Calamus® SL2006

The Reference Manual

invers Software, Löningen, Germany.
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Software
invers

1.1 Legal

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1.2 Quick installation

This brief installation instructions apply for all distribution forms of Calamus SL2006 that you will find on your Calamus SL2006 CD.

WinPack

Place your CD into your CD drive. In case the installer doesn't start up automatically (which opens an MS Internet Explorer window), open the drive window of this CD in your Windows work space (normally by clicking "Start" then "My computer"). You will find on your CD various folders and some EXE files. Start the program named "Calamus_SL2006_us_R1.exe" with a double-click and follow the instructions of the installation program, which will execute the installation of your Calamus automatically ("R1" represents the release number of the program).

TOSPack

To use Calamus SL2006 on a TOS operating system (Atari TT, Falcon, Hades, Milan) or in some other TOS environment (STEmulator, MagiCPC, MagiCMac, etc.) you only need to copy data. On your CD you will find, amongst others, a folder "SL2006us" which contains the complete standard distribution of your Calamus SL2006 in an unpacked format. Simply copy the whole folder to your hard drive. Follwing this you should check whether the folder and its contents are possibly write-protected due to copying from a CD to your hard drive. Remove this write protection from all folders and files. Now you can launch CALAMUS.PRG in the usual manner.

MacOS X

In order to be able and use Calamus SL2006 under MacOS X, at least MacOS X version 10.2 and the system enhancement MagiCMac X are required. MagiCMac X is not part of the Calamus SL2006 package but can be purchased from us, too. If you have not installed MagiCMac X already, you should do this first under MacOS X.

Then copy the folder "SL2006us" from your Calamus CD to your hard drive, as described in TOSPack.

Important: You will have to copy the files from the folder "MMX" to your MagiCMac X folder or Calamus cannot use the native MacOS X functions.

Quick installation

On your white CD envelope your will find a "matchcode" sticker for your indivually serial-numbered CALAMUS.PRG. This matchcode forms your key to the program, and may not be passed to third parties (that amounts to piracy). When you launch Calamus for the first time, a registration dialog appears in which you have to key your personal details and the matchcode. Please fill out ALL fields of this dialog and in the fields "Name", "Serial number" and "Matchcode" enter exactly the data that is contained on the sticker. Incidentally the letter "**o**" will be shown on the sticker in lower case, to differentiate it from a zero (**0**). However you can only enter capital letters and numerals into the matchcode fields.

We wish you success with Calamus SL2006!

1.3 Installation

1.3.1 Hardware prequisites

Calamus SL is, with all its modules, a powerful program which makes some demands on the hardware of your computer. For the operation of the program you therefore need the following minimum configuration:

Windows:

- Windows 98/ME will work, we recommend NT 4.0/2000/XP
- CPU speed 300 MHz minimum
- At least 64 MB RAM memory available for Calamus

MacOS X

- MacOS X v10.2 or higher
- CPU speed 700 MHz minimum
- MagiCMac X v1.1.0 or higher – not included with Calamus!
- For Calamus and MagiCMac X together at least 64 MB RAM memory available

MacOS Classic

- MacOS from version 7.6 onwards (to MacOS 9.2 – MacOS X is not supported yet)
- MagiCMac version 6.1.4 or higher – not included with Calamus!
- For Calamus and MagiCMac together at least 24 MB RAM memory available

TOS

- Powerful TOS systems (Atari TT/Falcon/Hades/Milan, etc.) as well as their derivates and emulations (STemulator, MagiCPC, etc.) recommended with limitations
- No use of native functions for screen calibration, color separation, fast compression routines etc. possible!
- At least 32 MB RAM for Calamus recommended
- TOS from version 3.6 onwards with WinX! or MagiC version 6.0 or higher
- NVDI from version 5.0 onwards recommended (for printer driver selection of NVDI)

General:

- CD ROM drive
- Unlimited hard drive space and RAM recommended
- Graphics card with at least 800 x 600 pixels resolution
- Screen colour depth 256c or TrueColor (recommended)

1.3.2 Program installation

The installation of Calamus SL is done in two to three steps:

1. Installation on the hard disk
2. Setting up of Calamus SL to suit your system and your wishes
3. The later installation of additionally purchased modules and drivers (optional)

1.3.3 Installation on the hard disk

For installing Calamus, your hard disk must be already formatted and divided into one or more logical drives (partitions). If you are not yet versed with this basic mechanism of hard disks then please contact your dealer; you can also take this opportunity to ask him to install Calamus.

Installation under Windows

The Calamus CD is so prepared that you can install it very quickly and conveniently with just a few mouse clicks and keyboard entries. Insert the CD into your CD ROM drive. Under Windows open the drive letter of the CD ROM drive and follow the instructions of the installation program. Subsequently, you can call and start Calamus using the appropriate entry in the "Start" menu of your Windows system.

Installation under MacOS

To install Calamus on Apple computers, the operating system MagiCMac (from Application Systems Heidelberg) must already be installed on your Mac.

Please start MagiCMac and put the Calamus CD into your CD ROM drive. Under MagiCMac please open the CD ROM drive window and simply copy the contents of the English Calamus folder to your hard drive. No further installation is required.

If you wish, you may place a Calamus program icon directly on your MagiCMac desktop, so that you may start Calamus directly from this icon in the future. Alternatively you can store a Calamus icon file in the Finder, and thus start Calamus directly from the MacOS environment. Please refer to your MagiCMac handbook to find out how to start MagiCMac applications (like Calamus) directly from the MacOS side.

Installation under TOS systems

Put the Calamus CD into your CD ROM drive, open the CD ROM drive window on the desktop and simply copy the contents of the English Calamus folder to your hard drive. No

further installation is required. We urgently recommend that under TOS you use a drive that permits long filenames and folder names, as we cannot guarantee that the Calamus CD uses only short file and folder names (8+3 mode)!

If you wish, you may place a Calamus program icon directly on your desktop, so that you may start Calamus directly from this icon in the future.

Registration

When you call the Calamus program for the first time you have to enter the "Matchcode" from your CD packaging into the corresponding Registration dialog. Please fill out all editable fields of the dialog carefully and take care to differentiate zeros (**0**) from **O**s (distinguished by a lower case "**o**") that may appear in the matchcode!

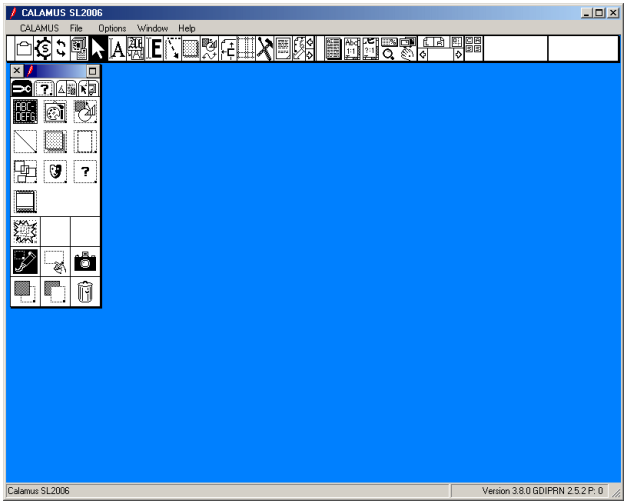
Once installation has been finished, you may remove the CD from its drive and keep it in a safe place. Never pass on your matchcode or the file CALAMUS.KEY from the Calamus SYSTEM folder to third parties: The matchcode forms your key to the program, and passing it on amounts to piracy. Nor is your matchcode required for any Calamus support; only the six-digit Calamus serial number, which you can check in the Info dialog, matters.

1.3.4 Setting up Calamus SL to suit your system and your needs

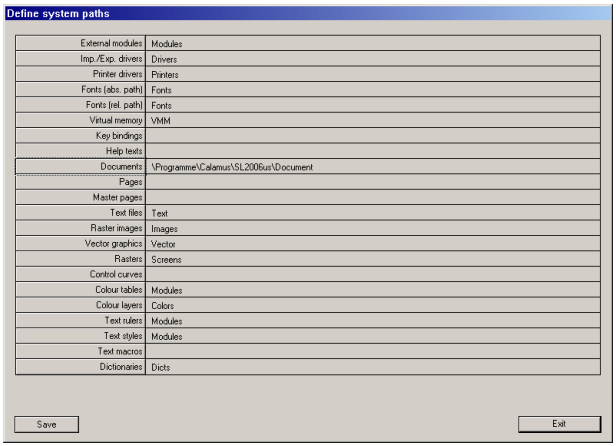
After installing Calamus on a hard drive as described above, you can now make some settings in the program. For this you must start Calamus first of all.

Inadvertent Calamus starts are interruptible by [Ctrl]+[Alt]+[Shift] on Windows keyboards (or the equivalent [Control]+[Alternate]+[Shift] spelt out fully on original Atari keyboards.)

Now you will see the Calamus work area:



Here you can make some settings in order to adapt the operation of the program to your wishes. The most important of these concern the search paths. Select in the Options menu the item "System paths". Thereupon you will see a dialog into which you can enter where Calamus should search for its files. Please set the search paths according to the following figure:



The next step is the checking of and if necessary the selection of the correct printer driver.

Calamus is pre-installed so that in the Calamus WindowsPack the universal printer driver WinPrint is loaded automatically, which permits access to all the Windows original printer drivers installed on the machine under Windows. Under MagiCMac (Apple) usually MacPrint is preset so that you have access to all installed Apple printer drivers in the Chooser.

Since the same installation (the Calamus TOS-Pack) is used for both Apple/MagiCMac and TOS computers, calling the menu item "Print" on TOS systems from the File menu will give an error message, because MacPrint expects an available MacOS. In this case you must change the printer driver.

Use the "Print" menu entry in the File menu to open the Print dialog and click on the field next to "Printer:". Now you will see the file selector dialog. Double-click on the name of the required printer driver. If you do not know which printer to choose here, then please ask your dealer or an experienced acquaintance. The Calamus distribution still contains a muliplicity of printer drivers, though these have become less important with the advent of the universal printer drivers WinPrint, MacPrint and VDIPrint. On TOS systems we recommend using a printer that NVDI supports, and load the VDIPrint printer driver.

The last step consists of saving the new settings. Do this with the button "Save", which gives direct access to the same dialog box as the menu item "Save system settings" in the Options menu. In this dialog box you simply click on "OK". Now you will find with each start of Calamus the set search paths, printer driver and other values again.

1.3.5 The later installation of additionally purchased modules and drivers (optional)

If you purchase extra modules or drivers for your Calamus SL it is possible that they will be supplied on one or more floppy disks. For technical reasons it is not possible for us to supply these often very small quantities of data on CD ROM. It is important for you to confirm that you are able to transfer data from the (PC formatted) HD diskette to your Calamus hard disk.

These additional purchased products are stored in folder structures in such a way that these folders correspond to the folders of your Calamus installation. You can thus drag the Calamus level of your additionally purchased module on to the Calamus folder. The files are thus automatically copied into the correct folders within the Calamus folder.

Example:

101010.BR6	=	Folder name of the product Bridge 6 for the Calamus serial number # 101010
INFO	=	Calamus folder structure, with sub-folders,
MODULES		in order to be able to find specific information.
BRIDGE6		
Info.TXT		
MODULES	=	Calamus folder structure containing the product.
BRIDGE6.CXM	=	The optionally purchased module Bridge 6 itself.

You must open the directory only so far that you can see the following file structure:

INFO
MODULES

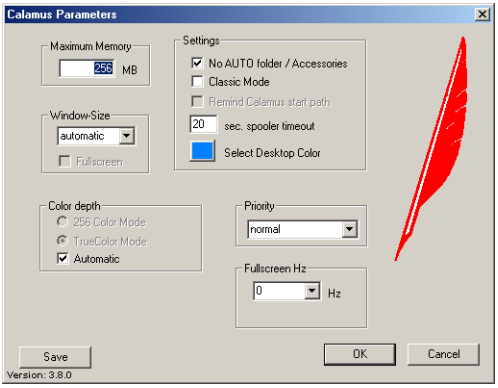
Then you drag both these two folders (with the relevant contents) with the mouse onto your Calamus folder and let them fall "in there". The copying mechanism of the operating system copies the files and sub-folders automatically into the similarly-named folder structure of Calamus.

Warning: When using MagiCMac, such disk and file operations should not be performed with the MacOS Finder. That is incapable of supplementing contents of folders with those of other folders, but simply replaces the complete folder already present with the new folder!

1.4 WinPack

If you are running Calamus SL on your Windows machine, you should not have had any problems with the installation – the installation process should have completed everything more or less by itself. During this the emulator integrated in the WindowsPack would have been installed automatically as well. It allows Calamus SL to be used under Windows, integrates it into the Windows system and makes the Windows printer drivers available, which can only be accessed when the universal printer driver WinPrint has been loaded. Normally this has been done already by default.

Actually you should never see the emulator, nor have anything to do with it. Therefore there are hardly any parameters to be set, and if they are then only when launching the program. If you hold down the [Ctrl] key when calling up Calamus, then this dialog appears:



Here you can alter all the required parameters:

Maximum memory

Enter here how much memory Calamus is to reserve for itself (and the emulator) from Windows. In theory you can reserve up to 4 Gigabytes of memory (providing your hard drive on which Windows caches its own RAM in an appropriate file is large enough). For sensible working we recommend however that you should reserve no more than the physical RAM actually present, less the memory required by Windows. Otherwise Calamus may become too slow as it has to swap portions of RAM to and from a file constantly.

Window size

Here you can select the usual desktop sizes or let Calamus run automatically at an optimum size in an MS-Windows window. The Fullscreen button is only selectable if you select one of the fixed specified sizes.

Colour depth

Select here the colour depth that Calamus is to run in. Your monitor also has to support the matching colour depth. However, you can let your monitor work in TrueColor (16.7 million colours) while you are using "only" 256 colours in Calamus. We recommend to set the switch "Automatic" in order to let Calamus recognize automatically, which colour depth your system offers at the moment (this should be TrueColor usually).

No AUTO folder/ACCs

You can launch TOS Auto-folder programs (such as TOSFIX.PRG for example) or TOS desk accessories with Calamus, thanks to the built-in emulator. Auto-folder programs have to be placed within the Calamus folder in a folder named AUTO. Accessories must be in the Calamus folder, on the same level as Calamus.EXE. If you do not want to launch such programs, set a tick here.

Classic mode

If you set this switch, the Calamus dialogs and menus take on the classical TOS look. To change the built-in TOS system font you only have to copy the three fonts from the Calamus SYSTEM\SYSTEM.FNT subdirectory, or three other suitable GEM fonts, into the Calamus SYSTEM folder. If you would prefer to use the Monaco MacOS system font, copy the three fonts from the Calamus SYSTEM\MONACO subdirectory into the Calamus SYSTEM folder.

If the switch is not set, then all dialogs and menus appear in the normal Windows look with a thinner font.

Remind Calamus start path

This switch is no longer required and will be removed in a future version.

xx sec. spooler timeout

If you use the WinPrint driver to print from Calamus, you can use the Windows printer drivers. These normally write their data first into a folder that is controlled by the Windows printer spooler. With this entry you can specify how long the Windows printer spooler should wait for Calamus to write the data via WinPrint into the spooler folder. Usual

values lie between 20 and 50 seconds.

Select desktop colour

If you launch Calamus in TrueColor mode, you can choose here the colour of the Windows window in which Calamus will run. Under 256 colours the moss-green colour familiar from Windows NT is set as standard.

Priority

Each program that is started under Windows is a "task" for Windows. Normally all tasks are assigned the same priority, so that they are handled in turn by the processor (MultiTasking). With this popup menu you can set a higher or lower priority for Calamus. But note that when you choose "very high", other programs and Windows itself may become very slow in some circumstances. So please give some consideration to this before you alter this entry.

Fullscreen Hz

This parameter only makes sense from Windows NT 5.0 onwards, so at the time of printing only for Windows 2000 (= NT 5.0) and Windows XP (= NT 5.1) – and even then only if you have chosen the Fullscreen mode under "Window size" (see above). With it you can select a higher vertical frequency (in Hertz) for the Fullscreen display mode.

Save

Click on this button to save the set parameters so that they will be available again the next time you launch Calamus.

If you want to let Calamus run in fullscreen mode, you can change to the window mode with [Alt]+[Enter] at any time. To put Calamus "to sleep" without terminating the program, just minimize the Calamus window or press the [Ctrl]+[Pause]. Restoring the Calamus window or repeated press of [Ctrl]+[Pause] wakes Calamus up again.

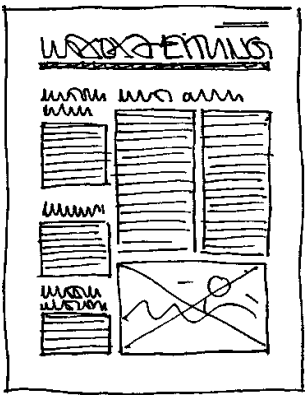
2 Fundamentals

2.1 Layout elements of Calamus

All in a frame – the layout elements of Calamus

Frames are the basic design elements of Calamus. What these frames are and how they are generated and processed is the topic of this section.

As is the case with all other work, an amount of planning and preparation is also required for the layout so that the result is qualitatively acceptable. When desiging a document (it's all the same whether poster, magazine or book) it's usual to define first the basic structure of a page in a so-called draft "scribble". Such a scribble for a magazine could look something like this:



Even without knowing what is actually to be printed on the page, you can form an idea of how it will look later: A headline provides brief information about the following text and is separated from it by a line. The text itself will be printed in three columns, with an embedded photograph. The rectangles sketched in the scribble will later have text or images inserted in them.

In formerly used layout processes the contents in the form of text column "galleys" and images on photographic film were pasted on a transparent foil (or on layout paper from which a film was made later in a process camera). The text columns originated from meter-long galleys – single column film or paper strips that were cut up in such a way that the columns of the layout were just filled to the bottom. Calamus SL does all this in the computer.

The rectangles in the scribble where you marked which items are placed where are called "frames" in the world of the desktop layouter. You can produce frames on the

screen, change their size, move or delete them, and much more. Naturally, you can also fill frames with content. The real new thing with "desktop publishing" is that you can alter a previously filled frame, and this alteration has direct consequences on the contents of the frame. For example if you take a frame that contains text (briefly, a text frame) and make it slightly narrower, it is clear that, with the same font size, fewer characters will fill a line. Calamus therefore moves the text around during the resizing of a text frame so that it again lies completely within the frame. One speaks also of "reformatting" the text. Something similar applies to pictures: In order to increase or reduce the size of a picture all you have to do is increase or reduce the size of the frame accordingly – the computer deals with the rest.

This frame concept includes some design objects to which one wouldn't assign the character of a frame at first: Lines, Filled areas and Tiling frames. For the sake of the uniformity of programming and the user guide, these objects are also treated as frames.

In contrast to conventional layout, frames are type-bound in Calamus: Only text can fill a text frame, a picture frame can only accept a picture, and a graphics frame accepts no other data than a graphic. At first sight this seems rather restrictive, but since each type of element is handled and processed in a different way this separation is very useful. There are nine types of frame altogether at present:

Text frames

Raster graphics frames (Picture frames)

Vector graphics frames (Graphics frames)

Line frames

Raster area frames

Tiling frames

Groups frames

Masks group frames

Special frames (Uniframes)

Text frames can only take text, though it can be in all sizes and shapes. Text contained in them can be processed in Calamus in so many ways that two of its own modules (see "Text module" and "Text style module") are assigned to this area.

Graphic elements can be stored in the computer as two fundamentally different types: As raster graphics or as vector graphics. The difference between the two is discussed in detail in the following section. Calamus provides a frame type for each of these two kinds of graphic.

You can "import" the contents of text, raster and vector graphics frames. This means that you may create texts or graphics with other programs and then place them in Calamus frames. This corresponds to the paste-up on a layout page or foil. Here however Calamus provides decisive support: During text import this will be reformatted automatically (including hyphenation if desired) and will also split up the text across multiple pages if necessary.

You cannot read data into the three frame types line, raster area and tiling frame, as they are defined completely within Calamus. An example: After "drawing up" a raster area frame you can determine whether the area contained within it is to be round, triangular, rectangular with rounded corners or have one of many other shapes. Likewise, you can define the colour, shadow throw and the border of the area. This applies similarly for line frames.

As already suggested above, usually altering a frame also results in the altering of its contents. How these alterations are implemented depends crucially on the frame type. An example: If the width of a text frame is reduced, its line length is altered. The entire text within the frame must thus be split up again to fit the words into the new line length. If the text finished just before the end of the frame it may no longer fit after this "reformatting". In that case it might be necessary for the surplus text be printed on the next page or in the next column. Calamus can take over all these functions for you.

Now the same situation with a raster graphic frame: If you make this narrower, depending on the setting the picture contained within is either reduced in scale or cut off at the side. Here, it does not make sense to execute a "reformatting" and to add the missing sections at the bottom as is the case with the text frames.

You can also copy complete frames. This copy process is comparable with the copying and subsequent pasting down of a galley column. In Calamus you also have the possibility of differentiating between a so-called "physical" and a "virtual" copy. The difference between the two is discussed in detail in the section "Frame editing module". Here it should just be noted that the difference is that with a virtual copy, all later modifications to the original are also executed in the copy.

In addition you can combine several frames into a group. Imagine this as if you pasted up the corresponding galley columns on a foil or layout paper to obtain a new, larger

galley. So, in the same way that you can combine this "super-galley" with other "super-galleys" into a "super-super-galley", you also have the option in Calamus to combine frame groups into another group. The advantage here is: You can dissolve the frame groups again, in other words break up a "super-galley" into its constituent parts once more. With present layout processes this is very cumbersome, in Calamus a single button press is enough.

A relatively new special frame (uniframe) can be found in Calamus' palette of frame types. You can work on special frames (copy, change, delete, etc.) just like any other frame, though the contents of these frames are managed completely by special modules, so Calamus knows nothing about the real contents of these frames. A good example of these are the vector blends (graduated tints) produced by the optional module LineArt. These blends are generated for both screen and printer output by LineArt, therefore if LineArt is not loaded then there will only be a white patch here.

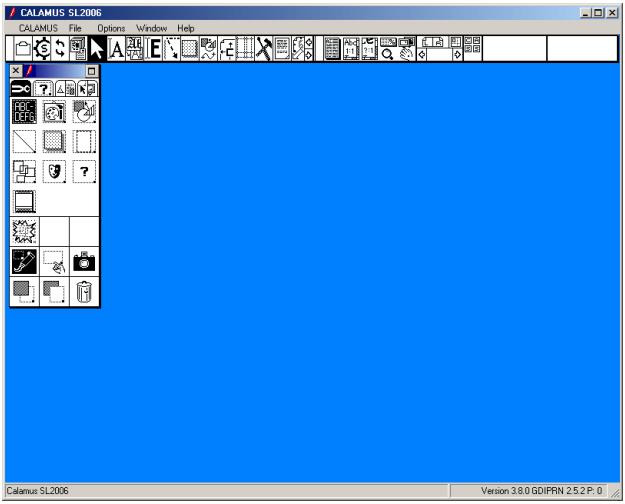
This is a first introduction to the basic understanding of the frames concept in Calamus. More detailed information about how the individual frame functions are served can be found in the section "Frame editing module".

2.2 User interface

Calamus is different!

If you have discovered Calamus right now, please don't panic! The user interface is definitely different from other programs, and we mean it.

Calamus is a very powerful, high modular Desktop Publishing application, its roots reaching back to 1986. Since this time the makers of Calamus aim to continuously enhance the power of Calamus. We will not drop items off the boat which have worked fine in practice, just because today's spirit wants to define things in another way or taste.



This is the face value of Calamus when you have started it. What makes it so much different from other programs? It's mainly the look.

We still use black&white symbols (icons) in very many cases to give you comfortable access to modules and functions.

Menu

Calamus' menu bar only shows a minimum of menu entries. The way of a mouse pointer from the desktop's work area to the menu is a long way. Your "mouse hand" should use this way not too often.

Top row

Calamus is high modular, but without modules it's pretty useless. The top row is the smartest way for managing and calling the bunch of modules which come in the standard package or can be purchased as additional modules.

Coordinates bar

Of course you want to keep full control over your documents. Therefore, we have put all important view and coordinate functions in the coordinates bar where you can reach them with a few mouse clicks.

Function panel

Here's the heart of Calamus' surface power! The function panel of Calamus is "thicker" compared to other programs. A long time ago, User interface scientists have discovered: for memorization, a menu with a maximum of 7 rows and 3 columns is the optimum. This is why the Calamus developers have chosen this arrangement in 1986 already – and it still works fine for many thousands of Calamus users.

In addition, our icons are pretty large (40 x 40 pixels) which gives more space for representing things in an icon. And of course the highest possible contrast helps for recognition – thus black&white.

The Calamus function panels are very useful due to another aspect: they offer up to 16 function groups in their compressed area using function group tabs. Somewhere else, your desktop work area would be almost invisible due to several "toolbars".

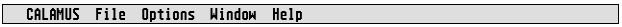
Key bindings

For absolutely practical and fast usage of this user interface, the various key bindings are a must. You can record all keyboard input everywhere and all mouse clicks everywhere except in document windows, define a keystroke for this macro and replay it whenever you want – with more than one working step, too, of course.

Please find a detailed description of the user interface elements below.

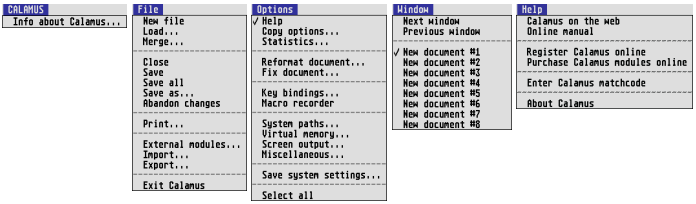
3 Menu

Always accessible – the Menu bar

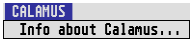


Calamus uses two types of operating elements: Icons access most of the functions for creating and editing documents, while menus are used for global functions such as loading, saving, printing and other mostly "housekeeping" tasks. This chapter deals with the menus, which are accessible from the Menu bar.

Several Calamus functions do not belong to any specific module, but must be available all the time. These are primarily the functions in the Top row. However, since there is not enough space there for all global functions, some of them had to be put in the dropdown menus. Move the pointer over the word "Calamus", "File", "Options" or "Help" at the top of the screen and a list of functions (a "menu") will drop down. You may click on any of the functions to activate them, or click outside the menu to make it disappear. Since menu functions require two separate mouse movements (select the menu, then select the function), they are only used for functions which are not frequently required.



3.1 Calamus menu



This menu contains only a preset entry, namely "Info about Calamus".

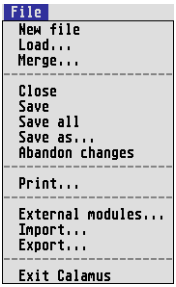
3.1.1 Info about Calamus

When you click on this menu entry, a dialog box will appear with the version number, serial number (for ordering upgrades or fonts) and the creation date of your Calamus version.

3.1.2 Accessories

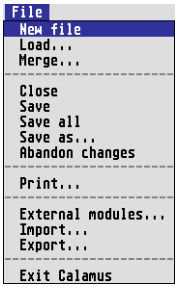
The fields in this menu contain the names of desk accessories which were loaded when you booted up your computer. These will vary, depending on what accessories are installed on your boot disk.

3.2 File menu



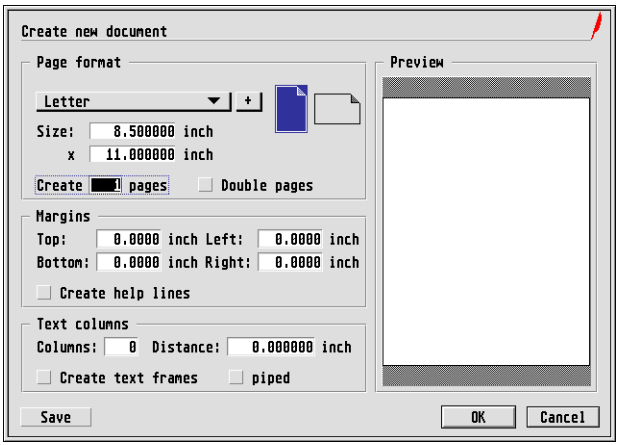
In the File menu you will find functions for the loading, saving and printing of a document. There are also functions for working with external modules, and for importing or exporting the contents of a frame. Finally, there is the "Exit Calamus" function.

3.2.1 Create document

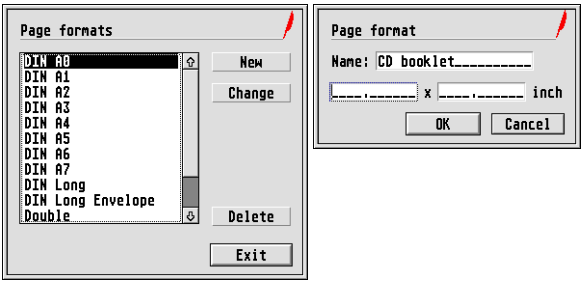


Select the "New file" menu item to create a new, empty document. You can edit any number of documents you like. The newly-created document at first consists of a single blank page in the format you chose under "Set page format". This page format, the number of pages, layout of guidelines and even (piped) text frames can be altered both when creating new documents and at a later stage, so you don't have to set the page measurements before starting a new document. You may even change the format when there are frames on the page.

To speed up creation of complex pages, using this menu entry calls the so-called Document manager (provided the Page module has been loaded) which displays the following settings dialog for the new document:



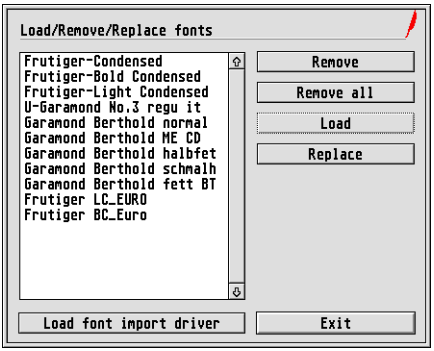
Here you can create several pages at the same time. If you select the "Double pages" format, the new document will always start with the right-hand side. You can change it subsequently in the Page module. The page format can be selected here at the start or later not just from a predefined list, but by clicking on the small "+" icon you can call up the Page formats list for making alterations or extensions.



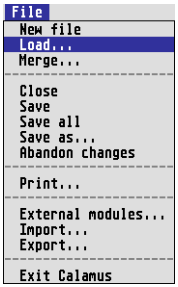
Guidelines too can be created directly here. In Double page mode there are guideline entries for "Inner" and "Outer", in the Single page mode there are "Left" and "Right".

If Calamus has loaded fonts on launching, or you have loaded fonts before opening the first document, you can also determine in the Document manager whether text frames are to be created. You can make settings for multi-column text frames and even make them piped frames directly.

After clicking on the "OK" button of the "Create new document" dialog you will see the new document with one or more (blank) pages; you can now work quite normally with it, even altering the page size if desired. However, text frames can only be be created if at least one font has been loaded, which will normally be the case. But if you have altered the preliminary settings, or if the first font to be loaded can not be found, the "Load fonts" dialog (from the Text style module) will be opened, provided the Text style module has been loaded. The function "Load fonts" (see Text style module, Font selection function group) then enables you to load the required font data from floppy or hard disk.



3.2.2 Load document



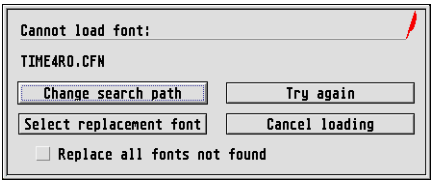
When you select this menu entry the file selector will appear and you will be able to select a document file to load. When you click on "OK" or press [Return], Calamus will attempt to load both the document and any associated fonts (if they are not in memory or embedded in the document to be loaded).

Here, we must discuss in greater detail the license for Calamus fonts. The CFN fonts of the "Classic types" series are encoded with your program's serial number. Therefore, you have to supply your program's serial number when you buy new CFN fonts. Every time you want to load a licensed font into memory, Calamus will compare the serial number of your program to the serial number encoded in the font. If they differ, an error message will appear, and Calamus will not load the font.

As a result, if you want to load someone else's Calamus document, you will have to own all the fonts which the document uses or substitute other fonts in their place. Even if one of your friends has one of these fonts and should be so kind as to provide you with a copy, you will not be able to use the other person's fonts because they will be stamped with a different serial number. Apart from this your friend is committing a criminal act as he is breaching the copyright and licence conditions.

Since you cannot expect professional imagesetting bureaux to have every Calamus font in stock, a special module is available to them to overcome this problem. This optional module (the Job list module) allows the bureau to laser print or imageset, but not alter, a Calamus document using someone else's licensed fonts. So as to prevent misuse here, each Calamus document contains a copy of the serial number with which it was created. The Job list module will check this serial number against the serial number of the fonts to make sure that the person who created the document is the font owner. This ensures that only your documents can be imageset with your fonts. To repeat: These restrictions only apply to CFN fonts from various commercial sources. Public Domain and Shareware fonts used by Calamus do not use this serialization system.

Back to loading of a document: If Calamus cannot find one of the fonts required by a document, the following dialog box will appear:



By clicking on one of the fields you can decide how to proceed:

Change search path

A click on "Change search path" tells Calamus to look for fonts in a different location (see "Options / System paths"). This option affects not only the current font, but all those which follow. The fonts will then be looked for in the selected directory and all subdirectories. If, for example, you enter the directory "C:\" as the new search path, Calamus will search the entire first hard disk partition for the font. On the one hand this makes things nice and simple, but on the other it can be extremely slow, especially with a large drive. It is best to enter the actual path to the directory in which Calamus can find the fonts.

Try again

Searches for the same font in the same place as before. This option allows you to switch floppy or interchangeable media disks if you keep some of your fonts on these. It is of little use if the font is on your hard drive, since how should it suddenly appear there?

Select replacement font

If you really do not have the required font, you can use "Select replacement font" to define a different, and if possible similar, font. When you click on this button the file selector will appear. Try to choose a font that appears as similar as possible to the original one. Different fonts rarely have identical spacing, so text formatting and line breaks may be changed by the new font. So a different font will affect the appearance of the text, specially if the text contains elements of manual kerning (see Text style module).

Cancel loading

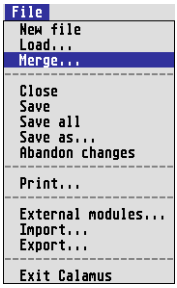
The last possibility is to break off the complete loading process. If you click on the corresponding field, you can continue working as before the loading attempt.

Replace all fonts not found

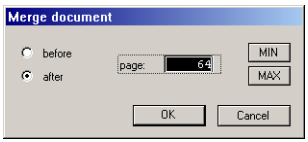
If you activate this switch (box crossed), then from that moment on all further loading of fonts that are not found for that document will be replaced by the one font that you

specify with "Select replacement font" at the next loading conflict. This can, of course, lead to many undesired side-effects, as subsequently even assignments to greatly differing fonts will point to the same font – namely the one that you have specified as a replacement font. For this reason this switch is normally left off. We suggest you should only set it if you want to take a "quick peek" at a document and believe that searching for many of the fonts contained in the document may take a long time. Or if you just wish to extract the text contents from this document, but do not care about its original formatting.

3.2.3 Merge within current document

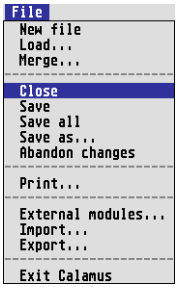


This menu item – like the following ones as well – is only available when you are already working with a document. It allows you to merge another document with the same page dimensions into the current one. When you click on this menu item, the following dialog box will appear:

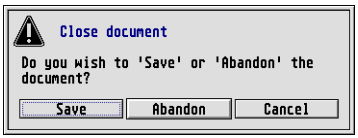


You may select where Calamus should merge the loaded document into the current one. Click on "Cancel" to abort the function, or click on "OK" or press [Return] to call up the file selector. Double click on the name of the document you wish to insert, or click on it once and then click on "OK". If the new document has a different page format than the current one, Calamus will display a warning and abort the function. Otherwise, Calamus will insert the new document at the point you have chosen in the current document.

3.2.4 Close current document

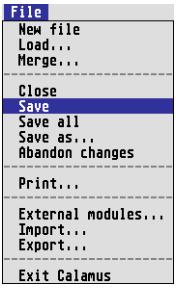


This menu item is only available when you are working on a document. It corresponds to the "Close" button in the top left corner of the active window. You can choose to save the current document, abandon it, or keep working on it ("Cancel").



Be careful: It's all to easy to click accidentally on the "Abandon" button so that many hours of your work may be lost forever. As you can also service these alert-box buttons from the keyboard and usually the "Save" button can also be selected by the [Space bar] in this case, that is the safest way to make sure you "hit" the right target.

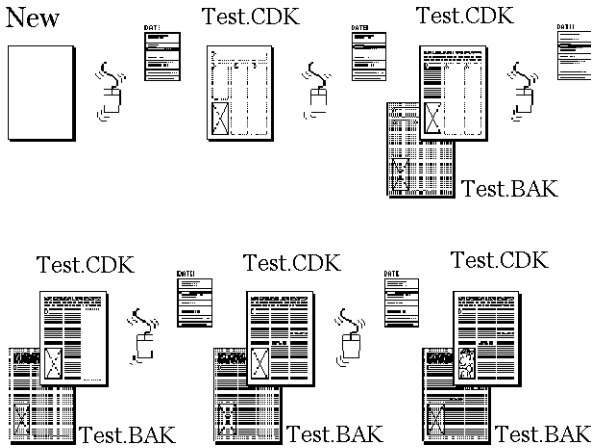
3.2.5 Save current document



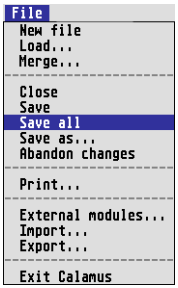
This menu item saves the current document to floppy or hard disk using the name with which it was loaded or last saved. If you have just created a new document, the file selector willl appear where you have to specify the filename and possibly the path where it should be saved.

If you have used the "Miscellaneous settings" dialog box (see Options menu) to instruct Calamus to keep backup copies of your files, the extender of the previous version of the file will be changed to "BAK". This allows you to have a copy of the previous version of the document on disk, in case you make a mistake with the newer one.

This chart shows how the process works:



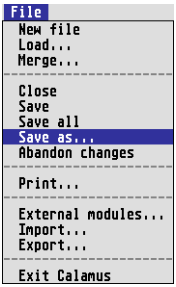
3.2.6 Save all documents



This menu item is the fastest way to save all open documents that are currently held in memory. You may also use it to save all current changes to floppy/hard disk before continuing work. If you have instructed Calamus to make automatic backup copies of your document (see the "Miscellaneous settings" menu entry in the Options menu), all open documents will be automatically saved at the chosen interval.

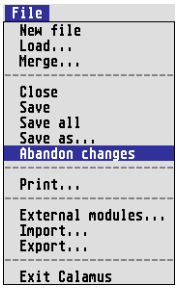
The fastest way to quit Calamus without losing your work is to select this "Save all" entry, select "Exit Calamus" directly after and then select the "Abandon" button in the alert box which appears. It is safe to do this because all documents have already been saved.

3.2.7 Save as ...



Unlike the menu item "Save", this item allows you to choose the filename under which to save the top, active document to floppy/hard disk. When you click on this item, the file selector will appear, and you will be able to enter a filename for the document. You do not have to enter the ".CDK" extender, because Calamus adds it automatically. If the filename you selected already exists, Calamus will change it to ".BAK" as for normal saving if automatic backups have been selected in "Miscellaneous settings".

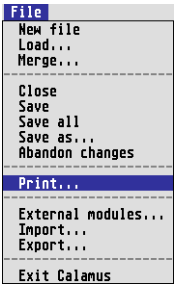
3.2.8 Abandon changes in document



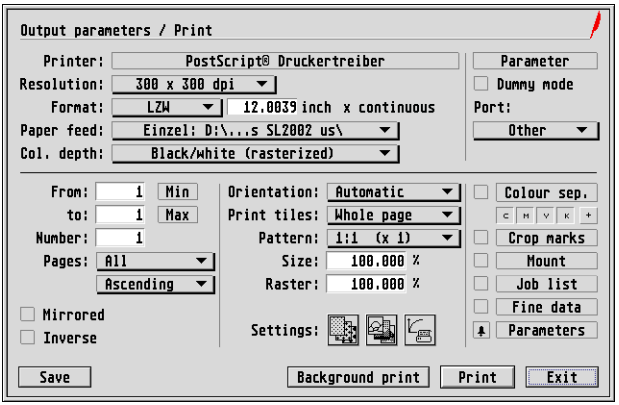
When you select this menu item, Calamus asks you to confirm that you want to proceed with the function.

If you click on the "Yes" button, Calamus will abandon the current version of the document and load the last version you saved from floppy/hard disk. If you never saved the document, Calamus will erase it completely and start over with an empty page.

3.2.9 Print current document



The "Print" menu item allows you to print a document and to change printer settings. The "Page format" settings and the actual printable area will affect the layout of your page (see "Frame editing, Tiling frame"). Therefore if may be necessary to click on this menu entry, even if you do not wish to print as yet.



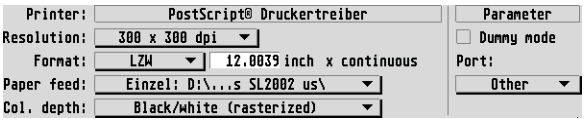
The top half of the "Output parameters / Print" dialog box (called "Print dialog" from now on) contains all the settings that relate to the currently selected printer. If you have not loaded a printer driver, "Driver not loaded" will appear beside the word "Printer". The bottom half of the dialog box allows you to change settings which do not depend on the specific printer. For example, you can start printing, close the dialog box, or use several special functions.

3.2.9.1 Load driver

When you click on this button, you will be able to load a printer driver. This is necessary because different printers are controlled in different ways. In the past, every manufacturer designed their printers with a different command set, but today there are several standard drivers. Calamus is supplied with a driver for most printers that are capable of

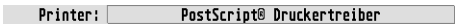
printing graphics. Click on the desired driver in the file selector and then press [Return] or click on "OK". The list of available printer drivers is constantly updated. If you have difficulty installing your printer, your dealer will be able to help you.

When you have loaded a printer driver, the following message will appear in the top section of the dialog box:



The buttons supply basic information:

Printer



This is the name and type of the printer supported by the driver. This does not have to be the actual name of your printer, since many printers are compatible with each other. Among dot matrix printers, for example, Epson and NEC are standards. Nearly all dot matrix printers on the market support these standards, so only these two drivers are necessary. The same applies to laser printers where the HP Laserjet command set has become the standard. Unfortunately, there are always exceptions to standards, so the actual list of printer drivers is rather large. (You do not have to keep all of the drivers on your hard drive; only the ones you use). For Calamus to print correctly, your printer must be compatible with the driver shown.

Several output devices, notably laser printers, cannot print on the entire surface of the page. As a result, you should place all frames a minimum distance from the edge of the paper. Of course, this minimum distance varies from printer to printer. When you load a printer driver, guidelines are loaded to mark this minimum distance. Moreover, the printable area of the page is shown in the "Create tiling frames automatically" dialog box (see "Frame editing, Special functions").

Printer resolution

This line shows the currently selected resolution of the printer in dpi (dots per inch). This measurement format may be unfamiliar to those used to metric units of measurement, but it has been adopted as standard for printers. Therefore it would not be sensible to recalculate it to pixels per centimetre. Most dot matrix printers support several resolutions, allowing you to print rough drafts (low resolution = few pin strikes = high speed) or final drafts (high resolution = many pin strikes = more time consuming). You

can select resolution with the popup. Laser printers usually work with a fixed resolution (eg 600x600 dpi), but to adjust for production tolerances and other manufacturing variables, you can adjust the horizontal resolution of some laser printer drivers within narrow limits.

Paper format

The paper size selected here will be used for output. Paper size is independent of a document's page format which you set up in the Page module. Naturally, you can print an A4 page on A3 paper, but part of the page will be blank. If you want to print an A3 document on A4 paper, the bottom part of the document will be missing. Tiling frames (see "Frame editing" module) help here, since they allow you to print different parts of a document page (tiles) on any number of separate printed pages.

The popup allows you to select one of the paper formats available for the printer. After clicking on one, you will see next to the name the paper size in the units which you selected in the Page module, "Set units of measurement". The "Special" size (only available for a few printers) corresponds to the largest size the printer can handle, and cannot be changed. This has nothing to do with the user-defined page format that was defined for the document (see "Page module").

Paper feed

If the selected printer has more than one type of paper feed, you can chose one in this popup. Dot-matrix printers usually work with continuous tractor feed, manual feed or automatic feed. With laser printers, you can choose from different paper trays or manual paper feed. With manual paper feed, printing will stop after each page and you will be prompted to insert a new sheet of paper. When you have done so, click on the "OK" button or press [Return] to continue printing.

Colour depth

In the upper area of the dialog which is used for the printer specific parameters you find a popup called "Colour depth". Most of the printer and output drivers only support one fixed colour depth in the current output mode. Other output drivers (like the MacPrint printer driver) may offer a range of options here.

Ext. parameters

This button is generally only selectable if a more complex printer driver (e.g. MacPrint, WinPrint or VDIPrint) is loaded, where more extensive adjustments are required than are offered by the Print dialog. If you click on this button, then generally a further dialog opens into which you can enter more specialized parameters for the current printer driver. With WinPrint the standard printing dialog of MS Windows (!) appears, in which you modify the printer parameters which the current system printer of your Windows system offers. If you exit the Windows printing dialog, the modified parameters are transferred to the Calamus Print dialog. You can also change the current Windows printer in the Windows printer dialog.

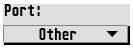
Further descriptions of the dialogs that lie behind this button can be found in the description of the respective printer driver.

Note: The button text itself can change – depending on the implementation and language of the loaded printer driver.

Dummy mode

If you simply want to "test" the print output without sending data to the printer, switch on the Dummy mode here.

Output port

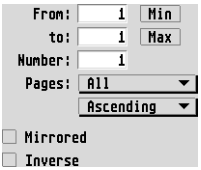


There are several ways to connect a printer to your computer. The majority of printers use the parallel (Centronics) interface. Some also send data through the RS232C serial port. An exception was the old Atari laser printers SLM 804 and SLM 605 which could be connected to the DMA port.

Several output devices can operate over the SCSI interface (say "scuzzy"), and data is essentially transferred as quickly as via the DMA port. If your printer can use either the parallel or serial port, you should choose the parallel port because it is much faster. While an A4 page at 300x300 dpi takes from 20-200 seconds to go to the printer through the parallel port (depending on the printer used and the data sent), it takes over 9 minutes (!) to send the same data through the serial port.

Finally, with some drivers there is the "Other" interface option. If you select this field, Calamus will send the information via your operating system or to a diskette, hard drive or file server instead of directly addressing your computer's hardware. Usually, this option is appreciably slower than direct output, but if several computers are sharing the same printer over a network, you will have to choose "Other" to use the network. The interfaces which a particular printer driver supports will be selectable in the popup.

3.2.9.2 Page settings



Here you are offered a wide choice of how document pages are to be printed or output.

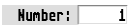
From (page ...)

Click the mouse in the number field and enter the (physical) page number where you want printing to begin. The default is the current page number. If you enter a higher number for the starting page than for the ending page, Calamus will correct it accordingly. If you click on the "Min" button, the document's first page will be entered.

to (page ...)

In this field you can enter the page where Calamus should stop printing. The default is also the current page number. If you attempt to enter a page number that is higher than the last page of the document, Calamus will correct the value to the highest page. If you click on the "Max" button, Calamus will print to the last page of the document.

Number



This field contains the number of copies that Calamus will make of each page. The

default is 1, but if you enter a higher number, Calamus will print multiple copies. A laser printer has a great speed advantage over a dot matrix printer when printing multiple copies because Calamus only has to calculate the page internally once. With the Atari laser, data transfer itself takes little time because it is printed directly from your computer's memory. HP Laserjet-compatible printers, moreover, have their own facility to print the same page several times from data stored in their own memory, so that the computer is available for other purposes as soon as the data has been transferred.

Pages

Sorting

You can sort pages in ascending (low number to high number) or descending order (high number to low number). The latter is useful if your printer outputs pages face-up. This is the case, for example, with ink-jet or dot matrix printers which use automatic single-page feed. When you print pages in descending order, they will be stacked in the correct order when printing is complete.

Further, you can decide to print only left-hand or right-hand pages of a multi-page document. This allows you to print the right-hand pages on the front of a batch of paper, and the left-hand pages on the back of the same paper. By default, both sides will be printed, but you can select "Left only" or "Right only" by clicking on the upper popup.

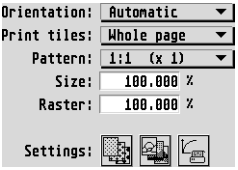
Mirrored

You can print the page as a mirror-reversed image. The reversed image is useful for printing to film for an offset printer, and also to the reverse side of an overhead transparency foil; this has the advantage that the printed side can be placed on the projector's glass to give a much sharper projection.

Inverse

If you choose the "Inverse" button, the output will be inverted (as in a photographic negative): All non-printed areas will be black, the rest white.

3.2.9.3 Print parameters



Here you can set how the printer is to output the print data to paper or film.

Orientation

If you have designed a document in the A4 landscape format and use a printer, such as a laser printer, which supports only portrait (vertical) orientation, Calamus must rotate the page 90 degrees before it can print it. You can set the orientation for the printed page by clicking on the "Automatic", "Portrait" or "Landscape" popup. Normally, you should select the "Automatic" button, which is the default. That way, Calamus tries to print the page without rotating it. If this is not possible with the current paper size, Calamus checks to see if it can print the page rotated. If there is not enough room for Calamus to print the page either rotated or unrotated, it will choose the orientation which will cut off as little as possible.

If you select "Portrait" or "Landscape", Calamus will not perform these tests, but will print the page with the selected orientation. Any elements which do not fit on the printed page, using the selected orientation and dimensions, will be cut off.

Print tiles

If you are working with tiling frames (see Frame editing module), you can decide here whether Calamus should print the entire page, all tiling frames, or only selected tiling frames.

If you have set up a working area on your page and have selected "Crop marks" in the Print dialog, Calamus will print not only the working area, but also the set margin with crop and register marks as well as the name of the colour separation. If you select "All tiles" or "Selected" in the "Print tiles" popup, then each valid tile frame will be printed surrounded by the set margin area.

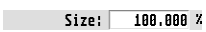
For example, if an A3 page were divided into two A4-sized tiling frames, the first legend would print only the top left corner on the A4 page. The second legend would print only the areas covered by tiling frames. The "Selected" tiles legend instructs Calamus to print only the frames which were previously selected in the Frame editing module. This way, you can repeat printing of an individual page in case of a paper jam, for instance.

Pattern

The fill patterns in Calamus are optimized for 300 dpi output, the resolution of a standard laser printer. If the output device works at a higher resolution, you can enlarge the fill pattern. This is important for special fills such as the "Heart" pattern:

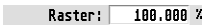
If this pattern were printed 1:1 at 2540 dpi, the hearts would no longer be recognizable. As a result, you have two options. If you select "Fit (x N)" in the popup, the pattern will be enlarged by an integer multiple for output. It is possible that it will then not fit the output rastering exactly. Thus, while you can enlarge 300x300 dpi to 2400x2400 dpi by printing each pixel eight times in horizontal and vertical directions, 300 dpi does not divide evenly into 2540 dpi. Then you can use "Free (x R)" in the popup, though this can lead to unpleasant Moiré patterns in some circumstances. To see how the different effects work, change the screen magnification to "Printer 1:1" and observe the results (see "Coordinates bar").

Size



You can enlarge or shrink a document during printing as well. Enter the magnification factor in the editable field. Please note that this factor refers to the page size (not the printed area!). So if you want to print an A4 document to fill A3 paper, that will correspond to a magnification of 141%. Conversely, printing an A4 document on A5 paper requires a reduction to 71%. The preset value is 100%, and any alteration stays in effect until you change it again.

Raster



In a similar way to altering the output size of the document you can also enlarge or reduce your pre-set raster settings from the Raster generator during output.

Enter the scale factor here. Please note that this factor refers to the resolution set in the Raster generator. In this way you can counteract enlargement or reduction of the page size during output by setting raster generation to exactly the reciprocal value. So if, say, you output an A4 document in 71 % size (as A5), then with the normal 100 % raster size setting the raster will also be reduced by a similar amount. If you set the raster enlargement to 141 %, then your set printing raster will appear "normal" again, as if the A4 document was output without reduction.

Settings

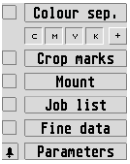
Under this entry you will find three icons that offer access to important printing modules without having to leave this central Print dialog first.

You will find the first icon in the Page module as well; it calls up the Raster generator, provided this has been loaded.

You can also see the second icon in the Page module; it opens the Colour separation module for setting (or just checking) the colour-separation control curves.

The third icon symbolises the output linearities and calls up the control curve editor, in which you can adjust the control curves for setting the output linearity in this case. For this the corresponding module (LIN.CXM) has to have beeen loaded beforehand. In contrast to the other two icons, this is the only place where you can set the output linearity.

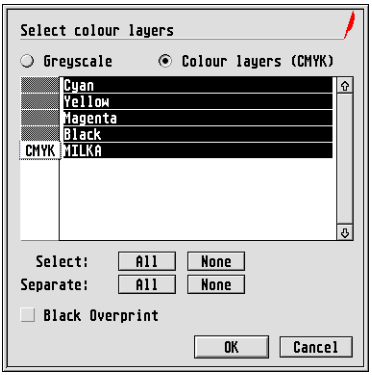
3.2.9.4 Print modules



This part of the Print dialog allows further control about just what is to be output, providing therelevant modules have been loaded.

Colour separation

When you click on this button, the following dialog box will appear:



Here you can decide whether to print a multi-colour document in greyscale, as a complete colour separation set, or only part of a colour separation. Normally, on monochrome printers (and imagesetters), the whole document will be converted to (rastered) grey tones. If you select the "Colour layers" radio button, a list of all the separate colour layers in the document will appear below, and you can use the scroll bar to view them. Use the mouse to select the colour layer(s) which you wish to print, or click on the "All" or "None" buttons to select all or no colour separations respectively. Once you've clicked on the "OK" or "Cancel" buttons, the Print dialog will reappear.

Incidentally, the "Separation" field of the Print dialog also shows the settings of the form in shorthand: The buttons "C", "M", "Y" and "K" below not only indicate whether the corresponding colour has been selected for output, but also offer an alternative method of switching individual colours on and off without having to open the "Separation" dialog. The button "+" is only there for information: if it is selected then there is at least one further spot colour selected for output in addition to the four process colours. Since Calamus can use any number of spot colours for output, we recommend that the "Separation" dialog be opened explicitly to obtain a renewed overview of the selected colour separations.

Crop marks

If this switch is active, elements and working areas set in the Page module will be output. Clicking on the button "Crop marks" opens the appropriate dialog from the Page module for directly entering settings as required.

Mount

The button "Mount" provides access to the Imposition module, if it has been loaded. Its operation is described in the module's documentation.

Job list

The button "Job list" provides access to the Job manager module, if it has been loaded. Its operation is described in the module's documentation.

OPI data

Since SL99 you can print documents which have to be completed by the "as OPI Manager" module or Fine data manager) directly from the Print dialog. The new button

group "OPI data" supports OPI management if the OPI Manager module is loaded. If the checkbox is crossed, OPI data will be added to the document when printing. The "OPI data" button allows access to the dialog "Overview OPI data files and links" in the OPI Manager module. Its operation is described in the module's documentation.

Pling module: Parameters

This button activates the print module "Pling" which, provided that it is loaded, will give a visual or audible signal when printing has finished. Click the button "Parameters" to open the setup dialog. Its operation is described in the module's documentation.

3.2.9.5 Action buttons

Save

This button lets you save all the settings of the Print dialog in the Calamus setup file without having to exit from it.

Background print

The "Background print" option lets you print Calamus documents and use other programs at the same time – but only in multitasking systems like MagiCMac etc. Background printing makes no sense at all on singletasking systems like TOS (without MagiC or other multitasking enhancements) or the SL WindowsPack, because background printing in that case does not mean that you would be able to continue your work in Calamus while printing a document. The background printing mode simply does not open a status dialog, so that screen output is not blocked by Calamus. In multitasking systems it allows other programs to be used, which could be very useful particularly when you print or imageset large documents.

Print

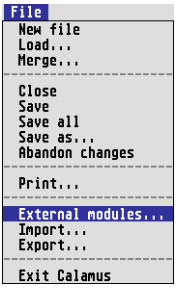
The "Print" button will send the document, with the current settings, to the printer. Printing can be interrupted by simultaneously pressing the keys [Shift]+[Control]+[Alternate].

We have built in a keyboard buffer lock so that pressing the "Print" button more than once does not trigger a multiple printout. If you really need additional copies of the page(s), please use the "Number" editable field in the dialog.

Exit

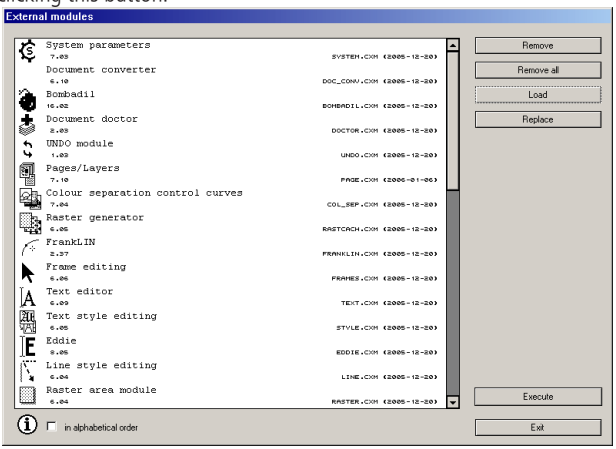
If you've only called up the Print dialog to change some settings, please use only this button to exit it. All changes will remain valid even though nothing will be printed. This is the reason why this button isn't called "Cancel" as it is in many other dialogs.

3.2.10 External modules



This menu item allows you to load, delete and activate Calamus' external modules. The modules supplied with Calamus are included in this list. With the exception of the Clipboard module, any module can be deleted and replaced in the Top row by another. If memory is tight, unused modules can be removed and reloaded as required. When you click on this menu item, you will see the "External modules" selector box described in the chapter "Object selection".

In addition to the regular buttons, there is one called "Execute". Normally, you activate an external module by clicking on its icon in the Top row. You can also activate it by using this button. However, some modules such as Speed~Line can only be activated by clicking this button.

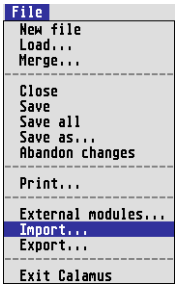


Please note when loading modules that generally the "Lite" and "Full" versions of the same modules don't always get along with each other. For example, if you try to load the full version of Bridge 6 when the lite version of Bridge 6 is already in memory, you will receive an error message.

The modules list can be sorted using the button at the bottom of the list.

Within this dialog, you can call the info dialogs of single modules directly. Select a module (or a group of modules) and click on the info button in the bottom left corner of the dialog. Alternatively you can click single list entries while pressing the [Ctrl] key.

3.2.11 Import

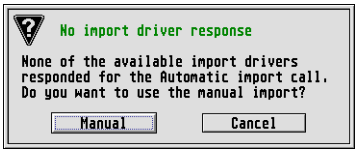


Text, vector graphics and raster graphics can be imported into frames.

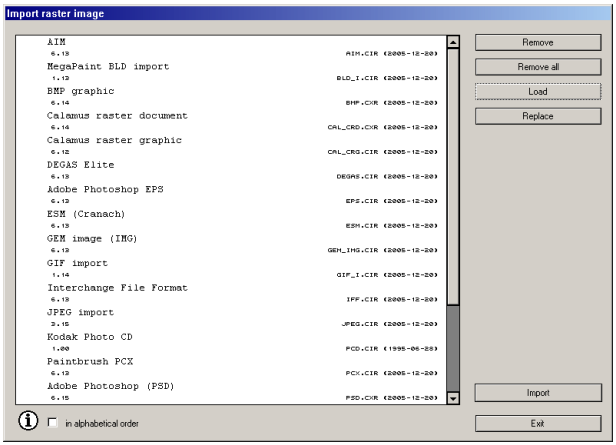
You can only select the "Import" menu item if you have selected a single text, raster graphic or vector graphic frame. Then the file selector opens and lists all files which can be opened at this moment. In text import mode, only text files are listed (e.g. CTD, TXT, RTF, etc.), on raster graphic import raster image files only (e.g. TIF, JPG, BMP, etc.), on vector graphic import vector graphic files only.

Chose the file you want to load and close the file selector with [Return] or "OK". Now Calamus offers the file to all loaded drivers for this frametype. (The drivers do not basically check the file extension, but some of them really check the file format.) When an according driver has been found, it loads the data in the frame.

If no driver was able to load the file, Calamus reports this showing an alert:



If you click on "Manual", you can select a driver or load another driver into memory. Therefore, the Object selector box will appear.

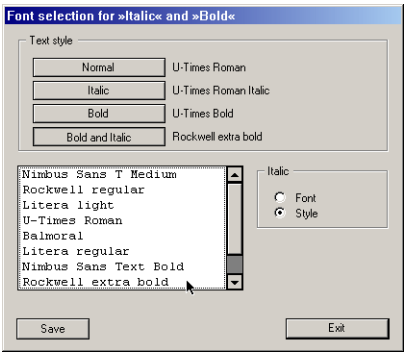


Hear you see the formats which Calamus knows how to read. When you click on the "Load" (or "Replace") button (see "Object selection") you can now load driver modules into the dialog box. The driver names follow this designation system:

The filename gives a short form of the external file format, with the file extender (the three characters after the point) describing the type of driver. The first character of the file extender is always a "C" (for Calamus). If the driver can only import, the second character will be "I"; if it can only export, the second character will be an "E"; and if it can do both, the second character will be an "X". The third character stands for the type of frame which the driver can work with: A "T" stands for text frames, "R" for raster graphics, and "V" for vector graphics. The first eight characters of the filename are a shorthand for the format of the file. For example, the driver WORDPLUS.CIT is an import driver for text frames that can read data which had been produced with the program 1st WORD Plus, and the driver ASCIIMEX.CXT can both read and write ASCII text from/to corresponding text frames.

In addition to the regular buttons in the object selector box, there's also a button labelled "Import", which by now requires no further explanation. When importing text however, there is also a "Fonts" button.

When you click on this button, the following dialog box will appear.



You can assign fonts to correspond to the different styles supported by the chosen format. The most common styles are Bold and Italic. If you want to alter the preset option, click in the field with the relevant font, and then in the overview below this on the desired font.

You can determine how italic text in the original document should be handled. If the button "Italic font" is selected, then the fonts selected for "Italic" and "Bold and Italic" will be used. If the button "Italic style" is selected then Calamus will instead slope the Normal and Bold fonts to give an italic effect.

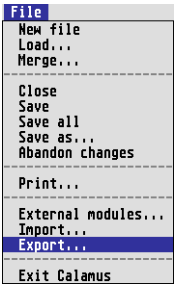
A click on "Exit" ends the assignment, and Calamus will use the information for the next file.

Use the "Save" button in order to save these settings in your Calamus.SET file. Please keep in mind that not the real font assignments and their names are saved, but "only" the numbers of the currently loaded fonts in their physical order.

3.2.11.1 Force manual import mode

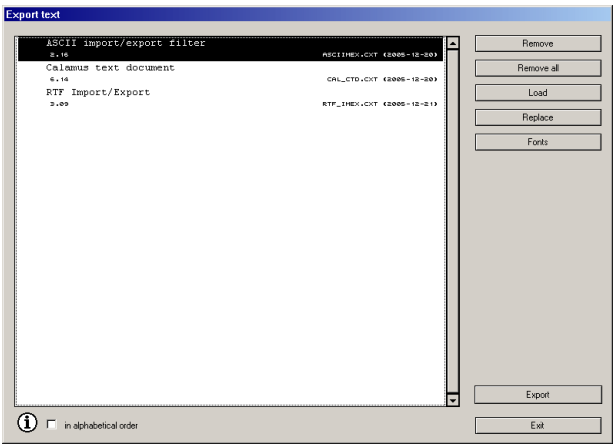
If you still use old import drivers which do not support the automatic import mode, you can force the object selector box to appear every time you want to import a file, showing all loaded drivers. Therefore, press [Ctrl] when chosing the "Import" menu entry. Then the import mechanism temporarily switches to "manual" mode.

3.2.12 Export



Text, vector graphics and raster graphics can be exported from a frame.

You can only select the "Export" menu item if you have selected a single text, raster graphic or vector graphic frame. The object selector box will appear.



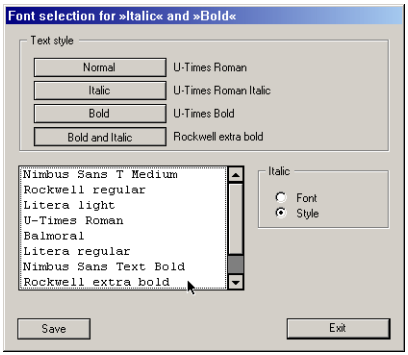
You will see the formats which Calamus knows how to write. When you click on the "Load" (or "Replace") button (see "Object selection") you can now load driver modules into the dialog box. The driver names follow this designation system:

The filename gives a short form of the external file format, with the file extender (the three characters after the point) describing the type of driver. The first character of the file extender is always a "C" (for Calamus). If the driver can only import, the second character will be "I"; if it can only export, the second character will be an "E"; and if it can do both, the second character will be an "X". The third character stands for the type of frame which the driver can work with: A "T" stands for text frames, "R" for raster graphics, and "V" for vector graphics. The first eight characters of the filename are a shorthand for the format of the file. For example, the driver WORDPLUS.CIT is an import driver for text

frames that can read data which had been produced with the program 1st WORD Plus, and the driver ASCIIMEX.CXT can both read and write ASCII text from/to corresponding text frames.

In addition to the regular buttons in the object selector box, there's also a button labelled "Export", which by now requires no further explanation. When exporting text however, there is also a "Fonts" button.

When you click on this button, the following dialog box will appear.



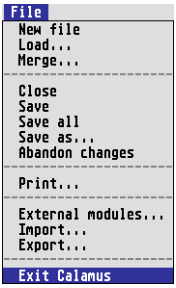
You can assign fonts to correspond to the different styles supported by the chosen format. The most common styles are Bold and Italic. If you want to alter the preset option, click in the field with the relevant font, and then in the overview below this on the desired font.

You can determine how italic text in the original document should be handled. If the button "Italic font" is selected, then the fonts selected for "Italic" and "Bold and Italic" will be used. If the button "Italic style" is selected then Calamus will instead slope the Normal and Bold fonts to give an italic effect.

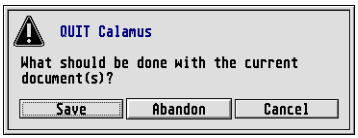
A click on "Exit" ends the assignment, and Calamus will use the information for the next file.

Use the "Save" button in order to save these settings in your Calamus.SET file. Please keep in mind that not the real font assignments and their names are saved, but "only" the numbers of the currently loaded fonts in their physical order.

3.2.13 Quit Calamus

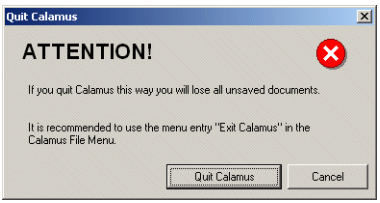


Not only is this the last item in the File menu, it's also the last in the whole program. If you click on this menu item, Calamus will terminate. Before it does, however, a dialog box will appear giving you the opportunity to save your document(s).

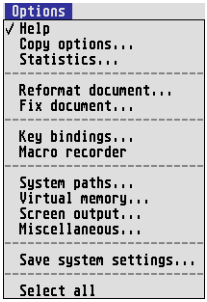


When you quit Calamus SL, you will be asked what to do with any documents that are still open. Calamus also checks for any data in the clipboard. If Calamus finds at least one entry on the clipboard, you will be given the opportunity to cancel quitting Calamus. (With LIBerty, the optional advanced clipboard module, you will be able to save the clipboard data when quitting.)

Attention: The SL WindowsPack version of Calamus normally runs in a normal MS Windows desktop window (though FullScreen mode is also possible.) If you use the Closer gadget of the Calamus desktop window for quitting Calamus, the security mechanisms of Calamus are not activated, so that neither documents nor clipboard data are saved beforehand and you could well lose them. You will be informed by an appropriate alert in this case.

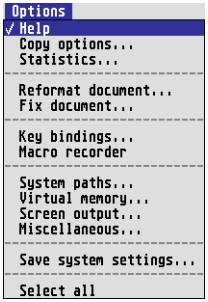


3.3 Options menu



This menu contains various settings and functions that do not belong to any particular module, but apply to the entire program.

3.3.1 Help messages on/off

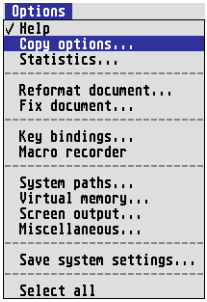


This menu item switches the Help messages on and off. A tick in the menu indicates that this function is active.

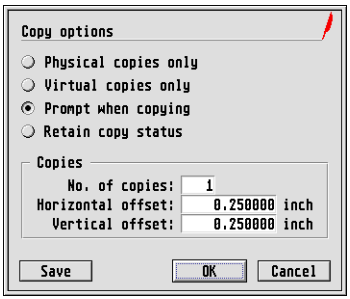
In the top right corner of the menu bar, Calamus can display a brief description of a function as the mouse passes over the related icon or menu entry.

In the SL Windows Pack, the help text appears in the usual Windows fashion in the window information line at the bottom left (provided that you haven't chosen to run Calamus in full screen mode).

3.3.2 Set copy type



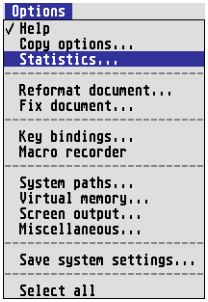
This menu item allows you to decide how Calamus will copy frames, and whether multiple copies should be made. When you click on the entry, the following dialog box will appear:



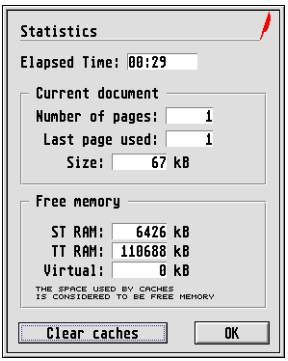
Here you can tell Calamus to make basically only physical copies or only virtual copies of frames; alternatively you can instruct Calamus to display a dialog box each time you make a copy, giving you the choice between physical and virtual copies; or you can select "Retain copy status", which instructs Calamus to make physical copies of physical frames and virtual copies of virtual frames. The concept of physical and virtual copies is explained in the Frame module function group section "Tools".

To make multiple copies of a single frame, enter the desired number of copies in the "No. of copies" field. If you do not want the copies to lie directly on top of each other, you should use the next fields to instruct Calamus how far it should offset each copy. A positive or negative value for "Horiz. offset" will place the copy to the right or left, respectively, of the original frame. A positive or negative value for "Vert. offset" will place the copy below or above, respectively, of the original frame. Values in both fields will offset the copy diagonally. To change the unit of measure in the spacing fields, see Page module, "Set units of measurement".

3.3.3 Current document statistics



You may obtain a report on the number of pages in your document and the available menory by selecting the "Statistics" menu item.



The dialog box provides information about the amount of time spent in Calamus, the total number of pages, the last page with frames on it and the amount of free memory in your computer and on your hard drive (see "Fundamentals, Computer information display"). You can also see how much memory there is left for your document to use. Note that Calamus needs some of the memory to execute its own internal functions. The extended memory on the hard drive is somewhat limited: the Atari laser printer, for example, cannot use it, but requires free memory in the computer itself. Virtual memory is not in the computer, but on the hard drive (see "Fundamentals"). The "Empty caches" button will free up all cache memory used internally by Calamus (see below, "Miscellaneous" menu entry) – as a result, the next screen display will take longer to redraw, but you will know exactly how much memory is available.

Current document size

Here you will see the current size of the document in memory. This information is used by Calamus when saving document. Calamus first checks if the target medium still has enough space for the current document.

Clear caches

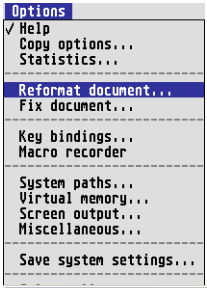
As you may know, Calamus caches almost every type of already calculated element in memory, like the screen output of a page or single frame types, generated raster screens etc. so they can be used much faster for the second time. For instance, if the pages of a

document are cached already, browsing it on the screen is much faster for the second time.

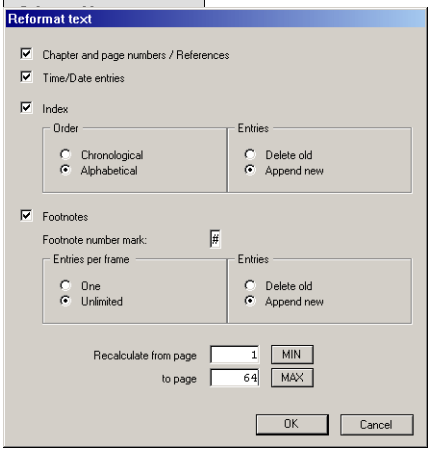
But there are also moments or jobs where you need memory more than speed. For instance, you may reach critical memory requirements when printing in high resolution – if you see the number of print strips increasing very quickly, this points to a lack of memory. But many caches are even saved with the document they belong to. You might regard them as ballast when memory gets tight.

In these cases please press the button "Empty caches". Calamus immediately initializes a garbage collection, and deletes all caches which belong to the current document or to the Calamus system itself.

3.3.4 Reformat all texts



Calamus supports semi-automatic management of footnotes, indexes and page numbers. Semi-automatic means that once you have changed the text formatting, you must tell Calamus to recalculate the numbers. This system speeds up text work because Calamus does not have to calculate every footnote, index entry and chapter/page number every time you change the text in your document. When you click on the "Reformat document" menu entry, the following dialog box will appear:



In addition to the elements mentioned above, you can also recalculate time and date references (see Text module).

Use the square checkbox buttons on the left side of the dialog box to select what you want to recalculate in the text.

The five options in this dialog box are described below:

Chapter and page numbers / References

If Calamus had to recalculate all chapter numbers every time you inserted a new one, it would also have to reformat all the following text. Instead, the program only recalculates page and chapter numbers as well as corresponding references in the specified page range when this function is activated (the checkbox to the left of this option is selected).

Time/Date entries

This function updates the system time and date entries which you can add to your text in the Text module. You can use this, for example, to update to the current date in pre-defined letters. If Calamus automatically updated date and time entries every time, then a subsequent repeat printing would show when the document was reprinted instead of the original date it was written.

Index

Building an index is discussed in the description of the Frame editing module ("Special functions / Text frames" function group) and the Text module ("Control codes" function group) as well. In this dialog box, you can establish whether the index should be "Chronological" by page number or "Alphabetical" by keyword. "Delete old" allows you to decide whether to delete the previous contents of the index frame or just "Append new" information.

Footnotes

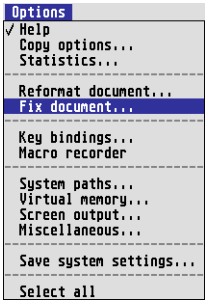
Creating and managing footnotes is discussed in the description of the Frame editing module ("Special functions / Text frames" function group) and the Text module ("Control codes" function group). When you reformat a document, Calamus will put the actual footnote texts into the footnote frames provided for them, with incrementing numbers replacing the footnote number placeholders. Superscript numbers will appear in the text referring to the footnotes. You can enter the footnote placeholder character in the "Numbering style" field.

When you update footnote frames, the old contents should normally be cleared. Only, for example, when you are assembling endnotes from several separate documents, should you append the new footnotes to the current frame contents. You can also select whether there should be only one footnote in each footnote frame, or whether Calamus should enter footnotes in each frame until it is full.

Recalculate from page ... to ...

These editable fields apply to the complete dialog. All chosen elements will be recalculated in the page area which has been defined here. If a text flow chain only covers the page area with at least one frame, the whole text flow chain is recalculated!

3.3.5 Set document parameters

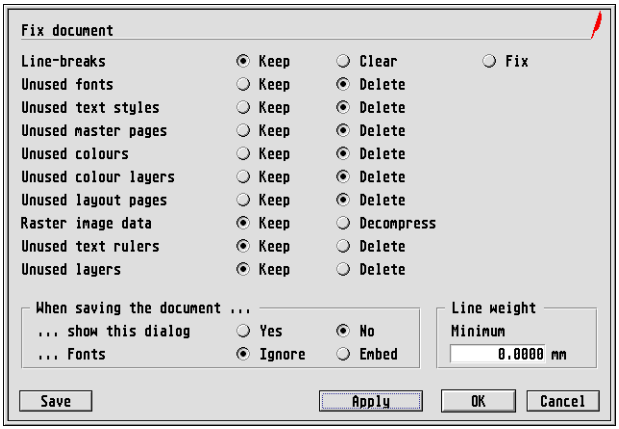


The "Fix document" menu entry provides a function designed for advanced DTP users. However, even if you are only a beginner, it may be useful to become acquainted with this function against future need. Calamus saves text line-breaks in cache memory (see "Fundamentals, Vector and raster graphics" and "Generating glyphs (character images)"). The contents of cache memory are emptied when Calamus needs the memory for something else. If a text frame has to be redrawn after this, it will be formatted anew. Calamus does not save the actual line-breaks to disk. Instead, every time you load the document, the program recalculates them as it draws the frames.

Most of the time, this is what you want to happen. However, there are exceptions: if you are sending a document to be imageset, the printer will usually use his own fonts. If he has a newer version of one of the fonts required, there could be problems. For example, some of the characters in the new version of the font might be narrower or wider than yours, so that the whole text would normally need reformatting with possibly different line-breaks.

You can avoid this problem and save the document with fixed line-breaks by using the "Fix document" menu entry to call the relevant function. To secure the line-breaks, click the "Fix" button in the "Fix document" dialog box. The position of the line-breaks is now encoded in the saved file, and Calamus will not recalculate them when it reloads the document. This way you can be sure your document will be imageset exactly as it appears on your screen.

On the other hand, if you want to reformat all text frames in the document before printing, select the "Clear" button. Calamus will discard all line-break information before it saves the file. As a result, printing (imagesetting) the document will take a little longer.



The "Keep" button, which is normally selected, offers a compromise between print time and reformatting. All line-break information already calculated will be saved, but information for the other pages will be calculated when printing.

One can also specify how Calamus should deal with any fonts, text styles, text rulers, master pages and document pages as well as layers which are not required by the current document. For each element, you can decide whether it should be kept or automatically deleted when the document is saved. (The "Raster image data" buttons are described below in the "Keep / Decompress raster images" section.)

The "When saving ... show this dialog Yes/No" buttons allow you to select whether this dialog box will appear every time you save a document. This allows you to double-check the settings and change them if desired. For safety's sake, you should always select "Yes" here.

Finally, you can set a minimum line width. All lines and raster area edges which Calamus prints will be at least as wide as the value shown here. This option allows you to make hairlines heavier; otherwise for example they would be only around 4 ten-thousandth of an inch at 2540 dpi, which would vanish during later printing.

In addition to the usual "OK" and "Cancel" buttons, there is also an "Apply" button, which allows you to perform all deletions immediately. This forces the computer to recalculate all text breaks and remove unused colour layers, and to eliminate all unnecessary elements in your document.

Keep / Decompress raster images

Calamus uses image compression (especially with b&w images) to keep documents as small as possible.

This switch defines if the (simple) black&white image compression should be used.

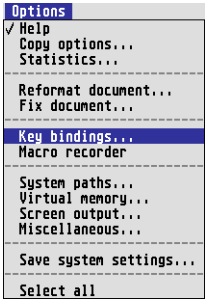
When saving ... Ignore / Embed fonts in the document

This switch is very important. You can embed all the fonts that are used in your documents (including any loadable font formats!) into your documents when saving them.

Previously it was important to keep an eye on every single precious byte of storage space. Today, Calamus documents are often very much larger, so the fonts form a smaller percentage of the total document size. It therefore makes sense to save documents with embedded fonts, even if you do not have to pass them on to your imagesetting service. You can reload all SL documents much easier, without time-wasting lengthy searches for rarely used fonts, because they are already in the document! Your imagesetting service will thank you too, if you ship your documents with embedded fonts for exposure, plot or print service matters.

Legally speaking you are covered. The loaded, serialized CFN fonts are encrypted in the document, and still bound to your Calamus serial number. An imagesetter service partner will still only be able to open your documents if he/she owns a Job manager module, so nothing has changed as far as license liability for using CFN fonts is concerned. PS Type 1 fonts and TrueType fonts are not serialized during loading or saving.

3.3.6 Key bindings editor

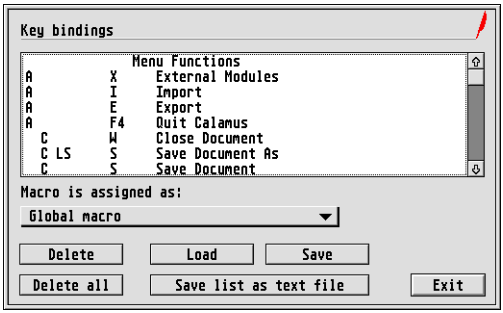


Calamus is well-known for its powerful macro recorder which allows you to record nearly every action which can be made in dialogs, menus and function panels, or performed by pressing keys on your keyboard. These macros can then have keys or key combinations assigned to them, which can in turn be used to control almost every function in Calamus. Performing complicated and lengthy actions with a single key stroke tremendously increases your work speed – once you have understood the concept.

Macro professionals who really scoot along at a very high work speed using every single feature of Calamus enjoy the separation of global and local macros.

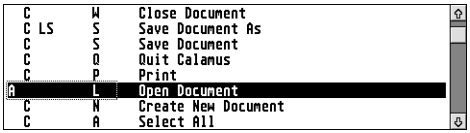
Calamus functions can be accessed via keyboard or mouse. Whenever the mouse is over a function (an icon or menu item), the key binding for accessing that function will appear in the Top row (see "Coordinates bar"). This Key bindings menu item will display all key bindings in the form of a list.

When you click on this menu item, the following dialog box will appear:



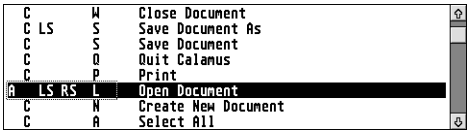
The start of each row specifies which key or key combinations have to be pressed to execute the listed operation (the "Key bindings"). The abbreviations "C", "A", "LS" and "RS" stand for [Control], [Alternate], [left Shift] and [right Shift], the modifier keys that have to be held down while the "hot key" specified in the next column is pressed. Note that Calamus can have separate assignments for the [Shift] keys at the bottom left and right of the keyboard.

The final column shows a description of the function that is called by this key combination. So look at the following line of the list, for example:



This means that if you type [L] while the [Alternate] key is held down, Calamus will call the file selector to load a document, just as if you had selected that function from the menu. There is an exception from this rule:

A combination like



means that the function "Load page" can be executed with the key [L] together with the [Alternate] key and either left or right [Shift] keys. You do not need to press both [Shift] keys together.

The explanatory text can also be edited. Double-click on the entry in the list and you can alter the text, then press the [Return] key to have it accepted.

The buttons at bottom left of this dialog allow you to delete individual key bindings or even (CAUTION!) all of the key bindings. You can also save or load the list of key bindings to/from disk. To do this click on the corresponding field; for deleting a key binding you have to click on the desired entry beforehand. After clicking on the fields "Load" or "Save" the file selector will appear, allowing you to enter the desired filename or select an old one.

Below this you are offered the option of saving the list of key bindings as a text file for printing out as a quick reference.

3.3.6.1 Global and local macros

Macros that you may have used in earlier Calamus versions are called "global macros". You probably have intuitively used many macros of the default Key bindings list from Calamus SL (for instance, [Alt][G] for "Group frames"). You probably have defined other ones as well and believe that your selection of keys are absolutely the best choice. (Your Calamus colleagues in the next town believe their macros are also the best.)

Did you get angry when you worked on a vector object in the vector edit mode and thoughtlessly pressed [Alt][K] (global macro for "Delete frames" from the Frame editing module)? Not the vector object, but the whole vector frame itself was lost!

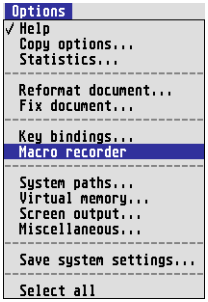
Now you can define local macros which only work in the current module, e.g. a separate [Alternate]+[K] for "Delete objects" in the Vector graphic module. Only when the module for which this macro was defined is active will this local macro be enabled. Local macro names are differentiated from global macros with a leading ">".

As the recording of local macros generally works in the same way as before, it makes little sense to alter the assignment of a local macro subsequently. Another module is likely to provide different functions in the corresponding function panel positions, nor will it provide identical dialogs.

Of course you can combine global and local macros to new "mega macros", provided this is technically possible. You can create macros to suit all your needs and wishes – and there should be plenty of key bindings available again.

Tip: The optional Macro manager module not only supports the automatic or manual sorting of the macros list in different ways, but also offers a small control window which provides macro lists on the Calamus desktop. You can set up a list of your favourite macros, and then use them directly from the control window panel.

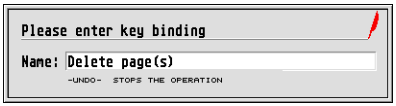
3.3.7 Macro recorder on/off



The Macro recorder allows you to record a sequence of mouse and keyboard actions and include them in the list of key bindings. i.e. assign them to a key combination. You will then be able to replay the entire sequence with this keystroke combination. This opens up a range of possibilities for automating document production. There is one exception however. You cannot record mouse clicks in the layout window, though you can simulate them using the Coordinate display.

To start the recorder, click on the menu item or type [Alternate]+[Esc]. Subsequent keyboard and mouse actions will be recorded. A checkmark will appear beside the menu entry to show that the recorder is active, and a small circle (recording icon) will appear at top left of the screen.

From now on Calamus will record all your keystrokes and mouse clicks (except those in the layout window). Click on the menu entry again or press [Alternate]+[Esc] to finish recording. At this point the following message will appear:

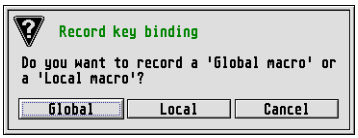


Here you can press the key combination that will later play back the just recorded function sequence of the macro. The [Undo] key allows you to cancel the recording function. Otherwise the function sequence will be included in the list of key bindings, under a name taken from the help-text for the first icon selected. You can change this name later as explained in the description of the "Key bindings editor" menu item. If you choose a key binding which already exists, you may elect to "Replace" it, select a "New key", or cancel the operation.

The Macro recorder can be started and stopped as we've seen with the appropriate "Options" menu entry. But because you may not stop the recorder this way if a dialog is still open (you cannot call any menu entry from an open dialog), Calamus offers a pre-defined shortcut [Alternate]+[Esc] for this function. (Please refer to the overview of all available pre-defined shortcuts in the file FIX_KEYS.CDK in the DOCUMENT folder.)

Note: MS Windows already uses this shortcut (for task switching in the Windows Task Bar) so if you're using the Windows version please press [Alt]+[^] instead. The "^" character is obtained with [Shift]+[6] on English Windows keyboards, but may be found directly below [Esc] on some foreign ones.

When you start to record a new macro, this alert box will appear first:



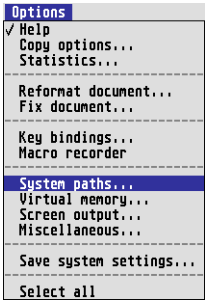
So you must first decide whether the macro to be recorded is to be active throughout the Calamus system ("Global"), or only in the module that was active at the time the macro recorder was started (!) ("Local"); this module also has to be active when the macro is replayed.

In case of doubt, stay with global macros at first.

When a recorded macro is playing back you will see a symbol that resembles the "Play" button on a cassette or video recorder at top left of the menu bar:

When you have defined a macro you may save it to the CALAMUS.CKT file. Click "Key bindings" and select "Save". The macro will be active for the rest of the current session and will be automatically activated when you load Calamus in future.

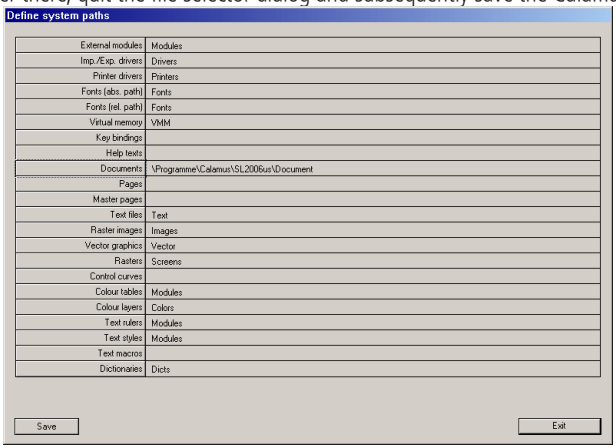
3.3.8 Set system paths



To keep its various directories (folders) manageable, Calamus subdivides the different types of files it uses in various ways. Your installed Calamus has a separate folder for each file type. With the "System paths" menu item you can determine where Calamus will look for or save various file types, or in which order files of this type will be shown in the file selector so that you can start looking for them. Normally, you will not want to change the pre-set folder names, but you may want to use more than one folder for document, text or graphics files. In that case, you can enter the specific pathname in this dialog box.

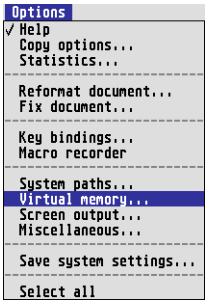
Note that Calamus will search all sub-folders inside the folder selected for Fonts. For other files, the file selector will show only the selected path.

In addition it may be sensible to sort the files by date, for instance. Then the newest file will head the list. To save the sort order for a file type permanently, you have to call up the relevant Calamus file selector via the "Search path" dialog and select the desired sort order there, quit the file selector dialog and subsequently save the Calamus setup.

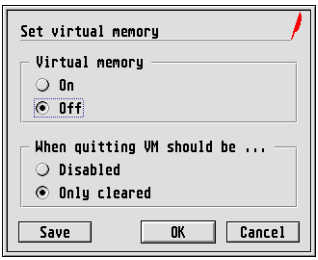


The operation goes like this: Click on the appropriate file type on the left side of the dialog box or on the folder name on the right. When the file selector described in the "File selection" chapter appears, you can move through different folders by clicking on the folder name or the close button until the desired folder is displayed. Click "OK" to enter the name of the current folder into the pathname list.

3.3.9 Set virtual memory



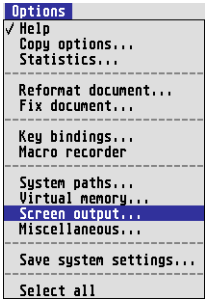
The "Virtual memory" menu entry allows you to decide how Calamus should use virtual memory (see "Concepts"). When you click on the menu entry, the following dialog box will appear:



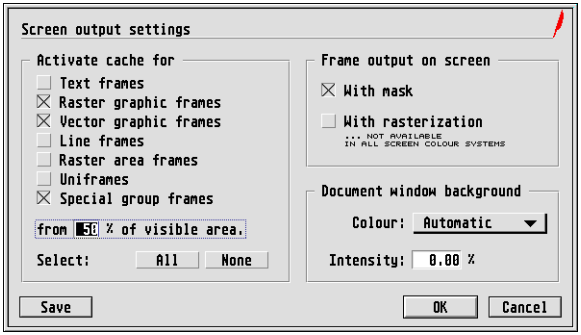
Normally when using a hard disk there is no need these days to switch virtual memory on, but if you work with large documents and have sufficient free space on a (fast) hard drive then you can also switch virtual memory on. If you do, your document size will no longer be limited to the free RAM in your computer. Calamus sets up virtual memory on the hard drive in a series of folders, and we recommend that you first set up a "top level" folder named VIRTUAL or similar, into which Calamus can generate these sub-folders.

The second pair of buttons tell Calamus what to do with the folders when you quit. If you click on "Disabled", Calamus will erase both folders and their contents from the hard drive. If you click on "Only cleared", Calamus will erase the files from the folders, but the empty folders will remain, so that Calamus will not have to recreate the folders the next time it runs. This can save a lot of time, especially with older operating systems.

3.3.10 Screen output settings



In order to speed up the display of text and graphics, Calamus uses cache memory. Recalculation (formatting, rotating, mirroring, enlarging, stretching, etc.) of the standard ingredients (text, raster graphics, greyscale images, vector graphics, lines and raster areas) takes more time than drawing them. Whenever Calamus calculates a new object with cache memory switched on, it puts a copy of it into the cache, so that the program will not have to calculate the next time it draws an identical object. Prove it for yourself by moving a text frame with the cache switched on, and again with it switched off.



In this dialog you can decide if and which frames should use Calamus' cache mechanism. For example, if the button for "Text frames" is crossed, then Calamus will first output text frames to the memory buffers ("caches"), then draw them on screen. So the very first screen build-up will be slower than subsequent ones, where the the "image" of the ready drawn frame can be fetched directly from the cache, and then drawn very quickly on the screen. We recommend, by way of a test on your current computer, that you try setting the cache on and off for the various sorts of frames, to give you an idea of whether the mechanism suits your working methods or not. In general, the cache only makes sense on faster computers where, for example, you only want to leaf through a large document. On slower computers, or in the WindowsPack, it can make better sense to switch the caches off. Building caches takes time, and the more caches that have to be built the more the slowdown. The agony of picking the right compromises is left to you!

In addition, you can define for all frame types if caching should start only if x per cent of the frame's area is visible. It can make more sense to cache only at larger screen magnifications. Try the effects of setting the value for visible screen area to 25% or even as low as 10%, and test for yourself the effect on screen build-up behaviour.

Frame output can be further defined:

With mask

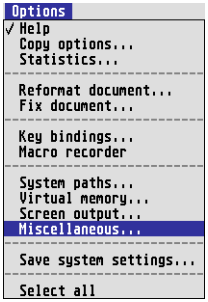
Means that frames set to "opaque" will in each case also be drawn as opaque. This means that no matter how complex the document construction, for every opaque frame a white (!) background will be drawn over its entire area, and then the frame contents on the now cut out area. This constant drawing of underlying white areas can be too slow in some cases, and only annoy. In this case, switch it off here. But note that opaque frames will then no longer be displayed correctly (only on the screen!), appearing as if they were transparent.

Frame output on screen with rasterization

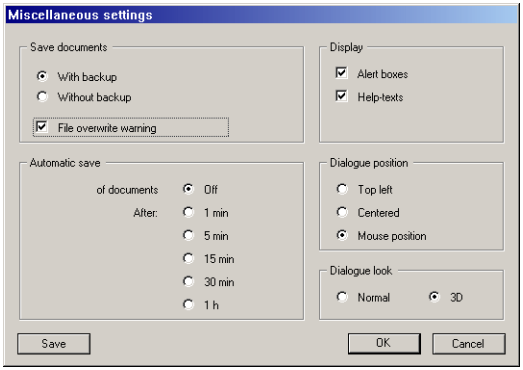
In former versions of Calamus, this switch was used in order to output raster dots in 256 grayscale mode directly into the document window. A smarter way of viewing the raster points is the print sheet view. Therefore, the printer driver has to be set as if it should rasterize on output. You no longer need this switch here. It will be removed in a coming version of Calamus.

In the field **"Document window background",** you can define the background color of the document window. The edit field "Intensity" defines how intensive the colour should be. We recommend you to not choose a very flashy or dark colour, because the hard contrast to the white document page background could tire your eyes. The option "Automatic" leaves Calamus to set the colour. On black&white screens you will get a 25% grey raster, and on colour screens the background will be set to light grey.

3.3.11 Miscellaneous settings



The dialog box which appears when you click on the "Miscellaneous" menu item allows you to set certain parameters which are valid throughout the program:



First, you can decide whether Calamus should keep a backup copy when it saves a document. For more information, see the description of the menu item "Save" in the File menu.

If you set the switch "File overwrite warning", you will be asked explicitely each time before a file is going to be overwritten. Exceptions from the rule are the file menu function "Save" (different from "Save as") and the "Automatic save" (see below).

You probably know that if there is a power failure when you are editing a document, or the computer crashes for some reason, you will lose all changes made since the last time you saved your work. There is only one way to limit this danger: save your work regularly. Unfortunately, we often forget about saving until it is too late. Calamus can help out here. You can decide to have the program save your document every 60, 30, 15 or 5 minutes, or even every minute, automatically to disk. These automatic saves can only work if you have named the document; the first time you must name and save it

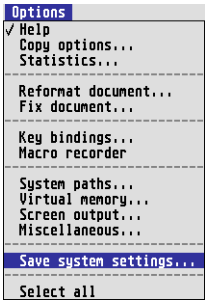
manually. To use this function, you would be wise to save and name a document as soon as you create it.

You can decide whether Calamus will show "Alert" and "Help" messages. It is fairly safe to shut off Help messages if you understand the program, but only very advanced users should consider shutting off Alert messages. For example, when you want to quit Calamus, an alert box gives you the chance to save your document.

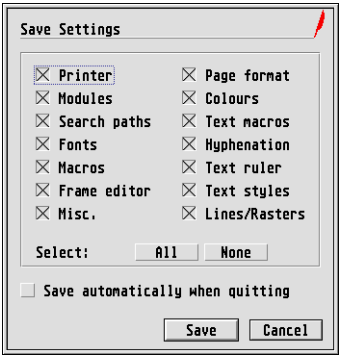
The last three buttons in this dialog box are especially useful if you have a full page monitor. Due to the high resolution of such monitors, larger mouse movements are needed to steer the cursor across the screen. It can become tiresome to move the cursor from a corner of the screen to an alert or dialog box in the middle just to click on a button. This feature allows alert and dialog boxes to appear at the current mouse position. You may also make them appear at the top left of the screen near the drop-down menus and icons, or in the centre of the screen.

You can also decide whether dialogs should be shown in "normal" or "3D look". The 3D look must be supported by your operating system. If it is not, this option is disabled (generally, all MagiC versions on screens with 256 or more colours support 3D look).

3.3.12 Save system setup



All the settings that you make in the various dialog boxes during a working session with Calamus can be saved with this menu item into the file "CALAMUS.SET". Clicking on this item calls the following dialog box:



The settings are divided into 14 groups which can be individually saved.
The groups are:

Printer:
All settings in the "Print parameters" dialog box.

Modules:
All settings in the dialog box "External modules" and the dialog/alert box positions.

Search paths:
All paths and sort orders set in the "System paths" dialog box.

Fonts:
The currently loaded fonts.

Macros:
Key combinations chosen in the Text module for non-keyboard characters and also the key bindings assigned elsewhere in the Calamus program.

Frame editor:
The currently selected frame type in the Frame module, snap options, rotation angle, visible elements and copy type; in short, all the settings in the Frame module.

Miscellaneous:

The values in the "Miscellaneous settings" dialog box, as well as the settings for Help messages, user-defined viewing size and other values, such as footnote characteristics, frame caches, and so on.

Page format:

All settings made in the corresponding dialog box.

Colours:

The current colour list.

Text macros:

The list of defined text macros.

Hyphenation:

The values defined in the dialog box "Set hyphenation" (see Text module, "Dictionaries" function group).

Text ruler:

The current text ruler (see Text module).

Text styles:

The text style settings, text style list and the current text sizes (see Text module).

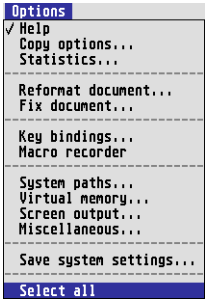
Lines/Rasters:

The settings in the Lines and Raster area modules.

Click on a checkbox so that it is crossed to add its associated group of settings to the items to be saved, or to remove it (uncrossed). The "All" button will select all groups, whilst "None" will turn off all groups. The "Save" button will save the selected settings to disk or hard drive. Calamus will load the saved settings the next time you start the program.

Activate the checkbox "Save automatically when quitting" if you would like Calamus to save the current settings on exiting Calamus. All the settings will be saved in the current SET file without further ado.

3.3.13 Select all

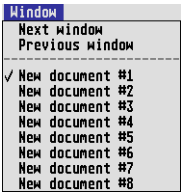


This function will behave differently depending on which module you are in. In the Text module for example, this menu entry will select all text in the current piping chain. You can, for example, use this function to convert all text to the same font, copy the text to the clipboard, or delete it all.

In the Frame module this menu item functions slightly differently: If no frames are selected, then "Select all" will select every frame on the current page. If one or more frames are selected, this function will select only frames of the type selected.

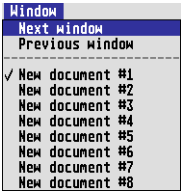
This final entry in the Options menu is not only very smart, because it knows what is to be selected in the current situation, but it can be used directly from every module in Calamus SL (for instance, call it from Eddie to select text in an Eddie window).

3.4 Window menu



In this menu you will find entries with which you can "top" (bring to the front) individual document windows so that you can edit them.

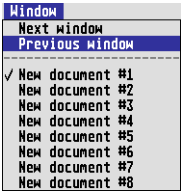
3.4.1 Next window



This menu item brings the next window (in a logical sequence) to the front. This window could be an Eddie text window as well as a document window.

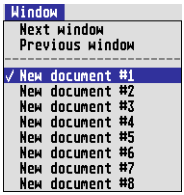
This menu item recommends itself as a keyboard shortcut, normally this is [Control]+[W].

3.4.2 Previous window



This menu item brings the previous window (in a logical sequence) to the front. This window could be an Eddie text window as well as a document window.

3.4.3 Documents in memory

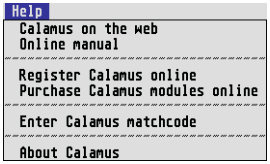


Clicking on "Document 1" and so on provides a convenient way to bring that selected document "to the front" when there are two or more documents in memory.

Calamus can manage any number of document windows at a time, but after the 16th no further window names can be show. In this case, please use the menu items "Next window" and "Previous window" in order to fetch the required document to the front.

If your TOS system isn't capable of handling sufficient GEM windows, then you should install a multitasking system such as MagiC, or at least install the GEM window extension WinX, supplied in your Calamus installation.

3.5 Help menu



This menu offers help around Calamus. Some of the menu entries are available in certain situations only.

3.5.1 Calamus on the web

If you work with Calamus under Windows, use this menu entry in order to access our Calamus website **http://www.calamus.net/us/** directly.

3.5.2 Online manual

If you use Calamus under Windows, use this menu function to get access to our Calamus online manual in our website **http://man.calamus.net/us/** directly.

3.5.3 Register Calamus online

If you use a lite edition of Calamus under Windows (e.g. Calamus L or SE), this menu item opens a registry form in our website **www.calamus.net** where you can register this Calamus version.

Only registered Calamus users get full support, product rebates and the oportunity to enhancing Calamus with upgrades and additional modules.

3.5.4 Purchase Calamus modules online

When you use Calamus under Windows, use this menu entry if you want to get access to our product information pages for purchase modules in our website **www.calamus.net/us/** where you can directly purchase these products.

3.5.5 Enter Calamus matchcode

If your Calamus still has to be released with a registry matchcode, you will perhaps be asked for this matchcode at every program launch. Alternatively you can open the registry dialog here, at any time when Calamus has already been started. Enter your valid matchcode then.

If your Calamus has been registered and released per matchcode, this menu point is disabled.

3.5.6 About Calamus

Windows users expect to call the program's info dialog in the Help menu while TOS programs offer their own program's menu title therefore. This menu entry opens the Calamus info dialog exactly like the menu entry "Info about Calamus" in the Calamus menu does.

4 Top row

The Top row: Everything important with one click

The Top row (beneath the Menu bar) is Calamus' function centre. Here you can call up the most important functions, find out the position and size of frames, and select the Calamus module you want to work with.

First, you see the icons representing up to 10 modules. In the default configuration, the modules of the standard package are already installed in the most useful order, though you can of course change them to suit your own requirements.

Calamus has room for additional modules. You can use the arrows to scroll the last five back and forth to see extra modules. The first five modules are always visible. The standard modules supplied with Calamus are described in this manual, grouped by theme. Each external module purchased has its own documentation.

It is possible to place the two parts of the Top row – the Module bar and Magnification/Coordinates bar – at any desired position of the Calamus desktop. (You can grab these windows at their left edge to move them, while double-clicking on the so-called "Mover" can minimise them.) A check is made on launching Calamus whether the positions of these two windows stored in the SET file can be used in the current screen resolution. If necessary the window positions will be re-set to sensible values.

The Module bar as well as the Coordinates bar are real windows, so they can be moved. Activate the window by clicking on the vertical bar at the left edge of the Module bar or Coordinates bar. The bar will then turn grey. If you keep the mouse button held down over the bar, you can move the window to any desired position on the screen.

Tip: A double-click on the active bar shrinks the window down to the size of the bar. This may be desirable in some situations to win even more space on the screen to display other things. A repeat double-click "opens" the shrunk window once more.

Tip: By clicking on an empty module icon field in the Top row you can call up the "External modules" dialog directly, which is otherwise called from the File menu.

4.1 Scroll external modules towards start

With for example three modules loaded, the module list will have two arrow icons at the right hand edge, with which the module icons may be scrolled left and right, starting from the sixth icon.

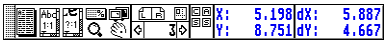
A click on the upper arrow moves the module list one entry towards the start of the list. The first five icon positions are fixed, shown by a somewhat thicker vertical divider between the fifth and sixth positions. The reason for keeping the first five icons statically displayed is that one may keep the most important modules always on display. You can freely choose for yourself which are the most important modules.

4.2 Scroll external modules towards end

With for example three modules loaded, the module list will have two arrow icons at the right hand edge, with which the module icons may be scrolled left and right, starting from the sixth icon.

A click on the lower arrow moves the module list one entry towards the end of the list. The first five icon positions are fixed, shown by a somewhat thicker vertical divider between the fifth and sixth positions. The reason for keeping the first five icons statically displayed is that one may keep the most important modules always on display. You can freely choose for yourself which are the most important modules.

5 Coordinates bar



The Coordinates bar, as its name indicates, deals with various aspect of coordination in the document. Page display, page selection and frame sizes are the most important headings here.

The Coordinates bar is a real window, so it can be moved. You can activate the window with a click on the vertical bar at the left of the Coordinates bar. The bar will then turn grey. If you keep the mouse button held down over the bar, you can move the Coordinates bar window to any desired position on the screen.

Tip: A double-click on the active bar shrinks the window down to the size of the bar. This may be desirable in some situations to win even more space on the screen to display other things. A repeat double-click "opens" the shrunk window once more.

5.1 Display size

The first three icons allow you to set display size.

You can switch among these three magnifications (Full page, 1:1 and User-defined) without clicking on the icons. Since users often want to magnify a small area of the screen briefly, and then return to the previous view, it is possible to select both the area and magnification at the same time. Hold down the [Control] or [Alternate] key and click the mouse on the desired area of your document. The document will be shown at a new magnification in that area. Use the [Control] key to show the page at 1:1 magnification, or the [Alternate] key to show it at the user-defined magnification. Both actions will show the part of the page where you clicked the mouse. Use [Control] or [Alternate] with the mouse a second time to return to the previous magnification.

5.1.1 Full page

With this icon you can choose to display the entire page. On a 12 inch screen you will probably not be able to read the text, since the characters will be only one or two screen pixels high.

5.1.2 Current size

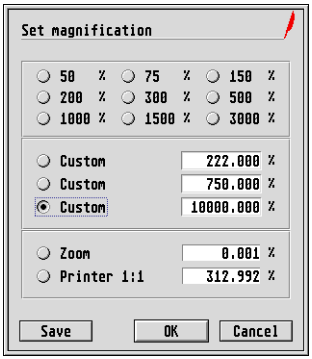
This icon shows the document 1:1, its actual size. This means that everything will appear on the screen in the same size (but not the same resolution) as the final printout. If the screen display has been correctly adjusted (see "System parameters" module), then you can measure items on the screen with an ordinary ruler. Only a full-page monitor can show an entire page at 1:1 display size.

5.1.3 User-defined size

Choose this icon in order to see details which are still fuzzy at 1:1 due to the resolution of the monitor, or to see the document pixel-by-pixel as it will appear in the final printout. The magnification can be set as described below.

5.1.4 Set magnification

 The next icon allows you to set the document display magnification for the user-defined setting. When you click on the icon, the following dialog box will appear:



There are 9 pre-defined magnifications you can click on, or you may set and select 3 custom magnifications.

To define a custom magnification, click on the percent sign, clear the field with the [Esc] key, and enter the desired number.

To select a custom magnification, click on the "Custom" button beside the appropriate percentage.

The final two values in the set display dialog box show the last magnification size used by the "Magnifying glass" function (see below), and the magnification at which each pixel on the screen will correspond to a pixel on the printer.

By using the "Printer 1:1" display, you can control the printer output pixel-by-pixel. Since this magnification depends on the printer, it is set by Calamus when you load the printer driver and cannot be changed.

One suggestion for working with the three user-defined magnifications: if you usually work with different printers (for example, draft copies on a laser printer and final copies on an imagesetter), you can enter the different magnifications here. This way, you can select a Custom button to match the imagesetter's resolution while you have a printer driver loaded that does not support that resolution (see "File menu / Print").

5.2 Page coordination

5.2.1 Switch to second monitor

 The "Second monitor" function allows you to show the current page on a second monitor connected to your computer through a high-resolution colour graphics card. You should use this function if the card is not supported under GEM or is too slow. An optional screen driver module is required.

Alternatively, from here (and only here!) you can call the Colour/Grey switch module. The operation of this module is described in its documentation.

5.2.2 Zoom

 If you click on the "Zoom" icon, you can mark an area on the screen and magnify it to fill the entire window. First, click on the "Zoom" icon; the mouse pointer will turn into a magnifying glass. Next, use the magnifying glass to draw a box the same way that you would draw a frame: So click the left mouse button once to set the first corner and a second time to set the diagonally opposite corner. You can abort the operation by clicking the right mouse button.

Note: Since you can click on the window's scroll bars during this operation, you can define an area that is larger than the window itself. This way you can also shrink the display by any desired amount.

5.2.3 Move document

 Clicking on the hand icon allows you to move the visible part of the current page within the window without the need to operate any of the window slider gadgets.

To exit from this mode, click again on this icon or simply right-click with the mouse (as often used in Calamus to change modes).

5.2.4 Previous page

Clicking on this icon turns to the previous page in the document. Once page 1 of the current document has been reached, this icon becomes greyed out and can no longer be selected.

In double page mode, this action will only automatically turn the page if the current page is the left-hand one. Paging back will then show the physical previous double page. Please see also the index icons "Left page" and "Right page".

5.2.5 Next page

Clicking on this icon turns to the next page in the document. Once the last page of the current document has been reached, this icon becomes greyed out and can no longer be selected.

In double page mode, this action will only automatically turn the page if the current page is the right-hand one. Paging forward will then show the physical next double page. Please see also the index icons "Left page" and "Right page".

5.2.6 Left page

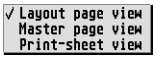
 If you are working with a double page document such as a book, the display will also show whether you are working on a left-hand or right-hand page. The first page of such a document is always a right-hand page; subsequent pages will alternate between left and right pages. More details and guidance on handling double pages, and a description of the resultant problems can be found in the section "Page module".

5.2.7 Right page

 If you are working with a double page document such as a book, the display will also show whether you are working on a left-hand or right-hand page. The first page of such a document is always a right-hand page; subsequent pages will alternate between left and right pages. More details and guidance on handling double pages, and a description of the resultant problems can be found in the section "Page module".

5.2.8 Master page/Layout page/Print preview

 Please note the icon for switching to various views. Clicking on this icon opens a popup menu in which you can choose what you would like to see:



The current viewing mode is shown ticked in the popup menu. You can select another one just by clicking on a new viewing mode entry.

This icon is the only method of recording a viewing mode switch as a macro!

It provides a fast and easy way to switch from the normal document page to the master page or to a print preview, so that you can continue to work in the corresponding mode. Further details about the functions of master pages and their editing can be found in the chapter "Page module, Master page editing".

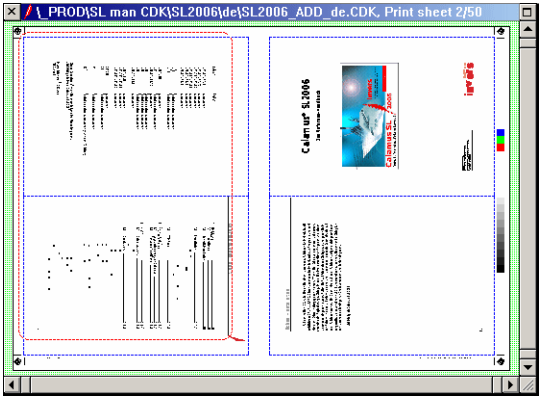
5.2.8.1 Print preview

If you have chosen this viewing mode, then the document will be displayed in the current document window exactly as it would be printed with the current printer settings. Thanks to this you have extremely valuable control possibilities that allow you to check your print parameters. Apart from the "Inverse output" parameter you can check all other

parameters of the Print dialog, including the colour separation, rasterizing, imposition (mount) settings and fine-data incorporation.

If several pages are shown simultaneously in the Print preview (e.g. in double-page mode or because an imposition scheme has been activated), then a double-click of the left mouse button on a page calls up the relevant page in the normal document layout view. This saves you from having to call up the View popup again to perform this change.

If in addition to the double-click you hold down a [Shift] key, you will land up directly in the master page that is assigned to the selected document page.



5.2.9 Set page number

This is the page number display and input field. You can use the "arrow" icons to leaf through the pages of a Calamus document just like going through a book. The current page number will always be displayed between them. If you click on the number, you can change it and Calamus will display that page of the document. This page number will not necessarily be the same as the numeral which will be printed on the page, since it is the number of the physical page in the current document, starting from 1.

Tip: If you want to jump to the last page in a document but you aren't sure how many pages there are, simply enter a large number in this field (max. 999,999). Calamus will automatically jump to the last physically available page. However, in most cases you can directly read off the number of pages from the current document's window title line. The Navigator module offers the possibility of adding a navigation list to the document window, which provides a very convenient way of navigating through a document. Refer to the Navigator module's documentation for further details.

5.3 Key bindings display

The last icon of the Top row shows the key binding which will call up the function currently under the mouse cursor. The boxes represent the [Control], [Alternate], left [Shift] and right [Shift] keys. Left [Shift] is the Shift key on the bottom left side of the keyboard, by the [Control] key, while right [Shift] is the Shift key on the right side of the main part of the keyboard.

To use a key binding, hold down whichever of the [Control], [Alternate], left [Shift] or right [Shift] keys is displayed in inverse video. Then type the "hot key" which appears in the bottom of the icon box.

5.3.1 [Control] key binding

Keyboard shortcuts using [Control] key combinations offer themselves customarily for providing keystroke alternatives for menu or icon entries or for essential basic functions.

5.3.2 [Alternate] key binding

Keyboard shortcuts using [Alternate] key combinations offer themselves customarily for providing keystroke alternatives for menu or icon entries or for essential basic functions.

Note: In the WindowsPack, various keyboard shortcuts in combination with the [Alt(ernate)] key have been defined which are already reserved for Windows itself. These must be redefined onto other combinations of keys.

5.3.3 Left [Shift] key binding

Keyboard shortcuts using left [Shift] key combinations offer themselves customarily for switching functions or extended functions.

If you call up the Page module with [F2] (function group "Page mounting") for example, then it's convenient to call its second function group (Master page editing) with [Shift]+[F2].

5.3.4 Right [Shift] key binding

Keyboard shortcuts using right [Shift] key combinations offer themselves for assigning unusual, specially critical or personally important functions to keyboard shortcuts. This includes all "destructive" larger macros, for instance. Calamus can differentiate between the left and right [Shift] keys – make use of this!

5.3.5 Hot key for key binding

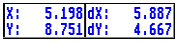
Under the four icons for the modifier keys you can see the actual hot key that is to be pressed in combination with the inverted modifier key to execute the action. If the character "#" appears before the key, it refers to a key on the numeric keypad rather than on the main keyboard. As there is only space in the field for three characters, some key names have had to be abbreviated.

Valid are:

RET – [Return] (or [Enter] on some PCs, main keyboard
ENT – [Enter], numeric keypad
BCK – [Backspace]
HLP – [Help]
INS – [Insert]
UND – [Undo]
CLR – [ClrHome] or [Pos1]

Please see the chapter "Options menu / Key bindings editor" for information on defining key bindings.

5.4 Coordinates display

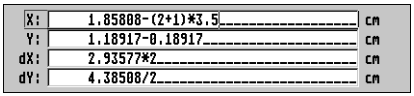


The last four boxes in the Top row allow you to see or change the position and size of a frame. X and Y show the horizontal and vertical position of the top left corner of a frame. The coordinates also reflect the current position of the cursor except when it is outside the working window. If a text ruler is selected in the Text module, "X" is the ruler's horizontal offset from the edge of the frame, and "Y" is empty (see Text module). When you drag out a frame, its size will appear in the dX and dY fields. The units of measurement in the Coordinate display can be set in the Page module.

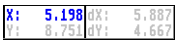
The mouse is not the only way to set the size or position of a frame. You can edit the fields directly in the Coordinate display. First, select a frame using the mouse. Next, click on the Coordinate display. Now you can enter new measurements directly from the keyboard, using the arrow keys or mouse to move from field to field. This method is more precise and flexible than using the layout rulers which may be placed around the screen; layout rulers are better used for an overview than for precise measurement. If you make a mistake entering new values, press the [Undo] key (see below) to restore the old ones. Pressing [Return] or [Enter] accepts the values input.

Some modules also use the coordinates report area to display their own data, e.g. FrankLIN (percentage values of the control curve coordinates), or the Vector graphic editor (rotation angle for vector objects), etc. The Coordinate display input field also offers arithmetic functions:

As well as the four basic operations of arithmetic addition (+), subtraction (-), multiplication (*) and division (/), parentheses and exponential calculation (^) are available. Naturally the normal rules of addition/subtraction before multiplication/division are observed. The input fields also show the unit of measurement being used. As soon as you click on one of the four coordinate values, an input mask opens containing long input fields for formulae:



5.4.1 X-position frame/cursor



This field (usually) shows the X position, thus the horizontal position of the mouse or the upper left corner of the selected frame.

Double-clicking on the field brings up a dialog for entering more precise values or formulae from the keyboard. You can terminate the input with [Return] or [Enter]. As with all Calamus dialogs they may be closed with [Undo], in which case any alteration or input of values are discarded.

In various modules which use the coordinate display for their output, both values and units can be different from the Frame module.

Tip: If you want to call the coordinate display by keyboard macro, it's recommended to record a mouse click in this field, then the cursor will land first in this field.

5.4.2 Y-position frame/cursor

This field shows (usually) the Y position, thus the vertical position of the mouse or the upper left corner of the selected frame.

Double-clicking on the field brings up a dialog for entering more precise values from the keyboard. You can terminate the input of numbers and formulae with [Return] or [Enter]. As with all Calamus dialogs they may be closed with [Undo], in which case any alteration or input of values are discarded.

In various modules which use the coordinate display for their output, both values and units can be different from the Frame editing module.

5.4.3 dX: Frame width

This field shows (usually) the width of the selected frame while it is being drawn or having its size altered.

Double-clicking on the field brings up a dialog for entering more precise values from the keyboard. You can terminate the input of numbers and formulae with [Return] or [Enter]. As with all Calamus dialogs they may be closed with [Undo], in which case any alteration or input of values are discarded.

In various modules which use the coordinate display for their output, both values and units can be different from the Frame editing module.

5.4.4 dY: Frame height

This field shows (usually) the height of the selected frame while it is being drawn or having its size altered.

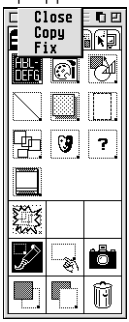
Double-clicking on the field brings up a dialog for entering more precise values from the keyboard. You can terminate the input of numbers and formulae with [Return] or [Enter]. As with all Calamus dialogs they may be closed with [Undo], in which case any alteration or input of values are discarded.

In various modules which use the coordinate display for their output, both values and units can be different from the Frame editing module.

6 Function panel

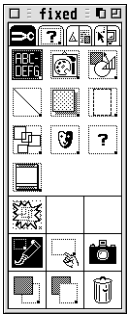
Calamus offers you a bewildering number of functions and possibilities for the processing and organisation of your documents. With the loadable external modules you can substantially increase this function range still further. In order to keep the abundance of functions manageable, these have been split into several large areas or "spheres" of operation, the so-called modules. Each module consists of up to 16 function groups, each of which can contain up to 21 functions. The principle resembles a file folder, within which a number of files can be summarised under a header. Additionally, module functions are accommodated in drop-down menus and in the Top row already described.

Calamus SL always has at least one function panel. This function panel can be moved on the desktop by clicking and dragging its window title. In order to open a second function panel, click on the top right "Fuller" window gadget of the first function panel. A popup appears in which you choose the "Copy" entry:



Following this a new, second function panel will be situated on top of the first, and can be freely positioned by you on the desktop. If you then wish to close one of several function panels, click again on the "Fuller" and choose the "Close" entry in the popup. Naturally, you may also click directly on the "Closer" gadget at the top left corner of a function panel window in order to close a function panel (apart from the last).

If you want a certain function panel to always show only a given module, set everything in this function panel the way you would like to see it from now on, and select "Fix" in the popup. Immediately afterwards the function panel window title line shows "fixed".



To make the settings or modifications of the function panels permanent and also to be active at the next program start, save the Calamus setup file in the usual way (Options menu, "Save system settings").

To change between the different modules you click on a module icon in the Top row. Its first (or the last selected function group for this module) appears in the current function panel.

You can delete all modules except for the clipboard module. All modules (including the clipboard module) can be replaced by others. More information can be found in the section "File menu, External modules".

6.1 Function group

Each module can be divided into up to 16 function groups, as already described. One of these function groups is always displayed in the so-called function panel on the left of the screen. Between the function panel and the title line you see up to eight switch-icons for switching between the function groups.

A single exception to this partitioning until now is the Frame editing module. Depending on what type of frame is active, the function group "Special functions" contains different frame functions – or even none! Special functions exist for text, raster graphics, vector graphics, tiling and masking frames, but not for groups, lines and raster area frames.


Function group Special functions


Special functions for text frames


Special functions for raster graphic frames


Special functions for vector graphic frames


Special functions for page tile frames

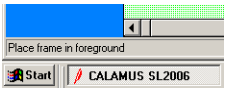

Special functions for mask frames

Select the function group with the switch-icons between the function panel and title line as already mentioned. Calamus remembers for each module which function group you used last and displays this when you call this module again. The functions shown in the function panel can be executed by simply clicking on the icon.

6.2 Help-text display

When you move the mouse over the function panel or Top row, a short description of the function for the icon that the mouse cursor is pointing to is inserted in the top right corner of the menu bar.

In the SL WindowsPack, if the FullScreen mode was not selected, the help text for the function that the mouse is covering is shown in the bottom left corner of the window information line, as is usual under Windows.



6.3 Keyboard shortcut display

With many functions, a key combination appears in the coordinates bar with which you can also execute this function. The squares marked "C" and "A" represent the [Control] and [Alternate] keys here, the two "S" squares are the left and right [Shift] keys; one or more of these are shown in inverse video for use together with the key displayed below.

The use of such a key combination is possible at any time. You can thus execute a function in the Frame editing module whilst working in the Text style module without having to change to the Frame editing module first. As mentioned earlier, you can assign the key combinations yourself in the menu item "Options, Key bindings".

7 Document windows

The Calamus document windows display, especially in magnified mode, a clip (portion) of the document. The clipped area can be moved with the horizontal and vertical sliders up to the edge of the document (or the edge of the layout area) at most. If you use the scroll-bar arrows instead of the sliders to move the window's clipping area, you can exceed this limit and even scroll to outside the document itself.

Usually you can only move the Calamus windows by grabbing the title line at the top of the window with the mouse and dragging it while holding down the left mouse button. Some TOS extensions in the meantime also offer dragging by grabbing the (thickened) side or bottom edges of the window.

Unlike in MS-Windows, Calamus windows can have their size increased or reduced only with the so-called "sizer" gadget at the bottom right corner of the window border. Also, unlike in MS-Windows, the "Closer" gadget is at top left (instead of right with Windows) and the "Fuller" to open the window up to its maximum size at top right. In the SL-WindowsPack the corresponding Windows icons have been adapted, so that users transferring from Windows would do not so easily make mistakes using the rather different window gadgets.

Calamus document windows give a direct indication of the size of the current document, as the window title line shows not just the current document name complete with its access path, but also the current page and the total number of pages. A small but very practical new feature, we believe. In addition, the page control buttons in the Coordinate bar show grey arrows as soon as you have reached the first or last page of a document while browsing through it.

If your TOS system supports the "iconify" feature, you will see a small triangle symbol at the right of the title line of the document window. If you click on this triangle, then the corresponding document window will be iconified. This means that afterwards a tiny "emblem" of the real large window will lie at the lower left corner of the screen. In contrast to other programs, Calamus iconifies its windows in such a manner that the document contents can be edited even in this mini-window! A double-click on such an iconified window opens it again to its full size.

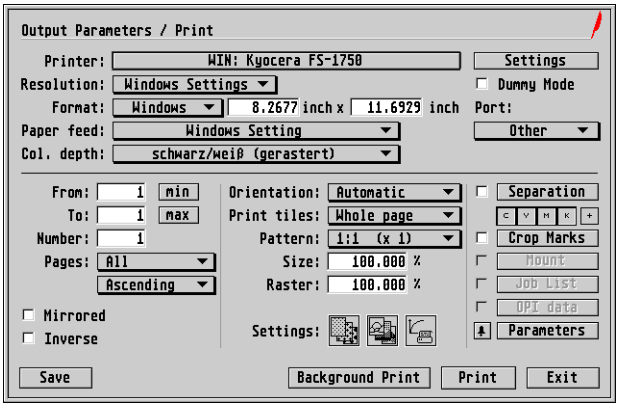
If your TOS system supports the so-called "backdrop button", you will see at top right of the document window before the closer (or before the iconification triangle if present) a further symbol which usually consists of two offset mini-boxes. Clicking on this places the current window right at the back of other windows. With this function it is very easy to "top" (bring to the front) windows lying "at the back" by moving the currently "topped" window right to the back with mouse-clicks on this gadget until the desired window is topped.

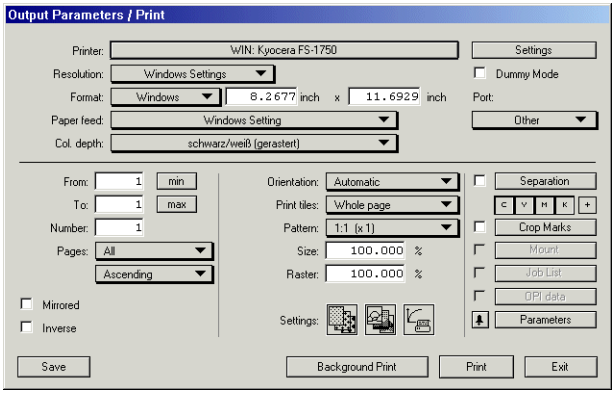
8 Dialogs

This documentation about Calamus basically showd dialog screenshots in the Calamus "Classic look" because the system font can be read and printed better. If you use Calamus WinPack, the same dialogs look rather like Windows dialogs. You can even activate the Classic mode in the Calamus WinPack at any time. Besides, you can change the system font which is used by the Calamus WinPack then, by chosing other *.FNT files from the folder <Calamus>\System\Classic\. Copy them to the System folder.

Classic and Windows look are generated from the same resources. This makes Calamus dialogs only look close to Windows or TOS dialogs.

Here a sample for the different looks of the Print dialog:





Calamus dialogs are somewhat different from "normal" dialogs that you know from your operating system (Windows, MacOS, TOS). Calamus dialogs can be grabbed and then moved around the screen by holding down the left mouse button over any "free" area inside the dialog. The dialogs remain "visible" during move operations (providing there is sufficient free RAM), and will no longer be represented only by a grey outline.

If the dialog contains editable fields then the contents of the currently active input field will be displayed in inverse video, and can be deleted and overwritten directly with your keyboard input. If you want to retain the text present in the editable field and only wish to alter it, then you should first press the [Left arrow] or [Right arrow] key to cancel the overwrite mode. To position the input cursor, again use the [Left arrow] or [Right arrow] keys. Alternatively you can click the mouse in the editable field, which inserts the cursor at the position clicked on. By pressing the [Esc] key the contents of the editable field can be cleared in the insert mode as well.

Important: If the input cursor is not positioned in an editable field (or if the dialog has no editable field at all), then you can close the dialog with the [Esc] key as if you had clicked on the "Cancel" button.

Where appropriate, there is a "Save" button in each dialog which leads directly to the "Save settings" dialog so that you can save any parameters that have been changed.

If you see vertical sliders in dialogs beside lists or for setting values (e.g. the Edit colour list dialog, the file selector or the "External modules" dialog), you can jump straight to the beginning or end of the list with a double-click on one of the arrow buttons at the end of the sliders. When loading modules, drivers and fonts, the list automatically jumps to its end so you can for example execute modules after loading much easier.

Popups in dialogs now open with the last selected value directly under the mouse cursor, and they can also be operated by the keyboard ([Space] selects the active entry).

All dialog objects can also be operated directly from the keyboard, similar to Windows. All lists in dialogs can also be operated from the keyboard.

A so-called "Object cursor" is available which gives keyboard access to all Calamus dialogs as per Windows. This makes working in many steps which require dialog editing much easier. The biggest advantage is in the scrolling of lists in all dialogs.

Keyboard operation can be switched off in the first parameter block (#SystemParameters) in the CALAMUS.SET file. Search for the entry "DialogKeyHandling" and replace the value "On" with "Off".

8.1 Fixed key assignments in dialogs

In all Calamus dialogs the keys [Tab], [Delete], [Backspace], [ClrHome], [Insert], [Return], [Enter], [Help], [Undo], [Esc], [Control]+[X/C/V], [Up/Down/Left/Right arrow] have fixed assignments and can no longer be overwritten by free key assignments. So in dialogs the fixed key assignments take priority.

Example:
You can use the [Delete] key for a local macro in the Frame editor for the deletion of frames, for instance, without restricting its functionality in dialogs.

Here are the key assignments for the new dialog operation:

[Tab]

The Object cursor jumps to the next dialog object (which will be surrounded with a dotted line rectangle), or back to the first editable dialog object if the last dialog object had been the current one (cycling).

[Tab]+[Shift]

The Object cursor jumps to the previous dialog object or to the last editable dialog object if the first dialog object had been the current one (cycling).

[Up/Down arrow keys]

The previous/next element within an object group will be selected:

- Objects in a group of radio buttons, or
- Objects in a scrollable list, or
- Editable fields, if there is more than one in the dialog.

[ClrHome]/[Pos1]

The Object cursor jumps to the first dialog object (very interesting for the Macro recorder!).

[ClrHome]/[Pos1]+[Shift]

The Object cursor jumps to the last dialog object (very interesting for the Macro recorder!).

[Space]

Execute selection (simulates a mouse click). This allows for instance the operation of buttons with [Space] even if they are not the "default", which would make them operable with the [Return] key. Checkboxes can also be switched on and off in this manner. In text editable fields of course "only" a space will be inserted.

[Control]+[X]

If the input cursor is positioned in an editable field, you can use this key combination to cut the contents of the editable field to the system clipboard (not to the Calamus clipboard).

[Control]+[C]

If the input cursor is positioned in an editable field, you can use this key combination to copy the contents of the editable field to the system clipboard (not to the Calamus clipboard).

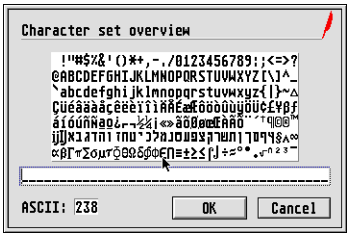
[Control]+[V]

If the input cursor is positioned in an editable field, you can use this key combination to insert the contents of the system clipboard into the editable field (not from the Calamus clipboard). The contents can only be inserted if they correspond to the format of the editable field.

9 Special dialog functions

9.1 Character-set overview

In all dialogs, editable input fields and modules which support this (for example the Text module), you can call up a character-set overview with the [Ctrl]+[Esc] (or [Control]+[^] in the WindowsPack) key binding:



In this overview you can use the mouse to click on one or more characters, allowing you (together with keyboard input) to construct the input string for the editable field. By clicking on "OK" or pressing [Return] you place the selected character(s) in the editable field (or text frame).

9.2 Continue with [Esc/Undo/F12/F15]

The [Esc] key (alternatively the [Undo] key or [F12] in WinPack or [F15] on Mac computers) also allows you to abandon whatever you have typed into all editable fields and restore the previous values. It is especially useful in small editable fields without their own "Cancel" button like those of the Coordinate display.

Warning: If a dialog contains so-called editable fields for text or numerical values and the input cursor is positioned in such an editable field, then pressing the [Esc] key (on all computer systems!) clears the corresponding field. If you want to close such a dialog instead, it is better to press one of the alternative keys [Undo], [F12] or [F15] mentioned above.

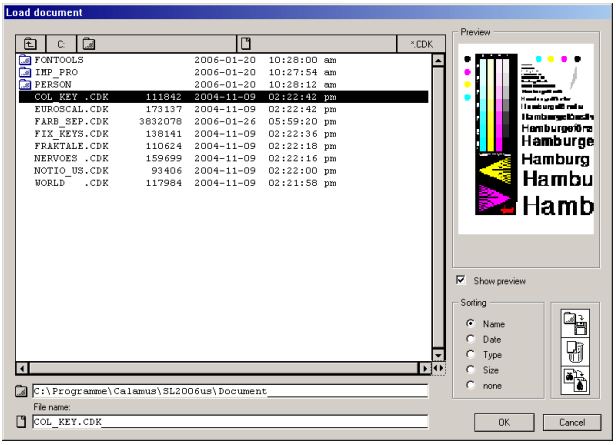
If you hold down [Ctrl], [Shift] and [Alternate] at the same time, Calamus will stop drawing the current page. With large documents you can save a lot of time this way if you believe that a complete page build-up takes too long. Since a bitmap image is also built up during the printing cycle, you can break from printing with this combination. You can also abort the recording of instruction sequences for key bindings (see Options menu, "Key bindings" menu item).

10 File selection

Tell me what you are called: The file selection dialog

Whenever you load or save data on diskette or a hard drive, the data is stored on the mass storage device under a name. You will know from your computer's instruction manual that the file name basically is a significant file content description, followed by a dot and an extension of usually three characters. In addition there is the need to know in which directory the desired file is to lie. In order to facilitate the input of this directory and the appropriate filename, the operating system of the computer has a so-called "File selector box" built in. Since the operation of this standard file selector is rather cumbersome, Calamus contains its own greatly extended version, which is much easier to use.

The entire file selector dialog looks like this:



A heading informs you for which function you are about to select or define a filename for. In the dialog list all files and subfolders of this directory are shown. Beneath that you can see the name of the directory that is currently selected. At the very bottom are the input field for the filename, available sort criteria, and icons for some special functions.

The Calamus file selector box, one of the main dialogs used in your daily work, is quite complex at first sight. There are up to 25 files visible in the scrollable list at a time.

The input elements in detail:

10.1 Path line

The name of the currently displayed directory, the so-called "file path", is shown here. This includes the name of the active drive as well as all the folders and sub folders which lead to the current directory, each separated by "backslashes" (reverse diagonal strokes). Every time you choose a folder in the file list, this folder name is attached to the end of the existing path name. The Closer above the file list removes the last folder from the file list.

But you can enter path names from the keyboard as well, by moving the cursor into the editable field with a mouse click or with the arrow keys. In contrast to some older operating systems, you may conclude this input with the [Return] key without the consequent exit from the dialog.

During the setting of the search paths (see Options menu), the path name displayed here is taken over, and any entered filename is irrelevant here.

10.2 Drive identifier

If you click in this field, which represents the current drive, a popup opens from which you may select another drive.

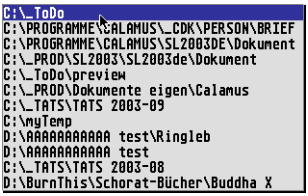
A double-click shows drive information for the current drive.

10.3 Folder closer

A click on this symbol closes the current folder in the file selector and shows the folders and files of the next higher level in the file list. A double click brings you to the root level of the currently chosen drive.

10.4 Folder history

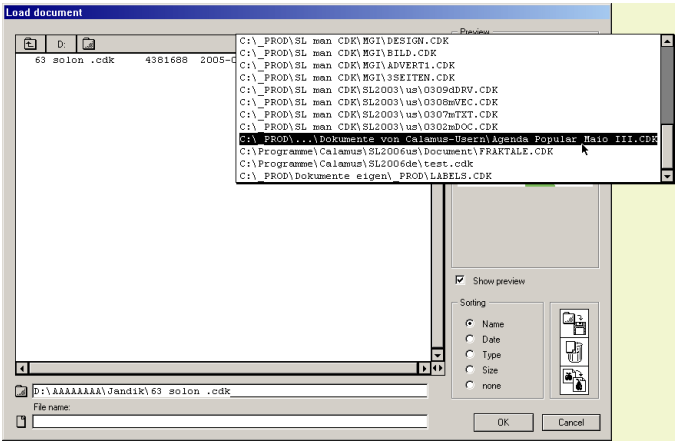
If you click on this folder symbol field between the drive and the file symbol field, a popup opens with a list of the last used folders. You may chose one of these folders, without having to use the file list dialog to click through to the desired folder.



The folder history is generated from the file CALAMUS.HST (refer to "File history") and can be shown only if this file exists and files have been opened before.

10.5 File history

If you click on the field between the folder symbol and file type fields, a popup opens with a list of the last opened files. You may open one or more files for loading directly, without having to use the file list dialog to click through to the desired file.



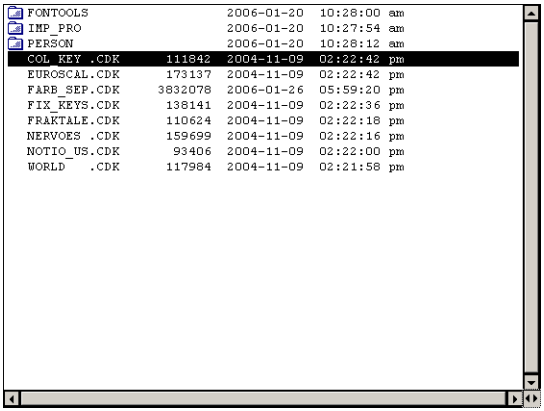
The file history is saved in the Calamus directory in a file named CALAMUS.HST, and can naturally only be displayed if this file exists and if files were opened at all.

10.6 File type

*.CDK

A filename as already described consists in principle of the actual name and a three character file type, separated by a point. All files which contain data of the same type should also possess the same file type. Thus you can access data of a certain type by specifying the file type. Calamus documents have the file type "CDK", character-sets (fonts) take the ending "CFN", and so on. In the file list, only files whose type corresponds with the one selected here are displayed. The asterisk before the point means that ALL files of this type are displayed, an asterisk after the point shows all files without consideration of their type (see your computer handbook for detailed information about the wildcard characters "?" and "*"). To change the active file type, click on the file type displayed, where a popup opens in which you can select further file types. The entry "*.*" shows all files with or without file extenders in this folder. The "all formats" entry shows all files that are valid for the current file selection status. For example, if you want to load fonts then all CFN fonts are shown along with all Type-1 and TTF fonts.

10.7 File list and filename input



In the file list, the name, type and size as well as the date and time of creation are shown for each file of the chosen type. Depending on the length of the filenames, the list can be scrolled to the right in order to be able to see the additional information.

Folders appear with their name, creation date and time. They are additionally characterized as such by the folder symbol.

You can scroll through the list with the arrow buttons and the bar at the right edge of the list.

If you double-click on a folder in the file list, this becomes "opened" and a list of the files that are contained in it is displayed. Clicking on a filename transfers this to the editable input field at the right edge of the dialog. Naturally you can also input a filename by hand; with a new file this is necessary to avoid the overwriting of an existing file. Double-clicking on a filename has the same effect as the standard operating system file selector: The name is accepted and the dialog quit. The double-click works thus as a click on a filename and a further one on "OK".

Documents, fonts, modules and drivers can not only be loaded individually, but several can be loaded into memory at the same time. To do this, click on several files with the [Shift] key pressed. If you have selected a file and immediately afterwards click on a file further down (or further up) the list with the [Alternate] key pressed, then all the files between the first and last selected will be selected as well. After a click on the "OK" button, all these will be loaded together.

A click on this button in the bottom right corner of the file list switches the list width and size of the preview area.

If you start entering a file name in the file name input field, the autolocator of the Calamus file selector tries and selects according file names in the file list which match your entered characters. Use this e.g. if you want to jump to the first list entry with "T" in a very long list of files by simply entering "T". Then scroll with the arrow keys up or down the list.

10.8 Sort sequence

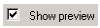
With these five buttons you can select in which order the files should be currently shown in the file list. "Name" sorts the list alphanumerically ascending. "Type" is for sorting files according to their file type, within this list they are again sorted according to their names.

If the button "Date" is chosen, then files are sorted by the date of their creation, with the youngest shown first. Sorting on "Size" puts the largest first, with the smaller files appearing nearer the end of the list. Finally, "none" lists files in the same order as they are physically on diskette or hard drive. In each case all folders in the directory are shown before the files.

Tip: In order to make the sort sequence for certain file types permanent, call the "Set paths" entry in the Options menu and call the file selector again for each desired file type. Set the sort sequence for each as desired and close both dialogs again. Then save the Calamus setup file. Only in this way can the sort sequence be permanently saved.

10.9 Preview

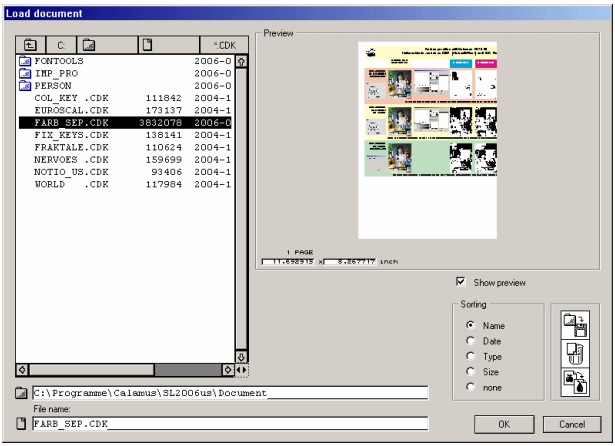
In the right area of the Calamus file selector can be seen a large field titled "Preview", as well as a switch below it called "Show preview".



If the switch is set, when you choose files of certain types you will see a preview of the file in the preview panel. The functionality for this is in corresponding preview drivers, which are automatically loaded by Calamus if they are located in the driver search path.

Take a look into your Calamus drivers folder in order to see the currently available preview drivers. Look for files with the extension .CPI – further preview drivers are in preparation.

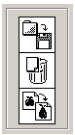
 A click on this button in the bottom right corner of the file list switches the list width and size of the preview area.



You can generally leave the switch "Show preview" switched on, since Calamus independently detects what preview drivers are available. If the generation of a preview takes some time, a progress bar appears to inform you about the waiting period. Naturally you can abort the production of the preview picture at any time with a mouse click or key press.

In addition, you will find an entry "File preview: delay" in the System parameter module, whic controls how long Calamus should wait when scrolling through the file lists until the preview mechanism reacts. The value is given in milliseconds, and is normally set to "100" (Calamus waits for a tenth of a second before the preview).

10.10 File selector: Special functions



With these three icons you can create new folders, delete files or rename them. In order to create a new folder, click on the first icon. In the "selection" field you can now input the name of the new folder, or abort the operation with a single click on "Cancel" or click on a file.

In a similar fashion you can rename a file in the "selection" field. Deletion is just as simple: After you have selected the file to be deleted in the file list, click on the middle icon. A safety query allows you to abort the delete function here as well.

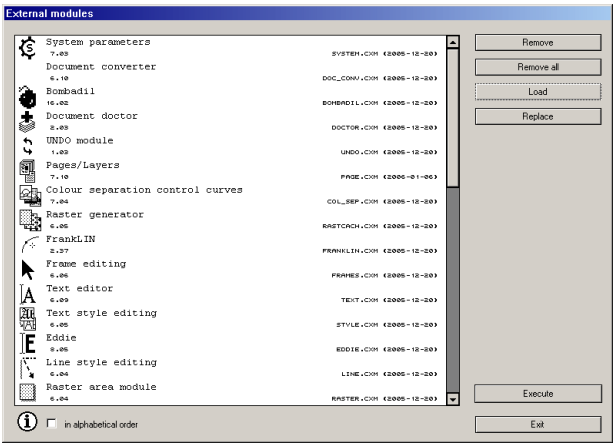
These file operations are supported by a tinted file name input field. In Delete mode, the data are tinted red, in Rename or New Folder mode they are tinted blue.

10.11 File selector buttons

The "OK" button ends input in the file selector dialog. The chosen or entered filename is taken over, i.e. data is stored or looked for under this name. A click on the "OK" button corresponds to a press of the [Return] key provided the text cursor was not positioned in the "Path" field beforehand. Additionally you can also leave the dialog with a double-click on a filename. The dialog can also be left with a click on the "Cancel" button, in which case the load or save operation is not executed and everything stays as it was.

11 Object selection

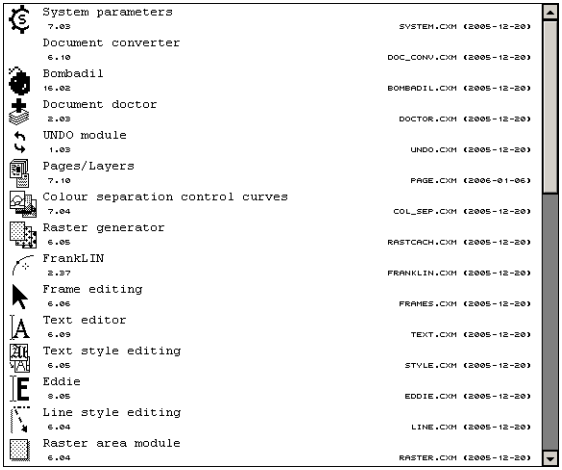
In order to be able to load fonts, modules and import/export drivers, and in addition administer other objects, the so-called "Object selection" dialog was built in to Calamus:



All relevant items have apart from the quite short filename (only eight places) also another detailed name, which gives a substantially better description. They are listed in this dialog under this detailed name. Small differences in the operation of the dialog exist between the different items, which are covered in detail in the corresponding sections. Common to all three dialogs are a list and the buttons "Remove", "Remove all" and "Load" or if appropriate "Replace".

The input elements in detail:

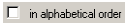
11.1 List



In the list you can select the item (font, module, driver, etc.) for a later operation by clicking on a line. You can also select several items just as for selecting frames (see "Frame editing module") if you keep the [Shift] key pressed whilst clicking on the items. Selected items are displayed as "active" in inverse video.

If all the loaded items cannot be displayed at once, you can browse through the list with the arrow keys and the scroll bar at the right edge.

If you want to call the info dialog of a module or driver directly in the object selection dialog, simply select the according list entry and click the info button then.



With the switch "in alphabetical order" you can display the list of loaded items sorted in alphabetical order.

11.2 Remove

With this button the selected object is removed from the list and from memory. For fonts there are however some restrictions: If the font is used in the loaded document, then a replacement font must be selected. Therefore – if there is text in the document – you cannot remove all of the fonts, because at least one must remain in memory. When replacing a font the text formatting will change in most cases. For the full details see the description of the function "Load/Delete fonts" (see "Text style module, Font selection" function group).

Naturally you can also remove several objects by clicking on this button. The restrictions described above apply to each individual item.

11.3 Remove all

This button removes all items in the list from memory. For fonts this button operates somewhat differently: When removing all fonts, a replacement font must be selected for each font in use (see above, "Remove" function). Here too the text formatting can change; more details can be found in the description of the "Load/Delete fonts" function.

11.4 Load

With this button you can add new objects to the list. After clicking, the file selector dialog appears where you can select the desired objects. If you want to load several objects at the same time keep the [Shift] key pressed whilst clicking them in the file selector. After clicking on "OK" or a press on the [Return] key the new items appear in detail in the list.

11.5 Replace

Similarly to the "Load" button here too you can add objects to the list; the operation is exactly the same. However, objects that are already selected are thereby removed first. With fonts, the text formatting can change here too. Modules with which you are currently working should not be replaced by others.

12 Colours

Calamus provides you with the possibility to work in different colour systems up to TrueColor (with 16.7 million colours). In addition ready-made standardized colour palettes as well as spot colours can be used.

Various modules place colour lists in their function panels for your use when you load in a file containing suitable colour objects, such as in the Lines module for instance.

You can allocate colours from this list to any selected object simply by clicking on one of the entries, not the colour patch, in the list.

The possibilities for setting up colours and fill patterns are so versatile that a specific module exists to handle these, though it is compulsory for this to be loaded in Calamus. It is located in the external module system file COLOR.CLL.

The operation of the dialog to set up and alter colours and patterns can be found in the corresponding Colour management module chapters. The Edit colour list dialog is called in different modules (wherever a colour list is provided or is needed); it is a system-wide module and is therefore included in the System module group. With it you can produce your own assortment of colours that will then be entered in a colour list that is displayed in those function panels that control the colour of objects, shadows etc. (Bitmap images are not included in this.)

12.1 Free colour

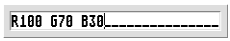
The first list entry in this function panel (above the top of the vertical slider) we call a "free" colour, because it has a special status. A colour visible (and adjustable) here is only valid where it is currently being used. A document may have any number of free colours, which are not visible in the document colour list however and which will be deleted by Calamus as soon as you no longer use them. But you can convert free colours to document list colours. A special module exists for this (COL_CONV.CXM), which is described elsewhere.

The big advantage of free colours is that you can use them very conveniently without having to call up the large Calamus Edit colour list dialog, which is described extensively in another part of this manual.

To create a free colour, just click on the small "C/%" (just above the vertical slider). A small dialog box opens where you can type in the values (each between 0 and 100, preceded by its colour ID) to define a colour. These settings may appear like this, for instance:

= 100% red

= 100% black

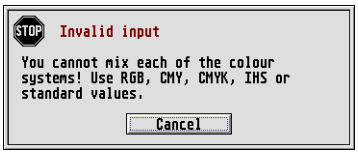


= A beige tone

= 75% black (grey)

When typing in the values you need not restrict yourself to the RGB colour system, although free colours are stored internally in Calamus only in the RGB format. You can input your free colours in the CMY, CMYK or IHS system in the same way. If you input only a single number without a proceeding ID letter, then the corresponding grey tone will be created.

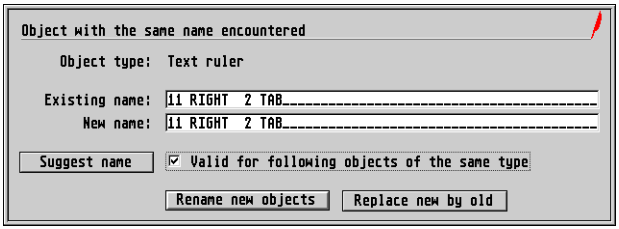
Should you make an occasional error when inputting free colour values, Calamus will immediately report this:



13 Duplicated object names

Double trouble – if two objects have the same name

In Calamus you can store externally many items such as text styles, master pages and colour lists on floppy or hard disk. These items can also be added individually to a document already present. Here, as when loading in another complete document, it may happen that two objects (text styles, colours, master pages, ...) have the same name. This would mean that if the list is sorted later by name you would not be able to tell the two apart. Therefore the following dialog appears in such cases:



The first line describes the type of object of concern. When loading individual master pages or style lists this is obvious, but if a complete document is loaded in addition to the existing one, say, this information is quite helpful. Below this is a line showing the name of the present object, while a line below this offers a suggestion for a new name. If this suggestion is not to your liking, you can edit it using the usual keys [left arrow] and [right arrow], or with the [Esc] key completely clear the line for re-entry. At the bottom of the dialog are the buttons "Rename" and "Replace". With a click on the first, the newly loaded object receives the new name, and the original stays as it was. The "Replace" button replaces the new object with the old.

An example: Assume that you have an empty master page named "Master page 1" in your document. You then load in addition from floppy or hard disk another document which also contains a master page named "Master page 1" which however also contains header or footnote lines. If you now click on the button "Replace", all the pages in the additionally loaded document are changed in such a way that they now use the (empty) master page of the old document. All header or footnote lines (and naturally also all other elements of the page) are then omitted on all pages that used "Master page 1" in this additionally loaded document. Depending on the application, you should use this function only after due consideration.

Finally, there is the button "Valid for all further objects" that you can activate. In this case, the instruction "Rename" or "Replace" applies not only to the displayed type, but also to all the following objects of the same type.

Tip: In the Calamus setup file (CALAMUS.SET) it is noted whether the button "Rename" or "Replace" is the default for each of the object types treatable with this dialog. It is therefore worthwhile to save the file CALAMUS.SET from time to time.

14 File types

14.1 What do the different file extenders in Calamus mean?

Do you constantly forget which file types Calamus uses? Here is what is hopefully a complete list.

File types as used by Calamus (most file endings are derived from the German file types):

CCT **C**alamus **C**odepage **T**able
CDK **C**alamus **D**o**k**ument
CDT **C**alamus **D**rucker (Printer) **T**reiber (Driver)
CER **C**alamus **E**xport driver **R**aster graphic
CET **C**alamus **E**xport driver **T**ext
CEV **C**alamus **E**xport driver **V**ector graphic
CFT **C**alamus **F**arb (Colour) **T**able
CHP **C**alamus **Hyp**henations (separations)
CHT **C**alamus **H**yphenation **T**able (user-defined separations)
CIF Calamus **I**mport driver **F**ont
CIR **C**alamus **I**mport driver **R**aster graphic
CIT **C**alamus **I**mport driver **T**ext
CIV **C**alamus **I**mport driver **V**ector graphic
CK1 **C**alamus **K**ontrol line **1** line (Greyscale pictures)
CK3 **C**alamus **K**ontrol line **3** lines (RGB or DuoChrome)
CK4 **C**alamus **K**ontrol line **4** lines (CMYK or linearity)
CK7 **C**alamus **K**ontrol line **7** lines (colour separation)
CKT **C**alamus **K**ommando (Command) **T**asten (Keys) (= Key bindings)
CMA **C**alamus **MA**cros
CPI **C**alamus **P**review **I**mport
CPL **C**alamus **P**rofiles **L**ist
CRC **C**alamus **R**aster **C**ache (used by the earlier Raster generator PLUS)
CRD **C**alamus **R**aster **D**ocument
CRG **C**alamus **R**aster **G**raphic
CRI **C**alamus **R**aster **I**nformation
CRL **C**alamus **R**uler **L**ist
CSE **C**alamus **Se**ite (Page)
CSL **C**alamus text**S**tyle **L**ist
CSL **C**alamus **S**peed~**L**ine Parameters

CSS **C**alamus **S**tamm**s**eite (Master page)
CTD **C**alamus **T**ext **D**ocument
CTT **C**alamus **T**ranslation **T**able
CTX **C**alamus **Te**x**t**
CVD **C**alamus **V**ector **D**ocument
CVG **C**alamus **V**ector **G**raphic
CWB **C**alamus **W**örter**b**uch (Spelling dictionary)
CXM **C**alamus e**X**ternal **M**odule
CXR **C**alamus Import+E**X**port driver **R**aster graphic
CXT **C**alamus Import+E**X**port driver **T**ext
CXV **C**alamus Import+E**X**port driver **V**ector graphic
SET Calamus **Set**up

File types used by Calamus modules and drivers (no guarantee that this is complete):

ATT **A**SCII **T**ranslation **T**able (-> ASCIIMEX.CXT)
AUS **Aus**schießschema (Imposition schemes) (-> Imposition module)
DLL **D**ynamic **L**ink **L**ibrary
INT RasterCache **int**ernal (RasterCache generator: RCACHE.INT)
JOB **Job**list (Tiff spooler)
PAR **Pa**rameter file (LineArt)
PRO **Pro**tokoll (Log) (Tiff spooler)
SET Module specific **Set**up (in module folder!)
VSF **V**erlauf (Blend/graduated tint) **S**etup **F**ilter (Graduated tint module)

14.2 What gives with these DEFAULT files?

I constantly find different files in the Modules folder which all begin with DEFAULT, but have different extensions. What is the meaning of these files?

Various Calamus modules will willingly load standard data of the type they support when they are started. This always occurs with the launch of Calamus, providing that the module is set to be loaded in the Calamus setup file (CALAMUS.SET), or if one loads a module explicitly afterward.

Following an agreement with the developers, these modules look for their standard data in exactly the same folder that they were in when they were launched. If the RasterCache generator is thus started in the Modules folder, then it wants to find a file there named CALAMUS.CRI. The Text style module accordingly looks for a CALAMUS.CSL file (Calamus Style list).

Exception: The LIN module, which after all needs a CK4 control line (for CMYK colour pictures), expects a curve named DEFLIN.CK4 in the Modules folder.

If you should find that Calamus refuses to load previously saved (somewhere!) files at program start, check first if the corresponding data with the filename DEFAULT. + extender for the relevant filetypes is located in the Modules folder.

15 CALAMUS.SET

The Calamus setup file is the alpha and omega as regards operation of the program. A great number of parameters (settings) are stored in it that you can set individually, ranging from which modules are to be loaded at start-up right up to the way that date output is to be formatted, and much more. You can save and load various *.SET files and so, say, quickly launch the same Calamus with a completely different configuration for various applications by using appropriate *.SET files. Most of the dialogs in which you can set parameters that land up in the setup file contain a "Save" button at bottom left.

If Calamus does not find a Calamus.SET file in its starting path when launched, the parameters that are specified in such a SET file will be set to default values. Thus an internal SET file is "built in" to Calamus itself so that all important parameters are preset to sensible basic values.

Below you will see a (rough) description of the parameters that are contained in such a *.SET file. Some of these parameters can only be altered in this file at present and so are described at greater length. Numerical values preceded with a "$" character are hexadecimal values. More complex data may be enclosed in curly braces or square or angle brackets.

Warning: Always consider carefully before making direct changes within this *.SET file (with an ASCII editor, for instance)!

Calamus SL Setup File
Header line of the setup file

#SystemParameters
The first section contains, amongst others, the settings from the System parameters module, the dither-limit of the Raster generator, the output text from the "Set layout/Working area" dialog, the sorting in the object selector dialog, some parameters of the "Screen output settings" dialog as well as the "Miscellaneous settings" dialog from the Options menu, and some other parameters that can only be altered here at present but not in any Calamus dialog.

BaseMeasure
PageMeasure
FontMeasure
LineMeasure
DateFormat
TimeFormat
ScreenXRes
ScreenYRes
RAMForTOS
FastRAMForTOS
VecOutBufSize
FontFileTree
SystemPaths
DeadKey
AltFileSel
UserToplinePos

If this switch is set in the System parameters module, the module bar and the coordinates bar are not placed in best

positions at the top border of the screen, but can be placed anywhere on the screen.

OverwriteWarning

This parameter (on/off) corresponds with the new checkbox in the dialog "Miscellaneous settings" (Options menu). If the value is "on", an alert box informs before a file is going to be overwritten (exception: "File menu: Save").

DitherLimit

BorderString

Here you can specify more than just a simple Info line: There are several abbreviated placeholders available that are filled by Calamus with current values during output:

$DN Document name
$CD File creation date
$MD File modification date
$CT File creation time
$MT File modification time

AltRedraw "On" (default):

If a frame is moved within a page in such a way that there is free space between the original position and the destination, then only the area under its original position and the area of the destination will be redrawn. This is the faster mode.

"Off": The rectangle that is defined by the original and destination positions will be redrawn. (This way is slower, but in certain situations it draws more correctly at the edges of the newly-drawn document areas.)

3DDialogs

DeskColor

DeskIntens

WindowPos

AltMove "Off" (default):

If several frames are selected simultaneously, then all will be moved along with any one frame that is moved. By holding down the [Control] key only the frame just clicked on will be moved.

"On": This reverses the operation: Only the currently clicked on frame of a multiple selection will be moved. If the [Control] key is held down then all currently selected frames will be moved together.

HoldTime

For slower computers (TT, Falcon) there is a setup parameter "HoldTime" in the Calamus *.SET file, with which you can determine how long (in hundredth of a millisecond) Calamus should wait for mouse-clicks. This can overcome problems when setting the text cursor, for instance, or when selecting underlying frames etc. Try out values between 50 and 100, for instance.

Mac users encountered problems with double-clicks if the second click was held down too long. Multi-click events have a context-sensitive filter.

ShowModSorted

AutoSetSave

DitherAlways

DialogKeyHandling "On" (default): In all Calamus dialogs one can use the so-called object cursor. This means that you can reach and set all selectable objects from the keyboard.

"Off": Switches off this mechanism.

MenuColor

PreviewDelay

This entry determines how long Calamus should wait while scrolling through the file list before the preview mechanism reacts. The value is specified in milliseconds and is normally set to "100" (Calamus waits a tenth of a second before showing the preview).

Preview

HelpTextColor

ImportDefaultMode "auto":

In place of the object selector appearing during import, the file selector will be opened to display all files that can be loaded with all currently loaded drivers for this frame type.

You can switch between these two modes by pressing the [Control] key while calling the "Import" menu entry.

"manual": In manual import mode, the object selector offers all loaded drivers for this type of file. You can chose one of them and import the according data afterwards.

TImpFontNormal

TImpFontItalic

TImpFontBold

TImpFontBoldIt

TImpCursiveFonts

These parameters store the settings of the dialog "Font selection for Italic and Bold" which can be reached in manual import mode by clicking on the button "Fonts" in the object selection dialog.

ShowGrabExtraGrabs

EditGroupContents (Reserved)

MaxUndoSteps

MaxUndoMem

NoTransparencies "Off" (default):

Frames switched to transparent will be output as transparent on the screen just like in the printed output.

"On": MagiCPC and some other TOS systems that use so-called "External screen drivers" (these are the "strange" AUTO-folder programs that are required for running Calamus with some operating systems) unfortunately do not work correctly. The problem is that these "External screen drivers" themselves blit all frames to the screen one after the other. As none of these drivers supports transparency, everything appears as before. In such cases please set this switch to "Off" to prevent unforeseen (false) colour reproduction on the screen.

TextRulerMeas

TextKerningMeas

TextanchorMeas

#VirtualMemory

This section contains the parameters of the "Set virtual memory" dialog from the Options menu.

VirtualMemory

CloseVirtualMem

#SystemPaths

This section contains all path settings from the "System paths" dialog from the Options menu, as well as the "Sorting" parameter settings for the file selector.

DocumentPath

PagePath

LayoutPath
TextPath
FontPath
FontPath2
PicturePath
VectorPath
PrinterPath
ModulePath
TextMacroPath
DictionaryPath
VirtualMemPath
TextStylePath
TextRulerPath
ImExDriverPath
GradCurvePath
CommandKeyPath
ColorTablePath
RasterPath
PlanePath (Reserved)
HelpFilePath
BorderElementPath (Reserved)
LayerGroupPath
DocumentSort

This and the following entries determine the default settings for how sorting of the corresponding data types should be set in the file selector.

PageSort
LayoutSort
TextSort
FontSort
PictureSort
VectorSort
PrinterSort
ModuleSort
TextMacroSort
DictionarySort
VirtualMemSort
TextStyleSort
ImExDriverSort
GradCurveSort
CommandKeySort
ColorTableSort
RasterSort
PlaneSort
HelpFileSort
BorderElementSort
LayerGroupSort

#Hyphenation

This section contains all parameters of the "Dictionaries" function group from the "Text" module.

AutoHyphImport
AutoHyphEdit
HyphDictionary

Here the hyphenation dictionary is defined, e.g. "ENGLISH.CWB".

PatternTable

Here the exceptions dictionary for hyphenation is defined, e.g. "ENGLISH.CHP".

SpellDictionary

Here the spelling dictionary is defined, e.g. "SPELL.CWB".

#ColorLookupTable

This section contains only two entries, of which only one is used at present:

Filename

Here the name of the colour list is specified that is to be loaded at program launch, normally "DEFAULT.CFT" (in the MODULES folder!).

PlaneFilename (Reserved)

#PageFormat

This section contains the parameters of the "Set page format" dialog in the Page module, some parameters of the "Set layout/Working area" dialog as well as the settings from the Guideline module.

Warning: The parameters of the Document manager dialog, which are similar to the "Set page format" dialog, are not saved here but in its own setup file.

PageNumType
DoublePages
MasterPageName
DefLayerName
Flags
Format
UserWidth
UserHeight
RulerXOffset
RulerYOffset
RasterXOffset
RasterYOffset
RasterWidth
RasterHeight
MCHRows
MCHColumns
MCHXSpace
MCHYSpace
MCHTopMargin
MCHBottomMargin
MCHLeftMargin
MCHRightMargin
FrameSnapXOff
FrameSnapYOff
PinXPos
PinYPos
GuideLinesXPos
GuideLinesYPos
BordLeftMarg
BordRightMarg
BordTopMarg
BordBottomMarg
BordFlags
BordVisibleFlags
BordBleed
BordCutLen
BordFalzLen
BordPageDist
BordOversize
BordUsage
BordTxtSize
BordOverlap
MaxCropSize
MaxLWidth
BorderElements
DefLayGrpName
LayerGroups
LayerGroupCol
MinLineWidth

#KeySettings

This section contains all parameters of the "Special key bindings" dialog called by the Key bindings editor icon in the Text module as well as the name of the Calamus Key bindings file that you can edit with the "Key bindings" entry of the Options menu.

DeadKeys
AltNumToASCII
HyphControlCode
InvisibleHyph
ShortDivis
NDash
MDash

DeadKeyToggle
AltNumToggle
LowQuote1
HighQuote1
LowQuote2
HighQuote2
FixedSpace
CharSizedBlank
CSB2
CSB3
CSB4
CSB32
RedrawPage
HardEndOfLine
EndOfParagraph
AdjEndOfPara
MacroPrefix
LowQuote1Char
HighQuote1Char
LowQuote2Char
HighQuote2Char
CmdKeyFilename

Here the filename for the Calamus Key bindings file is defined, e.g. "CALAMUS.CKT".

KeyDelayTime
EuroSign

#TextRuler

This section contains all parameters that you can set in the "Set vertical text alignment" and "Ruler parameters" dialogs of the Text module.

Filename

Here the filename of the standard text ruler list is stored.

ShowRuler
Widows (Reserved)
Orphans (Reserved)
VertAdjustment
VertAdjFlags
EditMode
ShowFreeRuler
AutoCreation
RulerChgMode

Here is stored whether you want to change ruler settings local or global or if you want to be asked each time what to do. Whenever ruler settings are changed locally, each change creates a new (free) ruler at the end of the ruler list.

Color
Justification
OffsetType
AbsOffCorrection
LineOffset
ParagraphOffset
LeftMargin
RightMargin
LIndentMargin
RIndentMargin
BlockMinSpace
BlockMaxSpace
LeaderTabChars
TabPositions
HyphCKToKK
CharsBeforeHyph
CharsAfterHyph
MaxHyphLines
MinNoHyphLines

#Fonts

This section contains only one entry:

Filenames

The list following this defines which fonts are to be loaded immediately on

launching Calamus. They will be found only, however, if they are in one of the two specified font paths (or their subdirectories), as described previously. Since at least one font has to be loaded for drawing up text frames, we recommend that you define a selection of fonts directly for the Calamus launch. The Document manager too can create text frames (and flow text) directly when creating new documents only if fonts are loaded already. Otherwise the relevant buttons in the Document manager are greyed out and cannot be used.

To clarify: Fonts can belong to a document (e.g. embedded fonts that are loaded directly with the document) or else they can belong to Calamus.

To assign fonts to Calamus, load one or more fonts when no document is open. Afterwards save the setup and when Calamus is launched next these fonts will be loaded directly as well.

#TextStyles

This section only contains parameters that can be set in the Text style module.

Filename

Here the filename of the Calamus Text style list is defined that is to be loaded directly Calamus is launched, e.g. "MYSTYLE.CSL".

FontSizeTable
ShowFreeStyles
AutoCreation
AskForSmart
SmartProtectLS
TextEffects
UnderlinePos
FormatDirection
KerningType
TabbedNumbers
FontHeightType
Font
FontHeight
Outline
CharacterSpacing
WordSpacing
ShadowXOffset
ShadowYOffset
ShadowDirection
OutlineWidth
UnderlineOffset
UnderlineWidth
UnderlineOver
CondenseFactor
SkewedOffset
TextRaster
ShadowRaster
OutlineRaster
UnderlineRaster
SupSubSize
SupSubOffset
EolOverWeight
StyleName

#TextMacros

This section contains only a single entry:

Filename

Here the filename of the Text macros file is defined that is to be loaded directly Calamus is launched, e.g. "MACROS.CMA".

#Printer

This section only contains parameters that can be set in the "Print" dialog of the File menu.

ResolutionIndex
PaperFormatIndex
PaperFeedIndex
OutputPortIndex
NumCopies
SizeFactor
RasterSize
PageSortType
Rotation
PartsToPrint
MirrorPage
InvertPage
DummyMode
JobModule
PageListGen
BorderMarkers
RingBell
PagesToPrint
FillPatternScale
Filename
Farbtiefe (Colour depth)
Feindaten (Fine data)

#ExternModules
Filenames

The filename list that follows this heading specifies which modules and drivers are to be loaded in which order when Calamus is launched. The order can be altered here only by manual changes of the list at present, unless you want to remove modules and drivers laboriously in Calamus itself and reload them in the desired order.

The CLL files that Calamus loads from the SYSTEM folder are entered at the start of the list by Calamus itself on saving the setup file. Preview modules (with the file extender CPI) are neither entered here nor taken into consideration.

#ObjPositions

This section defines the appearance of the function panel at the launch of the program.

DMCBoxX (Reserved)
DMCBoxY (Reserved)
OMPDescriptors

#LineAndRasterFrames

This section only contains parameters that you can define in the Lines module and Raster areas module.

LineLineDef
LineLineWidth
LineLineRaster
LineShadRaster
LineShadXOffset
LineShadYOffset
LineShadDir
LineTypeIndex
RastLineDef
RastLineWidth
RastLineRaster
RastFillRaster
RastShadRaster
RastShadXOffset
RastShadYOffset
RastShadDir
RastTypeIndex
RastXRadius
RastYRadius

#FrameEditParameters

This section contains many of the parameters that you can define in the Frame editing module, as well as the parameters of the "Copy options" dialog from the Options menu.

FrameType
TextSubtype
TextFlowOffset
PagePartSubtype
FrameName
WritingMode
RotationAngle
Proportional
FixedFrame
ScaledText
SnapFlags
VisibleFrames
FrameOutline
HairCross
Helplines
MultiColumn
PageOutline
FrameDeskVis
PrinterMargins
GuideRaster
PageRuler
PipeLines
Pin
FrameSnapArea
ModuleInfo
PicMulOptSize
PicSizeFixed
PicCentered
CopyType
NumCopies
CopyXOff
CopyYOff
InvisibleEdit
PPartOrientation
PPartHOverlap
PPartVOverlap
PPartOldFrames
AutoFallback
FrTextFlowXOff
FrTextFlowYOff
FrTextFlowX2Off
FrTextFlowY2Off
AutoTflow
VecOversize
NoAutoTextFlow

Here you can decide whether text frames may flow around other objects by default ("Off") or whether this should not be the default case ("On"). The position of this switch is saved via the relevant icon in the "Special functions / Text frames" function group of the Frame editing module.

#Miscellaneous

This last section contains, amongst others, the parameters of the "Fix document", "Screen output settings" and "Miscellaneous settings" dialogs from the Options menu, the "Set chapter numbering" and "Set footnote numbering" dialogs from the Frame editing module, plus those from the System parameters module, the Text module and the Guideline module.

Warnings
Messages
AutomaticBackup
CachedFrames
CacheWithMask

HelpMessages
FormPosition
AutoSaveTime
FootnoteChar
FootnoteNumType
FootnoteStart
FootnoteAppend
FootnotesPerFrame
IndexSortType
IndicesPerFrame
ChapterNumTypes
ChapterStarts
MergeModes
TextFormatInfo
UnusedFonts
UnusedStyles
UnusedMPages
UnusedColors
UnusedPlanes
EmptyLPages
AskSavingDoc
RasterOnScreen
AnchorPosition
DefaultTextOff
GuideColor
GuideOrder
Toplines
DefEditSizes
HelpTextXPos
ImportFrameOpt
ImportFrmOptMode
EditGuideLines
EditGuideLineFlags

16 Error messages

Listing of all the defined Calamus error numbers
(Version: 2006-01-03)

Errors with their own message box (self explanatory)

4	Memory full
18	Document has a version number that is not supported
25	Wrong file format (file is not a document)
30	Document cannot be saved since it contains fonts which are not licenced for this version of Calamus (imagesetter version)
32	Limits for justified setting cannot be adhered to (minimum/maximum space character width)
33	Font management module not loaded
44	Image output not possible, there is no colour seperation loaded
45	Image output not possible, there is no decompression module loaded
48	No more free windows available
64	General file read error
65	General file write error
66	Unexpected end of file reached
67	File access refused
68	Unknown drive
69	File access timed out
70	Defective sectors
71	GEMDOS has no more file handles available
72	File not found
73	Path not found
74	Diskette full
75	Diskette write protected
76	Non-specific error in input/output system
78	Wrong file format
79	Internal error in GEMDOS
101	No more space for further modules in the Top row
112	Module not found
303	Error in the conversion of a 1.09N document
311	Printing aborted manually
313	Not enough memory for printing
314	Internal error in printer driver
315	Special printer error (message is shown by the printer driver)

316 Timeout during printing
317 Printer is offline
318 No more paper available
319 Special printer error with option for automatic repetition
329 The printer driver does not understand the command
330 The internal structure of the printer driver is damaged
340 Page output overflow (Object is > 2 billion pixels)
341 Vector objects of more than 32,000 x 32,000 pixels cannot be output
342 Font structure damaged

Further errors with their own message box

All the errors in this section have their own message boxes, necessary because they require special treatment for their display (for example if the error message contains variable pararameters). If a module or program routine does not observe any of these error codes, they will instead show an "Unknown error number . . .":

160 Frame not found:
The chosen function requires the selection of a frame of a certain type.
161 More than one frame selected:
The selected function can process only one frame at the same time.
176 Error when piping text frames:
The appropriate message is dependent on the current conditions (e.g. "frame already chained")

The following errors occur with incorrect and/or unlicenced files:

144 Font not licenced for this Calamus
192 File is not in standard Calamus format
193 File is not a driver/module
194 Wrong driver type
195 The module is defective
196 Driver/module is not executable in Calamus S
197 Incorrect checksum
198 Driver/module is not licenced for this Calamus

These errors may occur in connection with dictionary administration:

200 Empty word (length 0)
201 Word too long
202 Word not found
203 Error in the structure of the compound word

204 Empty dictionary
205 Unknown character in word
206 End of the dictionary reached
207 Compound word has too many sections
208 No dictionary or hyphenation rules loaded
209 Non-specific error

Further errors:

300 Document loading aborted, the font is not loadable
301 Too many pages in the document:
If this error occurs you should think seriously about splitting up your document into smaller sections. That is because you have exceeded the upper limit of 999,999 pages ...
302 There are no frames in the selected area:
You have attempted to produce a group frame with no frames
360 Object cannot be deleted as it is still in use:
This error occurs in connection with lists (colours, styles, etc.)
700–799 Status codes for communication between Calamus and special modules (dependent on the respective module type)
800–999 Local status codes of certain functional units/modules:
These errors should never occur. If they do, however, then please contact invers Software Vertrieb with the exact error number. Afterwards you should save the document for safety's sake, since it is not clear whether the error was fatal or not.

Internal errors

All the errors specified here should actually never occur. If nevertheless one does, it points to an error in the program or one of the modules. For this reason these error codes appear as the message "Internal error ...":

1 Memory structure destroyed:
This error is fatal. You should save your document immediately (for safety under a different name).
2 Unknown memory segment
3 Invalid segment handle
5 Wrong mode when accessing memory segment
6 Offset outside the segment boundary
16 Error during handling errors (2, 3, 5, 6, 16):
Calamus or a module produced a reservation error during memory

management. You should save your document under a different name and start Calamus again.

17 Missing chaining of document segments

19 Wrong list index

20 Document segment of unknown type

21 Document segment not found

22 Chaining structure of the document is damaged

31 Invalid reference in document segment (17, 19, 20, 21, 22, 31): Calamus or a module produced a reservation error during memory management. You should save your document under a different name and start Calamus again.

The following special errors should never actually occur. If one should however, the effects are normally quite harmless:

42 Incorrect parameter in graphic data

43 Incorrect parameter in image output

49 Incorrect parameter in window management

50 Incorrect parameter in window management (Window closed)

77 Unknown TOS error number

80 Incorrect parameter in file management

100 Incorrect parameter in module management

128 Incorrect parameter in image output

1 Document converter

With the Document converter, various kinds of Calamus documents will be converted on loading to the current Calamus document format. This conversion will be carried out not only for Calamus documents (CDK) from the old Atari black & white version Calamus 1.09 and 1.09N, but also for older SL- and PC-Calamus documents.

Important: Calamus raster information files (CRI), colour lists (CFT) and many other "sub-sets" of Calamus documents are files that may be adapted by the Document converter if necessary.

Therefore, generally the Document converter should be one of the modules that is loaded permanently.

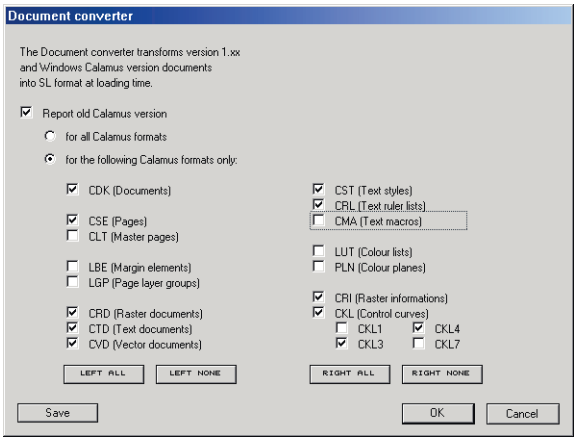
The Calamus document format is generally not downwards compatible!

When internal changes to the document format have been made during further developments of Calamus, the document format can no longer be loaded by older Calamus versions. Therefore documents produced by SL2003 can not be loaded into older versions, for instance.

On the other hand, thanks to the substantially revised Document converter, older documents from Calamus 1.0x, Calamus SL (91–2002) and Calamus for Windows NT/ Windows 95 can be loaded better than ever.

Tip: So that all conversion functions work without problems it is very important that you always load the Document converter module as early as possible, as it converts not just CDKs but also rasters, control curves, colour tables etc. if they are in the old format. It is also important that the converter is loaded before modules that use their own SET files (for instance the Vector module). (The SET file we supply naturally takes this into consideration.)

There are very differentiated options if and how Document converter should report the former Calamus version of a document type.

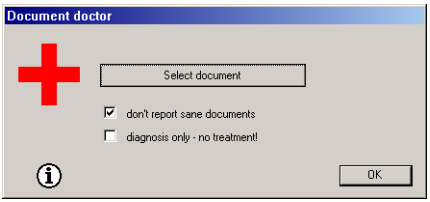


Document doctor

This module by Michael Monscheuer is able to detect and repair "sick" documents. We recommend to include Document doctor in a macro which loads documents.
The Document doctor is an accessory module that can correct various structural defects in Calamus documents directly during loading. There are sundry errors that are caused by old bugs in various modules and also in some older Calamus versions. These obsolete bugs may strike at any time and may make the documents unusable. The Document doctor detects these "infections" and can treat the documents so that they are "hale and hearty" again afterwards.

Operation

If the module is loaded via the "External modules" dialog and called, a dialog box (the one with a red cross) appears:



Clicking on the "Select document" button opens the usual file selector dialog, where you can choose the document to be analyzed. When you select a document it will be loaded into memory and checked. If you have set the switch "diagnosis only – no treatment!", the document will not be repaired immediately. Basically you should not set this switch.

After this it will appear as usual in a layout window. Document doctor will additionally display its diagnosis in an Eddie window.

If you set the switch "don't report sane documents" (default), then Document doctor will only report found and repaired errors.

What will be repaired?

Document doctor is able to recognise and repair defective vector graphics. Such defective vector graphics can arise when taking over graphics from Calamus for Windows95. The edited or imported graphics there unfortunately do not correspond always to the original format and in the past they were left untouched by the Document converter. In some circumstances this could lead to the following errors:

- Pages with vector graphics were not built up completely.
- Calamus crashed while building up the page.
- Calamus crashed during the printing process.
- The "Vector buffer too small" error was indicated, although the buffer should have been sufficiently large.

The current Calamus Document converter from the SL program distribution repairs W95 documents during the loading process. Older versions of the Document converter did not do this. So the Doctor in conjunction with the current Calamus SL will deal with previous (faulty) conversions into the SL format of a document's vector graphics.

A new error connected with vector frames in a document has been discovered. This internal structural error will also be corrected by the Document doctor.

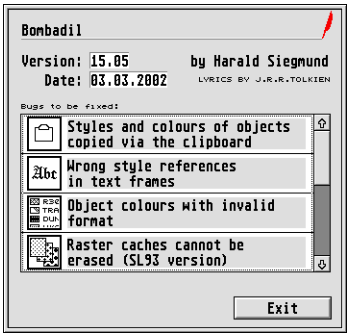
Document doctor also clears a segment that the Positioner (v 1.x) leaves behind in a document after a copying process. This error leads to some interesting effects: After physically copying a large image with the help of the Positioner and deleting the copied frame, the deleted frame remained "stuck" invisibly to the document and may also have been saved with it(!) But cleverly the effect is not additive: The invisible frame will be discarded at the next copying process. In short: The UNDO mechanism in the Positioner still does not work quite cleanly . . .

3 Bombadil

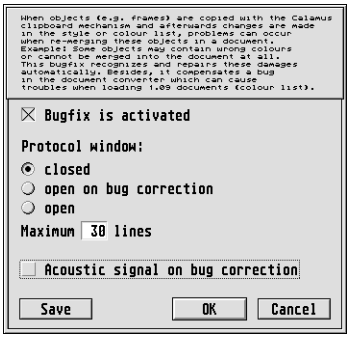
Bombadil seems to be the best name for this module which recognizes and repairs strong bugs in Calamus.

3.1 Using Bombadil

Bombadil is called by selecting the module and clicking on "Execute" in the "External modules" dialog. An overview of all available functions appears. Double-clicking on the relevant icon calls up the corresponding function.



3.1.1 Styles and colours of objects copied via the clipboard



Bugfix is activated

If this checkbox is selected (crossed) then checking of the document structure is switched on.

Protocol window

Information about required corrections of the document structure are displayed in the Protocol (log) window. The three radio buttons determine how this window is to behave:

closed

The window remains closed.

open on bug correction

As soon as Bombadil has finished its repair the window will be opened and remains open afterwards.

open

The window will be opened.

Maximum ___ lines

This specifies how many protocol (log) lines in the window Bombadil should "remember".

Acoustic signal on bug correction

Independent of the protocol window, you can choose whether a "ping" should sound during repair work by activating this checkbox.

With the "Save" button, all settings may be saved in a setup file BOMBADIL.SET in the MODULES folder. The current position and size of the protocol window is stored there as well.

3.1.2 Wrong style references in text frames

Here you can execute two functions:

Check

All text structures in the current document will be checked.

Repair

In addition to checking, Bombadil tries to repair any defects found.

In both cases error statistics are displayed after the action is complete.

3.1.3 Object colours with invalid format

This dialog box is built up in a similar way to the text checking function. There are again "Check" and "Repair" buttons with which all colours in the current document can be checked. For repairing some defective colours Bombadil has to create a replacement colour that is appended to the colour list. Information about this is displayed in the error statistics dialog.

3.1.4 Raster caches cannot be erased

This function is normally required only in Calamus SL93. By selecting "Erase" all raster caches can be cleared.

3.2 Bombadil messages

Here are the most important messages that Bombadil may display in the protocol window:

"Error in style list references found and repaired"

or

"Error in colour list references found and repaired"

or

"Error in colour layer list references found and repaired"

Errors were found and repaired in the relevant structure. This message should be understood purely as a reference. In addition some further information is displayed:

"Document: <x>"

"Object ID (old): <x>"

"Object ID (new): <x>"

"Net Coefficient: <x>"

This data is only useful for debugging purposes and may be safely ignored.

"Missed colour layer list found and replaced"

The document converter has "forgotten" to append a colour layer list to a newly-loaded 1.09N document. Bombadil has remedied this.

"!! Unexpected error <x> in function <y> !!"

Bombadil has requested information about the document from Calamus and received an error message during this. The document is damaged in a way that Bombadil can not remedy.

"!! Unexpected error <x> on repair !!"

Calamus has reported an error while reconnecting the document objects.

Warning: The document is seriously damaged and for safety's sake should be saved under a new name (the old version on your hard disk may well still be intact).

When unexpected errors appear, Bombadil terminates the checking of the document affected.

3.3 Bombadil FAQ

Frequently Asked Questions

"Do Bombadil messages in the window only draw attention to problems, or have they been repaired already?"

Normally Bombadil repairs an error it has recognized immediately. If the document is seriously damaged, however, it can't do any more and reports an "Unexpected error". In these cases the checking of the document is terminated and the data structures remain defective.

"Can I switch off the pesky report window?"

Of course! In the "Styles and colours of objects copied via the clipboard" dialog there is a "closed" option. If you select this, the log window will remain closed.

"Do I still need Bombadil for the new Calamus SL?"

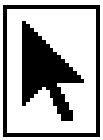
Yes. Some of the errors that Bombadil removes have not yet been located and rectified in the new Calamus SL. In addition, one is confronted repeatedly with older documents that – partly due to Calamus bugs that have long been fixed – give rise to problems of some kind. With Bombadil's repair functions some of these can be solved.

"Bombadil reports an unexpected error during repairs. What now?"

This happens when the data structures are so badly damaged that when Bombadil acccess them an error is reported to it. This terminates the capability of the module; the document will not be checked any further, the error cannot be rectified.

In such cases you should check whether you can still open the Text style and Colour list dialogs and that both lists appear correct. If not, it may be possible to save the frames by moving them via the clipboard into a new document (Select all, Group, Copy to clipboard etc. for every page). There have also been documents where only a single page or a frame was damaged beyond repair. By deleting the page or the frame, the problem could be eradicated.

1 Frame editing



This module contains functions for creating and editing (modifying) frames. Depending on the frame type there are various Special functions available.

The Frame editing module is organized into several function groups, though not all of these can be selected directly. This is because some of these function groups are Special functions that are always defined for only one given type of frame (text, raster graphics, vector graphics or tiling frames). That is why these special function groups are only selectable if the appropriate frame type is selected in the "Tools" function group.

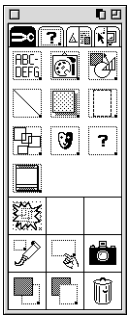
During the development of Calamus SL98 we placed special emphasis on optimizing frame handling. For this reason the frame editor was extended considerably once more. Besides additional mouse cursor shapes that make it easier to recognize the current Frame editing mode, switching between the various Sizing modes was simplified. While sizing a frame, you can now use the [Shift] key to switch on or off Proportional mode and the [Alternate] key to "Size from centre" mode. When you release the relevant key you will be returned to the original mode.

Here is an overview of the mouse cursor shapes:

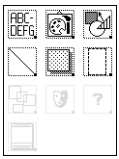
-  Move frame
-  Move frame horizontally
-  Move frame vertically
-  Copy frame
-  Draw proportional frame
-  Draw normal frame/Size frame
-  Size frame proportionally
-  Size frame from centre

The second novelty is that it is possible to move several frames at the same time. To do this just select all frames that you want to move and "grab" one of them while holding down the mouse button. All selected frames will be moved simultaneously when you move the mouse. If you want to alter the position of only one frame while several are selected, hold down the [Control] key while moving and you can move the frame whose position is to be corrected on its own.

1.1 Tools



1.1.1 Select frame type



With these icons you can select the type of frame that will be drawn next (see below). If a frame has been selected in the document window, then the icon that represents this frame type will be shown selected (inverse video). If you click on one of these icons, then Calamus will switch automatically into the Create frame mode.

Each frame type is treated individually below. What the individual icons represent has already been discussed in the "Fundamentals, Layout elements" chapter.

1.1.1.1 Text frame

Text frames can (and should) have contents, which can be imported with the supplied conversion drivers, as well as edited. Additional modules also permit you to create and edit text for text frames.

For text frames, Special functions are available in the second function group.

1.1.1.2 Raster graphics frame

Raster graphics frames can (and should) have contents, which can be imported with the supplied conversion drivers, as well as edited. Additional modules also permit you to create and modify raster graphics contents for raster graphics frames.

For raster graphics frames, Special functions are available in the second function group.

1.1.1.3 Vector graphics frame

Vector graphics frames can (and should) have contents, which can be imported with the supplied conversion drivers, as well as edited. Additional modules also permit you to create and modify vector graphics contents for vector graphics frames.

For vector graphics frames, Special functions are available in the second function group.

1.1.1.4 Line frame

Line frames have no contents as such. The definition of the frame itself (in the Line module) determines its visible "contents".

1.1.1.5 Raster area frame

Raster area frames have no contents as such. The definition of the frame itself (in the Raster area module) determines its visible "contents".

1.1.1.6 Tiling frame

The frames of page tiling frames are actually not frames at all – they merely represent the boundary lines of the tiles for subsequent printout. Page tiles allow you to print your document in several portions. This is necessary when your printing device uses paper sizes which are smaller than a document page. For example, if you are producing a tabloid size (11"x17" or 28cm x 43cm) document but your laser printer only prints DIN-A4 size (8.3" x 11.8" or 21cm x 29.7cm) pages, the tiling function will allow you to print your document in three sections, or "tiles", on A4 paper. A tiling frame will then correspond to exactly one output page. A more detailed description can be found in the Special functions for Tiling frames chapter.

For tiling frames, Special functions are available in the second function group.

1.1.2 Group frame

This functions allow you to join separate frames into one larger frame group. There are two ways to use the function: In the Frame editing mode (mouse cursor = [pointing hand]) you can select the desired frames with the mouse button while holding down the [Shift] key and then click on the "Group frame" icon to group them. Alternatively you may click on the icon first (which will switch to the drawing mode automatically) and then draw a "rubber band" around all the frames you want to group. In the latter case, any frame which is even partially within the "rubber band" will be included in the group.

No matter how you select the frames to be grouped: During grouping a frame will be created that encloses all frames in the group. Calamus will automatically calculate its size and position.

You cannot alter the contents of grouped frames, however you can resize and move them. When you adjust the size of a grouped frame, all frames in the group will change size proportionally. This also applies to the contents of the frame; raster or vector graphics will change size, and text frames will be reformatted.

You can split up a group frame to its component parts using the "Ungroup frame" function (see below). Incidentally, group frames may also be defined hierarchically, which means that a group frame can be made up, for instance, of two sub-group frames, which in turn each contain three normal frames. Ungroup frame will ungroup only the current group, so the group will not split up into six individual frames but two group frames again.

1.1.3 Group mask

 This unpretentious icon hides a very powerful function that was supplied previously in a separately available Mask module, and sensibly has now been incorporated into the Frame editing module: Dynamic masking.

Take care: This function is "larger inside than out"!

The function itself is very easy to use. It is less easy to get a general view of all the things it can do. Therefore the possibilities offered by dynamic masking are explained below at greater length than for other frame types.

For Group mask there is one Special function available in the second function group, the inversion of the mask.

1.1.3.1 Create mask

All frames that are currently selected will be concentrated into one mask group. The manner in which the frames lie on top of each other influences the result. The frame lying right at the back will be masked by all other frames "above" it. The masked frame determines the writing mode of the mask group. If only one frame was selected when clicking on the Mask icon, an error message will appear.

If the result of the masking does not match your expectations, you can split up the mask group again (see "Ungroup frames or masks" below) and check whether the order of the frames is correct and also whether all the frames were selected.

Perhaps there was also a misunderstanding about the way the masking mechanism works.

1.1.3.2 The masking mechanism

You will only be able to exploit dynamic masking fully when you have become familiar with the principle behind it. Although masking itself may appear simple at first sight, very complex results can be achieved with its aid.

Dynamic masking extends the Calamus system not just by a single function – rather it strengthens all the design possibilities already present.

How does the masking mechanism work?

A mask group consists of a frame to be masked (called the "background frame" below) and one or more masking frames(!) The masking frames in combination form the mask.

In the places where the mask is black, the objects of the background frame will be displayed in the usual manner. Where the mask is white or empty, the background object is hidden.

Where the background frame itself is already transparent, it will of course stay that way within the mask. The writing mode of the mask group affects only the current mask. Outside the mask the frame is always transparent!

As the dynamic masking takes place during output, the display of a masked object takes a little longer than for an unmasked object.

Rastering and resolution

With dynamic masking the mask is evaluated anew each time it is output. Therefore the edges of a vectorially created mask will always be sharp, also (and particularly) during imagesetting.

If you mask a bitmap picture, then even the individual pixels of this image will be cut cleanly by the edge of the mask.

The same applies, of course, to the dots of a set raster. These too will be cut cleanly by the mask. Here the raster will continue without a break over the mask edge.

If you use a bitmap image as a mask then the edge of the mask will be jagged (rough) along the pixel edges, of course. The lower the resolution of the masking image, the rougher the outline. If you want smooth edges you can vectorize the masking image with the Speed~Line module, for instance, and use the vectorial version as a mask.

There is no semi-transparency

Everything has its limits. With masking they lie exactly there – in the limits or boundaries.

A mask is at present always only black or white and with that the subject is always opaque or transparent. You cannot achieve semi-transparency with a mask.

The boundary between a masked object and the background is always sharp, therefore. There are no soft transitions.

Semi-transparency and soft transitions can be achieved with the optional Merge module.

What effects do colours or greytones have in the mask?

It is very important that you are clear about the fact that the mask is always evaluated as if it were on a monochrome screen. But that also means that it is (usually) not sensible to have any objects in the mask that are grey or coloured. In particular, it is not possible to achieve real semi-transparency in this way.

This is because coloured or grey areas too will be used in the same way as on a monochrome screen. This results in a colour being first converted to a corresponding grey value, and then rasterized. The small raster dots in the mask then only make tiny bits of the masked object visible. The same effect appears with fill patterns in masking objects.

Of course, nothing prevents you from using this mechanism as a design effect. And sometimes the result doesn't look too bad ...

What can be masked?

Quite simply: Anything that you can also use in the document otherwise! A text frame that lies within an active piping chain, a group of objects of any desired complexity, an already separated fine-data image from an image processing program or even another mask group – no problem.

If you want to apply the same mask to more than one object, you must first form a (normal) group and then mask this group. Otherwise all but the rear-most frame would be incorporated in the mask.

How can one build up a mask?

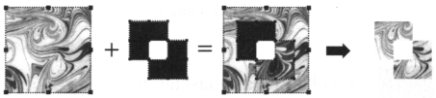
If you don't want to experiment with spectacular, rastered masks, you should always build your masks only from black and white objects.

The masking process doesn't care in the least where these objects come from. You can also combine any number of different object types in one and the same mask, exactly as you can in the document layout.

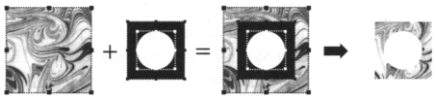
Even already masked objects are permitted in a mask!

When forming the mask group, all elements of the mask remain completely unaltered. All operations such as mirroring, rotation, the writing mode or rasterizing settings and image control curves are also active within the mask.

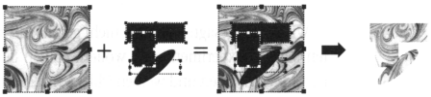
An object with inverting writing mode will for instance alter the objects lying behind them in the mask in the same way as in the document layout.



In the same way you can punch a "hole" in the mask by placing a white, opaque shape on a black raster area. The mask will become white in this position, in other words the mask group will be transparent there.



By overlapping several black objects on the other hand you can "piece together" masks of any desired shape.



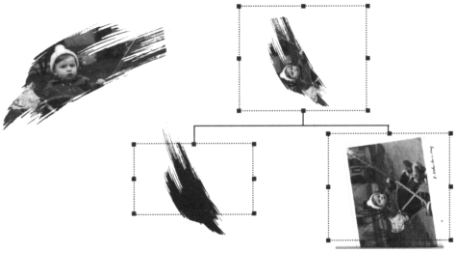
Experience shows that you can save yourself a lot of work if you put some thought into the structure of a complex mask beforehand. But even if things go wrong at times – you can always split up a mask group and correct the individual parts.

Rotation, mirroring and writing mode for mask groups

With a mask group you can only alter the general frame settings. Besides size and position changes this includes rotation, mirroring and the write mode.

These settings affect all frames within a mask group and remain in place even when the group is split up.

The only exception: The write mode only affects the frame being masked, not the frames forming the mask:

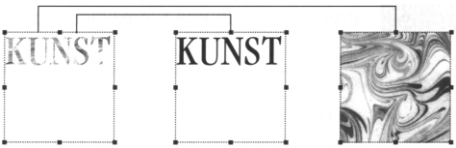


Editing the components of a mask group

This is one of the most interesting advantages of dynamic masking. As the mask groups are fully integrated into the Calamus document structure, it is possible to "go into" the closed group to some extent and edit the individual components!

For you the process is very simple: Make a virtual copy of the mask group and split it up. The individual parts of the copy remain connected with the corresonding parts of the original.

Any change to the contents of the virtual copies will then be reflected in the mask group as well, no matter whether you import images, edit text or correct vector paths.



With the Toolbox module you can go a step further: Create the virtual copy exactly on top of the original and split up the mask group as described above. So that the individual parts of the copy do not cover the original, make them invisible with the toolbox! Make sure that you have activated the "Edit invisible frame" option in the Frame editor parameters function group of the Frame editing module.

Now you can select the individual frames and alter their contents. (You may have to "click through" to the correct frame). As the mask group will be changed immediately as well, you can observe the effect directly.

In particular where text is concerned, there are often last-minute changes. With this procedure you will have no problems with this.

Tip: As virtual copies of objects occupy very little memory, you can keep the "working copies" until the document is output. If you have invisible objects in your document, Calamus will ask during printing whether these invisible frames should be printed as well. You should reply to the query with "No".

Tip: When you use a vector graphics frame as a mask, you can also change the positions of the individual mask portions relative to each other, as the position of objects within the same vector graphic is included in the contents!

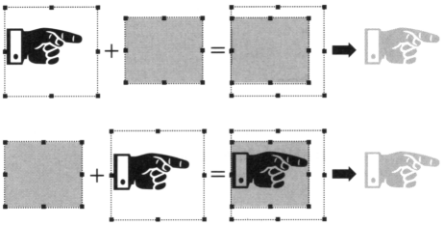
1.1.3.3 Masking: Problems and solutions

With dynamic masking you can create some very nifty constructs. Now and then though you can get out of your depth.

If the following suggestions do not provide a remedy, you should split up your mask group again and check carefully what the mask looks like and whether the order of the frames is correct.

Problem: The mask group is monochrome instead of coloured and possibly also undesirably rasterized.

Cause: The order of the frames is incorrect. The frame to be masked didn't lie right at the back and has therefore become a part of the mask. The colour areas have been rasterized and now mask one of the frames that should belong to the mask.



Solution: Split up the mask group again, correct the frame order and reapply the masking. Make sure that all participating frames are selected again (rubber-band).

Problem: A masked frame leaks like a sieve. The background shows through.
Cause: The mask is not black. Colour and grey tones are always rasterized in the mask. The raster dots then punch only small bits out of the masked object on the page. You can continue to see the background in the gaps.
Solution: Set the colour of the mask to black (via virtual copies, if present).

Problem: One or more frames of the mask remain ineffective after masking and still lie on the page.
Cause: These frames were not selected when grouping the mask.
Solution: Split up the mask group. Correct the order of the frames and make sure that all frames are selected. Then switch on masking again.

Problem: The mask group remains empty or is only partly visible.
Cause: This may have several causes:

- The mask is white.
- The mask does not overlap the object to be masked.
- Due to incorrect frame order the wrong objects mask each other.

Solution: Split up the mask group and remove the cause of the problem.

Problem: When masking several frames the result is "somehow wrong".
Cause: You can only ever mask one frame at a time. The second and further frames will be incorporated into the mask.
Solution: If you want to mask several objects with the same mask, you have to first group these objects into a group frame and then mask this.

1.1.3.4 Masking in practice

The following examples assume that you are familiar with the basic mechanism of dynamic masking. If not: Please read the mask group chapter above again from the start.

With the dynamic masking mechanism you can create a whole tier of basic effects. The following line-up should not be regarded as comprehensive, but is only meant to introduce some of the most important possibilities.

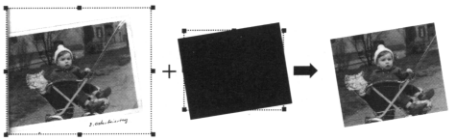
Rotated images

Digital rotation of bitmap images always leads to a loss of quality on principle. When possible, it is always better to scan the images at the correct rotation angle from the start.

But this leads to further problems: The image frame remains unrotated and the edges of the image will be jagged due to the pixel structure. Both problems can be solved elegantly with masking.

The image is simply masked with a rectangle of the same size and the same rotation angle. This makes the "dead corners" as well as the edges of the original image disappear and with it the roughness at the image borders.

If you then lay a physical copy of this rectangle with a transparent interior and white margin over the mask group, your image will be ready for assembling onto the page. (You have to group both frames appropriately).



Collage (paste-up)

The "Rotated images" example can be applied equally well with other mask shapes as well, of course. Several masked images can be assembled in a paste-up "collage".

Cutting out with vectors

As long as no soft transitions are required, you can remove the background of an object, in other words "cut it out" along its outline. Just place a vector graphics frame over the image and select a suitable magnification. This allows you to set the control

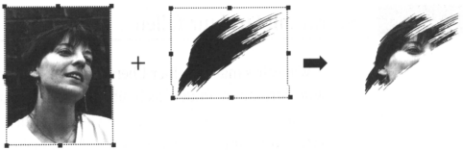
points in the vector graphic very precisely.

Set the colour of the inner raster area to black and that of the surround margins to transparent. Now mask the image with the vector graphic.

Cutting out with bitmap graphics

With halftone images there is an alternative to vector masking: Make a physical copy of the image and distort its control curve to make the outline of the subject stand out clearly. With the Brush module you can now paint out the white "holes" in the subject and remove any parts of the background that still remain with white "paint". Apply the result as a mask to the original halftone image.

Note, though, that the edge of the mask will appear "roughened" by the pixel structure. If you would then prefer to have a clean edge, you can still vectorize the mask image with the Speed~Line module and use this vector mask instead.



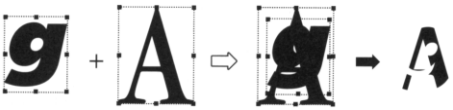
Punch holes

The simplest way to obtain a transparent hole in an image is the following: First mask the image with the shape that the hole should take. Now the image is transparent everywhere except within the subsequent hole. For this reason you should now invert the mask.

Cutting one object with another

Cutting one shape with another is of particular interest for overlap effects.

To do this, mask one shape with the other (which has to be black for this, of course). You can use the outcome as a mask in its own right and so fill the overlap of the two shapes with an image, for instance.



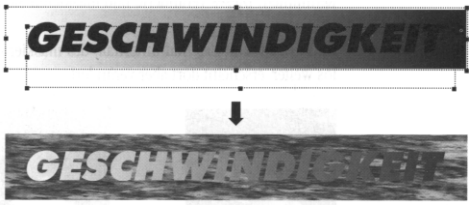
Texture-filled text

How would you like a headline with an "aluminium look"? You can find interesting texture patterns everywhere in abundance. With a suitable textured surface read in with a flat-bed scanner and perhaps its tones distorted with the image control curve, the result can be very attractive. Mask the scanned texture with the (black) text – and that's it!

If perhaps you would like to try out the same headline with various textures, prepare a virtual copy of the image frame before masking into which you can then import the scans one after the other. The mask group will be altered automatically at the same time. The same applies to a virtual copy of the text frame.

Blend (graduated tint) in text

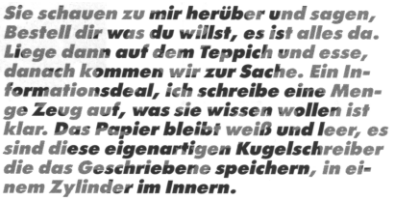
The same thing applies for graduated tints as for textures. Blends are images too. Converting a simple halftone graduated tint to a colour graphic and shifting the image control curves allows any desired colour graduation to be produced.



Partial colouring

Even complete text columns can be used as a mask. The column may even be a part of a text piping chain!

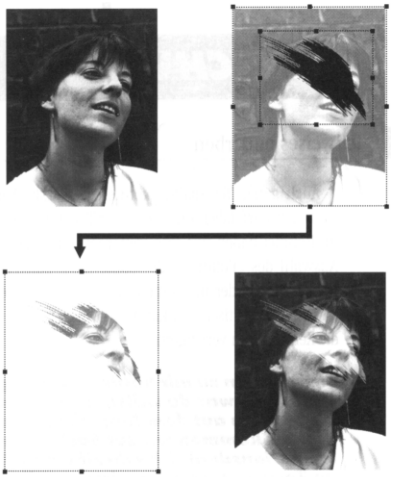
In the example below we have masked a vector graphic. The criterium for the selection of the "fill material" should be to retain the legibility of the text. Images with high contrast and fine textures can give poor results. In such cases it may be advantageous to reduce the contrast with an image control curve.



Lighten parts of the image

If you want to lighten, darken, change colour or otherwise alter only a part of an image, you can use masking for this too. Create a physical copy of the image directly on top of the original and alter its appearance via the image control curves. Mask this altered image in the desired shape.

In the result the image continues unbroken through the masked area, but has its appearance changed within it.



After a description of the basic mask effects we come to some examples for applying them in practice.

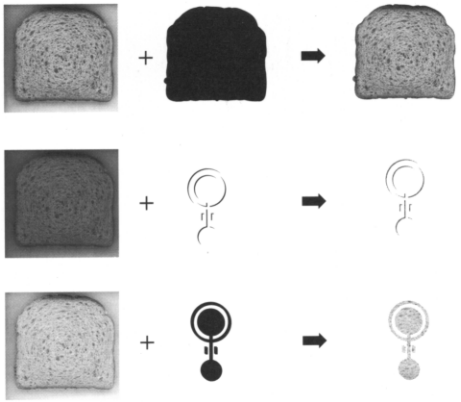
Corn circles

First the toast had to be freed from its background with a vector mask.

The inner shape was also developed as a vector graphic. This shape was copied once and moved to the right and downwards during this.

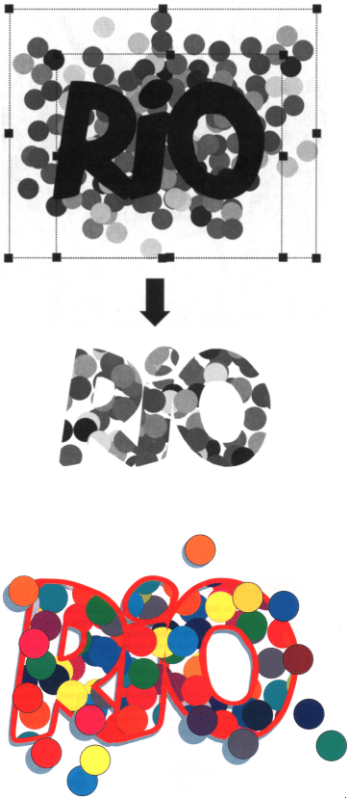
To give a solid appearance, three separate masking steps were used.

The first mask group contains a lightened copy of the image, which is masked with the non-moved vector graphic. The second contains a darkened copy of the image and both versions of the vector graphic. The non-moved graphic (black) is partly covered by the moved graphic (white). In this way only a narrow black outline will be visible. In the third mask a white raster area is masked by an inverted combination of the above items.



Rio

The shadow, outline and the individual bits of confetti are created conventionally as text and vector graphic respectively. For the fill the confetti is masked with the text shape in black and without an outline. Individual extra confetti pieces are scattered on top of the combination.



Victim of the telephone

In the background the telephone image – inverted by a black rectangle – masks a blue raster area. Directly above a white vector graphic covers the innards of the telephone.

The figure shape follows, which masks a red raster area and so gives it a colour as well as making it appear transparent.

Above this lies the vector graphic used previously in white, but this time in yellow and masked with the telephone image. (As the inner textures of the telephone are now transparent, without the white vector graphic the blue background would show through.)

The text is recoloured again in the usual way: A group made up of a yellow raster area and the blue-coloured telephone vector graphic is masked by the black text column.

Tutti frutti

Here just the monochrome outline pattern was available. Each object was surrounded by one or more vector paths. The paths were given the background colour of each object.

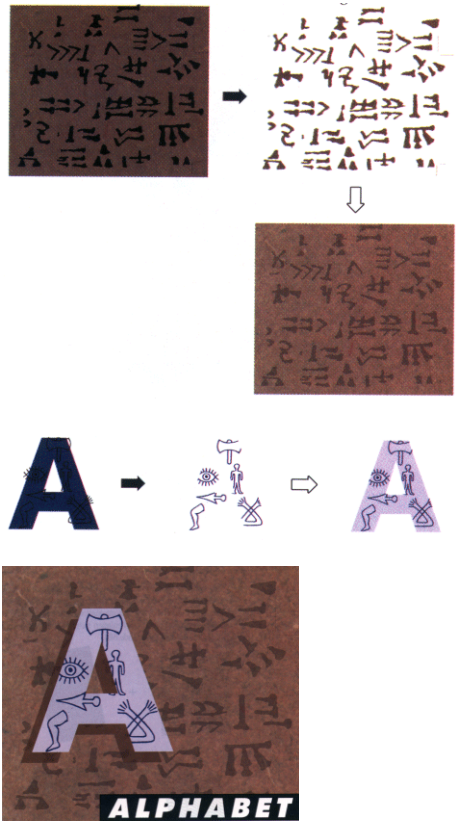
Subsequently the vector graphic was copied in the same position and an outline colour set for each of the objects. By masking this graphic with the original monochrome image, each outline gets a suitable colour.

Salamander

The background raster area and the black vector graphic lie over each other without masking. The text column was used as a mask for a group that consisted of a black raster area and a coloured copy of the graphic. This alters the colour of the text exactly where it lies over the vector graphic.

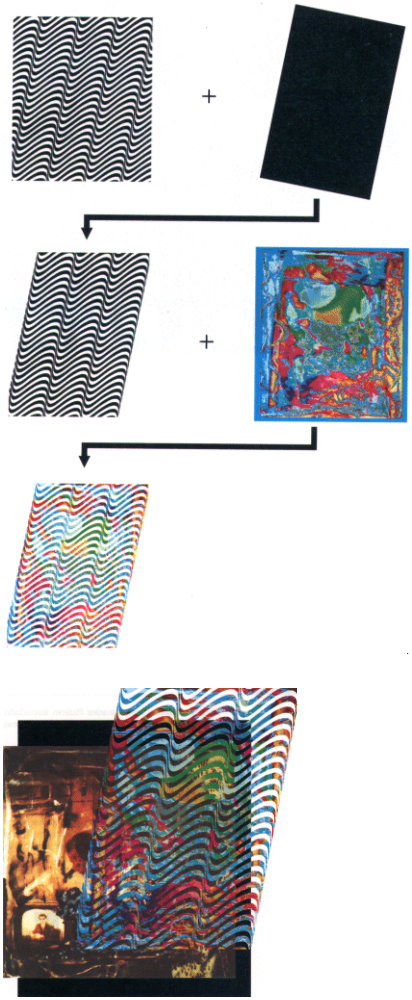
Alphabet

A b/w scan of a wedge-shaped font is used as a mask for a dark brown background. This mask group is placed on a slightly lightened copy of the background. A group of b/w scanned hieroglyphics masks a large dark brown capital A. This mask group is then placed on top of an identical light blue A, which is given a shadow falling to the left.



TV interference

The wavelike texture was scanned as a rectangle. That is why the oblique edges had to be trimmed with an angled vector mask. The result in turn masks the image. This makes the image visible only within the wavy area and covers the image lying in the background only there.

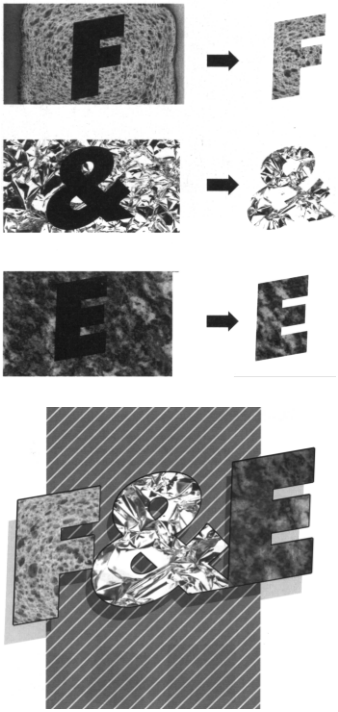


Letter texture

To exclude inaccuracies from manual positioning, modified copies of the same (rotated) text frame were used for all levels.

At the bottom lies a text frame with transparent lettering but provided with a shadow. The shadow offset is relatively large. Above this lies a raster area frame with shadow and on top of this a darkened version without shadow, masked by the shadow in the second text frame. The shadow offset is smaller than in the first text frame.

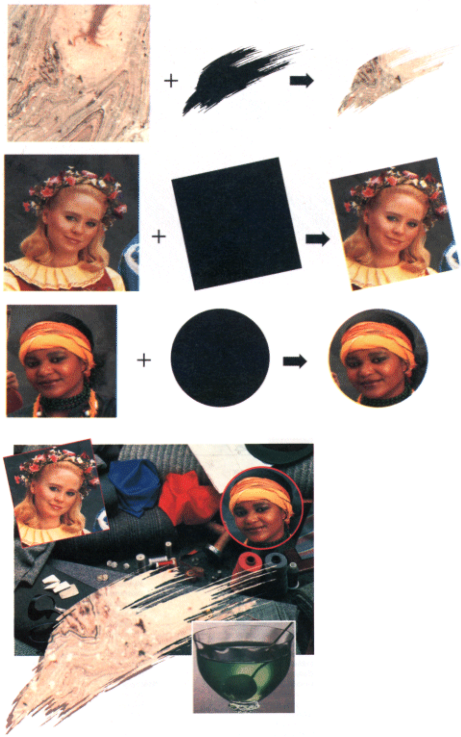
A further text frame follows, this time without a shadow but with a black outline. Above this lie three mask groups, each containing one text frame that masks a texture pattern image. During this only one letter is black at any time, the others transparent. In this way each letter is filled individually with its own texture pattern.



Collage

Here various image types and resolutions were mixed. The portraits originate from the same photograph. This picture as well as the one lying in the background were already colour-separated externally.

On the other hand the texture and the cocktail glass originate from a flat-bed scanner or a still video camera and were available as RGB data.



1.1.4 Uniframe

Uniframes are module-specific frames managed by external modules.

If the relevant module is not loaded for the module-specific frame, then up to now simply nothing was output (examples: LineArt blends (graduated tints), rough data of the Fine data module etc.). As long as the module supports this, the frame can have added to it an image of the last output which will be drawn if the module is missing at times.

1.1.5 Select master page elements

This icon allows you to select any master page elements of a document page, in other words all frames created on the master page (see Page module, Master page function group) that are visible on the current document page. However, the only thing that you are allowed to do with these frames is place them in the foreground or background (see below). You can also use the trashcan to eliminate master elements from the current layout page; if you reassign the master page, all master elements will become visible again. This function has nothing to do with the "Master page elements visible/invisible" function. Neither moving nor size changes are possible here. For this you must change the master page, which however also alters all other pages assigned to this master page.

1.1.6 Ungroup frames or masks

The "Ungroup frames or masks" function allows you to split up a group frame or a mask group frame into its component parts. Incidentally, groups can also be defined hierarchically, so that a group consists of two sub-group frames, for instance, which in turn may each contain three normal frames. When splitting up this group it will not dissolve into six individual frames, but into two group frames again.

You use this function if you wish to split up a group or mask group into its constituent sub-frames. First, select a group frame, then click on this icon. This will split up the group frames again into the same individual frames from which the group was formed, even in cases where the group is made up of group frames in turn. So to split up sub-groups, you will have to first dissolve the total group and only then can you turn your attention to the sub-groups.

If the group to be split up was a mask group, the individual elements of the mask group can now be altered directly once again. The masking has made no changes to the contents of objects.

If you have rotated or mirrored the mask group in the meantime, the individual components will now also be rotated or mirrored respectively. If you want to restore the objects to their original state, you have to reverse the transformation before splitting up the group.

1.1.7 Create frame

 In the Frame editing module, Calamus makes a fundamental distinction between two modes: Create frame and Modify frame. The Create mode allows you to draw new frames, and the Modify mode (see below) allows you to alter existing frames. You can select a mode by clicking on its icon, or switch between the two modes by clicking with the right mouse button.

You can tell which mode is active either by checking which icon is inverted, or by the shape of the mouse pointer in the layout window – in Create mode, it will appear as an arrow, and in Modify mode it will appear as a pointing or gripping hand. A cross might also appear, but we will explain that below.

-  Draw mode
-  Set size (while drawing)
-  Modify mode
-  While moving

So: You want to create a new frame. First select Create mode by clicking on the "Create frame" icon if it is not yet selected. Move the mouse cursor to the layout window and place it where you want a corner of the frame to be on the page. Click the left mouse button once, and the pointer will change to the "Set size" cursor (a hollow cross). Now, put the Set size cursor where you want the opposite corner of the frame to be – the corner marked first remains fixed and the frame will be created so that it lies between that and the current cursor position. A Calamus specialty here is that the left mouse button does not have to be held down while drawing out a frame. So you can click in the scroll bars and arrows of the layout window to move the current displayed portion of the page, or alter the magnification, in order to define a frame larger than the current layout window area. A further click of the left mouse button creates the frame, where the second corner corresponds to the position of the cursor at the time of the click, of course. A click of the right mouse button cancels the operation and the new frame will be discarded.

While you are drawing the frame, the Coordinate display will show the position and size of the frame at all times. If you want to alter these values, you can click in the Coordinate display directly after creating the frame (when this is still displayed with its resize grab handles). Then you can enter the desired values from the keyboard. In the same way you can position a frame very precisely: Simply create a frame without paying

regard to its size or position. Now click on the Coordinate display and you can enter the position and size precisely to three decimal places. The unit of measurement that will be used for this is the one you have set in the Page module for "Page size".

1.1.8 Modify frame

 This is the other mode available in the Frame editing module. Much information in the "Create frame" section is also relevant here.

The mouse pointer will appear as a hand that points to a frame. This pointing hand gives a visual indication that you are in the Modify frame mode.

-  Draw mode
-  Set size (while drawing)
-  Modify mode
-  While moving

The Modify frame mode allows you to move, resize or delete frames. Many other functions require that a frame should be selected; this too is possible in Modify frame mode. You can switch to Modify frame mode by clicking on the icon, or by clicking once with the right mouse button if you are in Create frame mode. In the document window the mouse cursor will appear as a pointing hand. You can now select individual frames in the layout window simply by clicking on them. If you would like to select more than one frame at a time, hold down the [Shift] key while you click on each frame; any frame clicked on which is not currently selected will become selected, and vice versa. To deselect all frames, simply click the right mouse button.

You may also use the mouse to "lasso" a group of frames. Place the Modify frame cursor outside one corner of the group of frames. Click once and the cursor changes to the "Set size" cursor. Move to the opposite corner of the group of frames and click again. All frames inside the drawn frame will become selected (though no new frame will be created).

It is possible that the frame you want is covered by another frame. In that case repeated short clicks in the same place allows you to switch between stacked frames. Just keep on clicking until the desired frame is selected.

To move a frame on a page, you must first select it. Point to the selected frame and

hold down the left mouse button while moving the mouse; the pointer will change to an open hand. Move the mouse and the frame will follow until you release the mouse button to drop the frame in its new location. If during moving you decide that you do not want to move the frame, simply click the right mouse button before releasing the left button, and the frame will return to its original position. If you want to move more than one frame at a time, you must group them, move the group frame, then split up the group frame.

Naturally you can also use the mouse to change the size of a frame. First, select the frame. Next, click the Modify frame mode pointer on one of the resize handles on the frame border. The mouse pointer will change to the Set size cursor (a hollow cross). Now, as in Create frame mode, you can move the corresponding edge or corner with the Set size cursor to enlarge or shrink the frame. If you want to cancel the operation because you have made an error, click the right mouse button. Otherwise, click the left mouse button once again to set the new size. If "Proportional sizing" is active you will be able to change the size of the frame, but not the proportion of width to height. So if the corner of the frame does not follow the mouse movements in the way you expected, check whether Proportional sizing is switched on. You can also recognize the proportional mode by the fact that there are no "grab handles" in the middle of the frame sides but only in the corners.

You can also change the position and size of any frame using the Coordinate display. First, select the frame; then click on the Coordinate display. Now you can enter the new position and size from the keyboard precise to three decimal places. The unit of measurement that will be used for this is the one you have set in the Page module for "Page size". When you have finished entering the new values, you have to press [Return] or [Enter] – or, if you have made an error – press [Undo] to cancel, before Calamus will accept further functions.

1.1.9 Copy frame

 Here and elsewhere in the program, the camera represents the copying function. Matters are a little complex when copying frames, because there are two copy types: Physical and virtual (see Options menu, "Copy options"), two concepts that require a detailed explanation. As the difference is really fundamental for using Calamus efficiently, you should study the process carefully by trial and error, so that it really gets under your skin.

We will start with the simpler type: **Physical copies.**

When you make a physical copy, you create a new, completely separate frame which happens to have exactly the same shape and contents as the one you are copying. Once you have made a physical copy, you can change either or both frames any way you want, treating them as two different frames that only have the same size and the same contents "by chance".

Now the slightly more complicated case: **Virtual copies.**

Like a physical copy, a virtual copy is a separate frame, and here too you can change its shape or position without affecting the frame you copied. However, the contents of a virtual copy are not just equal but the same as the original, so that the copy shares all of its contents and characteristics. The information is therefore only stored once, for all frames together. This means that when you change the contents of one of the frames (no matter whether original or virtual copy), the contents of other(s) will change correspondingly. So much for theory. In practice, when you change the contents of a frame that originates from a virtual copy frame, Calamus will ask if you want the change to apply only to the current frame or to all the frames linked to it by virtual copying. If you want the change to apply only to the current frame, then it will of course be removed from the list of virtual frames, since it is no longer identical to the others; it becomes a physical copy (or original) by default. Incidentally, you can group virtual frames without affecting their virtual nature.

Things become more critical however with piped text frames described in the Special functions for Text frames chapter. Virtual frames can not be connected to such text piping chains, because piping chains are intended for use with different original text in every frame. Things are similar when you you make a virtual copy of a text frame which is already in a piping chain. In this case, an alert box will appear, allowing you to cancel the operation or make a physical (rather than virtual) copy irrespective of the set copying

mode. The physical copy will contain all the text in the piping chain. You can select whether physical or virtual copies of frames are to be produced by using "Copy options" from the Options menu. Further description will be found under that menu entry.

Once again: You will save many hours of frustrating work, unpleasant surprises and inefficient working if you take some time to familiarize yourself with the nature of physical and virtual copies and play around with them a bit. Doing this will teach you far more than you will get from reading this description.

1.1.10 Place frame in background

If you have overlapping frames in your document, Calamus will keep track of which frame is on top of which: The oldest frame will be at the bottom, and the most recent at the top. Imagine the frames simply as pieces of overhead transparency foil, which where they overlap lie at several levels atop each other. This becomes especially clear for raster area frames, which are not made of transparency foil but are normally displayed with fully covering contents that hide everything under them. The "Frame to background" function allows you to select a frame and move it to the bottom of the pile. If you want to select a frame which is not currently at the top, keep clicking the mouse on the same spot, and Calamus will eventually select it.

1.1.11 Place frame in foreground

This function is similar to "Place frame in background", above, but it places the currently selected frame at the top of the "transparency pile" instead of the bottom.

1.1.12 Delete frame

You guessed it. If you want to delete a frame permanently, select it and then click on this icon. An alert box will appear, giving you the chance to change your mind. If you proceed, Calamus will delete the frame. It is possible to delete more than one frame at a time: Simply select all the frames you wish to delete by clicking on them while holding down the [Shift] key; then click on the trashcan icon.

If you want to remove a frame from a page, but later place it somewhere else, we recommend you use the clipboard function (see Clipboard module).

1.2 Special functions

This chapter deals with the "Special functions" function groups. These function groups are "special" because they each apply only to one given frame type.

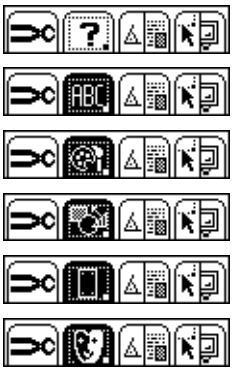
You can access the special functions for a given frame type by selecting the related frame type in the Tools function group and then clicking on the question-mark icon of the Special functions function group.

When you select it, the question-mark icon will change to represent a smaller version of the frame type you selected earlier and the function area will contain the function icons appropriate to the frame type.

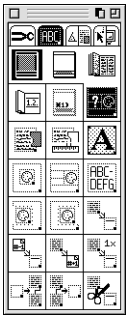
Special functions exist only for some frame types:

-  [Text frames]
-  [Raster graphic frames]
-  [Vector graphic frames]
-  [Page tiles]
-  [Mask group frames]

The following illustrations show how the Special function question-mark icon changes for different frame types:

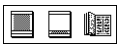


1.2.1 Special functions: Text frames

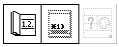


This is the first function group of the Special functions, in this case for text frames.
The special functions for text frames cover the following areas:

- Text frame type selection

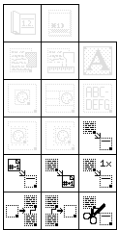


- Chapter and footnote numbering



- Text flow around existing frames

- Piping chain management



1.2.1.1 Text frame

With the first three icons of this function group you can determine the kind of information a text frame will contain.

- Normal text frames, • Footnote frames, • Index frames

The body text of a document should appear in a regular text frame; this frame may be joined to other text frames in a piping chain as described below. There are special functions to place specific text in footnote and index frames (see Text module, Tools function group for details). Footnote and index frames can be drawn and manipulated like all other frames.

1.2.1.2 Footnote frame

Footnote frames can, and usually must, be linked to a text piping chain. Every "regular" piping chain (i.e. a piping chain of normal text frames) can be assigned a footnote piping chain (see below, "Text flow from frame to frame" function). When you mark part of the text as a footnote entry (see Text module, "Control codes" function group), Calamus will automatically place it in the relevant footnote piping chain when you select the "Reformat document" function in the Options menu. Concrete examples for this are included in the description of the Text module, "Control codes" function group.

1.2.1.3 Index frame

Index frames can, and usually must, be linked to a text piping chain. Every "regular" piping chain (i.e. a piping chain of normal text frames) can be assigned an index piping chain (see below, "Text flow from frame to frame" function). When you mark part of the text as an index entry (see Text module, "Control codes" function group), Calamus will automatically place it in the relevant index piping chain when you select the "Reformat document" function in the Options menu. Concrete examples for this are included in the description of the Text module, "Control codes" function group.

1.2.1.4 Set chapter numbering

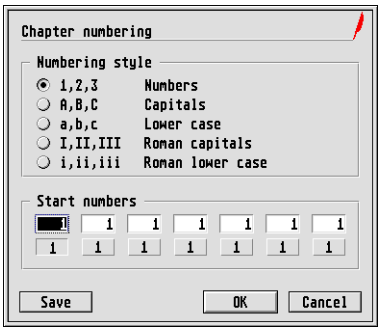
Chapter numbering works much the same way as page numbering (see Page module, "Select page number style" function group). However there are three important differences: First, the chapter number will not change automatically but only when a control code appears in the text. Second, numbering can consist of up to seven levels with different numbering styles (Arabic numbers, capital or lower case letters, Roman capital or lower case numbers). Furthermore the numbering will be carried out for all text frames in the selected text piping chain.

By inserting control codes into the text (see Text module, "Insert chapter number" in the Control codes function group) you can have semi-automatic numbering up to seven

levels deep. If you want this numbering to be consistent throughout the document, the text must be all in one piece. You can achieve this by uniting the entire document in a single piping chain (Special functions, Text frames). If no text frame is selected, then the specified numbering will be stored for the next text frames created.

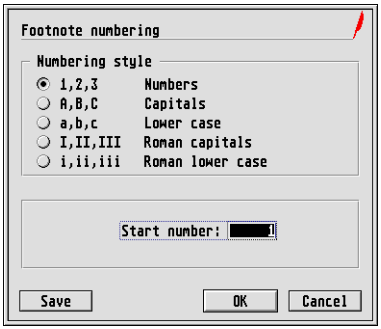
The numbering style and the starting chapter number (chapter number of the first chapter in the text piping chain) can be entered separately for each level. To change the numbering style for any level, click on the button for that level at the bottom of the dialog box and then select the numbering style for the level in the buttons above. You can enter the starting number of the current piping chain in the "Start" edit fields immediately above the level buttons. When starting a new, higher chapter level the numbering of the subordinate levels always starts with 1 (which could also appear as A, a, I, or i).

When you click on the Chapter numbering icon, the following dialog box will appear:



1.2.1.5 Set footnote numbering

You can also set the numbering system for footnotes. This works much the same way as the Chapter numbering dialog box and, like it, applies only to the current selected footnote piping chain.



1.2.1.6 Use/Ignore auto text flow

This switch indicates whether a text frame should or should not pay regard to "Automatic text flow" that may be switched on for other frames.

The default setting is "Use". This means that this text frame should flow around other frames if "Automatic text flow" has been switched on for them.

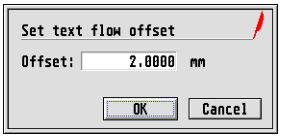
Switch this mode off if in a multi-column layout, say, you want one of several text frames not to flow around a graphic that has automatic flow-around set for it.

1.2.1.7 Show text flow

This function extends the ability of the four text flow functions described below. When you click on this icon, Calamus will display the path which the text will follow while flowing around an object, i.e. the left and/or right edge of the text. Once the path is visible, you can use the Vector graphic module to change its shape. This allows you to set the text with any desired outline shape. For more information, see the documentation of the Vector graphic module. What this function creates is the flow-around path with which you can format the text around a frame or a frame group with the following functions.

1.2.1.8 Set text flow offset

This function also complements the text flow functions. Here, you can set the minimum distance between the edge of the text and the object it is to flow around. When you click on the icon, the following dialog box will appear:



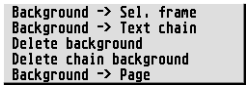
In the editable field, enter the minimum distance of the text from an object it is to flow around. The unit of measurement used for this is set with the "Set units of measurement" function (see Page module).

1.2.1.9 Select frame background

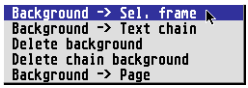
This function is used to assign any frame you wish as a background to a text frame or text piping chain. This can be, say, not just a coloured raster area, but equally well a raster graphics frame or vector graphics frame with a suitably interesting subject or decoration. The background frame adapts itself during assignment automatically to the size and proportions of the text frame(s). The background frame to be assigned must already be present on the page (be ready for assignment). The combination between the text frame and background is handled internally in a similar manner to normal frame groups, but the text still remains editable.

First select the text frame that you want to furnish with a background. (With a text piping chain, it does not matter which text frame you choose.)

Then click on this icon. A popup appears in which you can select various options:



The first two entries of the popup underlay the selected frame, or the whole text piping chain to which it belongs, with a background. So to assign the frame background to a single frame, select the first popup menu entry.



The popup closes again and the "Select frame background" icon remains inverted. Now click on the background frame. To complete the assignment, you have to click on the "Select frame background" icon again. It will return to its normal, unselected, state and the assignment will be executed.

As an alternative you can select both frames (text and background frame – which in this case may not be a text frame!) at the same time and then click on the icon twice in succession.

As in most cases you are likely to want a raster area frame as a background for a text frame, there is also a direct way to achieve this: If you select one of the raster area shapes in the Raster area module while a text frame is selected, then the text frame will be provided automatically with the corresponding raster area background (provided you answer "Yes" in the alert box that appears).

The third and fourth entries of the popup menu delete the background of a text frame or text piping chain respectively, and the fifth puts the background back on the page as a frame of its own. The position and dimensions of the frame created by this correspond to those of the text frame.

1.2.1.10 Delete text flow path

If you have assigned manual text flow to a text frame, it remains assigned to this text frame even if you clear the text frame subsequently and you can not see anything of the assignment, so to speak.

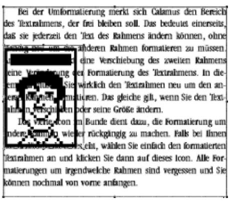
This icon serves for deleting the flow path and re-establishing rectangular formatting. To do this, just select a text frame where the text flows around an object and then click on this icon. All formatting around any objects will disappear from the frame, and the text will fill it normally so you can start again.

1.2.1.11 Text flow to left and right

Text flow around object

You can see a concrete example below:

Text is to be formatted round a graphic.



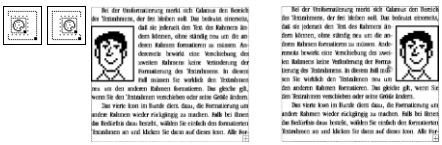
The four "Text flow" icons allow you to flow a text contained in a text frame around any other desired object(s). Any other frame can serve as the object for this. With raster graphics, however, text formatting will not be around the contents of the frame but around the complete rectangular frame border holding the graphic. With objects such as raster areas, vector graphics and line frames, the text will follow the shape of the actual object.

This flow-around path then serves as a new left or right margin edge for formatting the text. But you can also alter this flow path with the "Show text flow" function described above. The way that the text will flow around the object depends on which of three icons you click on.

To format the text, click first on the text frame (in Modify frame mode). Then select whether the text should flow to the left, right, or both sides of the object by clicking on the appropriate Text flow icon (see below). Now, select the frame or frames which the text should flow around. When you click on the Text flow icon a second time, Calamus will reformat the text in the way that you imagined. (It is possible to flow text around more than one frame at a time.)

The differences between the three types of text flow should still be described briefly:

As long as there is room for text on only one side of the object or objects, all three Text flow icons will have the same effect. It is only when there is room for text on both sides of the object(s) that you will see a difference. The icon shown will place the text on both the left and right sides of the object, providing this is possible acording to the formatting rules (see also Text rulers settings of the Text module):

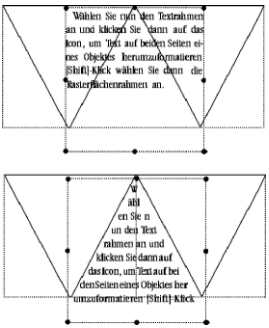


The flow path created during text formatting is managed together with the text frame. So if the object is moved, a new text flow path has to be created.

The fourth icon (the first in the Text flow group, already mentioned above) serves to delete the flow path again and restore a rectangular text format. To do this, just select the

formatted text frame and then click on this icon. All formatting around objects will disappear from the frame, and the text will fill it normally.

Following are examples of some interesting flow paths you might want to construct: To put your text in the shape of a triangle, create two invisible upside-down triangular raster area frames over the text:

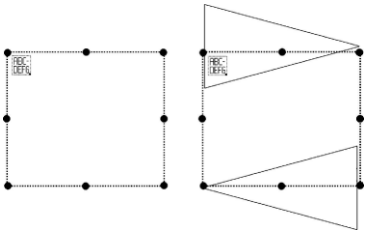


Now, select the text frame and click on the icon that places text on both sides of the frame.

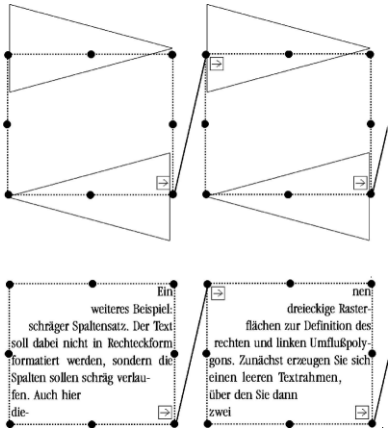
Then select the first raster area frame by clicking on it, and the second raster area frame by clicking on it while holding down the [Shift] key. Click on the Text flow icon once more. If you are happy with the shape of the text, you can delete the raster area frames:

Line frames open up even more possibilities. Note that the text can flow along both sides of the line. This allows you to create an empty oblique streak through the middle of the column by setting Text flow offset to an appropriate width around the line:

A further example: A slanted text column. For this the text should not be formatted in a rectangular shape, but the columns should run at an angle. Here too you can use two triangular raster areas to define the left and right flow-around polygons. First, create an empty text frame over which you lay two triangular raster areas:

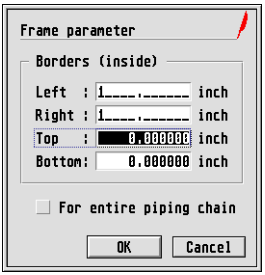


Set the flow path as described above. Now, you can delete the raster area frames. The text frame created, in which the text will slant from top right to bottom left, should be copied (physically) once for each column required. Now link these oblique columns into a piping chain with the "Text flow from frame to frame" function (see below). You should only now import the text, which will be formatted to the desired shape.



1.2.1.12 Set frame borders

A click on this icon opens the following dialog:



Here you can set borders for the selected text frame, or the entire text piping chain to which it belongs (for the latter, activate the checkbox). These borders will be left clear when the text is formatted. So setting the left border to 2 cm results in the text starting 2 cm to the right of the left frame edge. These border settings can be useful in connection with backgrounds to text frames (see "Select frame background"), for example, as you could otherwise just adapt the frame size and position.

Please note that the border settings may also contain negative values. So a left border set to – 2 cm lets the text protrude 2 cm to the left over the frame's edge.

1.2.1.13 Text flow to right of frame

If an object is positioned on a text frame so that there is room at both left and right for text to flow round it, activating this icon clears the space to the left of the object completely, and text only flows past the right of the object.

1.2.1.14 Text flow to left of frame

If an object is positioned on a text frame so that there is room at both left and right for text to flow round it, activating this icon clears the space to the right of the object completely, and text only flows past the left of the object.

1.2.1.15 Text flow from frame to frame

Before we explain this and the following functions, we will look at the idea of "text piping". Imagine that you are writing a book. The text which ends at the bottom of one page should continue at the top of the next. When you delete a paragraph on the

current page, the text should flow back from the following page to fill the space. Similarly when you insert text: The text that no longer fits on the page should be pushed forward onto another page. In other words, text should be able to flow back and forth between different pages. Several of these text flow connections result in a text flow or piping chain. Naturally, the same applies for text flow between two frames on a page (say when using more than one column).

The function "Text flow from frame to frame" allows you to join any two or more text frames to form a piping chain. First, select the frame from which the text should flow; this frame must not already have a text piping connection to another frame, though text from another frame may flow into this one. Next, click on the "Text flow from frame to frame" icon. When you move the mouse pointer back to the layout window, you will notice that its shape has changed and will be displayed as:

Now you can click with this cursor on the frame to which the text should flow. The second frame will now become selected and have an arrow in its top left corner to show that text is flowing into it from another frame in a piping chain. The first frame will have an arrow in the bottom right corner to show that text is flowing out of it. Now, since the second frame is already selected, you can click on a third frame to which the text should flow when there is no more room in the first and second frames. Once you have finished clicking on frames, click on the "Text flow from frame to frame" icon again to end the function.

Incidentally, it is not necessary to have all the frames in a piping chain on the same page. For example, you can even pipe text from a frame on page 5 to a frame on page 8, back to page 6, and then forward to page 11 (which is only very seldom a good idea, however). For a more practical application, there are also two special functions ("Piping from previous page" and "Piping to next page", see below) that create the corresponding text flow connections automatically when adding or deleting pages.

In addition this function also joins index and footnote frames in a piping chain (see above). Before Calamus can format footnotes or index entries, it must know to what text they are related. If a portion of text is marked as a footnote, it will transferred to footnote frame(s) assigned to the current text frame (the same applies to index entries, of course). The assignment itself is done in the same way as for normal text flow piping links between frames: Click first on the text frame, then on the relevant footonote or index frame. It is now possible to make entries in index or footnote frames, as described in the Text module documentation.

Tip: If during automatic chaining of text frames from one page to the next you collide

with Calamus's automatic page scrolling, just press the [Alternate] key, which switches off page scrolling for the time being.

1.2.1.16 Piping from previous page

When you call this function, it will have no effect on piping at first; it will simply place a [>] marker symbol near the top left corner of the frame. The next time you add or delete a page, this marker will automatically create a piping link between this frame and the frame on the previous page with the opposite (corresponding) marker, that is "Piping to ..." (see below).

This also makes it clear that only one frame on each page can be marked this way. To place the marker, select the desired frame, then click on the function icon. The active frame will then be marked as the one into which the text from the previous page should flow. To eliminate the marker, select the frame and then click on the same icon once more.

To prevent misunderstandings: No text piping connection will be created, nor will one be dissolved. Text piping connections are identified exclusively by an arrow in the corner of the frame. The [>] marker only ensures that text piping flow connections are formed or dissolved when pages are inserted or removed. A concrete example is once again a book that is to be set with Calamus: Create a new page with a text frame positioned where you want it; select the frame, and assign to it the marker for text flow from the previous to the next page. Now, add as many pages as you think you'll need; activate the "Copy layout" checkbox in the "Insert empty pages" dialog box of the Page module. All the pages will be linked automatically into a piping chain, because the frame carries the relevant markings. If you now import text, you will see that it pipes automatically from page to page. The same thing can work for pages which contain more than one text frame – for example three column layouts for magazines or newspapers. These three frames should have text piping linked manually. The first frame is given the marker for flow from the previous page, the third frame will be marked as the one from which text should be piped to the following page (see below). But here too the real linking between the pages will only be created when copying the layout.

1.2.1.17 Piping to next page

When you call this function, it will have no effect on piping at first; it will simply place a [>] marker symbol near the lower right corner of the frame. The next time you add or delete a page, this marker will automatically create a piping link between this frame and the frame on the following page with the opposite (corresponding) marker, that is "Piping from ..." (see above).

This also makes it clear that only one frame on each page can be marked this way. To place the marker, select the desired frame, then click on the function icon. The active frame will then be marked as the one from which the text should flow to the following page. To eliminate the marker, select the frame and then click on the same icon once more.

To prevent misunderstandings: No text piping connection will be created, nor will one be dissolved. Text piping connections are identified exclusively by an arrow in the corner of the frame. The [>] marker only ensures that text piping flow connections are formed or dissolved when pages are inserted or removed. A concrete example is once again a book that is to be set with Calamus: Create a new page with a text frame positioned where you want it; select the frame, and assign to it the marker for text flow from the current to the next page. Now, add as many pages as you think you'll need; activate the "Copy layout" checkbox in the "Insert empty pages" dialog box of the Page module. All the pages will be linked automatically into a piping chain, because the frame carries the relevant markings. If you now import text, you will see that it pipes automatically from page to page. The same thing can work for pages which contain more than one text frame – for example three column layouts for magazines or newspapers. These three frames should have text piping linked manually. The first frame is given the marker for flow from the previous page (see above), the third frame will be marked as the one from which text should be piped to the following page. But here too the real linking between the pages will only be created when copying the layout.

1.2.1.18 Piping text once

When a frame holds more text than it can display, a [+] sign will appear in the bottom right corner. If you want to display all the text, you can either make the frame larger, or link it into a text piping chain so that the surplus text flows into another frame. This function is used to let text that no longer fits into the frame flow to another frame, but without joining the frames in a piping chain. This means that both frames will be independent of each other, and that inserting or deleting text in one will not affect the other. You can, however, use the "Piping from frame to frame" function described above to join them into a piping chain later, if you wish.

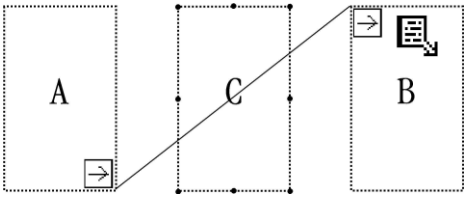
1.2.1.19 Insert frame into piping chain

This function allows you to insert a single frame between frames of an existing text piping chain. You can also use it to insert frames that you have removed from a piping chain accidentally. First, select the frame which you wish to insert into the piping chain.

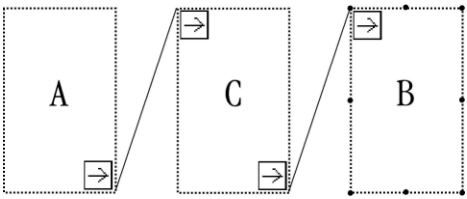
Now, click on the "Insert frame into piping chain" icon. The icon will appear in inverse video, and the mouse pointer will change into the piping cursor when it is within the layout window. Now, click on either of the two frames between which you want to insert a new frame. A dialog box will appear, asking if you wish to insert the frame "Before" or "After" the selected frame. Make the appropriate selection and your new frame will be correctly inserted in the piping chain.

The process is shown on graphical form below:

Before:



After:



1.2.1.20 Remove frame from piping chain

This function allows you to remove a single frame from a piping chain. Select the frame to be removed from the chain and then click on this icon. The text will disappear from the frame and flow into the other frames of the piping chain. The frame will still exist, but it will be empty, and no longer joined to others in a piping chain. You may do what you like with the released frame.

If you have selected this function accidentally, or change your mind after selecting this function, you can put the frame back into the piping chain by using the "Insert frame into piping chain" function (see above).

1.2.1.21 Cut piping chain

 This "scissors function" allows you to interrupt a text piping chain – just as you can use scissors to cut a necklace in two. All text and frames on one side of the cut will form one piping chain, and all the text and frames on the other side of the cut will form a completely separate piping chain. Select the frame where you want to cut the chain, and click on this icon. Unless the frame is the first or last in the piping chain, a dialog will ask whether the piped text chain should be cut "Before" or "After" the selected frame; if it is the first or last, the cut will be performed without a query. The piping icons each side of the cut will disappear because the frames are no longer joined.

If you have selected this function accidentally, or change your mind, you can rejoin the chains by using the "Piping from frame to frame" function (see above).

1.2.1.22 Frame identifying markers in text piping chains

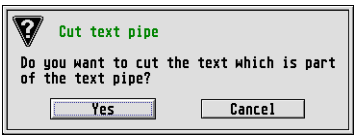
To complete this section about text piping chains we will review the various frame identifying piping icons (or markers) that can appear in text piping chains.

-  Frame holds too much text, and there is nowhere to pipe it.
-  Piping from previous page or to next page.
-  Piping to or from this frame.
-  Text chain

You can alter the piping (i.e. the flow of text from one frame to another) in the document layout directly with the mouse. Click on the [+] icon and use the mouse to draw a line to the next suitable text frame. This makes it easy to connect an overflowing text frame to the next one. Naturally this is possible with frames that have not yet overflowed and show the normal text chain icon as well.

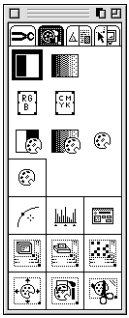
An alternative way to cut a text piping chain to that described above is to select the desired frame and then while holding down the [Alt] key click on the relevant text chain icon at top left or bottom right of the frame, depending on where the text flow should be cut. All text and frames on one side of the cut will form one piping chain, and all the text and frames on the other side of the cut will form a completely separate piping chain. The piping icon at the bottom right of the frame will disappear because it is no longer joined to the following frame. Likewise, the piping icon at the top left of the following frame will disappear.

A safety query protects you from accidental cutting of the piping chain:



If you change your mind, you can rejoin the chains by using the "Piping from frame to frame" function discussed above.

1.2.2 Special functions: Raster graphics frames



This function group will appear if you click on the question mark icon in the Frame editing function group while the icon for raster graphics frames is selected. The raster graphics frame icon will automatically be selected when a frame of that type is active.

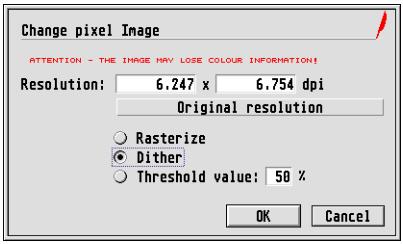
This function group contains all the functions designed for working with raster graphics. For more information on raster graphics, see the chapter "Fundamentals, Vector and raster graphics". You can also modify colour images here. For greyscale and colour images you can set the control curve for the raster transformation, and you can use various functions to control the size of any raster graphic. Finally, there are functions that allow you to crop (delete part of) an image or add a surrounding margin to it.

You will also find here functions for converting the colour depth of raster graphics frames. Please note that converting an image to a colour space with a lower colour depth (say RGB-colour to grey) may basically lead to a loss of colour information.

Beside the usual colour spaces CMYK, RGB, greyscale and monochrome you can also convert your raster graphics to palette images (duochrome or 256 colour) here. Furthermore Calamus lets you colourize greyscale images (also with real spot colours) and create duplex, triplex and quadruplex images here.

When a graphic frame is selected, the icons will show the current colour space of the image. This allows you to find out easily, for instance, whether the image has already been separated into CMYK or is still present in RGB format.

If you have selected a raster graphics frame and click on one of these icons, the following dialog appears:



Here you can set the desired target (resultant) resolution. A click on the "Original resolution" button sets the present image resolution, and a click on the unit of measurement following the resolution value switches between "dpi" and "pix"els. When converting colour or greyscale images to monochrome ones, you can also specify

how the colour and grey values are to be converted to monochrome. "Rasterize" means that the image will be rasterized with the raster that is currently selected in the Raster generator for this frame. As usual the hierarchic principle applies here too: If no raster is set for the frame then that for the page will be used; if there is none for this either, then that of the document. If "Dither" is selected then the Ordered dither process will be used. When converting greyscale images to monochrome, then instead of rasterizing you can set a Threshold value. A threshold value of 50 % for instance will result in all parts of the image that have a grey value lighter than 50 % becoming white while all darker ones become black.

1.2.2.1 Monochrome image

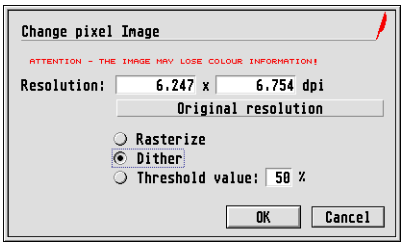
This function coverts a picture (multi-tone image) to a monochrome image.

Monochrome images can only be "painted" in the "colours" black and white. You will find further information about this in the introductory chapters.

Monochrome images often come from various drawing programs, for example.

When you convert a colour or greyscale image to a monochrome image, you lose the information about the colour and grey values, but for lower resolution output devices you will save memory and speed up screen drawing. You should do this conversion only when you are sure that you will never want to print the image to a higher resolution output device. (On the other hand, when you convert a monochrome image to a raster image, you can print it on higher resolution output devices because Calamus will generate the grey tones for that resolution.)

To convert a colour or greyscale image to a monochrome image, you should first select a screen resolution that is the same as that of the printer you will be using – so that each screen pixel corresponds 1:1 to a printer pixel. Select a raster graphic frame containing a colour or greyscale image and then click on the "Monochrome image" icon. After a safety query, Calamus will generate a monochrome image with a raster that corresponds to the one visible on the screen, and replace the original colour or grey image with it.



1.2.2.2 Greyscale image

This function coverts a picture into a greyscale image with 256 grey levels.

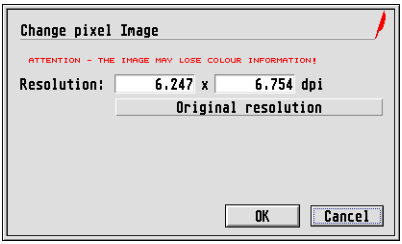
Greyscale images have up to 256 different levels of grey. You will find further information about this in the introductory chapters.

Greyscale images are mainly produced by scanners.

When you convert a colour image to a greyscale image you lose the information about the colour values, but for lower resolution output devices you will save memory and speed up screen drawing. You should do this conversion only when you are sure that you will never want to print the image to a higher resolution output device.

A monochrome image that is converted into a greyscale image can also be reproduced on output devices with different resolutions and can be enlarged/reduced. During this you will lose resolution, however, as Calamus attempts to create grey values from the pixel distribution in the image.

To convert a colour or monochrome image to a greyscale image, select the image frame and the click on the "Greyscale image" icon.



1.2.2.3 Colour image (RGB)

This function converts the image to an RGB colour image with 24 bit colour depth (16.7 million colours).

1.2.2.4 Colour image (CMYK)

This function converts an image to a CMYK colour image with 32 bit colour depth. For preparing colour separations, the control curves set for the four colour separation layers will be used. This allows you to colour separate images before outputting to a printer or imagesetter etc.

1.2.2.5 Duochrome palette image

 This function converts the image to a duochrome palette image. Duochrome images are similar to monochrome images, since they are displayed only in two colours. Therefore you will be asked before the conversion whether the image is to be rasterized or dithered.

During conversion from a colour or greyscale image to a duochrome palette image some image information will be lost.

After the conversion of the raster image frame you can replace both palette colours used in the duochrome palette image by any other colours.

1.2.2.6 Duplex/Triplex/Quadruplex image

 This function converts the image to an "nplex" image and you are offered a choice whether this should become a colourizable greyscale image, or a duplex, triplex or quadruplex image (i.e. consisting of only 2, 3 or 4 colours respectively).

Usually one uses this image type to create special effects with spot colours. So for instance you can colourize a greyscale image of your firm's building with the "house" colour and with it achieve a special effect on your firm's stationery. Nplex images may be defined from up to four freely chosen colours, whose gradation can be changed via individual control curves to achieve special mixing effects.

1.2.2.7 Colour image (palette)

 This function converts the image to a palette colour image with 256 colours or grey-tones (such as GIFs, for instance). "Palette" here means that a palette entry exists for each of the 256 colour values or grey-tones.

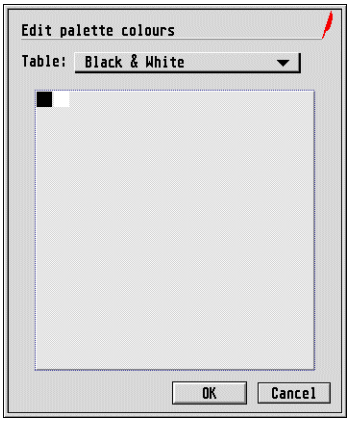
Afterwards you can assign any new colour you like to each individual colour value of the palette image.

1.2.2.8 Edit palette

 With this icon you call up image processing tools; their appearance depends on the selected image type. With the tools you can modify duochrome palette images, duplex/triplex/quadruplex images and palette colour images. With other image types an error message appears.

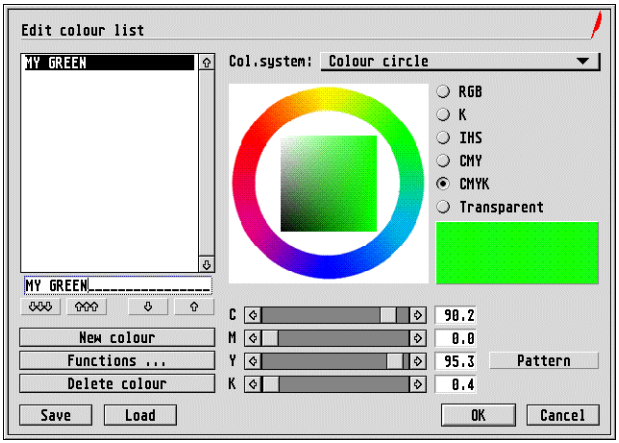
For duochrome palette images

The image processing tool is very simple to use: You will see a dialog that displays both colours used in the duochrome palette image.

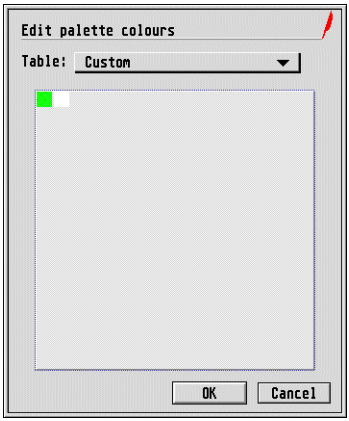


In the selection popup at the top of the dialog you will see the status of both colours: "Custom" means that the colours no longer correspond to the original colours after conversion of the image to a duochrome palette image. With "Black/white" you can recalculate the image back into the normal black & white mode at any time.

To define custom colours, just click on one of the two small colour patches at top left of the colour list area. After this the Calamus Edit colour list dialog opens, in which you can choose any desired colour.

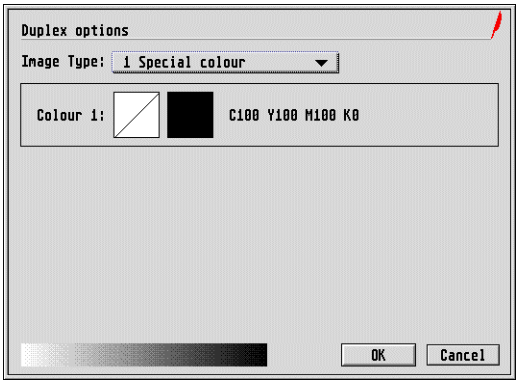


If you exit the Edit colour list dialog with the "OK" button (or with [Return]), the selected colour will be assigned to the previously clicked on palette colour of the image.

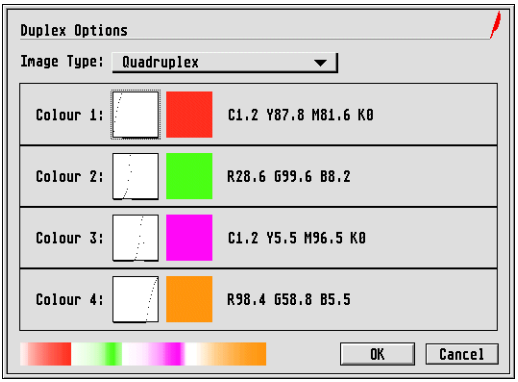


For duplex/triplex/quadruplex images

With this image processing tool you first have to determine what type of "nplex image" you want to process.



To do this, select the desired image type in the selection popup at the top of the dialog. Depending on what you have chosen, you will then see up to four image parameter lines in the dialog.

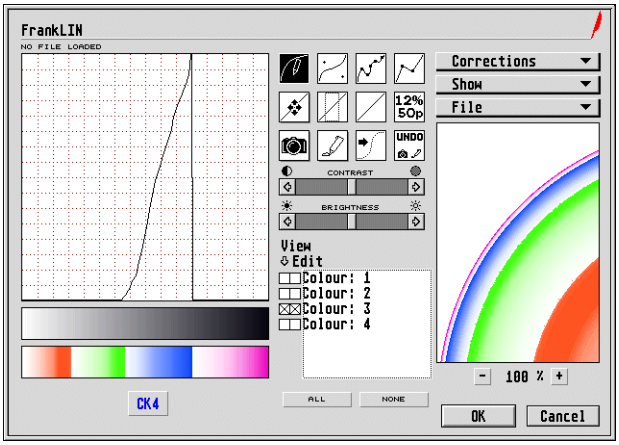


The lines are labelled "Colour 1" to "Colour 4" which is followed by a control curve field, a colour field as well as a colour name in each case.

If you only want to alter the colour(s), simply click on the large colour fields. After this the Calamus "Edit colour list" dialog opens, in which you can choose any desired colour. If you exit the Edit colour list dialog with the "OK" button (or with [Return]), the selected colour will be assigned to the previously clicked on layer colour of the image.

With greyscale or duplex images, this may be sufficient to achieve the desired effect in an image. But you can and should still take care to ensure that that the colours appear balanced with each other when mixed in the image.

To achieve this you can alter a gradation control curve for each colour. Click on the control curve field of the relevant colour. This opens the Control curve editor (e.g. FrankLIN, if you have loaded this as a module).

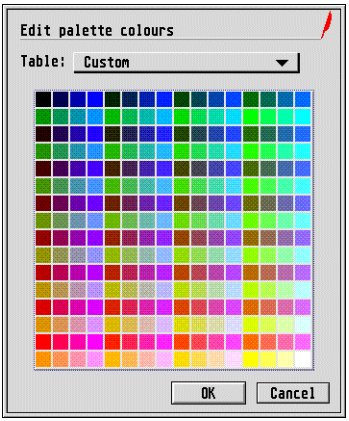


In the Control curve editor you can modify the gradation control curve, and save or load modified curves. If you exit the Edit control curve editor with the "OK" button (or with [Return]), the gradation control curve will be assigned to the selected colour of the nplex image, and you can see the changes directly in the document after the "Duplex options" dialog is closed.

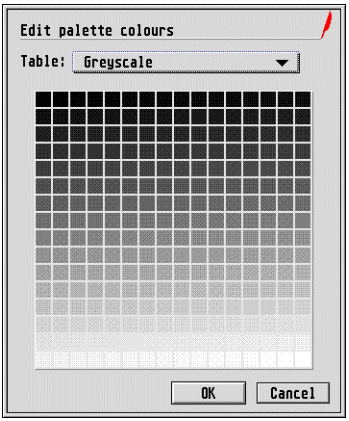
Tip: For such work its best to use the extended Control curve editor FrankLIN from the start, which has to be loaded as a module. This offers a preview of the effect any changes and the possibility of modifying all the required control curves in one go.

For palette colour images

This image processing tool is used in a similar way to that for duochrome palette images: You will see a dialog that displays the 256 colours of the palette colour image.



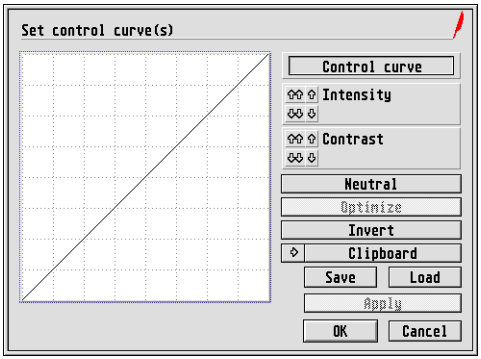
In the selection popup at the top of the dialog you will see the status of the colour palette: "Custom" means that the colours no longer correspond to the original colours after conversion of the image to a palette colour image. With "Greyscale" you can recalculate the image back into the normal greyscale mode at any time.



To define custom colours, just click on one of the two small colour patches at top left of the colour list area. After this the Calamus "Edit colour list" dialog opens, in which you can choose any desired colour. If you exit the Edit colour list dialog with the "OK" button (or with [Return]), the selected colour will be assigned to the previously clicked on palette colour of the image.

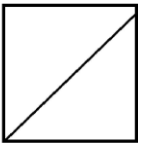
1.2.2.9 Set control curve

The control curves of a monochrome, greyscale or colour image greatly influence its appearance when output. (Note that "curve" here includes a straight line!) They determine the relationship between the theoretical brightness of each image point and the actual raster representation calculated from it. To understand this function properly, you should have read the introductory chapter about raster and greyscale images. For colour images, there is a control curve for each primary colour – red, green and blue – and you can modify them individually or all at the same time. For simplicity, it is easiest to describe the single control curve for greyscale images at first. This function allows you to increase or decrease the contrast of an image, to produce an inverse (negative) image, or to calculate the control curve automatically from the brightness values in the image. When you click on the "Set control curve" icon, the following dialog box will appear:

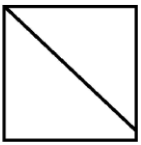


The left side of the dialog box contains the current control curve. Each of the 256 possible levels of brightness for an image, which increase from left to right, can be recalculated to a raster value. The raster values increase from bottom to top. A neutral control curve, where each brightness level corresponds directly to the same raster level, is a straight line going diagonally from the bottom left corner to the top right. For a negative image, it slants the other way; that means that the darkest values of the original will have the brightest rasters, and vice versa. Below are some sample control curves and their effects:

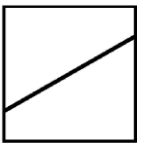
Neutral display:



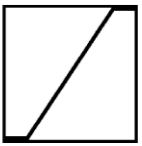
Negative/Inverted display:



Reduced contrast:

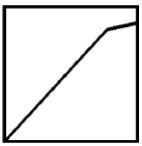


Increase contrast (here the brightness levels at the curve end from around 90 % will appear completely black and levels below some 10 % will not appear at all):

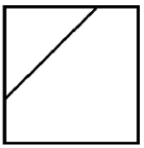


Raise contrast in the middle range, taper it off at the extremes:

Darken brightest areas:



Increase brightness:



You can change the control curve by clicking anywhere within the control curve area; the control curve will be modified correspondingly, though only at this one point. In practice this means that a point on the control curve will be "dragged" to the height where the mouse cursor was positioned at the click. By holding down the left mouse button and dragging the mouse cursor you can also draw a straight, curved or any other shaped line to change whole portions of the control curve.

On the right side of the dialog box you will see various buttons. Below the "Control curve" identifier there are four arrow buttons for setting the picture Intensity (brightness) and the same for Contrast. The double arrows allow large adjustments; the single arrows are for fine-tuning. [Up arrows] increase and [Down arrows] decrease the relevant picture parameters.

The intensity or brightness of an image depends on the amount of white it contains. So to brighten a picture, reduce all grey values by a fixed amount (smaller grey value = lighter). Graphically, the whole control curve moves up. You can also lose information here due to saturation effects since more of the picture will become pure white, and unlike the promise of washing powder adverts, you cannot get "whiter than white". You can also see this in the last illustration.

As may be expected, the Contrast arrows can be used to alter the contrast of the image – in other words to increase or decrease the difference between various grey levels. Please note that increasing contrast above the neutral value will produce a saturation effect at the extremes of the curve and so you will lose information at the top and bottom brightness ranges of the image. This is due to the fact that if a grey value of "80 %" produces a full black, for example, then the grey value of "90 %" can not be displayed even darker than this. The extreme case is a vertical line at 50 %; this will produce a "photocopier effect", where the picture only consists of 100 % black and 100 % white. In mathematical terms, the steeper the control line or curve, the higher the contrast.

The first two large buttons allow you to create pre-defined control curves. "Neutral" gives you the standard 1:1 diagonal control curve as a straight line from bottom left to top right. "Optimize" distributes the grey values present evenly throughout the graphic's tone range (not yet implemented). The next button, "Invert", changes the direction of the control curve so that everything white becomes black and vice versa (intermediate values are swapped over as well), thereby producing a negative of the image.

The "Clipboard" button offers additional temporary storage for a control curve. When the button is not selected, you can copy the displayed control curve to this clipboard (the direction "into clipboard" is marked by an inward arrow to the button). If a control curve is already stored in the clipboard, the button is activated (inverse video) and the arrow points outwards. In that case a click on the button moves the control curve in store to the dialog display.

The "Load" and "Save" buttons allow you to keep pre-defined control curves on floppy or hard disk. When you click on one of these buttons, the file selector will appear. You may then enter a filename for the control curve or select an existing one. Control curves have the file extender "CKL".

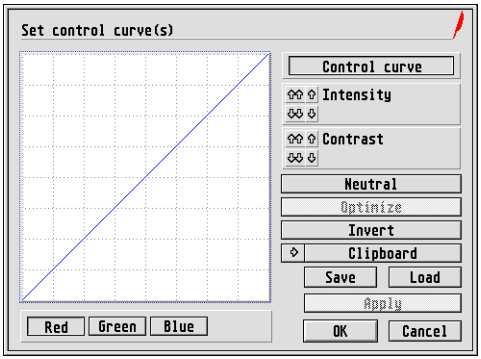
The "Apply" button has not been implemented, and so is greyed out.

A final word on setting the control curve: You should be aware that while altering the control curve can affect the reproduction of an image within limits, these limits are set by the quality of the available image data, as Calamus cannot produce output with more information than is contained in the image you supply.

To sum up: A properly set up scanner is worth more than any manipulation of the control curve. So before you attempt to "fine tune" an image with the help of a control curve function, you should try to get as optimum a contrast setting as possible of your scanner. Also, as mentioned previously, anything but a neutral control curve will reduce the greyscale resolution of the image. But if you are working with a raster consisting of less than 16x16 pixels (see also the introductory chapter about raster graphics), the effective greyscale resolution of the output is lowered in any case.

Control curves for colour images:

With colour images there are three extra buttons in the dialog box: "Red", "Green" and "Blue". You can click on these buttons to turn the control curve for each colour on or off, singly or in any desired combination. On colour monitors, each control curve will appear in the appropriate colour. All changes that can be made with the monochrome control curve described above can also be made to the currently displayed colour control curve(s). You can also create the effect of colour filters by changing the Contrast or Intensity (brightness) of one or two control curves.

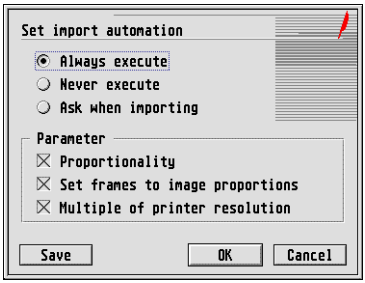


1.2.2.10 Show histogram

With this icon you can call up the working dialog of the Histogram module, provided the module has been loaded; otherwise you will get an alert that it has not. The detailed description of the various functions will be found in the chapter dealing with the Histogram module.

1.2.2.11 Set import automation

Import automation affects the size and proportions of frames when importing raster graphics. Thus raster graphics can be scaled automatically to the printer resolution, or an integer multiple of this while importing, for instance. Clicking on this icon opens the following dialog:



With the radio buttons in the upper part of the dialog you can determine when the settings made below should take effect – "Always", "Never", or "Ask when importing"; in the latter case this dialog will appear each time you import an image.

If the "Proportionality" checkbox is crossed, the frame will be switched automatically into proportional mode after importing the graphic.

If the function "Set frames to image proportions" is active, the image will be adapted automatically during import to the currently set printer resolution.

If the last entry ("Multiple of printer resolution") is active as well, the size of the image will be rounded to the nearest multiple of its original size.

1.2.2.12 Optimize raster graphics

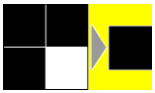
Raster graphics have a fundamental problem: They are made up of raster points. Raster points have different sizes on almost every output device. If you created a raster graphic in one resolution, but want to print it in another, the raster points must be enlarged or shrunk. Unfortunately discrete values – which is exactly what raster points are – cannot be reproduced smoothly on another, equally discrete raster. The problem is that in the digital domain one can only talk of yes and no, on and off (the analogy to the expression "a little bit pregnant" being impossible comes to mind). The whole thing should be made clearer with an example: Imagine you are looking at a greatly enlarged raster that has two white raster points:

So you have two raster points. Let's say we want to increase the width of the raster by a factor of 1.5. As a result, we will have three raster points in a row:

As long as the points are all black or all white (as above), there is no problem, but what happens if one point is black and the other white – how does the enlarged raster look?

The first point of the enlarged raster is certainly black and the third white, but what about the second point? That is the first problem. It manifests itself in the fact that some pixels will be doubled up, others not. The result is often ugly, because the graduations become regular and therefore noticeable.

The second problem occurs when shrinking raster graphics. Let's say you want to shrink this graphic



to a quarter of its size in both directions. As a result, you will have only one point instead of the original four. Depending on where you start to count, you will always get a black or always a white point. The subtle raster disappears, and you end up with large black or white areas. In conjunction with the first problem of rounding off, both enlargement and shrinking can create a Moiré effect, a series of streaks in the middle of your picture. These Moiré effects may be familiar to you as they may be seen also when travelling by car or train. Drive under a motorway bridge and look at the overlapping of the two parapets. Parts will be quite dark, in other areas you will then see just one of the ballustrades. The analogy may be a little hard to understand, but the effect is really the same. The basic cause is optical interference of one pattern with another.

Back to the raster graphics function "Optimize frame size for screen". This function enlarges or shrinks your raster graphic so that in the Actual size (1:1) display each raster point (pixel) corresponds exactly with one pixel (or with a multiple of that pixel) on the screen. If the "Optimize enlargement" function (see below) is not active during this, the graphic will always appear in its original size, each image pixel corresponding with a screen pixel. If the "Optimize enlargement" function is active, the enlargement factor will be rounded to the next highest whole number. In either case the image will appear in its original aspect ratio, that is its proportion of length to width is unchanged. Optimization avoids the distortion created when resizing a raster graphic. We repeat the most important factor: You will only get a 1:1 (or x:1) display on screen when you have selected the Actual size (1:1) icon in the Top row.

1.2.2.13 Optimize frame size for screen

Select a raster graphic frame and click on this icon. If the "Optimize frame to nearest factor" function is active, the graphics frame will be enlarged to the nearest geometric multiple of its original size. Otherwise, it will appear at its original size.

1.2.2.14 Optimize frame size for printer

In principle this function has a similar effect to "Optimize frame size for screen" described above, except here the optimization is to the current printer resolution, of course. Please bear in mind the basic notes about enlargement/reduction of raster graphics made earlier. This means that a 640x400 pixel graphic (which would fill the entire screen of an Atari SM124 monitor) would be printed as 2.13x1.33 inch (5.42x3.39 cm) on a 300x300 dpi laser printer. The "Optimize frame to nearest factor" function (see below) allows you to enlarge the graphic to the nearest whole number multiple of its original size in each direction. On a 24-pin dot matrix impact printer that

can produce 360x360 dpi (although the pin diameters are much larger and so the printed pixels will blend into one another) you will get a minimum size of 1.78x1.11 inch (4.51x2.82 cm). So when you are working with raster graphics, you must always consider the output device to be used later in order to avoid unexpected problems, because the rounding errors described earlier can ruin the prettiest graphic.

Using this function is again similar to "Optimize frame size for screen": Select a frame and click on the "Optimize frame size for printer" icon. Here too, depending whether the "Optimize frame to nearest factor" function is active (see below), the image size will be rounded to the nearest multiple of its original size or reproduced in a 1:1 display.

1.2.2.15 Optimize frame to nearest factor

The essentials of this function as well as the problems underlying it have been described already in the functions "Optimize frame size for screen" and "Optimize frame size for printer". Therefore there is only a brief description of the function here.

When this icon is not selected (icon displayed normally), then the optimizing functions described above will ensure that the graphic is enlarged/reduced so that one graphic pixel corresponds exactly to one pixel of the output device. With "Optimize frame to nearest factor" switched on (shown by its icon displayed in inverse video, i.e. as selected) the degree of enlargement will be rounded to the nearest whole number.

This function can be switched on and off simply by clicking on the relevant icon.

1.2.2.16 Center image in frame

This and the following two functions affect the position of the graphic (or part of it) in the frame. The "Center image in frame" function is closely linked to the "Image size independent of frame size" function described below. If the latter is not active this function has no effect, as in that case centering an image in a frame does not make sense. Therefore "Image size independent of frame size" will be activated automatically (if you have not already selected it) when you click on "Center image in frame". During this a raster graphic frame must be active. To deactivate this function, click a second time on the "Center image in frame" icon; the "Image size independent of frame size" icon will remain selected. however.

So when both icons are selected, the size of the image will not change at first when you make the frame larger or smaller (as the image size is independent of the frame size). Furthermore – and that is the effect of the "Center image in frame" function – the image will be centered in the frame. This means that you can have a white border around the

image, so that the text does not come too close to the image when you use one of the "Text flow" functions. If you shrink the frame afterwards, this will also not alter the image size; after reformatting the text will just flow around the frame closer to the image. Incidentally, you can also shrink the frame to be smaller than the image to "hide" part of the outer parts. We deliberately say "hide" and not "trim" here, because the parts that are not visible as still present, and the rest of the picture will reappear if you enlarge the frame again. In any case, with the "Center image in frame" icon selected, the middle point of the graphic will always be in the centre of the frame. If you would like to display another part of the picture rather than the section near the middle, you can use the "Image size independent of frame size" or "Crop or add to image" functions. (Note that you can only adjust the width and height of a frame independently if "Proportional sizing" is switched off in the "Set frame parameters" function group.)

Calamus keeps track of whether each image is independent of frame size and whether each image should be centered in the frame. When you select a raster graphic frame, the icons will change to represent the memorized status of the image in that frame.

As a practical example, here is the working procedure to incorporate an image in a block of text. We want the text to be spaced 0.5 cm from all sides of the image. In addition the image is to be enlarged in such a way that no ugly distortions or Moiré effects arise when outputting on the printer.

Let us assume that the text frame exists already and also contains the required text. Now draw up a raster frame of any desired size (yes, really!) and import your image into it. It may appear completely distorted, of course, but with the aid of the "Optimize frame size for printer" function we will get the natural proportions at a size where each printer pixel corresponds exactly to one image pixel. However, you may find this appears very small, perhaps. Very well, switch on the "Optimize frame to nearest factor" function and alter both the width as well as the height of the frame to roughly twice the size. You can do this either by eye, or quite exactly by reference to the Coordinate display. A further click on the "Optimize frame size for printer" icon will bring the picture to its proper proportions again. Now each image pixel corresponds to two printer pixels in height and two in width, i.e. a total of 4 pixels. Now to get a margin on 0.5 cm around the graphic, you have to switch on "Center image in frame" first. This will also activate the "Image size independent of frame size" function. 0.5 cm at left and 0.5 cm at right make the frame exactly 1 cm wider. So select the graphics frame again, if it is not active already, and then click on the field "dX" in the Coordinate display. Increase the existing value by 1. To reach the "dY" field, press the [Tab] or [down arrow] key and add 1 to that value as well. [Return] completes the entry and adds 0.5 cm at each side of the frame.

Warning: This only works if you have selected "cm" for the "Page size" field in the "Set units of measurement" dialog (see Page module), as otherwise you will have half an inch (or pica or cicero) more all round.

1.2.2.17 Image size independent of frame size

 This function is required for the "Center image in frame" function (see above) to work. You can turn it on either by clicking on the "Image size independent of frame size" icon, or it will turn on automatically when you select the "Center image in frame" icon. A raster image frame must be selected beforehand. To turn this function off, click on the icon again; if the "Center image in frame" function is active, it will be turned off automatically.

If the image size is independent of the frame size, the image will no longer adapt itself to the frame size if you enlarge or shrink the frame. Moreover the image itself will retain its size and proportions, and at places where the frame projects outside the image a white margin will appear. In places where the image is larger than the frame, it will be "hidden". If you later enlarge the frame again, the hidden parts of the image will become visible once more, so they haven't been trimmed off and lost. In other words the smaller frame acts like a window on part of the image, just as the layout window shows part of the page. You can enlarge or shrink the frame from all four corners, as well as from all four sides if "Proportional sizing" is switched off (in the "Set frame parameters" function group) – the image will always stay in the same position.

The function allows you to display only a portion of the graphic in the frame, by reducing the frame on all sides until only that part remains visible that you really want to display. However you can no longer enlarge it, as you would have to switch off the "Image size independent of frame size" function again. But then the complete image would be displayed in the frame reduced (and probably also distorted). So in this case you would have first enlarge the complete image and then select the cut-out portion. Or you can use the "Crop or add to image" function described below, although in that case you will then lose parts of the image irrecoverably but in return you will save memory for the data that will not be printed.

1.2.2.18 Crop or add to image

 You are familiar with the scissors icon: It allows you to cut something out of your document, which will then be really removed – in this case parts of your raster graphic image. First, select a raster graphic frame. If you click on the "Crop or add to image" icon and move the mouse pointer into the document window, the pointer will

change to the "Set size" cursor, a hollow cross, as soon as you click the left mouse button. You can use this cursor to drag out a "frame", which we can call a limiting frame, within the raster graphic frame the same way that you draw a new frame. The portion of the image that lies within the limiting frame when you click the mouse a second time will become the entire raster image and form a new graphic frame. If the limiting frame is larger than the raster graphic frame, Calamus will add a corresponding white border to it. You can, or course, also define the position and size of the limiting frame via the Coordinate display.

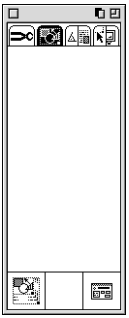
Warning: If you accidentally draw the limiting frame completely outside the original graphic, a blank frame will result, all the image contents will be lost and you will have to start again!

In order to obtain optimum output quality after this, you should resize the image by clicking on the "Optimize frame size for printer" icon (see above).

So with the "Crop or add to image" function you have the option of selecting a portion of the image which will then be treated as a new image. That saves memory space. If later you should change your mind and want a somewhat larger portion, you will have to import the original image into a frame once more. The same applies to the margins around the actual graphic. Using this function makes these margins really a part of the image which will be retained with all size changes, but again occupies memory.

Calamus offers you great flexibility here, which you have to learn to master, however. Just play around a bit with the possibilities offered by the "Center image in frame", "Image size independent of frame size" and "Crop or add to image" functions. "Learning by doing" is the motto here, so that you don't need to use trial and error in your work ...

1.2.3 Special functions: Vector graphic frames

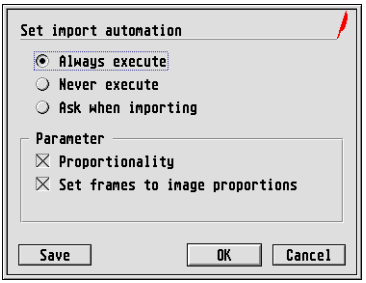


1.2.3.1 Set to optimal size

There is not much to describe here. The "Set to optimal size" function restores the selected vector graphics frame to exactly the size and proportions that the vector graphic was created in. If the graphic is to be enlarged or shrunk afterwards while maintaining the proportions, it's best to switch on the "Proportional sizing" function in the "Frame parameters" function group.

1.2.3.2 Set import automation

Import automation affects the size and proportions of frames when importing vector graphics. Thus vector graphics can be scaled automatically to their original size while importing, for instance. Clicking on this icon opens the following dialog:



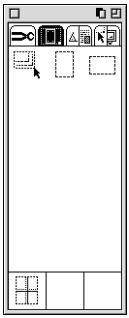
With the radio buttons in the upper part of the dialog you can determine when the settings made below should take effect – "Always", "Never", or "Ask when importing";

in the latter case this dialog will appear each time you import a graphic.

If the "Proportionality" checkbox is crossed, the frame will be switched automatically into proportional mode after importing the graphic.

If the function "Set frames to image proportions" is active, the image will be scaled automatically during import to the original size saved in the vector graphic.

1.2.4 Special functions: Tiling frames



You will need tiling if you create a document page that is larger than your printer can handle. For example, you could set the word "Calamus" for a 3 by 6 ft poster, and use tiling frames to divide the output into several 8.3" x 11.7" A4 printer pages. Of course, you would have to join the pages by hand. You can define tiles manually (where you can use any desired sizes), or you can let Calamus do the job automatically. In the latter case you can also establish how much the frames should overlap.

1.2.4.1 Freely sizable tiling frame

A tiling frame with adjustable size is like a frame that you can draw and modify as you like. Whatever is inside this frame will later be printed on one page. Of course, the frame should be no larger than the maximum size of a printer page. This type of tiling is useful when you want to print only part of a page. Draw the adjustable tile over the desired portion, and Calamus will take care of the rest; simply click on the icon and proceed as if you were creating a frame. Naturally you can modify this tiling frame like a normal frame. Just click on it in "Modify frame" mode and you can enlarge, reduce or move the tiling frame like any other frame.

1.2.4.2 Tiling frame for Portrait printer output

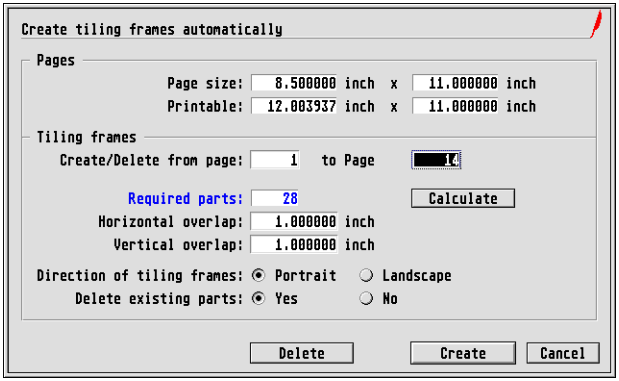
Each page tile in portrait format will be exactly as large as a printer page. You can only set tile position on the document page, not its size or shape. If you have drawn a tiling frame and then click on this icon, the tiling frame will take the size of a printed page. You can then move it wherever you like. If you want to change the size or shape of the portrait tile, you have to click on the "Freely sizable tiling frame" icon.

1.2.4.3 Tiling frame for Landscape printer output

This function is identical to the "Portrait format" function directly above, except that the tile will have horizontal rather than vertical orientation.

1.2.4.4 Create tiling frames automatically

You can – as described above – subdivide a document page with tiling frames into printer pages. The routine work of placing tiling frames on the page (and also removing them) can be handled by Calamus automatically. This function serves to do this. When you click on the relevant icon, an associated dialog box appears:



The values at the top of the dialog box show the current size of the Calamus document page ("Page size") and the maximum printable area the currently chosen printer can produce. The field below shows you how many page tiles you need with the currently set overhangs and orientation. The "Calculate" button allows you to see the results of any changes in these values.

The resulting tiles can be aligned automatically or manually. You will find additional information for printer settings under "Print" in the File menu.

Below this you can determine how much the tiles should overlap. The overhang permits clean joins between the various page tiles. The effect after printing is similar to that found in car atlases: The edge areas will be printed on several pages. The Horizontal and Vertical overlaps determine how much page portions lying next to and above each other respectively should overlap.

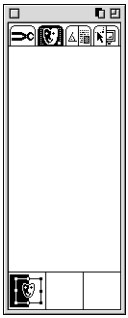
The radio buttons below this allow you to choose "Landscape" or "Portrait" orientation for the tiles.

The next field allows you to create or delete automatic tiles on a specified range of pages. The final radio buttons let you decide whether or not to delete existing tiles before creating new ones. Normally you will want to delete the old page tiles when creating new tiles automatically, but in special cases you may prefer to keep them.

Click on the "Create" button at the bottom of the dialog to generate the tiles.

To remove tiles, click on the "Delete" button. All tiles in the range of pages specified will be deleted.

1.2.5 Special functions: Mask groups



In this special group you will find only a single icon:

1.2.5.1 Invert mask

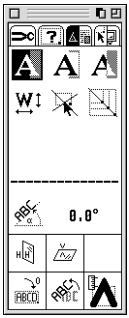
 This function inverts the mask in a mask group: Everything that was transparent before becomes opaque, and vice versa.

A second application of this function restores the original condition of the mask. Nothing will be changed in the frames of the mask group.

When ungrouping a mask group, the inversion of the mask will be lost.

The write mode of the mask group is not affected by this function. It simply switches what is to be actually displayed, and not how it is displayed! The write mode is set as usual in the Frame editing module. But generally it will refer only to the portion of the mask group that is really displayed.

1.3 Set frame parameters



Calamus frames may be rotated and mirrored. With it you can write mirror-reversed, upside down or rotated by, say, 42.42 degrees. There is a small restriction for the latter: While text frames can be rotated in 1/100 degree increments (giving a total of 360,000 possible orientations), without the aid of other modules raster graphics can only be rotated in 90 degree increments. This is because rotating raster images results in the familiar ugly effects like rounding problems and Moiré patterns. The same limitation applies to hatched raster areas, because the hatching has to be rotated with the frame as well. But you can mirror all frames both vertically and horizontally. In addition you can determine the appearance of frames where they overlap each other.

Tip: If you want to rotate raster graphics in other increments than 90 degrees, please use the "Rotate images" module (ROTATE.CXM). An alternative is available with the "Rotate" filter from the "Filter" module (optional extra) which works appreciably faster than the "Rotate images" module.

1.3.1 Write mode

When a frame lies partially or entirely on top of another one, you can use these three icons to determine how its contents will appear. If you click on the first icon "Write mode: Transparent", all colour and transparent areas will be transparent and you will be able to see the frame underneath through them. If you click on the second icon "Write mode: Opaque", colour areas will be opaque, and you will only be able to see through areas that are really transparent. The colour Transparent is not available for raster graphic frames.

The third icon "Write mode: Inverse" has a special function: In this mode, wherever two objects that are not white or transparent overlap, the overlap will appear as white. The icon itself illustrates the effect. The use of this function sets no limits to your imagination.

Using the icons is really simple: The icon that corresponds to the write mode of the current frame is shown activated (inverse video). To alter the write mode of a selected frame, just click on another of these icons.

1.3.1.1 Write mode: Transparent

If you want all elements in a frame to be output as transparent, select the frame and then click on this icon. This assigns the write attribute "Transparent" to the frame.

When a frame lies partially or entirely on top of another one, all colour and transparent areas will be transparent and you will be able to see the frame underneath through them. The result is that the colours contained in the transparent top frame may mix with the colours of the frame lying underneath when printed.

You can alter this assignment at any time.

A very common application for transparent output is, for instance, for text frames with black text that lie on a light background. If the output of the text frame were opaque, then the light background colour would have to be cut out everywhere a letter is to be placed. With offset printing in particular this would quickly lead to white show-through "flashes" as the colours can never be printed 100 % in register. If there is only very slight misregistration here, then the white of the paper will show through partly at the character edges – giving flashes.

However, if you set the text frame to transparent, nothing will be cut out of the light background, and the black of the text frame (which in any case covers everything) can be printed without problems slightly out of its correct position on the light background – no flashes.

The screen display of transparent frame contents attempts to mimic the mixing of the colours in offset printing as closely as possible. As Calamus converts all colour values that are to be output on the screen to RGB first (as this is the colour space of monitor screens) and can determine only then if and how the various write modes of various frames affect each other, the screen display can not imitate the printed output absolutely 100 % at present. In places where, say, a transparent 30 % yellow overlies a transparent 30 % grey, then (only in the screen output!) it will not be recognized that a grey value of 30 % is a part of the mix, as this was already converted previously to RGB values. The addition of the colours can not therefore take place here (and only in this special case, where any grey values are in play).

30 % yellow = R100 G100 B070

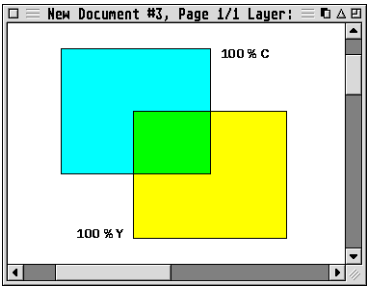
30 % grey = R070 G070 B070

The lowest values (i.e. the darkest colours) will take precedence so the result will be:

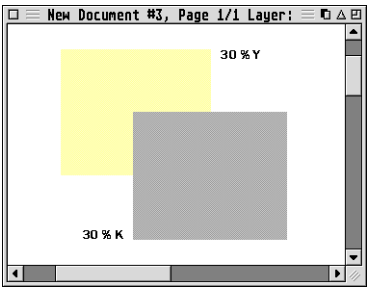
Target colour = R070 G070 B070

And one can see immediately that there is a mathematical problem here. But this applies only in cases where mixing with grey values occurs, and only on the screen ... and may perhaps be solved in a future version of Calamus.

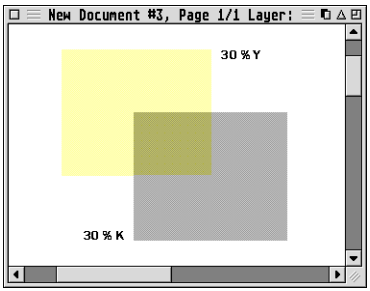
Transparency on the screen:



Transparency problems with grey values:



This is the output on paper:



1.3.1.2 Write mode: Opaque

If you would like all elements contained in a frame to be output as opaque, select the frame and then click on this icon. This assigns the write attribute "Opaque" to the frame. This means in fact that while theoretically Calamus will output everything that lies below this frame during printing, it covers it afterwards with an (also theoretical) white layer and then outputs the contents of this frame there. You will only be able to see through transparent areas. The colour "Transparent" is not available for raster graphic frames.

When printing several colours at the same time (inkjet printers) the output will be faster here than if the individual colour layers have to be computed individually for coloured imagesetter output.

You can alter this assignment at any time.

1.3.1.3 Write mode: Inverted

If you would like all elements of a frame's contents to be output inverted, select the frame and then click on this icon. This assigns the write attribute "Inverted" to the frame.

In this mode, wherever two objects that are not white or transparent overlap, the overlap will appear as white. The icon itself illustrates the effect. The use of this function sets no limits to your imagination.

To achieve the effect indicated by the icon, place a raster area frame over a text frame. Then select the write mode "Inverted" for the raster area frame (not for the text frame).

You can change this assignment at any time.

1.3.2 Scale text frame

 With this switch you can make text frames scalable. Scalable text frames can be enlarged or shrunk both horizontally and vertically like vector frames, where the size of the text they contain will adapt automatically to the changes, even with non-proportional size changes.

This function is very useful so that you don't have to try x times with different font sizes to exactly fill a headline, for instance. You simply place the headline text in a text frame and reduce the frame size until the text only just fits into it. Then you switch on "Scale text frame" for this frame and you can the draw it out to the desired width.

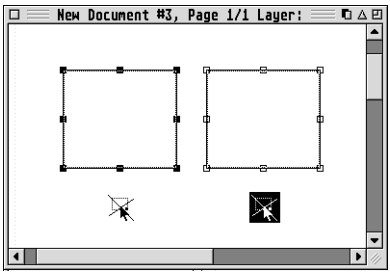
Tip: If the size change is to remain proportional (same in both directions), switch on "Proportional sizing" (see below) beforehand; in that case you can only alter the frame via the four corner points.

Warning: Text frames for which the scaling switch is set can not be edited in text mode. To alter the frame contents, switch off "Scale text frame" temporarily. Calamus will memorize the current frame's scaling and will jump back to the original size. Now you can alter the text contents. If you switch on scaling again afterwards, a dialog offers you the option to restore the measurements to the previous scale. Click on "Yes". "No" leaves the frame as it is at present.

Tip: Not just individual frames but also complete documents can be scaled easily. If you "just happen" to want to scale an A3 poster, say, to an A5 leaflet, you only have to select all frames, set the "Scale text frame" switch, group all frames and then shrink them to the desired size. The text frames (that without this switch would only produce a "text overflow") will now be displayed shrunk to the new size.

1.3.3 Frame protection on/off

Sometimes it is necessary to make sure that a frame will be printed in exactly the right place, down to the millimetre, on a form for instance. Once you've managed to get the frame in the right position, you will probably want to make sure that you don't accidentally move, change size or even delete it. For this reason, you can protect individual frames. Select a frame and click on the "Frame protection" icon. The icon will appear inverted and the resize markers will change from black squares to hollow ones. You can continue to select protected frames and modify their contents (if they are text or graphic frames) or their appearance (line and raster area frames), but you cannot change the frame's size or position any more. Naturally you are also not allowed to delete a protected frame. If you protect a group frame, you will not be allowed to ungroup it. If several frames are to be grouped, none of them should be protected frames.



If you decide later that you really want to move, change the size or delete a protected frame, then of course you have to remove the protection again.

To do this select the frame and click on the "Frame protection" icon a second time. The icon will appear unselected, and the frame resize points will return to normal on the screen.

Incidentally: If the "Frame protection" icon is selected when you draw a frame, that frame will automatically be protected.

1.3.4 Proportional sizing on/off

This function affects the way that you resize a frame with the mouse. When you click on this icon, it will appear selected. If there was a frame selected in the layout window, the resize handles in the middle of the boundary lines will disappear and will only remain in the four corners. As long as this function is active, if you resize the frame with the mouse it will keep its original proportion of height to width, no matter how small or large you make it. This is of particular interest for graphics and other images, because no distortion will result when enlarging or shrinking the frame. To turn off this function, click on the relevant icon a second time.

Warning: This function has no effect on size changes made with the Coordinate display.

1.3.5 Mirror frame horizontally

 This function allows you to flip a frame on its vertical centre axis. If this sounds confusing: When mirroring on a vertical axis left and right are swapped over, so everything to the left of the centre of the frame will appear on the right, and vice versa. That is why it's called "mirror horizontally". Of course, any text in the frame will also appear mirror-reversed.

This function is very easy to use: Simply select a frame and click on the icon. The icon will appear selected and the contents of the frame will appear mirror-reversed. If you click on the icon a second time, the frame will return to its original format.

At the same time the icon shows whether a selected frame is mirror-reversed. When you select a mirrored frame, this icon will automatically be displayed as selected (inverse video).

1.3.6 Mirror frame vertically

 This function allows you to flip a frame on its horizontal centre axis. Everything above the centre of the frame will appear below, and vice versa. But at the same time text will appear mirror-reversed, as everything that was on the left in the original remains on the left. If you have problems visualising the results, just try out the function.

Incidentally: Simultaneous horizontal and vertical mirroring is equivalent to a rotation through 180 degrees.

Except for the axis of rotation, the function works much the same as "Mirror frame horizontally" immediately above.

1.3.7 Restore frame to 0 degrees

In order to restore a frame quickly to its unrotated state, click on this icon. Any rotation angle that has been entered in the editable field (see below) remains in place, so by clicking on the next icon you can later turn it again just as easily to the rotated orientation.

1.3.8 Rotate frame

When you click on this icon, the currently selected frame will be rotated around its centre-point to the angle you entered in the "Rotation angle" function (see below). If the frame is a raster graphic frame, Calamus will rotate it in 90 degree increments. If you do not select a multiple of 90, Calamus will give you the chance to abort the operation or automatically switch to the nearest 90 degree increment.

You may rotate several frames at one time. Select the frames and then click the "Rotate frame" icon. All selected (linked) frames will be rotated to the chosen angle. You may unrotate frames the same way. Note that from Calamus SL2000 onwards you can enter text into rotated frames in the Text module – unlike in earlier versions, where these were restored to the upright position for text entry.

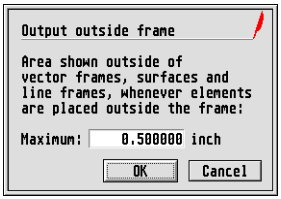
You can, of course, also enter negative angles for frame rotation.

1.3.9 Output outside frame

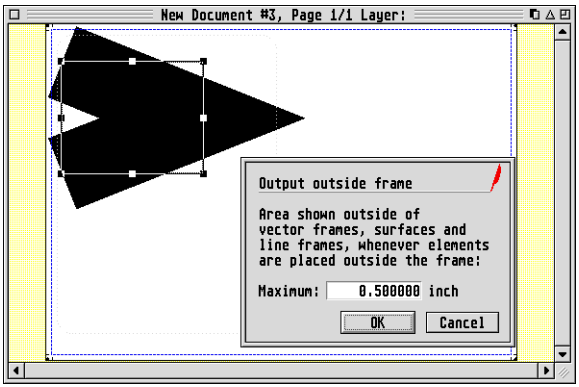
Due to the output method of Calamus, elements of vectorially constructed frames (vector frames, raster areas and line frames) can protrude out of the actual frame. In itself this is not critical for Calamus, though in extreme cases this could lead to a virtually infinite number of protruding elements.

In order to have complete control over all objects in this respect as well, you may determine how far elements may protrude from the frame (if at all).

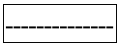
After clicking on this icon the following dialog opens:



Here you can simply input the desired value in the editable field. This will be assigned to frame(s) currently selected.

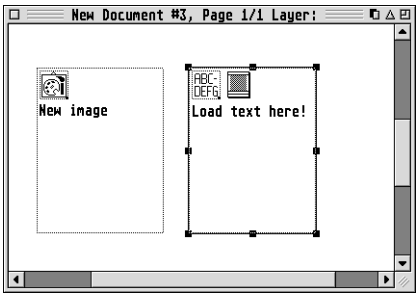


1.3.10 Name frame



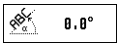
This function allows you to enter a name for an empty frame, which will then be displayed on the line. The function is useful when you are using an empty frame as a placeholder for an image, photograph, drawing as well as text or other content to be imported later. The name that you enter will appear on the screen, but not on the printout, which will have only an empty space.

To use this function, first select an empty frame as usual, then click on the name field. A text cursor will appear. Enter the name for the frame and press [Return]. If the frame has no contents and "Module information" is switched on in the Display function group, the name will appear on screen within the frame provided there is enough space beside the identifying icon.



The name remains associated with the frame after you import data into it, but the name will no longer be visible on the screen. It will appear in the name field when you select the frame.

1.3.11 Rotation angle



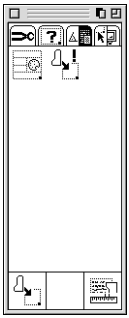
Here you can enter an angle by which the current frame is to be rotated. You can rotate text frames in 1/100 degree increments and raster graphic frames in 90 degree increments. The point of rotation is always the centre-point of the frame. To set the angle, which is measured counter-clockwise, click on the numeric field, enter the angle, and press [Return].

The frame will not be rotated immediately. When you select a frame, its angle of rotation will appear in this field, which you can of course also alter if you wish in the way described.

1.3.12 Rotation angle unit

The unit of measurement for the rotation angle cannot be changed and is specified in degrees. Following normal mathematical convention, positive angles rotate the frame counter-clockwise, negative angles clockwise.

1.4 Text flow settings



Text flow – when can you do what?

In principle it is not possible to apply manual and automatic text flow to one and the same text frame.

Manual text flow

This is the method known up to now, which can continue to be applied in the same way. You will find the relevant switches for this in the Frame editing module function group "Text frames – Special functions". You should be familiar with this application by now.

Automatic text flow

Automatic text flow is not assigned to the text frame that is to flow around other frames! This "property" is always assigned to the frame or frames that the text is to flow around, i.e. an image, a vector graphic, a line, a group frame, but ... (otherwise it would not be Calamus ...) you can also flow text around(!) a text frame. As this of course only makes sense in special cases, you should treat the last option with care as long as you are not thoroughly familiar with this method of working.

To repeat: Automatic text flow is a property that is assigned to the frame around which text is to flow. Aftwerwards you can draw, say, a text frame over it and this will then flow around the other frame automatically. If you now move the text frame or one of the frames around which the text flows, then the text flow will be recalculated automatically.

In this function group you can set various parameters for the so-called "automatic text flow". The automatic flow refers to the frames that the text frame is to flow around. The automatic part here is that a text frame will only flow around another frame automatically when this other frame is set to have text flowed automatically round it.

The individual switches and icons are explained below.

1.4.1 Automatic text flow on/off

 This icon acts like a switch. When you click on it so that the icon is displayed inverted, automatic text flow around the currently selected frame is activated. (Naturally you can also activate several selected frames simultaneously.)

As soon as this switch is set for any frame, then text frames that overlap it will flow text round it.

1.4.2 Text flow polygon active

 This icon is a (non-selectable) status indicator. As soon as you select a frame and see that this icon is shown in inverse video, it means that a so-called "text flow polygon" has been assigned to it.

A text flow polygon is a vector frame with one or more vector objects in it around which text will flow. This "shape" can be used as a text flow polygon in place of the normal rectangular frame. A favourite application, for instance, is as a cut-out mask for a scanned portrait photograph whose background should not be part of the area that the text is to flow around.

As soon as a text flow polygon is assigned to a frame, its vector path will be used for the text flow calculations – in place of the actual frame, even if this frame has "Automatic text flow" switched on.

You can assign a frame to a text flow polygon via the almost identical icon at the bottom of this function group. How this works is described below.

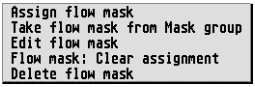
1.4.3 Menu: Text flow polygon

The text flow polygon (that Calamus creates internally with "Manual text flow" and which can be made visible and edited only on demand) also exists for automatic text flow, of course. In this case, however, this text flow polygon has to be created by the user! The text flow polygon is intended to permit flowing text around image contents, for instance. For this the mask is assigned to the image frame and will be scaled along with any scaling of the image frame.

Text flow polygon frames can have any desired shape and size, but have to be vector frames; for optimum calculation speed they should not contain highly complex graphics but only one or two objects, if possible.

Example:

1. Construct a large text frame and fill it with a lot of text.
2. Draw a raster graphic frame in the middle of the text frame.
3. Import RGBFUJI.JPG from the IMAGES folder.
4. Activate the "Automatic text flow" switch in the Frame editing module / "Set text flow parameters" function group:
   - The text frame flows round the raster image frame as a rectangle.
5. "Cut out" the lady in the photograph by constructing a vector path round her in a superimposed vector frame.
6. After this select the raster image again.
7. In the Frame editing module / "Set text flow parameters" function group click on the "Menu: Text flow polygon" icon (bottom left corner).

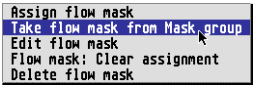
8. In the popup, select the "Assign flow mask" entry (the icon remains inverted).
9. Now select the mask (the vector frame just created).
10. Now click again on the "Menu: Text flow polygon" icon:
    - The icon will appear normal (unselected),
    - the vector frame has disappeared,
    - the text frame flows around the raster image frame following the vector mask of the text flow polygon.

    If the text flow polygon was not quite correct, it can be edited:
    - Select the entry "Flow mask: Clear assignment" in the popup.
    - Click on "Edit flow mask". This places a virtual copy of the text flow polygon vector mask that is still linked to the frame at the original position.

This mask can now be edited in the Vector module. When you start to make any alterations, you will see an alert that this vector frame is used more than once. If you select the "All" button, then any changes that you make to the vector frame contents will also affect directly the vector mask itself. After a successful alteration you can delete the virtual copy again.

- After this simply assign the altered mask to the frame anew. The previously "protected" original mask will now be replaced by the new mask. A recalculation of the text flow in the text frame follows. You may have to move the text frame slightly to update the text flow.

If you want to flow text around a mask group in which the mask frame is a vector(!) frame, select the second popup entry. The vector mask will now be assigned directly to the mask group as a text flow mask as well. (However, this text flow mask will be used only if the "Automatic text flow" icon was switched on – see above).

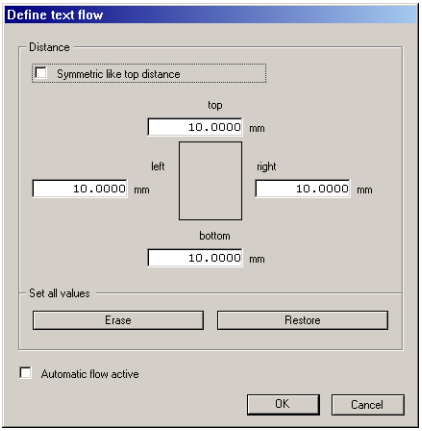


Tip: The optional extra import/export driver Tiffie from Version 6 onwards can import TIFFs with cut out paths in such a way that the cut out path is valid directly as a text flow path. This way you can save a lot of time in positioning images already cut out in Photoshop, for instance.

1.4.4 Set text flow offset

For every frame that text is to flow around you can define an offset that should be taken into account during text flow and be used instead of the actual frame dimensions.

When you click on this icon, the following dialog box appears:



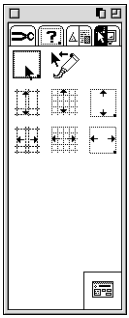
Here you can set different offset distances for the left and right X-directions (horizontal) as well as for the top and bottom Y-directions (vertical). With a zero value the frame edge will be used as the text flow boundary in each case. If you want to use the same values everywhere, simply set the switch "Symmetric like top distance" and enter the desired value in the top field. It will be copied to the left, right and bottom fields automatically then.

The button "Delete" resets all values to zero, "Restore" restores all values which were valid when you opened this dialog.

If you activate the checkbox "Automatic flow active" (so it is crossed), the frame will be activated for automatic text flow. This checkbox has the same effect as clicking on the corresponding icon in the function group. It was included in this dialog so that you can set all the important text flow parameters for a frame quickly from the keyboard via a macro, for instance.

Warning: The text flow offset can not be used simultaneously with assigned text flow masks. If you want to use a text flow mask but at the same time want to make the text flow round it with a given separation, you have to assign an offset to the text frame itself ("Set text flow offset" in the "Special functions / Text frames" function group).

1.5 Frame editor parameters



This function group makes functions available for the general handling and behaviour of the mouse cursor while modifying frames.

The icons are explained below.

1.5.1 Edit invisible frame

This function belongs to a group that you will probably not use at first when starting to work with Calamus. If this icon is selected, you will be able to select invisible frames and modify them the same as you would if they were visible. Some frames take a little time before they are redrawn completely. In order to be able to move or resize such frames quickly, there is the option to switch the actual raster image or vector graphic to invisible, but still be able to select the frame. The "Edit invisible frame" function serves this purpose. Its use is similar to all other functions in this function group.

1.5.2 Keep create frame mode

This switch is normally off and in that case as soon as a frame has been created Calamus switches over to the "Modify frame" mode. This is new from SL99 onwards, and is likely to save you many unnecessary right-clicks when working with frames in Calamus. If you would prefer to keep the old mode, set this switch so that the icon is selected, to say in effect: "After creating a frame the mouse cursor will remain as an arrow (in other words in Create frame mode)".

1.5.3 Snap to horizontal guidelines

 Like the next five icons, this function acts as a switch: A click on it activates the associated function (and the icon will be displayed as selected in inverse video), a further click switches it off (icon unselected). If it is switched on, so-called "magnetic" horizontal guidelines will cause the top and bottom edges of the frame to snap to the nearest guidelines when creating or resizing a frame. Thus the frame will stretch over the whole area from the guideline above its top edge to the guideline below the bottom edge. The borders of the page will also act as guidelines. When you move a frame, the top edge of the frame will snap upwards or downwards to the nearest horizontal guideline.

1.5.4 Snap to horizontal grid-lines

 Magnetic horizontal grid-lines work in exactly the same way as the magnetic horizontal guidelines, except that the frames snap to the grid-lines instead of the guidelines.

1.5.5 Snap to horizontal edge of frame

 Click on this icon to switch on and off magnetic snap to horizontal frame edges. When switched on, frames being created will snap to the horizontal edges of already existing frames, though you can set a separation between them with the "Magnetic frame range" function of the Guidelines module. If the new frame is being created next to or within an existing frame and is smaller or larger, then it will be enlarged or reduced respectively as both its top and bottom edges will snap to the existing frame boundaries. If it is above/below the existing frame then its top or bottom will snap to the nearest horizontal frame boundary.

1.5.6 Snap to vertical guidelines

 This icon too can be switched on and off with a click. If this function is active, whenever you create or resize a frame the left edge of the frame will snap to the nearest vertical guideline on the left and the right edge to the nearest guideline on the right. When moving a frame its left edge will snap to the nearest guideline to left or right.

1.5.7 Snap to vertical grid-lines

 This function works in exactly the same way as the magnetic vertical guidelines, except that the frames snap to the grid-lines instead of the guidelines. It is particularly well suited for creating symmetrical tables, as the grid-lines can be set precisely.

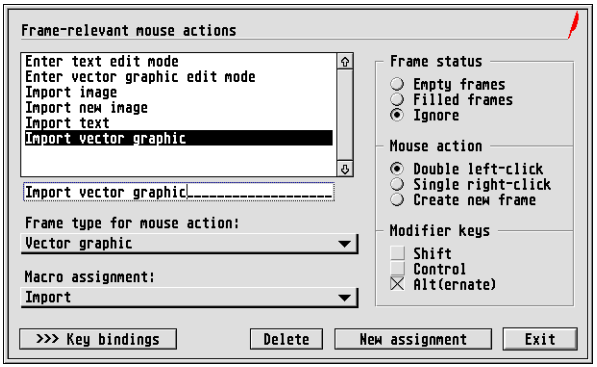
You can also combine magnetic grid-lines with magnetic guidelines. The frame will then always snap to the nearest line.

1.5.8 Snap to vertical edge of frames

 Click on this icon to switch on and off magnetic snap to vertical frame edges. When switched on, frames being created or moved will snap to the vertical edges of already existing frames, though you can set a separation between them with the "Magnetic frame range" function of the Guidelines module. If the new frame is being created above or below an existing frame and is smaller or larger, then it will be enlarged or reduced respectively as both its left and right edges will snap to the existing frame boundaries. If it is within or left/right of the existing frame then its left or right edge will snap to the nearest vertical frame boundary.

1.5.9 Frame-relevant mouse actions

With this icon you can call up one of the most important dialog boxes in Calamus SL, which can greatly increase your working speed:



In order to increase the operating speed still further, Calamus SL since SL99 for the first time offers the option to associate various mouse actions with macros (global as well as local). The exact meaning of this is described below in the Frame editing module, where you can also find the mode of operation. Here we just want to point clearly to the fact that the association between frame-relevant mouse actions and macros exists, and that both together are saved in the Key bindings file (normally CALAMUS.CKT) from now on. For users who have upgraded from earlier versions, old *.CKT files will be converted to the new format automatically on loading, but after renewed saving are no longer usable in SL98 and older Calami! In addition you should make sure that all the macros you have created will still "run" as expected. As some function fields and dialog boxes have been altered, this may affect custom macros created for older versions.

This dialog box controls the new mode of operation for associating macros with frame-relevant mouse actions. In order to create such an association, Key binding macros have to be present already.

The mouse-relevant frame operations always refer to the selected frame. If this was not the case, you could not apply the corresponding function to hidden frames any more. That would be bad.

Therefore the following compromise applies:

- If a frame is selected, then the frame-relevant mouse action applies to this.
- If no frame is selected, the action applies to the frame under the mouse cursor.

This is how you define frame-relevant mouse actions:

1. Click on the button "New assignment" to define a completely new mouse action.
2. Give this assignment a sensible name (which need not have anything to do with the macro name that you later want to associate with this mouse action): Click on the edit field that now shows "unnamed", clear it by pressing [Esc] and type in the desired name.
3. In the "Frame type for mouse action" popup select which frame type this mouse action should be activated for. The popup lists all the standard frame types that are available.
4. After this select in the "Macro assignment" popup the desired macro that you want to assign to the mouse action. The popup lists all the macros currently available in the Key bindings dialog (i.e. only macros that already exist).
5. Now use the top radio buttons to select which state the frame should have.
6. With the lower radio buttons you still have to specify which mouse action has to be executed in practice so that the assigned macro is started. Not all mouse actions and states of frame can be associated with each other, as otherwise you would no longer be able to deselect any frames, for instance!
7. Finally you can specify whether one or more of the usual modifier keys should be pressed so that the mouse action is recognised as such for the assigned macro to be started.

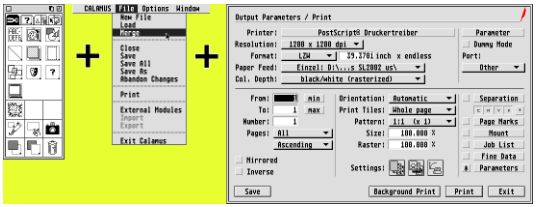
As you will see, there is an abundance of possibilities to execute various functions in Calamus appreciably faster in the future. Try out the mouse actions already defined with the CALAMUS.CKT file to get some idea of the power of this new mode of operation.

With the "> Key bindings" button you can reach the dialog of the same name from the Options menu directly, so that you perhaps can still make some changes to the macro names or the macro key bindings. The frame-relevant mouse actions will be saved directly with the key bindings file (usually CALAMUS.CKT).

The diagram below shows how macros and frame-relevant mouse actions can be controlled. Please note that both definable action types always land up in the Key bindings file:

Macro assignment

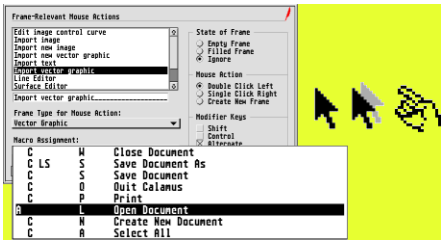
Input with keyboard or mouse ...



... will be saved in the Key bindings file (CALAMUS.CKT).

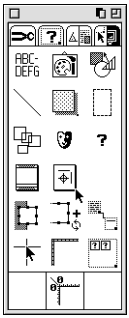
Frame-relevant mouse actions

Definitions via the dialog ...



... will be saved in the Key bindings file (CKT) as well!

1.6 Display



Calamus is one of the few programs that actually realizes the often quoted WYSIWYG principle (What You See Is What You Get). This is due to the fact, amongst others, that text frames as well as raster area and vector graphics at any desired magnification are calculated with reference to the resolution of the output device. This applies to the monitor screen as well, of course. Although today's computers have fast CPUs (Central Processing Units), without whose performance such calculations would not be possible at all, these are working at full capacity as a rule. Therefore it may well be that the redrawing of a page takes two or three seconds.

So as not to hinder your work flow, Calamus offers you the option to switch off individually the screen display for each type of frame (and some other elements). You will then only see the outline of the frame (and you can even switch that off) with the contents so-to-speak invisible. When you try to print a document that contains "invisible" frames, Calamus asks whether you wish to print all frames or only those that are visible.

In addition this function group offers a switch to set the mouse cursor to crosshair shape in the document window, which is particularly useful when working with the page measurement rulers (see below) to be able to judge the position of the mouse cursor precisely.

1.6.1 Frame types on/off

The icons described below permit you to make given frame types "invisible", so-to-speak, and restore them later. This "electronic magic hat" has no other strategic purpose apart from speeding up screen redraws. But of course you can also use it for other creative purposes. A possible example is a questionnaire with embedded answers. The questions would be placed in normal text frames, the answer frames would be gathered together in a group frame. By switching off the group frame you can then print out a questionnaire without the answers.

There is little to say about operation: If the icon for a frame type is selected (inverted) then frames of this type will be displayed, otherwise only the outline of the frame appears (as long as the "Frame outline visible" function is switched on in the Guidelines module). A click on the icon toggles between on and off, i.e. visible and invisible.

When outputting a document that contains invisible frames, Calamus will ask whether all frames or only the visible ones are to be printed.

1.6.1.1 Text visible/invisible

With this switch you can choose whether any text is to be displayed in text frames or not.

As screen redraws of text (compared to other frame contents) may take some time, in certain phases of creating a document it makes sense to hide the text contents and only modify the frames.

1.6.1.2 Raster graphics visible/invisible

With this switch you can choose whether any raster graphics are to be displayed in raster graphics frames or not.

Screen redraws of raster graphics are very fast in Calamus in comparison to other programs. Nevertheless, in certain phases of creating a document it makes sense to hide the raster graphics frame contents and only work on the frames.

1.6.1.3 Vector graphics visible/invisible

With this switch you can choose whether any vector graphics are to be displayed in vector graphics frames or not.

As screen redraws of vector graphics (compared to other frame contents) may take some time, in certain phases of creating a document it makes sense to hide the vector graphics frame contents and only work on the frames.

1.6.1.4 Lines visible/invisible

With this switch you can choose whether any lines are to be displayed in line frames or not.

Screen redraws of lines are comparatively fast. Nevertheless, in certain phases of creating a document it makes sense to hide the line frame contents and only work on the frames.

1.6.1.5 Raster areas visible/invisible

With this switch you can choose whether any raster areas are to be displayed in raster area frames or not.

Screen redraws of raster areas are comparatively fast. Nevertheless, in certain phases of creating a document it makes sense to hide the raster areas frame contents and only work on the frames.

1.6.1.6 Tiling frames visible/invisible

With this switch you can choose whether any tiling frames are to be displayed or not.

On principle, page tiling frames actually have no frame contents of their own. Nevertheless, for the sake of completeness the choice of displaying tiling frames (or not) is included in this group as well. If you have not switched on the display of frame outlines (in the Guidelines module), then with tiling frames switched off you will see – nothing here any more!

1.6.1.7 Groups visible/invisible

With this switch you can choose whether any group frame contents are to be displayed or not.

On principle, the contents of group frames in Calamus can include all frame types and frame contents. Therefore it is not possible to give concrete information about the speed of group frame redraws on the screen. In addition it depends on the other visible/invisible switch settings what or whether something is drawn in group frames.

Nevertheless, in certain phases of creating a document it makes sense to hide the group frame contents and only work on the frames.

1.6.1.8 Mask groups visible/invisible

 With this switch you can choose whether any mask group frame contents are to be displayed or not.

On principle, the contents of mask group frames in Calamus can include all frame types and frame contents. Therefore it is not possible to give concrete information about the speed of mask group frame redraws on the screen. In addition it depends on the other visible/invisible switch settings what or whether something is drawn in mask group frames. However, as outputting masked objects generally needs twice the calculation time, mask groups are drawn somewhat slower than "normal" group frames, for instance.

Therefore, in certain phases of creating a document it makes sense to hide the mask group frame contents and only work on the frames.

1.6.1.9 Uniframes visible/invisible

 With this switch you can choose whether any module-specific frame contents are to be displayed or not.

On principle, the contents of module-specific frames in Calamus can include all possible frame contents. As they are "drawn" by external modules, it is not possible to give concrete information about the speed of module-specific frame redraws on the screen.

Nevertheless, in certain phases of creating a document it makes sense to hide the module-specific frame contents and only work on the frames.

1.6.2 Master page elements visible/invisible

 This icon allows you to turn the display of elements from the master page on or off. The same applies here as earlier: If you print a document with the master page elements turned off, Calamus will ask whether or not you want to print them. This icon is used in the same way as the others: Click on the icon to turn the elements on or off. If the icon is shown selected (inverse video) the master page elements will be displayed, otherwise they won't. Normally you should always leave it selected.

1.6.3 Crop marks visible/invisible

 If this switch is active, then the crop marks and registration marks set with the "Set layout/Working area" dialog in the Page module are displayed with the pages of the document. You may have to activate a redraw of the page so that the page enlarged by the crop area is shown complete in the window in the Full page mode.

This switch only affects the screen display and has no influence on the output of the crop area and marks during printing. As ever, the corresponding switch in the Print dialog is responsible for this!

1.6.4 Frames off page visible/invisible

 When this icon is selected, frames that lie partly or completely off the document page will become visible. In this way you can use the area outside the actual document as a temporary storage or paste-up area – just like on a light-box. However the frames remain tied to the page. If you want to move a frame from one page to another, you have to copy via the clipboard as usual.

1.6.5 Additional grab-handles visible/invisible

 When you set this switch, the additional grab-handles introduced in SL2000 will be displayed with the frame, and can be used. These are, for instance, the grab-handles for rotating the frames.

(The frame icons for text piping from frame to frame and for cutting piping chains can be switched visible/invisible with the frame outlines in the Guideline module.)

1.6.6 Piping chain visible/invisible

 This function allows text piping connections to be displayed. Just click on the icon so it appears selected. If your document contains text piping chains, they will now be displayed in the form of lines from the right bottom corner of a frame to the top left corner of the next frame. This also works across page borders, in which case the line will run in the direction of the following frame on the next page up to the current page's right edge; or it comes from the direction of the previous frame from the left edge of the page. A repeat click on the icon switches the display of text piping connections off again.

1.6.7 Crosshairs visible/invisible

Instead of the normal mouse pointer, which can appear as an arrow, hand, cross or text cursor, you can use elongated cross hairs in the layout window as well. This function switches between the regular pointers and the elongated cross hairs.

The crosshairs appear in the form of two long lines filling the complete width and height of the working window. So that you can still tell the two frame modes apart, in "Create" mode the two lines of the cross hairs are joined, while in "Modify" mode there will be a small break where they should meet, with a central dot indicating the "hot spot".

1.6.8 Measurement rulers visible/invisible

The horizontal and vertical rulers allow you to measure frame sizes and positions on a page. With this function you can switch these rulers on and off. The rulers are displayed at the top and left-hand edge of the working window and give you a quick overview of the current positions on the page. The measurement unit used can be changed with "Set units of measurement / Page size" of the Page module. Rulers are particularly useful when moving the coordinates reference point (see "Set point of origin" below) and with the crosshairs (see above). Of course, the ruler scaling changes with the page magnification on the screen.

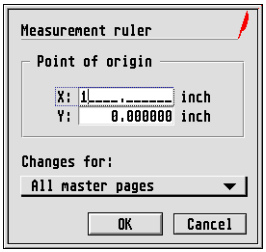
1.6.9 Module information visible/invisible

There are different frame icons for the individual frame types used in Calamus, which can be displayed as identifiers in the frames themselves as well providing these are still empty.

When you click on this symbol, the relevant frame type icons will be displayed at top left of each empty frame, no matter whether the frame outlines are switched to visible or invisible (in the Guidelines module). If the frame has been given a name (see "Set frame parameters" function group above), then this will be displayed as well if there is sufficient room.

1.6.10 Set point of origin

You can set the point of origin for both rulers and the Coordinate display. When you click on the relevant icon, the following dialog box appears:

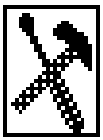


Up to now the rulers were nothing more than a rough version of the Coordinate display, which is visible at all times in the Top row anyway. With the "Start point X" and "Start point Y" edit fields you have the option to place the zero point of the rulers (and Coordinate display) at any desired point of the document. This permits measuring all sizes and distances on the page as with a real ruler, offering many possibilities, particularly in connection with the crosshairs (see above). The specified values always refer to the top left corner of the (right-hand) page. Positive values move the point of origin inwards, negative values outwards.

An example: You would like to move the zero point of the horizontal ruler 10 cm to the right. So after making sure that "cm" has been set for the "Page size" in "Set units of measurement" (Page module), click on the "Set point of origin" icon and enter 10 in the "X:" field. A little later you want to move the point of origin 3 cm to the left again. Now you have to enter 7 for the X value, not -3 !

Tip: You can also drag guidelines directly from the rulers. For horizontal guidelines, click on the top ruler and, with the mouse button held down, drag the guideline down to the desired position; for accuracy, you can refer to the side ruler or the Coordinate display. Releasing the mouse button places the guideline on the page. In a similar manner, vertical guidelines are dragged to the right from the side ruler.

2 Toolbox PLUS



In Calamus, frames are the "Alpha and Omega" in the creation of a layout. Therefore the Calamus Frame module offers many possibilities for creating and editing frames. With complex layouts that consist of numerous frames of various types, one quickly misses some advanced functions in which several frame editing functions are combined.

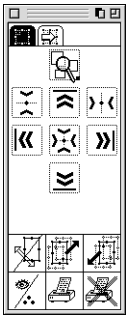
With regard to these experiences and wishes, the Toolbox module was developed years ago and provides a great variety of special tools that make many desired tasks available by clicking on a single function icon.

With the Toolbox you can align multiple frames or move individual frames directly between master and document layout pages, move frame layers on a page, make the contents of individual frames invisible on the screen or exclude them from being printed, and convert frames from one type to another.

The Toolbox Plus version now included in the SL standard package has been adapted for the extended SL features, and also offers an additional tool to convert any frame to a raster graphic frame.

Tip: The frame editing possibilities are by no means exhausted with the Toolbox Plus. Further recommended modules for modifying frames available optionally include the Positioner (for single frame editing), Align Tools (the Positioner's "brother" for multiple frame editing), Selector (for document-wide frame editing) and the Measurement module (for frame working in the desired measurement units).

2.1 Extended frame functions



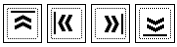
This function group extends the possibilities for modifying frames. This means the frames themselves in this case, not their contents.

2.1.1 Display frame fully justified

When you select this icon, the selected frame will be enlarged to the full size of the working window. This permits you to see the contents of this frame without having to go the the bother of setting the display magnification beforehand. – This also works with multiple frames: Here the magnification will be set so that all selected frames form a group that can just fit into the document window.

Tip: With the Locator module (available as an optional extra) you can extend the use of this function appreciably, as in that (among other factors) you can set how much margin is to be left visible around the displayed format-filling frame. This makes it much easier to use the frame's grab handles.

2.1.2 Frame alignment

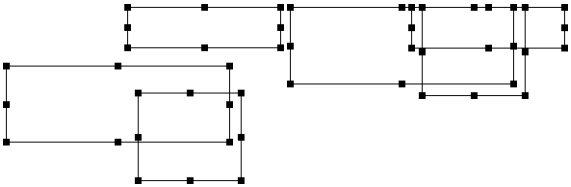


These four icons are used to align selected frames. The difference between the four lies only in the orientation of the alignment, so the basic principle can be explained for all four icons together. The edge to which all selected frames will align is always the extreme one at the edge of the frame with the largest dimension in the direction of orientation.

2.1.2.1 Top-aligned

After a click on this icon, all selected frames will be arranged on the screen so that all their top edges have the same Y-coordinate as that of the topmost selected frame on the page.

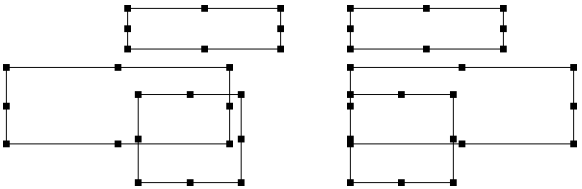
Initial positions: Top-aligned



2.1.2.2 Left-aligned

After a click on this icon, all selected frames will be arranged on the screen so that all their left edges have the same X-coordinate as that of the leftmost selected frame on the page.

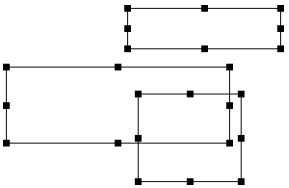
Initial positions: Left-aligned



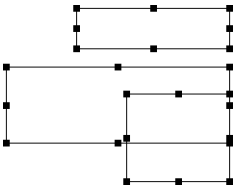
2.1.2.3 Right-aligned

After a click on this icon, all selected frames will be aligned on the screen so that all their right edges have the same X-coordinate as that of the rightmost selected frame on the page.

Initial positions:



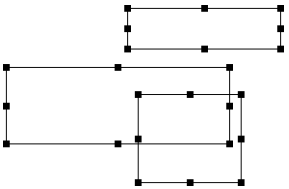
Right-aligned



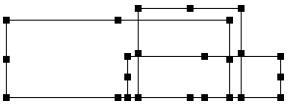
2.1.2.4 Bottom-aligned

After a click on this icon, all selected frames will be aligned on the screen so that all their bottom edges have the same Y-coordinate as that of the lowermost selected frame on the page.

Initial positions:



Bottom-aligned



2.1.3 Arrange frames centered

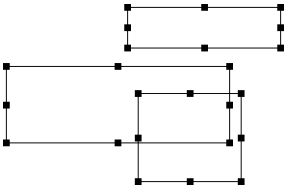
These two functions center selected frames. When you click on the "Center horizontally" icon, all selected frames are moved up or downwards until all of them fit an imaginary common horizontal line with their physical horizontal centre lines. This common horizontal line is the center line of an imaginary rectangle that covers all selected frames. The horizontal (X) position of the frames is not altered by this alignment.

With "Center vertically" the frames are moved to the left or right until they fit an imaginary common vertical line; their vertical (Y) position will not be altered.

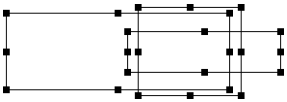
2.1.3.1 Center horizontally

After a click on this icon, all selected frames will be arranged on the screen with all their horizontal central axes in alignment.

Initial positions:



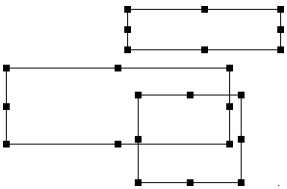
Horizontally centered:



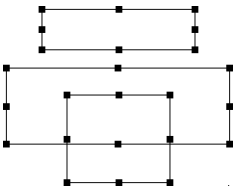
2.1.3.2 Center vertically

After a click on this icon, all selected frames will be arranged on the screen with all their vertical central axes in aligment.

Initial positions:



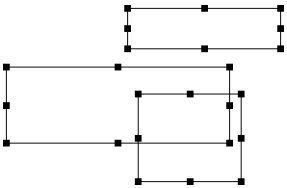
Vertically centered:



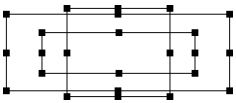
2.1.4 Mid-points aligned

This function serves to align all selected frames so that their centres are superimposed. For this all frame mid-points are brought to a common centre of an imaginary rectangle surrounding all selected frames.

Initial positions:



Mid-points aligned:



2.1.5 Master/Layout -> Layout/Master page

With this function you can move one or more frames directly to the current master page without having to use the clipboard to cut and paste. This function works in both directions, of course: If you are working in the master page mode and click on this icon, frames that are selected on the current master page will be moved to the layout page that was active before you changed to the master page mode. Generally the frames will be placed on a level above all frames that may be present already, no matter which level they lay in previously.

2.1.6 Shift one level down

As each frame is drawn in a layout window, it assumes a hierarchical position. Each new frame automatically becomes the top "level". You will learn to treasure this function if you work often with layouts that contain frames on more than two superimposed levels. If you wanted to move a frame down a level with such layouts previously, then this required extensive move actions. With the function "Shift one level down" you can accomplish this task much more easily. Naturally you can also move several frames at the same time.

2.1.7 Shift one level up

As each frame is drawn in a layout window, it assumes a hierarchical position. Each new frame automatically becomes the top "level". You will learn to treasure this function if you work often with layouts that contain frames on more than two superimposed levels. If you wanted to move a frame up a level with such layouts previously, then this required extensive move actions. With the function "Shift one level up" you can accomplish this task much more easily. Naturally you can also move several frames at the same time.

2.1.8 Contents visible/invisible

 This function is particularly useful with complex layouts. If you are currently putting delicate final touches to a complex layout, then you would likely prefer quick screen redraws to the display of all details on a page (e.g. complex vector graphics and currently irrelevant frames).

With the function "Contents visible/invisible" you can hide the contents of currently selected frames. These "invisible" frames will only display their outlines (as long as the frame boundaries have been switched to visible in the "Visibility" function field of the Guideline module) together with the frame type. If the frame has been given a name then this will be displayed as well. In each case screen redraws will be appreciably faster when the frame contents do not have to be drawn as well.

Tip: To be able to select the frames that have been switched to invisible in order to reverse the process, "Frame editor parameters" in the Frame editing module function group must have the "Edit invisible frame" icon selected!

In any case, please keep in mind that in general invisible frames will be printed out with the rest of the page.

2.1.9 Turn frame on for printing

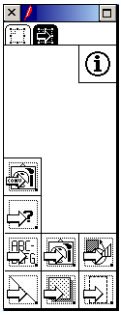
 With this icon you determine whether given frames should be printed or not. Clicking on the left printer icon switches on all selected frames for printing (the default state for all Calamus frames).

2.1.10 Turn frame off for printing

 With this icon you determine whether given frames should be printed or not. Clicking on the right (crossed out) printer icon will prevent all selected frames from being printed. (Naturally you can also switch off frames on the master page for printing.)

This feature may be useful for producing multiple-choice test forms, for instance. You first draft out the complete questionnaire with all the answers. When printing the form, all frames that contain the solutions and answers are switched off and you printer will produce forms ready for use. Or think of scanned copy (say forms) that you use as a template for the design of your page. Outline frames for CD inserts or punch-marks for printed sheets for binding are further applications.

2.2 Frame-type conversions



These seven icons convert the selected frame into an empty frame of the desired type. If you have selected a raster area frame, say, and then click on the "Convert frame to text frame" icon, the raster area frame will be converted to an empty (!) text frame.

When designing a layout this allows you to create first raster area frames in the desired size (placeholders) which will later contain photographs and graphics, for instance. Once the layout work is completed and you decide which photographs are to be included in the document, the raster area placeholder frames can be converted quickly to raster graphic frames without disturbing your layout.

Or this function can be very useful as well if you prefer to use a raster graphic in place of a vector graphic that has exactly the same size and position in a layout.

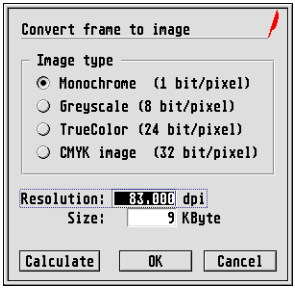
As the content of the frames is deleted when you click on one of these functions, an alert box will warn you beforehand.

Furthermore, you should keep some points in mind when using functions in this group:

- With text frames the contents will be lost unless the frame is part of a text piping chain. In that case the selected frame will be removed from the text piping chain and converted to the desired frame type, while the contents (text) remains in the text piping chain.
- When you convert selected frames into raster area or line frames, they will adopt all of the currently valid parameters (line thickness, colour, fill pattern etc.).
- When converting to a text frame, you must have fonts and text styles loaded, else the conversion cannot be carried out (in the same way that it is not possible to draw out a new text frame when no fonts and text styles are available).

2.2.1 Convert frame to raster graphic

This function converts the currently selected frame into a raster graphic with a defined size/resolution and colour depth. The original frame and its contents are retained in this case! With text frames the function checks how far the text runs in the text frame, and if appropriate a smaller raster image is created to avoid unnecessary white areas at the bottom edge of this "text raster graphic". The dialog for setting the conversion parameters offers all the important options:



2.2.2 Convert frame to uniframe

When you apply this function, all selected frames will be converted immediately to empty (!) module-specific frames. The existing frame contents will be lost!

2.2.3 Convert frame to text frame

When you apply this function, all selected frames will be converted immediately to empty (!) text frames. The resulting text frames all have the text ruler that is currently set in the Text module and the style currently set in the Text style module. The existing frame contents will be lost!

2.2.4 Convert frame to raster graphic frame

When you apply this function, all selected frames will be converted immediately to empty (!) raster graphic frames. The existing frame contents will be lost!

2.2.5 Convert frame to vector graphic frame

When you apply this function, all selected frames will be converted immediately to empty (!) vector graphic frames. The existing frame contents will be lost!

2.2.6 Convert frame to line frame

When you apply this function, all selected frames will be converted immediately to line frames. These frames will contain the line type that is currently selected in the Lines module. The existing frame contents will be lost!

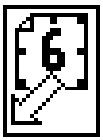
2.2.7 Convert frame to raster area frame

 When you apply this function, all selected frames will be converted immediately to raster area frames. These frames will contain the raster type that is currently selected in the Raster area module. The existing frame contents will be lost!

2.2.8 Convert frame to tiling frame

 When you apply this function, all selected frames will be converted immediately to tiling frames. The existing frame contents will be lost!

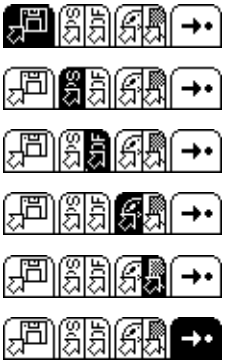
3 Bridge 6



This Bridge chapter applies both to the full version of Bridge 6, which may be purchased separately for Calamus, as well as the Lite version which is part of the standard package (as of SL2003).

With Bridge 6 you now have the central output module for object oriented PostScript, EPS, PDF and plot files in your hands, which can do many other important jobs as well. You can alter any kind of raster image frame in appreciably more complex and different ways than in the Frame module. You may change all text frames of a complete document to vector frames at a single mouse click (perfect for export and document transport without fonts). Other features of the Bridge 6 module are colour separation control functions and pre-rasterization of image frames. We hope you will be able to work with this module without problems after you read this part of the manual and really use this "bridge" to PostScript and other worlds of foreign data formats.

Like many other complex Calamus modules, Bridge uses the so-called "Function panel" and offers 6 different function groups in this panel:



Dataformer function group

EPS & PostScript export function group

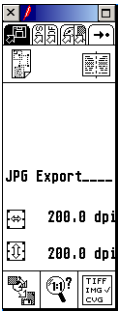
PDF export function group

Convert to bitmap graphic function group

Convert to vector graphic function group

Bridge settings function group

3.1 Dataformer



The first function group of the Bridge module offers the export functions for frames, groups of frames, parts of pages and even whole pages in various raster image (bitmap graphic) and vector graphic formats. Therefore it is called the "Dataformer". Apart from a multitude of different formats you can also select the size and resolution of the export format flexibly.

3.1.1 Bitmap graphics formats

The following bitmap graphics (raster image) formats are supported by Bridge:

Format	Ext.	Planes	Colour	Size	Header	Compr.
AIM	AIM	8	256 grey	256x256	no	no
Calamus	CRG	1	no	various	various	no
	CRG	8	256	various	various	no
Degas	PI3	1	no	640*400	34 bytes	no
	PI1	4	16	320*200	34 bytes	no
Doodle	DOO	1	no	640*400	no	no
Enhanced Simplex	ESM	1	no	various	various	no
	ESM	8	256 grey	various	various	no
	ESM	24	16.7 mil	various	various	no
GEM Image	IMG	1	no	various	various	yes
GFA Block format	BLK	1	no	various	6 bytes	no
GIF 89a	GIF	8	grey	256 grey	various	yes
	GIF	8	256	various	various	yes
IFF (ILBM)	IFF	1	no	various	various	opt.
	IFF	4	16	various	various	opt.
	IFF	8	256	various	various	opt.
JPEG	JPG	8	grey	256 grey	various	opt.
	JPG	8	256	various	various	opt.
Neochrome	NEO	4	16	320*200	128 bytes	no
Paintbrush	PCX	1	no	various	various	no
	PCX	8	256	various	various	no
	PCX	8	grey	256 grey	various	no
	PCX	8	256	various	various	no
	PCX	24	16.7 mil	various	various	no
Photoshop 2.5	PSD	1	mono	various	various	opt.
	PSD	8	grey	256 grey	various	opt.
	PSD	8	256	various	various	opt.
	PSD	24	16.7 mil	various	various	opt.
	PSD	32	16.7 mil	various	various	opt.
Raw data	RAW	8	256 grey	various	8 bytes	no
STaD	PAC	1	no	640*400	4 bytes	yes

Format	Ext.	Planes	Colour	Size	Header	Compr.
Targa	TGA	1	no	various	various	no
	TGA	8	256	various	various	no
	TGA	8	grey	256 grey	various	no
	TGA	8	256 grey	various	various	no
	TGA	24	16.7 mil	various	various	no
TIFF 6.0	TIF	1	no	various	various	no
	TIF	8	256	various	various	no
	TIF	8	grey	256 grey	various	no
	TIF	8	256 grey	various	various	no
	TIF	24	16.7 mil	various	various	no
	TIF	32	16.7 mil	various	various	no
Windows Bitmap	BMP	1	no	various	various	no
	BMP	8	256	various	various	no
	BMP	8	grey	256 grey	various	no
	BMP	8	256 grey	various	various	no
	BMP	24	16.7 mil	various	various	no

To this must be added the PostScript, EPS raster image and PDF output.

3.1.2 Vector graphics formats

The following vector graphics formats are supported by Bridge:

Format	Ext.	Colour	Bézier	Bitmap	Text
Calamus 1.0	CVG	no	yes	no	yes
Calamus 1.1	CVG	yes	yes	no	yes
GEM Metafile	GEM	16/256	opt.	no	yes
Adobe Illustrator	AI	yes	yes	no	yes
AutoCAD DXF	DXF	no	approx.	no	yes
HPGL Plotfile	PLT	no	approx.	no	yes

To this must be added the PostScript, EPS vector image and PDF output.

3.1.3 Whole page

 When this icon is selected, the whole of the current page is exported in the export format selected below. Otherwise the export is limited to only the selected (group) frame(s) in each case.

3.1.4 Split double pages

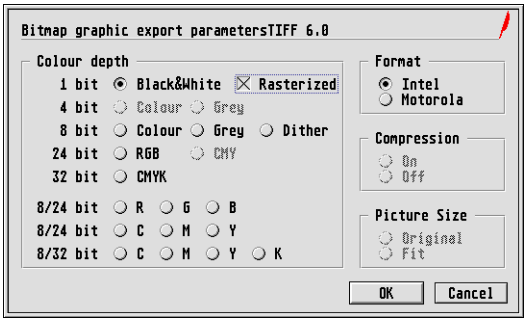
 When this icon is selected, double-page documents are split up into separate pages during export. Frames that extend across a double page are correctly positioned on both single pages.

If this icon is not selected, double pages are treated as normal pages, i.e. a document with 2 DIN A5 pages in double-page mode will be exported as a single page in DIN A4 landscape format.

3.1.5 Export

 A click on this icon starts the export process using the parameters set in the main part of the function panel (these are described in later sections). Depending on the selected format, you may like to select further parameters:

Pixel graphic formats:



Colour depth:

Here you can choose whether your export should be made in monochrome (1 bit), in 16 colours/greyscales (4 bit), in 256 colours/greyscales (8 bit), TrueColor RGB (24 bit) or

in TrueColor CMYK (32 bit). If you export RGB data in CMYK, then it will be separated automatically with the separation control curves set in the Calamus Colour separation module.

The options 8/24 bit RGB, 8/24 bit CMY and 8/32 bit CMYK exports each selected colour layer (or channel) as an 8 bit geyscale image, also if necessary after a separation process.

Format:

Here you can specify for certain image formats (e.g. TIFF) whether the export should be in the Intel (PC, Atari) or Motorola (Macintosh) format. Though most modern graphics programs import both variants without problems, it is selectable here for the sake of compatibility in case the program does not import automatically.

Compression:

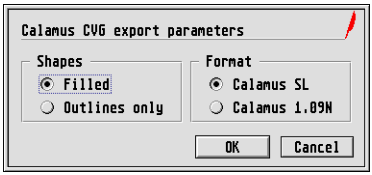
Some image formats have the option of storing image data in a compressed format, so that they require less space on the hard drive. As the compression takes some time to calculate and may not be supported by all graphics programs, it can be switched on or off here.

Picture size:

Some image formats are restricted as to their maximum size. Here you can choose whether the exported area should have the excess cut off once the maximum image size is reached ("Original") or whether the proportions of the area to be exported are to be adapted to the maximum size of the image format ("Fit").

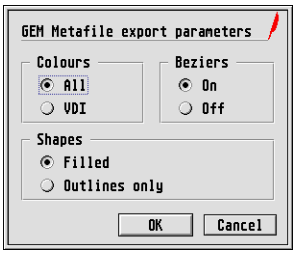
Please note that not all options are available with all image formats. A listing of the features of the individual image formats can be found in an earlier part of this chapter.

Calamus CVG:



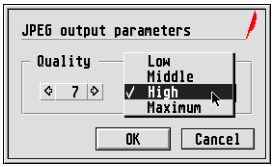
For Calamus CVG export you can choose whether exporting should be in Calamus 1.09 (grey) or in Calamus SL format (RGB colour). In addition you can choose to export vector areas or shapes as "Filled" or as "Outline only".

GEM metafile:



With GEM metafile export you can choose whether the graphic may contain only the 16 GEM system colours ("VDI") or whether it is to be exported in RGB colours ("All"). In addition you can switch off the use of Beziér curves; in that case the curves will be broken up into short line sections. Furthermore you can choose to export vector shapes as "Filled" or as "Outline only".

JPEG:



With JPEG export you can choose the output quality of your image data. The range begins at 0 (minimum) and ends at 10 (maximum). A popup menu offers four steps (1/4/7/10) as a text pre-selection.

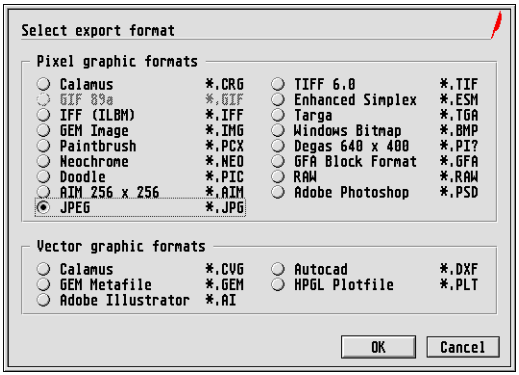
3.1.6 Define resolution

When a pixel graphic (raster image) format is selected as the current export format and a pixel image is selected, the current resolution of the image will be adopted. If the "Whole page" icon is active or a different type of frame is selected, a click on this icon sets the current zoom magnification as the output resolution. In other words the graphic will be exported exactly as you see it on the screen at the time.

With vector graphics this icon does nothing.

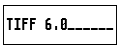
3.1.7 Select export format

A click on this icon opens the following dialog in which you can select the desired export format:



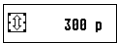
Please note that for vector graphics formats generally one can export only Calamus frames that are also in a vector format (Text, Vector, Line and Raster area frames as well as groups of frames of the types mentioned).

3.1.8 Current export format



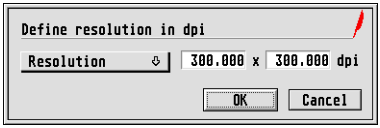
This line displays the currently selected export format. A click on the line opens the dialog described in "Select export format" above to allow you to choose an export format.

3.1.9 Vertical resolution / Height



If a pixel graphic (raster image) format is selected for export, the vertical resolution of the picture is shown here.

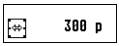
A click on the resolution value opens a small dialog where you can define any desired resolution for export.



3.1.10 Measure unit

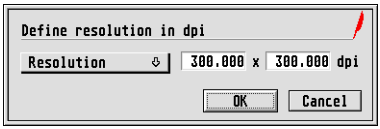
Clicking on the measurement unit after the value allows you to switch the resolution readout between "dpi" (dots per inch) and "p" (image pixels).

3.1.11 Horizontal resolution / Width



If a pixel graphic format is selected as the export format, the horizontal resolution of the picture is shown here.

A click on the resolution value opens a small dialog where you can type in any desired resolution.



3.1.12 Measure unit

Clicking on the measurement unit after the value allows you to switch the resolution readout between "dpi" (dots per inch) and "p" (image pixels).

3.2 PostScript & EPS export

PostScript output, but how?

Besides the many possibilities of converting data formats with Bridge, you will find that the completely revised and fully functional PostScript output engine forms an important tool in Bridge.

This automatically raises the question whether the PostScript output of the PS printer driver is better or worse than that from Bridge, or whether you can dispense with one or other of these two possibilities.

You will soon find out the answer for yourself when you understand the difference between the two outputting concepts:

The PS printer driver writes ready-to-print Calamus pages, in which the Calamus rasterizing, the Calamus colour separation, the transparency effects and all layout elements of Calamus are used. For this you have to know the output resolution of the imagesetter in advance, as the PS printer driver writes pre-RIPped colour separated layers in which the complete tried and tested SoftRIPping of Calamus is used.

Bridge on the other hand writes "object oriented" PostScript, so that neither the output resolution nor rasterizing is required in advance. Such PostScript files are only adjusted to the final output resolution, rasterized and if necessary separated during the actual imagesetting (or during printing) by the RIP processor of the output device (photo-composition machine, printer). The image data with Level 2 output and activated Calamus colour separation can nevertheless be separated directly in Bridge. On the other hand, transparency is not supported by PostScript up to Level 2 inclusive. Therefore you yourself have to ensure that any transparency effects used are made PostScript-ready by corresponding vectorial masking.

So generally you have to differentiate between:

- WYSIWYG output to imagesetters with Calamus-SoftRIP
  = PS-Print printer driver (SoftRIP -> PS-file) or ColoPS,
- Object-oriented output for various purposes, notRIPped
  = Bridge.

3.2.1 Whole page

 If this icon is selected, then the entire current page is exported in the format chosen below. Otherwise the export is restricted only to the presently selected (group of) frame(s).

3.2.2 Split double pages

 When this icon is selected, double-page documents are split up into separate pages during export. Frames that extend across a double page are correctly positioned on both single pages.

If this icon is not selected, double pages are treated as normal pages, i.e. a document with 2 DIN A5 pages in double-page mode will be exported as a single page in DIN A4 landscape format.

3.2.3 No text

 If this icon is selected then no text frames present will be exported.

3.2.4 No bitmap graphics

 If this icon is selected then no bitmap (raster graphic) data present will be exported.

3.2.5 No vector graphics

 If this icon is selected then no vector graphic frames present will be exported.

3.2.6 No mask groups

 If this icon is selected then no mask group frames present will be exported.

3.2.7 No page clipping

 When this icon is selected, page clipping is not defined or exported when outputting pages as PostScript. This means that frames that lie partly or completely outside the visible page area are also exported complete and unclipped. In that case one can not guarantee the page size will be interpreted correctly during export, of course. This

icon switch is intended above all for special cases where it is important that objects that lie outside the actual page format (and crop mark area!) are also exported.

3.2.8 Force page format export

 Some photo-composition machines and PostScript programs have problems correctly interpreting and RIPping PostScript files created without explicit export of the page format. So if you get problems of "misunderstood" page formats with further processing of your PostScript files, then switch on the output of the page size here as a test. In normal cases this switch should be set off (unselected).

3.2.9 Output vectorized text only

 If this icon is active, then text to be output will not be written as text with embedded fonts, but as a vector graphic instead. For this purpose the text frames will be converted temporarily into vector graphic frames during output, as if you had made this conversion manually in the "Convert to vector graphic" function group.

The temporary conversion means that the text frames in your original document still exist after output – in fact, no additional vector graphic frames will be assigned to the document.

If problems with embedded text in PS or EPS files must not occur, use this switch instead.

However, vectorized text output has some disadvantages:

- The output file size increases.
- After converting the created PS/EPS files to PDF format in external programs, the text will not look as nice as "real" text in Acrobat Reader, as Acrobat cannot create font hinting informations for vector graphic text elements.
- The created PDF files no longer contain text information (and thus cannot be searched for text), as the text has been converted to vector graphics.

3.2.10 Check document (PostScript)

 If this switch is set, Bridge 6 checks the whole document before output and reports, if it contains elements which cannot be output in this in PostScript format.

If such an element has been found, Bridge 6 alerts this and offers an according more detailed report.

The error report will be shown in an Eddie window and e.g. informs you that a raster image has been used as a mask on page 42.

The following problems are recognized and reported:

- mask groups with images as masks
- line frames with arrow tips

3.2.11 Output PostScript level 1

When this icon is selected, the data created will be compatible to PostScript Level 1. PostScript Level 1 is the simpliest (and oldest) language variant of PostScript and does not support many enhanced features like CMYK colours or more precise positioning.

We recommend basically that you use at least Level 2 format output to avoid colour and positioning problems. But as not all PostScript interpreters are Level 2 compatible (e.g. Calipso v1.x), you can switch off this option here.

3.2.12 Output PostScript Level2

When this icon is selected, the data created will be compatible to PostScript Level 2. One advantage of PostScript Level 2 over Level 1 is, among others, that it can handle CMYK colours and that the page formats can be set more precisely.

We recommend basically that you use at least Level 2 format output to avoid colour and positioning problems. But as not all PostScript interpreters are Level 2 compatible (e.g. Calipso v1.x), you can switch off this option here.

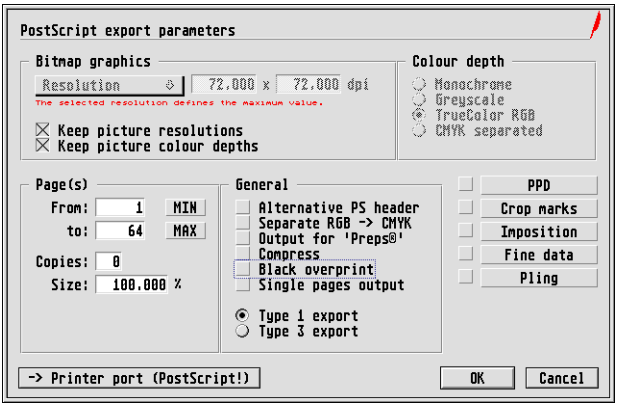
3.2.13 Output PostScript level 3

When this icon is selected, the data created will be compatible to PostScript Level 3. PostScript Level 3 has many advantages compared with Level 1, mainly CMYK colours and more precise positioning and page formats. Furthermore, Bridge 6 can use much more PostScript features in PostScript level 3 which are not supported by PostScript level 2.

We recommend basically that you use at least Level 2 format output to avoid colour and positioning problems. But as not all PostScript interpreters are Level 2 compatible (e.g. Calipso v1.x), you can switch off this option here.

3.2.14 PS export

To export documents, pages or individual frames as a PostScript file, click on this icon. A parameter dialog appears in which you can make further settings to achieve a successful PS output.



3.2.14.1 Raster graphics

In this area of the dialog you can define the resolution and colour depth for the export of all raster graphics. If you are uncertain about the real resolution and colour depth of your images, just activate the two checkbox switches "Use raster image resolution" and "Use raster image colour depth". Then no data will be lost during export.

But if you have created a document with images at 1,000 dpi resolution and you want to e.g. create a PS file for a b&w printer with a maximum resolution of 600 dpi, it makes sense to reduce the resolution of images to 600 dpi, too. Click on the popup "Resolution" and select the required resolution there. If the required resolution is not available there, you may enter it in the editable fields right of the popup directly. The first value describes the X resolution of your printer, the second one stands for the Y resolution.

The selected resolution stands for a maximum resolution of raster images. If you chose e.g. 1'200 dpi as image resolution and an image has 1'500 dpi, it will be downsized to 1'200 dpi (on output only). A 300 dpi image instead will not be "blown up" to 1'200 dpi!

Hint: If you find that you often need a resolution not present in the popup, you can make this up in the "Settings" function group. Click on the "Resolution setup" icon there.

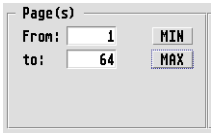
3.2.14.2 Raster graphics colour depth

If you have not set the "Use raster image colour depth" switch in the "Raster graphics" part of the dialog, you have to select a colour depth for all raster graphics here. This is recommended if, say, you want to export a PS file for a b&w printer. Even if your document contains many colour images, you should choose "Greyscale" in this case to avoid creating an unnecessarily large amount of data. This will also reduce the processing time before the PS file is printed.

Another use: If you want to e.g. convert your PS files to PDF for screen display only, it might be better not to use CMYK colour depth. In that case it is better to select "TrueColor RGB".

Note: If "CMYK separated" is not selectable, then this may be due to the fact that you have only activated the "Output PostScript Level 1" switch in this function group. CMYK is supported in PostScript Level 2 for the first time!

3.2.14.3 Page(s)

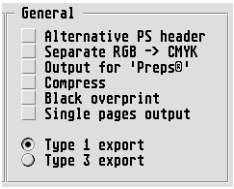


Here you can set whether just the current page, a given range of pages or all pages of the current document are to be exported. The setting is made as in the Calamus Print dialog.

If you want a page to be output more then once, enter the number of copies in the "Copies" editable field. If the value there stays "0", NO copies will be written, but only the original pages.

If you want to output the pages in another size rather than original, enter the desired percentage value in the field "Size". If you want to reduce the paper format from e.g. A4 to A5, you will have to enter "70.48 %". To get A3 output from an A5 page size, the value is "200.00 %".

3.2.14.4 General



Here there are various checkbox switches that are intended for special cases:

Alternative PS header

In a very few cases it may be necessary to replace the standard PS header created by Bridge with a customized header you produce yourself (with a *.PSH file extender). In order to let Bridge use this PS file, it has to be in the same folder where the Bridge module is placed (normally the MODULES folder). In addition the filename has to be DEFAULT.PSH.

Separate RGB -> CMYK

If this switch is set, all RGB colours of your document which are not part of a raster image will be separated to CMYK on output. If you have set up a colour separation control curve in Calamus, it will be used.

Output for 'Preps'

Preps is external imposition or mounting software that expects some special codings in PostScript files. If you want to impose your PS files with this software afterwards, please use this switch. Some required Preps PS commands will be output then as well.

compress

Basically, you should have this switch on. If forces all PostScript output to be compressed best possible. Your PS files will become much smaller. If a PS processing program or RIP has problems with compressed PS files, you can output uncompressed PostScript data by switching this feature off here.

Black overprint

If this switch is set on, all black colour informations from vector based objects (text, lines, raster areas, vector graphics) will be output to PostScript as if the write mode of the colour was "transparent". Then e.g. a yellow area will not be cut out by black text but stays intact and the black text will be simply printed over it.

Single page output

Chose this switch if you want a single PostScript file for each document page. A four digit cypher will be added to your chosen output file name and count upwards. A four page "Test.CDK" will become e.g. "Test0001.ps, Test0002.ps, Test0003.ps, Test0004.ps".

Type 1 / Type 3 export

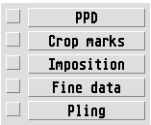
If the fonts used in the document are to be exported as well, they are embedded into the PostScript file. This prevents you from forgetting fonts when passing on the PS files, and also any accidental replacement of fonts by some other fonts directly in the RIP. At present PostScript supports two different font formats: Type 1 and Type 3. The Type 3 format was developed actually as an internal format only, just for embedding in PostScript files. The Type 1 format is the well known and widely used PostScript font format. Bridge can convert all fonts used in your document into one of these two formats during export.

If you want to convert your PS files to PDF in order to read these files on-screen, we strictly recommend the Type 1 format. Then Acrobat Reader can use the so-called "hinting" technology in order to let you read these fonts better on-screen.

If you have problems when processing PS files with embedded Type 1 fonts, you should try the Type 3 format as an alternative. As a rule this allows fonts to be processed with far fewer problems, but they are not as easy to read when viewed on a screen as the Type 1 fonts mentioned above. No "hinting" is available for Type 3 fonts.

Attention: Calamus converts all fonts used into another format on output. If you use third party fonts rather than CFN fonts, they will be converted into the CFN format on loading, too. This double conversion can cause differences which might prove unacceptable in processing, printing and reading on-screen. This problem can only be worked around by outputting your text in vectorized format or by selecting another font.

3.2.14.5 Print modules



Bridge supports all print modules which you already know from the Calamus Print dialog, for PostScript output, too. You can even use so-called PPD's.

PPD

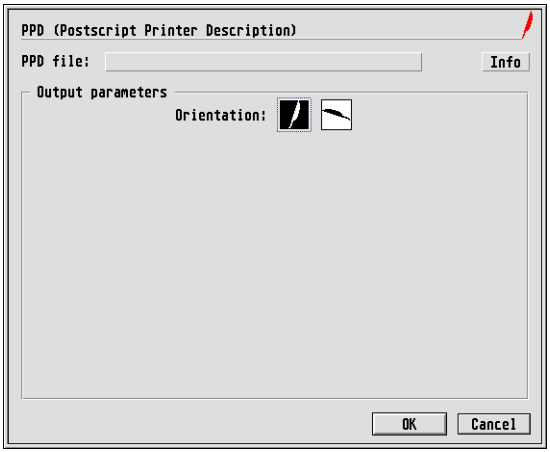
If you use this switch, the currently loaded PPD will be interpreted and all parameters which are supported by Bridge already, will be used for PostScript output, too.

PPD = Printer Parameter Description.

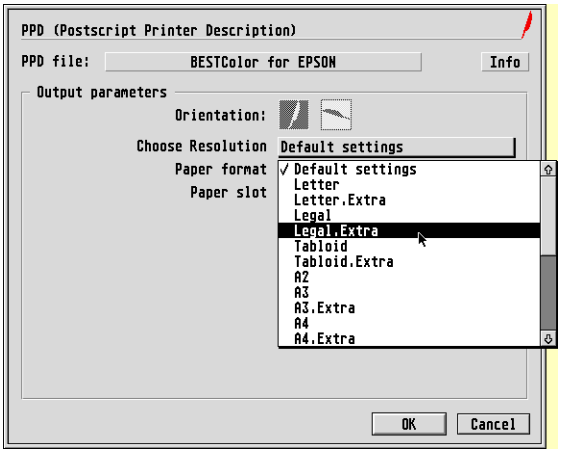
A PPD file contains instructions for output devices in a defined format. These parameters may refer to the paper format, to print resolution, paper feed trays and many other factors, and will differ from device to device. The supplied Bridge package contains a PPD folder containing a sample selection of these files for testing purposes.

Raster screen angles and raster frequencies from PPD files are not supported at the present time.

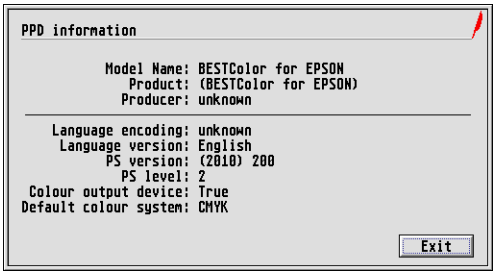
Clicking on the "PPD" button opens the PPD parameters dialog.



There you can load any PPD file. Its parameters will be presented then in this dialog then for selection:



The Info button opens a further dialog that provides details about the currently loaded PPD file.



Cut & crop marks

If this icon is selected, the settings for crop marks, registration marks and colour layer descriptions will be paid regard to and also exported in the PostScript document in the same way as for output via normal printers or imagesetters. These settings are usually made in the Page module, "Page mounting" function group with "Set layout/Working area". For easier access, however, the PostScript export dialog offers a "Crop marks" button to call up the same dialog directly (provided the Page module has been loaded). With this you can alter or check the settings directly from the PostScript output dialog without having to close that beforehand.

If this button cannot be selected, please load the Page module first.

Imposition

The PostScript export at present supports only the invers Imposition module in the full version from Version 3 onwards (available as an optional extra).

If this switch is set, the document will be imposed on output according to the settings in the imposition module. Click on the button [Imposition] to call the imposition module's dialog in order to define your settings there. Some of the parameters offered there are not supported for PostScript output yet (e.g. "rotate output") and thus are not selectable when you call the imposition module from Bridge.

Hint: If you cannot select the button [Imposition] although you have loaded the right imposition module, you might have set the switch "Output for Preps". You cannot use both imposition methods at the same time.

Fine data

If you select this switch, all fine data of raster images will be restored for PostScript output and will be removed again afterwards. With the button "Fine data" you can call the Fine data manager module in order to define further settings there.

Should this button not be selectable, please load in the Fine data manager (optional extra module) and try again.

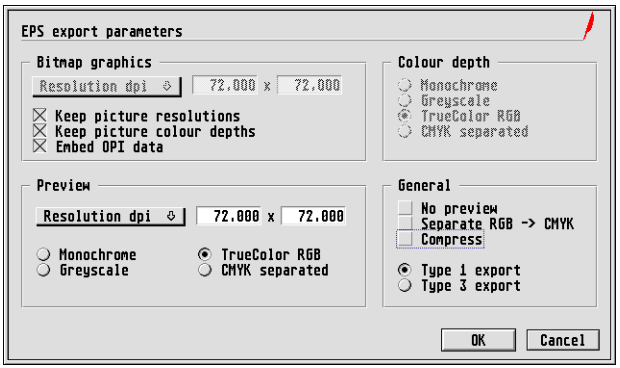
Pling

If this icon is selected, the Pling module will sound a bell after export. The settings are made directly in the Pling module, which can be reached via the [Pling] button.

Hint: If the ringing does not stop, press the combination of [Control]+[Alternate]+[Shift] once – as usual in Calamus whenever you want to stop an output process.

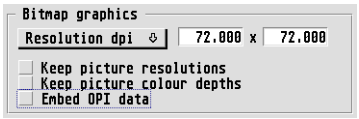
3.2.15 EPS export

To output individual pages or individual frames as an EPS file, click on this icon. A parameter dialog appears, in which you can make further settings for successful EPS output.



EPS = Encapsulated PostScript. This means that PostScript data in these files is defined for placement in other pages. This format is not suitable for imposition (mounting) purposes! EPS files are often used used for shipment of advertisements to newspaper or magazine printshops etc.

3.2.15.1 Raster graphics



In this area of the dialog you can define the resolution and colour depth for output of all raster graphics. If you are unsure about the real resolutions and colour depths of your images, mark both the buttons "Use raster image resolution" and "Use raster image colour depth" crossed. Doing this, you will not lose any image data for output at all.

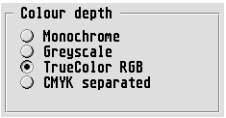
But if you have created a document with images at 1,000 dpi resolution and you want to, say, create a EPS file for a b&w printer with a maximum resolution of 600 dpi, it makes sense to reduce the resolution of images to 600 dpi, too. Click on the popup "Resolution" and select the required resolution. If the desired value is not present in the popup, you can simply enter it from the keyboard in the editable fields next to the popup. The first value describes the printer resolution in the X-axis, the second in the Y-axis.

Hint: If you find that you often need a resolution not present in the popup, you can make this up in the "Settings" function group. Click on the "Resolution setup" icon there.

If you select the "Fine data" switch, all fine data of raster images will be restored for PostScript output and will be removed again afterwards. With the "Fine data" button you can call the Fine data manager module in order to define further settings there.

Should this button not be selectable, please load in the Fine data manager (optional extra module) and try again.

3.2.15.2 Image colour depth

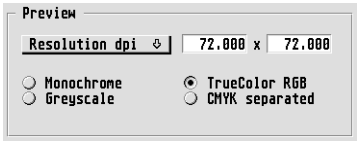


If you have not selected the switch "Use raster image colour depth" in the "Raster images" dialog area, you will have to select a colour depth for all raster images here. This is recommended e.g. if you want to output a PS file for your black&white printer. Even if you use many colour images in your document, it is better you use, say, "Greyscale" so that you do not produce too much unused data. This will also reduce the processing time of your PS file on print output.

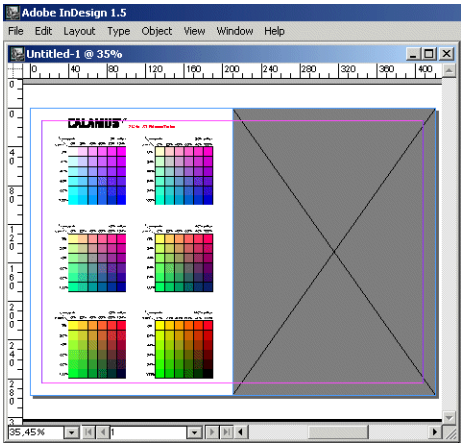
Another use: If you want to, say, convert your PS files to PDF for screen display only, it might be better not to use CMYK colour depth. Please select "TrueColor RGB" in that case.

Note: If "CMYK separated" is not selectable, then this may be due to the fact that you have only activated the "Output PostScript Level 1" switch in this function group. CMYK is supported in PostScript Level 2 for the first time!

3.2.15.3 Preview image



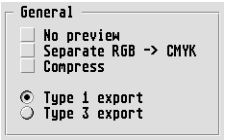
You can (and as a rule should) add a preview image to an EPS file. What does this mean? – If you place an EPS into an EPS processing program, this program usually only checks the size of the EPS by reading its header information. You will only see a grey rectangular frame afterwards, which then serves as a placeholder for the actual EPS data.



If the EPS file contains a preview image, then most programs can read this and display it instead of the grey placeholder. As far as handling is concerned, everything usually stays the same – even with a preview image the EPS can be placed only in many programs, but not edited. But you will at least see a preview of the EPS data contents.

Whenever Bridge creates a preview image, then in principle a "snapshot" is made of the frame or the page to be exported. You have to choose the image resolution and colour depth for the preview image here. Usually RGB images of 72 dpi resolution are preferred. Higher resolutions are not required for screen display and only increases the EPS file size.

3.2.15.4 General



Here there are various checkbox switches that are intended for special use:

No preview image

If you use this switch, all parameters of the "Preview image" dialog area are ignored (see above). No preview image will be created. You can only change the preview image parameters when this switch is not set.

Separate RGB -> CMYK

If this switch is set, all RGB colours of your document which are not part of a raster image, will be separated to CMYK on output. If you have set up a colour separation control curve in Calamus, it will be used.

Compress

Basically, set this switch. It lets the PostScript output be written in a compressed file format as far as possible. You will get smaller files then. If you get problems with a PS interpreting program or RIP, you will be able to write uncompressed PS files. Simply set this switch off in that case.

Type 1 / Type 3 export

If you want to output your document text with font information, the fonts will be embedded in the PostScript file. So you will not get problems with forgotten and replaced fonts in the RIP. PostScript supports two font formats at the moment: Type 1 and Type 3. The Type 3 format has been developed as an internal format only (i.e., for embedding in PostScript files only). The Type 1 format is the common and well-known PostScript font file format. Bridge can convert all fonts of your document into one of these formats for output.

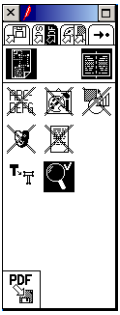
If you want to convert your PS files to PDF in order to read these files on-screen, we strictly recommend the Type 1 format. Then Acrobat Reader can use the so-called "hinting" technology in order to let you read these fonts better on-screen.

If you have problems when processing EPS files with embedded Type 1 fonts, you should select the Type 3 format as an alternative. As a rule this allows these fonts to be

processed with far fewer problems, but they are not as easy to read when viewed on a screen as the Type 1 fonts mentioned above. No "hinting" is available for Type 3 fonts.

Attention: Calamus converts all fonts used into another format on output. If you use third party fonts rather than CFN fonts, they will be converted into the CFN format on loading, too. This double conversion can cause differences which prove unacceptable in processing, printing and reading on-screen. This problem can only be worked around by outputting your text in vectorized format or by selecting another font.

3.3 PDF export



Bridge from Version 5 onwards offers a direct, object-oriented PDF export capability. This makes Bridge a practical tool for everyone who wants to create PDF documents, but shies away from the cost of the very expensive Adobe Acrobat software package.

Bridge creates object oriented PDF, exactly the same way as in its PS and EPS output. So raster images stay in the PDF as single raster images, while all vector based Calamus objects such as lines, raster areas and vector graphics stay as single vector elements in the PDF.

Text from Calamus documents will be written either as PostScript text with embedded fonts or as vector graphic text on PDF output. PDF files with vectorized text cannot be searched with text search functions any longer.

3.3.1 Whole page

If this icon is selected, then the entire current page is exported in the format chosen below. Otherwise the export is restricted only to the presently selected (group of) frame(s).

3.3.2 Split double pages

When this icon is selected, double-page documents are split up into separate pages during export. Frames that extend across a double page are correctly positioned on both single pages.

If this icon is not selected, double pages are treated as normal pages, i.e. a document with 2 DIN A5 pages in double-page mode will be exported as a single page in DIN A4 landscape format.

3.3.3 No text

If this icon is selected then no text frames present will be exported.

3.3.4 No bitmap graphics

 If this icon is selected then no bitmap (raster graphic) data present will be exported.

3.3.5 No vector graphics

 If this icon is selected then no vector graphic frames present will be exported.

3.3.6 No mask groups

 If this icon is selected then no mask group frames present will be exported.

3.3.7 No Notio comments

 If this switch is set, comments which have been placed by the Notio module in Calamus document pages, will not be exported.

3.3.8 Output vectorized text only

 If this icon is active, then text to be written will not be output as text with embedded fonts, but as a vector graphic instead. For this purpose the text frames will be converted temporarily into vector graphic frames during output, as if you had made this conversion manually in the "Convert to vector graphic" function group.

However the text frames remain in your original document also after the output process and no further vector graphic frames are assigned to the document.

Always set this switch to on if no problems may be permitted to arise with replacement fonts in the PS or EPS file.

However, the vectorized output of the texts also has some disadvantages:

- The output files become larger.
- If you convert the PS/EPS file with external programs to a PDF format, the texts will not look as nice in Acrobat Reader as "real" texts, because Acrobat can not create font hinting information for vector graphic text elements.
- The created PDF files can no longer be searched for words or text passages, because the PDF no longer consists of text but only of vector graphics.

3.3.9 Check document (PDF)

If this switch is set, Bridge 6 checks the whole document before output and reports, if it contains elements which cannot be output in this in PDF format.

If such an element has been found, Bridge 6 alerts this and offers an according more detailed report.

The error report will be shown in an Eddie window and e.g. informs you that a raster image has been used as a mask on page 42.

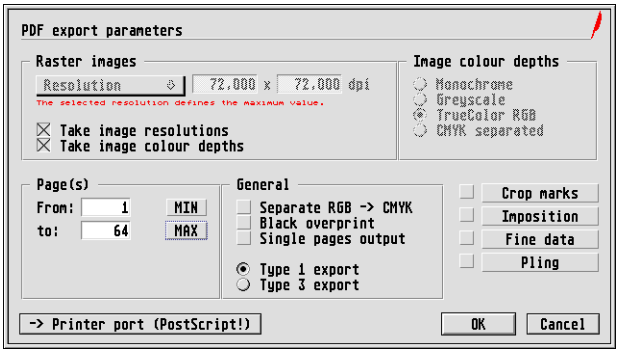
The following problems are recognized and reported:

- mask groups with images as masks
- line frames with arrow tips

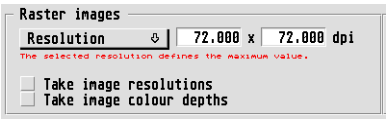
3.3.10 PDF export

To export documents, pages or individual frames in PDF file format, click on this icon. A parameter dialog appears in which you can make further settings to achieve a successful PDF output.

Remark: The PDF files written by Bridge 6 will be compressed automatically.



3.3.10.1 Raster graphics

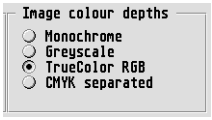


In this part of the dialog you can define the resolution and colour depth for all raster graphics that are to be exported. If you are uncertain what resolution and colour depth your images have, just activate the two checkbox switches "Use raster image resolution" and "Use raster image colour depth". Then no data will be lost during export.

But if you have created a document with images at 1,000 dpi resolution and you want to, say, create a PDF file for a b&w printer with a maximum resolution of 600 dpi, it makes sense to reduce the resolution of images to 600 dpi, too. Click on the popup "Resolution" and select the required resolution in it. If the desired resolution is not available there, you might enter it in the edit fields right to the popup directly. The first value describes the X resolution of your printer, the second one stands for the Y resolution.

Hint: If you find that you often need a resolution not present in the popup, you can make this up in the "Settings" function group. Click on the "Resolution setup" icon there.

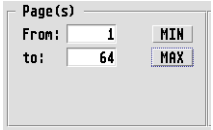
3.3.10.2 Image colour depth



If you have not selected the switch "Use raster image colour depth" in the "Raster graphics" part of the dialog, you have to select a colour depth for all raster graphics here. This is recommended if, say, you want to export a PDF file for a b&w printer. Even if your document contains colour images, you should choose "Greyscale" in this case to avoid creating an unnecessarily large amount of data. This also shortens the processing time before the PDF file is printed.

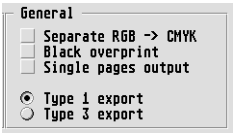
Another sensible application is if the PDF files are only required for screen display. In that case CMYK images are not much use, so select the colour depth "TrueColor RGB".

3.3.10.3 Page(s)



Here you can set whether just the current page, a given range of pages or all pages of the current document are to be exported. The setting is made as in the Calamus Print dialog.

3.3.10.4 General



Here are various switches for special cases:

Separate RGB -> CMYK

If this switch is set, then all RGB colours of your document that are not part of a raster graphic will be separated to CMYK on output. During this the current Calamus colour separation control curves will be taken into account.

Black overprint

If this switch is set on, all black colour informations from vector based objects (text, lines, raster areas, vector graphics) will be output to PDF as if the write mode of the colour was "transparent". Then e.g. a yellow area will not be cut out by black text but stays intact and the black text will be simply printed over it.

Single page output

Chose this switch if you want a single PDF file for each document page. A four digit cypher will be added to your chosen output file name and count upwards. A four page "Test.CDK" will become e.g. "Test0001.pdf, Test0002.pdf, Test0003.pdf, Test0004.pdf".

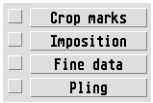
Type 1 / Type 3 export

If the fonts used in the document are to be exported as well, they are embedded into the PDF file. This prevents you from forgetting fonts when passing on the PDF files, and also any accidental replacement of fonts by some other fonts directly in the RIP. At present PostScript supports two different font formats: Type 1 and Type 3. The Type 3 format was developed actually as an internal format only, just for embedding in PostScript files. The Type 1 format is the well known and widely used PostScript font format. Bridge can convert all fonts used in your document into one of these two formats during export.

If you have problems when processing PDF files with embedded Type 1 fonts, you should try the Type 3 format as an alternative. As a rule this allows fonts to be processed with far fewer problems, but they are not as easy to read when viewed on a screen as the Type 1 fonts mentioned above. No "hinting" is available for Type 3 fonts.

Attention: Calamus converts all fonts used into another format on output. If you use third party fonts rather than CFN fonts, they will be converted into the CFN format on loading, too. This double conversion can cause differences which might prove unacceptable in processing, printing and reading on-screen. This problem can only be worked around by outputting your text in vectorized format or by selecting another font.

3.3.10.5 Print modules



For PDF export Bridge supports all the printing modules that you are familiar with from the Calamus Print dialog.

Crop marks

If this icon is selected, the settings for crop marks, registration marks and colour layer descriptions will be paid regard to and also exported in the PDF document in the same way as for output via normal printers or imagesetters. These settings are usually made in the Page module, "Page mounting" function group with "Set layout/Working area". For easier access, however, the PDF export dialog offers a "Crop marks" button to call up the same dialog directly (provided the Page module has been loaded). With this you can alter or check the settings directly from the PDF output dialog without having to close that beforehand.

Should the button not be selectable, then please load the Page module into Calamus.

Imposition

The PDF export at present supports only the invers Imposition PRO module in the full version from Version 3 onwards (available as an optional extra).

If this switch is set, then the document will be mounted directly during export according to the settings in the Imposition module. The "Imposition" button calls up the Imposition module to allow appropriate settings to be defined there. The parameters not supported in connection with PDF export (e.g. "Rotate output") are not selectable when you call the Imposition module from Bridge.

Fine data

If this switch is active, then during PDF export all fine data of raster images currently stored externally will be incorporated and after exporting will be offloaded again. With

the "Fine data" button you can call the Fine data manager module in order to define further settings there.

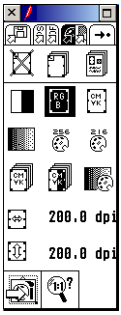
Should this button not be selectable, please load in the Fine data manager (optional extra module) and try again.

Pling

If this icon is selected, the Pling module will sound a bell after exporting is complete. The settings are made directly in the Pling module, which can be reached via the "Pling" button.

Hint: If the tinkling does not stop, press the combination of [Control]+[Alternate]+[Shift] once – as usual in Calamus whenever you want to stop an output process.

3.4 Convert to bitmap graphic



With the functions of this function group you can convert all kinds of Calamus frames (!) into images of any desired resolution and colour depth.

3.4.1 Delete original frame(s)

If you switch this icon on, the source frame will be deleted after successful conversion and will be replaced by the resulting converted frame. Otherwise the source frame will remain lying behind the newly created frame; after successful conversion in this case only the new frame will be in a selected state.

3.4.2 All frames

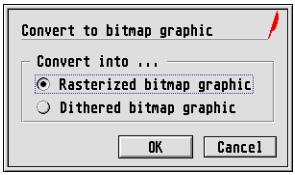
If this icon is switched on, all frames of the current page will be converted.

3.4.3 All pages (Multipage)

If this icon is switched on, the selected frames on all document pages will be converted. In combination with the "All frames" switch you can easily convert all frames in the whole document at once.

3.4.4 Monochrome

This icon converts the source frame into a 1-bit monochrome image frame. After you click on the "Convert" icon (see below) you will be asked to define whether the source frame shall be rasterized with the raster settings valid for it (see Raster generator module) or should be dithered with the Ordered dithering method.



3.4.5 TrueColor RGB

This icon converts a source frame to a 24-bit RGB image frame with a maximum of 16.7 million colours.

3.4.6 TrueColor CMYK

This icon converts a source frame into a 32-bit CMYK image frame. If the source frame contained RGB colours, they will be separated to CMYK automatically according to the control curves defined in the Calamus Colour separation module.

3.4.7 Greyscale

Converts the source frame into an 8-bit greyscale image frame.

3.4.8 256 colours

Converts a source frame into an 8-bit colour frame with 256 colours.

3.4.9 216 colours

Converts a source frame into an 8-bit colour frame with 216 colours.

3.4.10 C M Y K (4 frames), Greyscale

Converts a source frame into four 8-bit greyscale image frames which each contain one of the CMYK colour layers. If the source frame contained RGB colors, they will be separated automatically according to the control curves defined in the Calamus Colour separation module.

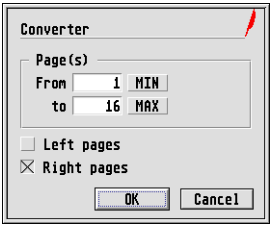
The colour layers will be identified by a prefix (C, M, Y or K) in the frame's name (Frame module, function group "Frame parameters") and will be placed on the layout page according to the settings of the frame copy parameters (Options menu, "Copy options").

3.4.11 C M Y K (4 frames), Monochrome

This function works in a similar way to the CMYK conversion to four 8-bit greyscale image frames, but here you get four monochrome image layers instead of four greyscales. In addition, you can select here, as in the "Monochrome" function, whether to rasterize the colour layers according to the current raster settings or to dither with the Ordered dithering method.

3.4.12 Convert

A click on this icon starts the conversion process. If the "Multipage" switch is set on, you can additionally select the range of pages the conversion process should work on.

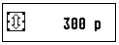


If the current document is in double page mode, you can select here, too, if the operation shall refer to right and/or left pages.

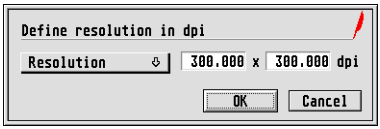
3.4.13 Define resolution

If you selected a raster image, the current resolution of this image will be adopted. At the same time the type of picture (RGB, b&w etc.) will be set correctly in the function panel. If the "Whole page" switch is set, or another type of frame is selected, a click on this icon sets the current screen magnification resolution as the output resolution. Thus a picture will be converted exactly as you see it on the screen at the time.

3.4.14 Vertical resolution / height



Here the vertical resolution of the converted image is shown. After clicking on the value you can specify here the vertical resolution of the converted image in the following dialog.

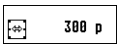


Hint: If you find that you often need a resolution not present in the popup, you can make this up in the "Settings" function group. Click on the "Resolution setup" icon there.

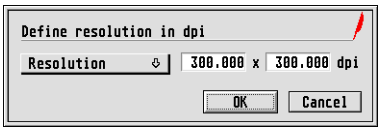
3.4.15 Measure unit

Clicking on the measurement unit after the value allows you to switch the resolution readout between "dpi" (dots per inch) and "p" (image pixels).

3.4.16 Horizontal resolution / width



Here the horizontal resolution of the converted image is shown. After clicking on the value you can specify here the horizontal resolution of the converted image in the following dialog.

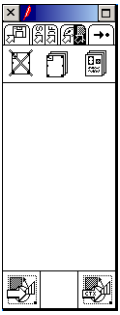


Hint: If you find that you often need a resolution not present in the popup, you can make this up in the "Settings" function group. Click on the "Resolution setup" icon there.

3.4.17 Measure unit

Clicking on the measurement unit after the value allows you to switch the resolution readout between "dpi" (dots per inch) and "p" (image pixels).

3.5 Convert to vector graphic



This function group converts frames and frame groups into Vector graphic frames. Please note that only Calamus frames that contain vector data (Text, Vector graphic, Lines and Raster area frames as well as groups of such frames) can be converted with this function.

3.5.1 Delete original frames

If you switch this icon on, the source frame will be deleted after successful conversion and will be replaced by the resulting converted frame. Otherwise the source frame will remain lying behind the newly created frame; after successful conversion in this case only the new frame will be in a selected state.

3.5.2 All frames

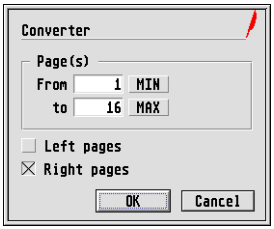
If this icon is switched on, all frames of the current page will be converted.

3.5.3 All pages (Multipage)

If this icon is switched on, the selected frames on all document pages will be converted. In combination with the "All frames" switch you can easily convert all frames in the whole document at once.

3.5.4 Convert

A click on this icon starts the conversion process. If the "Multipage" switch is set on, you can additionally select the range of pages the conversion process should work on.

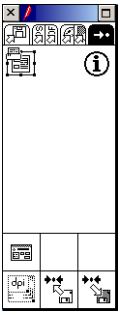


In case you work on a double page document, you can even define here if the operation should cover right and/or left pages.

3.5.5 Convert text frames only

This function corresponds to the function "Convert", except that here only Text frames will be converted. In combination with the switches "All frames" and "All pages (Multipage)" you can simply and quickly change all Text frames in the document into Vector graphic frames without having to select them explicitly beforehand. If these two switches are not set on, this function checks if at least one Text frame is selected in the current page.

3.6 Settings



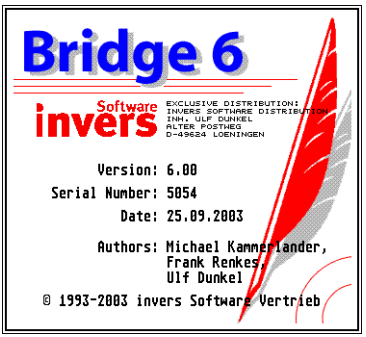
In this function panel you can set special switches that change the resolution presets and save or load the Bridge settings.

3.6.1 Allow output of unprintable frames

If you switch this icon on, all frames will be printed regardless of whether they have been turned off for printing with the Select module (optional extra module) or with the Toolbox PLUS module.

3.6.2 Module information

This is the obligatory module information. If you have questions or need support for the module then please note the module's version number, in case an update or upgrade version is needed.



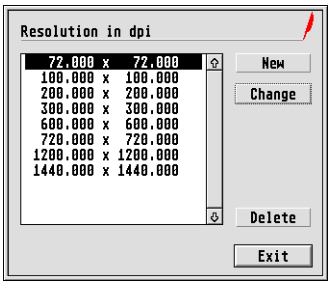
Updates for our modules and drivers are generally free of charge. You will receive all free updates of your purchased supplementary modules and drivers automatically when you have ordered your software directly from us.

Upgrades for modules and drivers are charged for. You will receive information about new products, upgrades and updates from us by post and our Calamus NewsTicker on the Internet. We recommend you to visit our WebSite (http://www.calamus.net/us/) and to subscribe to our free Calamus NewsTicker. In future you can then promptly receive all information direct per E-Mail. Simply select "Newsticker" in our WebSite and from there the entry "Subscribe/Unsubscribe".

Tip: Check in advance on the Calamus web site that you are actually working with the current version of the module. You can always find the UpToDate list under:
http://www.calamus.net/us/calamus/uptodate.php

3.6.3 Resolution setup

When you click this icon, the following dialog opens in which you can edit the predefined resolutions:



With "New" you can create new resolution presets which will be sorted to the list automatically. With the "Change" button you can edit existing resolutions while the "Delete" button removes selected entries.

3.6.4 Load settings

Click this icon to load a Bridge setup file (BRIDGE.SET by default) that was saved earlier (see below).

3.6.5 Save settings

Clicking on this icon saves the current settings to a setup file. A file named BRIDGE.SET will be loaded automatically when loading the Bridge module; a suitable file is included in the program package. You may of course specify any other filename and thus create a library of different Bridge setups for different jobs – please note that only the BRIDGE.SET file (in the same MODULES folder that contains the Bridge module) will be loaded automatically.

3.7 Bridge: Tips & Tricks

3.7.1 Preparing documents for PostScript

In this part of the Bridge instructions you will learn how to handle the main functions of this module as quickly as possible and thus achieve your "target" with the minimum of effort. At first we will deal with the output of Calamus documents to PostScript printers and external photo-composition devices via PostScript-RIPs.

Generally you can export Calamus documents "as they stand". For this it does not matter what format the pages have, how many pages the document has or whether you are working in single- or double-page mode. You can also export master page elements as well as registration and crop marks along with the actual page.

But in that case you have to reckon with your host! That means PostScript, which unfortunately is not as smart as Calamus. Hence you have to pay regard to a number of factors so that your Calamus document can be exported for PostScript-RIPs with the best possible quality.

The following layout elements are not supported by PostScript:

- Transparencies
- Line-end attributes
- Multiple raster resolutions on one page
- Mixed raster types (e.g. autotypical and FM) on one page
- Vector blends (graduations) from the optionally-available LineArt module

What does this mean?

3.7.1.1 Transparencies

Calamus uses three different writing modes to represent the contents of various frames: Transparent, Opaque and Inverse. You can define these writing modes in the Frame editing module, as already described:

It is imperative that before exporting a document as a PostScript file you check whether you have used any frames that were switched as Transparent. The simplest way is to set all frames to "Opaque" and check if any changes can be seen on the screen. This is easiest with the (optionally available) Select module, which among other things was optimized for this task and is able to switch all frames of any size of document to opaque at the touch of a button.

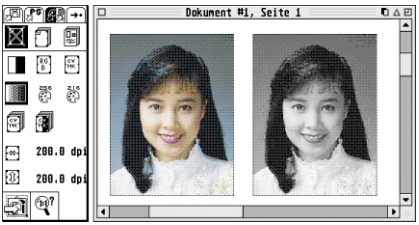
Example 1: You have set, say, black text over a yellow background and have set the text frame to transparent, so that the black text will overprint and so not show white flashes where it meets the yellow background after imagesetting the K and Y separations – in PostScript this black text is always output as opaque, and even masking brings no advantages since masks can not define opaque or transparent writing modes.

Example 2: You have a picture subject with a white surround that is to be placed on top of a light grey background. As soon as you set the image frame to the transparent write mode, the white surround will disappear in Calamus (becauses it is transparent) and only a little of the light grey background will shine through during output. Calamus does not support true semi-transparency at present, where you could define that really only the white parts of the image are transparent with the rest of the picture opaque; therefore – in this and all similar cases where the complete frame contents should not cover everything lying under it – you have to resort to masking to obtain the desired effect.

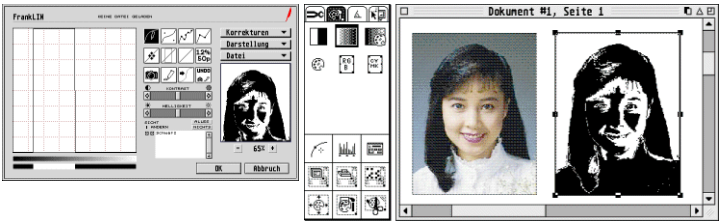
So that these masks are also exported correctly in PostScript, it is imperative that you create vectorial masks only! Raster graphic frames with b&w copies of a coloured image, for instance, would be output simply as what they are, namely monochrome images, but not as masks or as PostScript jargon has it "clipping paths".

It is however very simple to create vector masks for images. Just follow the instructions below step-by-step:

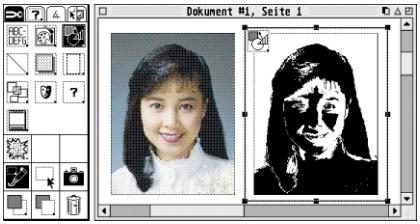
- In order to cut out a portrait from its background, say, the background must be removed "somehow". This can be done with Calamus and Bridge for instance by first making a copy of the picture as a greyscale image frame:



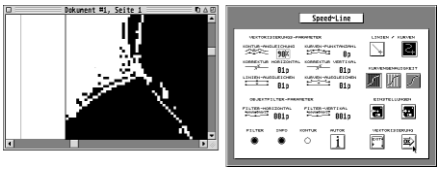
- After this use FrankLIN to alter the control curve of the greyscale image so that the result comes as close as possible to the desired effect, namely a complete b&w mask:



- The mask raster graphic frame now has to be vectorized. To do this, just create a vector frame that overlaps the mask image slightly:

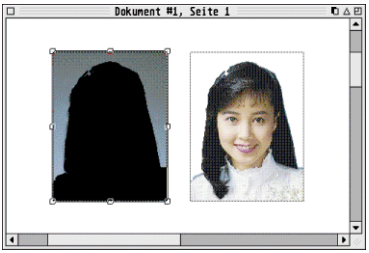


- Now use the Magnifier to zoom as tight as possible to the picture, because the vector tracing module Speed~Line uses the current screen resolution for vectorizing. Call that module and use the settings as shown in the following dialog box illustration, preferably without altering any of the Speed~Line parameters (apart from changing from Line to Curve tracing and setting the Curve precision):



- After Speed~Line has traced and vectorized the mask image you can check and clean it up in the Vector module. We recommend that, as in our example, you correct the vector object that represents the main part of the mask and then store it temporarily in the clipboard. After this select all other vector objects (Options menu, "Select all") and delete them. After inserting the main object back into the vector frame from the clipboard you will get the finished, vectorial mask:

- With this vector mask you can produce the background-free raster image:



On PostScript output the raster image is written quite normally as a rectangular image frame, with the vector data of the mask written as a clipping path definition. In this way you can also use several masks on a page, even masks within masks. However the mask objects must always be vectorial ones, i.e. all Calamus frame types that do not contain raster graphic data.

3.7.1.2 Line-end attributes

As you know, the Calamus Lines module makes various line-end attributes available for creative purposes.

Unfortunately, the round and arrowhead line-ends will be lost with PostScript output. Please bear this in mind during your design work and use, say, Raster area circles and triangles as round ends and arrowheads respectively.

3.7.1.3 Multiple raster resolutions on one page

In Calamus documents you can assign completely different rasters to individual pages or even individual frames. This is not so simple in PostScript and is not supported by PostScript export in Bridge. If you require special raster types for individual frames, we recommend therefore that you pre-rasterize them with the Bridge module ("Convert" function of the "Convert to bitmap graphic" panel):

- To do this, just set the desired raster for a frame in the Raster generator.
- After this convert the relevant frame in the Bridge module to a monochrome image frame using the Calamus rasterizing. (With coloured graphic frames we recommend you use the analogous conversion to "C M Y K (4 frames), Monochrome". This raster image data is then exported quite normally by Bridge with any other data and will not be rasterized further by external PostScript RIPs.

3.7.1.4 Mixed raster types (e.g. Autotypical and FM) on one page

Just like you can assign separate raster resolutions to each individual frame in Calamus, you can also mix FM rasters (StarScreening®) with autotypical rasters on one page. This too is not so simple with PostScript output. Therefore we recommend that before exporting PostScript files from Bridge that include FM rasters you pre-rasterize and separate the relevant frames with the (optionally available) adequate systems Filter module. This FM raster image data is then exported quite normally by Bridge with any other data and will not be rasterized further by external PostScript RIPs.

3.7.2 Handling fontless documents

As soon as several people want to use the data in one document, a problem arises for many Calamus users due to the font security mechanism. You cannot use Calamus documents with fonts that are not licensed to you, which prevents you from passing on licensed Calamus fonts with a document to others. So that other Calamus "handlers" can still print or scale and position documents that are "stuffed full of" protected fonts, there is a new tool in the "Convert to vector graphic" function panel:

If you select the "Convert text frames only" icon in conjunction with the upper switches in this function group and then "clean up" your document (Options menu, "Fix document", Delete unused fonts), you can load the document created into any other Calamus and perform restricted modifications (but not to the text) without having to depend on the original fonts.

3.7.3 MacOS + MagiCMac

If you double-click in the MacOS Finder on a PDF file that was created with PDF-Print (or Bridge 5 or ColoPS), instead of the Acrobat Reader opening, MagiCMac will open. This is due to the fact that as a default all files for the MacOS created by programs running under MagiCMac "originate from MagiCMac".

To alter this behaviour, proceed as follows:

- Start MagiCMac.
- Switch over with [Apple]+[W].
- In MagiCMac menu "Settings" (in MacOS Finder) select "File types".
- Click on "New", enter the extension: ".PDF " with a space as the fourth character (Creator: CARO, Type: PDF) or look for the corresponding file that will be opened by Acrobat.

3.7.4 Export data

Choose the objects that you want to export, carefully. You might e.g. use a Tiling frame to only export a clipping of your document page. If you do not want to export all frames which are covered by a Tiling frame, switch their visibility off. You can do so either in the Frame editing module ("Display" function group) or in the Toolbox PLUS. Now define the required size. In the most cases it makes sense to simply click the "1:1" icon.

3.7.5 Export to a picture editor

If you want to restyle your data in, say, Adobe Photoshop, you should choose the output format TIFF.

You will now have to define some additional parameters that depend on the kind of data. Usually the file format is set to "Intel" as most PC applications do not work well with the Motorola format while most Mac applications can read Intel formats. Since not all programs can load packed TIFF files, you should use the "Compression" mode only if the TIFF files could not be fit on your hard drive otherwise.

3.7.6 Export to a PC/Mac vector program

If you want to modify your vector data in, say, Adobe Illustrator, Macromedia Freehand or CorelDRAW, you should select the output format EPS (second Bridge function group). Please switch on both "Output PostScript Level 2" and "EPS export" icons first. Before exporting we recommend you activate the generation of a preview image as well. Please keep in mind that Illustrator usually interprets all data in 72 dpi quality.

3.7.7 PostScript output

If you want to send your data to a PostScript® printer or a photo-composition machine, you have to select the "EPS & PostScript export" Bridge function group. In

addition you can decide whether to output all types of frames. You will then have to choose whether you want to print several pages of your document at once. When you start the Export function, a dialog opens in which you can define whether the PostScript printer is colour-capable and set the range of pages you want to output. In the PostScript output dialog you can define for special reasons an alternative PS header to be embedded in the PS file (usually unnecessary!). This header is expected as a "BRI_PS.PSH" file in the MODULES folder by default.

3.7.8 Convert to a picture

You want to convert a frame into a picture? – Select the function group "Convert to bitmap graphic". Select the frames that have to be converted. If the bitmap picture frame is to be placed in the same layer in the frame's hierarchy and you do not need the original data any longer, activate the icon "Delete original frame(s)". Now you only have to select the destination format and can then start the conversion.

3.7.9 Create a mask

You want to mask out parts of a picture using the mask function of the Frame editing module and therefore need a mask? – Select the format "1 bit" and set the magnification to 1:1. In the Frame editing module, change the image control curve so that parts to be masked will look black, all other parts white. Now convert the data without deleting the original frame. Restore the original control curve in the original frame, then mask the picture with the new bitmap frame.

Warning: Such bitmap masks cannot be used as masks for PostScript output. You will have to transform the b&w graphic with Speed~Line or by hand (in the Vector module) into a vector mask, as described in the tutorial above!

3.7.10 Fix a control curve setting

You found the perfect control curve setting for a special picture and do not want to lose it by mistake? – Click on the "1:1" icon, which also sets the right colour depth of the original image frame for the panel, e.g. "8 bit grey" for greyscale images. Now select "Delete original frame(s)" and start the conversion. The current control curve of the original frame has been used to create the new image.

Attention! This method might erase important data! Please make sure you always keep copies of important original data on your hard drive.

3.7.11 Reduce the resolution

Define the same colour depth as in the original image frame, e.g. "8 bit grey" for greyscale images. Now select "Delete original frame(s)". Click on the "1:1" icon. Reduce the dpi value by the required factor and start the conversion. The image now looks coarser. You can create "pixellated" areas to hide some details in your pictures like on TV, or simply reduce the size of overscanned pictures in your document.

Attention! This method might erase important data! Please make sure you always keep copies of important original data on your hard drive.

3.7.12 Reduce the number of colours

Select "Delete original frame(s)" and "8 bit greyscale". Click on "1:1" and start the conversion.

You wish to reduce the size of your document temporarily? – Select a colour image frame. Select "Delete original frame(s)" and "8 bit dither". Click on "1:1" and start the conversion. Now the picture uses only a quarter of the original memory or disk space.

Attention! This method might erase important data! Please make sure you always keep copies of important original data on your hard drive.

3.7.13 Separation test

You would like to see how the defined separation control curves would treat your document? – Click on the "1:1" icon. Optionally you can define a lower resolution here. Now select the "C M Y K (4 frames), Greyscale" icon and start the conversion. You now get four new frames with greyscale images. (From the frame names you can find out in the Frame editing module which frame represents which colour. The frame's name will be prefixed with a process colour character. For example, TEST.TIF becomes "C TEST.TIF" in the cyan separation.)

If you select the "C M Y K (4 frames), Monochrome" icon you will get directly the same data that would land on a separation film. Define the required imagesetter resolution, e.g. 1,270 dpi. Of course you will have to set or load a matching raster definition in the Raster generator. (Do not forget to set the colour separation curves.) Now start the conversion by clicking on "Convert to", which brings up a dialog that asks you how you want to convert the raster graphic; choose the "Rasterized bitmap graphic" radio button.

If you are satisfied with the result, you can fix the separation, but use "32 bit" as the colour depth. With colour image files this will not waste memory, as Calamus always uses the same amount of RAM for 24 bit and 32 bit images.

You can make the separation test with all Calamus objects. But you should only fix image frames.

3.7.14 Convert to vector graphic

You want to convert frames into vector graphic frames? – Select the function group "Convert to vector graphic". Select the objects that you want to be converted. Please keep in mind that raster graphics cannot be changed here. So you would have to trace (vectorize) them with Speed~Line beforehand.

If the vector graphic frame is to be placed in the same layer in the frame's hierarchy and you do not need the original data any longer, activate the icon "Delete original frame(s)".

Now you only have to start the conversion.

3.7.15 Create logos

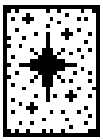
You want to create a logo without having to drag around the original font with you all the time? – Convert the text frames into vector graphic frames. Remove the fonts that are now no longer required ("Fix document") and save the converted document.

3.7.16 Line-end arrowheads for PostScript output

You know that PostScript does not support the Calamus arrowhead line-ends, but have no idea how best to prepare your Line frames? – Select an appropriate Line frame and convert it into a raster graphic frame with Bridge (3rd function group "Convert to bitmap graphic").

Attention: The arrowheads are always generated by Calamus according to the current screen resolution. So please select the correct resolution for the bitmap graphic frame, namely that in which the PostScript data will be output later.

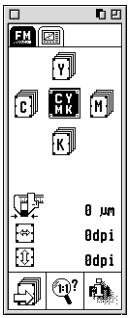
4 StarScreening PRO



StarScreening allows you to rasterize your documents with the latest frequency-modulated ("FM") rasterizing technique for printing.

FM-rasterizing gives excellent results even at low printer resolutions (300 dpi). The basis of this new rasterizing method is that it does not vary the size of the dots (with a fixed separation), but uses raster dots of a uniform size whose spacing is varied to achieve the desired density. With FM-rasterizing you can easily achieve smooth blends (graduated tints) and Moiré-free colour printing.

4.1 Image parameters



The first function group is responsible for the basic settings such as FM dot-size and the actual rasterizing.

4.1.1 Create Yellow colour layer

In place of the usually chosen CMYK colour layer you can can also select the yellow colour layer on its own, or combined with other colour layers.

4.1.2 Create Cyan colour layer

In place of the usually chosen CMYK colour layer you can can also select the cyan colour layer on its own, or combined with other colour layers.

4.1.3 Create CMYK colour layers

The upper portion of the first function group allows selection of the desired colour layers. In most cases you will choose the CMYK option, as this produces a complete graphic separated into the process printing colours. Should the data still be in the RGB mode before processing, then in each case they will be output separated paying regard to the corresponding CK7 control curves.

4.1.4 Create Magenta colour layer

In place of the usually chosen CMYK colour layer you can can also select the magenta colour layer on its own, or combined with other colour layers.

4.1.5 Create Black colour layer

In place of the usually chosen CMYK colour layer you can can also select the black colour layer on its own, or combined with other colour layers.

4.1.6 Create layer

 The rasterizing procedure is very simple. After you have made the basic settings in the module and selected a frame, you can start the rasterizing process by clicking on this icon.

In most cases you are likely to select greyscale, RGB or CMYK graphics for rasterization. However, you may work with all other frame types as well.

Calamus now creates – according to your settings – a so-called module-specific frame (uniframe) that holds the FM data. Once the rasterizing is complete, you will find the original and FM frames lying exactly over each other.

Important: Do not forget to remove the original graphics frame(s) from the page before printing, otherwise it/they may show through the FM raster, and you will lose most of the advantages of FM rasterizing! But at least for the duration of the print output you should save the original data first (say to the clipboard). That way you will retain the original data, because a back-conversion of the FM data is not possible.

Warning: The computation time rises quite appreciably for large quantities of image data and high resolutions. Therefore be sure that your computer has sufficient RAM installed. Otherwise, or in addition, you have to use other means for virtual management of your memory (see "Fundamentals / Concepts").

For printing your documents that contain FM graphics, the StarScreening module has to have been loaded into memory. Otherwise these frames will not be printed with the rest of the document. If you want to imageset your FM graphics, then the imagesetting bureau must possess the StarScreening-Pro module. For adapting the gradation to resolutions higher than 600 dpi, you may need additional customized gradation control curves.

4.1.7 Check resolution

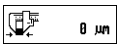
 With a click on this icon you can check the current resolution of the selected frame, which will then be displayed in the fields for horizontal and vertical resolution (marked with corresponding arrows). In addition the ideal dot size for FM rasterizing of this graphic at its current resolution will be displayed in the "Dot size" field (besides the "measuring gauge").

4.1.8 Information

Here you find a useful switch:

Delete original frame If you activate the checkbox (so that it is crossed) the original source frame will be deleted after rasterizing has been completed.

4.1.9 Set dot size

 In this field you can specify the dot size in micrometers with which the selected graphic is to be FM-dithered. If you have previously used the "Check resolution" function to establish the image data, this field will already show the suggested ideal dot size.

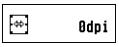
We recommend direct input of the output resolution of the desired output device in the fields below. The size of the dot will then be established automatically. The module uses these values to fine-tune the FM dots specially for your printer. It is also possible to use half the resolution of your printer (say 300 instead of 600 dpi).

Note that this value can never lie below the spot size of the output device.

4.1.10 Dot size unit of measure

The unit of measure for the FM dot size is displayed in micrometers. This unit can not be altered.

4.1.11 Set horizontal resolution

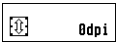


If you have established the image data with "Check resolution/Set dot size", then this field shows the current horizontal resolution of the graphic in dpi or points cicero (pc). You can also click on the numerical field, clear the existing entry with [Esc] and type in a different resolution, terminating input with [Return]. Note that while the horizontal resolution need not be the same as the vertical resolution, better results will be achieved if they are equal.

4.1.12 Horizontal resolution unit of measure

By clicking on the unit of measure after the numerical value you can switch the unit for the horizontal image resolution between dpi and points cicero (pc).

4.1.13 Set vertical resolution

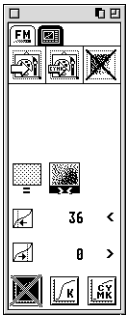


If you have established the image data with "Check resolution/Set dot size", then this field shows the current vertical resolution of the graphic in dpi or points cicero (pc). You can also click on the numerical field, clear the existing entry with [Esc] and type in a different resolution, terminating input with [Return]. Note that while the vertical resolution need not be the same as the horizontal resolution, better results will be achieved if they are equal.

4.1.14 Vertical resolution unit of measure

By clicking on the unit of measure after the numerical value you can switch the unit for the vertical image resolution between dpi and points cicero (pc).

4.2 Raster parameters



In this second function group you can make settings for choosing the gradation control curves to be used, and for the randomization of the dot spacing.

We recommend strongly that you retain the default settings for

- Random dot distribution
- Minimum drop = 36
- Maximum drop = 0

This is the only way that first class results can be achieved with the supplied control curve packages. To explain: Minimum and maximum drop determine the dispersion of the random dot distribution during rasterizing. An increase of the values or of the value range (say 32 to 128) alters the tone values of the result.

4.2.1 Create bitmap frame

One click on this icon converts StarScreening frames (uniframes) into single raster image frames, giving you a single frame for each colour plane (C, M, Y, K). The converted data can be edited or exported with other modules then.

4.2.2 Create CMYK uniframe

This function, the conversion of StarScreening frames (uniframes) into real CMYK rasterized graphic frames is only available in the Pro version of the StarScreening module.

4.2.3 Deactivate StarScreening preview

If this function is switched on, then no preview appears in the output frame (uniframe). As you know, the contents of such module-specific frames, which StarScreening frames are, will be output and controlled by the module that creates them itself.

4.2.4 Fixed dot distribution

 You can activate this icon if you desire a "fixed" dot distribution in the raster. This means the ordered dithering process, which produces mathematically uniform dot distribution. However, normally you should select "Random" distribution in the StarScreening module, because you can achieve ordered dithering already in the Frame editing module or with Bridge 5, for instance.

4.2.5 Random dot distribution

 You can activate this icon if you desire a "random" dot distribution in the raster. This means the FM dithering process. Normally you should select this dot distribution, as the printed output looks much better.

4.2.6 Use no control curves

 This setting is recommended for the conversion of RGB graphics. Set instead the corresponding CK7 control curves for colour separation (in the Page module / Colour separation settings).

Without a suitable adaptation the results will usually come out too dark.

4.2.7 Use Black control curve

 This setting is recommended for the output of individual colour layers, usually black.

With the function for a single colour layer activated, a suitable control curve type (CK1) will be taken into account when calculating the output values. As soon as computation is started by clicking on the "Create layer" icon in the first function group, the file selector appears where you can choose the desired control curve.

Without a suitable adaptation the results will usually come out too dark.

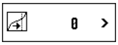
4.2.8 Use colour separation control curve

This setting is recommended for the output of already separated graphics.

With the function for all colour layers activated, a suitable control curve type (CK4) will be taken into account when calculating the output values. As soon as computation is started by clicking on the "Create layer" icon in the first function group, the file selector appears where you can choose the desired control curve.

Without a suitable adaptation the results will usually come out too dark.

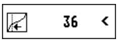
4.2.9 Maximum drop



The normal value of the maximum random limit for the creation of FM dot distribution is "0".

Changes in this value may alter the tone range of the end result in some circumstances. It is best if you retain the default value for your graphics, though you can change it for experimental purposes.

4.2.10 Minimum drop



The normal value of the minimum random limit for the creation of FM dot distribution is "36".

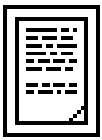
Changes in this value may alter the tone range of the end result in some circumstances. It is best if you retain the default value for your graphics, though you can change it for experimental purposes.

4.3 StarScreening exercise

A Calamus document with several images is to be output on a 600 dpi laser printer in as high a quality as possible (i.e. FM-rastered in this case). You have to process one image after the other. In this version of StarScreening, processing of several images is not possible in one pass. You need not necessarily keep to the order of the example sequence below.

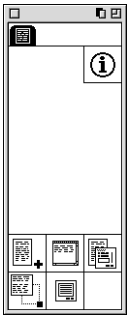
1. Load the StarScreening module if it is not installed already.
2. Make the appropriate settings in the module, i.e. select a suitable control gradation curve (CK1 for monochrome images, CK4 for multi-coloured images) in the second function group.
3. Check whether the correct separation is selected for the RGB data. Optionally, gradation correction can be undertaken just with the separation control curves (CK7). In this case please do not select any of the options mentioned above in the StarScreening module and only use the supplied CK7 curves.
4. Select a frame (e.g. a CMYK image). For a multi-coloured image select all colour layers for output. For a monochrome image a single colour layer suffices. In most cases this will be black (K).
5. Specify the desired resolution. In our example this is 600 dpi.
6. Start the rasterizing with the appropriate function.
7. If you have selected the relevant option, then you will be asked now for the gradation curves to be used. The file selector opens for you to choose a file. For our example this is HP4M600U.CK4.
8. Now a module-specific frame will be created for the selected frame. After the required computation, this will store the FM data.
9. Repeat the process for all images.
10. For the print output, remove the original data of the images (to the clipboard, for example).
11. Start printing in the usual way.

5 Notio



With Notio, you can create "notes" (memo stickers) and paste them into Calamus documents. The notes can be created in three different protection levels: "public", "private", "private and for serial number xxxxxx".

5.1 Notio



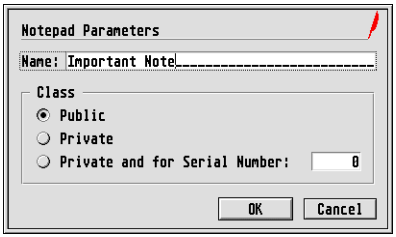
Notio has only one function group, whose functions are explained below.

5.1.1 Module information

With this icon you can open the Info dialog for Notio.

5.1.2 Create a new notepad

With this function you can place a new notepad memo at any desired position in a document on (or next to) existing objects.

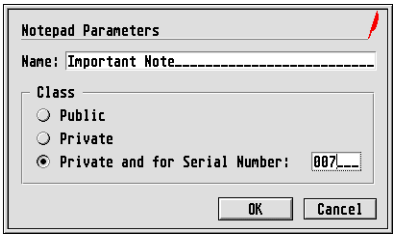


You can chose between three different memo types for this:

Public Memo that can be read by anyone who can open the document.

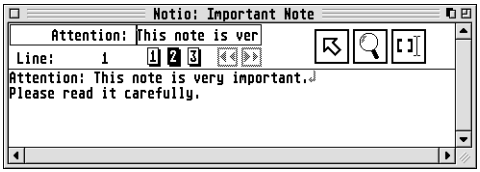
Private Memo that can be read only by you (or your Calamus serial number!).

Private and for serial number Special case of a private memo that you can dedicate to a colleague with a given serial number. Such memos are commonly used for team work or for information about imagesetting orders.



5.1.3 Edit the notepad in Eddie

A double-click on the notepad icon opens an Eddie window that displays the text of the notepad memo. (Of course the Eddie module has to be loaded for this.)



5.1.4 Change notepad parameters

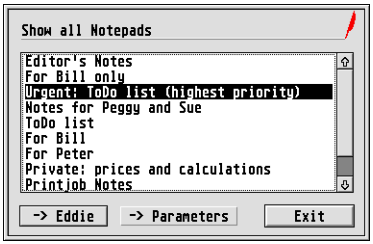
Clicking on this icon opens a dialog box that lists the notepad memos contained in this document. You have the option here of altering the type and contents of any individual memo. Private memos that are not intended for your Calamus serial number (so therefore you have no access to them) can not be altered here either, of course!

5.1.5 Notepad to foreground

When you click on this icon, all notepad memos of the current (double) page will be placed in the foreground to make it easier to select and "open" them there.

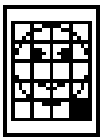
5.1.6 Show all notepad (information)

 When you click on this icon, the following dialog box appears giving an overview of all notepad memos contained in the current document.



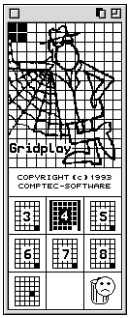
It is often more practical (specially with large documents) to get an overview of all notepad memos contained in the document directly with this function, rather than browse through the complete document.

6 Gridplay



Gridplay is played with a Calamus frame which is split into several parts or "tiles" that are scrambled at the start of the game. The aim of the game is to restore the picture to its original state.

6.1 Play with Calamus frames



Starting the game

First select just one Calamus frame of your document. It does not matter here what type of frame you select, though the contents of a line frame will certainly be less fun ...

Gameplay

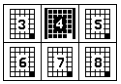
The game is controlled exclusively with the left mouse button. You always click on the tile of the image that is to be moved to the adjacent black area. All image tiles can be moved either horizontally or vertically in single steps.

End game

When all image portions are restored to the correct sequence and the black field is visible in the lower right corner, the game is complete.

Have fun playing during pauses of your creative process!

6.1.1 Select frame grid



Select one of the six available frame grids. With a "3x3 frame grid" the frame will be split up into 3x3 equal-sized parts of which you will then see only eight parts. The ninth field remains clear and serves for moving the tiles. The other frame grids generate a correspondingly greater number of tiles.

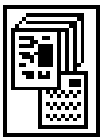
6.1.2 Start playing game

Now click on the bottom left icon with the grid. The tiles will now be scrambled and the game starts. You have the option to choose into how many rows and columns the frame should be split.

6.1.3 End game and restore page

The game can be ended at any time by clicking on the wastebasket icon. (Wiseguys also call this icon the "Boss coming!" button.)

1 Pages/Layers



This module serves for the definition of the basic data of a layout (page format, page and chapter numbering) as well as for working with complete pages and layouts.

The Page module is divided into three function groups: The first is for working with normal document layout pages, the second is for working with so-called "master pages".

The third function group offers all basic possibilities for using layers in your documents.

Master pages

Master pages are like style sheets. They allow you to establish elements which will appear on one or more related document pages. Here are examples of such elements:

- Header and footer areas of a page: Lines, text, and even graphics can be used here. The only condition: They must look the same on several pages.
- Manual registration marks
- All kinds of guidelines

Each document must have at least one master page. All the elements on the master page will appear on all the document pages related to it (that's why they are called "master elements"). A master page can – and should – apply to several document pages, but must contain only the elements which should appear on every page (for exceptions, see below). Text frames that will be filled only later with text can not be created on master pages, because these will look different on every page; body text should be created on the document pages themselves. It is possible to use more than one master page in a document, but any single page has only one master page which applies to it, so can only adopt the elements of this one master page. These master page elements are divided into master frames, guidelines and layout rulers.

Master frames appear on document pages exactly as defined on the master page. You cannot change master frames on document pages, but you can turn them all on or off, or move them to the background or foreground. Registration marks too can be defined as elements on master pages, by putting together suitable raster areas and lines. However, it is simpler to use special functions provided for this (see below, "Set layout/working area"). You can also generate crop marks with this and have some additional functions available.

There is one exception to the rule that all master frames must look the same: This concerns the page number. Below in the description of page numbering, and in the "Text module / Tools" function group, we mention that for page numbering you basically only use a placeholder, which Calamus will automatically convert to the correct page number. You can also use these placeholders on the master page, and Calamus will handle them correctly. The frames are then really identical (each has the same placeholder), but Calamus will assign different values to the placeholders on each page during output.

Likewise, guidelines (see Guideline module) and page layout rulers (see "Frame editing module / Display" function group) can also be defined on the master page, but you can change them on document pages. However, if you change them, you will change them not just on the current page, but also on the relevant master page and all other document pages that use this master page.

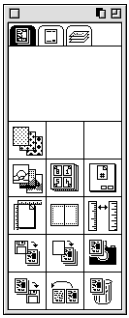
When you add a new page, you must specify which master page it should use. To do this, you give every master page a name which you can use to call it up again. You can also delete a master page which is being used by other document pages, but you must specify a replacement master page for it.

Layers

Layers are a further method to structure documents in an elegant way. In Calamus you have nearly unlimited possibilities to work with layers.

- Each document page and each master page can contain any number of layers.
- The layers are not tied to a fixed sequence order.
- Layers can be assigned flexibly to layer groups.
- Layers and layer groups may be protected.
- Layers and layer groups may be switched to be invisible, in which case they are not output with the rest of the document during printing.

1.1 Page mounting



In this first function group of the Page module you can set the units of measurement, the page format and the page numbering style. In addition you can load, save, copy, add, move and delete pages. There are also some icons present for calling external modules.

1.1.1 Raster generator settings

As already explained in "Fundamentals, Raster graphics", various levels of grey and colour are reproduced in printing by different sizes of raster dots. With this function you can set the dot form and raster width as well as the raster angle, provided that the module required for this has been loaded (see File menu, "External modules" menu entry). If this is not the case, a suitable alert message appears. Clicking on this icon calls up the corresponding module, which is described in detail in its own "Raster generator" chapter.

1.1.2 Colour separation settings

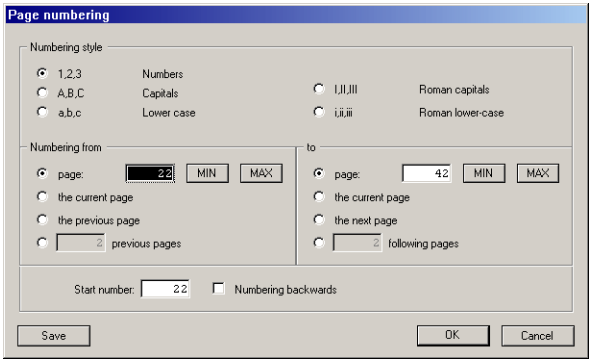
This function too presupposes the presence of an external module. The chapter "Fundamentals, Colour printing" has already explained the principles of printing in colour. The parameters for the colour separations can be set with this function. If the Colour separation module is not in memory, an error message appears.

1.1.3 Mount settings

Mounting in this context means the printing of several document pages on one output page or sheet. An external module is required for this, which is described in its own "Mount module lite" chapter.

1.1.4 Select page numbering style

Normally, multi-page documents like books and magazines contain page numbers. This function allows you to tell Calamus what kind of number style to use for its semi-automatic page numbering. When you click on the icon, the following dialog box will appear:



As already mentioned, Calamus performs semi-automatic page numbering. In practice this means: Wherever you want a page number to be printed, you insert a placeholder (see Text module, "Control codes" function group) for it in the text. When you click on "Reformat document" in the Options menu, Calamus will replace all placeholders with the correct page numbers. If you add or delete pages later, this numbering will no longer be correct of course. In that case just reformat the document again.

In the dialog box illustrated above you can choose the numbering style, and also which numbers are to be printed on which pages. The page number printed has no connection with the physical page, i. e., the number shown in the top bar of the document window. All this sounds fine in theory, but an example is required: First, there must be a text frame on every page, and the text frames must contain the control character for inserting the current page number (see Text module, "Insert page number"). It is best to create header or footer frames for this purpose on the master page (see below). Now, click on the Page numbering icon. Enter "1" for the Start number. Clicking on "OK" will close the dialog box. Now, the appropriate page number will appear on every page.

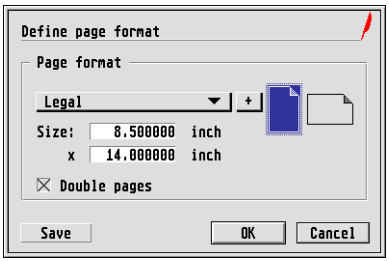
Next, insert a page into your document. The header or footer frame holding page numbers appears as you would expect (it is present on the master page, after all), but there is no page number in it. Instead you will see three question marks there: ???. You

can fix that by clicking on the Page numbering icon once more. Confirm the dialog box settings by clicking "OK", and there will be a page number on the new page.

If the numbering is not to be continuous because, say, you plan to add further complete page(s) later, you can enter the range of physical page numbers (i. e. those shown in the top bar) that are to be numbered in order in the Page numbering dialog box. Then enter the (printed) page number for the first page of this range in the "Start:" edit field.

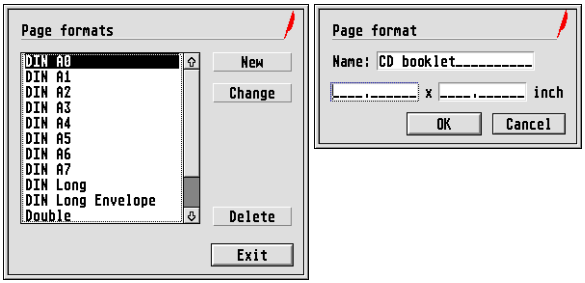
1.1.5 Set page format

 With this function you can set the page format for the current document. When you click on the corresponding icon, the following dialog box will appear:



In the top popup you can select the page size for the current document. In addition to various DIN formats there are also four standard North American sizes among others. The adjacent icons allow you to decide whether page orientation will be Portrait or Landscape. (Most printers process paper vertically. For a horizontal document, the entire output must be rotated 90 degrees. In graphic mode, which Calamus uses, this is not a problem.) The page size resulting from the chosen values is also displayed, where height and width will be swopped over if you work in Landscape mode. If the page size you want is not listed (Murphy's Law!), you can define one by clicking on and editing the values in the "Size" fields, in which case the popup will show "User-defined". If this defined size is to be used in Landscape format, then the width (upper value) must be greater than the height; there is no need to switch orientation with the "Portrait" / "Landscape" icons.

Furthermore by clicking on the small "+" button, you can open a further dialog box in which you can extend the list of available page formats by clicking on the "New" button and entering the desired name and size in the editable fields. You can also alter the page format names for the popup with the "Change" button or use "Delete" to remove existing selected entries. Clicking on "Save" in the main dialog stores the amended page format list so it is available next time you launch Calamus.



A word about the European DIN sizes: You will know that by folding a DIN A4 page in half you will get two DIN A5 pages. In a similar way, two A4 pages fit into an A3 page, etc. The ratio of height to width is always "root-2 : 1". The area of an A0 sheet is defined as exactly one square metre. This results in the following formats, which are however rounded off in practice:

Format	Width	Height
DIN A0	84.0 cm	118.8 cm
DIN A1	59.4 cm	84.0 cm
DIN A2	42.0 cm	59.4 cm
DIN A3	29.7 cm	42.0 cm
DIN A4	21.0 cm	29.7 cm
DIN A5	14.8 cm	21.0 cm

The series of DIN B formats is built up in a similar way, except that the B0 sheet has a size of exactly 100 x 141.4 cm.

The standard North American sizes are Letter, Legal, Double and Half; their measurements are given in inches. A letter-size page is twice the size of a half-size page, and a double-size page is twice the size of a letter-size page. Legal-size pages are not proportionate to letter-size. A double-size page is the size of a tabloid newspaper page.

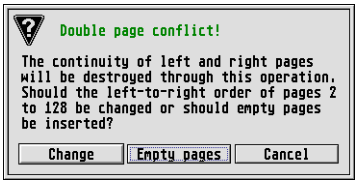
Format	Width	Height
Half	5.5 "	8.5 "
Letter	8.5 "	11.0 "
Double	11.0 "	17.0 "
Legal	8.5 "	14.0 "

Next, you can decide whether you would like to work with single or double pages. Books, magazines and brochures are usually laid out in double pages, while flyers, posters, etc. are laid out in single pages. When you select double pages, several things will

happen: Each page is marked as either a left page or a right page. Page 1 starts out as a right page. If you change the position of page 1, the position of all following pages will also change, and Calamus will reassign layouts for left and right pages accordingly. To change page 1 from a right to left page, click on the "Left" button in the dialog box which appears after you set page format to Double page mode. Be careful with this procedure as all header and footer information will also change. There are also other consequences, which are described below. Please read the following section carefully and try to understand the cause of possible problems. You can save yourself a lot of confusion that way.

1.1.5.1 Double-page problem

If your document uses double pages, there will be pages that will lie on the left side when you open the book etc., and those that lie on the right. If you add or delete a page (or an odd number of pages) within a document, the problem arises that there will then be two left (or two right) pages following each other. This can also happen in other cases, for instance when you import another document into your document (see File menu, "Merge") and this also contains double pages. In that case the following error message will appear:

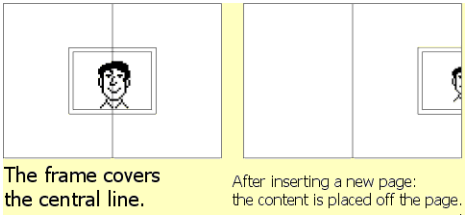


Here you can decide whether to "Cancel" the function or click on "Empty pages" to insert one of these. The added page will always be adapted to the current format. After adding an empty page the position of the left and right pages will be correct once more, but there will be an empty, white page between them. If you select "Change", on the other hand, Calamus will make sure that there are no blank pages and there is still a regular alternation between left and right pages. But changing the page order may destroy a carefully constructed layout. Depending on the situation you should therefore think very carefully which of the two options you choose. In case of doubt, there is still the emergency brake: Just click on "Cancel" and everything will stay as it was.

When you insert or delete an odd number of pages in your document, this dialog box will even appear twice: Then you must decide what to do at the beginning of the added pages, and what to do at the end.

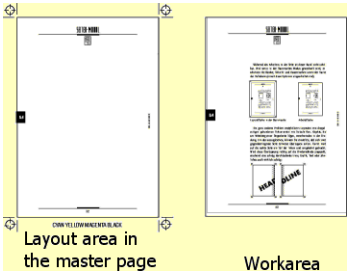
There is another problem when working with double pages: You can of course also place frames over the central divide or fold. These frames will then lie partly on the left and partly on the right page. If you insert a page between the two, then the double page will be pulled apart – the overlying frames have to be divided. Calamus assigns the frame to the page which contains its centre point. If, for example, 2/3 of the frame appears on the left page, Calamus will assign the frame to the left page. When you insert a new right page, Calamus will keep the frame on the old left page, but extending outside it to the right, so 1/3 of it lies on the new right page. If you later restore the original page division, the frames will naturally lie over the central divide once more. The order in which they were previously arranged on top of each other will be lost, however. This rather hypothetical situation should occur only in the rarest of cases.

The two effects described can even occur together. In that case an annoying situation arises that you should be aware of: If a left page becomes a right page and if this old left page contains a frame that extends over the central divide/fold, then after conversion to a right page it will of course lie partly outside the document. This is shown in the illustration:



1.1.6 Set layout/working area

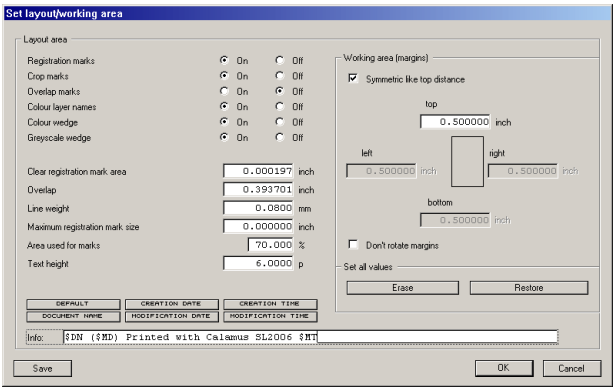
This function allows you to surround the printed page with a margin or border which will later contain crop marks, registration marks and the name of the colour separation. You use registration marks to make sure that individual separations in a colour document line up during printing.



Crop marks allow you to print a batch of pages and trim them to the correct size later.

The name of the colour separation is important for colour documents. As a rule, individual separations for the four basic process colours as well as any spot colours of a document are printed or imageset on the same (monochrome) output device. These separations often appear very similar, particularly with photographs. It is therefore very important to know with which colour a given separation should be printed. That is the reason for including the colour separation name, which can also be printed in the set margin area. Normally you would trim off this margin with its markings from the final page, so it contains no data for the final document though it can be very useful during production. For this reason you will only see the working area and not the complete sheet on the screen when editing a page normally, except when editing master pages (see below), which are always displayed complete, including registration and crop marks and the name of the colour separation.

When you click on the icon shown above, the following dialog box will appear:



Herewith a description of the individual parameters:

Registration marks

Registration marks help you to align colour separations. With multi-colour documents the printing house will insist on registration marks, as otherwise it is unlikely that they will be able to line up the separations correctly. These marks appear as circles with cross-hairs in each corner of the margin area and are always positioned so that they appear in the middle of it. Their maximum size as well as the line width can be set in the dialog. The size "0" here means that the optimum size of registration marks for the available space will be used, so it can really be left that way in all cases as a standard value.

Crop marks

Crop marks are printed as vertical and horizontal lines which mark the corners of the page, so that the corners of the final trimmed pages lie exactly at the intersection of the lines. Since guillotines are never 100 percent accurate, the lines are not extended up to the cutting point but (normally) drawn a little shorter by an adjustable amount. In the inner areas of the margin, frames will be printed quite normally. Thus overhang of a tinted or shaded frame prevents white margins appearing after trimming with a slightly inaccurate guillotine. All frame information that extends beyond the crop marks will not be printed (which would not be sensible, after all, since it would be removed after trimming in any case).

Overlap marks

Switch on the use of overlap marks if you have entered a sensible, non-zero value for the overlap (see below).

Colour layer names

If you select the "Yes" radio button for "Colour layer names", then the name of the corresponding printing colour will appear in the bottom border area of each page. So the separation to be printed in cyan will have the text "Cyan" output there.

Colour wedge

If you want a simple colour wedge to be output in the margin area with the document, click on the relevant "Yes" field. During output Calamus then creates a colour wedge (usually in the right margin) that displays the most important colour values as filled squares: C, M, Y, K, R, G and B.

Greyscale wedge

If you want a simple greyscale wedge to be output in the margin area with the document, click on the relevant "Yes" field. During output Calamus then creates a greyscale wedge (usually in the right margin) that displays ten fields with grey values from 0 to 100 %.

Clear reg. mark area

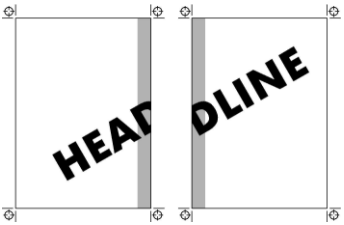
If you enter a non-zero value here then a white line of the set width will be placed behind the registration and crop marks. This ensures that both sets of marks can be seen clearly even on dark backgrounds.

Overlap

When you are laying out bound, double page documents like magazines or books, an object which spans two pages can disappear after binding. To overcome this effect you can arrange that two opposing pages should have a partial overlap, so that a small inner portion of the left page will be printed on the right page and vice versa. As a result, the inner portion of the page will be printed twice: Once on the right side of the left page, and once on the left side of the right page. You may be familiar with this principle from car atlasses referred to earlier (see Frame editing module, "Tiling frame"), where the borders of the pages also overlap. If this overlap is adjusted correctly for the binding method, the maps and text will really look continuous across the divide after binding.

So enter the width of the binding in the relevant field of the dialog. This is the width of the strip that will not be visible on one page due to the binding. If you are working with stitched sheets then you have to enter zero here, of course. There is no need to specify anything here if you don't use any elements that cross the central divide.

As the elements in the overlap region are defined once but printed twice, the displayed double page will look smaller by the width of this overlap strip.



Line weight

Here you can define the line weight (width) to be used for printing registration, crop and overlap marks.

Max. reg. mark size

Here you can set the position of the registration marks in the border that you define with "Working area" (see below). This size will be evaluated in relation to the border and the following "Used area" value. If you wish to have the largest possible registration marks irrespective of the other settings, set this value to zero – it will then be established automatically.

Area used for marks

This percentage value specifies how long the crop marks may be relative to the defined border, or how far they should be spaced from each corner of the document. If

you define a border of 1 cm and set "Area used for marks" to 50 %, then all crop marks will be only 0.5 cm long. Registration marks will then also be output in an area 0.5 x 0.5 cm placed as far away as possible from the edge of the document in the working area.

Text height

This value refers to the system font incorporated in Calamus, with which the colour layer name and the Info text will be output in the working area of the document. Values below 3 p are not sensible.

Info

Here you can define an information line that will always be output with the page contents (if possible at the lower edge of the page) – ideal for Copyright labels and other important information.

With some control codes you can also generate certain Info texts automatically, namely:

$DN Document name
$CD Creation date
$MD Modification date
$CT Creation time
$MT Modification time

Tip: If you do not want an Info text but wish to place the colour layer name as low as possible in the film separations, input a single space character as the Info text!

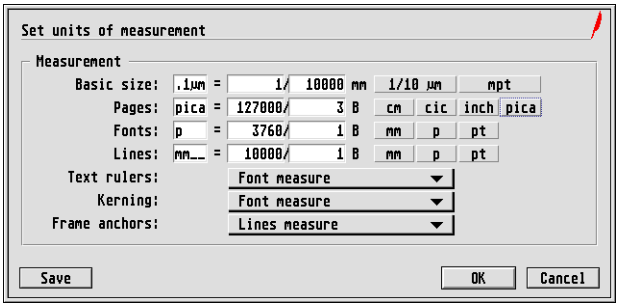
Working area (margins)

Here you can define the so-called working area (in other words including the margins around your actual document). It will be included in the document window display if the switch "Crop marks visible/invisible" in the "Display" function group of the Frame editing module is activated (see there for details).

Furthermore the complete working area will be printed/output if the printing module "Crop marks" in the Print dialog has its checkbox crossed (see there).

1.1.7 Set units of measurement

With this function you can set and change all the units of measurement being used. When you click on the icon, the following dialog box will appear:



Normally, you will use the fields for pre-defined measurement units on the right side of the dialog box. This is first of all the "Base measure", which is the unit that Calamus uses internally for computation. You may choose between "1/10 [Œ]m" (1/10 of a micrometre or 100 nanometres!) or "mpt" which are milli-pica points (1/72,000 of an inch or around 353 nanometres). In principle it does not matter much which unit you choose here. To prevent round-off errors in character and frame calculations, however, you should choose the unit that you use most often for working with Calamus. So if you measure pages, characters and lines in centimetres or millimetres but Calamus is working internally with milli-pica points, round-off errors may occur.

The measurement unit for "Page measure" can be set to "cm" (centimetre), "cic" (cicero), "inch" or "pica" by clicking on the appropriate button. This choice will affect the Coordinate display (at right of the Top row) and the layout rulers which you can display on screen around the document (to be described later). This unit of measurement is also used for various guidelines. If you are new to DTP, you will probably want to work in inches or centimeters. For more advanced work, picas (1/6 " or around 4.23 mm) allow greater precision. The cicero (4.5 mm) is used mainly by professionals in Continental Europe, including Germany.

The table compares the different units of measure:

Unit	mm		pica/pt		cic/p		inch (")	
1 cm	10.0	mm	2.36	pica	2.22	cic	0.393	"
1 pica	ca. 4.23	mm	12.0	pt	0.941	cic	1/6	"
1 pt	ca. 0.352	mm	1/12	pica	0.941	p	1/72	"
1 cic	4.5	mm	1.063	pica	12.0	p	0.177	"
1 p	0.375	mm	1.063	pt	1/12	cic	0.0148	"

The font measure unit is specified in the next line. This applies for example not only for the font size, but also word, line, and paragraph spacing as well as underline thickness and offset. English speaking users will normally use points pica (pt) for these measurements, while Central Europeans usually use millimetres (mm) or points cicero (p).

The last selection will set the measurement units for lines and raster areas. This selection is separate from the text measurement unit for good reasons. In professional layout, font sizes will usually be given in points pica (pt) or cicero, while various page elements like lines and rasters will use inch or millimetre measurements.

Because for text setting it is often desired to use a unit of measure for text rulers, kerning and frame anchors that differs from that used for the font size, there are three popup menus for these items at the bottom where you can choose which of the four previously defined measure units should be used for each.

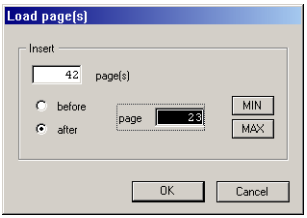
For very special applications, experienced DTP professionals can select a base unit of measurement suiting their requirements, and enter the name of this unit into the field supplied. In the next two fields enter the values for this basic unit as a fraction of a millimetre. Thus the unit "1/10 [Œ]m" corresponds to 1/10,000 mm, and "1 mpt" corresponds to 254/720,000 mm. Any other units must be given as vulgar fractions of the base measurement unit.

All units of measurement can also be altered while working with Calamus without affecting the document being edited.

Tip: If during working you find that the measurements you input "strangely" alter slightly, then the cause could be that you are working with an unfavourable base unit size. For instance, if you use mpt as the basic unit, you can expect round-off errors if you input any dimensions in mm. In case of doubt, always select the smallest possible base unit size that Calamus offers: 1/10 micrometer.

1.1.8 Load page(s)

To load individually saved pages, click first on the icon. The normal file selector will appear to let you select a file name. When you select a file containing Calamus pages (*.CSE), the following dialog box will appear:



You have to enter where the pages should be inserted in the document. By default, they will be placed immediately after the page you are currently working on. If you want pages to appear at the beginning of the document, click on the "Before" button and enter the number "1".

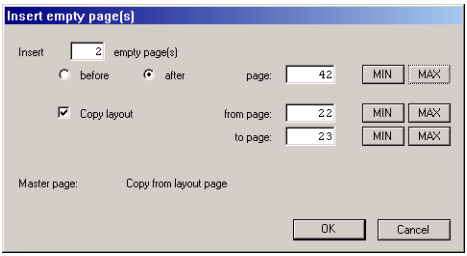
We should repeat here: Generally this number is the page number which appears in the top bar of the document window, and is not necessarily the number which will be printed on the page.

Every time you load a Calamus page, you also load the master page that governs it. There might already be a master page of the same name in your document, in which case see "Two elements with same name".

If you are using double-sided documents, problems can arise with the sequence of left and right pages. The reasons for this and possible solutions are described in the section "Double-page problem" above.

1.1.9 Insert empty page(s)

This function allows you to add empty pages to a document. When you click on the "Insert empty page(s)" icon, the following dialog box will appear:



First you can enter the number of pages you wish to insert. The maximum number of pages in a document is limited to 999,999. This should not be a serious limitation even if you are writing a 24 volume dictionary!

Then you can specify where the new pages are to be inserted – before or after the current page. This is handled in the same way as for loading pages.

The master page for the currently displayed document page will be allocated automatically to the newly created pages. With the "Assign master page" function of the Master page editing function group (see below) you can of course also change this later. Then all the master elements on the current page will also be displayed on the newly inserted pages.

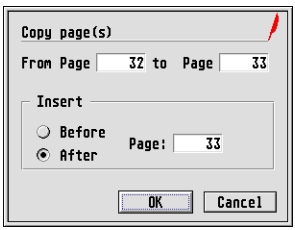
But for also including elements on the new page(s) that cannot be accommodated on master pages, you can copy the layout of a series of pages to the new page(s). As discussed earlier, you cannot place empty text frames on master pages whose contents varies from one document page to another. The same applies for raster and vector graphic frames, of course. Instead you can transfer these frames without contents (the layout of the page) to the newly created page. To do this the "Copy master page" icon has to be selected. Then use the editable fields "From page" and "to page" to enter the range of pages whose layout is to be copied.

For single page documents, Calamus will use the layout from the current document page by default. For double-page documents, Calamus will adopt the layout from the current page and its partner, the corresponding left or right page. Incidentally, with, say, 15 newly created pages you can adopt the layout from 10 specified pages: The first 10 of the new 15 pages will adopt the layout of the 10 specified pages, on the remaining five pages you can copy the layout of the first five again.

Please note here too the possible conflicts arising with double-sided documents.

1.1.10 Copy page(s)

The copying of pages is a combination of saving and loading, except that it does not take up any mass storage (disk) space because the temporary storage is internal in RAM. When you click on the "Copy page(s)" icon, the following dialog box will appear:



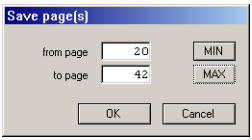
Enter the range of the pages which you want to copy in the "From page" and "to page" editable fields. Then select the destination of the copies by clicking on either the

"Before" or "After" radio button, where these refer to the value set in the last "Page:" editable field. Click on "OK" to perform the copy operation.

Please bear in mind possible conflicts discussed in Double-page problems above.

1.1.11 Save page(s)

As may be gathered from its name, this function allows you to save single or multiple pages to hard or floppy disk. A page consists of all the frames contained thereon, including the contents of those frames, as well as the associated master page. When you click on the "Save page(s)" icon, the following dialog box will appear:

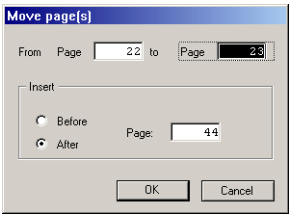


Operation is quite simple: If you only want to save the currently displayed page (with its master page), you just need to click on "OK" or press [Return]. Otherwise you must specify the page(s) to be saved. Note that these numbers refer to physical pages as shown in the top bar of the document window, which is generally not identical with the page number that the page numbering function will insert in the text! When the file selector appears, enter a filename for the saved page. Calamus pages use a "CSE" extender.

1.1.12 Move page(s)

This function allows you to change the position of one or more pages in your document. The pages (including text piping chains) will be removed from one position and placed in another.

When you click on the "Move page(s)" icon, the following dialog box will appear:



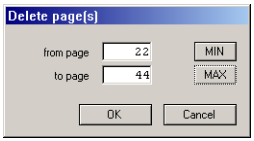
Enter your desired values here (as for Copy page(s) above) and confirm them with [Return] or a click on "OK".

The operation of this function and particularly how piping chains are affected should be clarified with an example: Let's say you have a three page document whose text frames are linked by a piping chain. If you move the third page before the second, the text flows from page 1 to page 3 and from there to page 2. If a block of text was deleted from the first page, text would flow back from the third page to fill the gap, and text from the second page in turn would flow back to fill the third.

Moving pages of double-sided documents has the usual effect (see Double-page problem). Please take note of the information given there.

1.1.13 Delete page(s)

 It isn't hard to guess what this icon represents. If you click on it, the following dialog box appears on screen:

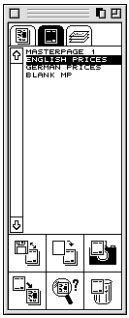


Enter the page or range of pages to be deleted. The default is the currently displayed page. Press [Return] or click on "OK", and the pages, including their contents, will be deleted permanently from memory.

The contents of text frames, however, will be deleted physically and permanently only when the frames are not part of a piping chain. If there is a piping link to the next page, the text will be moved to the next frame. If this is not the case and the frame is at the end of an existing piping chain, the text will be appended to the frame previous to it. This previous frame will then be marked with the overflow symbol "+" to show that there is more text that is not displayed anywhere.

When you delete an uneven number of pages from a double page-document, you may alter page layout and the conflicts described above in the Double-page problem section may occur.

1.2 Master page editing



The meaning and use of master pages has already been discussed in the introduction to this module. With this function group you assign, show, create, edit, copy and delete master pages. When you select this function group, Calamus does not switch automatically to the "Master page editing" mode. You can only call up this mode by clicking on the "Master page/Layout page" icon in the Coordinate display part of the Top row; this will also display the master page for the current document page. You can then edit the master pages in place of normal document pages.

In this mode, which you call up with the "Master page/Layout page" icon in the Coordinate display, you can create and edit the master pages of a document. Just as in the normal layout page editing mode you can create, edit (alter) and delete frames. You can link text frames (piping) and position guidelines. Master pages always consist of one single or double page. You can nevertheless browse through them by using the sideways arrows in the Coordinate bar. Master pages have no real page number, but names. The name of the master page currently being edited is displayed at the top edge of the layout window.

You cannot link text frames for piping outside the master pages. Text frames that are present on a master page will have exactly the same contents on all document pages that are assigned to this master page. It is not possible to accomodate empty text frames that are to be filled later on the master page. Despite this, there are uses for large, already filled text frames on master pages – circular letters, for instance: You write the body of the letter on the master page, then addresses are imported into empty text frames on the document pages.

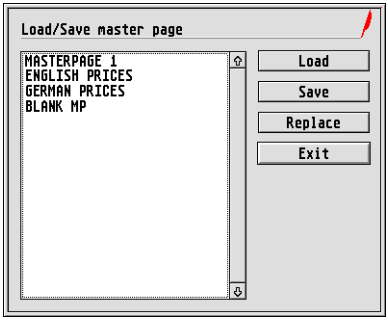
In the master page editing mode, as in the layout page editing mode, the complete printed page will be displayed, so the margins of the screen window (see "Page mounting", function "Set layout/working area") will be respected in the same way.

If you switch from the dispay of a complete document page to the master page editing mode, then the display scale (magnification) will be retained.

You can recognize the master page editing mode by the inverse (selected) state of the Master page/Layout page icon in the Coordinate display. Only by clicking on this icon can you switch back to normal layout page editing.

1.2.1 Load/Save master page

This function allows you to load or save one or more master page(s) to hard or floppy disk. You can also replace one master page with another. When you click on this icon, the usual object selector that was described in the introductory section will appear, though it only has the buttons "Load", "Replace" and "Save". If you want to load a master page, click on the "Load" button and select the corresponding file in the file selector.



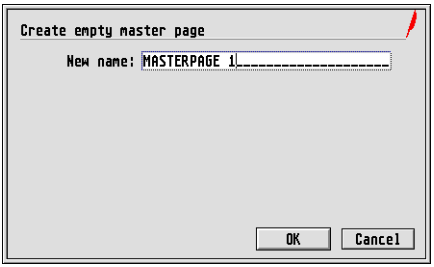
During this it is possible that one of the new master pages has the same name as one already in your document. In that case an alert box will appear as described in an earlier chapter "Two elements with same name".

To replace a master page, select it and click on "Replace". You can then choose a master page from the list.

Saving a master page is equally simple: Select the page and click on the "Save" button. The file selector will appear allowing you to give the file a name. Master page files use the extender "CSS".

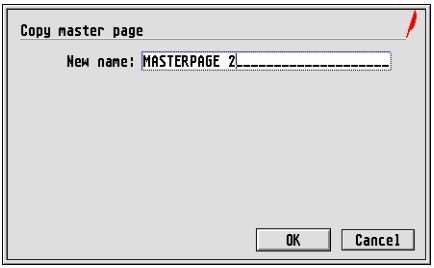
1.2.2 Create empty master page

This function will let you create a blank master page. A dialog box will appear, prompting you to supply a name for the new master page.



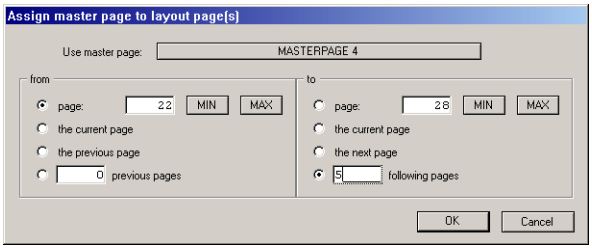
1.2.3 Copy master page

This function allows you to copy a master page. The "Copy options" from the Options menu will be taken into account. Virtual copies will naturally apply only to the frames on the master page. In practice this means that if, for example, you want the same logo to appear on several master pages, create a master page containing this frame and make virtual copies of it. You can then change the layout of the frames on the copies. The important thing is that the frame contents with the logo needs to be imported or created only once. Any changes to the contents of this frame will than be duplicated on all other master pages (and so also on all other document pages).



1.2.4 Assign master page

Normally all pages in a new document will be assigned a standard master page, an empty one. This command allows you to change to the master page of your choice. First, select a master page from the master page list and then click on this icon. You will see the following dialog box:



Just enter the range of pages to which the master page will be assigned into the editable fields.

1.2.5 Show current master page

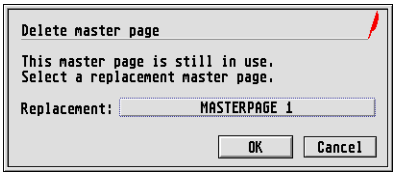
This function displays the name of the master page assigned to the current document page. Click the icon, and the name of the current master page will be highlighted in the master page list. If you have selected a different master page in the meantime, you can switch back to it here by clicking on its name in the list.

If you hold down the [Alternate] key when clicking on this icon, then the document window will display the first layout page that uses the master page that is highlighted in the master page list.

1.2.6 Delete master page

To delete a master page, click on this icon. The following dialog box appears:

If the master page is assigned to any document pages, however, an alert box will appear asking for a replacement. Should you enter the name of the master page that you actually want to delete, then the operation will be broken off.

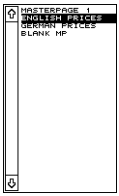


1.2.7 Master page list

The top section of the Master page function group contains a list of master pages already available. Every document has at least one master page, which however is blank by default when starting a new document. If your document has more than 24 master pages, use the arrow icons or scroll bar to browse through the remainder.

To select a given master page to edit it, click on its name in the list.

You can rename a master page by holding down the [Alternate] key while clicking the left mouse button on the master page name.



1.3 Layer editing

Layer editing offers immense possibilities for creating documents in a structured manner. This gives you the greatest amount of freedom to work with layers and layer groups.

To explain the principle of working with layers, imagine you are sitting at a light box to build up a page from several superimposed transparent foils. You can stick images, text and graphics to the individual foils. You can change the order of the individual foils, so that at times the images are right at the top, but on other pages perhaps right at the bottom. One page may be made up from a single foil, another from perhaps 20 foils.

In general the following applies:

- All document **layout** pages have at least one layer and may have any desired number of layers.
- All document **master** pages have at least one layer and may have any desired number of layers.

So if you do not wish to work with layers at all, you don't have to. A new document automatically has one layer per page and without your assistnace this will not change.

However, if you want to structure your documents so that you can use several layers in turn on all pages, you should read this section carefully.

Because the following applies as well:

- You can only work on or edit one layer at a time, so on a page that contains several layers you cannot select, group, delete etc. all frames of the whole page simultaneously, but only the frames of one layer.

- Layers may be switched to invisible, in which case they will not be printed when the document is output.
- You can change the order of the layers freely.
- Layers may be assigned to layer groups, so that you can, for instance, activate or switch off all "English" layers (e. g. "English purchase price" and "English sales price") simultaneously.

The layer tools are described in detail below.

1.3.1 Send layer to back

 If you click on this icon, then the layer currently selected in the layer list will be sent to the back of the layer "stack". After this it will lie below all other layers and is therefore also output first, and may be overlaid by elements from other layers.

A layer lying on a layout page cannot be moved to a master page (and vice versa).

The layer stack is visually represented in the function group so that a layer lying right at the back also lies at the bottom of the list display!

1.3.2 Send layer to top

 If you click on this icon, then the layer currently selected in the layer list will be sent to the top of the layer "stack". After this it will lie above all other layers and elements that are positioned on it may overlay elements on other layers.

A layer lying on a layout page cannot be moved to a master page (and vice versa).

The layer stack is visually represented in the function group so that a layer lying right at the top also lies at the top of the list display!

1.3.3 All other layers visible

 To be able to edit an individual layer of complex documents more easily, it is possible to switch all other layers to invisible with a mouse-click.

This icon does exactly the opposite: All layers currently invisible will be switched back to visible with a mouse-click. They are then displayed in the document window again and will also be output with others during printing.

Visible layers are identified in the list display of the function group by a small colour patch in front of the layer name.

1.3.4 Move layer one step down

 To move a layer of the current page/master page one step down in the layer stack, please click once on this icon.

The layer stack is visually represented in the function group so that a layer moved one step down also moves one line down in the list display!

1.3.5 Move layer one step up

 To move a layer of the current page/master page one step up in the layer stack, please click once on this icon.

The layer stack is visually represented in the function group so that a layer moved one step up also moves one line up in the list display!

1.3.6 All other layers invisible

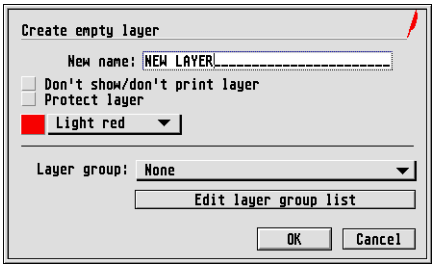
 To be able to edit an individual layer of complex documents more easily, it is possible to switch all other layers to invisible with a mouse-click. They are then neither displayed in the document layout window nor output during printing.

If there are many layers per page, Calamus offers this "shortcut" so that you do not have to switch all layers individually to invisible continuously. When you click on this icon, all layers of this page apart from the currently selected layer are afterwards switched to invisible.

Invisible layers are identified in the list display of the function group with a dash before the layer name.

1.3.7 Create empty layer

 To create a new, empty layer, please click once on this icon. This opens a dialog box in which you can set the parameters of the new layer.



Here is a description of the individual parameters:

New name

You can (and should) give each layer its own, unambiguous name. It does not matter here whether you use the same layer names on page 1 as on page 42, say – the layers are still unambiguously differentiated.

Don't show/don't print layer

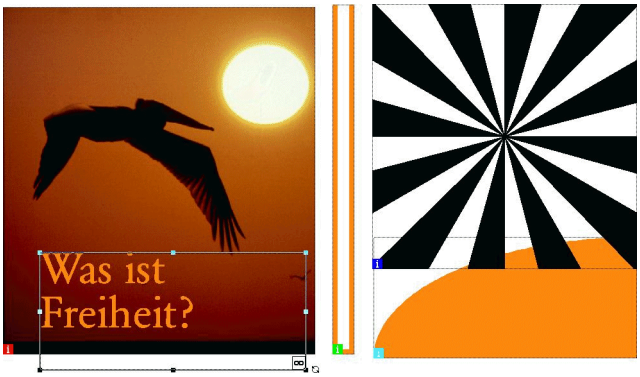
If you set this switch, then this layer will neither be displayed in the document window nor output with the rest during printing.

Protect layer

If this switch is set, then the layer is protected against any changes. This means that all frames of this layer will have frame protection activated automatically, which you would otherwise have to set individually in the Frame editing module.

Layer colour

For better differentiation and help in organizing, you can asssign colours to the layers used, which you can select in this popup menu. There are 16 colours available for selection. This colour identification is not just useful in the layer list, but is also shown in the document window: You will see that all frames that do not belong to the active layer display a corresponding colour patch with a small "i" in the lower left corner, which should inform you to which layer this frame belongs.



Layer group

If you have defined layer groups (see below), you can assign the layer here to one of the existing groups. When you have assigned layers to a layer group, the individual layers are no longer visible in the layer list and also adopt the colour ID that you have assigned to the corresponding layer group.

If "None" is selected in the popup menu, then this layer will be handled individually and also remains visible and selectable in the layer list. If the layer was previously assigned to a layer group, then it will have its own layer colour ID restored.

The editing of layer groups can be reached via the "Edit layer group list" button. It is described further below.

1.3.8 Copy layer

 To copy an existing layer, click once on this icon. This copies the layer complete with all the frames it contains. The copy is always a physical copy, not affected by the "Copy options" setting in the Options menu!

A dialog opens in which you can set the parameters of the copied layer.

Apart from the title line, this dialog corresponds to the one appearing when creating a new layer. We will therefore forego describing the individual parameters once again.

1.3.9 Delete layer

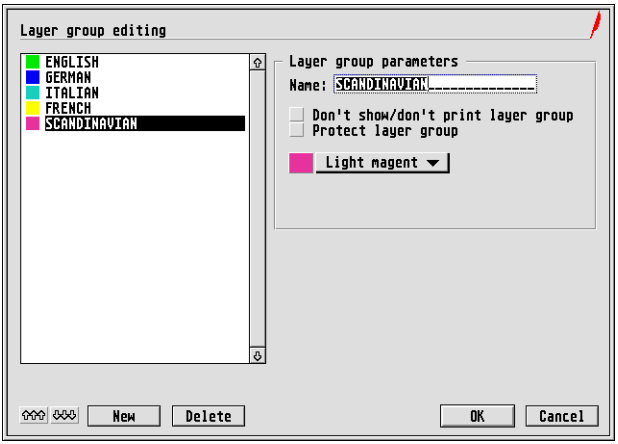
If you want to remove a layer or layer group from the layer list, first select it by a mouse-click on the layer list entry, then click on this icon. After a safety query the layer will be deleted – complete with all the frames it contains!

If you have loaded and activated the Undo module, this deletion process can be revoked, provided enough RAM was available for holding the deleted data.

A layer/layer group can be deleted even if it currently has the status of "protected". So it is not necessary to remove the layer protection beforehand.

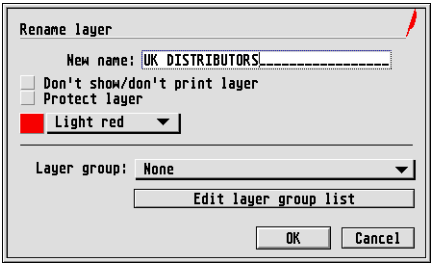
1.3.10 Layer group editing

With the "Edit layer group list" button in the "Create empty layer" and "Copy layer" dialogs you can reach the layer group editing functions.



In this dialog you can create and organize new layer groups. A click on the "New" button creates a new layer group. You can then give it a name, assign a colour ID to it and set whether this layer group is not to be displayed/printed, or should be protected.

When creating a new layer group, no existing layer is yet assigned to the group. This is not done in this dialog, but set for each layer individually in the "Rename layer" dialog. You can reach that dialog if you hold down the [Alternate] key while you click on a layer name in the layer list of the Layer editing function group.



In the "Layer group" popup menu you can assign the selected layer to a layer group (or revoke such an assignment again).

1.3.11 Layer list

In the upper part of the Layer editing function group you will find a list of the layers or layer groups already present. At least one layer belongs to each page/master page, but this is empty at first when the page is created. If you should use more than 24 layers on a page/master page, you can browse through the list with the arrows and scroll bar as usual.

To select a given layer, just click on its name in the list.

With the two list fields "PREVIOUS LAYER" and "NEXT LAYER" you can make the selection wander up or down one entry at a time in the layer list. This way you can reach all layers conveniently without having to scroll the list itself (we recommend you to record this as a macro).

To alter the name of a layer, its ID or its protection, hold down the [Alternate] key while you click on its name in the list. That brings up a dialog in which you can alter the parameters of the layer.

To switch a layer visible/invisible, click on the small field in front of the layer name in the list. A layer switched to invisible will be indicated by a horizontal dash, a visible layer normally shows a small colour patch.

To protect a layer, hold down the [Alternate] key while you click on the field in front of the layer name in the list. A protected layer is indicated by a diagonal cross in front of the layer name.

Warning: The markings can not be combined. If the layer is both protected as well as invisible, the more important status for "invisible" will be displayed.

2 Raster generator

Dot for dot – the Raster generator module

Some of the principles underlying rasterization were already described in the "Fundamentals" chapter. The process is always the same: Different brightness levels are converted to different sizes of raster points. Depending on the resolution of the output device, you can reproduce more or less good quality images this way.

With the Raster generator module described here you can decide which rasters are to be used for which parts of your document. You can manipulate the shape, angle and size of raster points – important elements used in the image processing stage of desktop publishing.

Calamus follows the hierarchical principle for this: At first the same (preset) rasters are valid for the whole document. If dealing with a master that will be printed only in black and white, then there will be only one raster. For documents in colour, the various colour separations have to be printed with different rasters to prevent ugly Moiré effects (see "Fundamentals"). But you can also allocate to each page and even to each frame its own special raster. Pages or frames for which no user-defined raster has been set will then be rasterized using the defaults preset for the complete document.

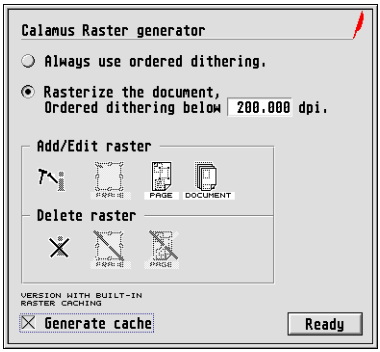
The Raster generator module creates all required rasters in real-time, i. e. while building up the image. Normally it works so quickly that you will not notice it at all; the calculation time may become apparent only with larger rasters (see below). Here too the philosophy that has the top priority everywhere in Calamus applies: The user should see the document on the screen exactly as it will appear later on paper. Due to the different resolutions of the monitor screen and the output device this is of course possible only in a limited way. But if you set the screen magnification so that it corresponds to that of the printer, you will see each printer pixel 1:1 on the screen as usual.

By using suitable focusing systems and good support materials, many laser printers and practically all imagesetters nowadays can separate the raster pixels in an optimum way, so in general these pixels do not blur or coalesce. Matters are different later during printing. Here one is working with liquid ink colours that can produce unpleasant side effects due to their physical properties: Their (necessary) surface tension will make two closely spaced dots coalesce, just like two water droplets flow together when the distance between them is small enough. In addition, the same effect creates difficulties in printing very small dots of the order of 1/100 mm. For these reasons one should always set the control curves for images to taper off at their extremities – in other words so that each line becomes a slightly S-shaped curve. Even though it appears that this would result in a drop in contrast, due to the effects described this is the only way to ensure reproduction of all brightness levels of the image.

2.1 Calling the Raster generator

You can alter the shape, angle and size of raster points with the Raster generator module. As this does not link to the Top row, the only way to call up the module is to use the corresponding icon in the Page module or the Print dialog. If necessary load RASTCACH.CXM first via "External modules" in the File menu.

First you will see the following dialog box in which you can set raster point options for the currently selected frame, the displayed page or the complete document. In addition you can also delete the raster for a frame or a page:



If you have not selected any frames, or have selected more than one frame, the "Frame" icon will be greyed out and not selectable, of course. The same applies for the icons for deleting rasters if a frame or the current page does not contain user-defined rasters.

The Raster generator can be switched off directly so as to use the ordered dithering printing raster incorporated into Calamus (ideal for inkjet printers):

To switch off the Raster generator, select the radio button "Always use ordered dithering.", otherwise the Raster generator will be used generally unless the output resolution is lower than the value specified in the editable field of the lower radio button. So if this is set to 601.000 dpi, for instance, output to a 600 dpi laser printer would be dithered.

The present version of the Calamus Raster generator offers the option to store the rasters that are generated for a printout in a so-called raster cache. This cache will be saved automaticaly as a file on the hard disk. If the same raster is required again, then the Raster generator will recognise that it has already created it and so does not perform the intensive raster calculations for a second time. Instead it will use the "memorized" raster from the cache. In most cases this is appreciably faster.

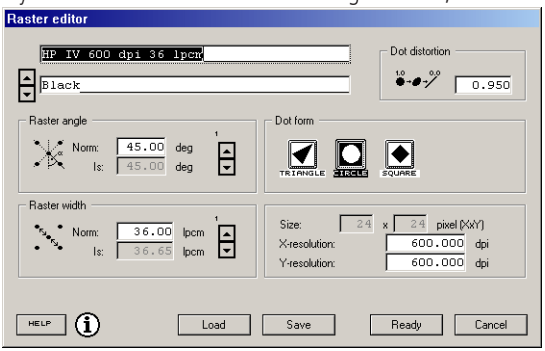
The file with the created raster will be saved to the same folder as the default raster (DEFAULT.CRI), which is loaded automatically when Calamus is launched. This file (RCACHE.INT) can also be deleted, of course; this will then destroy the "memory" of the Raster generator and the next creation of a similar raster will take some time at first.

This mechanism can be switched on and off with the "Generate cache" checkbox, so – if you really want this – you can let the raster be generated anew each time. This can be important if many documents with different raster settings have to be output, as with the cache switched on the RCACHE.INT file can become unnecessarily large.

Tip: Calamus's virtual memory should be switched on, if necessary, as otherwise the objects of the additional cache list occupy an unnecessary amount of RAM. If the virtual memory of Calamus is switched on, then the data will organize itself, namely in a way that only the most frequently required portions are held in RAM.

2.1.1 Raster settings

If you click on one of the icons for editing the raster, then a new dialog box appears:



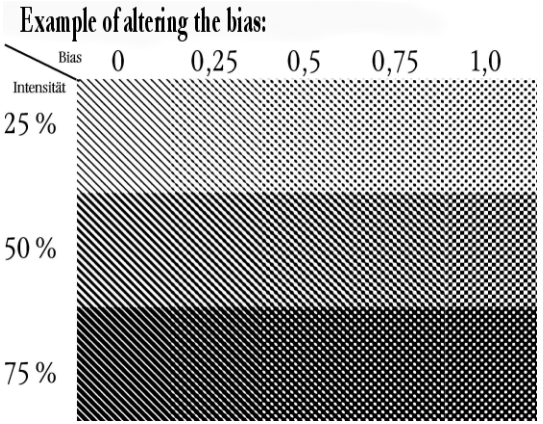
Here is a description of the individual parts of this dialog:

Raster list

At the top of this dialog you will see the name of the current raster followed by a list of the (printer's) colours for which you can alter the raster. The printer's colours are (normally) the four process colours cyan, magenta, yellow and black as well as all spot colours present in the document. You will find more extensive description of colour printing in the "Fundamentals" chapter as well as in the description of the Colour separation module. Although a raster is set for each of these colours in the document, for individual pages or frames you can alter the raster for just a single colour if you wish.

Dot distortion

With dot distortion (also known as elliptical bias) you can further define the shape of the raster points. You may enter a value between 0 and 1, where the regular circle, triangle and square shape is obtained only with the value 1. Lower values cause the raster points to take on progressively a linear form, as can be seen in the following example:



Dot form

In this area you will find three fields for setting the shape of the raster points. Normally you would use circular dots all the time, but for special effects, perhaps for individual images, you can switch to triangular or square shapes.

Raster angle

The fields in this area permit you to set the angle at which the raster is to be printed, as well as the raster width (see below). You can simply enter the desired values here. The angle determines by how much the raster angle is rotated relative to the document itself. The value here is much less critical for black and white documents than for colour. However, even with monochrome documents you should never specify a straight raster (0, 90, 180 or 270 degrees), because the raster structure will become too noticeable, which is something that should be avoided. In color printing, the choice of raster angle will affect the final appearance appreciably: If the angles are the same for every colour separation, then the feared Moiré effects will appear that produce ugly colour patches. The problem here once again is not the computer, but the colour printing process: The paper distorts or shifts slightly between the application of the various coloured inks, causing the rasters to be displaced relative to one another.

Raster width

Raster width, or separation between raster points, depends greatly on the resolution of the output device and on the printing quality required. The basics were explained earlier in the "Fundamentals" chapter. To remind you: The value shows the number of raster points per centimetre ("lpcm" is the abbreviation for "lines per centimeter", the unit usually used in the printing industry – though in English-speaking countries "lpi", "lines per inch" is perhaps more common). These raster points consists of several "raster pixels".

Under the "Norm.:" input fields for Raster angle and Raster width you will see in each case a field labelled "Is:". These again require further explanation:

Unfortunately, it is not possible on principle to create every raster at every angle and every resolution using an acceptable amount of storage space and calculation time. The reasons for this are the round-off errors that were discussed already in the "Fundamentals" chapter. The number 1/3 simply can not be reproduced exactly with 8 places of decimals. With other numbers such as 1/2 this can be done without problems. The "Is:" fields show the actual angle and width for the chosen settings after round-off, and you can see at once how these differ from the set "Norm:" values immediately above. The adjacent arrow buttons allow you to change the round-off value, which will create a new raster in each case. The smaller you make the difference, the larger the raster pattern will become and take up more storage space and of course calculation time. But you should also avoid too large differences, as otherwise the created raster may have little in common with the desired one.

Finally you will see fields containing information about the size of the current raster and the resolution of the output device. The larger the raster, the longer it will take to calculate it. The module will use the resolution of the currently selected printer driver, and can only be changed by loading a different driver.

The "Load" and "Save" buttons

permit you to save rasters to hard or floppy disks. After clicking on one of these buttons the file selector will appear, in which you can input or choose the filename. If you save a raster under the name "DEFAULT.CRI" in the folder that also contains the Raster generator module, then this raster will be loaded as a default each time you launch Calamus. Normally you would use the MODULES folder.

The "OK" and "Cancel" buttons quit the dialog as usual. Please note that if you click on "Cancel" all changes, including those made in other colour separations, will be lost.

3 Colour separation

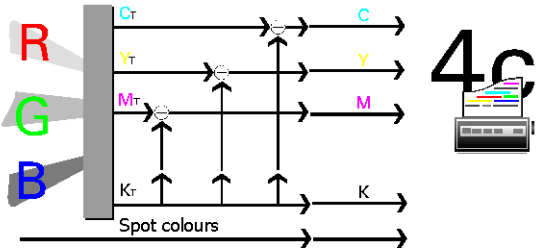
Many brilliant colours – the Colour separation module

The mechanical printing of coloured images is normally performed by printing four colours (cyan, magenta, yellow and black) in various intensities superimposed on each other (see "Colour printing" in the "Fundamentals" part of this manual). Variations in intensity for each colour are achieved by the use of rasters. But as the four colours have to be applied in four separate printing processes, this also requires four printing masters, the so-called colour extracts. The division of a coloured document into these four colour masters is called Colour separation. If the document also uses spot colours (solid colour patches used for adornment rather than images) then even more colour extracts may be required. These too have to be separated in that case.

The basics of colour printing were already described briefly in "Fundamentals / Colour printing". But the subject with all its physical and print-technical phenomena is so complex that it is not possible to provide a comprehensive discussion about it here. Reference should be made to the relevant technical literature for further details.

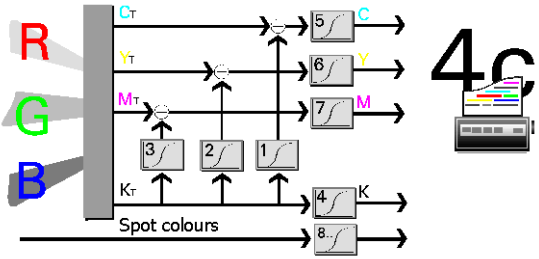
The basic idea is as follows: Using a total of four printing colours, varying their intensities can produce any required colour tint or shade. Unlike a television screen, the printing process cannot vary the strength or shade of the inks to print individual points "lighter" or "darker". For this reason the rasterizing process already described several times in this manual is used. Rasters vary the spacing and/or size of the ink dots to mimic the appearance of different colour intensities.

In theory, colour printing is quite simple. Since all colours in the document are saved in the RGB (Red Green Blue) system, we first convert them to the CMY (Cyan Magenta Yellow) system. From the resulting colour we calculate a fourth element, black, which will then be subtracted from all three basic colours. Finally, the resulting intensity values are converted to raster points of different size, appropriate to their relative intensities, which are then printed:



So much for theory. In practice, additional problems to those described for rasterization arise. The greatest problem is due to the printing colours themselves. Unfortunately, even today's chemical and colour industries cannot produce a colour which, for example, absorbs only the red part of the light spectrum and allows green and blue to be reflected unhindered. This optimum cyan is just as nonexistent as an ideal yellow or an optimum magenta. Therefore, to print an accurate colour picture, the theoretical colours in the computer have to be modified to allow for shortcomings in the printer's process colours.

To counter these colour imperfections, a total of eight control curves are built into the process illustrated above. These curves define the relationship between the theoretical values in the computer image and the actual output values. You may already be familiar with control curves from the Frame editing module. In the Colour separation module, you can use the control curves to adjust and correct information sent to the printer. The effect of these settings, however, will only be visible in the printed result, as these are purely control curves for printing.



3.1 How do these control curves work in detail?

The bracketed numbers in the following refer to the preceding illustration.

The Black control curve (4)

This control curve corresponds most closely to the function with which you are familar already. Every theoretical black element value is assigned a "raster point size" here. This curve can also be used to increase or decrease the black component to darken or lighten the image. But be careful: Too little black can falsify the colours, and too much can cover all other colours. To prevent effects such as the coalescing or breakdown of individual points, you should ease the black control curve at the extremes.

The control curves for Cyan, Yellow and Magenta (5,6 and 7)

These three control curves work in a similar way to the black control curve. Here too, the theoretical colour values will be converted to real, practical colour values. These control curves have a marked effect on the colour balance of the image. For example, a document where the cyan control curve is steeper than the yellow and magenta control curves will appear to have a greenish-blue colour cast. Equally, a document that prints overly red may be corrected with it to make the colours appear natural. It is important to note that the control curve for one colour may affect other colours.

The control curves for UCR (1, 2 and 3)

With these three control curves you determine how much of the theoretical, calculated black value should actually be removed from each printing colour. This makes it possible to correct certain (black) colour errors for particularly light or dark colours. Furthermore, you can use these control curves, in conjunction with the black control curve (4), to determine from which amount of black onwards UCR (undercolour removal) is to take place.

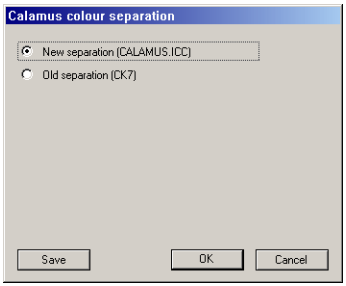
This all sounds very theoretical – and unfortunately, it is! We cannot give a general, practical example for setting the control curves here, due to the many different output devices and printer's colours available. The only way to determine the best values to use is to experiment with the various control curves and print out samples. However, we do have a few tips: If the image is too dark, you should weaken (reduce the slope of) the black control curve, and maybe also the yellow, magenta and cyan control curves. If you make the black control curve too weak, however, the image will have a brownish hue and will lose its colour contrast. You can eliminate colour casts by adjusting an individual control curve or the UCR control curve. For example, if the image is too red, you can raise the cyan control curve. If only the white areas are tending to red, you can lift the lower end

of the cyan control curve. However, we cannot give you a set of recipes.There is only one rule: Experiment!

As in the Raster module, you can generate individual colour separation control curves for the entire document, individual pages, or even individual frames. Here too, page settings take precedence over document settings, and individual frame settings takes precedence over both page and document settings.

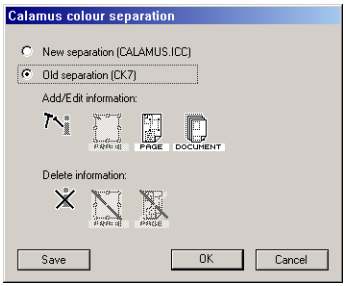
Calling up the Colour separation module works the same as calling up the Raster generator module. As the Colour separation module does not appear in the Top row, it can be called only with the relevant icon from the Page module or the Print dialog: Go to the Page module; if the Colour separation module is not available, load it by clicking on "External modules" in the File menu. You may activate the module by double- clicking its name in the module selector box, or by clicking its icon in the Page module or the Print dialog.

The following dialog box will appear:

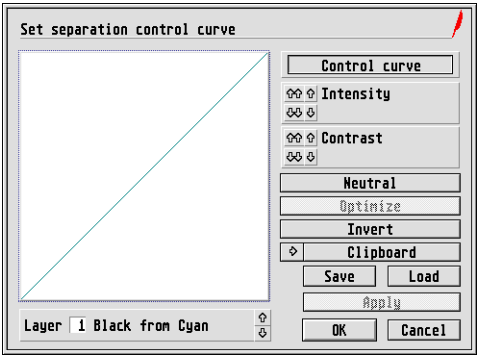


Under Windows or Mac OS X you can use an ICC separation method. It uses the ICC data from a file named CALAMUS.ICC from the Calamus folder.

Under TOS systems and MagiCMac Classic you can "only" use the well-known Calamus CK7 separation method.



If no frame is selected, the "Frame" icon will be greyed out and can not be selected. The same applies to the icons for deleting frame control curves and page control curves if the corresponding elements do not contain control curves of their own. Choose an option and click on "OK". If you have selected an icon to alter a control curve, the slightly modified dialog box will appear whose basic operation was described in the Frame editing module section:

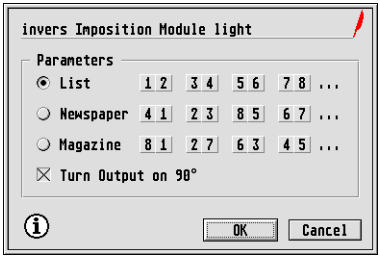


Under the graph there is a field containing the name of the control curve it represents. The number following "Layer" corresponds to the number in the diagram showing the colour separation process with control curves earlier in this chapter.

You can edit a control curve by using the mouse while holding down the left button. The cursor will appear as a cross hair. Once you have made adjustments, click on "OK" to exit the dialog box, or click on "Cancel" to abort. Note that when you click on Cancel, you will lose changes to all the control curves that you are currently editing, as they will be returned to their original state.

4 Imposition module lite

If Imposition module lite is loaded, an additional button at the right of the Calamus Output parameters/Print dialog called "Mount" becomes selectable. If you click on this button you can set the printing parameters of the Imposition module in the following dialog:



You can also call up Imposition module lite from the Page module, by clicking on the "Mount settings" icon of the "Page mounting" function group.

Imposition module lite always outputs two pages side by side. For this the set page size is ignored, say to test whether the registration marks will be output correctly. You can select from three ways to output the pages through Imposition module lite.

In these examples an 8-page document is used, but you can output a document with any number of pages. The options "List" and "Magazine" require the total number of pages to be a multiple of two. The "Newspaper" option must be a multiple of four. It doesn't matter whether these are single or double pages.

Output with Imposition module lite takes the following Print dialog parameters into account: From page, To page, Number of copies, Pages sort order, Left/Right sides only, Mirrored, Inverse, Orientation and Size scaling. If there is more than one copy entered, depending on the printing mode, the appropriate number of sets are printed.

The total number of pages always determines the number of pages to be output. For instance, if you choose to output an 8-page document as a "Magazine" but instruct the program to print just "From page 2 to page 2", only the print-page is output on which page 2 is supposed to be, i. e. the print-page 2,7.

When you want to print a real magazine or brochure with the help of Imposition module lite, you can first print all left pages, sorted in ascending order. If you then put the pages back in the printer so that the reverse side can be printed, you may re-start the printing process with the parameters: Right only, Descending order.

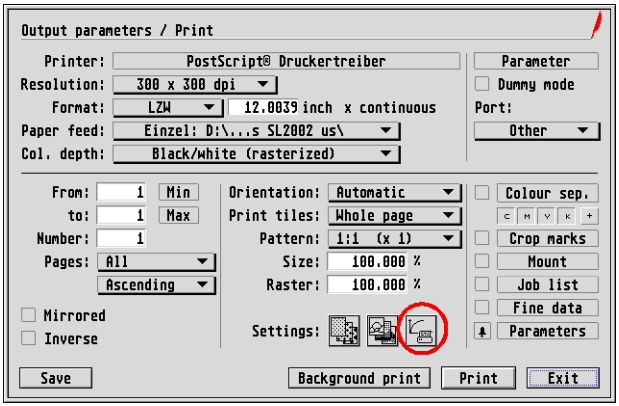
Tip: Imposition module lite is somewhat restricted in its functions and the output resolution – it is after all a Lite version. If you require output resolutions above 720 dpi, a more complex imposition layout or further functions during imposition, we recommend to you the more powerful full version of the Imposition module, called Imposition PRO, which can also work in conjunction with the full version of Bridge and the Fine data manager.

5 Output linearities

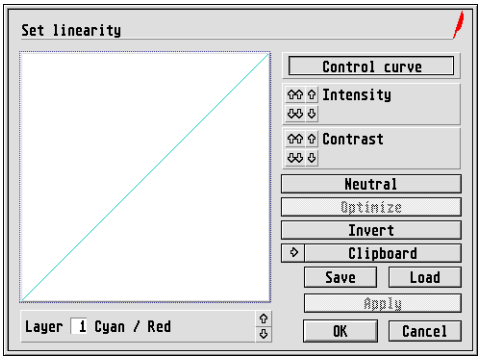
The LIN module serves to undertake calibration that may be required for print output. The corrections performed by the module affect only the print output. The LIN module produces no visible effects on screen.

5.1 Where is the LIN module?

This module does not appear in the Top row and can only be called from the "External Modules" dialog via the "Execute" button, or in the Print dialog where it is represented by its own icon. If it is not already in memory then LIN.CXM has to be loaded first.



For editing the LINearity CK4 curves either the Calamus control curve dialog or, if loaded, FrankLIN appears when the module is called. The use of the appropriate control curve editor is described separately.



5.2 Setting the linearity curves

The setting of the linearity curves works in exactly the same way as setting the control curves for colour images, with the difference that this correction is performed for all colours directly before outputting to film or paper.

Warning: Unlike the control curves in the colour separation process or the image control curves, those of the LIN module will be applied in the final output stage and so affect all intensities.

Operation: To make sensible use of the LIN module, the control curves should of course not be altered or loaded at every system start. It is therefore possible to set a standard default definition which will be activated every time the module is loaded.

This standard definition will be taken from the file DEFLIN.CK4, which has to be placed in the same folder as the LIN.CXM module. The simplest way is to make the correct settings in the LIN module (FrankLIN) and then store these in the module folder with "Save". In the file selector that appears select the path that also contains the module. Then enter the filename "DEFLIN.CK4" and select "OK" to save the settings under that name.

From now on these settings will be used for all print output if the LIN module is loaded in the Calamus system.

Warning: If you have assigned a LIN CK4 curve to a document and then save the document, the CK4 curve is contained in the document and will be used the next time it is output even if the LIN module is not loaded.

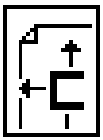
Note:

You should only use this module if your print output device falsifies the output intensities and you are not satisfied with them. But you should always know exactly what you are doing, as incorrect settings can result in horrible print output. Once you become familiar with it, you can of course also "play around" to try out effects that can be achieved with it.

We repeat for greater clarity:

- The image control curves are intended to affect the appearance of a single image (CK1, CK3, CK4).
- The colour separation control curves control the conversion of all RGB data in the document to CMYK (CK7). Here you can set the most favourable allotment to the process colour layers.
- With the linearity curves you can calibrate your output device so that the result of a colour separation (say 75 % cyan) really produces the corresponding colour on the paper (75 % cyan intensity on the paper). If you use an imagesetter, possibly with subsequent copying and then printing, you should regard the complete process as "output".

6 Navigator



The Navigator is an invers supplemental module for Calamus SL. It makes a bar available in each document window that you have a choice of filling with either icons or previews for each page in the document. It combines an easy to use, adjustable document preview with fast and elegant navigation through the document.

Herewith an explanation of two important concepts that keep on recurring in the following sections:

Preview = Greatly reduced image of the page giving some idea of its appearance after printing.

Cache = Buffer for screen display.

6.1 Actions/Settings

The Navigator has a function area from where all of its functions can be controlled. These functions are described below:

6.1.1 Navigator bar on/off

With this icon you can switch the Navigator bar on and off. If it is shown in inverse video, the Navigator bar will be included in every opened document window, otherwise it will be removed from all document windows.

6.1.2 Save settings

 After clicking on this icon the file selector will open, where you can choose where and under which name the Navigator setup file is to be created. While Navigator is being loaded the setup file named "NAVGATOR.SET" will be looked for automatically in the directory that contains Navigator, and will be loaded as well. If this file is not present then sensible default values will be used instead.

The Navigator setup file contains information about the position and size of its bars and the Navigator window, as well as the current Caching settings. This file is in pure ASCII format, and just like the CALAMUS.SET file can be modified in any text editor of your choice.

But take care: If values are entered that Navigator is not familiar with then problems can arise at run-time, possibly even causing a crash.

6.1.3 Open Navigator window

 When you click on this window a (small) window opens showing a preview of the current document page. The display adjusts itself to the Caching settings for the current page.

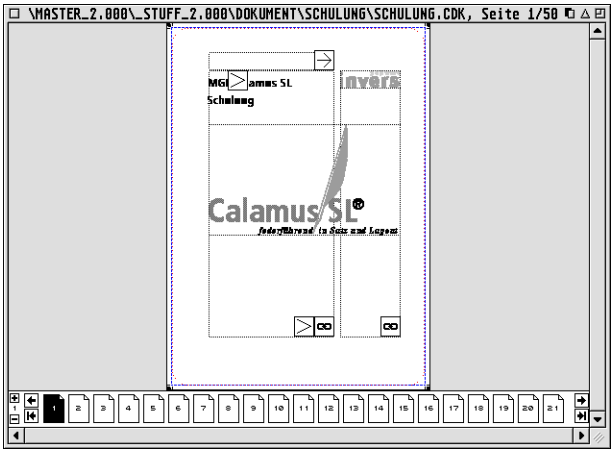
The size of this window can be altered freely by dragging its bottom right corner in the usual way, though you do not gain much additional detail by enlarging this window as text and graphics will always be represented at low resolution, particularly when the caches are in use. This window also has the zoom-Navigator at its disposal. It adapts its contents automatically to the page(s) of the current document visible in each case, so that it does not have to be called repeatedly when browsing through the document, or when the complete document is changed.

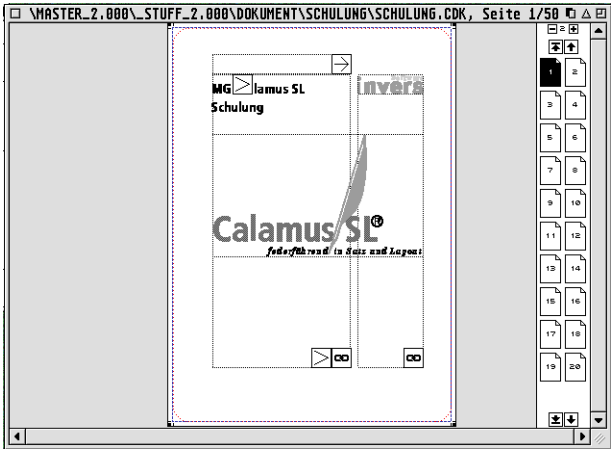
If "Save settings" is selected with the Navigator window open then the position and size of this window will be saved as well, so that it will open with the same size and position every time it is called.

Incidentally: The Navigator window can also be called by double-clicking on any page in the Navigator bar (icon or preview) of the currently active document. Furthermore, when calling up the Navigator window with this icon it is not necessary for the Navigator bar to be active.

6.1.4 Show pages in icon mode

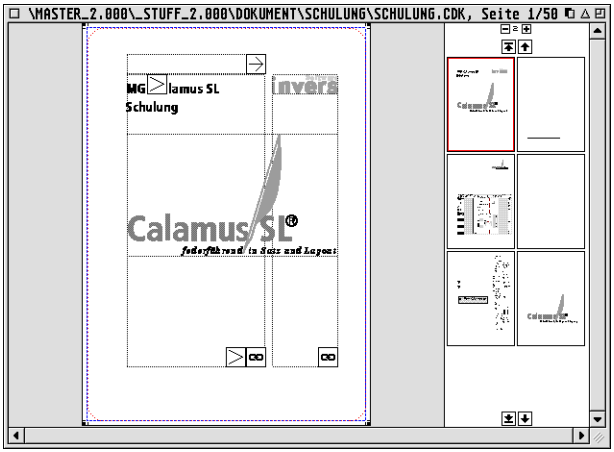
If this button is inverted then all pages will be displayed in the bar as small, identical icons labelled with the corresponding page number. This has the advantage that you can browse very quickly with the Navigator because there is no need to build up caches, but you still get an overview of your open document(s). As discussed later, the Navigator bar may be placed at any edge of the document window.





6.1.5 Show pages in preview mode

This button can make every page appear as a (reduced) reproduction of the original in the bar – the "preview". You can specify for this whether caches should be built up as well during use in order to speed up redraws when the same page is called again at a later stage, or whether the small graphics should correspond to the actual contents of the page at all times.

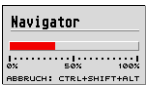


6.1.6 Caching

The Navigator offers comprehensive settings for caching the preview data that are to be described in the following sections. First of all, however, a short introductory explanation about Navigator's cache handling: Caches are (small) graphics that were created at some time and from then on can be used in place of the original data. Particularly with complex data structures, such as a page filled extensively with vector graphics for instance, this can result in enormous speed advantages at times, as Calamus only has to build up and assemble the data once only. After this has been done, the caches are made available to Calamus very quickly when required. You should be familiar with this principle already from general screen output in Calamus.

It is important, however, that the Navigator caches, whose contents may have changed, are "nursed" regularly. Otherwise, the output of what should be a page preview suddenly no longer bears any resemblance at all to what should really be displayed. The Navigator has several functions that are responsible for updating the preview:

1. If "Cache mode of other page(s)" is switched on, every change to another page will update the cache(s) of the page(s) just left.
2. At the expiry of the set timer interval, the caches of the currently active page(s) will be refreshed provided that "Cache mode of current page(s)" is switched on. By the way, it is really sufficient to refresh only the current caches after the set interval, as the caches of the pages not currently visible have either not changed, or were refreshed already when browsing through the pages (see 1.)
3. In addition the corresponding caches will be recalculated when the user requests this explicitly from Navigator by selecting "Refresh cache of current page(s)" or "Refresh cache of current document".
   While the computer is calculating the cache, a small status window may appear to show how much longer the calculation of the caches will take:



6.1.6.1 Cache mode of current page(s) on/off

If this button is not inverted, it means that the preview(s) of the current page(s) in the Navigator bar and Navigator window will be updated each time the document window is redrawn. That happens for instance after a frame has been moved or added, text is input into a text frame in the layout or if any other kind of layout elements have been changed, also if the size or slider positions of the Document window have changed, and so on. The speed of the redraw will depend on the type of document and the computer used and can become annoying with slow machines or complex pages.

Therefore you can select this button so that data from the cache is used instead. In that case changes to the current page(s) will not be visible immediately in the Navigator bar or Navigator window, but only after the caches have been refreshed.

6.1.6.2 Cache mode of other page(s) on/off

This hides a comparable function to "Cache mode of current page(s) on/off" except that it applies to all pages of the document that are not currently visible in the document window. Normally this icon should remain selected for reasons of speed, because there are actually only two situations in which the cache data of non-visible document pages does not correspond to their actual contents: Namely when you are just editing a frame, virtual copies of which are placed on other pages – or when you are editing text frames whose linking is piped across page boundaries.

6.1.7 Timer on/off

 The button left of the editable field can switch the timer on or off.

6.1.8 Information about Navigator

 Clicking on this icon opens a dialog box containing information about the Navigator such as version number and date, author and copyright.

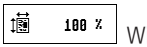
6.1.9 Refresh cache of current page/(s)

 Clicking on this icon refreshes the cache data of the currently visible page(s) – provided the corresponding caching is switched on.

6.1.10 Refresh cache of current document

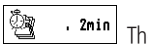
 A click on this icon serves to refresh all caches (all pages!) in the document, provided such caching is active.

6.1.11 Cache size



With this edit field you can affect the size of the caches. You can input a percentage value up to 100. This value always refers to the current optimum size that can be displayed in the Navigator bar. A value of 100 % means therefore that the caches are held 1:1 in this optimum size in memory. If the value is lower, then the cache size (and memory requirement) is also smaller – but the graphics displayed in the Navigator bar also become coarser, i. e. less detailed.

6.1.12 Timer interval



The function of the timer have already been explained earlier. The edit field serves for setting the length of the interval after which the caches will be refreshed if this has not been forced earlier. The value is in minutes and seconds, with automatic correction if the values are not sensible ones ("5.79 min" therefore becomes "6.19min").

6.2 Navigator bar

The Navigator bar is serviced completely with the mouse. During this the shape of the mouse cursor is an important indicator of what action you can perform with the mouse at its present position:

6.2.1 Move the bar

The bar can be placed at all four sides of the Document window, depending on your preference at the time. To move the bar, place the mouse cursor on a position where you can see the bar's white background. The cursor will now take the shape of a four-way arrow. Holding down the mouse button brings up a dotted box showing the outline of the bar, which can now be dragged to the side of the document window where the bar is to be moved to. The new position applies for all document windows and will be updated immediately the mouse button is released.

6.2.2 Enlarge and reduce bar size

(This function is only available with the preview display).

The height (with the bar at top/bottom) or the width (at left/right) can also be altered interactively. Run the mouse cursor to the edge next to the layout area to turn it into a shape of two opposed arrows, then drag the boundary to the desired size while holding down the mouse button.

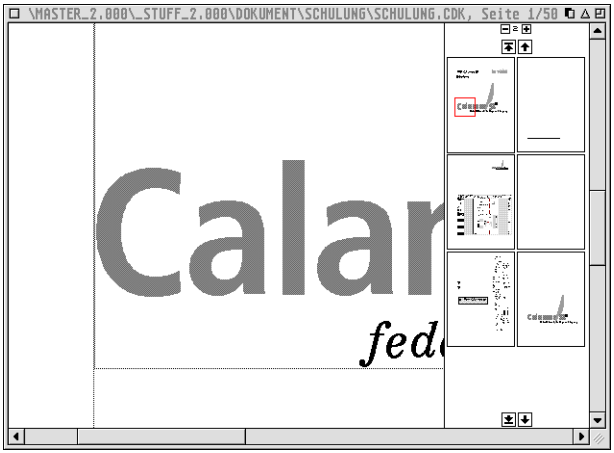
Incidentally: Navigator will remember different values for horizontal and vertical positions.

With the +/- keys at left or top respectively you can browse through various cached displays for the current page if several were calculated for different bar widths or percentage values.

6.2.3 Move zoomed Navigator area

(This function is only available with the preview display or in the Navigator window).

A red rectangle in the preview representation shows the area of the page currently visible in the layout window. Moving the mouse over this rectangle turns the cursor into the shape of a hollow cross. If the layout window doesn't display the whole page, then pressing the mouse button allows you to move the rectangle in the preview and so choose a new section to be shown in the layout window.



6.2.4 Scroll Navigator

If at times it is not possible to display all of the preview images or icons in the bar, then two arrows will be created automatically at each end. The normal arrows permit browsing by one image/icon forwards or backwards at a time. The arrows with a preceding line jump directly to the start or the end of the bar contents.

Note: Page changes are performed in the Top row as usual. The arrows only affect the display of the bar contents, not the current document page(s)!

6.3 Tips & Tricks

Due to its comprehensive setting options it is not easy or automatic to take in all the Navigator functions. That is why there are some recommendations for various settings here, which should help you to work effectively with the Navigator immediately. Have fun with it!

6.3.1 Navigator position

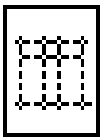
- Documents in portrait format
  - on large screen:
    * Position bar at the left edge of the document window.
  - on small screen:
    * Place bar at the right edge of the document window.
- Documents in landscape format
  - on large screen:
    * Position bar at the top of the document window.
  - on small screen:
    * Place bar at the bottom of the document window.

6.3.2 Navigator settings

- Small to medium documents:
  - Fast computers:
    * Preview mode,
    * Caches for current page off,
    * Caches for other pages on,
    * Timer off,
    * Cache size 100%,
    * Navigator window as desired.
  - Slow computers:
    * Complex pages (many frames):
      . Icon mode,
      . Navigator window as desired.
    * Otherwise:
      . Preview mode (try it out!),
      . Caches for current page on,
      . Caches for other pages on,

        . Timer 0.30 min,
        . Cache size 75% to 100%,
        . Navigator window as desired.
- Large documents:
  - Fast computers:
    * Preview mode,
    * Caches for current page off,
    * Caches for other pages on,
    * Cache size 50%,
    * Navigator window as desired.
  - Slow computers:
    * Icon mode,
    * Navigator window as desired.

7 Guidelines (SL)



Guidelines are an important tool for laying out documents. Guidelines are only displayed on the screen – they are not printed. Think of the guidelines as faint pencil lines that serve as a reference edge if you want to "paste in" a new frame, but unlike pencil lines you do not have to erase guidelines. Furthermore, the guidelines may be made "magnetic" (in the Frame editor parameters function group of the Frame editing module). Frames that lie near a magnetic guideline always snap (get pulled) exactly onto the guideline. This gives you the reference edge function described above. The guidelines described here are additional to those marking the page margins if "Create help lines" is active in the "Borders" part of the Create new document dialog, but the functions of the Guidelines module can be applied to them as well.

Besides the guidelines there are also grid lines, acting somewhat like squared paper with an adjustable square size. This grid too can be made magnetic in the Frame editor parameters function group.

However this does not exhaust the guideline functions of Calamus. You can define a border region around every frame. The width of this border may be chosen freely. Calamus uses that width for the spacing of a second frame made up of guidelines generated both inside and outside the frame. This simplifies aligning one frame with others.

The whole thing is rounded off with a function for automatically creating (normal) guidelines for multi-column layouts.

Thus there are three types of graphical help elements: Guidelines, grid lines and guide frames. All three may be switched on and off individually, both for display and effect. In addition you can set whether each individual type should act "magnetic" in horizontal, vertical or both directions.

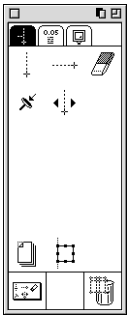
One should at least mention a fourth type of guideline: When a printer driver has been loaded (File menu, "Print" menu entry), the printable area of a page will be marked with a broken line. Some printers, including nearly all laser printers, cannot print a DIN-A4 page right up to the edges. These automatically created guidelines serve as a guide to show you areas where you should preferably not place any frames.

All guidelines are basically saved on the master page (see Page module). If you define a guideline on a document page, it will be stored on the associated master page and thus will appear on all other pages that use this master page as well.

All the guidelines are always drawn 1 pixel wide, irrespective of the set screen magnification.

The Guideline module is made up of three function groups:

7.1 Guidelines



This function group offers all the important tools for positioning, moving and deleting guidelines in the layout with the mouse.

7.1.1 Set vertical guideline

With this icon you can position vertical guidelines.

This and the three other icons are mutually exclusive: Only one of them can be selected at any one time. If this icon is selected, the mouse cursor appears as a cross in the layout window. Every click of the left mouse button now sets a vertical guideline at the current position.

Guidelines are displayed in Calamus chain-dotted. To position a guideline as accurately as possible, a high magnification factor is recommended. The Coordinate display then shows you the exact position of the mouse cursor on the page.

7.1.2 Set horizontal guideline

With this icon you can position horizontal guidelines.

This and the three other icons are mutually exclusive: Only one of them can be selected at any one time. If this icon is selected, the mouse cursor appears as a cross in the layout window. Every click of the left mouse button now sets a horizontal guideline at the current position.

Guidelines are displayed in Calamus chain-dotted. To position a guideline as accurately as possible, a high magnification factor is recommended. The Coordinate display then shows you the exact position of the mouse cursor on the page.

As for vertical guidelines, a guideline will be placed at the current cursor position, except that in this case it will be a horizontal one.

7.1.3 Delete guideline

The eraser: It is used to delete guidelines (rub them out permanently). If this environment-friendly guideline feature is switched on, every click on a guideline will remove it for ever. However this only applies to guidelines that were set by the functions described above. Frame guidelines (see below) and grid lines (also see below) can only be deleted by an explicit redefinition (with the value zero). To delete all guidelines you can also use the function described below.

7.1.4 Set reference pin

The reference pin is intended as an extension for future external modules. With this function you can position the reference pin on the page. Its functions are explained in the documentation of relevant modules that make use of it.

7.1.5 Move guideline

If this icon is selected then you can drag a guideline to a new position by clicking on it with the left mouse button and holding this down while moving it to where you want it. If you hold down a [Shift] key while clicking on the line, it will be copied rather than moved.

The following procedure is recommended:

Set one vertical and one horizontal guideline. After this switch to the "Move" mode and copy all further required guidelines by dragging them out from the existing ones while holding down the [Shift] key. This will save you a lot of needless clicking on the other icons.

A second click on this icon switches off the Move mode.

7.1.6 For all master pages

Calamus SL can assign various guideline sets to various master pages in a document. With this icon you can choose whether any guideline operations should be restricted to the current master page, or globally applied to all master pages.

If the icon is selected with a left mouse click, then changes to the guidelines will be performed on all master pages. A second click on this icon deactivates this function and all guideline operations only affect the current master page.

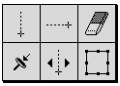
7.1.7 Magnetic frames

If this icon is selected then all guidelines "snap" to the nearest frame when they are created or moved. This function is particularly useful if you want to arrange several frames aligned exactly vertically or horizontally with each other. For this you first "magnetize" the frames and set a guideline precisely at the edge of the frame. Thereafter the guideline is also magnetized and you can now line up the other frames very easily and conveniently with the first.

A second click on the icon deactivates the function again.

7.1.8 Tool popup box

This icon brings up the following popup at the mouse cursor position:



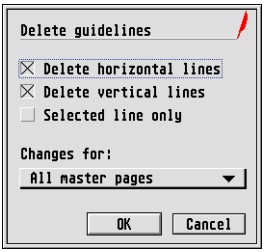
The function of the first five icons in it has already been described above. The sixth switches from the Guideline mode to the Frame editing mode. This permits a fast and convenient way to build up a page layout consisting of frames and guidelines.

It is best to place this function on an easily reached macro key combination (see "Key bindings"). This makes all functions relevant to manual editing of guidelines immediately available at all times.

7.1.9 Delete guidelines

With this icon you can delete all guidelines (though not grid lines) on the current page. Since this will also delete them on the associated master page, they will disappear too on all layout pages that use this master page. A safety query will appear beforehand so that you can cancel this function if it was selected accidentally.

When you click on this icon, the following dialog box appears:



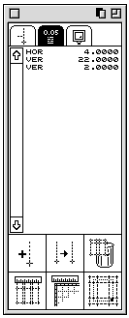
With its help you can determine quite precisely which guidelines you want to delete, and where. As you may guess, selecting the upper checkbox deletes only horizontal guidelines, while selecting the one below it deletes only vertical guidelines. If you want to delete all guidelines on the page, you can of course activate both.

The "Selected line only" checkbox excludes the other two. The selection here does not refer to a guideline selected in the layout, but to one selected in the guideline list described below.

In the popup near the bottom you can also select whether the deletion should apply to all master pages, or whether only the current master page should be affected.

As usual, "OK" confirms your selection, while "Cancel" quits the dialog without changing anything.

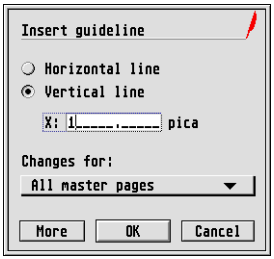
7.2 Numeric placement



In the second function group of the Guideline module you can on the one hand set and move guidelines numerically with a precision typical of Calamus, and on the other access a list of all guidelines present on the current master page. You will also find here settings for multiple columns, grid lines and snap-ranges for magnetic frames.

7.2.1 Insert guideline

Clicking on this icon opens the following dialog box:

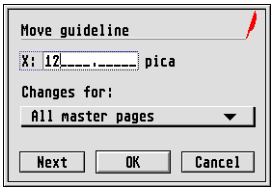


Here you can specify whether you want to insert a vertical or a horizontal guideline, as well as the X- or Y-coordinate respectively at which it is to be placed. With the popup you can set here too whether only the current page or all master pages are to be affected by the changes.

With "OK" the line will be inserted at the specified position and the dialog closed. Clicking on the "More" button sets the guideline in place but the dialog will remain open so that you can create further guidelines. As usual "Cancel" closes the dialog without adopting the settings.

7.2.2 Move guideline

To use this function a guideline has to be selected in the list. Clicking on this icon then opens the following dialog box:

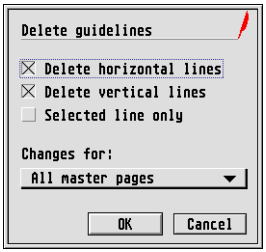


Here you can specify the new position of the selected guideline. Once more you can decide whether the change should be effective only on the current master page, or all master pages.

"OK" confirms your entry, with "Next" the position of the next guideline in the guideline list will be placed in the editable field so that it can be moved. "Cancel" discards the changes and closes the dialog.

7.2.3 Delete guideline

This icon opens the dialog box for the deletion of guidelines that was already described above for the first function group.



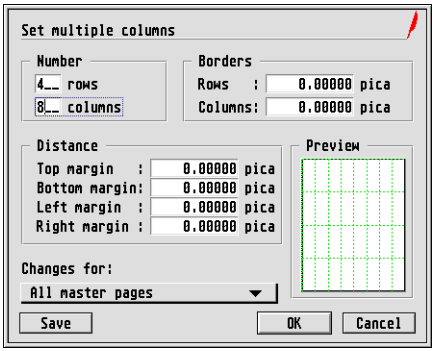
7.2.4 Set multiple columns

Guidelines – as their name indicates – should help you create your layout on the page. Now there are certain standard cases where guidelines are really helpful, but their positioning takes a lot of effort. One of these standard cases for instance is a typical newspaper layout with three uniform columns. The three text frames required for this should lie a given distance from the edge of the page, with a (somewhat smaller) separation between them. You could now fetch a pocket calculator and start to work out

the exact positions and dimensions of the text frames, but Calamus makes this much easier for you: This is because Calamus can calculate guidelines automatically from the preset values. You can then magnetize these (in the Frame editor parameters function group of the Frame editing module) and snap the text frames precisely to their correct position.

Besides mutiple columns Calamus can also create multiple rows. In that case the frames will not be placed side by side but stacked underneath each another. Naturally you can use both columns and rows together in a layout.

When you click on the "Set multiple columns" icon, the corresponding dialog box opens:



For "Number / Rows" enter in the editable field how many frames should later be placed below each other, for "Number / Columns" how many frames should appear next to each other. In addition you can enter in the corresponding "Borders" fields how much free space should be left between frames both vertically and horizontally. Finally you can also set the size of the margins to be left free from the edge of the sheet. All units of measurements will be those set in the Page module for "Page size".

Warning: If you enter zero for the value of "Rows", then the specified top and bottom margin settings will be ignored. The same thing applies for the left and right margins if zero is entered for "Columns".

A new feature added recently is the "Preview" field in which all values are reflected as they are input, so that you can immediately judge the appearance of the multi-column page. As usual you can apply these settings only to the current master page or globally to all master pages.

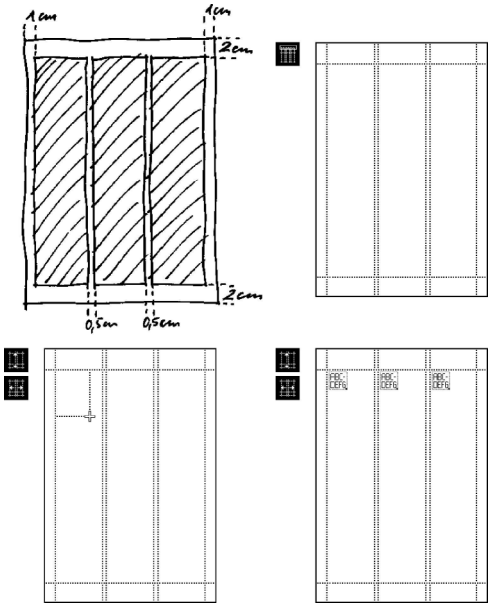
After you input all the values and close the dialog with "OK", Calamus creates the multi-column guidelines; to differentiate them from normal guidelines they are drawn

dotted. If you cannot see them at first, check in the next function group that they have been switched on! (You can also set the colour of various guidelines there.) You cannot delete these guidelines in the normal way; this is only possible by selecting "Set multiple columns" again and entering zero for the number of rows and columns.

These guidelines are not frames as yet! You have to draw these up explicitly. The best thing is to switch the guidelines to magnetic in both directions. That allows you to draw out a frame very simply that lies precisely over the area limited by four guidelines.

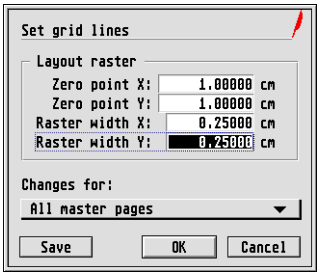
After the theory comes the practice:

You want to create text frames for the layout shown below. To do this, click on the "Set multiple columns" icon and enter the values taken from the illustration. Click on "OK" or press [Return] and there you have your guidelines. Now you still have to draw up the text frames. Just switch the guidelines in both horizontal and vertical direction to magnetic in the Frame editor parameters function group of the Frame editing module. To draw up a frame you have to change over to its Tools function group and then click on the Create frame icon. Now you have to tell Calamus that you want to draw up a text frame by clicking on the corresponding icon. For each text frame click twice somewhere in the rectangle that is formed by the guidelines at the desired position. At the first click the upper left corner snaps to the upper left corner of the guideline rectangle, the second positions the lower right corner. That's it!



7.2.5 Set grid lines

 A raster of grid lines can be produced with this function. Click on the appropriate icon and the following dialog box appears:



In the upper section you can set the point of origin (zero position) and size of the grid. With the "Zero point X" and "Zero point Y" edit fields you can move the grid raster around the page as described for rulers in the "Set starting coordinates" chapter of the Frame editing module. The spacing of the grid lines in horizontal (X) and vertical (Y)

directions can be set with the corresponding edit fields for "Raster width". The units of measurement are, as usual, those clicked on for "Page size" in the Page module. Any existing old grid raster will disappear and the new one will be displayed, provided the grid lines are visible (see below, "Visibility" function group).

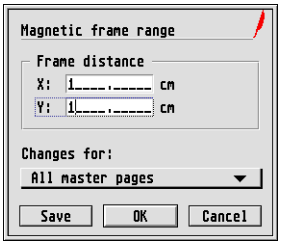
The position and size of existing frames does not alter at first. Only if you move them or change their size manually will they snap to the new grid raster, provided this is magnetic.

New here too is the possibility of applying the settings only to the current master page, or globally to all master pages.

7.2.6 Magnetic frame range

The width of the border area for magnetic frames can be set with this function. This is the distance from the edge of the current frame within which frames will snap to each other automatically. It is described in fuller detail in the "Visibility" section below.

Click on the appropriate icon and the following dialog box appears:

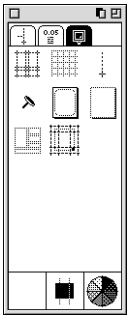


You can determine in this dialog the magnetic frame range – the distance inside and outside the frame that magnetic frame guidelines will be drawn automatically round a frame. This distance too can be set to different values for the horizontal and vertical direction. When changing any existing values the same applies as for the raster grid: Frames that already exist will only snap to magnetized guidelines when they are reselected.

Here too you can make the settings apply only to the current master page, or globally to all master pages.

As usual, a click on the "OK" button or pressing the [Return] key terminates input in this dialog. If you wish, you can save any changes with the "Save" button.

7.3 Visibility



In the third function group of the Guideline module you can set the visibility, colour and position separately for each help element.

With these icons you can set the help elements visible or invisible separately for multiple columns, grid lines, guidelines, reference pin, printable area border, page borders, frame outlines and magnetic frame snap-range areas.

When any of these icons is selected with a left-click, the associated guide element becomes visible. A second click on the relevant icon deselects it and the guide element will no longer be visible.

7.3.1 Multiple columns visible/invisible

Multiple columns may be created also by the Document manager directly when creating the page(s) with "New file" (File menu), as well as in the Guideline module as described above, and can be made visible or invisible here. During the layout phase it is sensible to leave them visible. When correcting text on the screen it may be more practical to hide them.

7.3.2 Grid lines visible/invisible

These grid lines are often also referred to as "magnetic graph paper", although you are free to define rectangular instead of square raster grids if you wish. You can also set the seperation of the grid lines and are not limited to the usual millimeter/centimeter markings or their Imperial equivalents.

Although grid lines help to create a layout quickly, they later act more like a brake and slow down screen redraws. Therefore you are free to switch them on and off any time while working on a document.

7.3.3 Guidelines visible/invisible

Guidelines are often confused with multiple column markings, but actually they can be distinguished from these quite easily: Guidelines can be set and deleted individually, and usually are used temporarily for placing certain objects or frames in alignment with each other.

Tip: Select different colours for multiple column markings and guideline help-elements (see below) to prevent confusion on future occasions.

7.3.4 Reference pin visible/invisible

The reference pin has not been brought into use as yet, but is available for use by external modules. Therefore you should normally hide it (icon unselected).

7.3.5 Printable area border visible/invisible

The edge of the printable area is shown in symbolic form as a dotted rectangle with strongly rounded corners and should help you to find the correct page layout for direct output on a given printer. This is because not all printers are able to print sheets right up to their edges.

Depending on the currently selected printer driver (chosen in the "Print" dialog of the File menu), the edge of the area that can be printed on will be marked with a dotted outline if this is switched to visible. Any objects in the border areas outside this will not be printed.

The position of the printable area on the screen however depends also on whether you have switched on the output of crop-marks, the page orientation (portrait or landscape), a given enlargement or reduction and other factors that have an effect on the actual printable area defined in the printer driver.

7.3.6 Page border visible/invisible

This help line type is particularly useful if you are editing complex double-page layouts and want to know precisely where the page fold at the centre of the page, or the page border, is positioned so that you can better take into account the effects of edge trimming and binding. In such cases we recommend that you bring the position of the page border to the "front" (see below) so that it is drawn on top of all other frames on the page and not covered by them.

7.3.7 Frame outline visible/invisible

The frame outline help element is very important in the creation phase, and when switched on shows the true outline of each frame as a near-solid line. When switched off, the frame outlines (except those for the currently selected frame) disappear.

(Note that if they are replaced by a dotted outline, you have Magnetic frame range switched to visible but with zero values for the snap-range.)

Since the frame outlines are often found disturbing when judging the appearance of a page, we recommend that you put this function on a macro so that you can quickly switch between displaying the frame outlines or hiding them.

7.3.8 Magnetic frame range visible/invisible

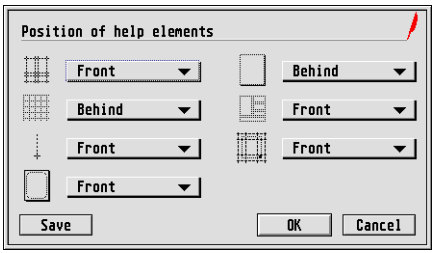
 Calamus offers the option to "magnetize" the edges of the frames you create in the page layout. This very practical feature is often forgotten, unfortunately, and other ways are looked for to align various frames with each other. You can set the distance over which this magnetization is effective in the Magnetic frame range dialog of the previous function group.

If you switch on this icon to make the magnetic frame range visible, dotted outlines both inside and outside every frame let you see immediately the areas where the magnetic "field" will make frames snap to each other.

If you never use this function you naturally do not have to switch it on, specially as it slows down screen redraws and may cause confusion with other elements on the page.

7.3.9 Position of help elements

 A click on this icon opens the following dialog box:



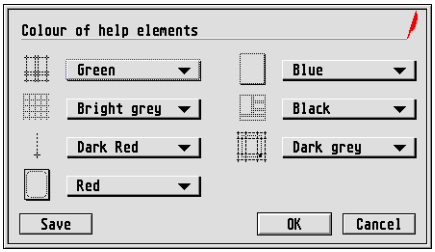
Here you can set for each help element separately whether it should be displayed in front of or behind the layout elements.

"Behind" here means that the corresponding help element will be covered by the layout frames. If set to "Front" the help element is drawn in front (on top) of the layout frame.

Clicking on "OK" or pressing [Return] confirms your selection and exits the dialog. "Cancel" discards any changes made.

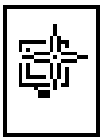
7.3.10 Colour of help elements

In this dialog you can set the colour of all help elements separately.



The popup makes the standard 16 GEM colours available for this purpose. As usual you can confirm your settings with "OK" or [Return], or discard them with "Cancel".

8 Calvin



Calvin is a module for Calamus SL and offers half automatic calibration of screen representation in 256 screen colours. We call it half automatic because before the calibration can be used, a profile has to be created first, according to the (optical) estimations of the user. Then the profile is presented in a list in the Calvin function panel – one click assigns it to the screen. You can even "link" a profile to a document, a master page or a layout page, making the calibration switch automatically – at last when turning the pages – as desired.

In order to have access to different combinations of profiles, e. g. for a library of HKS duplex simulations (see tutorial, "Spot color simulations"), profiles can be assembled to lists.

As an important feature of Calvin it pays attention to let switching the screen modes no longer give strange results in the 3D effects. Before, when you switched the mode, gray window elements became black in grayscale mode or dark green in 256 colour mode. This is history!

Important: Calvin does only work with 256 screen colours and cannot be used with COL_GREY.CXM at the same time. Please do never load Calvin and COL_GREY.CXM at the same time. Calvin quits if you try and use it with other screen colour modes than 256 colours.

Page related modules: Calvin

8.1 Calvin functions

This function group offers a list of calibration profiles as well as all important tools for editing and managing this list.

The single commands and functions will be described below in details.

8.1.1 Profile list

On module start, Calvin adds all profiles here which have been found in a perhaps existing default list (compare "List file operations" and "Settings"). You can add or remove single profiles, too.

The list divides in three areas:

8.1.1.1 Joined profiles

The top area refers to joined profiles. This means profiles which are joined to either a document, a master page or a layout page to be activated automatically. The top entry of this area shows the name of the currently active profile.

The hierarchy is as follows:
Priority 1: profile for current page
Priority 2: profile for current master page
Priority 3: profile for current document

On each page or document change, Calvin checks first if there is a profile joined to the current page. If so, this profile will be activated. If not, Calvin checks the current master page. If it has its own profile, the screen will be calibrated with this one. Otherwise, Calvin checks the document for a joined profile and activates the found one.

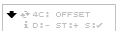
The entry below looks somewhat strange but can be explained simply: "D:" means document, "ST:" stands for master page ("STammseite" in German) and "S:" is page ("Seite" in German). A minus sign behind indicates that the according section has no joined profile. A plus sign indicates a found profile which is not active at the moment. An active joined profile is indicated by the checked sign.

i D:- ST:+ S:✓

means that there is no profile joined to the document (D:-) while there is one in the master page (ST:+) but is not active. The active one is the profile which has been found by Calvin in the current layout page.

Left to this view there is a tiny round double arrow symbol which helps you switching the current profile by toggling them. If you want none of the joined profiles to be activated, simply click on any list entry. If you want to activate the last joined entry, simply click on its name on top of the list.

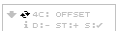
Add joined profile to list



When you click on this (very tiny) arrow icon, the currently activated profile will be attached to the end of the profiles list. No check for double entries is made.

This function is useful e. g. when you have loaded a Calamus document with joined profiles and want to take these profiles in your profile work list.

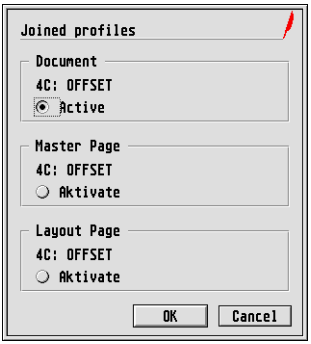
Change active joined profile



With a click on this (very tiny) icon you switch the current profile. This works only if at least two profiles are joined to the document, e. g. one to the document and one to the current layout page or master page.

Informations about joined profile

When you click on this (very tiny) i, the following information dialog opens:



Here you can get much more detailed informations about the three possibly joined profiles for document, current master page and current layout page. Use the "Activate" radio buttons if you want to activate one of them.

8.1.1.2 Fixed profiles

The middle part shows three fixed profiles which represent the basic screen modes. They are identical to those which can be chosen using COL_GREY.CXM: Grayscale, 256 colours and True colour (dithering) mode.

Important: Do not load COL_GREY.CXM when Calvin is in use!

Grayscale mode

If you want to work with Calamus in grayscale mode, click on this fixed, not editable entry.

256 colour mode

If you want to work with Calamus in 256 colour mode, click on this fixed, not editable entry.

In this mode, all colour informations will be shown on screen after being converted to the 256 colour system.

True colour mode

If you want to work with Calamus in true colour mode, click on this fixed, not editable entry.

In this case all true colour informations will be converted to 256 "mixed" colours in a colour dithering technique which tries to show the nearest colours.

8.1.1.3 Calibration profiles

The bottom part of the list contains the created calibration profiles. Each entry can be named (refer to "Toolbar popup" or "Create calibration"). The name will be shown here.

Left to each list entry a tiny image can be viewed which shows three lines for all inactive entries but shows four colour squares for the active entry. These colour squares represent the four process colours Cyan, Magenta, Yellow and Key and change their look according to the calibration values defined in this profile. All entries work like this: A click on these colour squares opens the calibration dialog which is described below in details. You remember this behaviour from the Calamus colour list.

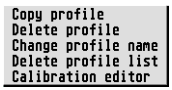
Change profiles

If you want to change an editable profile, click on the tiny four colours icon left to the profile name, which is the tiny CMYK process colour field in our example.

According to the currently activated calibration, you will, in general, not see the according process colours in real CMYK!

8.1.2 Profile tools

A click on this icon opens the toolbox popup menu:



Here you find some functions which refer to the current profile or to lists. The current profile can be duplicated or deleted with the according popup menu entries. Besides, you can change its name and/or the calibration values. Using the according popup menu entry, you can delete the list of all profiles which are selectable at this moment, too.

8.1.3 Move profile entry downwards

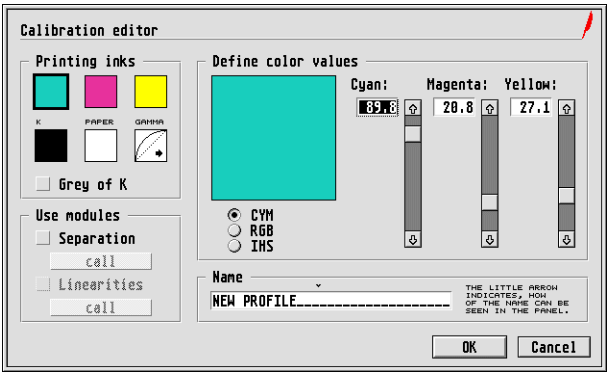
 You can sort free profiles. A click on this icon moves the selected list entry one step downwards.

8.1.4 Move profile entry upwards

 You can sort free profiles. A click on this icon moves the selected list entry one step upwards.

8.1.5 New calibration profile

 A click on this icon adds a new profile to the current list and opens the calibration dialog, which is described in the chapter "Calibration" in details:



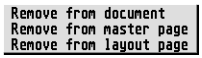
8.1.6 Join profile

 When you chose this icon, the following popup menu opens:

Here you can join the selected list profile to the current document, the current master page or the current layout page.

8.1.7 Remove joined profile

 This function is the equivalent to "Join profile". Here you can chose the joined profile to be removed.



8.1.8 Transform CalColor file(s)

For a long time, CLN in Ploen (Germany) offered the program CalColor. It offered a fine solution for the calibration problem in Calamus. This job was done by Calvin afterwards. With this function you can convert "old" RPL files, which have been created by CalColor, and use them with Calvin. When you click on this icon, Calvin opens the file selector and lets you chose the RPL files to be converted.

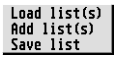
Attention: If no path has been defined in the settings dialog already for Calvin's own profile files, another file selector instance opens first and asks you to define this path – because Calvin needs this path for writing the converted files.

8.1.9 Profile file operations

 This function is almost self-explaning: A click on this icon opens a popup menu which offers functions for loading one ore more profiles and for saving the currently selected profile.

8.1.10 List file operations

A little remark to lists in Calvin first: lists have the file extension CPL and do only contain a composition of different profiles which should be loaded at once when you chose the list. The sorting will be kept, which offers the possibility to switch between different profile collections to and fro with a few mouse clicks. This is important e. g. when you use duplex, triplex or quadruplex simulations with Calvin (see tutorial).

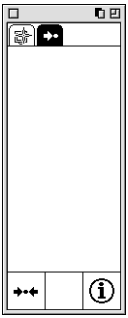


The popup menu allows to load one or more lists or to merge them to the current list (this means all profiles being loaded at this moment and being visible in the function panel). You can chose to save the current profiles as a list, too.

By the way: lists are simple ASCII files and can be edited with each text editor because they do only contain a list of profile file names, in exactly the sorting (top down) in which they should be loaded when the list is loaded.

Page related modules: Calvin

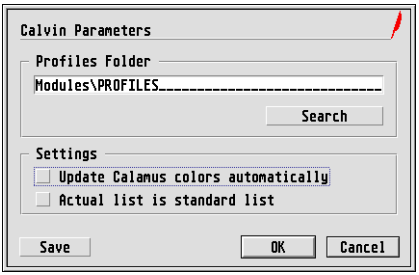
8.2 Calvin parameters



In this function group, you will find general settings to Calvin as well as the obligate information dialog.

8.2.1 Calvin settings

After a click on this icon, a dialog opens and offers some global parameters to be adjusted for the work with Calvin:



After Calvin is installed, you should click on the button "Browse" and define the folder where Calvin profiles should be found by default. We recommend to create a new folder named "Profiles". (We usually put this folder in the MODULES folder.) This is important for several reasons: First of all, you will be able and collect a big bunch of different profiles by the time which should not mix up your modules folder or, even worse, cannot be found any longer. Much more important is that Calvin only looks into the defined folder whenever you (re)load profile lists.

There are two additional options:

Update Calamus colours automatically

This feature adjusts the screen colours in Calamus automatically whenever you switch back from another application (e. g. "jinnee", an alternative TOS desktop which changes screen colour palettes). Until now, switching from Calamus to the desktop jinnee caused extreme redraw problems (Calamus document windows showed wrong colours then). You had to tidy up the Calamus screen by pressing [ClrHome] afterwards.

Current list is default list

If this option is set, a click on the "Save" button in the settings dialog saves a list file named "DEFAULT.CPL" into the defined profile folder, listing the currently loaded profiles. Calvin looks for this default file after being started and loads the list and the according profiles automatically.

Furthermore, the "Save" button stores the current settings of Calvin in a standard Calamus setup file named "CALVIN.SET" into the modules folder.

8.2.2 Calvin informations

This icon opens a dialog which informs you about the module version and date. If you should run into problems with Calvin, please note these informations before you contact the support.

8.3 Calibration

8.3.1 Basics

As mentioned before, Calvin uses profiles with user defined invidual screen calibration values. This sounds difficult but is really easy to do. As the main advantage, Calvin does not refer to a dedicated output device like ICC or ColorSync profiles do, but refers to the optical abilities of the user who works with these devices (here: the screen).

As the calibration refers to print colours, you will have to find your subjective settings which fit most on screen for the print process colours Cyan, Magenta and Yellow. Please keep in mind that these settings can only give you the impression of nearest colours because of the not comparable colour systems (print: reflection colours, additive colour mix; screen: light colours, subtractive colour mix) set technical borders which can not be ignored. This is why Calvin bases on the individual settings of calibration values.

Calvin offers an additional value setting for Black or Key (K). This value only shows effect when you add another Calvin feature: addition of colour separation. The basic idea of Calvin was to show a preview of the later print result on screen as best as possible. This depends very much on the according colour separation curves. So it is important to take the separation as well as the output linearities into value when creating profiles.

Important: whenever you add the colour separation, Calvin uses the separation control curves assigned to the whole document.

If you have not activated this function, Calvin creates a pure colour profile: black values are mixed from the three basic colours then and look rather dark brown than black, as you might know from print results already.

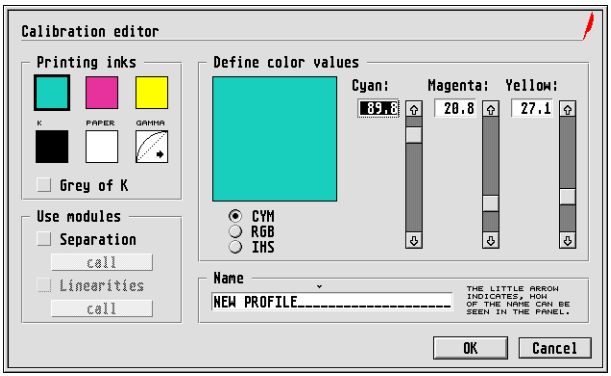
If you add the colour separation and all control curves are neutral, the profile will be created with uncoloured values: all (calculated) gray values will be removed from colours and put to the "K plane" which can be calibrated with the K value as mentioned above. The Calamus colour separation works on this GCR ("Grey Component Reposal") method, too. GCR makes colour impressions look cold and pale because all mixed colours with the same values are simply gray then. Not too pretty!

This is why we recommend to use a separation control curve which balances this problem. You will find a prooved 4c control curve (CALVIN4C.CK7) in the package. (In addition, the mediaLINK DataPack offers many special separation control curves for all available output devices and is strictly recommended for advanced separation jobs!)

Furthermore, you can define a paper colour in Calvin in order to control how green paper takes effect on the colour values of the (translucent) print colours. The tutorial shows more application examples.

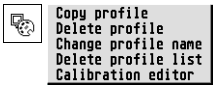
Last but not least: Let's mention the gamma value settings. What is the idea of this? Monitors do not have a linear intensity curve but very often look too dark in the middle and deep values (from 30% up to over 90% intensity). Using the gamma value, you can adjust the curve by practically moving the 50% position in the intensity curve. The most monitors have a gamma value between 1.30 and 1.80 (the measure unit itself is not important in this context).

8.3.2 The calibration dialog

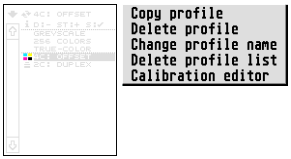


Welcome to the heart of Calvin. You can reach this dialog in three different ways:

If you want to create a new calibration, click on the calibration icon in the first function group:



If you want to change an existing calibration, click on the tiny colour preview left to the according entry or call the toolbox popup menu:



The dialog is divided in four segments. In the area "Print colours" you have to chose one of the three process colours, black or the paper colour. You will find the icon for gamma correction here, too. The five icons mentioned before are composed of two parts: the upper half shows the basic pure colour value, the lower half shows the resulting colour – the calibrated colour value.

The second segment contains colour sliders. You can control the changes of the colours affected by using the sliders in the large preview field. We recommend to hold a reference print card next to the preview field for optical control.

Below you can define the basing colour system: CYM, RGB or IHS. The usage of the sliders should be no problem at all.

Tip: When you click the colour preview field, the Calamus colour dialog opens where you can make the well-known operations: You can e. g. load colour lists, copy spot colours and chose palette colours. If you close it with "OK", the chosen colour values will be taken by Calvin – this makes it possible to e. g. chose an HKS colour and assign it to a print process colour in Calvin (compare tutorial: "Spot colour simulations").

At the bottom you find an edit field where you can define a name for the profile. This name does not have to be unique but we recommend clear names in order to find this profile in the list afterwards.

Beside this you find an area where you can chose other modules for profile calculation. Set the checkbox for the Calamus colour separation if you want to calculate the black weight of colours. The "Call" button below opens the colour separation dialog. Please remember: Calvin only uses the separation control curve which has been assigned to the whole document.

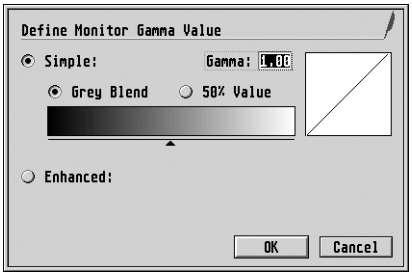
You can use the output linearities, too. These are managed by the LIN module (LIN.CXM) and are valid in Calvin only if the colour separation is added, too. If not, this option is deactivated and shown gray automatically. You can call the LIN module from this dialog, too. Did you know that you can simulate raster dot growth with it? (Read the tutorial for more . . .)

A last switch shall be mentioned now: "Gray from K" forces Calvin not to use the gray colour values from the process colours or from the colour separation, but to use the values black was calibrated with. Take care using this switch! The result which can be seen on screen, no longer shows the typical red-brown gray based on the calamus separation – the gray colours are definitely gray then according to the calibrated black value – but this is no real calibration, of course. Usually, you will claim the nearest print result simulaton possible, not a nice one. Thus, this switch should be used for quadruplex simulations in place holder method only.

When you close the calibration dialog with "OK", Calvin calculates the profile automatically. This may need some seconds – a status bar informs you about the calculation process.

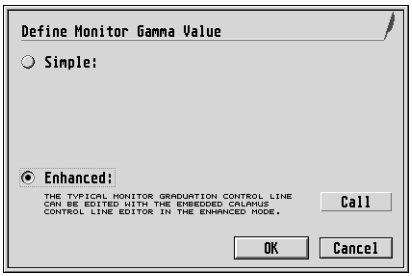
8.3.3 The gamma dialog

The gamma dialog is a subdialog from the calibration dialog which can be reached by a click on the "Gamma" icon. It is used to correct the typical non-linear intensity courves for monitors.



The gamma correction in Calvin offers two modes: the simple and the advanced mode. When you chose "Simple", you can define the gamma value with a value slider or entering the value. This value is valid for all three colour channels of the monitor then (red, green and blue). This works on the basis of personal, subjective "points of views". For control purposes there are two different preview types: 1. a grayscale wedge which helps to quickly find a smooth grayscale intensity blend by moving the slider to and fro, 2. a 50% gray area. Check the gamma value by using the grayscale wedge and a reference print with 50% gray.

Consult your monitor manual for the gamma value definition, too. In general, the mentioned gamma value from the technical data section in the monitor manual will be the best choice (if mentioned at all!). Simply enter this ideal value in the edit field.



When you chose "Advanced", the methods mentioned above are no longer available. Instead you will see a single button which opens the Calamus control curve editor. Here you can edit three control curves (one of each for R, G and B) which control the intensity courve of each monitor colour. This is interesting when you are able to check the monitor with a densitometer and enter the measured values in FrankLIN's numeric input, combining them for a gamma control courve.

A tip for all users who want to use the "Advanced" mode but have no densitometer: Try first to define a courve setting for all three courves which fits to the view that you get in "Simple" mode, when you enter the desired gamma value there. Then only lighten the red courve a little more. You will have seen already that the most monitors have a strong red signal. In print, red overweights in gray elements can be recognized by the eyes much better than other overweights.

Page related modules: Calvin

8.4 Calvin tutorial

8.4.1 Screen calibration – step by step

This section shows step by step how to set up a screen calibration. It bases on the typical 4c print calibration.

For the colour calibration, a printed gray wedge and a printed colour wedge are required. The best choice is to get one from the print shop where you usually place your print orders. The grayscale wedge should show all grayscale steps from white to black at a length of e. g. 10 cm. The colour wedge should show the four process colours Cyan, Magenta, Yellow and Black Key (CMYK), e. g. in 2x2 cm square full colour prints.

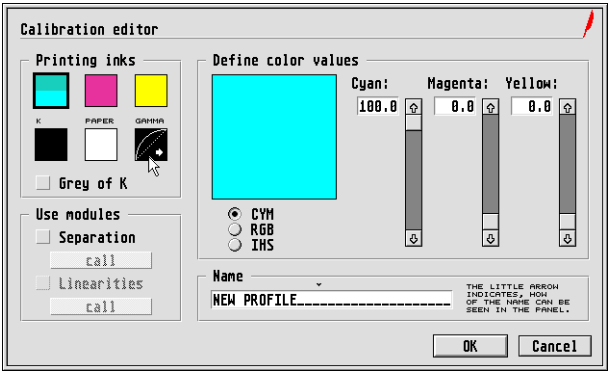
1. It is a good idea to sleep well before you start the calibration work. When you are tired, your eyes are tired, too, and don't see colours like in normal state. Keep in mind that you are going to define a monitor calibration for your own eyes only, resulting in a subjective correct colour presentation which will not be correct for your neighbor automatically, too. As you want to control your images and colours, you should calibrate Calvin for your daily working place only. But please don't work with a 25W weak lamp. We recommend daylight lamps which can be delivered by any lamp specialist – it's worth each penny!

2. Be sure that your monitor has run for fifteen minutes already at least. Keep control that your working conditions (especially light conditions) are the same as usual (see above).

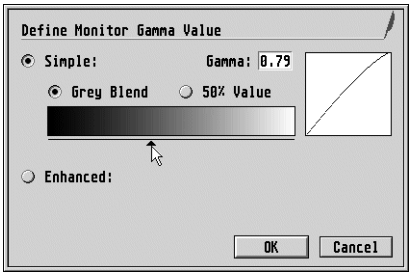
3. Now start Calamus and load Calvin (as well as CPAPER.CXM) if it has not been loaded automatically already. No create a new document)or load a typical document). Load the module "Colour separation" (COL_SEP.CXM) if it is not loaded already.

4. Call Calvin and chose the first function group. Click on the icon "Create new calibration", this is the very left icon in the middle row.

This opens the calibration dialog.

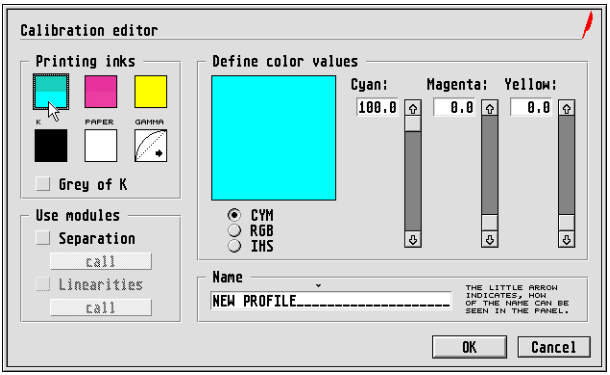


5. Click on the button "Gamma". The screen turns gray and the gamma value dialog opens:



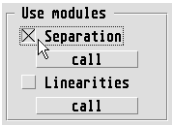
Take your grayscale wedge print and hold him near the grayscale wedge shown in the dialog. Now you can adjust the gamma value by moving the little arrow below the grayscale with pressed mouse button, until the shown grayscale wedge looks most similar to the printed one. Alternatively, you can switch to 50% preview and adjust it with the middle gray of the printed grayscale wedge. Close the gamma dialog with "OK".

6. Now get your printed colour wedge. Click on the Cyan colour button. The large preview field now shows a cyan coloured area.

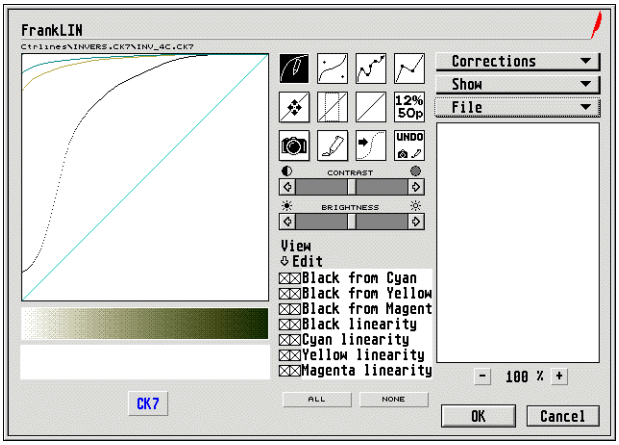


Hold your printed colour wedge near to it and adjust the single colour components by moving the three sliders until the colour on the screen is almost identical with the one of your printed Cyan colour field. Please be most distinctive, take time, put away the control print from time to time. It is best recommended to take short breaks for your eyes, too. Look at something else and let your eyes regenerate.
When your done with Cyan, continue the work with the other colours Yellow, Magenta and Black/Key. Don't adjust the paper colour now, this is mentioned in step 3 of this tutorial.

7. Now set the option checkbox for "Separation".

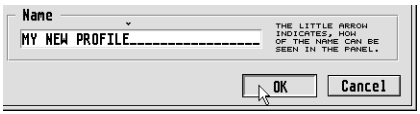


If you have created a new document or your loaded document has no (useful) colour separation definitions, click on the button "Call". The colour separation dialog opens. Click on the icon "Document", please. Now the Calamus control curve editor opens.

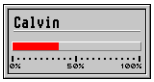


Load your default 4c separation or, if your not familiar with separation, the file CALVIN4C.CK7 from the package. Close control courve editor as well as colour separation dialog with "OK". When the colour separation asks whether to delete subset informations or not, chose "No".

8. Now you find yourselb back in Calvin's calibration dialog. Enter a name for the profile and close the dialog with "OK".



A status bar shows the progress of the calculation for the new profile:



Some seconds later Calvin is done and you can see the new profile as a list entry in the Calvin function panel. It is selected already and the monitor has been calibrated. Now chose the entry "Save profile" from the popup menu "Profile file operations" and save it with a unique name, using the extension CPA.

9. If you want this calibration (and even others which may be shown in the list) to be loaded and activated automatically on the next start of Calvin, switch to the second function group of the Calvin module and call the "Settings" dialog. Check on the option "Save current list as default" and click on "Save" afterwards.

8.4.2 Spot colour simulation in placeholder method

With Calvin, you can simulate the effect of spot colours, even for print mode with process colours! The basic idea is to use the process colours of Calamus (Cyan, Magenta, Yellow and Black) and use them as kind of placeholders for spot colours.

Create a new profile in Calvin for the spot colour simulation. We recommend to use the Calamus colour dialog by clicking on the preview field. This makes sense because you can create a new colour there and define its values from a palette colour (e. g. FOCOLTONE or HKS). invers Software offers an additional bundle of RAL colour palette modules with ready-to-print 4c colour definitions, too. If you like to, you can of course define all colours in Calvin directly.

Depending on your purpose to simulate duplex, triplex or quadruplex print mode, you will have to define two, three or four spot colour representations for the process colours in Calvin. The values of unused colours should be set to white in order not to disturb the results.

Important: For spot colour simulation the switch "Gray from K" has to be activated in any case because otherwise all "Gray" values which should contain spot colours or white, will be created from the other values, perhaps by using the colour separation, too. Anyway the results will not be as expected if this switch is not activated.

There are some more specialities to be aware of: Keep control that the colour definitions which should and could represent a distinct spot colour combination, have to be build by the four process colours CMYK. This may lead to unexpected side effects on images: gray and RGB images will usually be affected by the colour separation on output. In order to avoid unwanted effects, you can adjust the image control courves in a way that only the wanted colour components are shown (consult FrankLIN's pool of control curves therefore). On the other hand, you will have to use neutral separation control courves in the whole document.

Example: A document shall be printed in duplex method, where Cyan should be black and Magenta should represent a dark HKS red. In Calvin, you define black for the Cyan value, set Magenta to the desired HKS value and "cleear" all other colours to white. Set

"Gray from K" and the profile will be calculated. – Now there might be a grayscale image in your document. You will have to assign a control courve to this image with the help of the control courve editor in order to set all gray values to Cayn. (You will have to convert the grayscale image into an RGB image and then adjust the according image control courve until the red value is faded.) When this is done and you switch off the duplex profile, the image should be shown in Cyan colour. If not, then at last in the print output all three image channels (RGB alias CMY) would get a part of the grayscale value. But in this example we want to print black and HKS red, so this would result in a brown image, not a pure grayscale image.

Important: Do not forged to assign a neutral separation control courve to the document. When you are asked to delete subset informations, answer "Yes" this time.

We agree – the simulation is not very easy on face value – you will probably have to experiment a little bit. Another little tip: If you switch off the simulation profile, all spot colour representations must be shown in their according process colour place holders again. If not, then further changes have to be made in the document. You will then have to change a colour definition or add and change a control courve.

8.4.3 Paper colour simulation

Calvin offers a special paper colour simulation which colours the usually white document background with any paper colour. In combination with the raster dot growth simulation explained in the following chapter, you will be able and get a very good preview for several papers on the screen.

Important: The paper colour will be defined in Calvin. But you will have to load the additional module CPAPER.CXM from the package, or you will not see the paper colour!

There are two traps in the paper colour simulation which base in the Calamus output engine: On the one hand, the XOR write mode of frames does not work right if the paper has another colour than white. On the other hand, pure white parts of vector objects will remain pure white even with activated paper simulation. Both problems cannot be fixed by Calvin.

8.4.4 Simulate raster dot growth

Dot growth means that the raster dots grow due to the print material condition. If you print e. g. a 50% raster on a very absorbent material (e. g. soft paper sorts), then the raster will not show an intensity of 50% but much darker. This is caused by the soft paper material and structure which lets the single raster dots "grow" with the help of colour and water. The dot radius is larger then, resulting in a darker raster intensity.

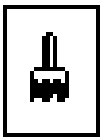
In calamus you can work against this effect which can be seen with inkjet printers (because of the liquid colour ink which lets the dots grow even more than the fat and creamy offset print colour) and with laser printers in darker areas (because the toner will be melted on the paper, making it liquid for a short period of time and let the dots grow). You simply have to create a proof print with raster areas in the intensity range from 5%, 10%, 20%, …, up to 90% and 95%. Then you measure the real values of these areas with a densitometer and create an adjusting control courve for the output linearity module (LIN.CXM). This courve forces critical values to be lightened up on output, resulting in a more linear output in these areas where the intensity usually is too dark (or too light).

If you take such an adjustment control courve and mirror it (with FrankLIN), you will see the characteristic gray value courve of the output medium because you will see the densitometer measured values again then.

In Calvin's calibration dialog, you can activate the option to consider the "Linearity". Calvin then uses the LIN module and the there defined control courves. You will then get better results on screen in order to see the print or film output.

If you mirror the adjustment control courve in the LIN module (Warning: do not print this way!), you can see the dot growth on screen. We recommend to print the grayscale proof like described above on your special papers (e. g. soft papers). Then get the resulting values from your densitometer and use the according control courve in combination with a paper colour simulation which shows exactly the paper colour of your desired special paper.

1 Brush



The Brush module –
Raster graphics (not just) for weekend painters

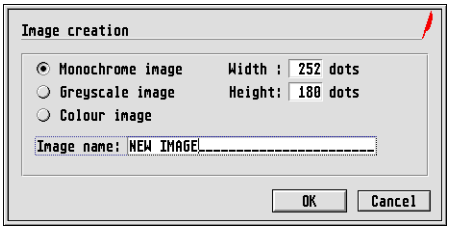
The Brush module offers you a simple way of modifying raster graphics. With it you can retouch scanned-in images, for instance, correct scanning errors and achieve other effects. For this the complete Calamus colour palette is available to you. You also have a free choice of the brushes: 19 predefined and one variable brush shape are at your service. That's not all: You have the possibility of altering the brush size continuously with all brush shapes.

You can call up the Brush module by a click on its icon in the Top row (if necessary use "External modules" in the File menu to load BRUSH.CXM first). It is made up of two function groups: Brush selection, and colour/fill-pattern selection. The latter has been described several times elsewhere, for instance in the "Colour" and "Colour management" chapters.

Working with the Brush module

In order to modify a raster graphic, it (or the corresponding frame) has to be selected first. To do this, just click anywhere within the relevant frame. You can then paint within this frame with the current brush.

If the current frame is not yet a raster graphic frame, the following dialog box appears in which you can set the parameters of the raster graphic frame to be created:

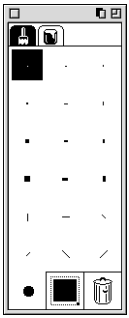


As soon as the mouse cursor is moved into a selected raster graphic frame, it takes on the shape of the current brush. This shape can be chosen in the first function group of this Brush module.

To paint with the brush, select the desired brush shape, and choose a colour in the second function group (see below). Then move the mouse cursor to the point in the graphic frame where you want to start painting and, holding down the left mouse button, drag the brush over the graphic. It will put down the chosen colour until you release the button. Afterwards you can make further strokes with the same brush, or change to a different shape and/or colour.

Important: Your changes in an image will be accepted when you right-click somewhere outside the image frame!

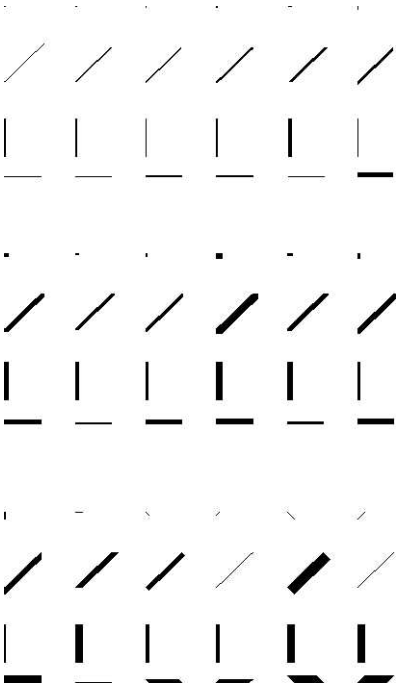
1.1 Select brush



Predefined brush shapes

You can see 19 predefined brushes, ranging from quite small to large. You can choose a single pixel brush; block brushes of sizes from 2x1 to 6x6 pixels; vertical and horizontal 8-pixel long line brushes as well as 4 and 8 pixel long oblique lines in either direction; and a circular brush with a diameter of 6 pixels.

Each brush produces a different effect, as you can see below:



By varying the magnification of the page you can effectively influence the brush size: As the brush size always remains constant on the screen, the real line width increases when you reduce the image magification. That may sound a little confusing, but we can make the effect clear with an example: If you make a dot with a ball-point pen on a map of a city, the size of the dot may correspond to the size of a telephone kiosk. If you make a

similar dot on a country-wide map, it may correspond to the size of a house or even a football field. On a globe the dot may cover at least a large city. The same effect forms the basis of the Calamus Brush module.

The important thing is that the effective size of the brush is enlarged and reduced with changes of magnification. This means in particular that the circular and slanted line brushes produce circles and slanted lines at the resolution of the image – and not only in the screen resolution.

1.1.1 Brush with variable size

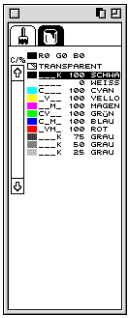
In addition to the 19 predefined brushes you can define your own rectangle of any size as a brush, forming a sort of miniature raster area tool. To form it, click on the relevant icon so that it is selected. You can then drag out the "brush" within the graphics frame just like any normal frame: Click in the graphics area to turn the cursor into a hollow cross. Click again and it will turn into the "set size" cursor. Drag the mouse cursor to the desired size and shape of the brush and click for a third time. A rectangle filled with the current colour appears and the cursor jumps from the bottom right to the top left corner of the variable brush. Move the brush to where you want to put down colour and start painting by holding down the left mouse button while moving the mouse.

This function can be used also, for instance, to erase large areas within the raster graphic by choosing white for the brush colour.

1.1.2 UNDO function

This function allows you to undo the last drawing operation. When you click on the icon, the image will be restored to the state it was before you selected the frame or changed to the Brush module, or before your last drawing operation.

1.2 Brush colour



In this function group you can set the colour that you wish to paint with in the graphic frame. Its selection is described in the "Colour" chapter. You can use both list colours and free colours, and alter them as described in "Colour management". Changing the brush colour by clicking on a list entry does not alter its current shape.

With a colour of white the brush works as an eraser. The paint colour "Transparent" does nothing at all in the Brush module – it acts as if there was no colour in the brush.

Colour picker

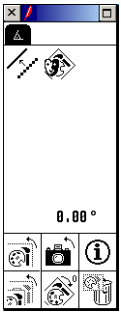
The Brush module has a colour picker function, which is somewhat hidden, unfortunately.

After you have selected a raster image, switch over to the "Colour selection" function group. If you now move the mouse cursor over the graphic while holding down the [Shift] key, the current brush will turn into a hollow cross. When you now click on a point in the graphics frame, the colour under the cross-hairs will appear in the colour list of this function group in the "current free colour" field (at the head of the list), and the brush will adopt the picked colour.

Furthermore, holding down both the [Shift] key and the mouse button while you move the cursor round the image will display the RGB values of each current point in the free colour field. (Note that neither of these functions will work in monochrome screen resolutions, as the pixels of the dithered colours are only black or white.)

2 Rotate images

This module offers functions to rotate raster graphics by any amount in one-hundredth degree steps.



This module only has one function group offering two switches, an edit field for specifying the rotation angle and some function icons. These are explained below.

2.1 Anti-aliasing

Due to the pixel structure, some ugly effects can occur during rotation. In particular straight lines are often converted to more or less jagged steps ("stepping"). This can be remedied by anti-aliasing, which fills abrupt corners with lighter pixels and so creates smooth edges again.

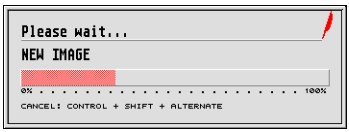
2.2 Generate mask

A mask is laid over the rotated image to smooth its outline edges.

2.3 Rotate original

The image frame will be rotated. This alters the original data irrecoverably.

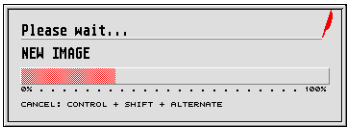
A growing bar shows the progress of the operation if rotation (with large images) takes some time:



2.4 Rotate copy

The whole frame will be copied and the copy rotated. So when this action is completed there will be two frames: The unrotated original and the rotated copy.

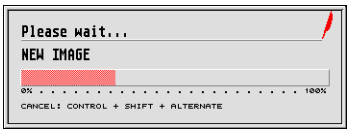
A growing bar shows the progress of the operation if rotation (with large images) takes some time:



2.5 Rotate and save original

The image in the frame will be rotated. The original data will be retained, invisible to the user.

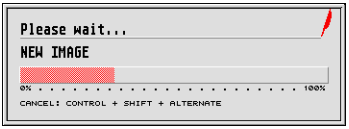
A growing bar shows the progress of the operation if rotation (with large images) takes some time:



2.6 UNDO rotate

This function can be applied only to image frames that were rotated with "Rotate and save original". The rotated image will be deleted and the original restored.

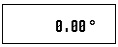
A growing bar shows the progress of the operation if rotation (with large images) takes some time:



2.7 Delete saved original

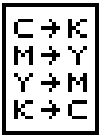
This function too can only be applied when an invisible original image is attached to the frame. It deletes this and so releases the memory occupied by this image once more.

2.8 Rotation angle



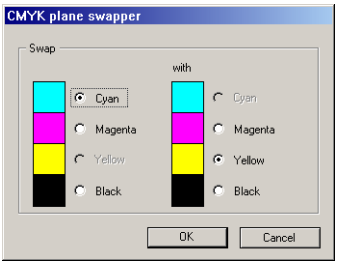
The desired rotation angle is typed into the edit field.

3 CMYK plane swapper



Some of the Calamus import drivers for raster images support formats that contain images as already separated CMYK data. This data is then taken over by Calamus in the same form. Practice has shown, however, that depending on the origin of the source data two or more of the four colour layers (Cyan, Magenta, Yellow, blacK) may have been interchanged at times. The CMYKSWAP module is intended to remedy this.

Application: Please select just one image frame with CMYK data. After this call the module and click on the function button. A small dialog will appear where you can set which of the four colour layers should be swopped with another specified layer.



A click on "OK" starts the action.

Note: The module does not "remember" which colour layers it has swapped already. If called up again, it assumes that, say, the cyan layer really contains the cyan part of the image data, even if you have previously swapped cyan with some other layer.

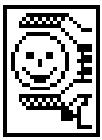
With the CMYKSWAP.CXM module you can swap individual colour layers for images that are in the CMYK colour space (and only those!).

First select the desired raster image. If not done previously, you now have to load the module. Then call it up in the "External modules" dialog of the File menu.

In the dialog that now appears, select in the left half the colour layer that is to be swapped, and in the right the colour layer which is to be swapped with the left one.

After clicking "OK" the image will be recalculated and displayed anew on the screen. Changes may be reversed at any time by a repeated swap of the same colour layers.

4 Image compression

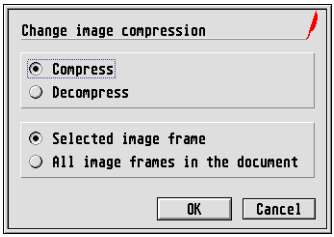


Calamus has available a built-in mechanism for image compression, which allows the storage requirement for raster images to be reduced. The algorithm used is known as "RLE" (run length encoding). Although this is one of the simplest forms of data compression, with certain images appreciable space saving can be achieved.

Access to compressed image data – e. g. when outputting the frame – is naturally somewhat slower than that to uncompressed data. In some cases it may therefore be preferrable to have raster images available in an uncompressed format. For this reason the module COMPRESS.CXM was developed and included with the Calamus package.

Using the module:

Please select exactly one image frame. Then call the module and click on the function icon. A small dialog box appears offering the following choices:



Compress / Decompress

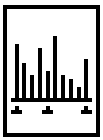
With these radio buttons you can determine whether the selected raster graphics are to be compressed or decompressed.

Selected image frame / All image frames in the document

The choice made with these radio buttons tells the module which frames it should process: Either all selected image frames on the current page, or all in the current document (in this case also those that are not selected).

Note: The run length encoding used in Calamus is most sensibly used with bitmap images (monochrome or duochrome). For this reason only these will be compressed by the image import drivers. Actually the COMPRESS module can compress other image types as well; but it may then happen – specially with TrueColor images – that due to unfavourable data organisation as well as the aditional management information the compressed data takes up more space than the uncompressed data!

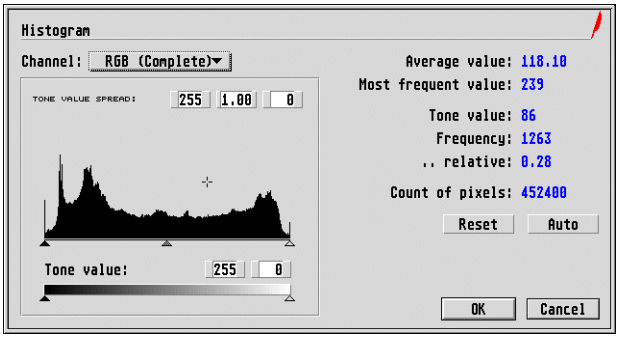
5 Histogram



The Histogram module is an optional module for Calamus SL and offers several interesting image adjustments. It hooks itself into the system just like all the other modules, and can be called with a click from either the Histogram icon in the Frame editing module, or the Histogram function field.

5.1 Histogram main dialog

After selecting an image frame and opening the Histogram module by clicking on the bottom centre button, the main dialog appears where you can adjust all settings.



The most important part of this dialog is a bar chart (histogram) that shows the frequency of the tone values in the image. With this you get an easy overview of the greyscale distribution in the image.

5.1.1 Channel selection

ˆ Using the button above the histogram you can select the channel to be edited. You can switch between selecting the RGB (complete) channel or individual channels (colour layers). Independent settings can be made for each channel which will then be applied in the image (see below).

Warning: It is not possible to apply both the complete and the individual channels simultaneously! The reason for this is the fact that changes in the RGB (complete) channel affect the individual histograms and vice versa. Consequently, the settings of the respective channels would then not match the settings in the original histogram. For this reason, when exiting the dialog box a query appears asking you whether you want to use the RGB (complete) or individual channels.

5.1.2 Working with histograms

The histogram is a statistical tool that supplies information about the frequency of element distribution. Beside the histogram in the main dialog, there is certain statistical data as well as the arithmetic median or the most frequent value (mode). Information regarding the relative and absolute frequency is also included in the display. When you move the mouse pointer over the histogram, the data that belongs to the value under the pointer are displayed. You can also select a range of values by marking an area with the mouse button pressed.

5.1.3 Tone value spread

The small triangular "faders" directly below the histogram display are used to set the tone value spread.

The black one represents the darkest tones (black) and the white one the lightest (white). For example, if you pull the black fader 20 steps to the right, the resulting grey value is now defined as a new black, and values from that point up to the white fader are spread out to the full 256 grey levels.

These faders are meant primarily to increase the contrast, as for instance certain dark grey values can be set to black, or light ones to white, and the entire tone value range is distributed evenly over the section in between the two.

The small grey fader provides gamma correction. It provides a simple way to adjust the overall brightness. A move to the left darkens the image, while a move to the right lightens it.

5.1.4 Tone value range

Unlike tone value spreading, the tone value range doesn't re-distribute the tone values in the image. Rather, it is used to determine which tone value should be the darkest and which the brightest in the image. Black can be defined as a certain dark grey, and white as a light grey value. All values outside of this range are trimmed to this value. The values between the two remain untouched.

5.1.5 Automatic function

A click on this button optimizes the fader settings for the current histogram. For example, a too light image with poor contrast can be adjusted with a mouse click: Contrast is increased to a sensible value and the brightness is regulated as well. A small adjustment in the tone value range, which this function also causes, prevents bright areas in the image from breaking up the raster and darker areas blending together when printed because of the increased greyscale value range.

5.1.6 Reset

When this button is pressed all faders for the current channel are moved back to their original position. Reset all channels by pressing the [Alternate] key as well.

5.1.7 Control curve operation

In order to prevent image data from being destroyed, a special control curve is created that is attached to the image. It may be used to create the desired special effects.

It is possible that pre-SL96 control curves may conflict with a newly created one. Naturally, the older control curves are not lost – they're just utilized in different ways: First, a histogram is created that is based on the data. When the settings are concluded, this control curve is extracted from the image and merged with the histogram control curve. The new control curve is applied to the image and alters its appearance accordingly. The Histogram module "remembers" the old control curve and, if desired, re-applies in to the image.

Only through this, admittedly rather complex, control curve operation is it possible to modify an image in the Histogram module without permanently altering or even destroying it. Naturally, the individual control curves can be freely changed or removed.

5.2 Histogram

The Histogram module has only one function group that makes some switches and functions available. These are explained below.

5.2.1 Combine control curves

A control curve can be created from the histogram settings. This icon merges the control curve from the histogram and the one from the image and attaches the result to the image. This function becomes necessary after extracting a control curve.

5.2.2 Extract image control curve

As explained earlier, a merged control curve is attached to the image after exiting the histogram main dialog window with a click on "OK". This control curve may, of course, have little in common with the original control curve. To be able to edit this new control curve afterwards with any control curve editor, without danger of colliding with the histogram settings, all you need to do is click on this icon: The original control curve will be attached to the image and can be edited.

After the modification, the control curves should either be merged (see above) or the histogram editor should be opened in order to adapt the histogram settings to the newly created histogram.

5.2.3 Extract histogram control curve

 This option is similar to "Extract image control curve" in both function and operation.

Warning: A change in the histogram control curve never affects the "remembered" histogram settings! Therefore an altered control curve is necessarily destroyed and replaced with one according to the new settings when you call up the histogram editor and exit it with "OK".

5.2.4 Calculate histogram into image

 When this icon is selected, then (following an alert message) the data from the histogram control curve is applied to the image, this control curve deleted, and the original control curve, if there is one, is attached to the image again. The "remembered" settings from the histogram editor are also deleted. This function alters the image and cannot be reversed!

5.2.5 Remove histogram data

 After an alert message all histogram editor-dependent data that have been attached to the image are deleted (histogram settings, histogram control curve, etc.) and the image control curve, if present, is again applied to the image.

5.2.6 Module information

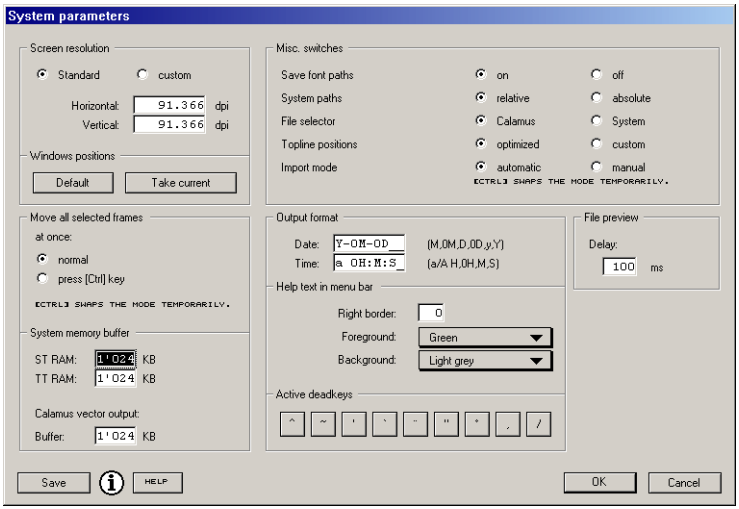
 This icon calls the Info dialog of the Histogram module, where you will find the version number and creation date of the module, author etc.

5.2.7 Call histogram editor

 This icon behaves exactly like the one in the Frame editing module and opens the histogram main dialog for the selected image.

1 System parameters

In the System parameters module, which you can only call from the File menu entry "External modules" (select it in the list that appears – or if it is not yet present, load the SYSTEM.CXM module first – then click on "Execute" or press [Return]) you can set global options that control Calamus's system behaviour. These parameters are so fundamental that you will probably only have to define the settings once.



The System parameters module has a dialog in which settings for various "theme groups" can be made. The description of the individual groups follows:

Screen resolution

In the two editable fields under this name at bottom right of the dialog you can set the resolution of your screen in pixels per inch both horizontally and vertically. With the "Standard" radio button active the values used will be those returned by the operating system, though only seldom are these absolutely correct. If you activate the "Custom" radio button, then values typed into the editable fields will be used. For this you have to divide the number of pixels in the horizontal and vertical directions by the actual active screen width and height in inches. With an active screen area of 24 cm wide by 15.7 cm high (corresponding to 9.45 x 6.18 inch) and an image format of 640 x 400 pixels you therefore have a resolution of 67.7 dpi horizontal x 64.7 dpi vertical.

Window position

You can define the standard window position of Calamus Document windows yourself. Until now Calamus opened a new document window to make the most of the free space on the screen below the Top row and right of the function field. But in the meantime many tools have been developed that look for space on the desktop or directly in Calamus, for instance at the lower screen edge. Therefore you can now set the standard position at which a new document window will be opened. To do this, open a document window and position and size it to suit your requirements. Then in the System module click on the "Take" button below "Windows position". Now use "Save system settings" in the Options menu and all new windows will be opened at your preferred position. (Clicking on the "Default" button will clear the newly defined window positions once more.)

Move all selected frames at once

Here you define if multiple selected frames can be moved at once (default) or if you have to press the [Ctrl] key to do so. I you set "normal" and press [Ctrl], only the clicked frame of a selection will be moved. If you have set "press [Ctrl] key", the a selection of frames will only be moved if you press [Ctrl]. Try and define your favorite mode. If you then want to use the other mode, without changing the settings here, simply press [Ctrl] which changes the mode temporarily.

System memory buffer

When it is launched, Calamus occupies almost all of the operating system's free memory. Here you can (and should) set how much memory Calamus is to keep free for its host operating system. This is necessary because certain system components (such as NVDI, the Atari or another Control Panel, as well as other applications under a multi-tasking system) also need to reserve memory subsequently, and may not work otherwise.

New standard memory values

Important note: In connection with system-wide printer drivers that intercept and pass on Calamus print data (e. g. VDIPrint and NVDI printer drivers), it is important that the host system on which Calamus is running leaves enough RAM free in order to be able to actually pass on the print data. In the System parameters module you can set the minimum amount of RAM that is to be left free for the operating system to use, both for ST-RAM and also for TT-RAM (or corresponding memory regions available to the operating system).

In former SL versions the standard value of RAM that Calamus left free for its host system was always set to 128 KB. With today's computer and RAM requirements, it is hardly surprising that some A4 pages only appeared at the laser printer after several minutes, because, say, NVDI had to make do with this 128 KB and hardly had room to pass on the print data.

Since SL99 the standard value has been moved up to 1 MB. Normally you should keep this value, or even set it higher rather than lower. If you were wondering why Calamus always has 2 MB less RAM than you expected available for use, you will now know the reason.

Calamus vector output

When converting vector to raster graphics, Calamus also requires memory temporarily – called a buffer. The size of this buffer is normally set to 128 KB. If you get error messages when constructing complex vector graphics, increase this value.

Misc. switches

Here you find several switches for various functions which are described as follows:

Save font paths

If you use a large number of fonts, then you are likely to have grouped the font files in some sensible order and stored them in corresponding subdirectories (folders). Although Calamus searches for a font file in all subdirectories of the specified font access path, this can take some considerable time with a large number of subdirectories and fonts.

However, if you select the "Save" button here, an "overall font directory tree" will be built up in memory and saved with the filename FILETREE.FNT in the font access path. This tree stores all found fonts showing the subdirectory that contains them. When launching Calamus, this overall tree directory file will be loaded into memory and the "location" of all fonts in this font access path made known to the program. If a font is required, Calamus only has to look in this font tree to access the desired font file without protracted searching. If a font is not found in the overall tree directory then the usual alert will appear (see Text style module). In that case the overall font directory tree can be rebuilt by clicking on "Try again".

As already mentioned: This function is only useful if you keep your fonts in subdirectories of the set font access path.

As long as your font collection does not contain any duplicated names, it is recommended you set the font access path "as high as possible" (so perhaps even at the root level of you hard drive partition, such as "F:\" for instance) and let Calamus search

through this partition once. After this you will find a new file named FILETREE.FNT on this partition containing all the fonts found.

If the "No" radio button is selected, on the other hand, Calamus will search again through the whole hard disk partition(s) for each font to be loaded.

System paths

The system paths can be specified either as relative or absolute. "Relative" means that all paths are specified relative to the Calamus folder. This is particularly useful if all folders associated with Calamus are contained within the CALAMUS folder. It is then very easy to copy the complete CALAMUS folder to another partition without losing the search paths, for instance.

Normally the "Relative" radio button should be selected, so that all access paths to folders within the CALAMUS folder are stored as relative, i. e. instead of "D:\Programs\Calamus SL\Printerdrivers" simply as "Printerdrivers". In certain cases though it may be sensible to store the paths generally as "Absolute". For instance, with multi-tasking operation it may happen that other programs "miss-set" the current Calamus system path, so that Calamus no longer knows which folder it is in. So if, say, you note that when saving the Calamus setup file the file path suddenly no longer points to the Calamus folder but to "C:\", for instance, you should on the one hand check which program is resetting the system paths, and on the other activate the "Absolute" radio button.

Equally, if your Calamus folders and access paths are strewn over several partitions, it is better to switch to "Absolute".

File selector

Here you can choose whether Calamus should use the handy Calamus file selector dialog, or use the file selector offered by the current operating system.

Warning: Some older TOS operating system file selectors cannot handle long filenames or multiple selections. So in case of doubt activate the "Calamus" radio button rather than "System".

Topline positions

If you choose the "optimized" mode here, the module bar and the coordinates bar will be placed best possible on the top screen border at each Calamus launch. This is the best choice for avoiding manual resizing when you work with various screen resolutions.

If you prefer a free placement of the mentioned bars, you have to choose the "custom" mode in order to keep your defined positions for these bars when Calamus starts the next time.

Import mode

Since almost all Calamus import drivers support the automatic import mode, we have predefined the "automatic" import mode in the CALAMUS.SET file. This means you will directly see the file selector which offers all available file formats according to the already loaded import drivers. When the import mode is set to "manual", the object selector dialogs opens first, where you have to select an import driver yourself. In the manual mode, you can only load data which are supported by the selected import driver.

According to the set import mode, you can toggle the mode temporarily by pressing [Ctrl] when you call the file menu entry "Import" without changing the mode in this dialog.

Output format

Date

In some countries the date is displayed in a different format to that in Germany (in America for instance as 12–31–2001 i. e. as month-day-year, in the U. K. as 31/12/2001 i. e. day/month/year, while the ISO international standard has 2001–12–31, i. e. year-month-day). You can set the format in this editable field, where "D" will be replaced by the day, "M" by the month and "Y" by the four-digit year. With a preceding "0", single-digit days or months will also start with a 0. A lower case "y" will output the year as a two-digit number.

Here are some examples for the 31st of January 2001:

0D.0M.Y 31.01.2001
D. M.Y 31.1.2001
y-M-D 00–1-31
D/M/y 31/1/01

Time

You can set the format in a similar way to the date. "H" represents the hour, "M" the minutes and "S" the seconds. The minutes will always be output with a preceding "0", for hours you can optionally do the same with "0H". If a lower case or capital "a/A" appears in the editable field, then the time will be output only in a 12 hour format with a corresponding lower case or capital "AM" or "PM".

File preview: Delay

This value defines how long Calamus must wait until it calls the loaded preview drivers in order to create and show a preview for the selected file.

Help text

Help texts are always output ranged right in the Calamu menu bar. With the value in the "Position" editable field you determine how many character spaces are inserted at the right screen edge. So if you enter "2" here, for instance, the help text will be output as if there was room for two more characters at the end; in other words the help text will be moved 2 characters to the left. In this way you can keep, say, menu bar clocks or other output "clear" of the help texts.

Since SL99 you are able to define the foreground and background colours in which the help text will appear in the menu bar, of course in TrueColor mode as well.

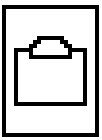
Warning: In the SL-WindowsPack the Calamus help texts, as usual under Windows, will be displayed at lower left of the window bar of the Calamus program window. Neither colour nor position settings will apply in this case.

Only when you use the SL-WindowsPack in FullScreen mode (i. e. without a visible Windows task bar) will the Calamus help texts be output at top right of the Calamus menu bar.

Active deadkeys

Here you can set which deadkeys (described in the Text module) should be active. Click on the keys you wish to use to activate them, and when entering text within the text editor these characters when pressed before other letters will produce accented characters for foreign languages.

2 Clipboard



Hold on a mo' – The clipboard module

Here you can store frames, texts and rulers temporarily for later use. External modules too can use the clipboard for their own data structures.

Are you familiar with a clipboard? It is a small wooden, metal, card or plastic "board" with a spring clip at the top. Here you can store papers temporarily (the clip holds them in place even if chaos reigns on your desk) and if you need them again later you can simply take them off the clipboard again.

Calamus has a universal clipboard in which you can store any number of objects (frames, text rulers, texts). You can use it for removing a frame from a page and inserting it another one, for instance. The second page may even lie in another document; when creating a new document all data in the clipboard are retained.

Additional modules can use the clipboard as well. The Clipboard module is the only permanently installed module. It is displayed in the Top row at far left and called up by clicking on its module-icon.

The Clipboard module has only a single function group.

There is room to display five clipboard objects in the function panel. To see further objects (if present), you can use the scroll-bar at the left edge of the list to browse through them.

2.1 Move frame from page

 With this function you can cut the currently selected object from a page and move it to the clipboard. This may be a frame (in the Frame editing module), a text ruler or text (in the Text module) and also any kind of object from an external module. To use the function select an object and click on the scissors icon.

The object disappears from the page and is placed in the clipboard, appearing in skeleton form in one of its fields. If no clipboard position was selected beforehand, the new object will appear as the last one in the list. Otherwise it will be placed after the selected object and will itself be selected. This means that you can easily paste (insert) the last object cut into the document again: Just click on the "Copy frame from clipboard" icon.

2.2 Copy frame from page

 This function works in a similar way to "Move frame from page", although the object remains on the page and a only copy appears in the clipboard. Whether this is a physical or virtual copy depends on the setting in the "Copy options" menu entry (see Options menu).

2.3 Move frame from clipboard

 This function works in exactly the opposite way to "Move frame from page". Before using it you have to select the clipboard position that contains the object to be pasted to the page. A click on this icon removes the selected object from the clipboard and inserts it in the document – even if this is completely different page to the one it was copied or moved from. If this object is not currently visible in the clipboard, a corresponding alert message appears.

You can use this function for copying or moving objects between two different pages or even between two different documents. Afterwards the object before the one acted on will be selected in the clipboard.

2.4 Copy frame from clipboard

This function works in just the opposite way to "Copy frame from page": The object from a selected clipboard position will be pasted to the current document page, though a copy remains in the clipboard so that you can copy it to other pages as well, for instance.

2.5 Delete frame from clipboard

To delete an object from the clipboard, click first on the appropriate position in the clipboard and then on the trashcan icon.

If you have selected an object both in the clipboard and in the document you will get the following alert:

In this you can decide which of the two objects – if any – should be deleted.

As, due to the context sensitivity of the Clipboard module, this deletion function is available more or less in every module, we recommend that you place it on a keyboard macro so that the same key presses can call up this deletion function anywhere.

Tip: Why delete immediately? In most cases it will be enough (and steadies the nerves) to place objects and frames no longer needed in the clipboard.

3 Colour management

Colour management in Calamus is controlled by a so-called internal Calamus system module named COLOR.CLL. This means that though it is a module and so not a part of the Calamus kernel, it always has to be loaded. That is why instead of the usual module extender CXM it uses CLL (which stands for Calamus Link Library, and doesn't have much to do with the world of Windows).

In order for the Colour management module to make all its functions available, the Colour separation module (COL_SEP.CXM) has to be loaded into memory. (As usual, this can be done in the dialog that opens when you click on File / External modules).

For native colour calibration and colour separation working under Windows and Mac OS X some additional files are required:

Calamus WinPack

A native Windows DLL CalamusSeparation.DLL has to be placed into the SYSTEM subfolder in the Calamus folder. In addition, the file CALAMUS.ICC has to exist in the Calamus folder.

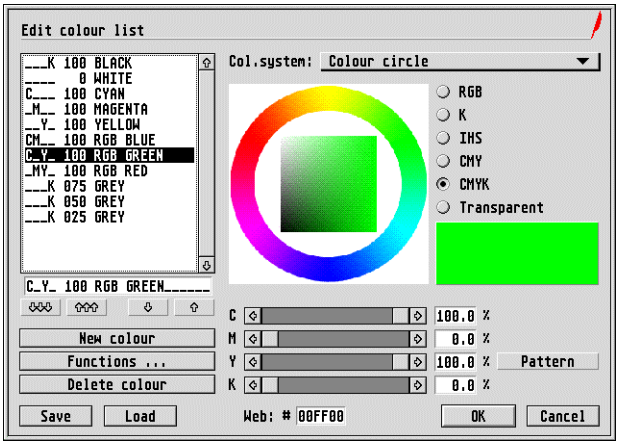
Calamus with MagiCMac X under Mac OS X

The native Mac OS library file CSLSeparation.lib as well as CALAMUS.ICC have to be placed in the MagiCMac X folder.

This module makes the so-called Edit colour list dialog available, which may be called from within various other modules. At present this is always the case, for instance, where you can see a function group in a module that displays the standard Calamus colour list.

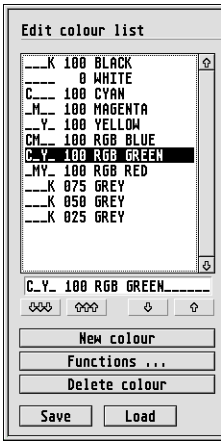
In these you can always call up the Edit colour list dialog by clicking on the tiny colour fields in front of the individual colour names.

You will then see the following dialog:



This dialog is subdivided into several areas, which are described extensively below.

Let us start with the left part of the main dialog, which displays the document colour list.



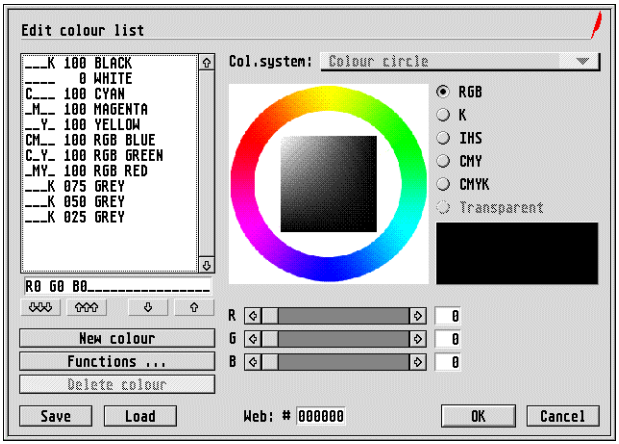
This document colour list shows the names of the colours currently in use in the document. (This always means colours in vector objects and frames, i. e. all frames apart from raster graphics frames, whose colours are not displayed here). If you are sure that the document uses some additional colours to those shown here, then these will be so-called "free colours" that have not yet been included in the document colour list. To do this, call up the Colour converter module (COL_CONV.CXM). All free colours found (those not visible in the document colour list) will be converted by this module into "visible" document list colours, which you can then modify in this very colour list.

Right at the bottom you will find various buttons that execute Copy, Deletion, Sorting and other functions directly in the colour list, or open up further dialog boxes. All these functions will be described extensively below.

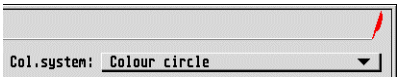
Free colours arise when you create a free colour via the "C/%" colour shortcut button in a function group that contains the Calamus standard colour list: Clicking on "C/%" opens a small dialog where the R-G-B values may be input. Close the dialog with [Return] and the free colour patch will appear together with its values at the head of the colour list, above "Transparent".

Another way that free colours arise is from importing vector objects, which often contain free (RGB) colours that are not included directly into the colour list during import.

Tip: You can also create free colours in the Edit colour list dialog. To do this, click on the currently selected colour in the document colour list while holding down the [Shift] key. This deselects the colour, and the name of the current free colour appears in the colour name line just below the document colour list, which you can now alter. Free colours are always defined as RGB colours, which is why the colour system popups are not selectable when altering a free colour.

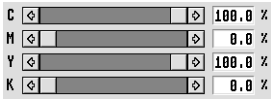


At the top of the right hand side of the colour dialog there is a popup in which you can choose various colour systems. At present three colour systems are available: "Colour circle", "Process / Spot colours" and "Palette colours". These colour systems are explained later on.



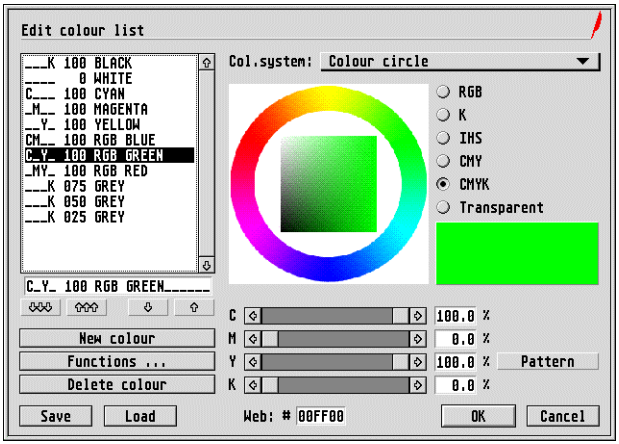
If the document colour list contains colours from several colour systems, then when selecting a colour (or scrolling through the colour list) the corresponding colour system with the values valid for this colour will be displayed automatically in each case.

Equally you should note that any alteration that you make in the right-hand side of the dialog (i. e. in the colour system) is immediately applied to the colour currently selected in the document colour list. On the one hand this allows you to change existing colours very quickly. But for experimenting with new colour settings be sure to create a "New colour" beforehand – to make sure that you do not destroy existing colour values!

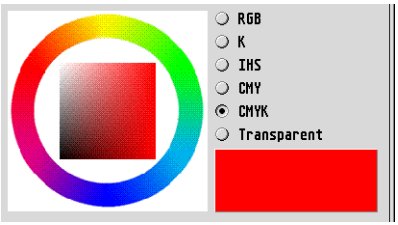


Below the colour system is the region of the colour sliders, in which – depending on the working layer – up to four horizontal sliders with different tasks may be used to define or alter colour values more accurately; when moving the sliders, their value is shown in the field to their right. Even greater precision may be achieved by clicking on these fields and typing in the desired values.

3.1 Colour circle



The colour circle is the first colour system offered to you by Calamus. You will see above all the colour circle itself, in which the fundemental colour areas of the RGB-CMY colour system of the 32-bit colours are displayed. Thus you can quickly get a feeling for the mixing of colours by clicking on a colour shade that is closest to the desired colour.

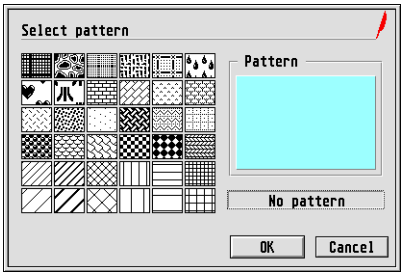


A colour square now appears within the colour circle, in which the colour clicked on appears at top right, and is mixed with various amounts of white towards top left and black at bottom left. If you click anywhere within the colour square (and only then!), the colour that you have clicked on will be adopted as the colour value, and shown in the adjacent colour preview field immediately so that you can check your selected colour. You will also see the colour value reflected in the respective colour sliders, with numerical readouts to their right.

At the right of the colour circle you are offered various colour systems for this 32-bit colour system. Please note that apart from CMYK all other colour systems are currently handled internally by Calamus with 24-bit colour depth. Therefore the following applies: RGB is internally the same as CMY or as K or as IHS. Only CMYK is really a 32-bit colour, which is already pre-separated for the colour separations into the four process colours of the Euroscale. If you are not familiar with colour separation processes, please choose for your own document colours directly the pre-separated CMYK colours if possible. In this way you can read off directly from the four colour sliders of a CMYK colour how large a portion of this colour will wind up in each of the four films when you imageset a document with this colour.

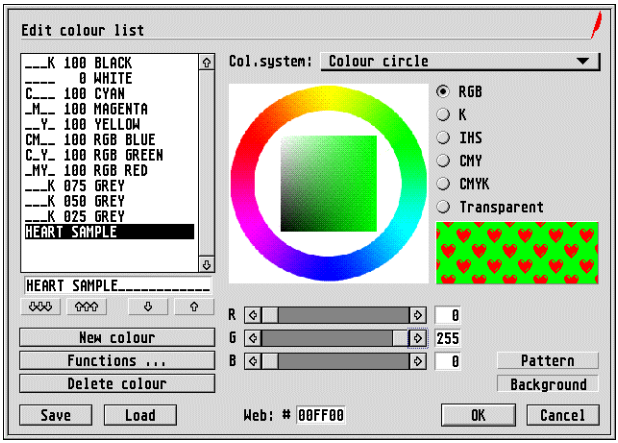
Colour fill-patterns

The colour that you define need not be just a plain colour, but may also be modulated by one of 24 different fill-patterns. To do this, please click on the "Pattern" button, which opens the following dialog box:

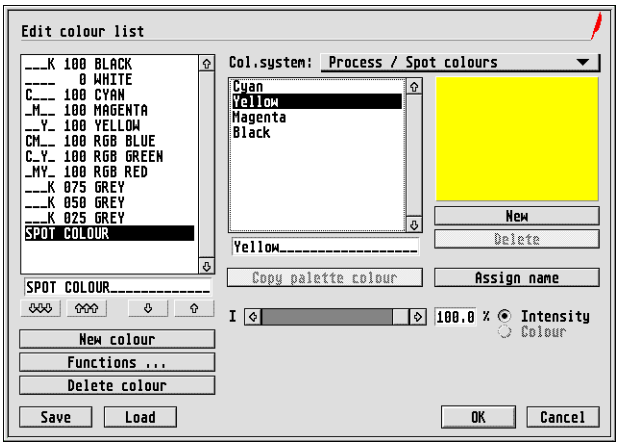


If you click on one of these fill-pattern fields, then the previously plain colour field will display the dark parts of the chosen pattern in that colour, normally contrasted by a black background.

When you close the dialog afterwards, you will see a new "Background" button. This button is only visible if you have assigned a fill-pattern to a colour. If you click on this button, you can use the colour sliders to define a colour other than the preset black as a background of the coloured fill-pattern. You can even choose the colour system for this colour freely.



3.2 Process and spot colours



This colour system is often wrongly understood, which is why we explain here first of all the difference between process and spot colours.

Process colours in Calamus should be understood as the four preset colours available for the whole Calamus Colour management system: C (Cyan), M (Magenta), Y (Yellow) and K (blacK or contrast). This does not mean arbitrary shades or tints of these colours, but strictly defined colour values that are used in the so-called Euroscale, which is uniformly used in Europe for four-colour printing.

Please note that at present it is not possible to simulate other process colour systems in Calamus, such as SWAP or similar. The colour separation in Calamus is only realized as Euroscale four-colour separations.

During colour separation, a continuous-tone coloured document is split up into four separate parts, one for each ink colour. In professional use these are each output on an imagesetter to a separate film, which is used to produce a printing plate for this colour. Different intensities of each colour are produced via the rasterizing process, which breaks up tones into a series of closely-spaced dots whose spacing (or size with some printing processes) determines the intensity of the printed colour – the further apart (or smaller) they are, the lighter the colour will be at that position.

A spot colour is a freely chosen colour that is added in a separate printing step (or even in a different printing works) to the four process colours C-M-Y-K. In general it costs less to print than separated process colours and may be used instead of them for documents that only use one (or a few) solid colours apart from black. But it can be used equally well together with process colours to produce large solid areas of colour.

Each spot colour requires its own film to produce a suitable printing plate and uses an ink that is pre-mixed to give just one desired shade or tint which is fed from its own ink reservoir on the printing machine. Unlike process colours it is printed "solid", without a screen or rasterization. Note that it may be a metallic colour such as gold, silver or bronze, for instance; it may equally well be a firm's customized "house" colour. BT blue, Royal Mail red or German Post Office yellow are typical examples of house colours as spot colours.

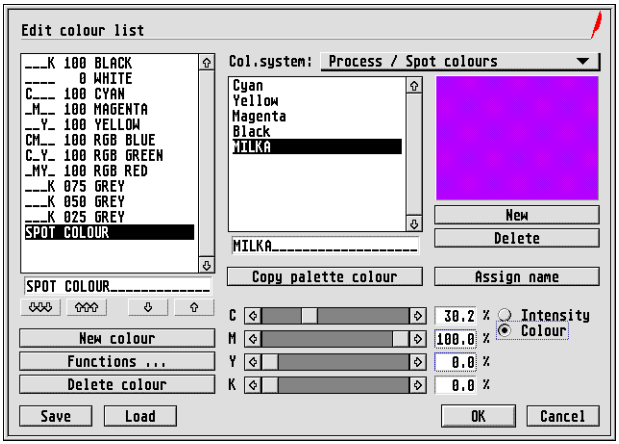
A spot colour can also be a "print lacquer", a clear coating that is used in some types of printing to add brilliance to printed colours. As this print lacquer often covers the 4-colour printing (though with printed packaging, for instance, some areas that will later carry adhesive address-labels may have to be kept uncoated), this printing process will require its own print-film.

In Calamus you can not alter the four process colours C-M-Y-K. The only thing you can change are the names that represent these colours. This may be useful when preparing separation films for foreign print works; for German printers you may prefer to use "Zyan" in place of "Cyan" and "Gelb" instead of "Yellow" etc. These colour names will be output in the margins alongside the picture during printing or imagesetting.

To create spot colours, first make sure an entry is selected in the colour list on the left (if necessary click on "New colour" to place one there), select "Process /Spot colours" in the "Col.system" popup and then click on the "New" button under the colour patch on the right. A copy of the currently selected process or spot colour will be created and added to the (central) list. You can now change both the name and colouring of this newly produced spot colour. Note that the colouring is only required originally for the screen representation, since each spot colour will be imageset as a separate film. So if you want to have a "Gold" spot colour, it is sensible to alter the colour name produced after clicking on "New" from, say "Cyan #2" to "Gold". After this switch from the "Intensity" to the "Colour" radio button to let you assign a CMYK colour mixture to this new spot colour. With gold it is recommended that you mix Y with M until you like the resulting colour in the colour patch.

But as soon as the radio button "Colour" is selected you can also take directly the already preset CMYK colour values of a palette colour in order to assign them to a spot colour. It may be quite sensible to create an HKS-colour, for instance, not as a palette colour (see below) but as a spot colour. This was you can choose subsequently during imagesetting whether the colour (say HKS 25) should be output to its own print film, or whether the preset CMYK colour values that form the basis of this palette colour as well as the spot colour should be output as colour separations instead. In that case no separate film would be output for HKS 25, but its colour portions would be distributed over the four C, M, Y and K films.

If you click on the "Assign name" button once you have achieved the desired colour mixture, the selected spot colour name will be included in the document colour list (at the left of the dialog); this saves you having to type in the spot colour name again in the document colour list.



If you want to use spot colours at a reduced the intensity (say 50 % BT blue or 25 % gold), proceed as follows:

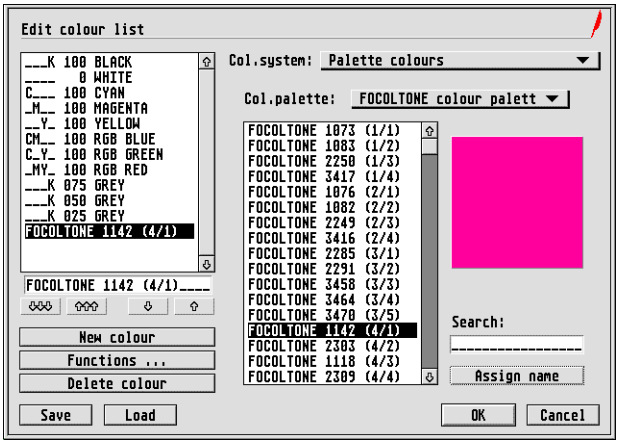
First create a new document colour in the list on the left with "New colour".

Next create a spot colour of the desired hue as described above and leave its intensity set to 100 %. Assign the name of this spot colour to the document colour. This includes the 100 % colour in the list.

Now copy the document list spot colour (click once more on the "New colour" button). The new colour automatically adopts all the values of the 100 % spot colour. In the "Process / Spot colours" part of the dialog you can alter the Intensity slider for this new colour to, say, 25 %. Now alter the name of the copied spot colour in the document list so that you can recognize that it has reduced intensity (for instance "Gold 25 %").

It is not sensible to create the spot colour in the colour system itself (the list on the right) again and keep it there with an intensity of 25 %. When you later output that spot colour during imagesetting, the result would be not just one film for this spot colour (with different spot-colour intensities), but that several films would be produced. This is normally not what you want.

3.3 Palette colours



The "Palette colours" colour system is only available if you have loaded at least one colour palette module. The Calamus SL standard package at present includes the color systems HKS, Focoltone and Pantone.

If more than one colour palette has been loaded, then you can use an additional "Col.palette" popup to switch between the colour palettes.

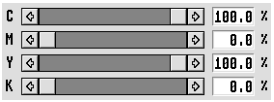
Palette colours are pre-mixed colours that always lie in the CMYK colour system, so contain 32-bit colour information, and they cannot be altered by the Calamus colour separation process. If you use the HKS 25 colour in a document, for instance, and imageset this document via colour separations, you will get the same four colour printing films (C-M-Y-K) as if you had not used an HKS colour. This HKS 25 colour is available already CMYK-separated, so that no further print colour film has to be produced during imagesetting. The values that represent the colour shade HKS 25 can be distributed directly during imagesetting to the four process colour print films C-M-Y-K (and rasterized accordingly).

Please note when using palette colours that on principle these cannot be 100 % identical to the original colours of the individual palette systems. An original HKS 25 colour as a spot colour is simply something different to an HKS 25-approximating mixture of the four process colours CMYK, even if they approach HKS 25 as closely as possible.

With the "Search:" field you can find the desired quickly in long colour palette lists. If you then click on the "Assign name" button, the relevant pallette colour name will be

assigned to the colour entry in the document colour list (at the left of the dialog). This saves you having to type in the palette colour name again in the document colour list.

3.4 Colour sliders

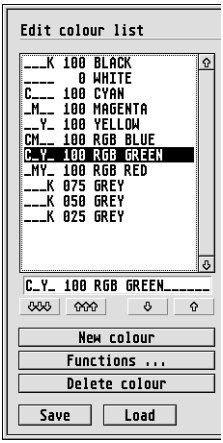


The colour sliders display the current values of a colour in the according system, i. e. percentage (%) for CMYK, CMY and K colour values, real integer values (0–255) for RGB and saturation (0–360 degrees) for the IHS' S value.

As there are 8 bits per colour available in TrueColor with 32 bit colour depth, and you can "only" represent 256 values with 8 bits, it is not possible to alter the colour values in per-mill (thousandth) steps. Therefore you will find that when typing in colour values or scrolling the sliders the numbers will be rounded off to apparently arbitrary values. This is due to this conversion of 256 values to a 100 percent scale.

With a double-click on the left or right arrow of the horizontal colour sliders you can make their value jump to their start resp. end position respectively. The [Tab] key too can be used in the sliders, making the most varied inputting options available.

3.5 Colour list



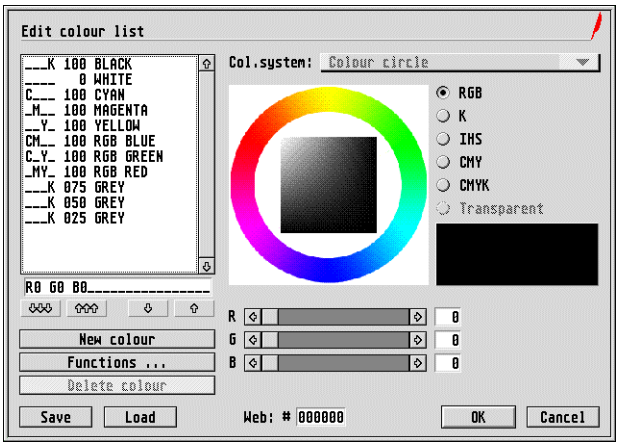
Below the colour list you will find some arrow buttons which let you reorder the colour list quickly and easily. The buttons act on the currently selected colour in the document colour list and move it one line up or down (single arrows) or to the start or end of the list (triple arrows) respectively.

Further sorting functions for the colour list will be found in "Enhanced colour functions" – see below.

3.6 Colour list buttons

The "New colour" button enters a new colour into the document colour list. If the list already contains colour entries, then the colour selected last will be copied and its name adopted for the new colour.

If you want to create a "free" colour (a new one not present yet) then you have to first deselect the document list colour. To do this hold down the [Shift] key and click on the currently selected colour entry.



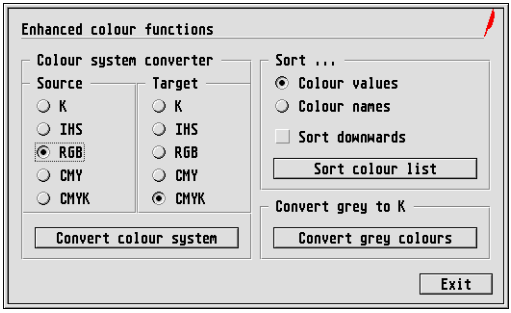
Now you can create a new free colour. It will not appear in the document colour list (until you use the COL_CONV.CXM module to incorporate it or click on the "New colour" button).

The "Delete colour" button removes the currently selected colour from the document colour list. If this colour has not been used previously in the document then no further message appears regarding this deletion. Otherwise you will be requested to choose another colour from the list of other document colours to replace the one to be deleted. Note that if you do not choose a replacement you can not delete the colour!

The "Save" and "Load" buttons write the current colour list with the extender CFT (Calamus Farb-Tabelle = Calamus Colour Table) to a file or load a list into the Edit colour list dialog respectively. During loading you have the option of supplementing an existing colour list with the new list, or overwriting it. If you cannot load a colour list, check whether the Document converter (DOC_CONV.CXM) has been loaded. Because even Calamus colour tables are documents, which have used different formats over the years and so may have to be converted into the current format.

Tip: If you want Calamus to make a given colour list available at program launch, save the desired colour list with the name DEFAULT.CFT in the MODULES folder!

3.7 Enhanced colour functions



If you click on the "Functions ..." button, a further dialog box appears in which you can modify the complete colour list in various ways.

The left half of the dialog controls a Colour system converter. If you want to convert all colours that are present in a given colour system to another colour system, use the functions in this area. If, say, you wish to convert all RGB colours, click on the corresponding radio button at left under "Source" and on that of the desired new colour system (such as CMYK) under "Target" on the right. A click on "Convert colour system" button converts directly all RGB colours of the whole document colour list to CMYK colours. You will be returned immediately to the Edit colour list main dialog.

If you wish to sort the whole colour list, then you have various sorting modes available in the top right panel. Select the desired mode and click on "Sort colour list". All colours of the document colour list will be resorted immediately and you will be returned to the main dialog once more.

The "Convert grey to K" panel is a special form of the Colour system converter. It converts all grey values in the document colour list (i. e. all values in the "K" system, all identical values in RGB and CMY colour systems) into the correct, pre-separated CMYK colour values. This means, for instance, that K30 will be turned into C0 M0 Y0 K30. Simple switching of the colour system from K to CMYK would produce C30 M30 Y30 K0 instead. The result of this would be that when imagesetting this grey value, nothing at all would appear in the black separation film while 30 % would be output in each of the three C-M-Y colour separations films. In itself that wouldn't be too

serious, but with offset printing, for instance, the result is never really a 30 % grey but a muddy brown between 40 and 50 %. A simple switching of R0 G0 B0 (RGB black) to CMYK would result in C100 M100 Y100 K0, which offset printing would reproduce as a muddy black made up from cyan, magenta and yellow, whereas a 100 % black in the black separation film was actually desired. The Convert grey to K converter will produce the required result by converting the above-mentioned RGB black correctly to C0 M0 Y0 K100.

So for safety's sake, don't forget to make use this function of the grey to K converter before outputting the data for imagesetting.

4 Colour palettes

4.1 HKS palettes

The HKS modules (E, K, N and Z) makes the HKS palette colours available directly in the colour dialog. You can now transfer individual HKS colours to the colour list and then work with them almost as with normal colours, though it is not possible to alter the process colour values as these already correspond to the ideal values.

The HKS modules make available percentage values of the process colours that are optimized for standard printing output. With it you will get the best possible approximation in the printed output to what you see on the screen, though with some colours it unfortunately does not always correspond to the ideal. The colour reproduction on the screen is greatly dependent on the monitor as well as the graphics card used.

4.2 Focoltone palette

The Focoltone module makes the Focoltone® palette colours available directly in the colour dialog. You can now transfer individual Focoltone colours to the Colour list and then work with them almost as with normal colours, though it is not possible to alter the process colour values as these already correspond to the ideal values.

The Focoltone module makes available percentage values of the process colours that are optimized for standard printing output. With it you will get the best possible approximation in the printed output to what you see on the screen, though with some colours it unfortunately does not always correspond to the ideal. The colour reproduction on the screen is greatly dependent on the monitor as well as the graphics card used.

4.3 Pantone palettes

The EC and PC Pantone palettes offer the Pantone palette colours directly in the Calamus colour management dialog. You can take single Pantone colours to your colour list and use them almost like normal colours. It is impossible to change their print colour values as these are fixed already.

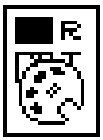
The Pantone palettes offer optimized percentage values for the basic print output. This gives best possible approximation results but are not perfect in all colour definitions. The monitor colour representation depends much from the used monitor and graphics card.

EC stands for "European process version of the PANTONE Color on coated paper". The Pantone EC palette contains the colours of the "Pantone color bridge CMYK EC" by Pantone, Inc., for CMYK print methods on coated papers, used mainly in Europe.
PC means "Process version of the PANTONE Color on coated paper". The Pantone PC palette contains the colours of the "Pantone color bridge CMYK PC" by Pantone, Inc., for CMYK print methods on coated papers, used mainly in Northern America and Asia.

Remark: The CMYK colour values of these Pantone colour palettes have been defined by Pantone, Inc., in April 2005. These CMYK colours are only approximations to the original Pantone spot colours, without any warranty. PANTONE(R) and other Pantone trade marks are property of Pantone, Inc.

invers Software respects all trade marks and copyrights. The used data are available at Pantone for the public.

5 Colour dialog opener

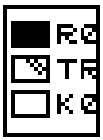


The large Calamus colour dialog can be opened from modules which use a color list in a function panel.

This tiny CXmy module offers direct access to the Calamus colour management. When you click the function icon, the Calamus colour dialog opens (in "Free colour" mode).

If you find those tiny colour pads in the colour lists of other modules too small or need a macro for opening the colour management dialog, even if no other modules with a colour list are loaded, just use this little help tool.

6 Colour list converter



If you want to keep full control of the colours used in your document, call up this module before imagesetting or colour printing at the latest.

The Colour list converter (COL_CONV.CXM module) converts all free colours that are present in a document to colour list colours.

Free colours are always tied to the object for which they were created. In addition they are always stored as RGB values. The conversion to list colours therefore brings several advantages:

- List colours can be altered for the whole document at one time.
- List colours may also be defined as CMYK values.

Application

Call up the module in the File menu with "External modules" (if necessary load it first) and when it is selected, click on "Execute" in the dialog. A small query dialog appears:

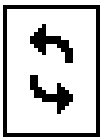
Confirm the query with "Yes". Everything else happens automatically.

At the end of the conversion process the number of free colours found and converted will be displayed.

Technical details:

The module always attempts to make do with the colours already present in the list and to use them. This prevents the creation of countless numbers of identical colours. Newly generated list colours are given the three RGB values of the free colour, e. g. "R100 G49.8 B0".

7 UNDO module



UNDO = Take back an action.
REDO = Restore an action that has been taken back.

The UNDO module offers the possibilities of an UNDO and REDO to many functions, i. e. taking back an executed action and restoring again an action that has been taken back respectively.

The UNDO module works very closely with Calamus and uses its newly introduced Inspector technology to recognise and log actions that have been performed by individual modules, as well as making them available for UNDO and REDO functions.

The most important functions (above all the Frame editing module) have already been restructured to use the UNDO methodology, but the majority of the modules for Calamus SL have not had all their functions adapted for it as yet. Please note that the actual UNDO capability always resides in the module that executes the function. The UNDO module is just a coordinator for these functions. In future, therefore, repeated intermediate updates of individual modules will be published when more of their functions have been made UNDO-capable.

Please note also that various standard package modules and separately sold modules (for instance the Align tools, LineArt, Eddie, Paint) already have their own, in part very powerful, UNDO methods.

7.1 UNDO list

The UNDO module has its own function area that offers a scrolling list of the UNDO functions and some function icons. The method of use is explained below.

7.1.1 One step back

When you click on this icon the UNDO-list will be executed one step up towards the start of the list, or in the direction "past". This means that a further step whose action has been recorded, or executed again with a REDO, is taken back (UNDO).

7.1.2 One step undo/redo

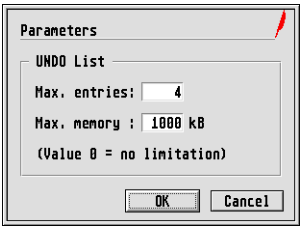
If you want to disregard any list entries and/or require an UNDO/REDO that can be executed with a single keystroke, then create a macro that records a mouse click on this icon. This One step undo/redo does not affect the list, but always swaps only the actions executed last.

7.1.3 One step forward

When you click on this icon the UNDO list will be executed one step down towards the end of the list, or in the direction "future". This means that a further step that has been taken back with an UNDO will be executed once more (REDO).

7.1.4 UNDO parameters

When you click on this icon the following dialog opens:



Here you can define two values:

Max. entries

If you enter a value greater than zero here, then just this number of list entries will be memorised, not more. If the list grows above this value, then the list entries recorded first will be deleted (FIFO principle: "First in, first out!").

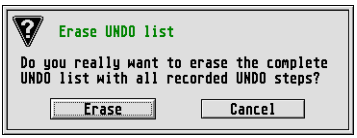
Max. memory

The UNDO mechanism takes up memory, in some circumstances quite a lot. Give a thought to what happens in practice when you delete, say, a 100 MB TIFF image with a mouse click. So that it may be restored again with an UNDO later, this mass of data has to be stored somewhere. At present this will be in RAM memory. To prevent your RAM memory from overflowing completely at times so that you are unable to continue working with your document, it is sometimes sensible to limit the amount of memory available for the UNDO function. (A value of 0 means no limitation).

You can save both values for the next call of the UNDO module in the Calamus Setup file with the "Save system settings" entry in the Options menu.

7.1.5 Erase UNDO list

When you click on this icon the current UNDO list will be deleted completely. As these UNDO steps are lost irrecoverably after this, which could lead to permanent loss of data, a safety query appears first:



7.1.6 Recorded actions

This list shows the UNDO actions that have been recorded so far. The individual actions have names that are assigned by the corresponding module, say "Delete frame" (from the Frame editing module).

This list serves in the first place for visual control of the current state of the UNDO/REDO mechanism, as the current step is displayed in inverse video (normally the last entry in the list).

Clicking on individual list entries has no effect, as jumping about in the list is not possible for technical reasons. Think about this a little: If you did not wander backwards step by step towards the start of the "history" of your document creation, but could just leave out some steps, then it could happen that you try to restore (or delete) frames that don't even exist in the timeframe that you have jumped to in the list.

Do you know the film trilogy "Back to the Future"?

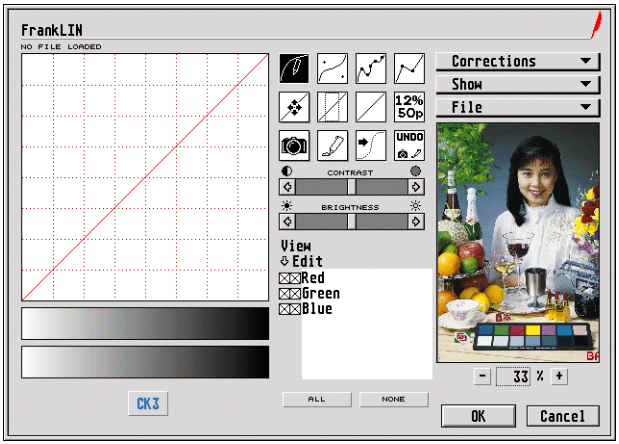
Please do not mistake – with full sympathy of this wish – the UNDO mechanism of, say, Photoshop with that of Calamus: Photoshop offers the possibility to jump back and forth in its UNDO list. But – Photoshop can only edit a single picture at a time. In Calamus the UNDO mechanism must be able to restore any kind of actions in a document that have been performed by modules about which Calamus cannot know exactly what they are doing.

The actual UNDO methodology is contained in each individual module; the UNDO module just coordinates it. So if some functions of some modules are not yet UNDO-capable then this means that the UNDO methodology has not yet been incorporated or supplemented in these modules.

8 FrankLIN

FrankLIN is a control curve editor module that replaces the built-in Calamus SL control curve editor and offers you a user friendly interface as well as a number of new functions.

If you would like to work with FrankLIN, you first have to load the FRANKLIN.CXM module with the "External modules" menu entry of the File menu. As a rule it pays to make it available permanently with "Save system settings" in the Options menu once it has been loaded. After that, you only have to select a filled raster graphics frame and click on the Set control curve icon in the "Special functions" function group of the Frame editing module. FrankLIN then opens its main dialog box:



Apart from its drawing functions, FrankLIN is fully macro recorder-capable. This applies also to the UNDO function and popups, because in addition to selecting with the mouse they can also be operated from the keyboard:

CURSOR UP/DOWN
: Select entry

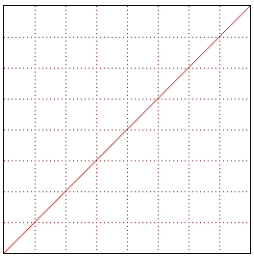
ENTER/RETURN
: Select entry, close popup

UNDO
: Leave popup without executing function

The current version number of FrankLIN will only be displayed at present when the "Execute" button in the module selector box is activated, either while loading the module or later when opening it with "External modules" of the File menu with the name "FrankLIN" selected. The information box for the FrankLIN module will appear.

You can choose the colour(s) for which the control curve data should be displayed and edited – see below. FrankLIN differentiates between control curves you can view and those you can edit. Those selected for viewing are visible but can not be altered. Those selected for editing become visible and may be altered with the tools described below.

8.1 Drawing tools



The single largest part of the FrankLIN dialog is the control area graph. This contains the control curve data obtained from the graphic frame and allows it to be edited (modified). Various tools are available to do this. When changing from one mode to another, FrankLIN asks whether the data should be converted.

You can move between the individual tool modes as you like, and FrankLIN will try to convert the data appropriately as well as it can. Due to the special properties of Bézier curves it is not possible, however, to convert other tools to a Bézier, though the Bézier can be converted to all other tools. And all others between each other as well, of course!

Incidentally, the Bézier control point data will not be lost when quitting FrankLIN. Rather they are "linked" to the document, and when called, FrankLIN checks whether there are suitable control points in the passed data. If there are, it will use these and if not, use the passed data.

8.1.1 Freehand drawing

 If the "Freehand" icon is selected, the mouse pointer behaves like a pen in the control area: While the left mouse button is held down it modifies the control curve data to match the mouse movements.

The control curves in this mode will be drawn freehand, in other words pixel by pixel wherever you move the mouse with the left button pressed over the control curve coordinates area.

This is the traditional way, also used in Calamus' old control curve editor.

Attention: If the [Alt] key is held down as well as the mouse button, you can draw a precisely vertical line. If one of the [Shift] keys is held down, you can draw precisely a horizontal line.

8.1.2 Bézier

 In Bézier mode the control curves each have a movable start and end point as well as two control points. By moving any of these four points (dragging them with the left mouse button pressed) you can achieve smooth curvature of the control curve.

Other curve shapes can not be recalculated to a Bézier shape, unfortunately! Why? Because it is not possible (or highly complicated) to convert something to a Bézier, as these have certain mathematical restrictions applied to them (no more than one point of inflexion, maximum of 2 extremities, 3rd order function). To put it plainly: One would have to build in a vectorizing function, which would far exceed the scope of a control curve editor.

8.1.3 Spline

 The "Spline" tool creates a spline interpolation through any number of reference points. A mouse click in the control area graph where there is no reference point adds a new one, which can be moved freely as long as the mouse button remains held down. All reference points can of course also be moved subsequently – just drag them with the mouse while holding down the left mouse button. To delete an individual reference point, just drag it up or down outside the control area.

In the Spline mode you can achieve smooth, harmonic curves built up from several curve points. This mode is also well suited for creating curves from numeric data input.

The points set in this mode have a 3-pixel snap radius: If you try and place them closer than this, only a single point will be set. Note that the snap radius for Spline mode

working is only effective when a curve point is newly created with the mouse click and not when it is moved to a different position. Thus reference points may be moved flush up against each other without deleting the neighbouring point when coming closer than 3 pixels to it.

8.1.4 Polyline

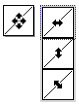
 The Polyline mode generates control curves made up of several short straight-line sections. Each mouse click generates a new section. On occasion the position of a mouse click may unite smaller sections to a new, longer one. The curve points may be dragged to a new position either when creating them, or afterwards by clicking on them and holding down the button while moving the mouse.

The points set in this mode also have a 3-pixel snap radius: If you try and place them closer than this, only a single point will be set. The snap radius for Polyline mode working is only effective when a curve point is newly created with the mouse click and not when it is moved to a different position. Thus control points may be moved flush up against each other without deleting the neighbouring point when coming closer than 3 pixels to it.

8.2 Functions tools

Among the tools you will find several icons coupled to certain functions that can be applied only to modified control curves:

8.2.1 Control curve popup



With FrankLIN the control curves can be subjected to comprehensive mirroring operations. A click on the "Mirroring" icon opens an icon popup offering a choice of horizontal, vertical and 45° bisector line reflection of the control curve.

In this popup you can choose three different operations for changing the direction of control curves:

Mirror control curve(s) vertically

The control curve(s) that is/are currently marked for editing will be mirrored vertically (i. e. reflected along the horizontal centreline).

Mirror control curve(s) horizontally

The control curve(s) that is/are currently marked for editing will be mirrored horizontally (i. e. reflected along the vertical centreline).

Mirror control curve(s) at 45° bisector line

The control curve(s) that is/are currently marked for editing will be mirrored along the 45° bisector line (i. e. along the diagonal).

8.2.2 Neutralize control curve(s) partially

With this icon a portion of the modified control curve(s) can be neutralized – i. e. restored to its original 45° bottom-left to top-right state. After clicking on the icon, select the portion of the control graph area to be neutralized while holding down the left mouse button (the coordinate display at top right can be helpful here). If you confirm the following safety query, the data of the marked area for all control curves that are currently marked for editing will be reset to its original state.

8.2.3 Neutralize control curves completely

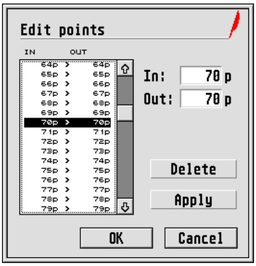
To restore all altered control curves, just click on this icon. If you confirm the following safety query, all changed data for curves that are selected for editing will be

erased so that a "Freehand" control curve will be set to a 45° diagonal line with value pairs (0,0) to (255,255). For a "Spline" or "Polyline" control curve all reference points will be deleted and the start and end points will be reset to the respective corner values, thus neutralizing the curve(s) selected for editing.

8.2.4 Edit control points

This unpretentious button hides a powerful function: A further dialog opens, containing a list of all curve points (Freehand mode) or reference points (Spline or Polyline mode) of the top control curve being edited. These values may be changed and any changes made will be adopted by the current control curve when quitting the dialog with "OK". If several control curves are switched on for editing, then FrankLIN will ask whether any changed data should be adopted by the top or all control curve(s).

Note that this function is not available for Bézier curves where it would be misleading – the icon disappears if the Bézier mode is selected.



These points can now be edited: A click on the relevant entry in the list transfers the "In" and "Out" value pair to the editable fields. New or altered values will be included or replaced in the list by clicking on the "Take" button. With "Freehand" curves, the "Delete" button resets the selected "Out" value to the "In" value, as such control curves have to contain exactly 256 value pairs, so cannot have more or fewer; with "Spline" curves the selected point is deleted, if present.

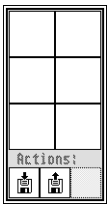
By clicking on the unit following the editable fields ("p" or "%") you can switch between greyscale values (curve points) or percentage values for input as well as the listing.

The "In" values represent the X position of the mouse cursor in each case. They are the greyscale values that an image has before being affected by the control curve, for instance.

The "Out" values on the other hand represent the Y values associated with the respective "In" values. To put it another way, the original greyscale values of an image (In

values) will be converted to these values by applying the control curve function.

8.2.5 Clipboard



A clipboard is a temporary storage area for data. FrankLIN offers this function for storing control curves. Due to its conception as a dialog box, a (sensible) tie-up with Calamus SL's own clipboard is not possible, unfortunately. But that does not matter, as FrankLIN has its own clipboard with six slots, which is hidden behind the "Camera" and "Tube of glue" icons.

To fill a slot, you only have to click on the camera icon and then select a slot in the popup that opens. This copies the topmost control curve selected for editing together with the current tool into the slot. For information a thumbnail picture of the control curve is created and displayed in this slot. The data remains in the clipboard as long as FrankLIN remains loaded in Calamus, or until the slot has a new curve assigned to it, or a clipboard set is loaded into the module.

To extract a control curve from the clipboard again, click on the "Tube of glue" icon and select the desired control curve in the clipboard popup. This control curve will now replace all curves selected for editing.

The whole clipboard set can be saved (and saved sets loaded) with the floppy disk icons under "Actions" in the popup, so that they will not be lost if you remove the FrankLIN module or quit Calamus. Clipboard sets have the file extender "FCL".

To ensure compatibility with itself as much as possible, all control curves are stored in the slots together with the tool mode used for creating or last editing them. If you have switched to a different tool mode from the stored one and you extract the curve from the clipboard, FrankLIN attempts to convert the data as well as possible if you answer "Yes" to the alert (c. f. conversion with different tools, above); answering "No" leaves the curve(s) as before.

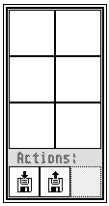
Copy control curve(s) to clipboard

 When this icon is selected, the clipboard popup opens and you can select a slot with the mouse in which the control curve is to be stored. For this the top control curve of those being edited will be copied over in each case, together with the tool currently being used for modifying it.

A clipboard set can also be saved or loaded in by just selecting the relevant disk icon in the clipboard popup.

Insert control line(s) from clipboard

 This icon is selected to copy a stored control curve into the control area (graph). The clipboard popup opens once more where the required curve slot can be selected.



Such copying affects all control curves currently marked for editing. This offers a fast way of duplicating an individual control curve, for instance.

The control curve(s) modified last will be defined as a model for a reference control curve. If the "Show" popup has "Reference control curve" checked then it will be displayed from then on and can serve as a model or reference for modifying any of the real control curves.

8.2.6 Reference curve

 Clicking on this icon adopts the current control curve in the working area as the reference control curve (see above). This can be useful if you want to adapt other control curves with the aid of such a reference curve. The reference control curve then lies in the background and can be used as a "model" for further control curve modification.

8.2.7 Undo buffer

FrankLIN has been given an Undo buffer, which is slightly different from the regular one. It does not always record the last action; instead, the buffer can be loaded by the user at any desired working step, and this memorises the data as well as the tool that is currently in use.

To load the Undo buffer, click on this icon. The buffer will be loaded automatically when FrankLIN is opened as well as when loading and saving control curve sets.

The contents of the buffer are recalled (which resets the control curve(s) in the working area to a previously stored state) with a click on the small tube at the bottom of the Undo icon. This acts as an Undo/Redo combination, meaning that the contents of the buffer is reconstructed in the graph and the conditions when triggering the action are loaded into the buffer. By selecting the icon repeatedly you can switch back and forth between the old and new states.

FrankLIN's Undo buffer is fairly intelligent and attempts to intercept any user errors. So it is not only possible to reconstruct the conditions before the Undo buffer was called, but also to return to the chaotic state reigning at the time that it was called (Redo). The buffer normally operates in the background, but can also be used actively:

Load Undo buffer

To do this you just have to select the small camera in the Undo icon. The current status (control curve type) and all control curves will be loaded into the Undo buffer. This function can also be called with a [Shift]+[Alt]+[Undo] key combination.

Read out Undo buffer

This function can be triggered by clicking on the small collapsible tube in the Undo icon, and serves to restore exactly the stored state. This means that the control curve will be converted to a different type if necessary, the tool as well, and naturally the control curves will be replaced by those from the buffer.

At the same time, however, the conditions at the instant that the Redo was triggered are loaded into the Undo buffer. In other words, there is a swap between the editing conditions and the Undo buffer conditions.

This function can also be called with the [Undo] key.

8.2.8 Change contrast

The Contrast slider serves to alter the effective contrast of the control curve(s) selected for editing. This can be done in various ways:

Linear

The contrast of the control curve(s) selected for editing is altered in a linear manner. This mainly alters the lightest and darkest portions of the image while the mid-tones remain constant.

To make linear contrast changes, just click the left mouse button on the arrows at the right or left ends of the bar for small changes, or on the shaded portions of the slider for larger changes. Alternatively you can grab the small white slider field with the left mouse button and drag it to a new position. (In other words, it behaves exactly like the standard GEM window sliders.)

Algorithmic (Gamma correction: 0)

The contrast of the control curve(s) being edited is altered in a manner where the lightest and darkest retain their values in the same way as the mid-tones, while the difference between the lightest and mid-tones and mid-tones and darkest ones is altered. For using the gamma correction the [Alt] key must be held down for all actions while clicking on the arrows or dragging the slider.

Numeric

Double-clicking on the white slider (in any position) brings up a popup where the desired change can also be input numerically. The measurement unit changes between

"p" (curve points) and "%" according to the selection made in the "Edit control points" dialog. If the [Alt] key is held down during the double-click, numeric changes too will follow the gamma correction algorithm. Note that in both cases the changes this produces are cumulative – i. e. they refer to the current curve shape or position; positive values decrease the contrast while negative values increase it. The slider position does not change when making numeric changes, and may be used independently.

8.2.9 Change brightness

The Brightness slider serves to alter the effective brightness of the control curve(s) selected for editing. This can be done in various ways:

Linear

The brightness of the control curve(s) selected for editing is altered in a linear manner. Actually this just moves the control curve(s) vertically so that each output value is increased or decreased a little.

To make linear brightness changes, just click the left mouse button on the arrows at the right or left ends of the bar for small changes, or on the shaded portions of the slider for larger changes. Alternatively you can grab the small white slider field with the left mouse button and drag it to a new position.

Algorithmic (Gamma correction: 0)

The brightness of the control curve(s) being edited is altered in a manner where the lightest and darkest retain their values whereas the mid-tones are increased or decreased by up to 50%.

For using the gamma correction the [Alt] key must be held down for all actions.

Numeric

Double-clicking on the white slider (in any position) brings up a popup where the desired change can also be input numerically. The measurement unit changes between "p" (curve points) and "%" according to the selection made in the "Edit control points" dialog. If the [Alt] key is held down during the double-click, numeric changes too will follow the gamma correction algorithm. Note that in both cases the changes this produces are cumulative – i. e. they refer to the current curve shape or position; positive values increase the brightness while negative values decrease it. The slider position does not change when making numeric changes, and may be used independently.

8.3 Corrections popup

FrankLIN offers some automatic functions for correcting control curves. This can be a particular advantage if, say, an otherwise satisfactory set of control curves exists for a picture but it shows a colour-cast that is to be eliminated.

These functions depend on the current control curve type and hence are not always available:

Colour-cast correction

Clicking on the "Corrections" button opens a popup where you can select one of the primary (R, G, B) or secondary (C, Y, M) hues that is to be corrected. Selecting one of the entries opens a numeric popup where you can input the desired value for the change. Again the measurement unit changes between "p" and "%" according to the selection made in the "Edit control points" dialog. Positive values increase and negative values decrease the amount of the respective colour.

Light/Darkness

After inputting a positive value as above, the control curves are altered so that the lighter parts are increased and darker parts decreased. This ensures that during later reproduction of an image very light areas do not bleach out and very dark ones do not block up.

Coloured ink graphics

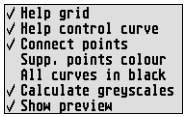
This allows monochrome images (*.IMG etc.) that have a "small" CK3 control curve to be coloured. This CK3 control curve looks completely different from the usual diagonal control curves and you can see at once that you can only set two colour values, namely for the foreground and background. In this way monochrome images are more correctly duochrome images, even when they are only in black and white.

After selecting in the subdialog whether Foreground or Background is to be coloured, you can select the desired colour conveniently from the Calamus Colour-circle dialog box. You can use palette colours as well as spot colours. The conversion to the correct RGB values (spot colour layer is not retained!) is undertaken by FrankLIN.

The "intensity" of the foreground and/or background colours and the "difference" between them can also be altered with the Contrast and Brightness sliders, or by clicking the mouse in the relevant half of the control curve graph. You can even swap foreground and background colours in this way. (This trick also works with duochrome graphics that have not been coloured!)

8.4 Show popup

Here you can make various settings for the display of the control curves, which are also saved in the setup file.



The Show popup behaves differently to the usual popups, as it contains entries that can be switched on and off by clicking on them. When switched on, the entry is preceded by a tick.

Help grid

Selecting this entry switches the help grid on and off. The scaling will depend on the unit of measurement selected in the "Edit control points" dialog.

Reference control curve

When this is switched on, a reference control curve (serving as a model for modifying real control curves) will be included in the graphical working area.

Connect points

When this is switched on, the points set with the "Freehand" tool will be drawn connected by a line. This entry has no effect on any of the other tools.

Support-points colour

When this is switched on, the control or reference points are displayed in the colour of the control curve they belong to, instead of the normal red. This is useful when all the control curves are switched on for editing simultaneously with the Bézier tool, for instance.

All lines in black

Because with some monitors and brightness settings the cyan and yellow control curves in particular may be hard to see clearly with the human eye (I don't know what your cat will say to that!), it may be sensible to choose this mode of operation. In that case all control curves will be drawn in black.

Calculate greyscales

To help visualise the colour or greyscale distribution, greyscale wedges for the X- and greyscale or colour wedges for the Y-direction can be calculated and diplayed. They represent the tone value range from 0 to 255.

The upper greyscale represents the input values along the horizontal axis, the lower wedge, which can be switched on with this function, the assigned output values (along vertical axis).

At each termination of a function (releasing the mouse button!) the lower wedge will be updated and offers realistic clues about the resultant tone value changes in the image.

Exception: The greyscales can not be calculated for greyscale pictures with LUT (Look Up Table).

Show preview

This switch does not really have to explained, does it? – Oh well:

Calamus at last has a real Preview function.

If "Show preview" is selected in the Show popup, a preview of the expected result appears in a frame below the popup fields, provided this is possible. Naturally this only works if the control curve(s) being modified is/are to be applied to images.

"100%" edit field

If you click on the edit field, a small popup opens in which you can either input any value between 5 % and 5000 % manually, or you can choose between the buttons "100 %" and "Fitting".

The last ensures that a magnification is calculated that lets the whole image fill the width of the frame around the preview box.

Alternatively clicking on the [–] and [+] buttons below the preview box can alter the zoom magnification in 5 % steps between 5 % and 5000 %.

If only part of the image is shown in the preview box, you can change the portion that is visible by grabbing the image with the mouse and dragging it.

FrankLIN remembers whether and with which zoom setting and image portion a picture associated with a control curve set was displayed previously in the FrankLIN preview. The corresponding last settings will be adopted.

8.5 File popup

All file operations are called up via this popup.

Naturally FrankLIN has its own internal file format, adding one to the vast array of custom file formats …

But seriously: Unfortunately FrankLIN has to be alloted its own file format (extender CKD), otherwise all control curves created with FrankLIN-specific tools would only be saved in the Calamus pixel display mode. But to guarantee the ability to make changes later, we have been forced to introduce a custom format which also saves the details of the FrankLIN-internal tools.

With FrankLIN you can edit all "CK?" control curves used in Calamus. Depending on where FrankLIN was called from, only certain control curve types are offered for editing.

These entries permit the loading and saving of the CK? control curves. You are forced to use them frequently, so after two months at most they will be worn out. But they still continue to function!

For further editing you can also load and save gradation curves from DA's Layout and control curves from PhotoLine.

Naturally FrankLIN can also save the data entrusted to it or load new data. For this Calamus's own CK? format is available on the one hand, but in addition there is also FrankLIN's own custom format (CKD); this became necessary as the CK? format is not capable of supporting control point data. Naturally control curves that were created in "Spline" mode can also be saved in the CK? format, only they will be converted first to "Freehand" curves. On reloading these control curves their reference points will be lost.

8.5.1 Setup file

FrankLIN uses pre-sets for its functions that can be saved in a SET setup file.

Warning: This SET file with the default name FRANKLIN.SET must be present in the MODULES folder. It has nothing to do with the Calamus setup file!

You can alter this SET file in any ASCII editor. This can be useful in the situations described below, for example.

You can save and load any number of different FrankLIN Setup files. When FrankLIN is loaded, it will first look for the file FRANKLIN.SET and will load this.

The setup file contains all settings that can be activated directly in FrankLIN as well. If desired the file can be edited freely with any text editor, for example to change all similar data in one go. In addition, it contains further settings that can only be changed with a text editor, since it does not make sense to change them after FrankLIN is initialised:


```
FrankLIN Setup File
#Globals
UseNVDI    = Yes
ConvToCalamus = Yes
[...]
#DefaultGrid
GridWidth   = 32
GridHeight  = 32
```

The first entry is "UseNVDI". If this entry is set to "Yes", FrankLIN attempts to support offscreen bitmaps (provided it is supported by the VDI). Since the screen output is considerably faster using offscreen bitmaps, this is the preferred setting. With some graphic card drivers problems may arise, even though they actually support offscreen bitmaps. So if you encounter problems such as unexplained crashes or pixel- garbage in the control area, the value should be reset to "No". This is an area where the incompatibility of the original NVDI offscreen bitmaps may cause some problems.

In contrast to all other programs, Calamus displays all control curves (except the CK-7 control curve) turned through 180°, so that black is always found at bottom left and white at top right. This is due to the internal management of colours in Calamus, where black is represented by the value "0" and white by "255".

The second entry, "ConvToCalamus", defines whether FrankLIN displays the values of CK1, CK3, CK4 curves in Calamus's own format ("=Yes") where white is 255 and black is 0, or in the "regular" format ("No"), where 0 is white and 255 is black; unfortunately CK7 will then be the wrong way round. In the first case, for example, increasing the brightness would send the control line "upwards" whereas in the second case the same operation sends the control line "downwards". The default value is "Yes" since this is the convention used in the main Calamus program.

The last block supplies default values that determine the width and the height of the grid, in case the host application doesn't supply that data to FrankLIN.

8.6 Control curve selection

FrankLIN offers comprehensive options for selecting the control curves. It differentiates between control curves that are visible and those that can be edited. Visible control curves, as one can guess from their name, are those that can be viewed but remain unchanged by all operations. Editable control curves are those that are being modified at the time; all actions will operate on each of these control curves. This may sound a bit complicated, but it has its practical side. For instance it allows altering only a single control curve while its relation to the others remains visible at all times.

In order to make control curves visible or editable, one only has to activate the "View" or "Edit" checkbox(es) respectively at the left of the control curve list so that they are crossed. Since, logically, control curves that are not visible can also not be edited, and, the other way round, editable curves have to be visible, FrankLIN ensures that the selected checkbox combinations are sensible.

Provision has been made in FrankLIN to handle also control curve sets that contain more than seven individual control curves. Though applications for this are not found in Calamus as yet, it may be that this will be realised in the future via an additional module, for instance. Thus with FrankLIN you have at your disposal a future-proof tool that can deal with such demands as well.

In principle control curve types in Calamus can contain any number of individual control curves that in combination fulfill some kind of task. Although at present a maximum of 7 individual control curves are used, FrankLIN is already prepared for more (e. g. spot colours, 7-colour separations).

The lower part of the main dialog box contains the selection area. It consists of two columns with small checkboxes and one column of control curve names.

View

If you click on one of the checkboxes at far left, then the display of the corresponding control curve will be switched on (crossed) or off (uncrossed).

Edit

If you click on the checkbox on the right, an invisible control curve becomes visible and editable; with a control curve that is already visible this just switches between making it alterable and not alterable.

This difference may appear somewhat puzzling at first, but is extremely sensible: Only in this way, though you can see all the control curves, you are not forced to also edit all curves at the same time. In addition, you can for instance make a detour via the clipboard and copy the pattern to another (unedited) control curve, then modify existing control curves with any of FrankLIN's construction tools.

All

The button ALL activates all checkboxes.

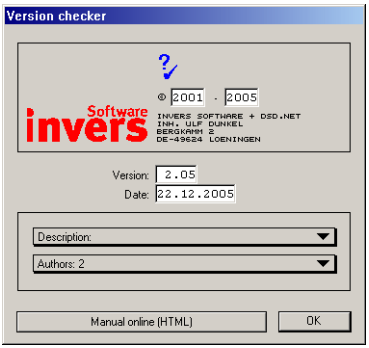
None

The button NONE switches all checkboxes off.

The control curve names can not be altered at present. Depending on the colour space of the image they are either "Red, Green, Blue" or "Black, Cyan, Yellow, Magenta". If at some time Calamus should use more complex control curve types with more than 7 individual control curves, then you will be able to scroll through the list of individual control curves with a scroll bar at the right of the selection field.

Tip: If instead of clicking on one of the checkboxes before the control curve name you click directly on the control curve name itself, then all control curves except for the one clicked on will be switched off and the clicked control curve switched on for editing.

9 Version checker



This module is loaded like any other module and serves for:

- Keeping order in the MODULES and DRIVERS folders,
- Obtaining free updates from the Internet,
- Receiving information about chargeable upgrades.

Suggestions about the module and Internet evaluation are heartily welcome!

9.1 Load

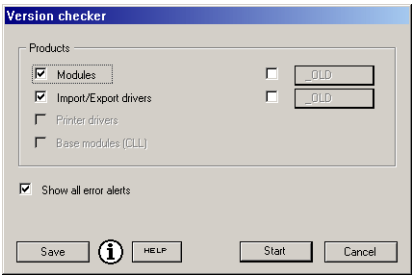
The module is loaded just like any other module, so place it in the MODULES folder. Incidentally, the Version checker does not have to be kept loaded permanently in Calamus. Just the opposite: When you want to use the Version checker, it is recommended that in some circumstances you remove all other products from memory, so that your work with the Version checker does not lead to collisions between product items loaded already and those still to be loaded.

Example: If you have loaded Bridge (full version) and the Version checker has not yet tested BRIDGE6.CXM before it finds BRIDGE6L.CXM (the Lite version) in the MODULES folder, it will not be able to load Bridge lite correctly, as this will be prevented by the Bridge full version. The analysis of Bridge lite after this will hardly show any sensible data. – If however you have previously removed the Bridge full version from memory beforehand, the Version checker will be able to load and check all Bridge versions one after the other without problems.

Tip: If you remove product items from memory before calling the Version checker, make sure that the Calamus settings are not saved automatically when you exit Calamus. Otherwise you will not find modules loaded previously stored in the Calamus.SET file and at the next start only the Version checker will be loaded!

If you have not removed the product items from memory before calling the Version checker, it will kick them out itself one by one during checking, and note their order so that after finishing work it can reload them automatically in the same order.

9.2 Version checker Start dialog



A few tips follow:

1. The checking of products can be halted with [Control]+[Alt]+[Shift].
2. The alerts in which various products or the Version checker output warnings and messages can be operated with [Tab] and [Space].
3. The Version checker recognises product items already loaded, kicks them out itself during checking, and notes their order so that after finishing work it can reload them automatically in the same order.

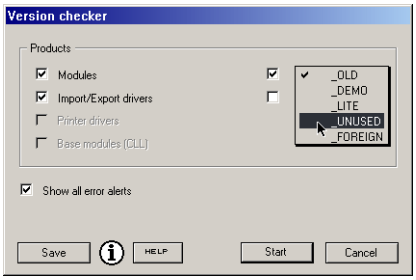
Despite this is may be sensible to kick out all other product items (particularly modules) before launching the Version checker, so that all product items can be loaded and recognized.

9.2.1 Products

The Version checker checks modules and/or import/export drivers, which will be simply called "products" from now on for easier reading. The first dialog displays two selectable switches for this.

The current search paths of Calamus for the products are taken into account and should be set correctly. For modules the Version checker searches for files that match the file mask *.CXM, for import/export drivers for all files that match the file mask *.C*. If "apparently defective" products such as "CALAMUS.CKT" are displayed, it is certain that one of the Calamus search paths is not set correctly.

If you have activated one of the product switches, it immediately brings up a further switch and an inactive popup menu.



As soon as you have activated the additional product switch, you can use the popup menu. It displays various subdirectory names that the Version checker creates if later during working with it you want to move products out of the main products folder. In order to be able to check these subdirectories as well, you can specify here beforehand that, say, the product type "Modules" should not be checked in the main folder MODULES, but only in the subdirectory MODULES/_LITE. In this way you can keep lite versions of modules conveniently in a Calamus _LITE folder and only move them back to the main folder when required.

9.2.2 Display all error messages

Various products will output the strangest error messages if they are loaded in the wrong context. The Version checker can output further control messages as well when this switch has been set. Normally the control process will not run without at least some alert messages. Note that the Version checker can not recognize and therefore sensibly evaluate alert messages that the products themselves generate.

9.2.3 Save

This button saves the settings mentioned above in a VERSION.SET file in the Modules folder.

9.2.4 (I)

Here you can call up the Info dialog. It tells you the version of the Version checker itself. (Naturally you can also check the version number of the Version checkers using the Version checker via the Internet, but then you are likely to be the sort of person who uses a car to drive round the corner to the baker to get a couple of rolls.)

9.2.5 Help

This button (and the according ones in the other dialogs) guide you directly to the online help for this module in our website. This works only if you use Calamus WinPack and your computer is online.

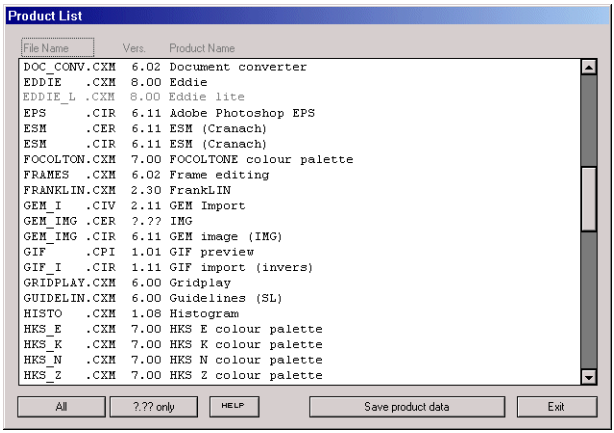
9.2.6 OK

This button starts the checking process. This check, depending on the "fill level" of the folders, may take some time and get on your nerves a bit, as you have to click away various alerts. Unfortunately the Version checker can not know what various products want to report. Otherwise we would certainly have filtered out this "babbling" somehow and presented it in a neater form.

9.2.7 Cancel

This button terminates the call-up of the module without performing the checks.

9.3 Product list



This dialog is the heart of the Version checker. It presents a list of the found products. Those products that the Version checker could recognize unambiguously as DEMO, LITE versions or having some DEFECT are displayed greyed out, but nevertheless can be edited quite normally as described below.

9.3.1 List sorting

The list with 20 entries visible at a time is sorted from A-Z by filename. A click on "Filename" above the list reverses the sorting order (Z-A). Capitals and lower case are sorted correctly. But one can also click on "Version number" and "Product name" above the list to sort in the corresponding order.

9.3.2 List operation from the keyboard

- Cursor up/down reacts like the arrow fields on the slider.
- Pressing the keys [A/Za/z] displays the list so that the first product whose filename starts with the depressed letter and/or continues with any following one is at the top of the list.

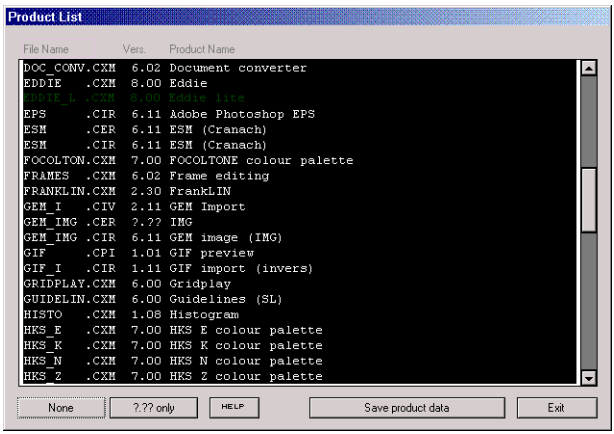
9.3.3 List operation with the mouse

- Left single-click selects/deselects a product.
- Left double-click calls up a further dialog (see below).
- Slider clicks react as usual.

9.3.4 All

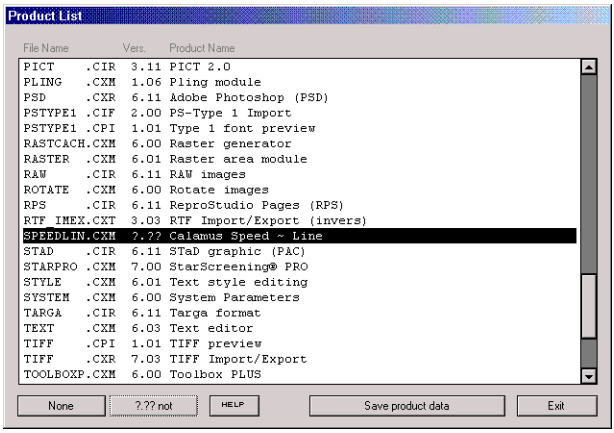
A click on this button selects all products and switches the button text to [None]. A repeated click deselects all products and switches the button text back to [All].

It makes no difference whether all or no products are selected if you want to check all products.

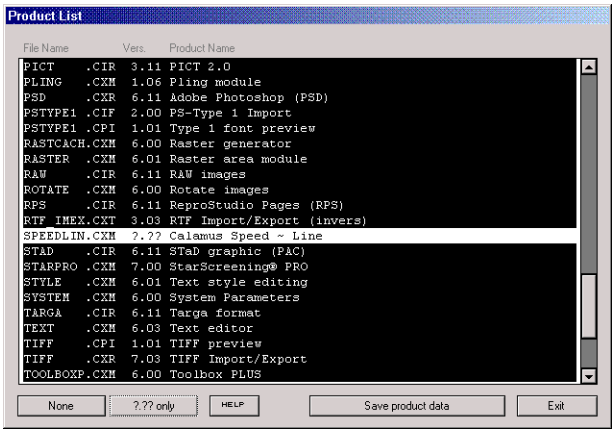


9.3.5 Only ?.??

A click on this button selects all products whose version numbers the Version checker could not recognize. The button text will be altered to "Not ?.??".



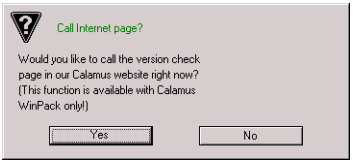
A renewed click selects all products whose version number was recognized. At the same time the button text will be set back to "Only ?.??".



9.3.6 Save product data

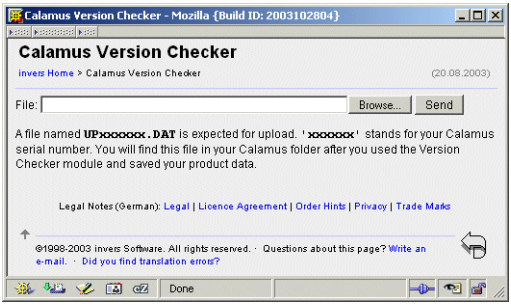
When you click this button, the currently selected (or all) products from the product list will be saved into a file. This file is named UPxxxxxx.DAT and will be saved directly in your Calamus folder. ("xxxxxx" represents your Calamus serial number. If you would own the number 4711, the file name would be UP004711.DAT.)

You can then easily check the created version check file in our website. The module asks you to do so, after the file has been written.

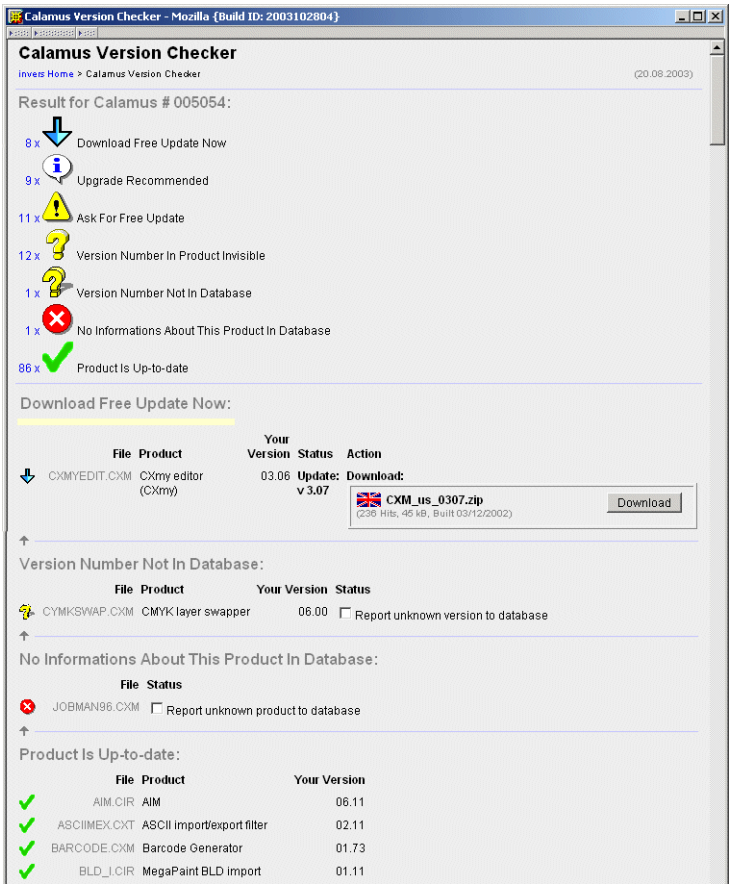


If you chose "Yes", your browser comes up with the entry page of "My Calamus" and asks for your matchcode data in order to authorize you for the version check.

After you logged in successfully, you will be asked for the file which Version checker has just created. You will find it – as mentioned – in your Calamus folder.



When file upload to our server succeeded and the file could be analyzed, you will see a more or less detailed result page of your version check.



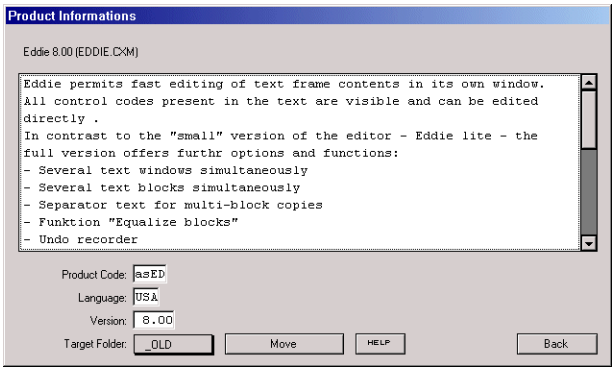
The informations given by the web page are too much to be described here. You may perhaps reach free update archives there, purchase upgrades and report unknown module versions.

Hint: Use this service from time to time in order to keep your module versions updated.

9.3.7 Exit

This button exits the Version checker.

9.4 Product information



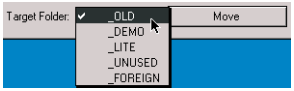
A double-click on a product entry in the above-mentioned list brings up this dialog, which, depending on the state of the product, offers further information and functions.

At present the following will be displayed:

- Product description (so-called ModIBlk), providing it is present and made accessible in the product.
- Product ID.
- Language of the products (FRG = German, USA = English etc.)
- Version number in the format vv.ss (version.subversion).

In addition this dialog offers the possibility to move products into a subdirectory, which is created by the Version checker.

For products that could be recognized unambiguously (!) as DEMO, LITE version or having some DEFECT, the folder name will be displayed in RED. For all other products, five folders are offered for selection at present: _OLD, _DEMO, _LITE, _UNUSED, _FOREIGN.



9.4.1 Move

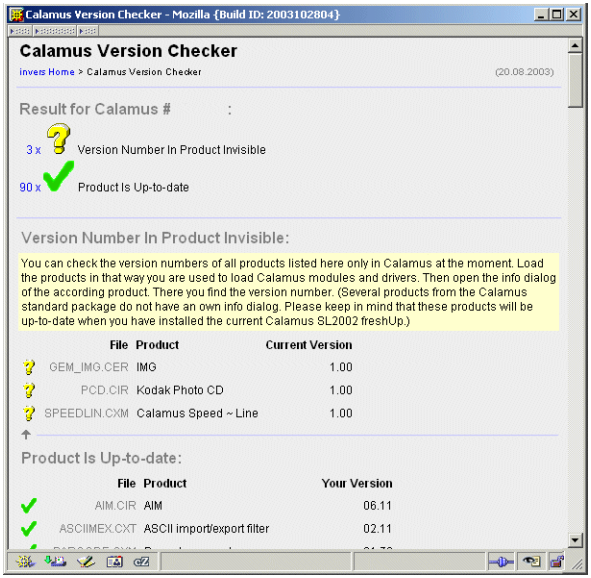
A click on this button moves the product to the selected folder and closes this dialog, removes its entry in the "Product list" dialog list and updates the list.

9.4.2 Back

Closes this dialog without performing further actions.

9.5 Product information on the Web

This page is still rudimentary and displays some misleading information. This is connected with the fact that the so-called ModIBlk was only introduced in SL99 and in consequence has not yet been realized in all products. Free of charge updates of products that recommend updates can be requested already.



10 CXmy: why?

Fundamentals about the extended user interface concept

Many ideas are born from asking the correct question. In the case of CXmy (say: cee-ex-mju) this ran something like this: *"Can you not do something about modules with only a few icons that waste so much space?"*

This referred to the Calamus Top row, which became fuller and therefore harder to use with each further module loaded. A module has to make an entry for itself in the Top row even if it only has a single function-icon, with a largely empty function panel hanging below it. Does it really have to be like this?

It turns out that the Calamus user interface is flexible enough for some extended concepts. CXmy represents one such extension and offers you, as a user, some interesting advantages:

- Several modules can save space by accommodating their icons in one and the same function panel. This avoids function panels that are mostly empty, and the Top row remains lucidly short. More functions can be reached with fewer mouse clicks.
- The arrangement of the icons may be altered at any time during use to suit your own preferences, and naturally saved as well.
- CXmy modules offer the possibility of installing animated or variable icons (whose appearance may depend on a switch position, for instance).
- You can work with a CXmy module in the same way as with a "normal" module. You do not have to make or learn any special settings or take any special steps. The CXmy modules find each other automatically.

A module needs to be prepared appropriately by its producer so that it can be activated as CXmy. Existing non-CXmys are excluded from this mechanism (although there is a technical possibility of subsequently providing an upgrade). The process is worth while mainly for modules with a small number of icons, which is symbolised by the letters "my" in their name (module texts use the Greek letter mu, which is the usual abbreviation for "micro"). The designation "CXmy" was derived from "CXM" (Calamus eXternal Module).

It remains to be mentioned that for loading CXmy modules no "basic module" or anything similar is required. It also makes no difference which CXmy you load first; the first module produces the entry in the Calamus Top row, all further modules simply join it. The CXmy modules are not necessarily connected functionally; the common property of all CXmy modules is only the way that they present their control elements to the user.

10.1 This is what it looks like – Construction of the user interface

When explaining the design and construction of the Calamus user interface, there is a great advantage in first agreeing a common terminology. It is much easier to talk about a subject when you can call things by name. The Calamus manual already deals with part of this problem in "The Function panel" chapter. But some of these terms need revising or extending to keep up with current practice, and the CXmy concept requires additional definitions.

The Calamus user interface is organized in a strict hierarchy, and is subdivided into three levels:

10.1.1 Lowest hierarchical level: Functions

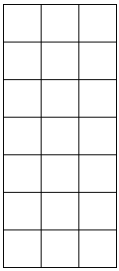
The term function should be understood here as a logical part of a module that can be addressed directly via the user interface. This can be, for instance, a Copy function, a Rotation angle or a Text-style list. A function is represented by suitable control elements: Icons, editable fields, lists with scroll-bars or similar items. CXmy in its present version only supports icons as control elements, which is why we talk in the following documentation only about icons or function-icons, and leave all other types of control elements aside.

In the old nomenclature of the Calamus manual "functions" were still described as commands, though this never found widespread recognition and so will not be used any more.

10.1.2 Middle hierarchical level: Function groups

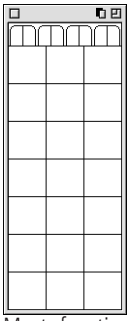
Functions are grouped in function groups, connected thematically as a rule (e. g. editing functions in one group, setting functions in a different one etc). Each function group is identified by an icon that serves as a control element for switching back and forth between the individual function groups and should therefore be given the name switch-icon (even if the intention behind this designation may appear to be too pragmatic).

The size of a function group is limited by its graphical presentation. There is room for a maximum of 21 function-icons in one function group, arranged in a 3x7 grid.



10.1.3 Highest hierarchical level: Function panels

Up to 16 function groups belong to one function panel (sometimes called a function block), which is symbolised by an icon entered in the Calamus Top row (also called the "Module bar"). The assembly of function groups into function panels is organized by Calamus into individual sections (e. g. text processing, page mounting etc.). Before the development of the CXmy concept, each function panel was assigned to exactly one Calamus module, which is why this term is only needed now because the fixed connection between module and function panel has been broken. The expression "module-icon" for the icon identifying the function panel will however be retained.



Most function panels contain no more than eight function groups, as more switch-icons than that do not fit into the function panel. This term denotes the container that holds just one function group, together with a maximum of eight switch-icons for selecting different groups for the same panel. The function panel forms the main user interface. Up to now there is only a single case where a function panel contains more than eight groups: the Frame editing module. The additional function groups (Special functions for the frame) can be reached by selecting the desired frame type and then clicking on the question-mark switch-icon.

10.1.4 And what else is new?

The assembly of function-icons into function groups, as well as the positions of the icons within a group, are programmed in fixed positions in traditional modules and cannot be altered. In addition, as mentioned above, such a module is tied firmly to one function panel that may contain only functions of this single module. Here the CXmy concept comes into play. It extends the possibilities of the Calamus user interface by the following properties:

- The icons of several (CXmy) modules can be placed within the same function group or the same function panel.
- At runtime, i. e. while using Calamus, the icons may be moved freely within the function group, to another group, or even to a different function panel. All the icons of a given module have to be within the same function panel for this, i. e. under the same entry in the Calamus Top row. Apart from this there are no restrictions.
- The help-texts of module- and switch-icons can be edited in the CXmy editor (described in its own chapter). The graphics for these icons may be chosen from a selection offered by the CXmy modules.
- The CXmy extension permits dynamic icons (for instance animated, or dependent on the state of the switch).

10.2 Come together – Automatic sorting of the module-icons

Immediately after loading, every CXmy module installs itself in the Calamus user interface. For this it inserts its module-icon into the Top row (if it is loaded as the first CXmy module). After this it inserts its function-icons into already existing function groups, or creates new function groups if these do not exist yet or there is insufficient space for them. A previously saved icon configuration will be taken into account for this. Otherwise the module proceeds according to the following positioning rules:

- The program will establish which CXmy function panel was created last and look for the last occupied function-icon group in it.
- The function-icons will be positioned after the last icon already in place.
- If there is insufficient room for this, the module creates new function groups or even a new function panel. In the CXmy editor (see the relevant chapter) you can choose whether four or eight groups should be created per panel by default.

All function-icons of a module are always placed in the same function panel, so cannot be distributed over several Top row entries.

10.3 Module- and switch-icons

Function panels are represented in the Top row by an icon. Also, each individual function group has a switch-icon at the top of its panel with which it can be selected. But where do these icons (as well as their help-texts) come from? They are built into in the CXmy modules, which bring with them suggested samples for both types of icons. If there is a requirement for such an icon (for a new entry in the Top row or the creation of a function group), then a suitable proposal is adopted from the relevant module. The CXmy editor permits subsequent rearrangement of the icons as well as changes to the associated help-texts.

10.4 Managed modules

From Calamus' point of view, each function panel is assigned uniquely to one module and is also managed by it. This premise has two consequences, which however appear only in exceptional cases in practice and otherwise remain unnoticed:

- All function-icons of a module have to lie within the same function panel. As a result, it is impossible for more CXmy function panels to exist than the number of CXmy modules loaded.

10.5 What else?

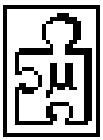
The following things should be noted when dealing with CXmy modules:

- If you want to move or copy CXmy function fields, click on the left half of the selected group switch icon in the case it is a "wide" icon.
- CXmy function panels, like other function panels, can be moved with the aid of the title bar of their window.
- Copied function groups which become empty (due to moving function icons) will not be removed automatically. You can delete them in the usual way (press [Ctrl] and click in the group switch icon.
- Each CXmy module is supplied with some other files that belong in the MODULES folder and are essential or at least important for the working of the module. These include:
- CXMY.CLL
  This "Calamus Link Library" contains portions of the program that are required by all CXmy modules. To save memory, these program functions exist only once in this file,

and not as copies in each individual CXmy module. The CLL is only loaded once into memory, no matter how many CXmys are currently installed in Calamus. In addition this process allows simple updating of the CXmy program codes: New basic functions can be introduced just by exchanging the CLL file, from which all installed CXmy modules will profit immediately.

- CXMYEDIT.CXM
  This is the CXmy editor with which you can adapt the user interface to suit your wishes and concepts. The next chapter covers this interesting tool extensively. The editor need not necessarily be loaded at all times and is only required for altering the basic settings of the CXmy function groups and of the user interface.

11 CXmy editor



The ability to edit the user interface is one of the strengths of the CXmy concept. The CXmyu editor – itself a CXmy module – is the tool for arranging a customized working environment within the Calamus function panel architecture. It can be used for the following work on the user interface of the CXmy modules:

- Moving of function-icons
- Creating or deleting function groups
- Creating or deleting function panels (module-icons in the Top row)
- Altering the appearance of module- and switch-icons as well as their help-texts
- Configuring the basic CXmy settings

In addition the CXmy editor offers an overview of all loaded CXmy modules and optionally shows which icons belong to a given module (or vice versa).

11.1 CXmy functions

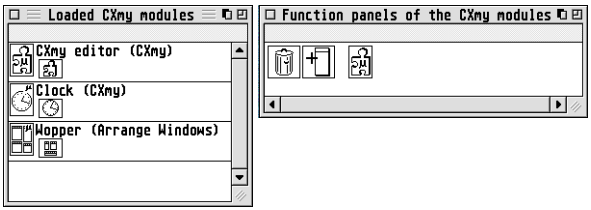
The following function-icons are offered by the CXmy editor:

- [Editor for CXmy function groups]
- [Settings for CXmy function groups]

11.2 Editor for CXmy function groups

 A click on this icon opens the windows of the actual editor. A list of all currently loaded CXmy modules (icons accompanied by their names) will be displayed in one window. A second window, besides icons for deleting function panels and creating new ones, shows module-icons for CXmy modules currently loaded.

Note that when the CXmy editor is opened (!I)for the first time(!i) in a session and more than one CXmy module has been loaded (either before or after opening the editor), then in some circumstances you may have to click on the "New function panel" icon (see below) for each module after the first to make its icon appear in this window. In that case the same will apply if new CXmy modules are added later. Whether this is necessary or not depends on the arrangement of the CXmy function groups when they were saved last in the editor. Once the module-icons appear, they will stay there as long as their module remains loaded, even if you quit the editor and reopen it later.



When you select one of the module-icons in the function panels window, a large window opens showing an overview of all the function groups contained in that function panel, complete with switch-icons in the top bar and the module-icon at top left. So in all there are three types of editor windows:

Loaded modules window (present once)

The list of the loaded CXmy modules. For each entry the name of the module is displayed together with suggested module-icon and switch-icon, as well as perhaps an asterisk ("*") as an indicator that this module manages a function panel. When the mouse cursor is over either icon in this window, its current help-text will be displayed on the window's info line; when it is in the field next to the icons, the name and relative path of that module file will be shown instead.

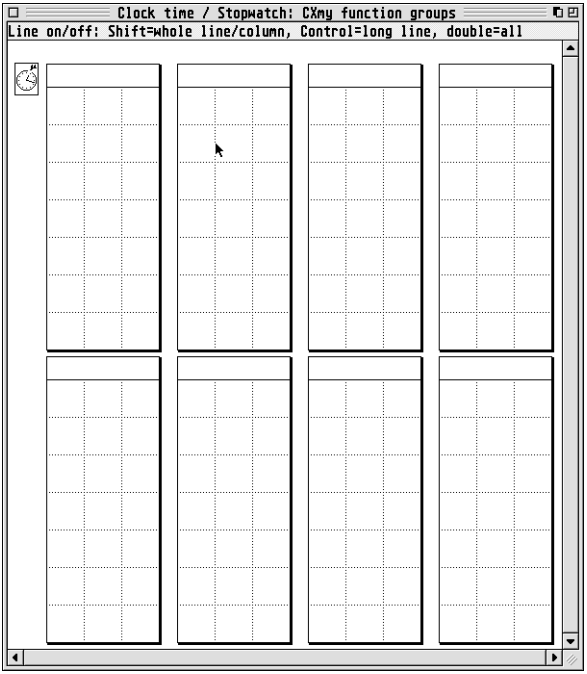
Function panels window (present once)

At the left there are two functions, which are realised as icons:

- Delete function panel
- New function panel

This is followed by one or more module-icons representing the function panels of loaded CXmy modules. (As mentioned above, if more than one CXmy module has been loaded into memory then the first time the editor is used in a session you may have to click on the "New function panel" icon once for each module after the first before its icon appears in this window.)

Function groups window (one can be opened for each function panel)



Here eight function "skeleton" groups that can make up one function panel will be displayed together with their module-icon at top left of the window. For each group in use a switch-icon appears at the top, with its function-icons (normally) contained in the first group panel. These icons may be moved to other panels in the group or even another function panel, as described below. Function panels that are to contain up to four function groups (using wide switch-icons) should use the four upper panel fields; for larger groups simply use the lower panels as well (giving half-width switch-icons). This procedure is not, however, mandatory. Any of the eight group panels can be assigned freely, or left empty.

All actions performed in the function groups windows will be transferred immediately to the "real" function panels, so the new arrangement can be tried out at once.

As discussed in the previous chapter, the whole point of the CXmy concept is that function-icons from several modules may be combined in one function panel – either in the same group, or in different groups that you can move between with the switch-icons. When the CXmy editor is opened for the first time all CXmy function-icons for all loaded

modules may appear in the first panel, provided there is sufficient room (whether they do or not depends on their arrangement when the CXmy "Save" function was used last). For the sake of clarity you may prefer to move them either to their own group in the same panel, or to the function panel of another existing CXmy module (in both cases you have to provide a suitable switch-icon for changing between the groups of a panel); you can even move them to a new panel (in which case their module-icon will appear in the Top row, though that rather defeats the whole CXmy concept). The way to move icons and groups is described in detail below. You can save the new arrangement so that the chosen user interface will be retained the next time Calamus is loaded.

11.2.1 Moving function-icons (within a function panel)

Function-icons can be moved simply by "Drag&Drop". Click the left mouse button on an icon in the function groups window and, holding the button down, drag the icon to the desired position in the same window. This can be either a different position in the same group panel (if you only wish to change the order of the function-icons) or another group panel in the same function group window (if you want better differentiation between the two groups of function-icons). A bold outline around the available fields indicates those positions to which the icons may be moved.

All icons of one group should be in the same panel, with a suitable switch-icon to bring up individual groups in the function panel. So if you move function-icons to a new group, drag the smaller icon from the loaded modules window to the field at the top of the group panel, which will provide a new switch-icon to access that group's function-icons.

11.2.2 Moving function-icons (to a different function panel)

To move a function-icon to a different function panel, simply drag it to the desired function groups window (if open), or to the appropriate module-icon in the function panels window. No matter which group panel you drop it on, it will always appear in the group that was active last, though you can drag it to another group panel afterwards, of course. Alternatively the icon can be dropped on the "New function panel" icon, in which case a new (empty) function panel window will be created first and after this the icon will be moved to it.

As all the function-icons of a CXmy module have to be in the same function panel, all other icons of the module will wander automatically along with it. They will be arranged in the selected function panel as if the module had just been loaded. Only if space is tight will the CXmy editor depart from this procedure and will occupy any blank spaces

between the icons already present. If the function panel is too full to take all the icons, an error message appears and no moving takes place.

11.2.3 Assigning module-icons

The graphic for the module-icon of a function panel (which will appear in the Top row) can be chosen from one of the proposals that come along with the CXmy modules. Take any module-icon (the larger one from any of the three editor windows) and simply move it via Drag&Drop onto the module-icon in the function panels window or the function groups window to which this graphic is to be assigned.

11.2.4 Assigning switch-icons

The switch-icons can be distributed freely among the function groups in a similar way to the module-icons. You do not have to give any thought to whether they should be wide or narrow (half-width) switch-icons; the CXmy editor automatically selects the correct type depending on whether you use the top four group panels (which produces wide switch-icons) or the bottom ones (narrow). "Pick up" the smaller of the two icons by Drag&Drop (either from the loaded modules window or the function groups window) and drag it to the switch-icon line at the head of the desired panel in its function groups window.

11.2.5 Editing help-texts

A double-click on a module-icon in the function panels or function groups window, or on a switch-icon in the latter, opens a small dialog in which you can alter the help-text for the icons. Use [Esc] to clear the editable field before inputting a new text, or do the same to an empty switch-icon area if you want to remove the help-text previously assigned to it.

The help-texts of the function-icons are determined by each individual CXmy module and cannot be edited manually.

11.2.6 Placing separation lines between function-icons

To organize function-icons visually, the CXmy editor offers the opportunity to insert separation lines between the icons. In the function groups window: Clicking the left mouse button on the region between two icons can set a vertical or horizontal divider line (depending on just where you click), or remove it again (the state toggles with each click). If the [Shift] key is held down during this then the editor draws the altered separation lines for all further lines in the same column or row. If the [Control] key is held down instead, the change will extend along the line up to the edges of the function groups window ("long lines"). Finally a double-click sets or deletes all separation lines in this function group.

The above description appears in a shortened form in the info line of the window when the mouse cursor is positioned over a separation region.

11.2.7 Swapping function groups

Within a function groups window, complete function panels may be swapped with each other in a single operation. Click and hold the left mouse button on the free area next to the switch-icon of one function group and drag the ghost outline frame that appears via Drag&Drop onto another function group (in the same window). Both groups together with their switch-icons will then swap places.

You may also move a complete function group to any empty panel in the same window. The switch-icon will move to a corresponding position in its field.

11.2.8 Moving module to a different function panel

All icons of a CXmy module can be moved to a different function panel with a single action. To do this, either move any of the function-icons of the module, or move the module name in the loaded modules window with Drag&Drop to a different function panel. The result is the same in both cases.

11.2.9 Creating a new function panel

A new function panel for a loaded module can be achieved in two ways:

- Clicking on the "New function panel" icon in the function panels window
- Moving a module from the loaded modules window to this same icon.

In both cases this only works if there are more modules loaded than appear in the function panels window. Now you can split up combined function groups into separate function panels once more, if you wish.

11.2.10 Deleting a function panel

Function panels can of course be deleted again. However, before this is possible they must be first emptied manually, by moving the function-icons they contain to other function panels. If this is omitted then an error message appears and the CXmy editor will not perform the deletion. Deletion of an empty function panel can be done either by dragging a module-icon in the function panels window onto the trashcan icon, or simply by clicking on the trashcan icon to delete the currently selected (empty) function panel.

If you remove a module from memory, its module- and function-icons will be removed from the CXmy editor windows and Top row as well.

11.2.11 Show module information

A double-click on a module name in the loaded modules window opens a dialog containing information for the relevant CXmy module. Apart from the module name, this is normally the version number and copyright notice (the CXmy module itself is responsible for the type and contents of the information displayed).

11.2.12 Selection

Entries in the loaded modules window can be selected by a simple left mouse-click. This opens the function groups window with the function-icons of the module (or tops it if it is already open), with all icons of the module marked with a thick outline, allowing you to see immediately which icons belong to the module. This works the other way round as well: Clicking on any function-icon in the function groups window makes the editor immediately select all other icons of this module as well as the relevant module entry in the loaded modules window. In both cases the selection can be cleared by clicking the right mouse button.

Finally, the CXmy editor indicates by the selected state of a module-icon in the function panels window which function groups window is currently topped. This is also the panel to which "Delete function panel" will be applied.

11.2.13 Close editor

Closing either the function panels or the loaded modules window closes all of the editor's windows.

11.2.14 Things worth knowing about servicing the windows

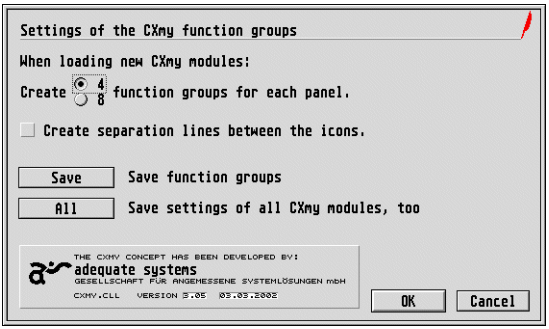
As long as this is supported by the computer's operating system and the Calamus version, all the CXmy editor windows may be serviced in the background. Thus the windows do not necessarily have to be topped to allow functions to be selected. If you want to top an editor window despite of this, just click anywhere in a free area of the window that does not contain function elements.

A click on the "Fuller" button (top right of the window border) brings the editor window to an optimum size (i. e. just large enough for all of its contents). A second click on this button returns the window to its previous size.

The information lines of the windows show help-texts for the icons and operating elements currently under the mouse cursor, as well as some useful notes during moving operations.

11.3 Settings for CXmy function groups

The other icon of the CXmy editor function panel opens a dialog box in which you can undertake various settings relevant to CXmy function groups.



In addition you can see some information about the version of the CXmy.DLL here.

11.3.1 Create 4 or 8 function groups for each panel

Selecting one of these radio buttons determines the number of function groups per function panel that may be created when loading in additional CXmy modules (either four with wide or eight with narrow switch-icons).

11.3.2 Create separation lines between icons

If this checkbox is active (crossed) then separation lines will be drawn round the function-icons of new modules loaded into the Editor. These will cover the whole icon line in each case.

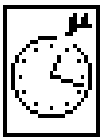
11.3.3 Save settings

One of two buttons can be used for saving any changes made to the settings:

[Save] saves the settings of this dialog as well as the current configuration of the CXmy user-interface (all function panels and their make-up). So if function-icons of more than one module were combined in one function panel, they will open the same way again when the modules are loaded the next time.

The [All] button additionally instructs all loaded CXmy modules each to save their current settings.

12 Clock



The Clock module is intended to serve as a small example of the possibilities offered by the CXmy concept. It is the first module to offer an animated icon, in which the current system time is displayed in analogue form. If desired you can switch the second hand on or off, or switch the clock display off completely for a time.

12.1 Functions

The Clock module displays the following function-icon:

- The current system time

12.2 Configuring the clock module

The clock icon serves simultaneously for the display of the system time as well as a button for calling up a small dialog box in which you can make the following settings:

On/Off

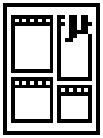
Switches the display of the system time on or off. When switched off, the hands simply stop moving.

Show second hand

When selected, the sweep second hand will be displayed.

With the "Save" button you can store these settings permanently.

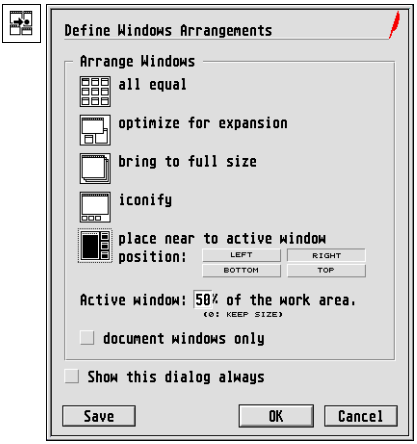
13 Wopper



The Wopper is a useful tool with which you can arrange your document windows in Calamus.

As a CXmy module it has two of its own icons which, following the CXmy principle, can be included in any desired function group of any CXmy function field.

13.1 Define window arrangements



Thanks to the function icons, the individual functions virtually explain themselves.

All equal

If you select this arrangement, then all open windows will be shown at the same size on the screen. Naturally several rows and columns of windows are possible.

Optimise for expansion

Here you can choose whether the current window, the others or even all open windows should be optimized to their individual magnifications. This means, for instance, that for a document window displaying a DIN A7 page in the 1:1 resolution, the image borders will then cling exactly to the edges of the page and so will fit completely on the screen in almost all screen resolutions.

Bring to full size

Here you can choose whether the current window, the others or even all open windows should be opened up to the full window size, which means the standard window size in which documents are usually opened in Calamus. This normally excludes the top and left part of the screen with the Top row and module function groups and areas. However, you can alter this standard window size and position in the System parameters module, perhaps to leave room at the bottom or right of the screen for further screen objects or windows.

Iconify

Here you can choose whether the current window, the others or even all open windows should be iconified. Iconification means that the Document window is shrunk to a small rectangle and placed at bottom left of the screen. In contrast to other programs, Calamus displays not just a placeholder icon for each iconified window, but even reproduces the document window contents themselves in this window in WYSIWYG fashion!

Place near to active window

Here you can choose where the other windows should be positioned with reference to the currently active window. Select the corresponding position button. In addition you can choose whether the current window should "make room" for the other windows,

e. g. if it should shrink to 50 % of its current size, or whether it should remain unchanged (value = 0 %).

Document windows only

This switch ensures that other windows such as, say, the Eddie text editor window, Navigator windows etc. should be excluded from the window arrangement function.

Show this dialog always

When this switch is set, this dialog will appear not just when the "Define window arrangements" icon is clicked on, but also for "Arrange windows".

13.2 Arrange windows

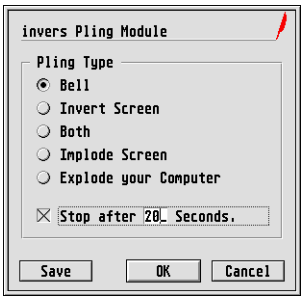
 This icon executes the chosen Wopper task for arranging the windows. If the "Show this dialog always" switch is set, the Define window arrangements dialog will appear again here.

14 Pling

Module for Print dialogs (alarm after printing)

Pling for Calamus "tinkles" at the end of a printing process.

Pling links itself into the Print dialog and can be switched on by clicking on the small bell icon at the lower right of that Print dialog. With the adjacent "Parameter" button you can call up a relevant setting dialog in which five different types of alarm can be chosen at present:



- Bell
- Invert screen
- Both
- Implode screen
- Explode your computer

In addition, a checkbox can be activated for ending the nuisance automatically after a set time. When the checkbox is selected (crossed) you can input in the adjoining editable field the number of seconds (max. 999) after which the row should terminate.

These settings can be saved with the "Save" button and will then be available in the same form the next time the Pling module is loaded. (The module writes a file named PLING.SET to the MODULES folder.)

How do I stop the alarm?

Simply press the key combination [Ctrl]+[Alt]+[Shift] – as always if you want to break off an output process in Calamus.

Warning: The alarm itself (i.e. the activation of Pling in the Print dialog) can not be saved in this way. You have to save it to the CALAMUS.SET file with "Save system settings" of the Options menu, or via the "Save" button in the Print dialog box.

Pling, as the first attempt at programming a module by Ulf Dunkel, is only intended as a small jest and makes no pretensions to perfection.

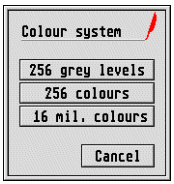
15 Colour/Greyscale monitor switcher

With this accessory module you can switch the screen display of Calamus between three different modes:

- Greyscale
- 256 colours
- TrueColor (dithered)

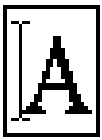
The module is called up by the "Switch to second monitor" twin monitor icon in the Top row. If necessary, load COL_GREY.CXM first using the External modules menu option

Warning: This module can not be used in the TrueColor mode of your monitor!



Text related modules: Content

1 Text processing



Despite various pronouncements to the contrary, the written word is still the number one medium even in this time of electronic communication. However, the manner in which words are written has adapted itself to technical developments. The result we call today DTP – DeskTop Publishing.

The Text module of Calamus offers the opportunity for entering and editing the written word. Furthermore, the text rulers permit you to determine how your text should be formatted within the frames. This is accomplished with a total of six function groups, which are described below.

The Text module deals with text input and its formatting, that is the layout of the text on one or more pages.

1.1 Working in the Text module

Before we come to the description of the tools used for these tasks, first a few words in general about working in the Text module:

One of the main tasks of the Text module is naturally to modify or edit the text. In the Text module you can enter text directly into the frame or delete it. In a similar way to the selectable frames in the Frame editing module, you can select portions of text and text rulers in the Text module. For this the mouse cursor can take several forms: If it is not positioned over a selected text frame it will take the shape of a "pointing finger", and permit you to select a frame.

With an activated frame you can modify either the text itself, an associated text ruler, or the "kerning" of the letters. This is done either in the Text mode, when the mouse cursor will be displayed as an "I-beam" forming the so-called text cursor, or in the Ruler mode; here the mouse cursor will take the form of a small cross. You can switch between these two modes with the right mouse button, provided the cursor is over a selected frame.

You can switch to the Kerning mode by pressing the [Esc] key. Here you can adjust the separation between neighbouring characters in precise detail and position superscript and subscript characters accurately.

Cursor shapes in Text mode:

 Cursor with no text frame selected

 Text cursor

 Ruler cursor

 Kerning mode

1.2 Text mode

In Text mode you can enter text directly into a frame, you can change or delete the text which is already there, and you can mark text as a block for another function. To enter Text mode, simply change to the Text module. Now, when you select a frame (or move the mouse pointer over a frame which is already selected), you will see the mouse pointer turn into a text cursor (I-beam). If it appears as a cross, the Ruler mode has been selected previously. Click once on the right mouse button and the text cursor will appear.

You can set the text cursor anywhere in the text frame by clicking the left mouse button once at the desired location. If there is no text where you clicked, the cursor will appear after the last character in the frame. If the text frame is empty, the cursor will appear in the top left corner of the frame, of course.

The I-beam now works like a normal text cursor that shows where the next character will be inserted. You can enter text using the keyboard as in a text editor or word processor. Calamus will handle carriage returns automatically. If a word is too long to fit on a line, Calamus will send the entire word to the next line. During text input, please note the difference between a hyphen, which is achieved by the [-] key at the top of the main keyboard, and the somewhat longer dash or "minus" character obtained by presing the [-] key on the numerical keypad at far right.

The [Backspace] key will delete the last character entered, and it can backspace over line ends. You may also delete the control codes (described below) using the [Backspace] key, but in this case it is possible that more than one character will be deleted, say a place holder control code for time and date.

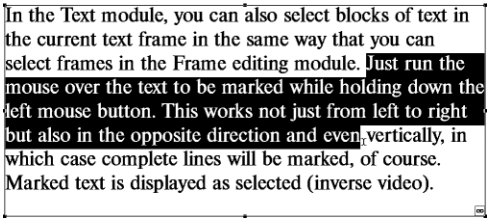
The arrow keys move the cursor one character to the left or right, or one line up or down in the text respectively. If you press one of the [Shift] keys together with [Left arrow] or [Right arrow], the text cursor will jump to the start or the end of the line. In a similar way you can reach the start or end of a text frame respectively with [Shift] and [Up arrow] or [Down arrow]. The [Control] key together with [Left arrow] or [Right arrow] moves the text cursor to the start of the current or the next word respectively. The combination of [Shift]+[Control]+[Left arrow] or [Right arrow] move you to the start or end of the complete text respectively. [Shift]+[Control]+[Up arrow] or [Down arrow] set the text cursor at the start or end of a currently selected text block respectively (see below).

To end a paragraph, use the [Return] key. Special key functions can be created by using the "Key bindings" function (see Tools function group).

As a text frame (and with piped frames all following ones too) must be reformatted each time you enter or delete text (line breaks, text flow to other frames, possibly also

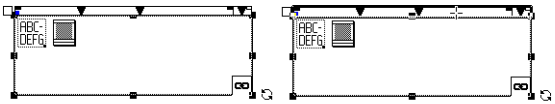
justification) the frame will not be redrawn immediately you press a key, but only if you pause for a short while between two keypresses. This allows you to work in a reasonably fluid fashion without having to wait for the frame to be redrawn after each letter on the one hand, while on the other it offers the possibility to check your work at any time simply by a short pause while entering text. Nevertheless, the built-in text editor would be more efficient (see "Tools" function group in the Text module) for entering or editing large amounts of text.

In the Text module, you can also select blocks of text in the current text frame in the same way that you can select frames in the Frame editing module. Just run the mouse over the text to be marked while holding down the left mouse button. This works not just from left to right but also in the opposite direction and even vertically, in which case complete lines will be marked, of course. Marked text is displayed as selected (inverse video).



1.3 Ruler Mode

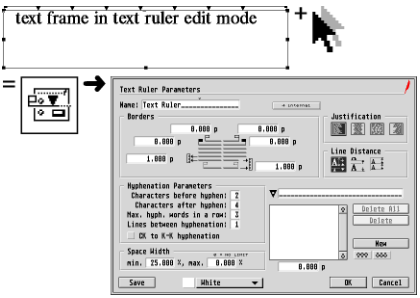
When you change from Text mode to Ruler mode (by clicking on the right mouse button) all text rulers on the current page will be displayed automatically. You can select any one of the rulers with the ruler cursor, which will then appear with a dark border like a selected frame. You can find the functions required for working with the ruler in the "Rulers" and "Clipboard" function groups. To switch from Ruler mode back to Text mode, click on the right mouse button again.



text ruler selected text ruler

Each ruler may be assigned a "ruler colour", which you can select from a list of 16 colours. This ruler colour will be displayed in Ruler mode as a small colour patch to the left of the ruler. By clicking on such a colour patch you can open a popup menu that shows you all currently existing rulers in the text ruler list. In this way you can replace the current ruler by another one quickly and without long detours.

A pre-programmed mouse action occurs when you double-click on the text ruler: The "Ruler parameters" dialog (see below) opens immediately, as if you had first activated the ruler and then clicked on the "Edit text ruler" icon (see below):

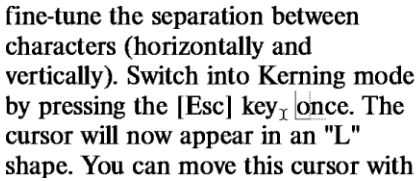


1.4 Kerning mode

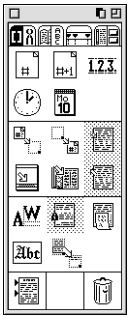
In this mode of operation you can fine-tune the separation between characters (horizontally and vertically). Switch into Kerning mode by pressing the [Esc] key once. The cursor will now appear in an "L" shape. You can move this cursor with the arrow keys in the usual way and position it between the two characters whose separation is to be altered. If you now use the arrow keys while keeping [Shift] held down, the text to the right of the cursor will be moved by one screen pixel in the direction of the arrow marked on the key. If you hold down the [Control] key while pressing the arrow key, the movement will be by 8 pixels. With [Shift]+[Control] you can move the text by 32 screen pixels. The movement will of course not be saved in screen pixels but calculated to take the current display magnification into account, so that the WYSIWYG principle is retained. The larger the magnification of the screen is currently set, the smaller the actual displacement of the lettering will be.

Be aware that kerning moves all the following letters in the line; this is perhaps obvious for horizontal movement, but applies to up and down movement too!

To return to Text mode, just press the [Esc] key again.



1.5 Control codes



This function group contains some very important tools that can make your work with text in Calamus much simpler, once you have become accustomed to the principle lying behind it.

We are dealing here with control codes. These are special characters that you can insert in the text, where they will be invisible. These codes are placeholders for given data or tasks, and offer you full control over this data!

To give an example: It makes much more sense in practice not to input a subsection number as clear text, say "3.4.2.1", but only place a control code there which, even after restructuring your document, will always show the right numbering scheme and display the then valid subsection number. That's full control!

1.5.1 Insert current page number

This function inserts a control code at the current cursor position. This code will appear on the screen and on the printout as the current page number, as set in "Page numbering" in the Page module.

1.5.2 Insert following page number

The control code inserted here will display the number of the following page in the format set in "Page numbering" (see Page module).

1.5.3 Insert chapter number

When you click on this icon, the following dialog box will appear:
[IMG

You may enter the numbering depth at which the current chapter or sub-chapter

should be incremented here. This increased (sub-)chapter number will then be inserted at the cursor position. The chapter number can only be increased, so it is not possible to assign the same chapter number twice.

This example shows how chapter and sub-chapter numbering works:

1 Numbering depth 1
1.1 Numbering depth 2
1.1.1 Numbering depth 3
1.1.2 Numbering depth 3
1.2 Numbering depth 2
1.2.1.1 Numbering depth 4
2 Numbering depth 1
2.1.1 Numbering depth 3
3 Numbering depth 1

You can set the first assigned chapter number and the type of numbering with the "Set chapter numbering" function in the Special functions of the Frame module.

1.5.4 Insert time

 This control code inserted in text will be displayed and printed as the time when the code was entered. This time is taken from your computer's internal clock, so make sure this is set correctly. It can be updated to the current time by the "Reformat document" function (see Options menu). The format the date will be inserted in is set in the System parameters module and stored in the "CALAMUS.SET" file.

1.5.5 Insert date

 Instead of the time this function inserts the current date. Everything else is identical to the "Insert time" function described above.

1.5.6 Insert reference to previous page

 This function will insert the number of the last page in the current text piping chain. If you are laying out a magazine and one of the articles is broken up by full-page advertisements, this function will allow you to put, for example, "Continued from page xx" with the correct number at the top of the next page.

1.5.7 Insert reference to next page

 This function is the complement of the preceding one. You may use it at the bottom of a page or column to enter, for example, "Continued on page xx".

1.5.8 Select reference marker

 After clicking on this icon you will see the following dialog:
[Function not yet available]

The dialog box contains a list of all the reference markers in your document. You can choose a marker from the list or enter the corresponding name in the name field. A click on one of the buttons "Page number" or "Chapter number" closes the dialog and inserts in the document the page or chapter number of the page where the corresponding reference marker is positioned.

Attention: Like all page numbers, the references will only be inserted after the "Reformat document" function has been called.

1.5.9 Footnote entry

 This function will transfer marked text to the footnote stream attached to the text piping chain. In the text, the marked block will be marked with a superscript number (see Frame editing module, "Footnote numbering") and either moved or copied to the footnote frame (see below). To make the text in the footnote stream visible, you must activate the "Reformat document" function (see Options menu). The settings of this dialog will then determine in which footnote frame the text will appear.

Two concrete examples will help make the operation of this and the corresponding functions clear. First, the standard situation: On one page there is a footnote, which should be moved to the corresponding footnote frame. For this you first have to create a footnote frame: Go to the Frame editing module and create a new text frame. Then select the "Special functions" function group. Now, select the frame which you just created and click on the icon for footnote frames (you could of course have selected the Footnote frame icon before creating the footnote frame, but it is all too easy to forget to switch back to normal text frames afterwards).

The new footnote frame must be linked to the text frame. Select the text frame and choose the "Piping from frame to frame" icon (see above). Next, click with the text flow cursor on the footnote frame and the two frames will be linked. Select the text frame again, switch to the Text module and use the cursor to mark the text which is to appear as

a footnote. Now, when you click on the "Footnote entry" icon, the text block will be cut from the text frame, replaced by a superscript number, and pasted into the footnote frame. The text will not appear in the footnote frame until you use the "Reformat document" function.

Please make sure that the "Entries/Frames" field has the "One" radio button selected. In this dialog you can also select which character should be used in the footnote as a placeholder for the footnote number.

To create footnotes on other pages as well, you will of course need footnote frames on them too. Additional footnote frames must be piped not to the original text frame, but to the previous footnote frame. Only the first footnote frame in a footnote piping chain should be linked to a text frame. Thus a footnote frame on page 3 should be piped, not to the text frame on the same page, but to the footnote frame on page 2. As the footnotes are distribued chronologically to the footnote frames, only pages where footnotes are actually present should contain footnote frames. Otherwise the following could happen: There are footnotes defined on pages 1 and 3 but not page 2, though all three pages have footnote frames that are piped to each other. The first footnote would appear correctly in the footnote frame on page 1, but the second would appear on page 2 rather than on page 3 because Calamus placed it in the next available footnote frame. You can solve this problem, as well as the problem of having more than one footnote appear on the same page, by using the text editor after the "Reformat document" function to edit by hand the page breaks that were inserted automatically into the footnote text by this function.

The second example is much simpler:

Say that instead of footnotes, you want to create endnotes (which are like footnotes but accumulated at the end of a document rather than the bottom of the pages to which they refer). Add several pages at the end of your document with large footnote frames which are piped together. Link this piping chain to the whole text piping chain (select the first text frame, click on "Piping from frame to frame" – see Frame editing module, Special functions – then click on a footnote frame.) Once you have marked all footnotes and transferred them with the function described above, you can use the "Reformat document" function to make all the "footnotes" appear in the piped footnote frames as endnotes. Since endnotes should all appear together one after the other, the "Entries/Frames" field should have the "Unlimited" radio button selected.

1.5.10 Index entry

This function is useful for creating index entries and corresponding page numbers. It works in a similar manner to the creation of footnotes (in the endnode

variant, see second example above), though no footnote numbers will be assigned in this case. Instead the text of the index entry can (and should) include the page number of the current page. Although you are offered the option, normally it will not make sense to use the "Move" option here, only "Copy".

First, merge all files in your document into a continuous piping chain. Don't worry about memory if you have a hard drive because Calamus can use virtual memory. The only limitation is the space available in the virtual memory folder. At the end of the document, create and link several large text frames. Click the Index frame icon in the Text "Special functions" function group and then click on each of the empty frames. They will change to index frames.

Select the text frame at the beginning of the document and click on the "Piping from frame to frame" icon. Then click on the first frame in the index frame piping chain. You have now created a link between the index frames and the text frames. From this point on the Index entry function works like the endnote example described in the section dealing with footnotes. Now that the text and index frames are properly linked, you may begin creating index entries. Begin on page one and use the text cursor to mark words or phrases to be used in the index. After each marking, click the Index entry icon. The marked text will be copied to the index frame with a placeholder for the corresponding page number.

The final stage involves the automatic calculation of page numbers. For technical reasons this is accomplished in two steps. Click on "Reformat document" and deselect the "Index" checkbox before reformatting the pages. This establishes the proper sequence of page numbers. When the page numbers have been set, repeat "Reformat document" but enable the "Index" checkbox this time by clicking on it. You must also decide whether the index entries will be sorted in "Alphabetical" or "Chronological" order. You may also choose whether to replace any previous entries in the index frame or add new ones to them with the "Delete old" or "Append new" radio buttons.

1.5.11 Set reference marker

This function allows you to set a reference marker. The "Select reference marker" function (see above) allows you to insert the number of the page or chapter where this reference occurs elsewhere in your document. This is useful, for example, for referring to another section of a manual though the page numbers are not yet available at the time that the text is prepared. When you click on this icon, after placing your cursor in the reference position, the following dialog box will appear:

[Function and image not yet available]

You can enter the name of the reference marker in the field. Click on "OK" or press [Return] to insert the reference marker.

1.5.12 Insert Manual kerning

As an alternative to altering kerning from the keyboard after pressing [Esc] as described above, you can select this icon to input precise numerical kerning values to alter the distance between characters (both horizontally and vertically) in very fine steps.

You first use the arrow keys to move the cursor in the normal way to position it between the two characters whose distance is to be altered. Now click on the icon and enter the desired values in the dialog that appears. Positive numbers for "Horizontal" and "Vertical" will move the text to the right and down respectively, negative numbers in the opposite direction. If you apply this function more than once, the movement will always be from the original position and not from the kerned position. Thus if you don't like the result and wish to restore the line to its original state, you should enter "0" in the editable field(s).

Be aware that kerning moves all the following letters in the line; this is perhaps obvious for horizontal movement, but applies to up and down movement too!

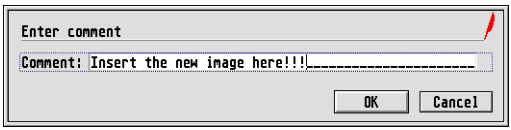
1.5.13 Protect text block from break

Formulae and quotations do not look good if text piping splits these over more than one frame; normally you want to keep these on the same page and, if applicable, the same column. To prevent this, mark the relevant block of text (either with the mouse or with functions in the "Macro" group) and then click on this icon. Calamus will then make sure that all text in the block appears in the same text frame.

Take note: Calamus will also ignore any "Force piping to next frame" control codes within the block.

1.5.14 Insert comment

With this function you can insert comments into your document. This text will be stored in the main text with a so-called Comment control code and will then no longer be visible, though it can be found, read and altered with corresponding search functions.



1.5.15 Insert style

When you click on this icon, the currently active text style (from the Text style module) will be inserted immediately at the current text cursor position in an active text frame. During this there will be no interrogation or display of the available or defined text styles. If a text block is marked at the time, then this will not be affected, but in general a text style control code will be inserted at the text cursor position.

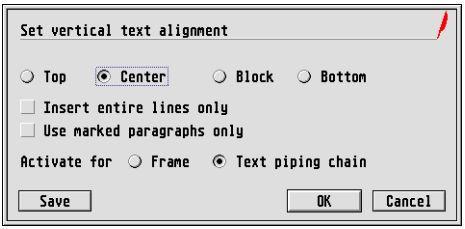
1.5.16 Force piping to next frame

This control code has a very special task: When this code is inserted, Calamus when formatting the text in a text piping chain will consider the frame full at this character, and will immediately pipe the remaining text to the next frame in the piping chain. In this way you can set up text with many chapters so that each chapter automatically begins on a new page.

1.5.17 Vertical text alignment

For reasons of space, the function "Vertical text alignment" has been moved here from the Text ruler function group.

This function affects the vertical alignment of sections of text within a frame. It is in a way the counterpart to "Range left", "Range right", etc. of the Text ruler functions which affect the horizontal alignment of characters. The settings here apply not only to the current text ruler, but, depending on the setting, to the entire frame or piping chain. When you click on the icon, the following dialog box will appear:



Here you can choose whether the paragraphs should be formatted with reference to the top or bottom of the frame, or whether they should be centered vertically or spaced out uniformly ("Block" setting); in the latter case Calamus will enlarge the spacing between paragraphs to make sure that the text fills the frame. Typographers call this vertical justification.

With Center and Block formatting you can choose whether Calamus should insert complete lines between the paragraphs ("Insert entire lines only" checkbox active) or whether the separation may also include distances that are not a multiple of the line spacing. The first option ensures that in multi-column layouts the lines are placed at the same height in all columns (hold register). With the second option formatting appears more even.

With Block formatting you also have the option to apply vertical justification for marked paragraphs only ("Use marked paragraphs only" checkbox active), or for all of them. Marked paragraphs are those that have variable paragraph endings (see "Special key bindings" entry in the Tools function field, normally produced by terminating the paragraph with [Control]+[Return]).

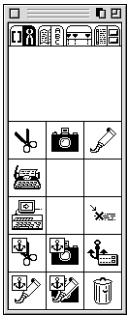
For vertical justification to take effect, the text must be broken with a forced column/page break – even if the text frame is not part of a piping chain.

Finally you can choose whether the settings of this dialog should be valid only for the current frame ("Frame") or for all frames of the text piping chain ("Text chain").

1.5.18 Delete text block/ruler

You will be familiar with this deletion icon – last encountered in the Frame module. But with this "waste basket" you can target the deletion of specified text blocks or the currently selected text ruler. In the latter case the previous text ruler (higher in the text) will take effect. You may not delete the first text ruler in a frame.

1.6 Tools



In this function group you will find all general tools for working with text in text frames. Amongst others these include the text editor that you can call up from here, as well as the Anchor frame functions.

1.6.1 Move block to system clipboard

Use this function if you want to move text data from a Calamus text frame in simple ASCII data to the system clipboard for exchange purposes. Informations about text styles, rulers and special control codes are lost as they cannot be transported in ASCII. Paragraphs will be separated by new lines; each paragraph is a long text line.

1.6.2 Copy block to system clipboard

Using this function you can exchange text data in simple ASCII format via the system clipboard. Informations about text styles, rulers and special control codes are lost as they cannot be transported in ASCII. Paragraphs will be separated by new lines; each paragraph is a long text line.

1.6.3 Paste text from system clipboard

Use this function if you want to insert text data in simple ASCII format from the system clipboard into a Calamus text frame. Paragraphs will be build by new lines; each paragraph will be output into a long text line.

When text data are copied from the system clipboard, the visible characters will be taken only. Succeeding lines with text will be joined into one Calamus text paragraph.

The form feed character will be replaced by the Calamus control code "Force piping to next frame". Tabulators will simply be taken as is.

1.6.4 Open text editor

 Clicking on this icon opens the Text editor module supplied with Calamus. You can find the description of this module in the Appendix. This method of editing is preferable to working directly in the layout window, because this takes a lot of time redrawing the frame after each entry or deletion.

1.6.5 Insert blind text

 If you want to layout with text without having finished text already, you will require so-called "blind text" which doesn't make sense and can only be used for layout purposes.

A click on this function icon inserts blind text in the selected text frame.

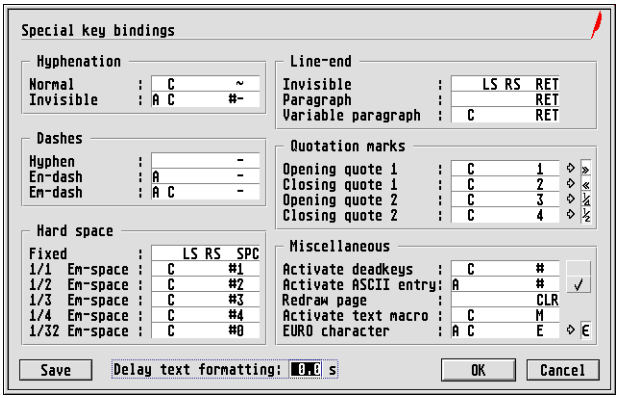
The blind text is built into Calamus (Lorem ipsum ...) but you can redefine it. Copy a file named BLIND.TXT (capitals only) into the system folder within your Calamus folder. The text content of this file will then be inserted instead of the built-in text.

1.6.6 Key bindings editor

 While you are editing text, you can use a number of special key combinations to insert characters which are not present in your computer's regular character-set. For example, while the ASCII character- set has only one dash, Calamus has four of varying lengths. With this function you can decide which key bindings will call up which characters, as well assigning them to some other functions.

Control codes are not necessarily displayed in a text frame (such as control codes for hyphenation, for instance). In the external Text editor which is described separately in the Appendix, you can choose to display all control codes. So to get a clear overview which control codes are positioned where, you should always use the Text editor.

Click on the "Key bindings editor" icon. You will see the following dialog box:



We will describe the meaning of the 23 special key combinations briefly:

Hyphenation

Normal

This is a control character in the sense described above. Wherever it appears, a word may be divided at that position if necessary when wrapping the line. So normally this control character is not shown, but a hyphen will appear when a word must be split at the end of a line.

Invisible

This control character works in a similar way to the code above. It denotes the position where a word or combination may be divided, but unlike the normal control code no hyphen will appear at this marking. You can use this code to show where word combinations that contain non-alphabetic characters (such as the slash in "black/white") should be divided at the end of a line without adding a disfiguring hyphen. So the control character itself will never be displayed, it only affects the formatting of the text.

Dashes

Hyphen

A hyphen is a short horizontal dash used for joining compound words and to show that a word is divided at a line-break. Also called a "short divis".

En-dash

The en-dash is a dash the same width as the uppercase letter "N". It is used to mark a range of numbers, such as in 1988–1990.

Em-dash

The em-dash is a dash as wide as the uppercase letter "M". It is used for a break in thought – like this one – in the middle of a sentence.

Note: The minus sign is a dash even longer than an em-dash, and is used in mathematical expressions.

Hard space

Fixed

A fixed space will not be stretched to justify a line in justified text.

Em-space and fractions of it

An Em-space is a space of the same width as a capital "M". A 1/2 Em-space is naturally half that width, etc. pro rata.

Line-end

Invisible

This control code allows you to mark the end of a normal line of text. During reformatting, Calamus will break the line here, but will not begin a new paragraph; in other words, there will be regular line spacing and no indentation on the next line.

Paragraph

This control code ends a paragraph. Here too the text will be broken, but instead of the regular line spacing the paragraph spacing will be inserted here and the next line may be indented.

Variable paragraph

To vertically justify text paragraphs on a page (see Control codes function group) you can use a variable offset between some paragraphs. More information can be found in "Vertical text alignment".

Quotation marks

Opening and Closing quote 1 and 2

For proper typography, you should use different marks to begin and end a quotation. There are two kinds of opening quotation marks and two kinds of closing quotation marks – double- and single-quote marks in English, as well as some others in German, French etc. This function allows you to specify which quote marks should be used and which keys will call them up, allowing you to set items like "John says: 'Goodbye![Æ]" correctly.

The edit fields at far right of this part of the dialog permit you to choose the quote marks to be used in your document. As some of these quote marks are included in the Calamus fonts but are not part of the ASCII character-set, you have to put placeholder characters in these fields.

For the normal English-language convention, the best choice for the four fields are: *ASCII 171 (1/2), 170 (“), 096 (‘) and 039 (’).*

These give opening and closing double-quotes (so-called 66 and 99, because they look like small versions of these numbers) and single-quotes (6 and 9) respectively. Other languages, such as German, may use a dropped double opening quote (obtained with ASCII 172 here) or the "double chevrons" (ASCII 174 and 175). The method of inputting non-keyboard ASCII characters is described below. Note that for this to work "Activate ASCII entry" must be active (ticked) when the dialog is opened. If necessary activate this, close the dialog and reopen it again to input your choice of quote marks. Click on "Save" then "All" to save your settings for future use.

Miscellaneous

This group allows you to assign key bindings to some text-related functions.

Activate deadkeys

For deadkeys you need neither a cemetery nor Dracula. A deadkey is a key which does not display any character itself, but will modify the character which other keys produce in combination with it. These keys allow you to enter accented characters in foreign languages. For example, you could produce "é" by entering the "´" and then "e". A similar thing applies for the keys "‘", "^" and " " on English-language keyboards. In detail (capitals are similar):

1st character:		^	‘	"	‘	~	/
2nd character:	a ->	â	á	ä	à	ã	
	e ->	ê	é	ë	è		
	i ->	î	í	ï	ì		
	o ->	ô	ó	ö	ò	õ	ø
	u ->	û	ú	ü	ù		
	c ->	ç					

The key binding combination specified here allows you to switch deadkeys on and off. A tick in the field at far right shows that the option is currently active. You can also activate and deactivate the function by clicking on this field to make the tick appear or disappear.

Activate ASCII entry

There are some characters which cannot be entered even with deadkeys. You still have two options: Either use [Control]+[Esc] to bring up the font overview in which you can "click out" the letter you want, or use ASCII input. Hold down the [Alternate] key while you enter the (decimal) three digit ASCII code of the character on the number keypad. You can turn the ASCII input option on or off with the specified key binding combination or by clicking in the "tick" field at far right.

Redraw page

This key binding allows you to rebuild the currently displayed page. If you have aborted a page display using the [Control]+[Shift]+[Alternate] key binding (see "Key combinations" in earlier chapters describing the standard elements), this function will allow you to rebuild the complete page from scratch.

Activate text macro

This macro call key (or key combination) must be used before each application of a key binding that executes a user-defined text macro (see "Text macros" function group). For ease of use it is a good idea to use a single – otherwise unused – key for this, such as [Help].

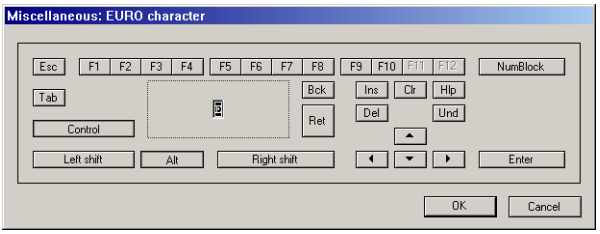
EURO Character

This key combination produces the "Euro" currency character. Unfortunately the correct character is not present in most Calamus CFN fonts, so you can either use ASCII 238, or create your own with the optional Font editing module.

Delay text formatting

Here you can enter the delay (in seconds) before text becomes visible, or is reformatted, when inputting directly into a text frame.

To alter a key binding combination in the "Special key bindings" dialog (see above), first click right of the colon on the relevant entry. The dialog shown below appears and you can input a key combination in it. The settings are similar to the key binding display in the Top row, where "Control", "Alternate", "left Shift" and "right Shift" represent keys that you hold down while you press the key that you enter in the larger box below or select from the listed modifier keys. Note that when both "left Shift" and "right Shift" checkboxes are active you need to hold down only one of the two, but otherwise all selected modifier keys have to be held down simultaneously:



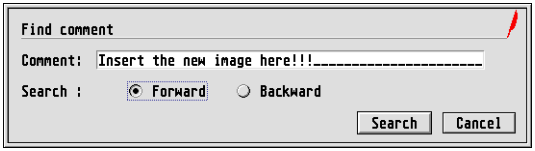
The 18 keys of the numeric keypad at far right can be used independently of their equivalents on the top row of the main keyboard. To use them, activate the "Number-pad" checkbox.

The keys [Backspace], [Return], [Delete], [Help], [Undo], [Insert], [ClrHome], the function keys [F1] to [F10] and the [Enter] key of the number-pad do not create any characters directly, and are generally known as "special keys". So if you want to use one of these keys, you have to click on the corresponding button of the dialog to activate it. In the main Special key bindings dialog the keys are abbreviated in the same manner as in the coordinate display (see "Coordinate display" in the "Coordinates bar" chapter). If you have problems using this dialog, please refer to the "Text module, Define macro" chapter.

The corresponding key binding combination will then be displayed as for the "Key bindings" entry of the Options menu. A preceding "A" means "Alternate", "C" represents "Control", "LS" and "RS" the two "Shift" keys. A "#" immediately before a character means you should use the relevant key in the numeric keypad at far right of the keyboard.

1.6.7 Search for comment

With this function you can search for text comments in the current text frame (or piped text chain). Clicking on the icon brings up the following dialog:



Here you enter the comment string to be looked for (normally a word) and also choose whether the search should be "Forward" or "Backward" from the current cursor position in the text. If the comment is found in the matching direction, the cursor will jump to it immediately. Otherwise you will get an error message.

1.6.8 Anchor frame

With this function you can anchor (tie down) raster or vector graphics or coloured areas at a given position in the text. If you insert or delete text afterwards, call the hyphenation function or modify the page layout – in other words alter the text formatting – then the images or graphics will be moved along with the text, and are carried over page-breaks quite normally. However, you cannot flow text around anchored frames (because they have become part of the text).

To create an anchor frame, place the cursor in the text at the position the anchored frame should occupy and click on the "Anchor frame" icon so that it is inverted. Now select a frame (or several) to be anchored and click on the icon again. This now anchors the frame(s) at the specified text position(s), and they will flow with it.

The second way to create frame anchors is somewhat easier and is new since SL98:

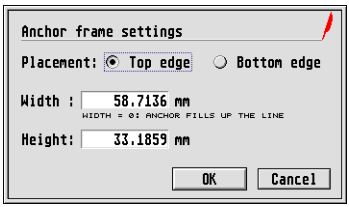
Place the frame to be anchored in the clipboard and in the layout mode put the text cursor on the position in the text where the frame in the clipboard is to be anchored. Now you can simply paste the frame from the clipboard to the cursor position. The frame anchor will be created automatically during this.

1.6.9 Copy and anchor frame

This function corresponds in both principle and use to "Anchor frame" described above. The difference is that the frame to be tied down is copied and anchored in the text paying regard to the set Copy options. If the Copy option is set to Virtual copies, then a virtual copy will be anchored, so that changes to the frame on the page will also affect the copy anchored in the text.

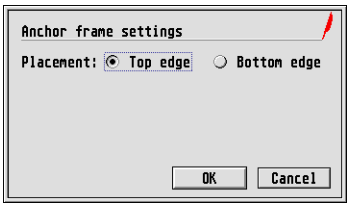
1.6.10 Position frame anchor

Here you can set various parameters of a frame anchor. To do this, mark an anchored frame as a block or place the cursor directly before the anchor and click on the icon. This makes the following dialog appear:



Here you can set both the width and the height of the anchored frame. Placement "Top edge" means that the bottom of the frame will lie aligned with the line's baseline, while "Bottom edge" will align it with the top of capitals in the text line.

Naturally you can also set the general alignment of frame anchors when no frame anchor exists as yet. This setting will also be saved in the Calamus Setup file. Just click on the icon. The dialog will then look like this:



1.6.11 Place anchored frame on page

With this function you can remove the anchored frame from the piped flow of text and return it to the page. To do this mark the anchored frame as a block or place the cursor just in front of the anchor and then click on this icon. The anchored frame will then be removed from the text piping chain and returned as a frame on the page in its previous position.

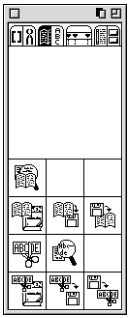
1.6.12 Copy and place anchored frame on page

This function works in the same way as the "Place anchored frame on page" described above, except here a copy of the text anchor will be placed as a frame on the page in its original position.

1.6.13 Delete text block/ruler

You already know this deletion icon – at the latest from the Frame editing module. With this "wastebasket", however, you can delete specified text blocks or the currently selected text ruler.

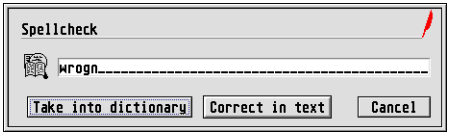
1.7 Dictionaries



In this function group you will find all functions for using Calamus's spellchecking and hyphenation dictionaries to make your text "come to life".

1.7.1 Spellchecker

This function searches through your text for incorrect spellings. If Calamus finds an error, the following dialog box will appear, giving you a chance to correct it:



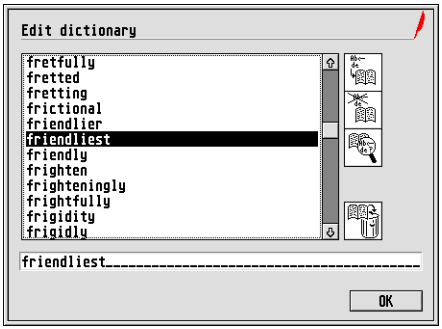
You are offered the opportunity to correct the word by clicking on the "Correct in text" button. Alternatively you can also add the current word to the contents of the dictionary (click on "Take into dictionary"). For this the spelling dictionary has to be loaded, of course. As this dictionary takes up a lot of memory, you should delete it after completing your spell check (see "Edit spelling dictionary" below).

1.7.2 Edit spelling dictionary

As already mentioned, Calamus supports two dictionaries:

An exceptions dictionary for hyphenation, and a spelling dictionary. Both have their own set of icons and may even use the same file for both purposes.

A click on this icon brings up the dictionary editing dialog, provided one has been loaded (this may take a quite some time to unpack before it appears):



You can see a part of the loaded dictionary in the scrolling dialog window and, besides the obligatory "OK" button, an input line and four icons. These are, from top to bottom:

Add word to dictionary

 To insert a word in the dictionary, you have to first type it into the editable line below the dialog window. After this you can include it in the dictionary by clicking on the top "Add word" icon.

Delete word from dictionary

 To delete a word from the dictionary, click first on the word and then on the second, "Delete", icon.

Search for word in dictionary

 This third icon has the same function as the [Return] key: The word on the edit line will be looked for in the dictionary. Again this may take some time with large dictionaries.

Unload dictionary

 If you click on the lowest icon, the complete dictionary will be cleared from memory following a safety query alert, which allows you to change your mind.

1.7.3 Save spelling dictionary

With this function you can save a changed spelling dictionary to disk or hard drive. After clicking on the icon you the file selector appears where you can choose the desired filename and path.

1.7.4 Load spelling dictionary

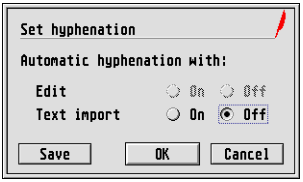
This function loads a spelling dictionary from disk or hard drive. You need to load a spelling dictionary before you can perform spellchecks (and a hyphenation dictionary before you can hyphenate the text automatically). Clicking on the icon brings up the file selector where you can choose the spelling dictionary to be loaded. Several are supplied in different languages and have the extension *.CWB (for Calamus WörterBuch). The default for English-speakers is SPELL.CWB. Dictionaries for other languages are contained in separate folders for spelling ("GRAMMAR") and hyphenation ("HYPHEN").

1.7.5 Hyphenate text

With this function you can hyphenate a text so that words are sensibly divided at overlong line ends, provided you have loaded a hyphenation dictionary. This is needed when you have not set up automatic hyphenation (see "Hyphenation options" function below), perhaps because it takes too long. To use it a text frame must be selected or a text block marked. If a frame is active, then after a safety query all other text frames in its piping chain will be hyphenated too.

1.7.6 Hyphenation options

After clicking on this icon you will see the following "Set hyphenation" dialog:



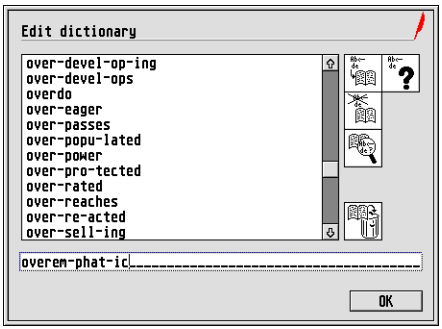
Here you can choose when the text should be hyphenated automatically. When "Text import" is switched "On", all hyphens that have been set manually will be lost.

1.7.7 Edit hyphenation dictionary

As already mentioned, Calamus supports two dictionaries:

An exceptions dictionary for hyphenation, and a spelling dictionary. Both have their own set of icons and may even use the same file for both purposes.

A click on this icon brings up the "Edit dictionary" dialog:



If a hyphenation dictionary has been loaded (loading may take some time), you can see a part of the "exceptions" listing in the scrolling dialog window and, besides the obligatory "OK" button, an input line and five icons. The special functions described below for inputting and adding a word apply only in the hyphenation dictionary.

If you type a word in the edit field, then after pressing [Return] this will be hyphenated following a set of fixed rules.

Unfortunately there are words in the English language which cannot be hyphenated correctly using fixed rule algorithms. For example, in the word "software", the final -e is silent and there are two syllables: soft-ware. On the other hand, in the word "catastrophe", the final -e is pronounced, providing an extra syllable: ca-ta-stro-phe. The hyphenation dictionary is designed to catch such special cases.

The three top icons in the left column enable you to insert, delete, and look up words. The bottom icon clears the entire dictionary from memory.

The special function "Uncertain hyphenation" is described further below.

Add word

To add a word to the hyphenation exceptions dictionary, you must first provide the correct hyphenation. Calamus understands two types of hyphenation logic: The normal syllabic division and division into several words. In the dictionary, syllables are divided by using "-", while words are divided with "+". For example, the correct

hyphenation of "overemphatic" would be "over+em-pha-tic".

When you type in a word and press [Return], Calamus will attempt to suggest the hyphenation of the word automatically, using internal rules. In this case it might look like this:

If the word is not already in a loaded dictionary, it would guess "overem-phatic" here, which unfortunately is not entirely correct either.

If you click the mouse once on the hyphen between "over" and "em-phat-ic", it will change to "+" to mark a break in a compound word. If you click once between two letters where there is no "-" such as on the "t", a "-" will appear. A double-click on an unwanted "-" (like between "at" and "ic" in the example) will eliminate the break altogether.

Once you have finished hyphenating a word, click on the "Add word" icon to enter it into the exceptions dictionary. The new words will not be added permanently unless you save the hyphenation dictionary before quitting Calamus.

Delete word from dictionary

To delete a word from the dictionary, click first on the word and then on the "Delete" icon in the second row.

Search for word in dictionary

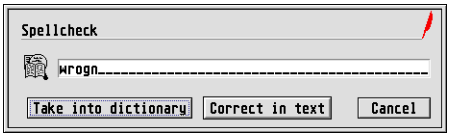
This third icon has the same function as the [Return] key: The word on the edit line will be looked for in the dictionary. In the hyphenation dictionary it will also have hyphens between syllables: If it was found they will correspond to the dictionary entry, otherwise a special algorithm is used.

Unload dictionary

If you click on the lowest icon, the complete dictionary will be cleared from memory following a safety query alert, which allows you to change your mind.

Uncertain hyphenation

The top right button offers a unique Calamus function that is only present in the hyphenation dictionary. There are some cases (very rare in English) that are hyphenated differently in different contexts. You can mark such words as "uncertain" in the hyphenation dictionary, so that Calamus will stop and ask you to supply the hyphenation. To add such a word to the exceptions dictionary, type it into the text field, then click on the question-mark icon. The word will be included in the dictionary with a question-mark as well. When Calamus attempts to hyphenate this word, the following dialog box will appear:



You may enter hyphenation for a word here with a mouse click as in the hyphenation dictionary dialog box. With the "Add word" icon the altered word will be included in the hyphenation dictionary.

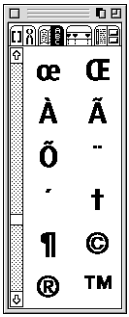
1.7.8 Save hyphenation dictionary

With this function you can save a changed hyphenation exceptions dictionary to disk or hard drive. After clicking on the icon the file selector appears where you can choose the desired filename and path.

1.7.9 Load hyphenation dictionary

This function loads a hyphenation dictionary from disk or hard drive. You need to load a dictionary before you can perform hyphenation. Clicking on the icon brings up the file selector where you can choose the dictionary to be loaded. Several are supplied in different languages and have the extension *.CWB (for "Calamus WörterBuch"). ENGLISH.CWB is the default for English-speakers.

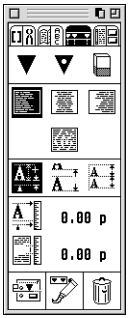
1.8 Character-set



The character-set panel displays a portion of the currently selected font. Unlike the Character-set overview, which you call up with the [Control]+[Esc] keys, the characters shown here appear as they are defined in the font. Since there is room for only 12 characters in the display field, use the scroll bar or the arrows at the left margin to move through the list.

When this overview is visible in the function panel, a click of the mouse on one of these characters will make it appear at the cursor in the text frame or text editor, as if you had entered it from the keyboard.

1.9 Text rulers



Text rulers allow you to format paragraphs within text frames. Formatting includes text justification (centred as well as ranged left, right, or fully justified), paragraph and line spacing, and the units for measuring these. Other elements such as tab-stops, left and right margins and paragraph indentation also belong to the Text rulers function group. In addition, with vertical text alignment you can prevent single line remainders at the top or bottom of pages ("widows" and "orphans").

You may use as many text rulers as you want in your text. A text ruler stays in effect until the next ruler is met. In order to edit a text ruler, click the right mouse button to switch from Text mode to Ruler mode; the I-beam will change to a cross. Use the cross to click on one of the text rulers, which will then appear with a dark border just like a selected frame.

You can now modify a selected ruler by moving the edge markers or tab-stops. To do this though, none of the three tab icons in the top row of the "Text rulers" function panel may be selected.

The margins and tab-stops will be displayed as follows:

A pre-programmed mouse action occurs when you double-click on the text ruler: The "Ruler parameters" dialog (see below) opens immediately, as if you had first activated the ruler and then clicked on the "Edit text ruler" icon.

With the following three icons you can set and delete tab-stops (commonly abbreviated to just "tabs"). If none of the three icons is selected you can move any existing tab markers.

If you grab a tab marker in Text ruler mode to move it, a vertical guideline now appears to make positioning of the tab by hand even easier.

1.9.1 Tabs

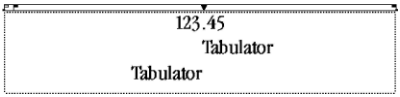
In Calamus you can set any desired number of tab-stops in the text ruler. There are principally two different type of tab, which are described below. A particular feature of the Calamus tabs is that they have a different effect depending on where they are placed in the text.

Important: If you want to move a tab directly in a selected text ruler, then none of the three icons for tab handling may be in a selected state!

1.9.1.1 Insert tab stop

When you select this icon, you can insert tab stops in the current text ruler by clicking with the mouse. You will be familiar with tabs from your typewriter: They allow you to align text in tables or indent lines etc. The tabs in Calamus are more powerful, since they simultaneously serve as ranged left, ranged right, centered or decimal tabs. Unfortunately their use is also somewhat different in most cases. Because of their various properties, we call these "sticky tabs".

You may enter tabs into the text by using the [Tab] key. Usually, everything from the last space before this keypress will be indented so that the postion at which the [Tab] key was pressed lies directly under the tab marker in the text ruler. Here are some examples to illustrate the use of tabs:



There is one exception though: If you press the [Tab] key before and after a word, the word will be centered under the tab. If you want to center several words, then separate them not with the normal but with the fixed space character.

[Tab]Tabulator␣in␣4␣Worten[Tab]

The text "Tabulator in vier Worten" is spaced with fixed-space characters.

Effective use of "sticky" tabs takes some practice, but you will not regret the effort since these tabs are more flexible than any other kind.

1.9.1.2 Insert leader tab

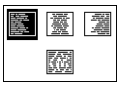
Leader tabs correspond to normal tabs with one exception: The space created by the [Tab] key is filled with a definable character. You can, for example, use this function to put dots between a chapter name and its page number in a table of contents. You can define the leader tab fill character in the "Ruler parameters" dialog of "Edit text ruler" (see below).

Just like normal tabs, leader tabs may produce text ranged left, ranged right or centered. You can recognize them in the ruler by a white dot in the triangle.

1.9.1.3 Delete tab stop

With this "eraser" you can remove tabs from the selected ruler. To do this, just click on the eraser icon, then with the cross-cursor on the tab marker to be deleted.

1.9.2 Text justification



These four icons affect the justification of the text within the frame borders.

1.9.2.1 Text ranged left

Text ranged left (sometimes called "left-justified") is how we normally write; all the lines begin at the same position on the left side, but the right side is normally ragged.

To change the formatting of a section of text, select the text ruler immediately before it and then click on the desired formatting icon. If you want to change the alignment of a small section of text which does not have a separate text ruler, switch to text mode and mark the section as a block; then click on the relevant "justification" icon. Calamus will insert two text rulers – a new text ruler immediately before the block and a copy of the existing text ruler at the end of the selected text block.

1.9.2.2 Text centered

Centered text setting formats the lines so that their mid-point lies on the central vertical axis of the frame. Every line has the same amount of space on the left side and on the right side; in other words, both sides are ragged.

To change the formatting of a section of text, select the text ruler immediately before it and then click on the desired formatting icon. If you want to change the alignment of a small section of text which does not have a separate text ruler, switch to text mode and mark the section as a block; then click on the relevant "justification" icon. Calamus will insert two text rulers – a new text ruler immediately before the block and a copy of the existing text ruler at the end of the selected text block.

1.9.2.3 Text ranged right

With text ranged right (sometimes called "right-justified"), all lines end at the same position at the right of their frame, but the left side may be ragged.

To change the formatting of a section of text, select the text ruler immediately before it and then click on the desired formatting icon. If you want to change the alignment of a small section of text which does not have a separate text ruler, switch to text mode and mark the section as a block; then click on the relevant "justification" icon. Calamus will insert two text rulers – a new text ruler immediately before the block and a copy of the existing text ruler at the end of the selected text block.

1.9.2.4 Text fully justified

In fully-justified text, Calamus stretches spaces between words on each line so that both the left and right sides are flush with the frame edge or with the left and right indent/margin flags. Fixed spaces and em-spaces will not be stretched.

To change the formatting of a section of text, select the text ruler immediately before it and then click on the desired formatting icon. If you want to change the alignment of a small section of text which does not have a separate text ruler, switch to text mode and mark the section as a block; then click on the relevant "justification" icon. Calamus will insert two text rulers – a new text ruler immediately before the block and a copy of the existing text ruler at the end of the selected text block.

1.9.3 Line spacing

These three icons apply only to the selected text ruler. They determine how the distance between two lines will be measured.

1.9.3.1 Relative line spacing

 Relative line spacing means the actual white space between the bottom of one line and the top of another lying below it. Its dimensions will be based on the type of character height you chose in the Text style module (Em-height, Versal or Designer height). Relative line spacing is always the space between two characters, one under the other. Here is an illustration of the two types of line spacing:

Relative line spacing:

Absolute line spacing:

1.9.3.2 Absolute line spacing

 Absolute line spacing is the distance between two identical points on two identical characters lying one below the other. Its dimensions will be based on the type of character height you chose in the Text style module (Em-height, Versal or Designer height). Absolute line spacing is always the separation between the baselines of two characters, one under the other. The relationship described can be seen again in the illustration below:

Relative line spacing:

Absolute line spacing:

1.9.3.3 Baselines snap to line raster

 To simplify line alignment (or line register) in Calamus SL, a third option for setting line separation was introduced. "Line alignment" means that with multi-column layouts, adjacent lines will always lie at the same height.

With the setting for the line raster you specify the abolute separation to which text lines will snap in the frame. For this the reference point is not the position of the ruler in which the line raster is active, but always the top edge of the frame! The baselines of the characters in the line will always snap to the raster, whose step size is set in the Line spacing editable field. The size of the font is immaterial for this. Should the font be larger than the set line raster, the characters will overlap the line above or even extend above the top of the frame.

If the Paragraph spacing is set to a larger value than the Line spacing, the start of the next paragraph will also snap to the next coordinate of the line raster. So it will always be "rounded off".

You can obtain aligned text with this function quite simply provided you ensure that various text frames always start at the same vertical coordinate. Should this not be possible (e. g. when setting marginal notes), then it helps if you set up magnetic grid lines in the Frame edting module with the same separation as the line raster. Then let the text frame snap to them, so maintaining alignment.

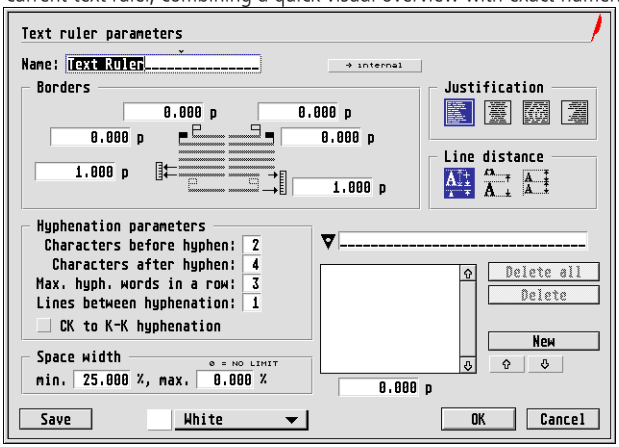
Naturally you can work with several line rasters in a text frame (say because you need different separation for quoted passages or something similar). Just set a text ruler that uses the original line raster after the paragraph with the altered formatting, and the lines will be placed automatically in the correct position.

Please note that vertical justification (see above) takes precedence over the line raster and may pull the lines out of alignment. You should use line alignment above all for professional printing (books, magazines, brochures etc.) as well as multi-column newspapers. Individual posters or fliers and other single sheet items gain little from line alignment.

The basic idea behind holding line registration is to ensure that text lines on the back of a page align exactly with text lines on the front of the page, so giving a quiet, smooth appearance to the pages. This is because the paper is often slightly transparent, so that the printed text shines through the paper. It's easier on the eyes if the lines on the reverse are not visible in the line-spaces on the front.

1.9.4 Edit ruler parameters

The dialog called up by clicking on this icon permits editing the parameters of the current text ruler, combining a quick visual overview with exact numeric input:



Here you can make all the settings that affect the (current) text ruler.
The setting options in detail:

Name

You can (and should, to maintain a better overview) assign a unique name to each ruler. The small mark above the editable field indicates how much of the name will be visible in the "Text Ruler List" function group.

Internal

If this switch is set, then the corresponding text ruler will be managed "internally" in the text ruler list. Depending on the settings of the text ruler list, it may be that that ruler is not visible in the text ruler list at all. For "internal" text rulers the same applies as for internal text styles: They are automatically removed by Calamus if they are not being used anywhere in the document any more.

Margins

In these numeric editable fields you can set individually the margins and paragraph indents, as well as the line and paragraph separation very precisely. From top left to bottom right, these are: Left paragraph indent, right paragraph indent, left margin, right margin, line spacing and paragraph spacing. With a click on the current unit of

measurement abbreviation following the number, you can switch to display a percentage value instead.

Justification

Icons for horizontal justification of text lines, in order: Ranged left (or left-justified), centered, fully justified, and ranged right (right-justified).

Line distance

Here you will find the icons for line separation: Relative line spacing, absolute line spacing, line raster.

Hyphenation parameters

Here you can determine the minimum number of letters that are to appear before and after a hyphen character, and the maximum number of successive lines that may be hyphenated – both the number of wrapped (hyphenated) lines that may follow each other as well as the least number of lines without a hyphen that should lie between broken lines. These settings make it easier to obtain a "smoother" fully justified text.

Space width

With this function you can define the minimum and maximum width of white space to be inserted between two words in fully justified text.

The minimum and maximum values are inserted as relative percentages of the width of an em-space (width of a capital "M"). If either of the specified values are exceeded during formatting, an alert will appear and the formatting will be terminated. You can then edit this portion of text manually, for instance hyphenating a word or changing the sentence structure.

Leader tabs

Next to the white-dotted triangle you can enter the character to be used for leader tabulation. You can enter more than one character in the edit field; the gap in the text will then be filled with this sequence of characters.

Tab list

This list shows all tabs present in the text ruler. If you select one of the list entries, you can edit its value in the editable field below. With the "New" button you can create a new tab stop, "Delete" clears the selected tab. Clicking on "Delete all" clears all the tab stops set in the ruler. The arrowed buttons below the list let you sort the list. However, the sorting has no effect on the order of the tabs in the ruler itself.

Colour popup

You can assign a colour to each individual text ruler, which you can select from 16 colours in this popup. By assigning colours you can set up your own classification system for your rulers, so that you can mark all left-ranging rulers blue or all rulers with relative spacing red, for instance. You can choose the colours to be assigned freely.

The text ruler colour will be displayed in Calamus documents in ruler mode as a small colour patch in front or each ruler. Clicking on this colour patch opens a popup menu that displays a list of available rulers. In this way you can replace the current ruler by another one quickly and without long detours.

1.9.5 Insert text ruler

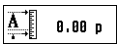
You may insert a new text ruler anywhere you want within a text frame. There are three possibilities:

- No text block is marked, and the cursor is at the beginning of a line. Here the text ruler will be inserted before the current line, so it will be valid for the line containing the cursor.
- No text block is marked, and the cursor is anywhere within or at the end of a line. In this case the new text ruler will be inserted after the current line containing the cursor. Hence only the following lines will be formatted according to the settings of the new text ruler.
- A text block is marked. In this case two rulers will be inserted: A new ruler before the start of the block and a copy of the previous text ruler at the end. Thus by changing the first new ruler you can alter the formatting of the text block.

1.9.6 Delete text block/ruler

The currently selected text ruler will be deleted from the text, and the previous text ruler (higher in the text) will take effect. You may not delete the first text ruler of a piping chain.

1.9.7 Line spacing



You may enter the line spacing for the current text ruler as a fixed size in points or millimetres, depending on which unit was chosen in "Set units of measurement" in the Page module. You may also set line spacing as a percentage of the current character height; in this case this will refer to the font height set in the Text style

module (Em-height, Versal height, or Designer height – see Text style module, "Font size" function group).

The percentage option maintains a consistent ratio between font size and line spacing when text appears in different font sizes. In certain situations, a fixed value is preferable.

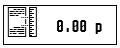
To set line spacing, simply click on the numerals and input the desired spacing in the subdialog.

Warning: This distance only applies to running paragraphs that have not been interrupted by the use of the [Return] key. Lines input individually and separated by [Return] presses will be output with paragraph spacing (see below).

1.9.8 Line spacing units of measure

To change the current unit of measurement to or from a percentage value, simply click on the unit abbreviation (after the number) with the cursor. This will also recalculate the value for line spacing from points or millimeters to percent, or vice versa. The percentage values of character height will be based either on the Em-height, Versal height or Designer height, depending on which is currently active in the Text style module (see Text style module, "Font size" function group).

1.9.9 Paragraph spacing



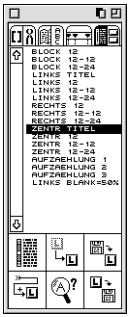
Paragraph spacing is similar to line spacing. A paragraph ends with a carriage return which is entered into the text using the [Return] key. To change between fixed and percentage spacing, or to set spacing values, see the instructions for line spacing.

1.9.10 Paragraph spacing unit of measure

To change the current unit of measurement to or from a percentage value, simply click on the unit abbreviation (after the number) with the cursor. This will also recalculate the value for paragraph spacing from points or millimeters to percent, or vice versa. The percentage values of character height will be based either on the Em-height, Versal height or Designer height, depending on which is currently active in the Text style module (see Text style module, "Font size" function group).

1.10 Text ruler list

1.10.1 Text ruler list



The text ruler list (new from SL2002 onwards) brings an overview and clarity to your documents. With it you can see at a glance how many text rulers are used in a document.

Naturally you can work with so-called "free" text rulers as before, without using the text ruler list at all.

However, for this you have to specify first that text rulers may be "internally created". To do this call up the "Edit text ruler list" function that is decribed further below. After this save your Calamus.SET file.

If you are familiar already with text style lists and free text styles, the following comparison of free text styles and free text rulers may help you to get a feeling for working with them, as the text ruler operation mimicks that of the text style one quite closely.

Procedure for creation of a free style/ruler:

Style

- Read out ("pick") the style parameters by placing the cursor or marking a block and selecting one of the "Check text style" icons.
- Alter the parameters in one of the Text style function groups.
- Assign a style by clicking on one of the icons using the "Change text style" help text (possibly a query appears asking whether the whole text or only the block is to be altered).
- Doing this creates a new free text style.

Ruler

- Read out ("pick") the ruler parameters by selecting a ruler in the layout.
- Alter the parameter in the "Text rulers" function group of the Text module.
- Insert the ruler at the cursor position by clicking on the "Insert text ruler" icon.
- During this a new free text ruler will be created.

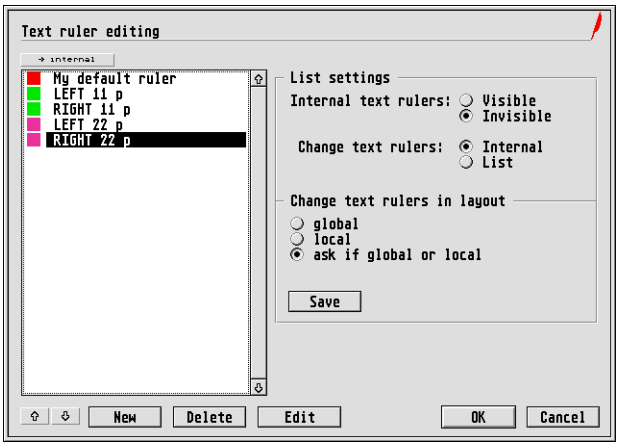
The following applies to both cases: The same ruler/style will be inserted/assigned only if the parameters of the ruler/style match those of the picked ruler/style. If this is not the case, a new ruler/free style will be created.

That wasn't too hard, was it?

The use of the text ruler list is very simple and will be described in detail below.

1.10.2 Edit text ruler list

A click on this icon opens the main dialog for editing the text ruler list:



At the left of this dialog you will see a list of the rulers that are currently available. In contrast to the function group, the ruler names are visible here at their full length.

With the "Internal" button above the list you can switch the currently selected ruler in the list between an internal and a "visible" mode. If a ruler's status is set to "Internal", then a "#" character appears as a marker in addition to the actual ruler name. An "internal" ruler may not be listed in the "Text ruler list" function group. In addition, Calamus removes all "internal" rulers again immediately and automatically from the document as soon as they are no longer used anywhere in the layout. A ruler that is not switched to "internal" remains in the text ruler list even if it is not being used in the document. It can then only be removed from the list manually, or with the appropriate settings in the "Fix document" dialog called from the Options menu.

At the right of the dialog you can alter the list settings for the text ruler list. Here you can define whether internal rulers should be visible in the list, and whether new rulers may be created freely or whether for each new ruler being created the "Text ruler parameters" dialog already described in detail in the "Text rulers" chapter should have to appear.

With the "Save" button you can save these settings in the Calamus.SET file.

At the lower edge of the dialog you will find two buttons with which you can sort the entries in the text ruler list.

A click on the "New" button creates a new ruler (with the parameters of the ruler currently selected in the text ruler list) and opens the "Text ruler parameters" dialog for further editing of the parameters.

With the "Delete" button you can delete the currently selected text ruler list entry and so remove it from the list. If the ruler is in use anywhere in the document, you have to select a replacement ruler which is to take the place the deleted ruler from now on. As every text frame used in the layout has to have at least one text ruler, you cannot delete the last ruler in the text ruler list as long as your document contains at least one text frame.

In order to alter the parameters of one of the existing rulers, select it and click on the "Edit" button. The "Text ruler parameters" dialog opens and shows you all the parameters of the ruler that is currently selected in the list, which you can now alter. Alternatively you can open this dialog also with a double-click on a text ruler list entry.

Clicking on the "OK" button quits the "Edit text ruler list" dialog and all changes made will be adopted. If you click on "Cancel", all ruler settings will remain as they were before opening this dialog.

1.10.3 Edit text ruler

 A click on this icon opens the "Text ruler parameters" dialog showing the details of the ruler currently selected in the text ruler list, allowing them to be modified.

This corresponds to activating the ruler edit mode in the document layout, and selecting the desired ruler followed by a double-click on the ruler.

Warning: Since clicking on a ruler in the text ruler list immediately inserts the ruler at the current input cursor position in an active text frame, you should ensure first that no text frame is in the selected state. If appropriate deselect all text frames beforehand and then choose the desired ruler in the text ruler list.

1.10.4 Load text ruler list

 Naturally text ruler lists from Calamus documents can be loaded subsequently, so you can create a library of the most important text rulers very quickly and easily.

Clicking on this icon opens the file selector, in which you can select a text ruler list for loading. Calamus text ruler lists have the file extender CRL (for Calamus Ruler List).

Warning: An earlier Calamus Raster generator (Rastergenerator PLUS or Rastergenerator PRO) used so-called Calamus Raster lists with the same file extender CRL. Please take care that you do not load such files as text ruler lists!

1.10.5 Define text ruler

 When you click on this icon, a new text ruler with the current text ruler parameters will be created immediately, but will not be inserted at the current cursor position in the text frame. Instead the "Edit ruler parameters" dialog appears, in which you can modify the ruler settings as desired.

This function is particularly useful when working with "internal" text rulers and frequently altering the text ruler parameters via the "Text rulers" function group.

1.10.6 Establish text ruler

 Naturally it is quite possible that at times you lose sight of which ruler from your text ruler list is being used at a given place in a text frame.

To establish this, simply place the text input cursor at the desired position and click on this icon. Immediately the corresponding ruler will be selected in the text ruler list (and may be further altered if desired).

Tip: If a text block is marked, then the first text ruler within this block will be selected.

1.10.7 Save text ruler list

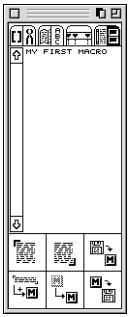
Naturally text ruler lists from Calamus documents can be saved, so you can create a library of the most important text rulers very quickly and easily. We recommend you save text ruler lists for various purposes in a folder named "RULERS".

Clicking on this icon opens the file selector, in which you can input a name under which the text ruler list is to be saved. Calamus text ruler lists have the file extender CRL (for Calamus Ruler List). Choose a suitable filename for the list being saved so that you can find it easily later. (It is not absolutely necessary to input the file extender ".CRL" – Calamus is able to insert required file extenders itself when necessary.)

If you want a given text ruler list to be loaded automatically each time Calamus is launched, save this list with the filename DEFAULT.CRL in the MODULES folder!

1.11 Text macros

1.11.1 Text macros



Text macros (macros) make it possible to assign text strings, text rulers and text styles, or any combination of these, to just two definable key presses (these are called key bindings). Some of the possibilities are sketched out below:

The simplest use of macros is as "phrase keys" to generate not just individual letters, but entire words, sentences or even complete chapters. One of the best examples of using a text macro is to avoid having to type the words "Yours sincerely" followed by blank lines at the end of each letter. You can even adorn these words with text styles and position them carefully with text rulers.

If you use a lot of tables in your documents, you may choose to save the text ruler for the tables as a macro to obtain matched tables. That way, the tab-stops will be always in the same place.

The options described in the Text style module offer you the chance of altering the appearance of the text. Text macros allow you to save the current text style as defined in the Text style module, so you can enter a new style from the keyboard instead of clicking your way through the icons in the Text style module.

The word "macro" comes from the Greek and as a prefix means something like "large" or "long".

You may execute a macro either by typing the macro call key(s) (see "Key bindings editor" in the Tools function group) followed immediately by the defined keys (see below), or by clicking on the macro name in the list with the mouse. Depending on the macro contents and whether you have selected a text block, Calamus will carry out certain actions:

The macro contains text

If no text block is marked, the macro text will be inserted at the cursor position. If a text block is marked, the block will be deleted, and the macro text inserted in its place.

The macro contains a text ruler

If no text block is marked, the ruler saved in the macro will be inserted at the cursor position. If a text block is marked, two rulers will be inserted: The ruler saved in the macro before the block, and a copy of the previous ruler after the block.

The macro contains style information

The same applies as for macros containing rulers: If no text block is marked, the style information saved in the macro will be inserted at the cursor position. If a text block is marked, two style buttons will be inserted: The macro style before the block, and a copy of the previous style after the block.

Even when using a small font the function field only has room for 24 macros. Calamus can, of course, use many more. To see the others you have to scroll through the list. This is accomplished with the scroll bars at the left edge of the list.

1.11.2 Set block start

This icon and the next perform the same task as marking a text block by running over it with the mouse with the left button pressed, except that here you can mark a block which is larger than the page or screen. To mark the beginning of a block, move the cursor to the appropriate position and click on the "Set block start" icon.

1.11.3 Set block end

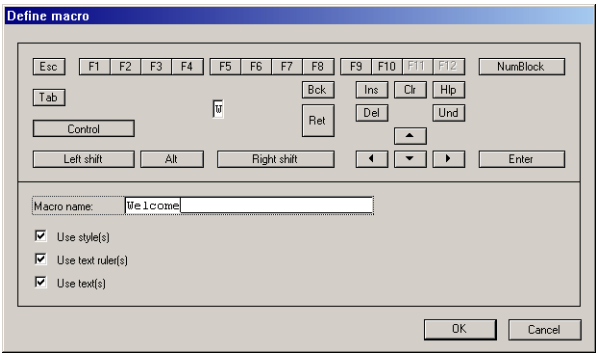
This is the counterpart to Set block start: When you click on this icon, the text from the start of the block to the current cursor position will be "marked" as a block. It will appear in inverse video, as if defined by dragging the text cursor over it.

1.11.4 Load macro file

When you click on this icon, the file selector will appear and you will be able to load a previously saved set of macros from floppy or hard disk. If macros are already defined, they will be replaced.

1.11.5 Define macro

This function allows you to save selected text, text style and/or text ruler information as a macro. The text can be marked in the current frame with the mouse before clicking on this icon, or changed later. After clicking on the icon the following dialog box will appear:



In the top sections, you can first of all enter the key binding combination that will call up the macro. There are four modifier keys which you may use with other keys to call up macros. These keys are [Control], [Alternate], left [Shift] and right [Shift]. Note that Calamus distinguishes the two [Shift] keys here. With the numbers and mathematical sign keys, if the "Number-pad" checkbox is active the keys on the numerical pad (at far right) will be used to call the macro; when inactive, those on the main keyboard.

Immediately underneath, you may select the actual key ("hot key") to be used with the modifier key (if any). There are 25 fields available for selection. In the one selected by default (the largest rectangle) you can enter any key that produces a printing character. Non-printing characters may be used as well by clicking on the other fields: Here "Bck" means [Backspace], "Ret" represents [Return], the [Help] key is abbreviated "Hlp", "Del" is the [Delete] key, "Ins" is short for [Insert], "Clr" for [ClrHome] and "Ent" represents the [Enter] key. Theoretically, the 90 available keys together with the 16 modifier key binding combinations with [Control], [Alternate], left [Shift] and right [Shift] give you a possible total of 1440 macros. However, some of these are already in use for special key bindings (see "Tools" function group), and so are not available for your macros.

In the bottom section of the dialog box you can enter the macro name. You will also see three checkboxes: "Use style", "Use text rulers", and "Use text". These tell Calamus which elements of the marked or input text you want to save in the macro. Click on any checkbox to turn it on or off.

When you click on "OK" or press [Return], the dialog box will disappear and the name of the new macro will appear in the macro list. If you have already used the key binding combination or the macro name, Calamus will warn you and give you the chance to enter a different binding or macro name.

1.11.6 Change macro

You may change a macro in one of three ways:

Delete macro

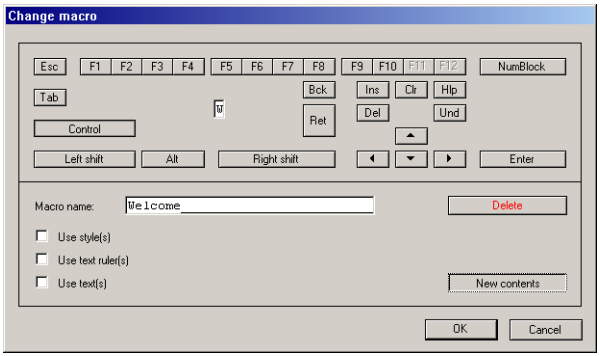
This is the simplest option: Click on the "Change macro" icon, then on the name of the macro to be deleted from the list. When the dialog box appears, click on the "Delete" button.

Rename macro or change key binding

To change the name or key binding of a macro, start the same way as for Delete macro: Click on the "Change macro" icon and select the macro you want to change. When the dialog box shown below appears, change the desired fields (name or keys) and click on "OK" or press [Return].

Change macro contents

This works basically the same as defining a macro. Mark a text block that has the new content for the macro. Click on the "Change macro" icon and then click on the macro name in the list. The following dialog box will appear:

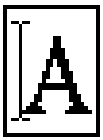


Here you can set the same values as when defining a macro, including the modifier keys, the "hot key", the macro name and the type of information to include, though the values of the old macro will be preset. The elements of a marked text block will only be used, however, when you click on the "New content" button, otherwise only the name and key bindings will use the new values.

1.11.7 Save macro list

The counterpart to "Load macro file": Your list of macros will be saved under the name that you input in the file selector.

2 Text style



While the Text module is used mainly for entering, editing and formatting your text, the Text style module allows you to change the appearance of individual letters or entire words, paragraphs, frames or even piping chains. By producing glyphs (character images) in the computer, Calamus opens up more possibilities than almost any other DTP program. The selection of fonts is practically unlimited, any character – depending on the unit of measure – can be over a metre or up to 999.99 points high (see Page module, "Units of measurement" function group), without unpleasant corners, edges or stepping effects. In addition to the usual text effects like "Underlined", "Outlined" and "Shadowed", Calamus allows you to stretch or compress as well as slant the characters at any angle you like. You may turn off proportional type to make tables. Even writing from right to left is no problem for Calamus. Character and word spacing are adjustable of course, as are the colour and fill pattern of the text, underline, outline and shadow. You may store the text styles in a list and call them up with a single click at any time.

Working in the Text style module is much like working in the Text module. Although you can also switch between Text mode and Ruler mode in the Text style module, to change rulers you must enter the Text module. The most important function in the Text style module is selecting text blocks. You can either drag the mouse over the desired text with the left button pressed (see Text module), or mark it using "Start block" and "End block" functions of the "Macros" function group in the Text module. This function allows you to work with blocks longer than a single page. The third option is to click on "Select all" in the Options menu to select all the text in the current piping chain.

In addition to freely altering the appearance of the text, you can – and should – store the text styles used in your document in a list. The principle behind this is exactly the same as for master pages: Besides providing a clearer overview, this gives you the option of altering several parts of your document simultaneously. For instance, you can assign the same text style in the list to all chapter headings. If you change your mind later and want to set the headings in another font, size or style, you can simply alter this text style in the list and immediately all headings will be transformed.

Which of these two principles (free design or style list) is to be used can be set in the "Misc. settings" dialog (see "Misc. settings" function, below). Here too you can choose whether the internal (free) text styles should also be displayed in the Text style list. These two methods of working will be called "Free text style mode" and "Style list mode" in the following sections. For the reasons mentioned above the style list mode is recommended for professional text layout.

2.1 Font selection

This function group displays the loaded fonts (see below) with their name displayed in the corresponding font. When more fonts are loaded than can be displayed in the window, you can browse through them with the scroll bar at the left of the window. From the displayed list you can select the font in which the selected text block or frame in your document will be set.

2.1.1 Change text style

In seven of the eight function groups in the Text style module, you will find this and the icon described next in the bottom row. The "Change text style" icon allows you to apply style changes to the selected text and if desired also to include a new style in the text style list. If you have not selected any text when you click on this icon, Calamus will ask if you want to apply the new style to the entire piping chain. Changes in text style will not take effect until you click on this icon. This function is not restricted to the current function group; you can choose a different font in the "Fonts selection" function group, then select a smaller font size in the "Font size" group, then click there on the "Change text style" icon. Calamus will then apply both changes at the same time.

Smart mode

If you have activated the so-called "Smart mode" for text style changes in the function group "Style list" in the dialog "Text style list parameters", a click on this icon only changes the current text style parameters for the current text area. (Current text area can be a marked text block, the whole content of a text frame or the whole content of a text pipe.) The other text style attributes of already existing styles are conserved then.

Sample:

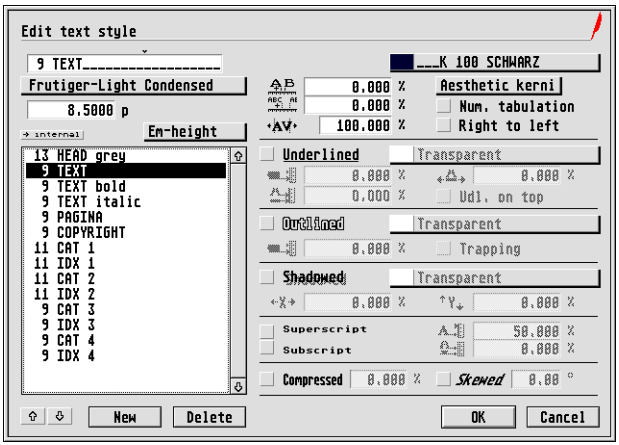
You have used 20 different text styles (Frutiger bold 20 pt black, Times 12 pt green, Garamond 14 pt 50% gray, etc.). Now you want to change all text styles in the way that all styles use the Baskerville font only – all other style attributes shall remain.

Chose the first function group ("Font selection"), select the wanted font and click on "Change text style". Then the text will be redrawn, while font sizes, colours etc. are still the same. Only the font face has been changed.

(See more explanations for the Smart mode in the chapter "Style list".)

List mode

If the "Misc. settings" dialog (called by "Text style list parameters" icon of the Text style list function group) has the "List" radio button active for "Edit text style", the altered text style will be included automatically in the text style list if you click on "New" or press [Return] in the following alert dialog – naturally only if it is not present already. You will then see the following dialog:



This admittedly very comprehensive dialog will be described fully further below.

Calamus makes a sensible suggestion for the name of the new text style. With the "Cancel" button in the lower right corner of the dialog you can also abort the complete "Change text style" function.

Tip: Too many different text styles in a document is hard on the eye and difficult to work with. A good guideline is the length of the text style list: As soon as you have to scroll because there are more styles than fit in the window, you should think about restyling your document and deleting superfluous text styles.

If the new style is present more than once in the list already, a selection box appears listing the corresponding styles. Here you can choose which of these is to be assigned to the selected text. This function is useful, for instance, if you originally wanted to use text styles with the same name for titles, body copy and footnotes, but also wish to leave open the possibility for subsequent changes. To do this, first define a text style and copy this twice (see below, "Add text style to list" function) and change the name to suit. Now you

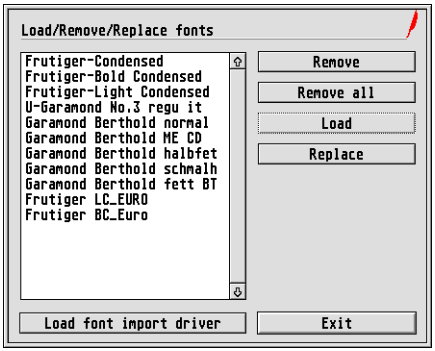
only have to ensure that you assign the correct style to the appropriate parts of the text. By changing the text style in the list you can then alter all titles, body copy or footnotes at once.

2.1.2 Check text style

This function "establishes" the current style information and enters it into the input fields of the Edit text style dialog box. If a text block is marked then generally the style of the first character in the block will be examined, otherwise it will be the one at which the text input cursor is currently positioned. If the style is present in the style list, then it will also be selected there (inverse video). You can then change attributes you want to alter; click on the "Change text style" icon to apply them to the text.

2.1.3 Load/Delete fonts

After clicking on the "Load/Delete fonts" icon, the familiar object selection dialog described in earlier chapters describing the standard elements will appear:



At the bottom left of the dialog you will find a new button "Load font import driver".

You can choose in this dialog which fonts Calamus should hold in memory for work with a document. Please keep in mind the licence conditions discussed under "Load" of the File menu. Calamus will load only the fonts serialized to match your registered copy. When you load a document, the necessary fonts will be loaded automatically if they are not in memory already.

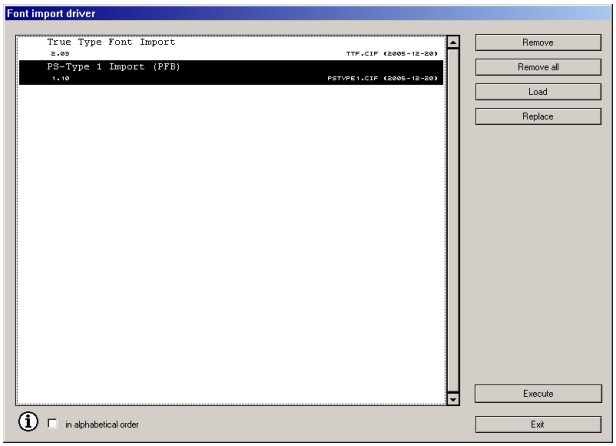
If you want to delete a font, you should select the font and then click on the "Remove" button. An alert box will appear with a prompt to select a replacement font. Click on "OK" or press [Return], then click on another font in the font overview to replace

the one you are deleting (if you select the font that you are trying to delete, the operation will be cancelled). Please note that replacing a font may alter the text formatting.

Finally you can delete all fonts except one from the document. Select the font you wish to keep, then click on "Remove all". Again, normally the text formatting will change because only this one font will be used for the complete document.

2.1.3.1 Load font import driver

Clicking on this button opens the selection dialog for the font import drivers, allowing you to load font import drivers into Calamus in a similar way to the well known driver selection dialogs. At present an import driver is available for PostScript Type 1 fonts (PSTYPE1.CIF) and one for TrueType fonts (TTF.CIF). Further import drivers are due to follow, and once available can be loaded easily thanks to this new modular driver concept to extend the font loading capabilities of Calamus SL.



2.1.4 Font

This list shows the fonts Calamus currently holds in memory. You can alter the current font for the current text style at any time by selecting a new font in the list and applying the change with the "Change text style" icon.

2.1.5 PostScript Type 1 fonts

What are Type 1 fonts?

During the development of PostScript some years ago, the firm Adobe also developed a font type that was distributed under the name PostScript Type 1. Due to vectorial construction of the font characters (based on Bézier curves, just like Calamus fonts) and very precise vector coordinates, these fonts quickly found great success in the professional sector since imagesetting and printing with such fonts produces very high quality results. The same applies to Calamus and its CFN fonts, though it must be admitted today that CFN remained an island solution.

Thanks to the PS-Type 1 import driver (font-loader) you have access to enormous libraries of PostScript Type 1 fonts in a far more convenient and safe way than was previously possible via a font converter such as Type-2-Type or DA's Layout.

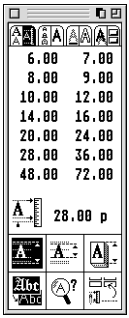
Under Windows please look for font files with the extender PFB (which stands for PostScript Font Binary) and the associated *.AFM files (Adobe Font Metric). If AFM files are present, then the kerning information they contain will be evaluated while loading a Type 1 font, otherwise the font-loader will create ideal font kerning automatically. (The *.PFM files (Printer Font Metric) that are present usually as well will not be evaluated.) On a Mac things are simpler: Here the PS-Type 1 font-loader "simply" recognizes the Mac-PostScript fonts and also reads the kerning information from the corresponding font stores of the Mac file system – and all that under MagiCMac!

All font formats (at present just the PostScript Type 1) that are loaded via the font import driver are available in Calamus SL afterwards as CFNs (!), exactly as if you had really loaded CFNs. Thanks to the possibility of embedding the fonts into the document, you may only have to load the Type 1 fonts once. (Due to the conversion process, the loading of Type 1 fonts may take fractionally longer than loading of CFN fonts.)

You can obtain Type 1 fonts from all font foundries or suppliers. A very large selection of current fonts is included in the CorelDRAW package, for instance.

Tip: The optionally available "FonTools" module allows you to perform many useful actions for all font types that Calamus can load: You can easily choose fonts from Mac-like font windows and load them with a single key press, add the "Euro" symbol character to them, alter the appearance and/or the name of the font, create your own random fonts, define pair-kerning for character-pairs, print out font catalogues and a lot more. It is also possible to use FonTools to save loaded Type 1 fonts (and also TTF fonts) as CFN fonts.

2.2 Font size



This function group allows you to set font size. In addition to the 14 pre-set (but re-definable) font size fields, you can enter the desired size in increments of 1/10,000th of a point or millimetre. Furthermore, you can choose how the font height should be measured.

2.2.1 Em-height

This function, along with the next two, determines how Calamus will measure the height of a character. Only one of the three icons may be selected at a time.

Em-height is the height of a complete line. It corresponds to the height of the lead type once used for typesetting, which also had to include space for descenders. When this lead type was set without extra lead between lines ("leading"), the em-height was exactly the same as the line spacing. For this reason it is also often called the "point size".

2.2.2 Versal height

Versal height is the height of a versal or upper-case character in the text. Thus, a character printed with 12 pt versal height is larger than a character with 12 pt em-height.

2.2.3 Designer height

Designer height is pre-set in the font, and varies from font to font. It is the ideal display size for the font. Some fonts are designed to look better in large sizes, while some look better in small or medium sizes.

2.2.4 Change text style

This icon offers the same function as in the Font selection function group.

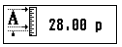
2.2.5 Check text style

This icon offers the same function as in the Font selection function group.

2.2.6 Enter size in list

This function allows you to place the font size displayed in the Font size editable field in one of the 14 pre-defined fields. To do this, click first on the relevant icon and then on the desired pre-defined field. Once you have placed a size there, you can select it by clicking on that field.

2.2.7 Font size

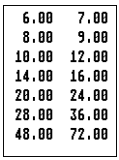


The font size set in this editable field will become the new size when you click on the "Change text style" icon. The unit of measure after the number is the one you selected in the "Set units of measurement" of the Page module. But from where to where is the size of the letters measured? That is determined by the three icons described above ("Em-height", "Versal height" and "Designer height").

2.2.8 Font size unit of measure

In this field you can select the desired font size for a text style. The unit of measure after the number is the one you selected in the "Set units of measurement" of the Page module, and cannot be altered here. Normally fonts in English-speaking countries should have "pt" (points pica) here; in Central Europe the usual choices are "p" (points Cicero) or "mm" (millimetres). You are of course free to use any other units of measure you like by entering relevant data in the first three editable fields of the "Font size" line of the "Set units of measurement" dialog.

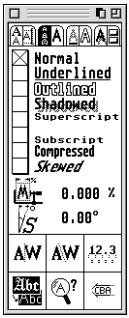
2.2.9 Fixed font size



In this field the Text Style module offers you a collection of pre-defined "fixed" font sizes, which you can copy quickly into the current font size field by clicking on the desired size.

However these "fixed" font sizes can also be altered at any time if you require other font sizes as standard (see "Enter size in list" above).

2.3 Text attributes



This function group allows you to apply the various attributes described above to your text. This wide variety of functions is possible mainly because Calamus uses vector fonts which are easily manipulated. In addition to the seven style definitions, you can also control proportional spacing and kerning. There is even a function that allows you to write from right to left!

2.3.1 Proportional text spacing on/off

This function allows you to turn proportional spacing on and off. In non-proportional spacing (such as a typewriter produces), every letter occupies the same width, whether it is narrow like "i" or wide like "m", so that a line with 30 keypresses always has the same width irrespective of the characters used.

Only a few fonts will work well with non-proportional spacing; familiar representatives of this group are, for instance, the typewriter fonts "Courier" and "Elite". These are supplied normally with non-proportional kerning in any case, so that you do not have to switch off proportional spacing specially here for them.

Thus normally this icon should always be in a selected (inverse) state, otherwise the set text will almost always have an ugly appearance. Only in special cases such as for printing program listings or tables should proportional spacing be switched off by clicking on the icon to deselect it. As the use of Automatic kerning (see below) does not make much sense in that case, the relevant icon will be switched off too.

2.3.2 Automatic kerning on/off

The distance between certain letters should be reduced to prevent "white holes" in the text and thus improve the aesthetic appearance of the page. This reduction is called "kerning".

An example says more than a thousand words:

Warning Warning

To obtain an even appearance in the text – particularly body copy – a very careful setting of the kerning distances is required for each individual font. Different processes are used for various fonts.

When you select this icon, you automatically turn on proportional spacing.

2.3.3 Numeric table mode on/off

This effect allows you to turn proportional spacing for numbers on or off. Switching off proportional spacing means that Table mode is switched on, and vice versa; this is useful for numbers in tables where different columns have to line up with each other. With Table mode all numeric characters will occupy exactly the same width as the widest numeral in the font. If proportional spacing was switched off in the Automatic kerning function described above, then this function of course has no effect: All characters will then be printed with the width of a capital "M".

Table mode is easier to understand with an example of a short table. This example shows clearly that when this effect is switched on the numerals all line up below each other, without the aid of tab stops:

1	34	4	235	56	987
23	4	456	34	284	78
123	491	39	6	8	45

2.3.4 Change text style

This icon offers the same function as in the Font selection function group.

2.3.5 Check text style

This icon offers the same function as in the Font selection command group.

2.3.6 Writing from right to left

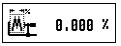
Another speciality of Calamus: You can write the selected text from right to left. This has nothing to do with mirror images; rather, the characters are added from right to left, instead of from left to right. You may turn this feature on or off by clicking on the icon. Due to kerning of the characters, a text written from right to left can have a different width compared to being written left to right:

Kerning between P and .

No kerning between R and .

This function even allows you to switch the writing direction within a line.

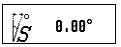
2.3.7 Compression factor



Here you can set the factor by which the text will be expanded or compressed when the "Compressed/Expanded" function is active (see "Distortion factor", below). Factors higher than 100 % stretch the text apart, while factors smaller than 100 % compress it.

However you should note that the horizontal elements of a font are affected by this distortion, though vertical ones are not. The width of the font outline therefore becomes less regular, which, thanks to manual correction, is not the case with the image setting fonts from noted font foundries.

2.3.8 Skew angle

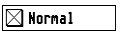


This is the skew angle for the text when the "Skewed" style is selected. Zero degrees will have no effect. 10 degrees will create a mild slant to the right, while -10 degrees will create the same to the left. Please note here too that fonts skewed automatically in Calamus are usually of poorer quality to slanted fonts sold professionally, because the skewing does not retain all the font outline widths.

2.3.9 Text Effects

You can switch a text effect on and off by clicking on the square field in front of the relevant name. There are two exceptions to this rule: "Normal" switches all other effects off, and "Superscript" and "Subscript" are mutually exclusive so that one toggles the other.

2.3.9.1 Normal



When you click on the field before "Normal", you turn off all other font styles, and the x's in the other fields (denoting they are active) will disappear.

2.3.9.2 Underlined

☒ Underlined The selected text will be underlined after the "Change text style" icon is activated. You can define or alter all underline parameters in the Underline function group.

2.3.9.3 Outlined

☒ Outlined With the "Outline" function active, a line will be drawn around each character's shape. An outlined character will be slightly larger than a regular character, since the line appears outside the character itself. You can define all the outline parameters in the Outline function group.

2.3.9.4 Shadowed

☒ Shadowed With the "Shadowed" function active, the characters will appear to have a shadow behind them. You can define all shadow parameters in the Shadow function group.

2.3.9.5 Superscript

☒ Superscript Superscript text is normally only half the specified text size, and lines up with the top of the line. Both size and alignment may be altered in the Edit text style dialog (see below).

The "Superscript" field switches off the "Subscript" field if active, since text cannot be both a subscript and a superscript at the same time. (If this effect is required, it can be achieved using the vertical kerning function.)

The font size and positioning of the superscript text can be altered in the "Edit text style list" dialog of the Text style list function group.

2.3.9.6 Subscript

☒ Subscript Subscript text is normally only half the specified text size, and lines up with the bottom of the line. Both size and alignment may be altered in the Edit text style dialog (see below).

The "Subscript" field switches off the "Superscript" field if active, since text cannot be both a subscript and a superscript at the same time. (If this effect is required, it can be achieved using the vertical kerning function.)

The font size and positioning of the subscript text can be altered in the "Edit text style list" dialog of the Text style list function group.

2.3.9.7 Compressed/Expanded

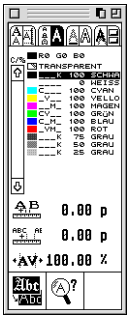
☒ Compressed If you select this effect, the text will be stretched or compressed by the given amount (see "Distortion factor", below). This function affects not only the characters themselves, but also letter spacing and word spacing.

2.3.9.8 Skewed

☒ *Skewed* Skewed text is not the same as italic text! Skewed only means that the regular characters have been slanted ("skewed" is the mathematical term for this). Italic text on the other hand has a different, more flowing set of character shapes for each font. This is why most font families have an italic font in addition to regular (or "Roman").

You can enter the angle by which the text is to be slanted in the matching editable field; see "Skew angle" above.

2.4 Text colour/Word spacing



The functions in this function group control the fill pattern and colour of the text, as well as character and word spacing.

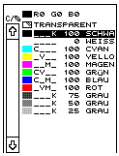
2.4.1 Change text style

This icon offers the same function as in the Font selection function group.

2.4.2 Check text style

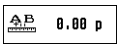
This icon offers the same function as in the Font Selection function group.

2.4.3 Text Colour



This specifies the colour and fill pattern with which normally written text will be displayed and printed. For selection, please see earlier "Colour" chapter.

2.4.4 Character spacing



Character spacing controls the minimum amount of space between two glyphs after they have been kerned.

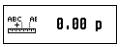
Normally, the glyphs are arranged next to each other without a gap, but you can alter the tracking (space between characters) in this editable field to create spaced lettering for emphasis etc., if you like.

You can choose whether the character spacing should use an absolute value in the current font measurement system (set in "Set units of measurement" in the Page

module), or be a percentage of the font height. Swap between points or mm and percent by clicking on the unit abbreviation after the numeric field. The value will be recalculated immediately as well.

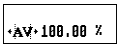
To enter a value, click on the number field, use the [Esc] key to clear the line, enter a new value, and press [Return].

2.4.5 Word spacing



The value entered here will be inserted in addition to a normal space character between words. Word spacing is defined in the same way as Character spacing.

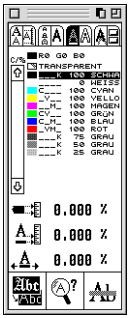
2.4.6 Extend text justification



With normal fully justified text, the lines always start and end at the border of the text frame. But as the optical centre of gravity of various letters can appear different when viewed (an "F" has a different optical centre of gravity to an "O"), the column or page edges can appear ragged. Extended text justification helps to equalise the optical "grey value" of a text column at its edges by letting certain characters extend slightly over the edge of the frame and hence the text column. This improves the aesthetic appearance of the page.

As the effect can look different with various fonts, you have the opportunity to set the weighting for Extended text justification here. 100 % weighting is the standard value for an activated extended text justification, with 0 % it is switched off and text formatting works as normal. Naturally you can also set values above 100 % to strengthen the effect, though if the value is too high this can again make the edges look ragged, so that values above 100 % are seldom useful. This manual was set in Frutiger Light Condensed with 100 % extended text justification weighting. Please note that not all CFN fonts have the same quality as far as the kerning data (pair kerning, vertical step kerning) is concerned. Therefore the Extended text justification behaviour is not identical with all fonts!

2.5 Underline



In this function group you will find everything required for underlining text. Please do not forget to switch on the "Underlined" attribute in the "Text effects" function group in order to activate the settings made here.

2.5.1 Change text style

This icon offers the same function as in the Font Selection function group.

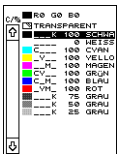
2.5.2 Check text style

This icon offers the same function as in the Font Selection function group.

2.5.3 Print underline on top of text

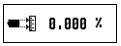
Normally an underline will lie "behind" the text. You will only notice this if you have set a negative offset from the text as described below, and neither the text nor the underline are solid black. In such cases you may use this function to make the underline appear on top of the text instead of behind it. This function also allows you to "strike-through" outlined or differently coloured text. Turn this function on/off by clicking on the icon.

2.5.4 Colour/Fill pattern



This specifies the colour and fill pattern with which the underline will be displayed and printed. The settings are described in detail in earlier chapters describing the standard elements.

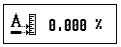
2.5.5 Underline width



You can specify underline width in the current font measurement system or as a percentage of the font height. To switch between these two systems, use the mouse to click on the unit abbreviation following the number. This will recalculate the value immediately.

To set the width, click on the number field, use the [Esc] key to clear the field, enter a value, and press [Return].

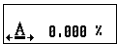
2.5.6 Underline offset



The offset value determines the distance between the character baseline and the underline. As with underline width, you may enter the offset in the current font measurement system or as a percentage of the font height. A negative offset will print the underline above the baseline.

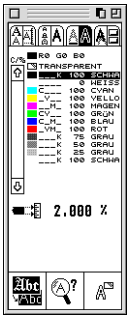
Here is a little trick to create inverted (white on black) text: Select an underline width of 100 %, an offset of -50 %, and choose the "Outlined" and "Underlined" text effects.

2.5.7 Underline overhang



An underline can extend to the left and right of an underlined character. You can set the amount of overhang with this function which works the same way as "Underline width" and "Offset", above.

2.6 Outline



This function group controls the appearance of outlined text. The functions are identical to those in the "Underline" function group, so we will save ourselves repeating the explanations made there.

2.6.1 Change text style

This icon offers the same function as in the Font selection function group.

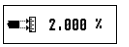
2.6.2 Check text style

This icon offers the same function as in the Font selection function group.

2.6.3 Outline transparent

The "Outline transparent" option sets the outline of a font to transparent independently of the frame it is in. This makes it possible to trap a text to prevent white showthrough flashes when printing text of one colour on a contrasting background if the printing is slightly out of register. The contour, unlike the character, will not be cut out of the background.

2.6.4 Outline width

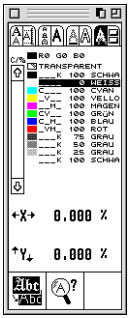


You can specify the width of the outline in the current font measurement system or as a percentage of the font height. To switch between these two systems, click on the unit abbreviation following the number. The value will be recalculated immediately. To set the thickness, click on the number field, use the [Esc] key to clear the field, and enter a new value.

Please note that (due to the method Calamus currently uses for vector output) wider outlines require significantly increased calculation time. In addition, with some outline

widths you can get vector breakout, which the Germans refer to as "Griesbecksche Buschmesser" (translates as "Griesbeck's bush-knives", named after the programmer of vector output). This may offer some neat effects at times, but does not give really acurate outline results. We hope to be able to offer a revised form of vector output in one of the coming Calamus versions that no longer has this problem.

2.7 Shadow



These functions control the appearance of the shadow for shadowed text. For more information about the settings, see the earlier chapters describing the standard elements.

Characters can throw shadows. You can determine where this shadow should fall by typing values into the "X" and "Y" editable fields.

If you do not want a shadow, set both values to zero.

The unit of measure following the number is the one that has been specified in the Page module. You can choose the shadow offset both in the horizontal (X) and vertical (Y) direction freely. You can also choose whether the shadow should always fall at the same (absolute) distance or whether the offset should depend on the character size (relative).

To switch between Absolute and Relative shadow offsets, please click on the unit of measure after the value for the desired direction. This will toggle between absolute values ("mm", "pt" or other unit selected in "Set units of measurement" in the Page module) to "%". This percentage value refers to the set character size, so that a shadow offset of 100 % with a 12 point font corresponds to exactly 12 points. After typing the value into the editable field, terminate the input with the [Return] key, after which the new values will be adopted.

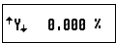
2.7.1 Change text style

This icon offers the same function as in the Font selection function group.

2.7.2 Check text style

This icon offers the same function as in the Font selection function group.

2.7.3 Vertical (Y) shadow offset

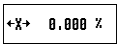


Here you can set the offset of the shadow from the characters. Positive values of the Y-coordinate move the shadow downwards, negative upwards.

2.7.4 Shadow Y unit of measure

By clicking on the unit of measure abbreviation following the value, you can switch between relative (percent of font size) and absolute offset.

2.7.5 Horizontal (X) shadow offset

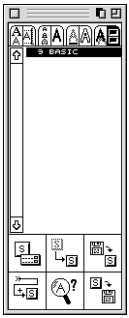


Here you can set the offset of the shadow from the characters. Positive values of the X-coordinate move the shadow to the right, negative to the left.

2.7.6 Shadow X unit of measure

By clicking on the unit of measure abbreviation following the value, you can switch between relative (percent of font size) and absolute offset.

2.8 Text style list



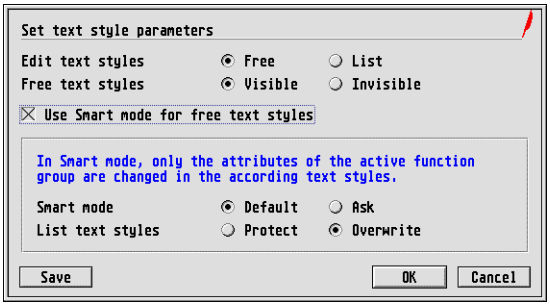
As described earlier, you can hold the text styles of a document in a style list. Calamus can manage any number of text styles in a document, but there is only room to display 24 of them at once. You can use the scroll bar or arrows at the left of the list window to browse through additional text styles in the list. However, with most normal documents you should be able to manage with a maximum of 24 text styles.

To change the style of a text block to that of a stored text style, you only have to highlight the block and click on the desired style in the list (if a block extends over more than one page, you can use "Start text block" and "Set block end" in the "Text macros" function group).

In addition the Text style list function group allows you to load and save text style lists from/to floppy or hard disk.

2.8.1 Set text style parameters

In this dialog you can chose the style change mode you want to use. When you click on the icon, the following dialog box will appear:



Calamus supports three style change modes:

Free mode

In this mode you are free to work with text style parameters and do not have to keep control over any kind of conventions. We recommend this mode when you want to work with text layouts in a creative way, e. g. for posters, headlines, company cards, and other layout jobs which perhaps are done one time only. Use the first seven function groups then.

List mode

This mode is dedicated to all users who want to or have to work with text styles in a high structured way. Use this mode if you need to use text styles again and again (e. g. in books, customer related jobs with fixed style presets, etc.). Use the last function group and the here callable large text style dialog then.

Smart mode

As the name indicates already, this mode is a smart compromise between the other modes mentioned before. In this mode you can work very free, sometimes even more effective than in the free mode. But hier you do not have to do without the structural advantages and the order of the list mode.

Now the switch groups of this dialog will be described, bringing them into relationship to the change modes described above:

Edit text styles

Here you can chose between the free resp. smart mode and the style list mode (list). Beginners often use the free text style mode only, but on the long run the style list mode has many advantages. Please take a view on the descriptions at the beginning of this chapter, too.

Free text styles

Free text styles will be created if you are not working in the list mode. These textstyles are part of the text style list in the current document once they are created. But Calamus removes them automatically as soon as they are not used anywhere in the document any longer.

Here you can define whether these free text styles should be visible in the list. With this switch group, you can define if you will only see list text styles or all other text styles which have been created in the free or smart mode, too.

Smart mode

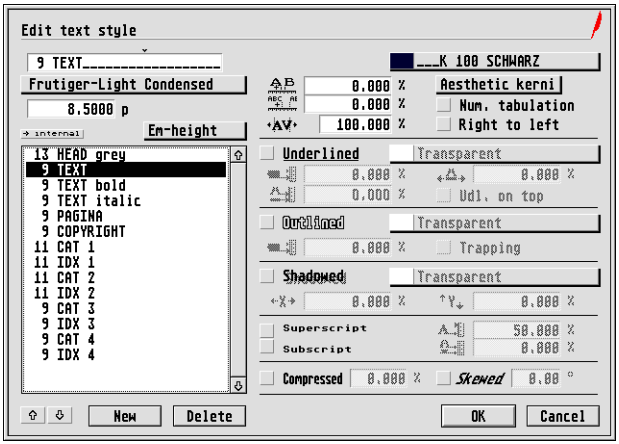
The switch groups for smart mode are visible and selectable only if you did not chose the list mode above. In the first switch group you can select if the smart mode should be the default mode. If you chose "Ask" here, an alert box will appear each time you use the icon "Change text style" in order to change a text in one of the seven first function groups. You will then have to decide whether to use the smart mode in this case or not.

List text styles

Here you define whether the chosen smart mode may overwrite existing list text styles or rather protect them. If you chose "Protect", new free text styles will be created instead of the list text styles.

2.8.2 Edit text style

When you click this icon, the mammoth Edit text style dialog box appears:



In this dialog box you can see at a glance and change all the settings that are contained in the other seven Text style function groups!

So you can specify here the name of the text style, the font used as well as the character size. Both the font and the choice between "Em-height", "Versal" or "Designer" height for specifying font sizes can be set via popups, which open when you click on the field.

The list at the left of the dialog shows all text styles used in the current document. Clicking on an entry selects it for editing. The small "Internal" field at the head of the list shows whether you are dealing with an internal (free) or list style mode. By clicking on this field or double-clicking on the list entry you can toggle the style's mode. An "internal" text style is identified by a preceding arrow in the list.

The triple-arrow buttons below the list are used to resort it. One click moves the selected entry one position up or down respectively. A click on the "New" button creates a new style while a click on "Delete" removes the selected entry. Also all selected text styles that are not used in the document are deleted from the list without further query. If the current selected text style is still in use, however, a popup appears containing all text styles in the list apart from the one to be deleted, allowing you select a replacement style by clicking on it.

You can also alter the settings for font colour, letter and word spacing, formatting as well as the type of kerning. Clicking on the name of a colour makes a popup menu appear

in which you can select an entry from the list of colours used in the document. A click on the colour field itself calls up the Edit colour list dialog, where you can create a new colour for the list, or alter an existing one.

You can also set the parameters for the various text effects here in a clear and comprehensive way.

Only this dialog offers the possibility for altering the parameters for Superscript and Subscript text. The upper edit field sets the text size for super/subscripts, the lower sets the relative offset to the baseline: Positive values move the text further down, negative ones move it up. As usual a click on the unit of measurement toggles between relative and absolute dimensioning.

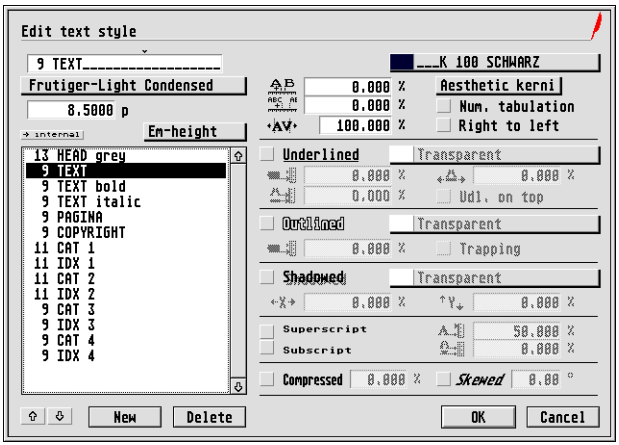
2.8.3 Load text style file

This icon allows you to load a previously created text style list from disk. When you click on the icon, the normal file selector (see earlier chapters describing the fundamentals) will appear. You may then choose and load a previously saved text style list to merge with an existing one, or to replace it – a small dialog offers you the choice. Calamus text style lists have a "CSL" extender. Note that when you load a text style list, some of the style names may conflict with current ones. In that case the dialog described in the "Duplicated object names" section appears, permitting you to change duplicated entries.

2.8.4 Add text style to list

This function is used to add a new text style to the list.

When you click on the icon, the current text style set in the Text style module will be included with all its parameters in the document text style list. Following this you will see the mammoth Edit text style dialog, whose use was described above:



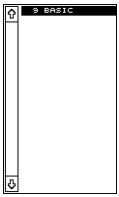
2.8.5 Check text style

This functions lets you display the name of the currently used text style. To do this, select a frame and place the cursor at the relevant position, or mark a block. Clicking on the icon will highlight in the list the text style at the cursor position or the first style in the block.

2.8.6 Save text style list

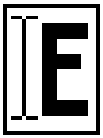
This icon allows you to save the currently active text style list to hard or floppy disk. When you click on the icon the normal file selector (see earlier chapters describing the fundamentals) will appear and you can type in the name under which the list should be saved. The "CSL" extender will be appended automatically by Calamus. If you select a name that is already in use, the "Duplicated object names" dialog already described will appear, offering you the choice of overwriting the existing file or using a new name.

2.8.7 Text style list



If you have marked a block in the working window, you can restyle it by a click on one of the text styles shown in the list window without having to use the Change text style function; if no block is marked but a frame is active, you will be asked whether you wish to modify the complete text and clicking "Yes" will carry out the change.

3 Eddie



"Hi there! This is Eddie, your Calamus editor, and I'm feeling just great, guys, and I know I'm just going to get a bundle of kicks out of any text you care to handle through me."

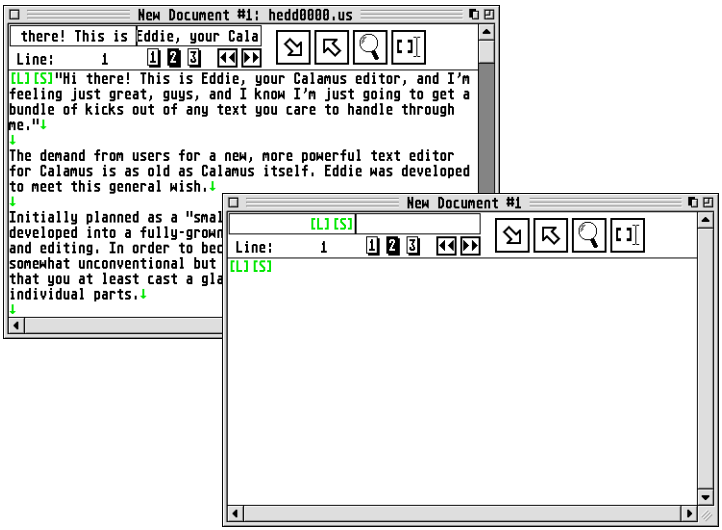
The demand from users for a new, more powerful text editor for Calamus is as old as Calamus itself. Eddie was developed to meet this general wish.

Initially planned as a "small, neat text editor", it has developed into a fully-grown tool for everyday text creation and editing. In order to become really familiar with the somewhat unconventional but powerful functions, we recommend that you at least cast a glance at the description of the individual parts.

3.1 Let's start

Working with Eddie is really quite simple. Just call it from the "Text" module, "Tools" function group via the "Open text editor" icon. You should assign a macro to this function from the start, if you have not already done so.

A window will appear holding the contents of the selected text frame. If no text frame is selected, or the text frame does not contain any text as yet, then the window will be empty.



In the upper part of the window there are some icons and other operating elements, which apart from the line number display and text magnifier are also present in the Eddie function fields.

The text magnifier serves to give you detailed information about the text even when the control codes are not visible in the main text window. The whole text area in the region of the edit cursor is always displayed in short form. In the same way blocks will be displayed here, or the block marks (see the "Block functions/Tools" chapter) made visible.

The window title shows you which document is being edited. If names have been assigned to individual frames of a text piping chain, then these will be shown, separated by commas, after the name of the document.

The line number serves only for rough orientation in the text. It refers to the number of lines that the text possesses in the chosen wrap mode. If line wrap is switched off, then this will equal the number of text lines in the document.

The exact working of the other buttons is described in the relevant chapters. For practical reasons these are functions that have been duplicated in the text window.

3.1.1 Positioning

You can use the mouse to position the edit cursor anywhere in the visible text. As usual you can also navigate the text with the four arrow keys.

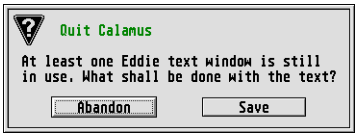
In order to be able to position the cursor precisely, even when some control codes have been switched to invisible, Eddie always places the cursor before the next control code in the direction of movement. So if moving backwards the cursor will be positioned automatically after the characters. Try this out with a text into which you insert some control codes and then switch these to invisible by selecting "Control code setting 1".

Also take a look at the text magnifier while you move the cursor back and forth.

Position display

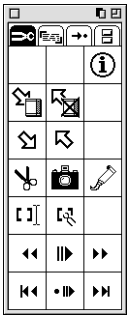
If you should "lose" the cursor at times (more exactly: can't find it in the forest of letters at first glance) then pressing [Control]+[Shift]+[Alternate] calls up a position display: This is a small collapsing rectangle that is intended to lead the eye to the cursor.

3.1.2 Automatic saving and loading of texts



When quitting Calamus, Eddie offers the greatest possible data safety, since it is possible to save the contents of all text windows that are still open. The texts will be saved under the name EDDIExxx.CTD in the search path for texts, where xxx corresponds to an incrementing number. When restarting Calamus/Eddie, these files will be loaded again automatically. (Note that Eddie lite only permits one text window at a time.)

3.2 Data transfer and editing



Eddie shows its value in Calamus with data transfer. On the one hand they support the text- oriented system clipboard, on the other hand the Eddie text is integrated with Calamus as completely as possible.

As the Calamus text editor, Eddie offers the possibility to take text directly from text frames. During this process the Eddie window is opened, or the text of the selected text frame is transferred to an already open editor window.

Flowing the text back to the text frame is similar. When sending the text back to the frame you may choose to leave the window open. If you do not wish to alter the text any further, then you can send the edited text back to the frame with a click and then let Eddie close the corresponding window.

If text passages are exchanged this way between different documents, the Calamus merge mechanism comes into play. You will be familiar with this from various clipboard operations. Dialogs appear in which you are asked how duplicated colour or style names should be handled. The description of the exact way this works will be found in the "Duplicated object names" chapter.

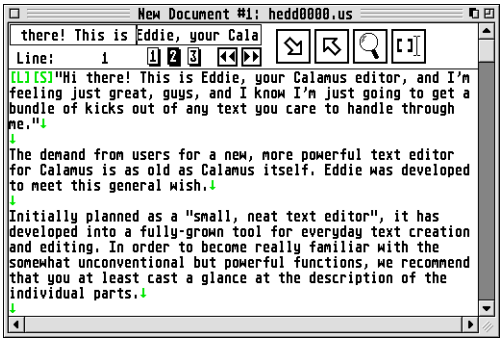
3.2.1 Show module information

This icon calls up the obligatory Info dialog, where the most important information is the version number of the module. This version number is very important if you contact us with any inquiries.

3.2.2 Open new window with text from frame

If a block or a text ruler is selected it is transferred for editing without further interaction, otherwise the entire text.

If a window with text from this frame is already present, an alert message appears. This offers the alternatives of activating the existing window ("Show") instead of opening a new window ("Continue").



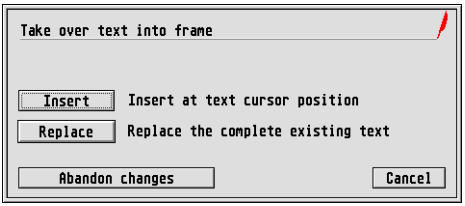
The Eddie window has a dialog section in the top area that contains several icons that are also found in the function area at left. These are the icons for the text flow from and to the frame, for opening the search/replace window, and for inserting control codes. In addition, you can also set the three different display modes for control codes here.

For further information, there is a so-called text magnifier – an area that always displays the current section of text around the cursor with all control codes, irrespective of the selected display mode for the window. Below this the current line number is shown.

The functions for data transfer between frame and text windows may need confirmation of a suitable safety query before they are executed.

3.2.3 Close window, text flow back to frame

When flowing the text back from the Eddie window to the frame, you may select between closing the window or leaving it open by using the appropriate icon. When exchanging texts between different documents in this manner, Calamus' mix mechanism comes into play. You will be familiar with this from various clipboard operations. Dialog boxes appear in which you are asked what to do with multiple colour or text style names. You will find the exact description of this procedure in the "Duplicated object names" chapter.



Insert

The text in the edit window will be inserted at the cursor position in the text frame.

Replace

The text in the frame will be replaced by the text from the edit window.

The "Replace" button refers either to the entire text, the selected block or the selected text ruler. The button label is context sensitive and changes to match the applicable action. In addition this dialog may display a message that warns you about inadvertently overwriting text:

The original text was changed

Parallel to the work in Eddie the text in the layout window was altered. Such changes may be lost when flowing back replacement text.

Different text piping chain is selected

The text in the Eddie window was derived originally from a different text piping chain to the one selected. This may happen, for instance, if you activate a different document accidentally while moving a window or taking some similar action. The message warns you about inadvertently overwriting the wrong text data.

No frame or too many frames selected

This really explains itself: The current page of the current document either has no text frame selected at all, or several text frames selected from different text piping chains.

Different text area is selected

The area in the layout text that would be replaced (entire text, selected block or selected ruler) does not match the text area that was originally transferred to the Eddie window.

Here is an example: A block is marked in the layout and the contents of this block opened as an Eddie window. During further work in Eddie and Calamus the block marking in the layout is deleted accidentally. When flowing back the text Eddie would replace the entire text instead of the desired block. Hence this warning message appears.

Calamus also requires that each text frame start with a text ruler and a style entry (in this order). If this rule is broken while sending back replacement text to the frame (because you have deleted or moved one of these control codes in the Eddie window) another alert message appears. Eddie simply jumps over the ruler and style control codes in the frame and starts replacing the text at the first character after them.

Abandon changes
The window will be closed, the text discarded.

Cancel
No action, the window remains open.

Tip: Eddie "knows" which areas of the text have been altered. When sending back the text to the frame, Calamus will be induced to reformat only the changed areas. If you make only small changes, this can happen very quickly. All changed areas will be gathered up into a single area, and as a consequence several small but widely spaced alterations produce a large region to be reformatted. In such cases it is better to send back the text to the piping chain with the relevant Eddie function as soon as each individual change is made.

3.2.4 Take text from frame to Eddie window

 The functions for data transfer between frames and Eddie windows may, depending on the circumstances, require replying to a query in an alert dialog.

This is mainly a warning message aimed to prevent the text in the window being overwritten accidentally.

3.2.5 Flow text from Eddie window to frame

 If the window is to stay open, then normally the text is transported back to the text frame without comment (see below). The text from the Eddie/Eddie lite window replaces the previous contents of the frame on the layout page. If the window is closed, a dialog box appears where you can determine how Eddie should incorporate the text in the frame:

If no conflict arises (see below) the text flows back to the frame without comment. Otherwise a dialog box appears, which is the same as the one that appears when closing the Eddie window.

If "Replace" is selected in this dialog, the contents of the frame are replaced wholly or partly by the text from the window: Either the entire text or the selected block or text ruler is replaced. For greater clarity about what is to happen, the button controls are context sensitive and change depending on the applicable action. With "Insert" you can insert the text at the cursor position in the text frame. With "Abandon changes" you may exit the edit window without applying the changes to the text frame. Finally, with "Cancel" you exit the dialog and continue working in the window; in other words the edit window will not be closed and the contents of the text frame will remain unchanged.

In addition, messages may appear in this dialog warning you about inadvertently overwriting text, particularly when with parallel working in the document you select a different frame (or none) or a text block other than the one to which the text in the edit window belongs.

3.2.6 Move block to system clipboard

 With Eddie it is possible to exchange text data in a simple ASCII format with other windows (or even other applications) via the system clipboard. For this blocks of text are converted by Eddie to a simple text format; this will lose all information about styles, rulers and special control codes, as they cannot be reproduced in this way. Paragraphs will be separated by blank lines; every paragraph corresponds to one long line.

This function removes the marked block of text from Eddie's window and stores it in the system clipboard for use elsewhere.

3.2.7 Copy block to system clipboard

 With Eddie it is possible to exchange text data in a simple ASCII format with other windows (or even other applications) via the system clipboard. For this blocks of text are converted by Eddie to a simple text format; this will lose all information about styles, rulers and special control codes, as they cannot be reproduced in this way. Paragraphs will be separated by blank lines; every paragraph corresponds to one long line.

This function copies the marked block of text in Eddie's window and stores it in the system clipboard for use elsewhere.

3.2.8 Paste text from system clipboard

With Eddie it is possible to exchange text data in a simple ASCII format with other windows (or even other applications) via the system clipboard. For this blocks of text are converted by Eddie to a simple text format; this will lose all information about styles, rulers and special control codes, as they cannot be reproduced in this way. Paragraphs will be separated by blank lines; every paragraph corresponds to one long line.

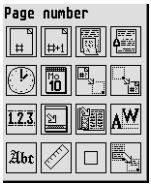
This function copies text stored in the system clipboard to the current cursor position in Eddie's window.

When copying text data back from the clipboard, the visible characters will be transferred first. Lines following each other will be conflated into one paragraph.

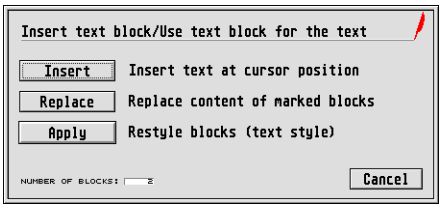
The form feed character will be replaced by the "forced break to the next frame" control code. Tabulator characters will be transferred normally.

3.2.9 Insert control code

With the "Insert control code" function you can insert new control codes into the text.



If a block is marked in the text then a dialog box appears in which you can choose how Eddie should behave (in the illustration below for text styles for instance). You have the option of inserting the code at the cursor position, replacing the marked block with it or (for functions listed below) applying the code to the marked block.



The full version of Eddie supports several blocks simultaneously, and therefore has a more extensive query dialog.

The following control codes can be applied to the block:

Text style

The style to be used is inserted before the block, directly after it the style that applied at this position previously. All styles within the block will be removed. This corresponds to the "Change text style" function of the Text module.

Eddie incidentally optimises styles, removing those that are superfluous. If the text is already in the style that is to be applied, then no control codes will be inserted.

Ruler

The application of rulers works in exactly the same way as for styles.

Footnote entry, Index entry, Comment

The text block is converted to the relevant control code. The contents of the block will afterwards be within the control codes.

If you want to return to certain places in the text several times, you can insert a comment control code at the relevant positions. Later you can use the search function to look specifically for each comment.

Manual kerning

Eddie inserts a kerning control code at the beginning and end of each block. The values for horizontal ("X") and vertical ("Y") offset have to be input into the editable fields of the subdialog that appears, which is then quit by pressing [Return]. Another dialog box appears and when you click on "Apply", the control code at the start of the block will be assigned the set X and Y displacement values, the control code at the end exactly the opposite values. Should such control codes already be present there, they will simply be altered rather than new ones added. If existing control codes were modified, then a relative change of the kerning takes place at the end of the block.

Example 1: Apply [Kerning X=10.0 Y=-2.0] to the block
At the start of the block: [Kerning X:10.0 Y:-2.0] will be inserted
At the end of the block: [Kerning X:-10.0 Y:2.0] will be inserted

Example 2: Apply [Kerning X:10.0 Y:-2.0] to the block, though this already has the following control codes present:
At the start of the block there is: [Kerning X:5.0 Y:1.0]
At the end of the block there is: [Kerning X:-4.0 Y:-1.0] (i. e. the 5.0 is not completely cancelled out)

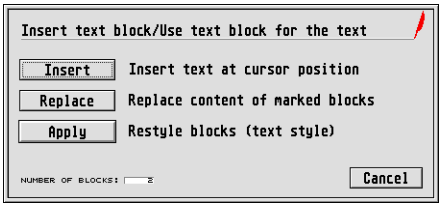
The start of the block will be altered to: [Kerning X:10.0 Y:-2.0] (as specified)

The end of the block will be altered to: [Kerning X:-9.0 Y:2.0] (the -10.0 will not be completely cancelled out by the same amount as previously).

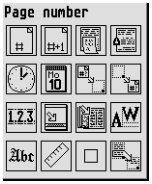
3.2.10 Edit control code

Please remember that with the "Edit control code" function the cursor must be positioned in front of the control code to be modified. It is usually simpler to call this function with a double-click on the relevant control code to open its editing dialog.

With some control codes Eddie will also ask whether to "Apply" the code to be inserted to a block or blocks.



"Apply" to the block means that the code to be inserted is placed before the block. The code that was previously valid at the start of the block will now be inserted at the end of the block. In other words the block will be restyled.



The control code selection dialog will display a title line with a help text for the icon that is currently under the mouse cursor.

The comment control code will not be familiar to users of previous Calamus versions; it serves for inserting invisible remarks in the text that can be searched for and displayed in Eddie.

3.2.11 Undo: Rewind

With "Undo: Rewind" a working step will be revoked. In principle the whole mechanism behaves in a similar way to a recording on tape or compact cassette, where

any recordings made can be rewound at any time to play them back or make a new recording.

3.2.12 Undo: Start/Stop

 When the Undo recorder is switched on, all changes to the text will be recorded step by step as they are made. As a result these changes can also be reversed ("undone") step by step.

If the Undo is switched on in "normal" mode, then each change will be recorded.

In some circumstances this uses up a large amount of memory over time, which can give rise to problems with a relatively small main memory or a very long recording time. In such cases, just switch off the Undo mechanism for a short time before switching it back on again, which clears the occupied memory. If necessary simply program this process onto a macro key.

Undo with Search and Replace As it is possible to use the Undo mechanism with Search and Replace or block marking in Eddie, in some circumstance this procedure may take appreciably more time with the recorder switched on. In addition, with large-scale actions the Undo information may require holding very large amounts of data in memory. In such cases it may be preferable to switch off the Undo recorder beforehand if its use is not essential.

Clear Undo buffer The Undo mechanism records all actions in Eddie if it is switched on in standard mode. In the course of time this may require a lot of working memory just for the Undo buffer. To clear the contents of the recorder, switch it off for a short time and then back on again. If you use the automatic mode, this will happen automatically at the start of the next action.

3.2.13 Undo: Forward

 With the "Undo: Forward" button a working step will be restored. In principle the whole mechanism behaves in a similar way to a recording on tape or compact cassette, where any recordings made can be recorded over at any time.

3.2.14 Undo: Rewind to start

 So that you don't have to press the button repeatedly when you want to perform a complete Undo, you can use the "Undo: Rewind to start" button. This undoes all the recorded changes and restores matters to the original state.

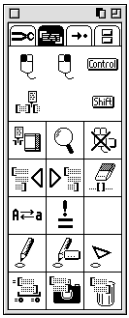
3.2.15 Undo: Only record single events

In the automatic mode of the Undo function, in order to save memory only the last action will be recorded each time.

3.2.16 Undo: Forward to end

So that you don't have to press the button repeatedly when you want to restore all recorded actions that have had Undo applied to them ("Redo"), you can use the "Undo: Forward to end" button. This restores all the recorded changes that have been undone by a previous action and reinstates the final position before you invoked the Undo function.

3.3 Block functions/Tools



In a text editor, blocks are normally used only for moving, copying or deleting portions of text. Eddie offers rather more here. For instance when inserting styles or rulers, it is possible to apply these to complete blocks. With the full version of Eddie you also have the option of selecting several blocks simultaneously in order to alter or move them at the same time (Eddie lite only allows a single block to be marked at a time).

Eddie remembers blocks by inserting a corresponding marker at the start and end of a block.

It is therefore no problem to work with several blocks . Normally when dragging out a block with the left mouse button all block markings that may already be present will be cleared and just the newly drawn up block remains selected. If you want to drag out a block in addition to existing ones, simply hold down the [Shift] key while dragging it out. This causes the old block markings to be retained and the newly marked block to be selected in addition to the ones present. If there are blocks within the additionally marked region, then these blocks will be deselected; in principle therefore an inversion of the selected area takes place.

Block operations

Select block

Press and hold the left mouse button to drag out the desired area, releasing it at the end. The selected area will become inverted (selected) so it is visible immediately.

Select additional block

Drag out the block as above while hoding down the [Shift] key. During this the selection of any previously selected blocks within the newly marked area will be inverted.

Restyle blocks

When style or ruler control codes are inserted in the text while blocks are selected, Eddie will ask whether the control code is to be inserted at the cursor position, should replace the block or whether it is to be applied to the block. "Apply" here means that a control code is inserted before and after the block. Now the block will have been assigned new properties while the rest of the text remains unaltered.

3.3.1 Simulate left mouse-click

 So that more complex operations are also possible without mouse support, as required for macro recording, you have the possibility here to simulate the press of the left mouse button. In this way you can use a keyboard macro to drag out multiple blocks as well, to mark a word with a single keypress, for instance.

3.3.2 Simulate right mouse-click

 So that more complex operations are also possible without mouse support, as required for macro recording, you have the possibility here to simulate the press of the right mouse button. This allows you to use a keyboard macro to drag out multiple blocks as well, to mark a word with a single keypress, for instance.

3.3.3 Invert state of Control key

So that more complex operations are also possible without mouse support, as required for macro recording, you have the possibility here to simulate the press of the [Control] key. In this way you can use a keyboard macro to drag out multiple blocks as well, to mark a word with a single keypress, for instance.

3.3.4 Use separator text

 This icon acts as a switch that is used in connection with the "Define separator text" function and the moving of multiple blocks.

If you have marked several blocks simultaneously, either manually or by using a Search function, and want to move these blocks together to a new position, you may like to separate the blocks with a separator text. This separator text is specified with the "Define separator text" function (see below) and will be only taken into account when moving the blocks if you have set this switch here.

3.3.5 Invert state of Shift key

So that more complex operations are also possible without mouse support, as required for macro recording, you have the possibility here to simulate the press of the [Shift] keys. In this way you can use a keyboard macro to drag out multiple blocks as well, to mark a word with a single keypress, for instance.

3.3.6 Define separator text

So that a separation of blocks is possible, you can choose whether a separator text should be included when moving and copying them. This text, which is specified with the "Define separator text" function, can be of any length. If copying or moving multiple blocks, then after copying or moving a block the separator text will be copied to the end of each one, as long as a further block is present. The next block will be copied after the separator text. So if you define a comma as a separator text, for instance, then all blocks will be copied to the destination position separated by a comma.

Thus if the text has the words "Milk", "chocolate", "cash" marked as blocks and the separator text is a comma followed by a space character, then the resultant block will look as follows:

Milk, chocolate, cash

To understand the use of a separator text better, take the following text (where the bold portions represent marked blocks):

"Hello, I am **Eddie,** y**our** new **text editor**, and I can hardly wait to get hold of new texts."

If these blocks are copied with the separator text "super ", the resultant portion will look as follows:

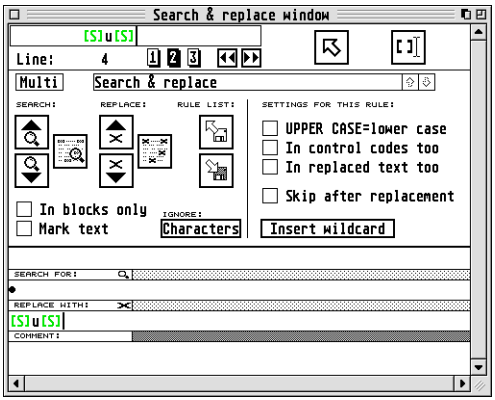
Eddie, super our super text editor

Warning: Only if the "Use separator text" icon (see above) is selected when copying or moving multiple blocks simultaneously will the separator text be inserted between individual blocks. The same icon is also present in the header line of the separator text window.

3.3.7 Open Search & replace window

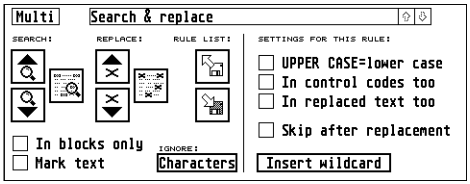
Eddie's "Search and replace" functions are a very powerful tool for editing texts. Besides simple operations such as exchanging words or portions of sentences, with appropriate settings it is also possible to recognise and remodel whole text structures. With suitable Seach/Replace setups the editor can be turned into a tool for refining raw text or a converter for other text formats.

Search & replace is controlled by a dialog which lies in a window for pragmatic reasons. That was the only way that permitted searching and replacing text passages of any length, which in the full Eddie version may also contain all control codes supported by Calamus. This window is opened by clicking on the magnifier icon, either in the "Block functions/Tools" function area or in the header line of any Eddie text window.



At first sight the number of functions offered may appear a little overwhelming. But don't let it scare you! Using it is not nearly as complicated as it may seem at first.

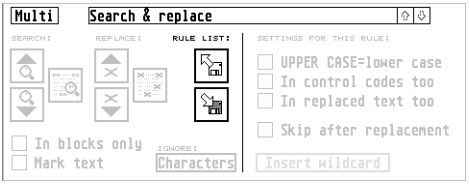
First of all an overview of the individual operating elements and parts of the window: At the very top there is a title bar and a header line that you will be familiar with from normal text windows. The buttons for taking over text and for opening the Search & replace window are missing, since they make no sense here.



Below the header lies the portion of the dialog with a row of icons, checkboxes and buttons. Right at the bottom there are three input fields separated by labelled bars (only two in Eddie lite). These contain the text to be searched for, its replacement, as well as (in the full Eddie version) comments for both. The comments field is ignored by Eddie entirely and only serves for documentation purposes. All three texts may be of any length and may contain all control codes. In practice you can use all functions here that are permitted in normal text windows. The search and replace lines too allow you to work with text blocks as well as to exchange data via the clipboard.

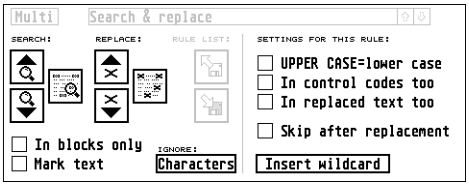
The buttons and switches in the main dialog area may be divided roughly into the following categories:

Setup



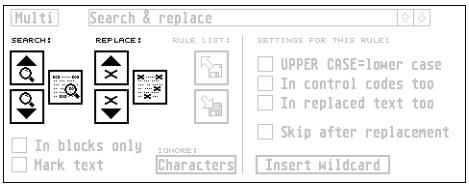
Eddie (full version!) offers the possibility of applying any number of search & replace operations simultaneously to a text. Functions for managing a Search/replace list are available for this purpose.

Options



These are the operating elements that can be used to affect the behaviour of the search & replace function.

Functions



These icons serve for triggering the actual search & replace operation.

The following paragraphs introduce the multitude of possibilities offered by this tool step by step. Read through the individual points in order. We suggest you try out your newly acquired knowledge on the screen as you go.

3.3.7.1 Search & replace of simple text

Let's start with an easy task: Searching and replacing of simple portions of text, where "simple" does not refer to the length of the text portion but to the absence of placeholders (jokers). It makes no difference whether the search is for a single letter, a word, or one or more complete sentences; the amount of text on its own does not influence the operation or behaviour of the individual functions.

The following applications will be explained:

- Counting (how often a passage appears in the text)
- Finding and marking parts of the text in the whole text
- Finding and replacing parts of the text in the whole text
- Single search
- Single replacement of some of the found text parts

Searching and marking

Initially all special switches and options should be turned off, as they are not required at this stage. This concerns the labelled checkboxes in the centre section as well as the "Multi" button. Now we can start: Enter the text that Eddie is to search for in the field below the "SEARCH FOR:" bar and then click on the single magnifier icon ("Search global"). This already shows the first application: Eddie hunts through the complete main text for the presence of the search-text. The number of the found occurences will then be displayed in the status line in the Search & replace window:

Now activate the "Mark text" checkbox and repeat the process. In the full version, all matching parts found will be shown marked as blocks afterwards (in Eddie lite only the last match found is marked as a block). Any existing markings will be cleared during this.

Find control codes

As already indicated, the search-text may also contain control codes. Eddie will then find all text parts that contain exactly that control code. This means that if the text contains the "Headings" style code, for instance, Eddie will only find "Headings" styles, though not "Body text, underlined" styles. With the aid of the joker, described further below, it is possible to search for control codes independently of their contents (in our example any kind of style). With frame anchors, instead of the contents (i. e. the actual frame) only its name will be used for comparisons.

Replace text globally

In order to replace all occurrences of the text contained in the "SEARCH FOR:" field with a different contents at one go, just enter the replacement text in the input field below the bar labelled "REPLACE WITH:" and start the action by clicking on the "Search & replace global" icon (with four Xs). Here too you have the choice of adding block marks to the found and replaced parts of the text (only the last replacement in Eddie lite).

Both functions – "Search global" as well as "Search & replace global" – may also be applied to portions of the text. To do this, mark the desired portion of the main text as a block (by dragging the mouse over it with the left button held down) and switch on the "In blocks only" checkbox. All passages not marked as a block will be unaffected by the action in that case.

Single search/replace

A further variant of search/replace is controlled by the next four icons (with up/down arrowheads), namely the finding or replacing of only one text passage in each case. The reference point here is the position of the cursor in the text window. Eddie will look for the next occurrence of the entered search-text from this position onwards, though the text exactly at the cursor position will not be checked. The search direction will be determined by the use of the corresponding icon: Towards the start of the text ("Find previous text part" upward arrowhead) or towards the end of the text ("Find next text part" downwards arrowhead). With each click on the icon Eddie searches for the following matching text portion and places the cursor there. In addition a built-in position indicator, a small collapsing rectangle, helps you to localise the new cursor position quickly and easily (this indicator can also be called up manually at any time by simultaneously pressing [Control]+[Shift]+[Alternate] keys, by the way).

The single. i. e. optional replacement of text parts is realised in Eddie with two further icons (one for each search direction), whose help-text runs "Replace, then find previous/next text part". That already describes what this function does: The text portion at the cursor position will be replaced, and after that the editor will look for the next

occurrence of the search-text in the specified direction and move the cursor to the corresponding position. At first look this function may seem a bit peculiar. In conjunction with the single search (without replacement), however, this presents a convenient method to target just some of the found text passages for replacement. To do this you only have to position the cursor at the start of the region to be searched and start the process with "Find previous/next text part". Eddie will now jump to the first found passage. Now you have the choice: Do you want to replace the text? If so, click on the "Replace, then find previous/next text part" icon, whereby the editor after replacement will continue immediately to the next passage that matches the search-text. If you do not wish to replace this particular text part, a click on the Search function leaves the found text untouched and jumps immediately to the next occurrence. This procedure can be repeated as often as desired.

We recommend, incidentally, that you allocate keyboard shortcuts with the Calamus Macro recorder to the Search/Replace icons (for instance [Control]+[S] for "Search" and [Control]+[R] for "Replace, then find next part"). Single searches with optional replacement can then be performed quickly and easily with two key combinations.

Incidentally, "Replace, then find…" can also be used without first using the search function, by placing the cursor at the desired text position beforehand. Eddie will check in each case whether the search- text actually matches part of the main text, and if not shows an error message in the status line of the Search & replace dialog window.

A final remark: On principle, the Calamus text format is not suited to being searched through backwards. In such cases too Eddie has to work through the text forwards and memorize the last found match. Due to this, backwards searching is slowed down, so whenever possible you should always let the editor search forwards.

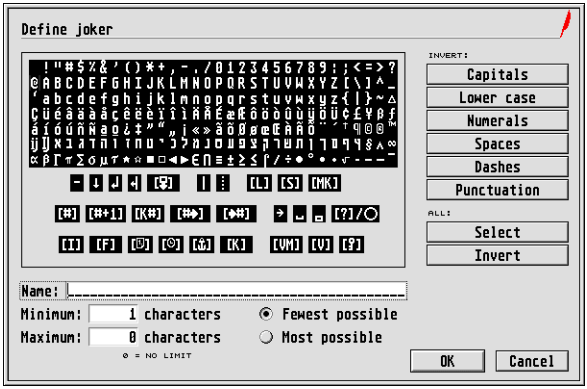
3.3.7.2 Jokers

Only in the full version of Eddie:

Whereas a normal search-text requires an exact match to the passage(s) to be found right down to one character, the use of jokers (wildcards) allows it to be formulated so that text portions with different contents and size can be found. Jokers are placeholders and represent any amount and kind of text, although this can be restricted as desired with respect to text length and composition.

Joker characters may be inserted in the search or also the replacement text with the "Insert wildcard" button. Let's start with the first. After insertion the text contains a control code-coloured abbreviation in curly brackets. The exact display of the joker depends on the parameters it contains, which can be set with the "Edit control code"

function after a double-click on the joker in the following dialog box:



The upper portion corresponds to the "Define joker" character-set dialog for "Define word hyphens". Here you can choose which characters and/or control codes may appear in the text encompassed by the joker. Below this are several editable fields: "Minimum: ... characters" as well as "Maximum: ... characters" determine how long the text portion may be that the joker matches. Every control code counts as exactly one character here. A "0" as the maximum removes the length restriction upwards, i. e. the found text part may be of any length.

Attention: The minimum value too may be zero! In this way you can define jokers that – in some circumstances – match text passages that are zero characters long.

The "Name" is optional and may be empty. It is required mainly when using replacement jokers, and so will be described later.

Finally there remain the radio buttons for selecting "Fewest possible" or "Most possible". With this you inform Eddie whether the joker should encompass the smallest possible or the largest possible text passage.

The exact appearance of a joker in the search-text is determined by all these settings. Within the curly brackets there is first the minimum and maximum number of characters, separated by two dots. If one of these two values is at the limit (i. e. 0 or unrestricted), then it will be omitted completely. If both values are identical, then the two dots are omitted. If "Most possible" was selected, then two colons will replace the dots. After all this follows – if present – the name of the joker. Finally, an exclamation mark will be inserted right at the start if the joker is not to fit all characters and control codes.

This seems more complicated as it really is. Therefore a few examples follow:

{3..7} A joker that encompasses a minimum of 3 and maximum of 7 characters (or control codes).

{1} This joker matches just a single character.

{2..} Joker that has to contain at least 2 characters.

{..10} This time the minimum is 0, the maximum is 10, the text region found should be the greatest possible.

{..} The number of characters is unrestricted.

{::} Ditto; this joker applies to the complete text, as both length as well as contents of the text to be found are unrestricted and should have the greatest possible extent.

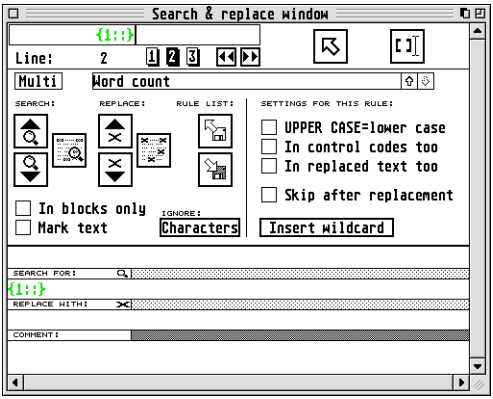
{!::} Here too the length is unrestricted, though the text that is matched by the joker may not contain all possible characters and control codes (by opening the dialog you can determine which are permitted).

Examples of search-texts with jokers

To get some idea of the various things you can do with jokers you should try experimenting with them. We have put together a few examples to serve as suggestions. The search/replace setups included with the Eddie package can also be used for study purposes.

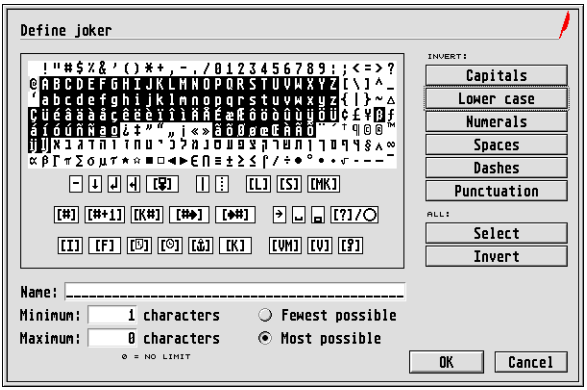
Word count

For this you enter a search-text that consists of a single joker. That joker is constructed in such a way that it matches complete words. With the aid of the "Search global" function you will get the number of text parts found and with that the number of words in the text.



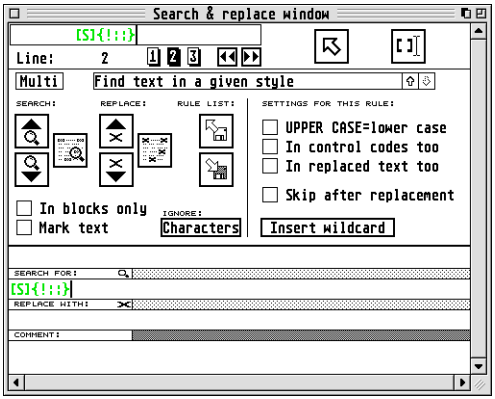
Settings:

- Minimum: 1 character
- Maximum: 0 characters (0 = any amount)
- Most possible
- Permitted characters: Letters (click on the buttons in the following order: Select – Invert – Capitals – Lower case)



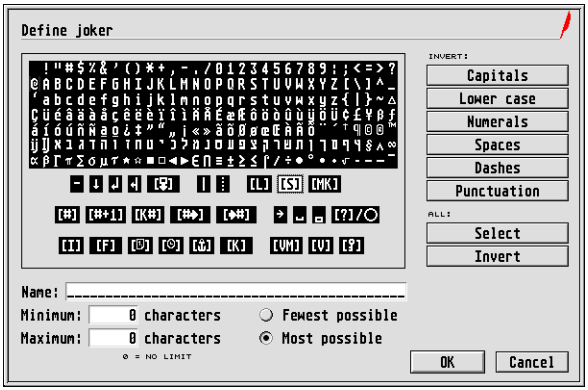
Find text in a given style

With this you can find text passages that are written in a given text style. The search-text consists of two parts: The style control code and the joker for the text.



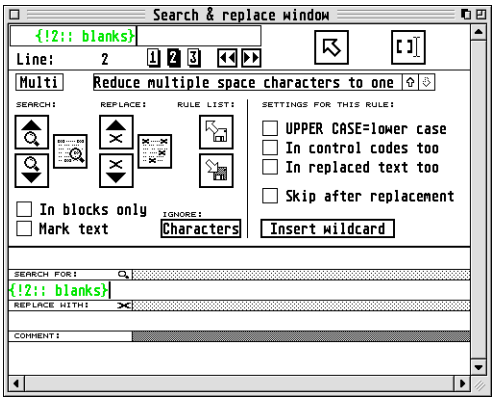
Settings:

- Minimum: 0 characters (i.e. even style control codes following directly after each other will be found)
- Maximum: 0 characters (0 = any amount)
- Most possible
- Permitted characters: All apart from text styles (click on the buttons in the following order: Select – then switch off the text style symbol again)



Shrink multiple space characters to a single one

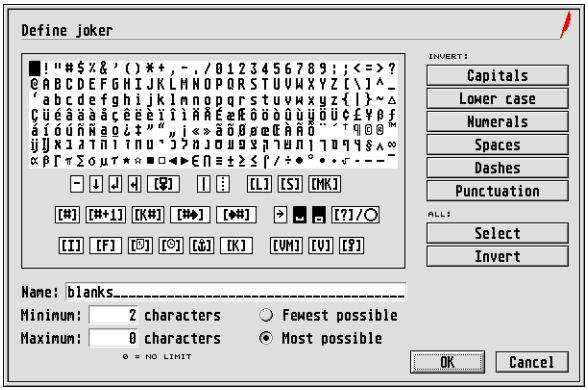
Raw texts frequently have accidentally typed twin space characters in them, which appear in the layout as disturbingly large separations between words. With a simple search/replace rule you can remove these quickly and easily. Space characters following directly after each other will be replaced by a single space in each case.



Settings:

- Minimum: 2 characters
- Maximum: 0 characters (0 = any amount))
- Most possible
- Permitted characters: Spaces (click on the buttons in the following order: Select – Invert – then select the space character once more)

Replacement text: A single space character



Examples of Replace jokers

The jokers become really interesting when they appear in the replacement text: In that case the text portions encompassed by the Search jokers may be used during replacement and reinserted into the main text together with the fixed parts of the replacement text.

{=Name} To ensure unambiguous classification between Search and Replace jokers, all Search jokers that are also to appear in the replacement text must be assigned a name. The Replace jokers in turn contain the names of the Search jokers whose contents they are to adopt. Apart from that the Replace joker has no further settings. It will therefore be displayed only as an equality sign with a following name.

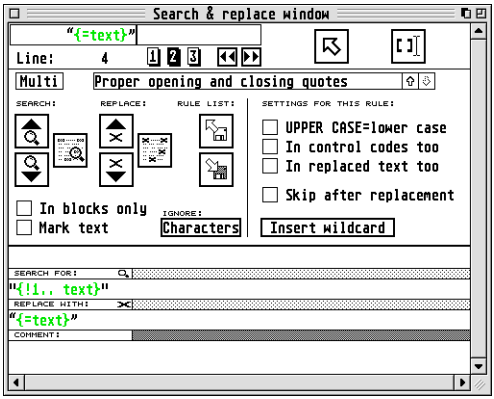
A double-click on a Replace joker opens a popup with the names of all Search jokers currently present, from which you can select one.

If two or more Replace jokers have the same name, then the contents of one and the same search jokers will be assigned to it. Incidentally the reverse case is also permitted: Two or more Search jokers may have the same name. In this special case the text passages which the jokers should match must have the same contents.

Some examples of replace-texts with jokers follow.

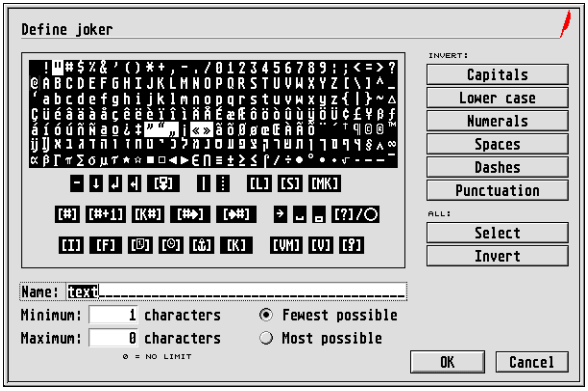
Proper opening and closing quotes

A text will be searched for passages that lie between two inch (") characters. These will be replaced by true opening and closing quote marks.



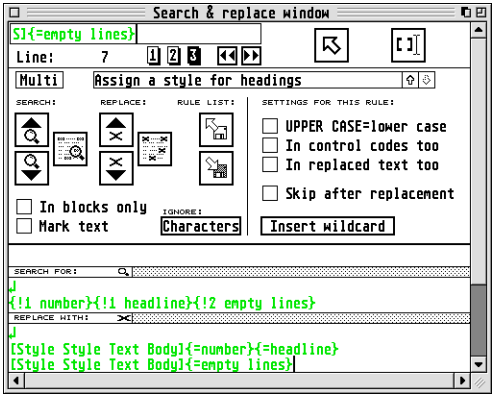
Settings:

- Minimum: 1 character
- Maximum: 0 characters (0 = any amount)
- Most/Fewest possible has no effect
- Permitted characters: Everything apart from opening and closing quote characters (click on the buttons in the following order: Select – then switch off all quote marks of any kind)
- Name: Any (here: "Text")



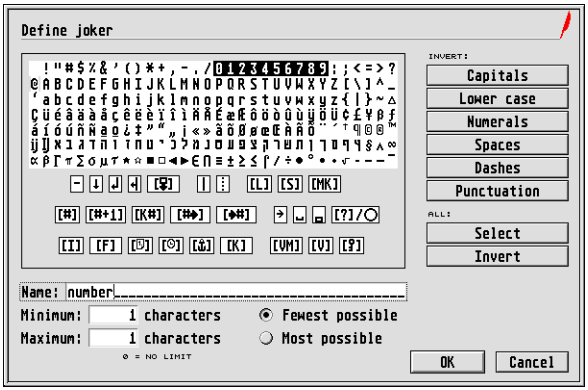
Assign a style for headings

In this example headings are recognized as such and are assigned a suitable text style. The identification of a heading naturally depends on the text being edited. Here we make the assumptions that the headings start with a number (chapter or section number), contains no hard line-ends and is followed by a blank line. In addition there must be at least one paragraph end before it.



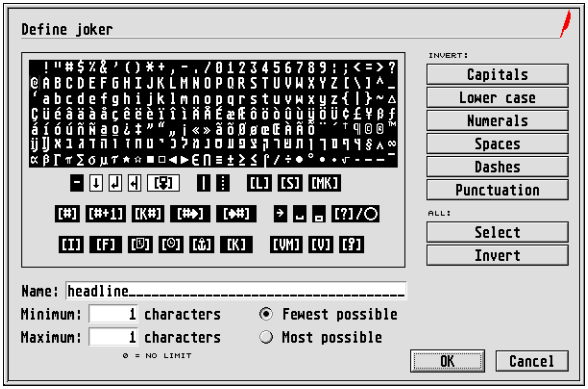
Settings for joker "Number":

- Minimum: 1 character
- Maximum: 1 character
- Most/Fewest possible has no effect
- Permitted characters: Numerals (click on the buttons in the following order: Select – Invert – Numerals)



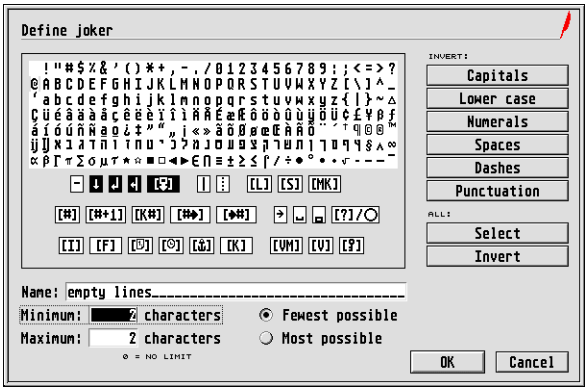
Settings for joker "Heading":

- Minimum: 1 character
- Maximum: 0 characters (0 = any amount)
- Most/Fewest possible has no effect
- Permitted characters: Everything apart from line-ends (click on the buttons in the following order: Select – then switch off the line-ends)



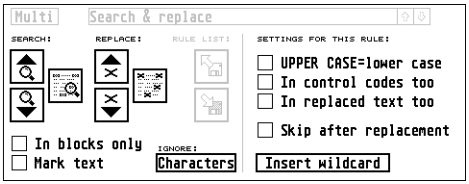
Settings for joker "Blank line":

- Minimum: 2 characters
- Maximum: 2 characters
- Most/Fewest possible has no effect
- Permitted characters: Line-ends (click on the buttons in the following order: Select – Invert – then switch on the line-ends)



3.3.7.3 Search and replace options

Here we will deal with the switchable checkbox and button options.



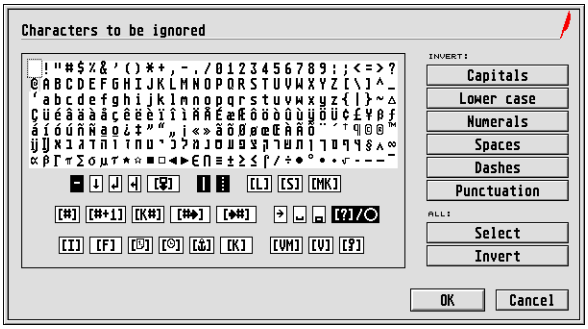
In blocks only

When active, searching and replacing will only take place in those portions of the main text that were marked as blocks before the beginning of the action.

Mark text

When active, found or replaced text portions will be marked as blocks. If there are overlaps with block areas that are already present, then the marking at the affected places will be inverted (in the same way as if you had dragged out the block while holding down the [Shift] key).

IGNORE: Characters



This button opens a dialog box in which you can determine which characters in the main text are to be ignored during searches. This is a great advantage specially with the optional line-break hyphenation markings. In this way you can search for any words, for instance, without having to pay regard to whether they contain hyphenation control-codes or not.

Example:

The search-text "Representation" matches all these portions (as long as the hyphenation characters are set to be ignored!):

Repre|sentation Representation Re|pre|sen|ta|tion etc.

The characters however will not be ignored if they appear in the search-text itself. Therefore the search-text "Repre|sentation", which contains one hyphenation character, only matches:

Repre|sentation Repre|sen|ta|tion etc.

but not

Represen|tation or Represen|ta|tion.

Warning: If the characters to be ignored are also to be allowed to appear in jokers, then these have to be marked as valid characters for the relevant joker.

UPPER CASE = lower case

If active, no regard will be paid to case. So for instance the search-text "tomorrow" would match "Tomorrow" as well as "tomorrow", "TOMORROW", "tomorROW" etc.

In control codes too

The search will be extended to the visible part of the control codes, i. e. those components that are also represented with their own characters in the layout. In detail these are:

- Page number
- Following page number
- Chapter number
- Text piping from page…
- Text piping to page…
- Date
- Time

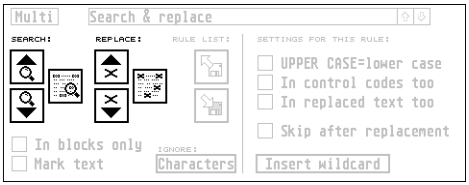
In replaced text too

After a replacement Eddie normally continues the search for further matching text passages that occur after the replaced text. With this option switched on, searches are made recursively in the replacement text as well. Specially when working using several search & replace rules simultaneously you can realise very complex applications in this way. This option will be discused in detail later.

Skip after replacement

If this switch is set (crossed), then a text portion in which a replacement has taken place will be skipped over afterwards.

3.3.7.4 Complex search & replace



A specialty of Eddie is the possibility to let loose any number of search/replace configurations ("rules") simultaneously on a text. Only with the aid of this mechanism can one define complex tools that undertake a complete refining of a raw text at one go, or perform other, quite individual tasks.

Eddie always handles a list of search/replace rules with their associated options, a so-called search/replace setup. One rule of the setup is displayed near the top of the window at a time, and may be edited. If the "Multi" button is switched off then Eddie will work with this rule only, but if you activate "Multi" then Eddie will obey all defined rules simultaneously.

The options "Mark text" and "In blocks only" are set globally and do not change when a new setup is loaded or when changing to another search/replace rule. All other options can be configured separately for each rule.

The name of the current search/replace rule is shown near the top of the window. This name only serves for documentation purposes and has no effect on the actual operation. At the right of the name field there are arrows for scrolling through the list. A click on the name line opens a dialog box in which you may create new rules or delete or resort existing ones. The small box at the left of the name permits selection and deselection of search/replace rules. Deselected settings will not be made use of in the search/replace process. In this way it is possible to use only some of the loaded search/replace text simultaneously.

Furthermore there are also two icons for the loading and saving of search/replace setups. During loading Eddie gives you the choice of adding items to the setup already present, or of replacing it.

The search process

During searching Eddie proceeds to find the first text passage that matches any of the selected search-texts. For this the list is worked through from top to bottom. If none of the search-texts matches, Eddie advances one character in the main text and starts with the comparison from the top of the list once more.

If a matching text passage is found, then the following occurs:

- Any replacement that may be required is performed.
- If so set, the text will be marked as a block.
- Searching will be continued. The position from which this occurs depends on the "In replaced text too" switch setting of each individual search/replace rule. The following applies:
  The search-texts of all rules for which this option has not been activated will be matched at the earliest after any found or replaced text.

For the rules working with "In replaced text too" active, things look a little different: If only searching (not replacing) took place, then the search simply continues. This makes it possible for two found text passages to overlap each other. Thus for instance the first rule could find a part of the text with several words. The search-text of a second rule that has the "In replaced text too" option active later finds the spaces between these words. With "In replaced text too" switched off, after the first match Eddie would continue the search directly after the first passage found.

After replace operations the whole text just replaced will be searched through anew by all rules that have "In replaced text too" recursion switched on. Now a different search-text may provide a match, which may again trigger a repeat of the process via replacement with recursion switched on. Due to this behaviour you can define various search/replace rules that interlock as they work their way through the text. The text will be reconstructed by one rule and passed on to the next for further changes.

Recursive replacement may take an infinite time with inappropriate search and replace texts, namely in cases when the search-text is present completely in the replacement text. This is not all that serious, because you can break off the action at any time. If Eddie finds that while working through the text it remains in the same place, then a blinking question-mark appears in the small progress bar dialog. In complicated setups with many recursive rules this indicator may appear, usually sporadically, and vanish again after a short time.

Multi search/replace in combination with crafty joker characters offers a broad field of applications, which permits all kinds of additional functions to be defined and stored. In this way the editor can be extended by many functions.

3.3.7.5 Joker expansion

In search-texts with multiple jokers in particular it is important to know in which order and under what circumstances the jokers are expanded. Expansion in this context means the portion of the text region that the joker encompasses to achieve a match between the search-text and the main text. During the search Eddie proceeds as follows:

- The search-text is analysed and split up into its constituent parts. During this Eddie differentiates between fixed text data and jokers. The search-text consists of "n" fixed text portions that are separated by "n-1" jokers ("n" is greater or equal to 1; an empty search-text never matches).
- Eddie now goes through the text forwards character by character and each time compares the search-text with the main text at the current position. When the end of the text is reached the search is completed. A match between search-text and the main text triggers the desired action (replacement, marking) and with "Search/replace global" will carry on to the next matching part of the text.
  The comparison between the search-text and the current position in the main text looks like this:
- Eddie starts with the first fixed text portion of the search-text. If its contents differs from the main text, then the comparison will be terminated. There is no match.
- If no jokers are present, then the complete search-text has been gone through already. The comparison will be terminated, the contents of the search and main texts are identical.
- If a joker is present, then it will be set first to its preferred size. This means: With a joker to be held as small as possible the number of characters set in "Minimum: ... characters" will be jumped over at the current text positon. A joker that is to encompass as many characters as possible will be expanded as far as it can, where the value set in "Maximum: ... characters" will represent the upper limit.

Now it may happen that certain circumstances will arrest the expansion of the joker. Apart from reaching the end of the text, this is generally due to encountering a character that was not selected in the joker dialog and therefore may not be included in the joker. This sets a limit to the expansion of the joker. If the minimum number of characters cannot be achieved due to this, then the comparison fails and will be terminated.

As soon as the text portion encompassed by the first joker has been established, the characters following it will be compared with the second fixed text portion of the search-text. If the two texts do not match then Eddie alters the size of the joker (downwards or upwards, depending on the setting chosen) and repeats the comparison.

This process is repeated until the second part of the search-text either matches or the joker can not be changed further in size due to the parameters assigned to it.

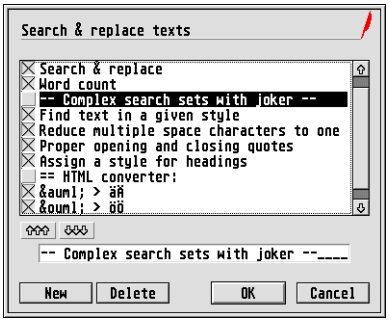
In the case of a match the steps described last (find start region of the joker – compare the next text portion and possibly alter the size of the joker) will be repeated for each further fixed text part. If the comparison fails during this because a joker can not be varied further in its size, the editor returns to the last still alterable joker and attempts a comparison from this position anew. If none of the jokers is expandable any more, then the comparison as a whole will be terminated.

If two or more jokers lie between two text parts, they will be always expanded from left to right. This means that Eddie first attempts to obtain a match by adapting the first joker. If the first one can not be altered further, then it is the turn of the second joker etc.

For jokers with identical names Eddie also checks whethere the referenced text regions have the same contents.

3.3.7.6 Select search/replace texts

Eddie handles any number of search and replace texts for each document. These settings will be saved with that document and so are always easily available again. When you click on the name of the current search/replace setup a dialog box appears that lists all the search and replace texts belonging to the document currently being worked on.



Here you can create new texts ("New") and delete old ones ("Delete"). The names of the listed texts can be altered by selecting an entry in the list and then altering the name in the editable field in the usual way. In front of the name entry for each text there is a checkbox in which the status of each entry is displayed, and this can be altered by clicking on it. If this field is crossed then that search/replace text is active, i. e. it will be one of those used for all actions in Multi mode. With the arrow keys below the list you can alter

the order of the entries, where the selected entry will be swapped with the one above or below it.

When the Multi mode is switched off then only the search/replace setup that is visible in the search & replace window will be executed. With the arrow fields behind this name field you can scroll through the list of search and replace texts without having to call up the dialog box shown above.

3.3.7.7 Search/replace settings

All settings that have been made in the search & replace window can be saved to a file, and loaded back from it when required. For this, note that in some circumstances fonts and colour lists will be loaded as well. In such a case the corresponding Calamus dialog boxes that control the additional loading of the colour and style lists will appear. After loading, any unused styles and fonts will be cleared from the memory again.

Important: As long as you are working with a single document, the set search, replace and separator texts will be valid for all text windows. Only when you load a further document and open an Eddie window from it will the search, replace and separator texts from this document be used. The search & replace as well as the separator text windows will display the texts that belong to the topmost text window. In addition you will be informed in the title bar of the search & replace window to which text window the search and replace operations will actually apply. Incidentally the search/replace texts as well as the separator text will be saved with the relevant document in each case.

3.3.8 Switch off all simulations

 All keyboard simulations can be switched off by clicking on the "Switch off all simulations" function icon.

3.3.9 Go to previous block

 You can jump to a previous block with the "Go to previous block" function. This places the cursor at the end of the previous block.

3.3.10 Go to next block

 You can jump to the next block with the "Go to next block" function. This places the cursor at the start of the next block.

3.3.11 Delete all empty blocks

With this function you can remove all empty blocks from the text. It is possible to create blocks without any contents (so-called "empty blocks") by drawing out a normal block and then reducing it to zero length. Empty blocks can also arise from search & replace actions. In the text magnifier line, blocks are always indicated by square brackets. This permits you to recognize easily even such empty blocks.

3.3.12 Convert to CAPITALS/lower case

With this function you can convert capital letters in all marked blocks to lower case, and vice versa. Eddie proceeds as follows here:

First of all the characters at the start of the selected text passage are analysed. If there are more capitals than lower case characters then the contents of all blocks will be converted to lower case letters. If lower case characters form the majority, the conversion will be to capitals. Further clicks on the icon then reverse the case of each marked text.

3.3.13 Active block replaces all other blocks

The function "Active block replaces all other blocks" permits all blocks to be filled simultaneously with the same contents. For using it the cursor must be positioned within a marked block. By clicking on this function icon, all other blocks will be replaced by the contents of the presently active block.

3.3.14 Text markers

Eddie allows you to define any number of text markers that help quickly and conveniently to identify and later access text positions. (Eddie lite supports a maximum of 5 text markers.) The markers are inserted in the text and are also included when the text is sent back to the layout. However, they are only visible in Eddie. In the short display mode the markers are displayed as small circles, and in the long display mode as two semicircles that enclose the key binding assigned to the marker.

3.3.14.1 Insert text marker

Clicking on the "Insert text marker" icon will insert a text marker without a key binding at the current cursor position.

3.3.14.2 Insert text marker with key binding

 A text marker will be inserted at the cursor position. Eddie prompts the user to press any desired key combination that will be assigned to the marker (a so-called "key binding").

A text marker with a key binding can be set by clicking on the icon next to the one previously described. Eddie will request you to define a key combination be pressing any desired keys, which will be assigned to the marker.

The key binding will be displayed in the text in the following form (provided "Control code long view" is active):

ACS #Key

"A" stands for [Alternate], "C" for [Control] and "S" for [Shift]. If a specific [Shift] key is meant, Eddie uses "L" or "R" (for left and right [Shift] keys respectively). The "#" character indicates that the key is part of the numeric keypad at the far right of the keyboard.

Warning: All key combinations already assigned by the macro recorder ([Alternate]+[Esc]) will be intercepted by Calamus and therefore cannot be used for text markers. However you can get around this restriction by a small trick: Just activate beforehand the key combination for the "Activate text macro" prefix, which can be set in the "Special key bindings" dialog by the "Key bindings editor" function of the Text module.

For setting and going to text markers we recommend that you assign each function to a key with the macro recorder. For this two key bindings are recorded as follows:

First macro

- Start recorder with [Alternate]+[Esc]
- Click on "Insert text marker with key binding"
- Press key(s) for Activate text macro (usually [Control]+[M])
- Stop recoding with [Alternate]+[Esc]
- Press the key combination for "Insert text marker"

Second macro

- Start recorder with [Alternate]+[Esc]
- Click on "Go to text marker"

- Press key(s) for Activate text macro (usually [Control]+[M])
- Stop recoding with [Alternate]+[Esc]
- Press the key combination for "Go to text marker"

The text markers can then be controlled completely from the keyboard and can be used very quickly.

3.3.14.3 Go to text marker

 Clicking on the "Go to text marker" icon brings up a popup listing all markers present in the text. At the left – if previously assigned – there is the associated key binding for each entry, followed by a portion of the text on each side of the marker position. A marker that coincides with the current cursor position has a tick at the far left. There are two ways of going to the marker in the editor window:

- By clicking the mouse on the desired marker popup entry.
- By pressing the key combination that has been assigned to the marker.

A collapsing square helps localise the found marker in the text.

3.3.15 Move blocks

 Blocks of text, including control codes, can be moved to a different position in the text with the "Move blocks" function. After a safety query, the selected blocks will be copied to the current cursor position, then the original blocks will be deleted (thus moving the blocks). If several blocks are selected simultaneously (only possible in the full version of Eddie!), the move action will apply to all of them.

In the full version of Eddie you can enter a separator text in a special window intended for this, which can be opened by the "Define separator text" function. Whether this text will really be used during moving (and copying) is determined by the "Use separator text" function. The icon for this can be found both in the "Block functions/Tools" function panel as well as the header line of the separator text window.

in the "Define block marking" dialog ("Settings" function panel) of the full Eddie version you can determine what is to happen with the block markers during copying, moving or pasting (insertion) of text blocks. Four different cases can be set separately:

Copy (original)
The original blocks remain selected after the copy operation.
Copy (duplicate)
The copies of the text blocks will be selected.

Move
The blocks remain selected after the move.
Paste from clipboard
The inserted text will be marked as a block.

3.3.16 Copy blocks

Blocks of text, including control codes, can be copied to a different position in the text with the "Copy blocks" function. After a safety query, the selected blocks will be copied to the current cursor position. If several blocks are selected simultaneously (only possible in the full version of Eddie!), the copy action will apply to all of them.

In the full version of Eddie you can enter a separator text in a special window intended for this, which can be opened by the "Define separator text" function. Whether this text will really be used during copying (and moving) is determined by the "Use separator text" function. The icon for this can be found both in the "Block functions/Tools" function panel as well as the header line of the separator text window.

in the "Define block marking" dialog ("Settings" function panel) of the full Eddie version you can determine what is to happen with the block markers during copying, moving or pasting (insertion) of text blocks. Four different cases can be set separately:

Copy (original)
The original blocks remain selected after the copy operation.
Copy (duplicate)
The copies of the text blocks will be selected.
Move
The blocks remain selected after the move.
Paste from clipboard
The inserted text will be marked as a block.

3.3.17 Delete blocks

A click on this icon deletes all marked blocks. This action can be reversed only if Eddie's Undo recorder (available only in the full version) is switched on!

3.4 Settings

In the third function field you can make settings that affect the behaviour and appearance of Eddie. Naturally all the settings have already been preset to sensible values, so you can safely skip over this chapter. However, if you want to make optimum use of all the possibilities offered by Eddie, then we recommend that you read the following pages.

Please note that any alterations made to the settings will not be saved automatically when you quit Calamus. You have to do this yourself with the "Save setup" function.

3.4.1 Use control code setup 1

Eddie uses three independent groups of settings for displaying control codes. With these buttons ("1", "2" or "3") you can select any setup to be used for the active or (in the full Eddie version) for all windows. For convenience, the setup selection buttons are repeated in Eddie's text window.

Setting 1 normally means that no control codes will be displayed in Eddie's text window. (You can still see them in the Eddie text magnifier line!)

3.4.2 Use control code setup 2

Eddie uses three independent groups of settings for displaying control codes. With these buttons ("1", "2" or "3") you can select any setup to be used for the active or (in the full Eddie version) for all windows. For convenience, the setup selection buttons are repeated in Eddie's text window.

Setting 2 normally means that all control codes will be displayed in the short format in Eddie's text window.

3.4.3 Use control code setup 3

Eddie uses three independent groups of settings for displaying control codes. With these buttons ("1", "2" or "3") you can select any setup to be used for the active or (in the full Eddie version) for all windows. For convenience, the setup selection buttons are repeated in Eddie's text window.

Setting 3 normally means that all control codes will be displayed in the long format, showing all the details, in Eddie's text window (though not in the magnifier line).

3.4.4 Replace mode

When this icon is selected, any text input in the Eddie window will not be inserted at the current cursor position, but will overwrite the following text instead.

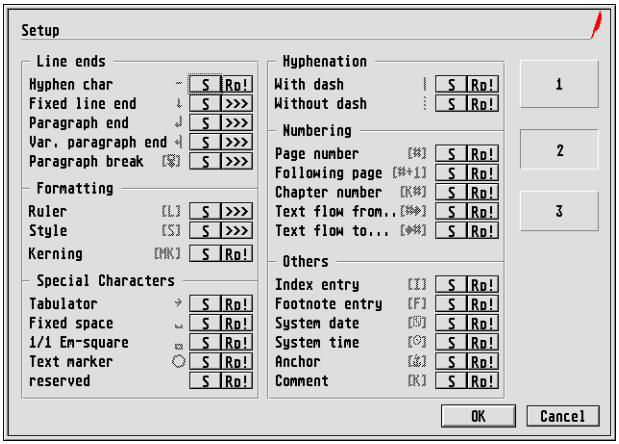
3.4.5 Space indicator on/off

When this icon is selected, spaces will be "visible" in the current Eddie window or (after a question alert) in all Eddie windows by visualizing them with a tiny line.

3.4.6 Delete active block by writing

If this icon is selected then the marked block (if present) will be deleted automatically when new text is input and replaced by the typed characters. The block may also be deleted by pressing the [Delete] or the [Backspace] key.

3.4.7 Define control codes



This dialog offers you the possibility to alter the three control code setups to suit your wishes. To change a setup, click first on one of the three large numbered buttons at the right of this dialog to call up the corresponding setup parameters.

The three different display setups (buttons "1", "2" and "3") share one and the same set of measurement units. However different units of measurement can be set for each text window. When selecting units of measurement you can choose between those set for the page size, the font size and the line size. The units in question can be set, as usual, in the Page module.

This dialog contains all the control codes that Eddie can display arranged in groups. At the right of each code there are two fields whose contents determine how this character is to be presented (displayed) and how it is to be handled:

In the left field you will find the type of presentation; a click on it opens a popup menu where you can select one of the following:

Nothing means that this control code will not be displayed in the Eddie text window. In that case it will only be visible in the text magnifier line.

Short form ensures that this control code will be displayed in the short form in Eddie's text window. As a rule the abbreviation for the code will then be displayed enclosed between square brackets. This is also the type of display that is used by the text magnifier line at the top of the window.

Long form with parameters ensures that a great deal of information about this control code will be displayed in the text window.

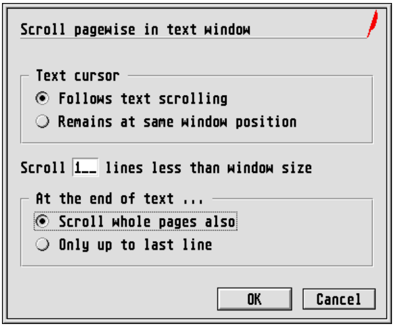
In the right field you can see how the control code will be handled in the Replace (overwrite) mode. Here too there are three different possibilities:

Replace means that the control code will be treated as a single character and will be simply overwritten.

Move (as in Insert mode) means that the code will be moved by the write cursor, i. e. any new text will be inserted before it. This option is sensible so that ruler and style information should not be lost, for instance.

Ignore (skip) has the result that the code remains in place at its original position. The write cursor in Replace mode will simply jump over the control code, without affecting it.

3.4.8 Define scrolling in windows



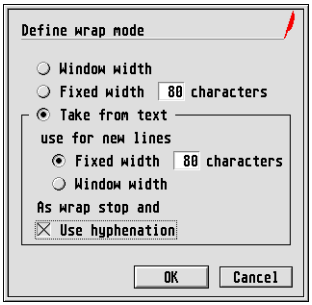
Here you can specify how many lines of text, counted from the bottom edge of the window, should be visible at its top edge when scrolling.

In addition you can also set the behaviour of the editor when scrolling to the end of the text. With "Only up to last line" selected, Eddie, when it reaches the end of the text, will fill the window with text in such a way that the last text line will correspond to the last line in the window. Otherwise scrolling will be as normal with the set overlap, which may lead to a larger empty area on the last page.

3.4.9 Define block marking

Here you can specify how block markers are to be handled when you perform certain block operations (copy, move, paste) in Eddie windows.

3.4.10 Define wrap mode



Text wrapping at the end of lines can be accomplished by Eddie in various ways, depending on which radio button has been selected: When creating text it is sensible to set wrapping to the width of the window as a rule. This results in all text information being visible in each window. If the window is enlarged or shrunk then the wrapping will be adapted to the new window size.

This is no longer the case if a fixed width is specified for text wrapping. In that case the text will be treated as if the window had the width in characters entered in the editable field. That can be useful if the window has to be enlarged and shrunk often on a lowish resolution screen to be able to judge the layout "underneath" Eddie's text window, for instance.

For comprehensive correction work it is sensible to take the word wrap from the frame, as this makes it easy to find your bearings in the text and to locate text passages quickly. If the wrapping is taken from the frame, the line-breaks and any hyphenation are retained in the layout until individual lines are altered in length. Only when the write cursor leaves the specified width (window width or maximum number of columns) will line wrapping take place.

In the full version of Eddie, depending on the settings in the lower part of this dialog any new lines either will be adapted to the window width, or a fixed line length of the width specified in the relevant editable field will be assumed for wrapping.

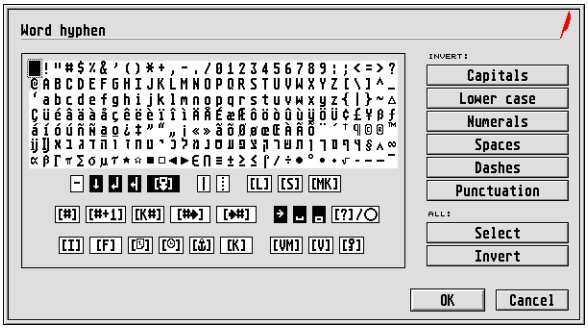
If long words are to be hyphenated when wrapping text at the end of overlength lines, the "Use hyphenation" checkbox has to be active (crossed). Otherwise the lines will be wrapped only at the end of words plus associated punctuation marks.

3.4.11 Define word hyphens

Eddie offers the possibility of freely choosing the characters that are to be used for word hyphenation at end of lines in its window. These are control codes indicating that the word may be divided there by automatic hyphenation in the layout window if necessary.

In this dialog, those characters that are to be interpreted as hyphens by word-oriented functions are displayed in inverse video. Click on any of them to add more, or on an inverted one to deselect it; if you get in a muddle, click on "Select" and then "Invert" to clear all existing selections so that you can start again. The various control codes too can be defined as word hyphens.

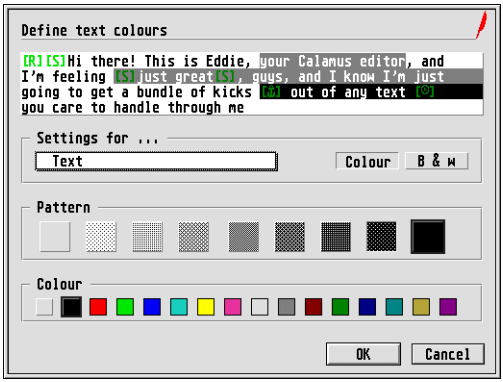
Eddie always handles multiple word hyphens that directly follow one another as a single hyphen, so that the "Go to next word" function will really go directly to the next word, for instance, rather than stopping at these places.



The dialog for selecting hyphenation characters contains a column of buttons with which various groups of characters can be selected/deselected simultaneously. These are:

- Capitals
- Lower case
- Numerals
- Spaces (including fixed spaces, em-spaces)
- Dashes (the minus character, em- or en-dash)
- Punctuation (marks)

3.4.12 Define colours



In this dialog you can set the way that text, control codes and blocks are displayed in an Eddie window. You can make independent settings for colour and monochrome screens. With the popup menu you can select for which display combination the colours and fill-patterns should be set. The overview displays the current setting. Changes will only come into effect when the dialog is quit with "OK".

In the Colour dialog the colour to be changed may also be selected by a mouse click in the relevant part of the sample text.

3.4.13 Load setup

Here you can load Eddie's setup file. Normally it is called EDDIE.SET.

When loading Eddie, the file EDDIE.SET from the MODULES folder will be loaded automatically as well. This contains all the module's parameter settings as well as settings for the individual tools. You can overwrite this file at any time and replace it with one containing your preferred values.

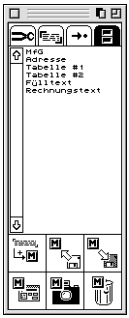
If the file EDDIE.SET is not present, then the parameters are set initially to sensible starting values.

The file EDDIE.FNT will also be looked for in the MODULES folder. This is a special GEM font that contains the extra characters required by Eddie. If it is not present in the correct folder, then each time Eddie is loaded the file selector appears in which you have to locate the EDDIE.FNT file.

3.4.14 Save setup

With this icon you can save the setup of Eddie/Eddie (lite). Normally it is called EDDIE.SET and is stored in the MODULES folder.

3.5 Eddie text macros



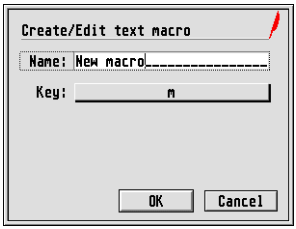
In this function group you have access to the text macros that are also available in the Text module of Calamus. The text macros in the Eddie window are used in the same way as in a text frame in the layout: First press the so-called "prefix" key, then the actual macro key. The prefix key can be defined in the Text module under "Activate text macro" in the "Tools / Key bindings editor" function dialog box (it is usually [Control]+[M]).

For a more detailed description of text macros we recommend that you read the relevant chapter in the Text module part of the Calamus manual.

The "Text macros" function field, besides the macros list, now contains functions for editing text macros as well. Operation is organised in a similar way to the in the Text module.

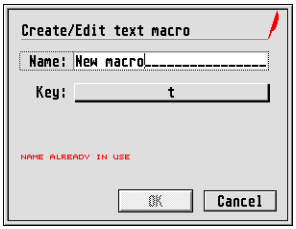
3.5.1 Define new text macro

With this function you can create a new text macro from a marked block or blocks. Eddie first requests you to input the key binding combination that is to be assigned to the macro, and after that the name of the macro. All selected blocks will be copied and gathered up into a single piece of text (in the full version of Eddie only, as Eddie (lite) only allows one block to be marked at a time). The separator text settings will be respected for this. The text data resulting from this will be stored in the macro.

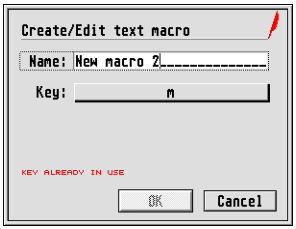


In certain cases of conflict this dialog can not be quit with "OK". This can be due to the following reasons:

- The macro name is empty, or already assigned to another macro.



- The key combination has already been assigned to another macro.



After altering the macro name or entering a new, still unused key binding combination the dialog can be quit with "OK" once more.

3.5.1.1 Keyboard input

When programming functions with the Macro recorder or assigning key bindings to text macros, it can be very useful to know the exact procedure used to evaluate key presses within Calamus. After all there are three levels on which key presses can trigger certain actions:

- The top priority is always given to macros recorded with the Macro recorder, as these are intercepted directly below the user interface. In place of the key presses the recorded events will be reported directly to Calamus by the interface.
- Second come the text macros. As a rule these are only paid regard to by those modules that can do something with them (e. g. Text module and Eddie). The text macro key bindings may overlap with those from the Macro recorder. This is because the text macro is always activated in two stages: The macro prefix (set in "Activate text macro" entry of the "Special key bindings" dialog called by the "Key bindings editor" function of the Text module) as well as the actual macro key binding (Text module "Define macro" dialog or the similar "Define new text macro" in Eddie).
- Finally there are the "Special key bindings" that can also be set in the Text module, which come lowest in the hierarchy.

Only when a keypress has run through all three steps and could not be utilized as yet will it be used for text input or similar purposes.

3.5.2 Load macro list

 When you click on this icon the file selector appears, in which you can select a text macro list (file extender CMA).

During loading Eddie will ask whether the list being loaded should be merged with the existing list or whether it should replace it.

3.5.3 Save macro list

 Clicking on this icon brings up the file selector where you can choose a path and name under which the current text macro list is to be saved (the file extender should be CMA).

3.5.4 Edit text macro

 This function is used for altering the parameters of a text macro (name, key binding, contents). Clicking on the icon and then a macro in the list brings up a similar dialog to that for "Define new text macro", with an additional checkbox.

If "Take new content" is selected (crossed) then the contents of currently marked blocks will be assigned to the macro (as described above).

3.5.5 Copy text macro

 Clicking on this icon and then on an entry in the macro list will duplicate that text macro. Eddie will request automatically that you input a new key binding for this macro.

3.5.6 Delete text macro

 With this function you can delete a macro. First click on the icon, then on the text macro to be deleted.

3.6 Eddie: Key bindings and mouse clicks

In Eddie different functions are assigned to numerous key bindings and mouse operations that make working with text easier.

Lost key-presses

If you type in text in the Calamus layout and call up Eddie before all typed characters have appeared in the layout, then a few characters may be lost in some circumstances. To prevent this you can place the calling of Eddie on a keyboard macro. This macro must contain the keys "Left arrow" followed by "Right arrow" before calling the editor. This forces Calamus to insert the characters that have not yet been handled into the text first.

3.6.1 Eddie key bindings

[Shift]+[Left arrow]	Go to the start of the line
[Shift]+[Right arrow]	Go to the end of the line
[Shift]+[Up arrow]	Scroll up one page
[Shift]+[Down arrow]	Scroll down one page
[Control]+[Left arrow]	Go to the start of the previous word
[Control]+[Right arrow]	Go to the start of the next word
[Control]+[Up arrow]	Go to start of the previous paragraph
[Control]+[Down arrow]	Go to start of the next paragraph
[Control]+[Shift]+[Left arrow]	Go to the end of the previous word
[Control]+[Shift]+[Right arrow]	Go to the end of the next word
[ClrHome] or	
[Control]+[Shift]+[Up arrow]	Go to the start of the text
[Shift]+[ClrHome] or	
[Control]+[Shift]+[Down arrow]	Go to the end of the text
[Alternate]+[Return]/[Enter]	Go to the start of the next line
[Delete]	Delete the character on the right of the cursor
[Backspace]	Delete the character on the left of the cursor
[Shift]+[Delete] or	
[Shift]+[Backspace]	Delete line
[Control]+[Delete]	Delete from cursor position to the end of the word
[Control]+[Backspace]	Delete from cursor position to the start of the word
[Control]+[Shift]+[Backspace]	Delete from cursor to the start of the line
[Control]+[Shift]+[Delete]	Delete from cursor to the start of the line
[Insert]	Insert a space character

[Shift]+[Insert]	Insert line break
[Tab]	Insert Tab character
[Undo]	Undo: Spool backwards
[Shift]+[Undo]	Undo: Spool forwards

Also (provided they don't conflict with other shortcuts from the text module):

[Return] or [Enter]	Insert paragraph mark
[Shift]+[Return] or [Shift]+[Enter]	Insert hard line break
[Control]+[Return] or [Control]+[Enter]	Insert variable paragraph mark

In the following dialog boxes the lists may be operated through the keyboard:

- Set text style
- Find/Replace texts
- All popups

In addition the logic of the function group "Go to the start/end of the previous/next word" can be switched over with two newly added key binding combinations. These alter the key bindings as follows:

Switch:
[Control]+both [Shift] keys+[Right arrow]
Result:
[Control]+[Left/Right arrow] makes the cursor jump to the start of the next available word in the selected direction. With [Control]+[Shift] + [Left/Right arrow] the cursor is positioned at the end of the next word in the selected direction.

This is the default setting.

Switch:
[Control]+both [Shift] keys+[Left arrow]
Result:
[Control]+[Left arrow] jumps to the start of the previous word, [Control]+[Right arrow] to the end of the next word. If [Shift] is pressed as well the cursor also jumps over the space character between words.

Try the new variations and decide yourself which keyboard assignment you find more comfortable.

3.6.2 Eddie mouse clicks

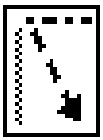
Words can be marked as a block by double-clicking on them with the left mouse button. Holding down the button and moving the cursor over the text draws up a block in the usual way, though Eddie only accepts the markings for complete words in this case. Any set word hyphenations will be respected.

In a similar way a triple-click will select a complete line or draw up blocks line by line.

Single left-click	Place cursor
Double left-click (Control code)	Edit control code
Double left-click (Word)	Select word
Triple left-click	Select line
Single left-click and hold	Draw up block
Double left-click and hold	Draw up block word by word
Triple left-click and hold	Draw up block line by line
Right-click	Deselect all blocks
[Shift]+right-click	Deselect single block
[Control]+right-click	Close all gaps (select entire text)
[Control]+[Shift]+right-click	Close single gap (combine blocks)

Vector related modules: Content

1 Lines



In all directions:
The Line module

Here you will find all the functions for creating and editing lines, arrows, curves and corners.

Lines are the simplest, but perhaps the most important graphic element in a document. They are used to separate tables into lines and columns, to separate headers and footnotes from text, and to give structure and dynamics to a layout. As arrows, they draw attention to important text passages. Try and imagine the page without lines: Uninteresting and underwhelming. Lines therefore surpass all other design elements in giving full freedom to your creativity.

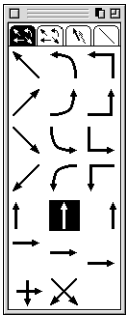
Calamus offers you the ability to exploit your creativity with line frames. Unlike text, raster graphic or vector graphic frames, line frames obtain their contents as soon as you create them. There is no need to import anything, since the frame cannot hold anything else apart from one line.

The Line module gives you the ability to control the appearance of these lines. This includes the line's direction, type, colour, fill pattern, thickness or width, shadow and style, as well as the appearance of its ends. There are four Line module function groups: Two for line type; one to set the fill pattern, colour, thickness, style and line-ends; and one to set the shadow values.

When you click on a line frame, the frame's current settings will appear in the current Line function group. To change the appearance of the line in the line frame, simply click on one of the icons or edit the appropriate number field. After each click, Calamus will display the line with its new setting immediately.

If no line frame is selected at present, any change in line settings will apply to the next line frame created.

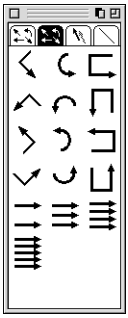
1.1 Line type



There are many different ways to draw a line in a line frame. Calamus supports a variety of them in two function groups. In the first group, the first four rows show line types which, in various ways, use both the full height and width of the frame. By selecting the appropriate icon you can make the line slanted, rounded or angled from one corner of the frame to the one opposite. The line will be drawn in the direction of the arrow; that is, the line-end will lie at the point of the arrow, while the line-beginning will be in the opposite corner. Whether (and where) arrowheads will really appear can be set independently in the "Line colour and attributes" function group (see below).

In the next two rows you can select lines to be drawn exactly horizontal or vertical. You can decide whether the vertical line will be displayed on the left edge, in the middle, or on the right edge of a line frame. Similarly, you can place horizontal lines at the top, middle or bottom of a line frame. As you can see from the arrowheads on the icons, vertical lines are always drawn from the bottom to the top, horizontal ones from left to right.

With the two bottom icons in this function group you can draw crossed lines, either at the mid-points of the line frame or from corner to corner.



The line types of this function group are intended for special purposes. The shape drawn should be obvious from the icons. These too occupy the complete height and/or width of the line frame.

1.2 Line shadow

Lines can throw shadows. You can determine exactly where the shadow should fall. This is done with the Line shadow function group, which is divided into two main parts: Direction and offset as well as colour and fill pattern.

The elements of this function group affect the display of line shadows and are all described in the corresponding earlier chapters. In the lower part you select in which direction the shadow should fall. The eight outer icons represent the eight possible shadow directions, with the selected icon framed. If you don't want a shadow, click on the central icon.

The offset, or how far the shadow should fall in the selected direction, can be set with the two numeric editable fields immediately above. After inputting the value, press [Return] and the values will be reflected in the document immediately.

The unit of measure following the number is the one you have set in the Page module's "Set units of measurement" for "Line size". You can set freely the shadow offset both in width (X-direction) and height (Y-direction).

1.3 Line colour and attributes

Here you can set the appearance of the actual line. Beside specifying a fill pattern you can also choose the colour, thickness (width) and style the line will be drawn in. In addition you can choose the shape for the start and end of the line.

1.3.1 Line colour/Fill pattern

You can set the colour and fill pattern of a line by using this function. For an extensive description of the Colour/Fill pattern function and its elements, see the "Colour" chapter.

1.3.2 Line thickness

You can set line thickness (width) either in the measurement unit selected under "Set unit of measurement" in the Page module, or you can select one of the pre-set widths. Selection is simple: Click on the number field, use the [Esc] key to clear the line, enter the desired value and then press [Return] to make sure that the new value will be adopted. With this function you can create lines that are over a metre wide, but in that case you are unlikely to see much of your document!

To select one of the eight pre-set line thicknesses, click on the desired icon, which will then be framed. The value in the number field will show the actual thickness of the line in the chosen unit of measure. The dotted line shown on the far left is called a "Hairline". Hairlines are always one pixel wide in the resolution of the output device and so do not change in width if you magnify their frame on screen. If you print a hairline on an imagesetter, it would be only 1/100 mm (1/2540 of an inch) thick in the highest resolution, and would be difficult or impossible to see after copying.

1.3.3 Line style

These eight icons allow you to choose line style. Here are the options from which you can choose:

- Solid
- Long dashes, closely spaced (broken line)
- Long dots (short widely spaced dashes)
- Dash/dot
- Normal dashes (long, widely spaced lines)
- Long dash, short dash, dot
- Short dots (dotted line)
- Short dashes (dashed line)

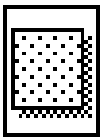
The currently selected line style will appear within a small frame.

1.3.4 Line starts and ends

Calamus can display the beginning and end of a line in straight, rounded or arrow form. The first three icons define the beginning of a line and the other three define the end (recognizable by the small arrows within the icon). See also the Line type icons (above) to determine which terminus of a line is the beginning and which is the end; an arrow appears at the end of line in its Line type icon.

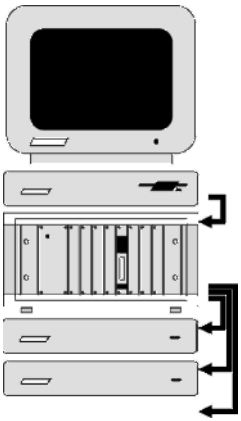
Note that with a rounded end, the centre of the semi-circle will be exactly at the corner or edge of the frame. The same applies to arrows, in which case the middle of the arrowhead will be at the frame's corner or edge. As a result, part of the line can extend beyond the frame's edge. Arrowheads can not be made smaller than a certain value to make sure that they still remain visible. This may make them appear much larger on the screen than they will on the output device; change to a 1:1 display to preview the actual output.

2 Raster areas



Here you will see how you can create and modify circles, rectangles and other areas.

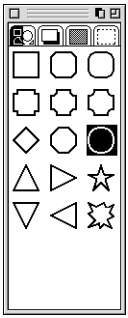
Raster areas, often underestimated, are among the most useful creative elements in DTP. They help to subdivide and define your document. You can make important passages stand out by placing a light raster area under them. You can also use raster areas and lines to create elements of vector graphics, as can be seen in this illustration from the Calamus LI2 RIP interface guide:



The Raster area module is divided into five function groups. The first two allow you to set the shape of the raster area, and the other three let you set the colour and fill pattern of the raster area, its border and its shadow.

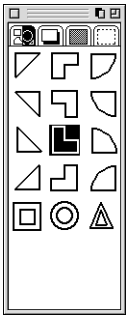
Raster area frames are "dynamically linked". This allows the user to change the characteristics of several raster area frames at the same time. Select the raster area frames to be linked and click the icon or element of your choice. All selected raster area frames will change to the selected shape, colour, fill pattern, shadow or border.

2.1 Raster area shape



You can choose a shape for a raster area from the 15 predefined ones shown here.

Naturally a circle will be distorted into an ellipse if the raster area frame is not an exact square. To create a square frame, draw and select a frame; enter identical values in the dX and dY fields of the Coordinate display, and use proportional sizing when resizing the frame. Operation is the same as for line frames: Select a shape and draw the raster area frame. The currently selected shape will appear selected (inverse video).



This function area shows further shapes that can be used to create raster areas. The currently active raster shape icon will be shown as selected.

2.2 Raster area shadow

Raster areas can throw shadows. You can control the precise placement and colour of any shadow placed around a raster area. The Raster area shadow function group is used for this, which divides roughly into two parts: Direction and offset.

In the lower area you can choose the direction in which the shadow is to fall. The eight outer icons represent the eight possible shadow directions. The selected icon will be shown outlined. If you do not want a shadow, click on the centre icon.

How far the shadow is to fall in the selected direction can be set in the two editable fields just above.

The unit of measurement following the number is the one that has been set in the Page module. You can choose the shadow offset freely both in width (X direction) as well as height (Y direction). You can also choose whether the shadow should always fall at the same (absolute) offset or whether the offset should depend on the character size of the font (relative).

To switch between absolute and relative shadow offsets, click on the measurement unit of the desired direction. This will then change from the absolute value ("mm", "pt" or other unit defined in the Page module) to "%". This percentage value refers to the selected character size, so a shadow offset of 100 % will be exactly 12 points for a 12-point font. Please complete the entry with [Return], after which the newly set values will take effect.

In this function group you can select the type of shadow thrown by a raster area.

2.3 Raster area colour

Here you can set the colour of the raster area itself. This function too is discussed in detail in the "Colour" chapter.

2.3.1 Set radius

0.00 mm

This function allows you to set the radius of the arc of any raster shape which has rounded corners. These will then be equal no matter what the size of the frame. To use it, click the number field, use the [Esc] key to clear the field, set the desired radius, and press the [Return] key. The unit of measure is selected as described in "Set units of measurement". A value of "0.00" means that the radii will be proportional to the frame size. Set radius works with dynamic linking, as described above.

2.4 Raster area border

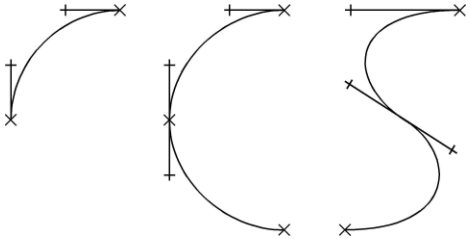
The border surrounds the raster area and the shadow cast from it. You can set the border's line style, weight (thickness) and colour as well as the fill pattern with which the border should be drawn. For the shadow border, Calamus will use the shadow's colour and fill pattern. The functions of this function group are described in the Calamus chapter "Colour". The functions for setting the line style will be found in the chapter for the Line module.

3 Vector editor

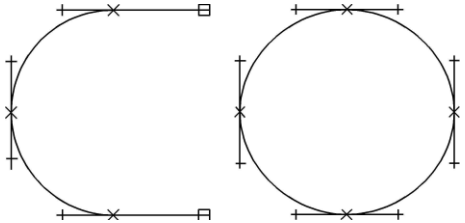
In Calamus, vector graphics consist basically of only two elements: So-called "Paths" and "Other objects". The "Other objects" can be a raster graphic incorporated in the vector graphic, for instance, or something similar; in other words objects that have little in common with vector graphics. For this reason they can not be edited in the Vector editor . Paths, on the other hand, consist of combinations of lines and Bézier curves and can be created and altered freely. With these basic functions you can really create every kind of vector graphic. Calamus even contains functions for recalculating vector graphics from external programs that contain other elements. Thus, for example, circles and arcs are converted to Bézier curves for modifying in the Vector editor.

A vector graphic frame usually contains several (path) objects, each of which consists of one or more paths. A path is made up of lines and Bézier curves joined together. The object as a whole is assigned a line type and a fill pattern. This means in practice that all elements of the path have the same line type, and surround the same fill pattern. You may be familiar with simple vector graphic objects from working with the Raster area module. Each object has an outline (that is the path), a fill colour, a fill pattern and a line type. All these raster areas are present in the Vector graphic module too, and can be modified here.

Having dealt with objects, let's get to the paths. As mentioned, a path consists of several points joined together by lines or Bézier curves. It should be clear what lines are, but Bézier curves may require further explanation: Bézier curves are like curved lines, except that they have two external points in addition to the start and end points. These extra points, called "control points", determine the shape of the curve. The Bézier curve clings at either endpoint to an imaginary line connecting the endpoint to the control point. The distance between the control point and endpoint determines the amount of "bowing" of the curve. Here are some examples with the control points visible that are clearer than words:



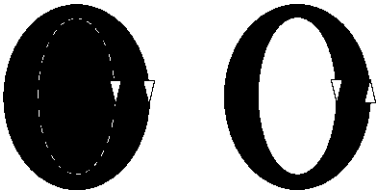
A path may consist of a combination of joined lines and Bézier curves. This creates either closed or open paths, as shown in the following examples:



The starting point of each path appears as a solid square, further points appear as small empty boxes, and control points of Bézier curves appear as small crosses. If an object is made up of more than one path, you only have to count the solid squares to see how many paths are involved.

As explained in the Raster area module, each object as a whole has a fill colour, a fill pattern, a line shape and a line colour. The important point is that the whole object must have the same colour, the same fill pattern and the same line attributes. If you want more than one fill pattern, colour or line type in your raster graphic, you will have to create separate objects.

From this it follows that it would appear not to be possible to create objects with "holes" in them. Normally such objects are created by placing a white-filled path on top of an object with a different fill pattern. But as objects may only have a common fill pattern for all paths, "holes" in it would seem to be impossible. This apparent dilemma can be solved thanks to the fact that the direction of a path has a deciding influence on the filling of an object. The following basic rule apples: Areas that lie inside two opposing paths will not be filled. So if two objects with the same fill pattern are drawn on top of each other with the paths created in opposite directions, the area where they overlap will be left blank. This may sound somewhat complicated again, but the illustration should make everything clear:



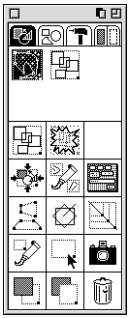
The Vector editor consists of the following function groups:

- Object mode
- Objects
- Path mode
- Colour/Fill pattern
- Border

The tasks of the individual function groups have been hinted at briefly already. Generally working in the Vector editor is much like working in the Text or Text style module. You select a vector graphic frame by clicking on it, then you can create, modify or delete objects in that frame. The "Object mode", "Colour/Fill pattern" and "Border" function groups allow you to work at the object level. The "Path mode" function group allows you to work with the low-level paths that make up the objects.

Hint: In the object editor of the Vector graphic module you can use the frame functions "Resize object proportionally", "Move only horizontally", "Move only vertically" and "Draw out from the centre".

3.1 Object mode functions



Objects in the Vector editor are handled in a similar way to frames in the Frame module. Every object possesses its own "object frame", a rectangular area that encloses all paths that make up the object. This Object frame can be selected in the "Editable object" function group. The other functions in this function group let you modify one or more objects within those frames. Naturally you also have the opportunity to create new objects.

3.1.1 Editable object indicator

This icon provides information about the type of object currently selected. Path objects can be modified freely.

Do not select this icon – it serves purely as a vector path status indicator.

3.1.2 Non-editable object indicator

This icon provides information about the type of object currently selected. While you can modify path objects freely, other objects can only be enlarged, shrunk or moved. Such "other objects" can arise when you import data from other programs that have no direct equivalents in the Vector editor , for instance.

Do not select this icon – it serves purely as a group object status indicator.

3.1.3 Create object group

This function works in a similar way to the Frame module function for creating groups, except that in place of frames the vector objects within a vector frame will be joined in a group.

Select the desired objects with the mouse (holding down the [Shift] key) and then click on this icon. After this the objects are joined in an object group.

3.1.4 Ungroup object group

This function works in a similar way to the corresponding Frame module function and ungroups vector object groups that you created previously with "Create object group" again.

After ungrouping the object group you can modify the individual vector objects once more.

3.1.5 Shrink frame to object size

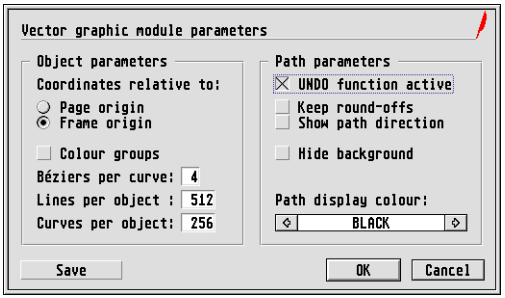
This function allows you to shrink the vector graphic frame so that it is just large enough to contain all the objects in it. This is useful when you have deleted many objects in a vector graphic. A click on this icon and there is no more wasted space in the frame.

3.1.6 Join objects

This function joins all selected objects into a single object. Select all the objects you wish to join (see "Select objects" below) and click on this icon. Note that the new object can have only one fill pattern, one colour and one line style, namely that of the selected object that is drawn first. Normally this will be the one lying on the lowest level.

3.1.7 Miscellaneous settings

This function allows you to change several settings for your work in the Vector editor . When you click on the icon, the following dialog box will appear:



With the first two radio buttons you can choose whether the coordinate display should show the offset from the start of the Calamus page or from the start of the current

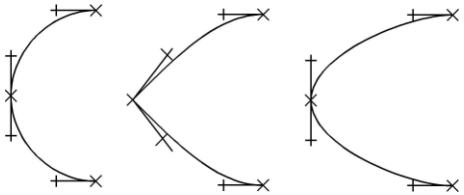
vector graphic frame. In the first case ("Page origin") the coordinate zero-point lies at the top left corner, or for a left-hand page at the top right corner of the sheet. If the "Frame origin" button is selected, the zero-point will lie at the top left corner of the currently selected vector frame.

The checkbox belows this allows you to make the group itself an object in its own right.

The three numerical input fields permit you to specify the maximum number of Bézier sections per curve as well as lines and curves making up an object.

The "Path parameters" affect a number of functions in the "Path mode" function group only: You can determine first of all whether the UNDO function should be active for the Vector graphic module.

The "Keep round-offs" checkbox also belongs to the Path mode function group. The tangents of a Bézier curve are the connecting lines between a path point and the appropriate control point. The curve at its endpoints clings to these tangents. With rounded paths these tangents run in both directions from a control point at an angle, meaning that the curve has a crease at this point though it remains continuous. If this checkbox is selected, this continuity is retained when moving a control point. Therefore the corresponding control point on the other side of the path point will be moved along automatically too. An example of this as well:



When the "Show path direction" checkbox is active a small arrow appears next to each path when in the Path mode function group to indicate the order the path points were set. This is useful when constructing objects with holes in them (see above).

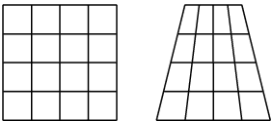
The "Hide background" checkbox hides any previous objects when you switch to the Path mode function group.

Finally, you can select what colour the paths should be displayed in the Path mode function group. The right side of the dialog box contains a list of available colours, from which you can select your preferred colour.

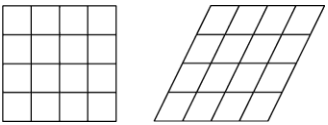
3.1.8 Distort object

 A function to modify objects in a particular way: You can use it to distort the selected object (or if more than one is selected, all of them). Click on the icon. If you use the function with more than one object selected, the selected objects will first be joined to form a group. This means that a common frame will be drawn around the objects, but in contrast to the "Join objects" function (see above) the objects all remain stored separately and will keep their own colour, fill pattern and other properties. The group frame will vanish again automatically if you click on a different object subsequently. In any case, after clicking on this icon only one selected frame will be present. Depending on which of the eight "grab handles" in the frame border you click on, two different functions will be executed:

1. If you click on a corner point, you can move it toward another corner point. The opposing corner point will also move by the same amount toward or away from the one you are moving. With this you can convert a rectangle to a mathematical trapezium, as shown in the following example:



2. If you click on a mid-point of the object frame outline, you can move the two corner points of this side in the same direction (but always only parallel to the side – an enlargement of the frame is not possible). This turns the rectangle into a parallelogram:



To "set" the point, simply click for the second time with the mouse. After this the actual distortion process will start. Naturally you can also terminate the operation by clicking the right mouse button. Otherwise all objects that have been joined in the group frame (or the selected object if there was only one) will be distorted in the same manner as the frame. This allows you to achieve a perspective effect, for instance, by making objects narrower at the top ("railway-line effect"). Of course the frames around the objects will remain as rectangles after the operation, only the paths contained in it will be altered. Let this versatile function inspire you to discover new effects by yourself!

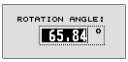
3.1.9 Rotate object

Like the distortion process described above, rotation is an operation that can be performed without loss of quality only for vector objects. You can rotate an object frame by any amount without getting any "jaggies" or "stepping effects" that you often get with raster graphics. Select one or more objects and click on the icon. If you have selected more than one object, they will be grouped temporarily. We repeat as a reminder: This grouping is not connected to the "Join objects" function, the grouping will be terminated immediately when clicking on an individual object.

Now, click anywhere in the layout window. This point marks the reference point for rotation. As you move the mouse cursor around this point, you will see an attendant arc, reflecting the angle of rotation. The centre of rotation lies at the mid-point of the object or group frame. To execute the rotation, just click the left mouse button again. if you have changed your mind in the meantime, a click of the right mouse button cancels the operation.

Tip: You can also rotate an object through a numerically specified angle. For this we recommend you place the calling of the Coordinate display on a macro.

The following small dialog appears, in which you can input the exact turning angle (in a counter-clockwise direction):



[Return] closes it again and executes the action.

3.1.10 Resize object proportionally

You will know this function already from the Frame editing module. When this icon is selected, you can only resize selected object frames proportionally. In practice this means that you cannot alter the proportions of objects – a circle will remain a circle and cannot become an ellipse. When the icon is selected the central grab handles of the object frame disappear, and only the corner ones remain available. But even their function is restricted, because only proportional size changes are possible. Grab a corner handle with the mouse (click and hold down the left button) and drag the frame out to the size required.

3.1.11 Create object

 This icon allows you to "drag out" a new object frame, i.e. to create new objects rather than select existing ones. As already mentioned, every object consists of one or more paths, which share the same colour, fill pattern, border type and border colour.

This function works the same as "Create frame" mode in the Frame editing module. Select this icon and drag out a frame in the layout window to create a new object. The nature of the object depends on which object type is active in the Objects function group (see below). You can switch between "Create" and the "Select" function described next by clicking the right mouse button.

3.1.12 Select object

 This function allows you to select existing objects rather than create new ones. It works the same as "Modify frame" in the Frame editing module. You can select individual objects by clicking on them. It is possible to select more than one object at a time by holding down the [Shift] key while you select each one. You may also select objects by drawing a "rubber band" around them while holding down the left mouse button (click on an empty area and then drag out a "frame"). "Click through" also works in the same way as in the Frame editing module: If several objects are superimposed, you can select them in turn by repeatedly clicking in the same place.

You can switch between "Create" and "Select" modes by clicking the right mouse button.

If you want to resize several objects at once, you must group them first into one frame. Whereas this happens automatically in the "Distort object" and "Rotate object" functions described above, you have to create a temporary group frame by holding down the [Alternate] key and pressing the right mouse button anywhere in the window. All selected frames will be joined into a group frame.

Note: This grouping is temporary, so that as soon as you select one of the individual frames, the objects will be ungrouped again automatically.

3.1.13 Copy object

 To copy one or more objects, select them and then click on this icon. To make multiple copies, use "Set copy type" in the Options menu to select the number of copies and where these should be placed. All copies will be physical; virtual copies are not available in the Vector editor .

3.1.14 Place object in background

 With this function all selected objects will be placed behind all others. In other words you can change the order in which the objects lie above one another. If you still don't have a clear grasp about this principle, please look for the corresponding function in the Frame editing module section.

3.1.15 Place object in foreground

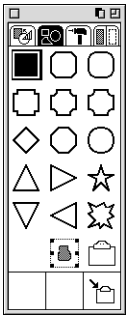
 With this function all selected objects will be placed in front of all others. In other words you can change the order in which the objects lie above one another. If you still don't have a clear grasp about this principle, please look for the corresponding function in the Frame editing module section.

3.1.16 Delete object

 If you have become bored with an object, simply select it and then click on this icon. Naturally you can also delete several frames at once. In each case a safety alert appears to allow you to change your mind at the last instant.

Tip: You don't always have to delete it. If you cut an object from the page and store it in the clipboard (see Clipboard module), it will still be available for use on this or other pages. Naturally at some time the clipboard will become completely filled, so that you should tidy it up from time to time.

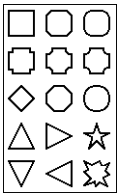
3.2 Objects function group



The functions of this function group allow you to determine what is to appear in the newly drawn object frame. In some ways this function group corresponds to the first function group of the Raster area module, because here too you can select from fifteen predefined objects. In addition you can copy the object selected last into a newly drawn frame to produce a "clipboard" for further objects.

Naturally there is also an icon to leave a newly drawn frame empty. In contrast to the Raster area module you can modify the objects in the Vector module with the functions of the "Path mode function group". With this you can, say, convert squares with inwardly bent corners into the shape of a "Stop" sign, just by removing a line at each corner.

3.2.1 Vector object shape



15 predefined object shapes

These 15 objects correspond to those in the Raster area module. If one of these icons is selected, then when you draw out an object frame (see "Create object" in the previous function group) the corresponding object will be copied into the frame immediately. Fill pattern and colour as well as line type and colour will be adopted from the relevant function groups (see below).

Naturally a circle will only be really circular when the frame is an exact square: If one pair of sides is longer than the other then the circle will become an ellipse; other shapes are affected in a similar way. Unlike the Raster area module, you cannot specify a shadow for an object, as a shadow has a different fill pattern etc. to the object itself. This means that shadows must be created manually; you must create a second, darker object and place it behind the first object. Use the "Copy object" function in the Object mode function group. After this you can change the object(s) to your liking with the functions of the Path mode. So you can see: Raster area frames are nothing else than vector graphic objects for Calamus.

3.2.2 Copy last object

 This function lets you copy the most recently-selected object: To do this, select this icon; when you create a new object frame the last object selected will be copied to it immediately. This will be a physical copy of the object (see also "Copy options" in the Options menu). If no object, or more than one, is selected the new frame will simply remain empty.

3.2.3 Object clipboard

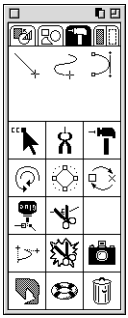
 On this object clipboard you can use the "Copy object to object clipboard" function described below to store any desired (single) object. When you next click on this icon, the contents of the clipboard will be copied to a new vector graphic frame.

Warning: This Object clipboard can always store just one object. To copy several objects, please use the normal clipboard (see Clipboard module) or the "Copy object" function from the Object mode function group.

3.2.4 Copy object to object clipboard

 In addition to the option of copying the object selected last to a new frame, you can also store individual objects in the clipboard described above and copy them later to a vector graphic frame. First select the desired object and then click on this icon. This copies the selected object to the Object clipboard, from where it can be inserted in a new object frame as described above.

3.3 Path mode function group



The functions in this group allow you to modify the basic elements of a vector graphic, the so-called paths. How these paths combine to make objects and what these are made of has already been described extensively in the introduction to this chapter. For this reason this section concentrates mainly on the description of individual functions of this function group and their operation.

3.3.1 Insert line

This icon and the next one determine whether setting new points on a path will produce straight lines or Bézier curves. The two icons are therefore mutually exclusive, with the active one shown in inverse video. When this icon is selected, straight lines will be added to a path.

3.3.2 Insert Bézier curve

A click on this icon ensures that any points added to a path will be connected by Bézier curves rather than straight lines. The control points of these curves will lie at first near the middle of the line connecting the two endpoints, so that the curve appears originally as a straight line. By clicking on the next-but-one icon, though, you can move the control points to change the shape of the curve freely.

3.3.3 Round Bézier curves automatically

With this icon switched on (so it is shown in inverse video), then while joining two Beziér curves to each other an attempt will be made to round off the joined Beziér portions smoothly, paying regard to the last-set control point.

If the switch is not set, then Beziér section too will be arranged first as straight line sections, i. e. their control points will lie exactly on the Beziér line.

3.3.4 Select/Move path point

 This icon must be selected to be able to move path or control points. Normally a click of the right mouse button will accomplish this. The right mouse button can also be used to "deselect" all selected path points once more. For selecting one or more path points the same applies as for objects: A single click with the left mouse button on a point selects it (and only it). Holding down the [Shift] key while clicking ensures that the point is selected in addition to any activated previously. If a number of points have been selected already and you want to deactivate one of them, then a [Shift]-click will do that too.

"Rubber banding" is available here as well in order to select all points in a larger area. Simply click on a position where there is no path point and draw out a rectangle.

You can reach aditional functions again with a combination of the right mouse button and the [Control] and [Alternate] keys. With [Control]+right mouse click on a path point all points of the corresponding path will be selected (i. e. including the control points of Bézier curves).

A right-click with the [Alternate] key held down will select all points of the current object. This makes it easy to move complete paths or even entire objects.

To move the selected points, just click again on one of them. Now all active points will follow movements of the mouse cursor. If this includes control points of Bézier curves, the new curve shape will be drawn at the same time. In this case you can also obtain an additional effect. If you have activated the "Keep round-offs" checkbox in the Miscellaneous settings dialog, then any rounding off or smoothing of the curve will not be disturbed provided that there is also a Bézier curve on the other side of the path point. To accomplish this the control point of the other curve will be moved as well so that the tangents will line up again after the move. Details of how this works can be found above in the description of the Miscellaneous settings function.

Click the left mouse button to paste the moved points into their new position as usual. A right-click aborts the procedure and all points will return to the positions they were in previously.

3.3.5 Delete path point(s)

 To delete individual path points, please click on this icon. After this the mouse cursor will take the shape of a pair of pliers, and you can "pull out" points that were "hammered in" earlier. With a right mouse click you can switch back to the Select/Move point mode again. If you delete a control point, then the associated Bézier curve will vanish with it.

3.3.6 Add path point(s)

 With this function you can create new path points. Clicking on the icon makes the cursor take on the shape of a hammer. Depending on which of the two icons "Insert line" or "Insert Bézier curve" is selected, the new point "hammered in" will be connected to the last point in the path with a straight line or a Bézier curve. Remember that Bézier curves also look like straight lines at first because both the control points will lie exactly in the middle between the old and new path points. However you will see small crosses that can be positioned with the Select/Move path point function described above so that a true curve is formed.

When this icon is selected, the current path will continue to be lengthened until the right mouse button is pressed. After this you can left-click to create a new path, or right-click to change to the Select/Move path point mode.

You can also insert points between two other points of a path. To do this, click on a path point while holding down a [Shift] key. A new path point will be set between the last point selected and the next point in the path, which you can then position as described above. Here too the right mouse button retains its function: The first click terminates the process, the second click switches to the Select/Move path point function.

To insert further points before the first one on the path you have to first reverse the path direction. For this you use the following function:

3.3.7 Reverse path direction

 As already mentioned above, all paths also have a direction. The start of the path will be shown as a small filled square, with all other points filled with white and so appearing hollow. Path directions have a decisive effect on the fill function when two paths cross each other.

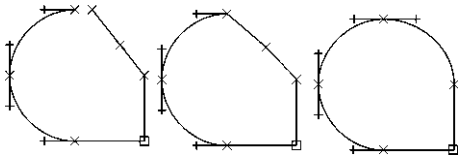
To alter the direction of a path so as to cut "holes" in other objects, simply click on this icon. This reverses the order of the points in the path. The old last point of the path will now appear filled with black and so forms the new start of the path.

Tip: You can also use this function if you want to insert additional points before the start of a path. Just reverse the path direction, select the (now) last point of the path and then set the new points. After this you can reverse the path direction once more and you have "extended" that path at the front.

3.3.8 Close and round-off path

This function has a double purpose: You can use it to close paths as well as to round them off. Closed paths are those having their start and end points at exactly the same position. Curves that contain Bézier curves can also be rounded off. This means that the control points of the curves are moved automatically in such a way that they join up smoothly without forming "creases" at the common endpoints.

Just how rounding off a path works can be seen from the next illustration:



The use of the function is simple: Click on the icon and then on any of the points in the relevant path. The complete path to which this point belongs will then be closed and rounded off. The icon will remain selected so that you can also close and round-off other paths. A right-click returns you to the Select/Move path point mode as usual.

3.3.9 Convert path <-> Bézier curve

If you have drawn a path and perhaps decide subsequently to "bend" individual straight lines of this path, you have to convert the lines into Bézier curves in order to do this. The same thing applies the other way round as well, of course. Click first on the relevant icon, then on the end of the line or Bézier curve. When straight lines are converted to Bézier curves the new curves will be rounded off immediately. In order to convert a path made up only of straight lines into Bézier curves it is best to start from the last point; then the curves will be rounded off in such a way that no creases arise betwen sections.

This icon too remains selected after use so that you can convert several path sections during one work process.

3.3.10 Join paths

This function permits you to join two separate paths into one. To do this, select the last point of one path and drag it to the first point of the other. You can also join two endpoints or two starting points, which will automatically reverse the direction of one of the paths.

3.3.11 Separate paths

 This function is the opposite of the previous one. If this icon is selected, every time you click on a point in a path the corresponding path will be cut in two at that point. For obvious reasons you cannot cut the start or end point out of the path individually.

3.3.12 Tangents on/off

 Tangents for Bézier curves are the connecting lines between a path point and the associated control point. The curve clings at its ends to these tangents. With this function you can make these tangents visible, which may make it easier to see the path's construction. Clicking on this icon to select it makes the tangents of a curve visible, otherwise they are invisible.

3.3.13 Cut path from object

 With this function you can remove paths completely from an object. These paths then become separate, individual objects. The function is the counterpart to "Join objects" in the Object mode function group. To cut a path, click first on this icon and then on a point of the path you wish to cut. After this the icon remains selected and you can cut further paths from the object. The right mouse button changes back to the Select/Move path point function.

3.3.14 Copy path

 Use this function to copy paths. First select one or more paths, then click on this icon. As with copying objects or frames, a copy of the path(s) will appear which you can then move or change in size. Just like objects you can also make multiple copies of paths, using the corresponding settings of the "Copy options" dialog in the Options menu. However virtual copies are not possible – whatever the setting the copies in the Vector graphic module will always be physical ones.

3.3.15 Fill pattern visible/invisible

To make work faster and provide a better overview while working in this function group, paths will be displayed normally without their fill patterns. With this icon you can switch on the filling in order to get a better idea of the final appearance of the object. With the icon active the paths will appear filled with the selected fill pattern, otherwise they will remain empty.

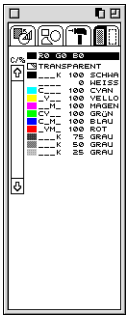
3.3.16 UNDO

With this "life preserver" you can restore the previous condition of the vector path. A repeat click on the icon allows you to switch between this and the current condition.

3.3.17 Delete path

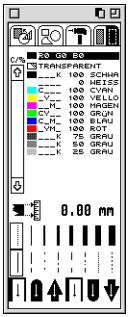
This function permits you to delete several path points and also complete paths. To do this you first have to select these path points. A click on the waste basket will then delete them after a safety alert. If you want to delete the complete path or even all paths of the current object, you can select the corresponding path points while holding down the [Control] or [Alternate] key and right-clicking (see the Select/Move path point function).

3.4 Colour/Fill pattern function group



In this function group you can select the colour and pattern with which the objects are to be filled. Operation is exactly the same as that in corresponding function groups of other modules that use this colour name list, for instance the Raster area module and the Lines module.

3.5 Border function group



This function group allows you to define all properties of the object border. Operation is exactly the same as that in corresponding function groups of the Raster area module .

4 Speed~Line

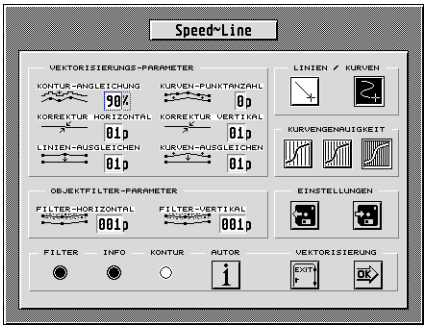
Speed~Line is the vectorization module in Calamus for Black&White graphics.

4.1 Vectorization by Speed~Line:

There are several possibilities for vectorizing pixel graphics in Speed~Line:

1. Select a pixel graphic to be vectorized. In this case the pixel graphic will be vectorized at 1:1 scale. For this the size of the vector frame does not have to be brought to optimum screen size.
2. Select several pixel graphic frames. These will then be processed in turn.
3. Draw up a vector graphic frame over the portion of the pixel graphic that is to be vectorized. Everything that is within this frame will then be processed in the current resolution (but not smaller than 1:1).
4. The third mode described can be performed also with several vector graphic frames simultaneously. These will then be processed in turn.
5. If you select a vector graphic frame that already contains a graphic, you have the option of inserting the new graphic in it.

4.2 Speed~Line parameters



Smoothe contour

This function lets you set how closely the vectorization should follow the original contours. As a rule you can leave this parameter set to 80 %. If too many lines are created by this, however, then the value can be reduced. If the graphics are in a rough form only (showing "staircasing" / "jaggies") then even low values can produce good results.

Curve points

This function allows you to set the precision or detail of the curve. Speed~Line is able to transform even small contour sections to Bézier curves. But sometimes it is desirable to determine from how many line-points onwards such curves should be created. If one sets this value to 2, for instance, then curves calculated from two line-points will remain as lines. The lower the number in the input field, the more Speed~Line will use curves instead of lines when auto-tracing a raster graphic.

Fix horizontal/Fix vertical

The function of these parameters can be guessed from their depiction in the Speed~Line dialog. They permit cleaning up horizontal and vertical lines by an adjustable amount. The values represent the line width, in pixels on the screen at the current magnification, that will be created when auto-tracing raster graphics.

Smoothe lines

As you can see from its depiction, this function removes superfluous line portions and so smoothes the line. The value represents the maximum distance of a line-point, in screen pixels, that should be "smoothed", i. e. deviations smaller than this will be ignored and a straight line drawn.

Smoothe curves

Speed~Line often vectorizes Bézier curves in order to reproduce curvature in pixel graphics as closely as possible. Due to this process some curves will look like straight lines. It is therefore possible to use this parameter to specify the offset distance in pixels within which an "almost straight" curve is converted back to a line segement.

Lines / Lines & Curves

In the Lines/Curves group, you must select the type of line to be used when Speed~Line traces a raster graphic. If you select the Lines button, Speed~Line will use short straight lines only as it traces a raster graphic. If you select Curves, Calamus will use smoother Bézier curves, as well as lines where appropriate, to trace the graphic; Bézier curves take longer to calculate.

Curve precision

This function allows you to set the level of precision as Speed~Line calculates curves. Of course, Curves mode must be selected in the Lines/Curves box. The level of precision increases from the left icon to the right one.

Object filter parameters

When scanning graphics, stray pixels often arise that should not be incorporated in the graphic. With the Object filter you can set the size of the unwanted objects in pixels that should be left out of the vector graphic. The filter can be activated/deactivated by a separate button.

Load/Save settings

Once you have found the correct parameters for a particular type of graphic, you can save all settings to floppy or hard disk. Naturally you can also load these parameters again.

The Speed~Line program after starting loads the file SPEEDLIN.CSL as the parameter file automatically, so that you can set the starting condition by saving your parameters in SPEEDLIN.CSL.

Info

If this button is active, then Speed~Line will display the number of lines, curves and objects created after completing the vectorization calculations.

Contour

If this button is active, the vectorized graphic will consist only of outlines, i. e. of lines and objects without any fill colour or pattern.

Author

Shows the Copyright information.

Vectorize

The Speed~Line program can be terminated at any time by clicking on the Exit icon or by pressing the [Undo] key.

A click on "OK" or the [Return] key activates the program.

After performing the calculations for vectorizing (which may take some time for complex objects), then if the above-mentioned Info button is active a small dialog shows the number of lines, curves and objects that were generated.

5 Barcode generator

Barcode generator lets you create barcodes directly in your document layout. You only have to select the required type of barcode and enter the information to be coded.

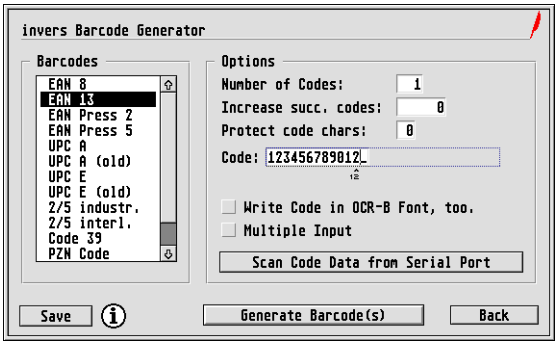
Normally you cannot "just invent" barcodes of your own, but have to stick to international coding rules that are defined and controlled by appropriate associations.

A good contact (in Germany) for all who require further information about barcodes is:

CCG – Centrale für Coorganisation GmbH
Postfach 30 02 51
D-50501 Köln (Cologne)
www.ccg.de

5.1 Operating instructions

When you load the Barcode generator from the File menu's "External modules" entry and execute it, a dialog appears that shows on the left a list of all available code families.



Select the desired type of barcode. The right side of the dialog offers some additional parameters.

Number of codes

In this editable field you specify how many codes you would like to create. The default value is 1.

Increase succ. codes

This option is useful only if you entered a value greater than 1 at "Number of codes". Then the codes generated are not identical but will be incremented successively by the value given here. Please note that not all types of barcodes can be altered at will. A code with a fixed length like the EAN8 with eight digits, for instance, can not be increased by 100,000,000, of course; in the same way, take care when using alphanumeric codes like Code39. If you encode information like "CALAMUS SL" here, say, the module will find it difficult increasing this by 100! So please ensure when using alphanumeric codes that the right part of the code contains numeric information if this is to be incremented by the module.

Example: Select Code39 and enter "FALCON 030". Set the "Number of codes" to 3 and "Increase succ. codes" to 10. You will then get "FALCON 030", "FALCON 040" and "FALCON 050" codes. Try it now with "IBM PC". You will see it does not work! If you want to create several identical codes at one go, set the "Increase" value to 0.

Protect code chars

Some types of codes are coded on a fixed schedule. For example, the EAN13 code is made up of four parts. The first two digits reflect the manufacturer country, the following five digits encode the manufacturer, the next five are the article number itself and the last digit is a control character. If you are working on a project for one manufacturer that uses different barcodes, then the first seven digits will always be the same. If you set "Protect code chars" to 7, the first seven digits of the code entered last will not be cleared when you execute the module again. Then you will only have to enter the last 6 digits for the next code.

Code

Here you enter the information to be coded. Please bear in mind that you will not be able to enter alphabetical characters for a numeric code, of course. Furthermore you will have to enter the required number of digits when using codes with defined lengths. As a reminder the Barcode generator shows the least number of digits required for each individual type of code.

Write code in OCR-B font, too

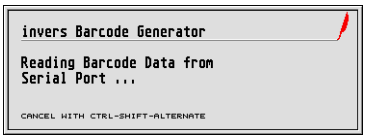
Select the button "Write code in OCR-B font, too" if you want the coded information to be generated as a readable OCR text line below the barcode as well.

Multiple input

Normally the module will be closed after a barcode has been created and you will find yourself back in the document layout. If you do not want to exit the module, please select the button "Multiple input".

Reading barcode data from serial port ...

As a special feature, the invers Barcode generator supports barcode reader tools connected to one of the serial ports of your computer. So if you have an unknown code format before you or simply want to minimize the risk of input errors, you can connect any scanner or barcode reader to one of the serial ports. Incidentally, the module cannot recognize what type of code an item of information was encoded in. For example, if you have selected the code "2/5 interleaved" and you scan EAN code data, then the information will be retained but the coding will be changed. Please do not forget to set the parameters of the serial port in the appropriate control panel of your computer, or you are hardly likely to get the desired result!



You can abandon the scanning process by pressing the key combination [Ctrl]+[Shift]+[Alt].

Generate barcode(s)

After you have define all settings to suit your wishes, please click this button or press the [Return] key. The created barcode will be placed directly in your document layout.

Warning: If a vector graphic frame was selected in your document before you created a new barcode, the content of this vector frame will be replaced by the new vectorially created barcode. This might be an advantage because the barcode may be placed directly at the desired position of your layout. However you might lose important contents of vector frames that should not have been filled with the barcode.

It is better therefore to deselect all frames, if appropriate, before you execute the Barcode generator. The first barcode will be generated then in a new vector graphic frame at the document position X=1.0 cm, Y=1.0 cm. (Further automatically generated barcode vector frames will be placed 4 mm to the right and to the bottom in each case.)

5.2 Barcodes

Barcodes can be found in all areas of daily life today. You can find them everywhere: In shops and supermarkets, on pharmaceutical packages or on the box of your new VCR. Basically barcodes can be used anywhere to check the product flow using machines or computers, such as in production processes, in storage and in the retail trade for instance. The wide spectrum of possible uses has created many different barcoding schemes that differ in their information density and character-sets. From about 200 existing types of barcodes we implemented the most frequently used ones in this module. If your special code should be missing, we might be able to extend our module to include it.

The following is a short description of all available barcode schemes with their uses and special features. Please make sure you add sufficient white space to the left and right of your barcodes in the layout, and also when increasing successive codes with variable lengths you do not exceed 30 digits.

5.2.1 EAN codes

The EAN code (EAN means "European Article Numbering") is a further development of the American UPC code and was introduced on July 1st, 1977, in Germany. The EAN system covers durable and consumer goods in the wholesale and retail trade. More than 10,000 companies from trade and industry have joined this system in Germany alone. One differentiates between 13-digit and 8-digit codes. The EAN 13 code can be extended with a 2- or 5-digit additional information (add-on). Common to all EAN codes is a fixed number of digits, a numeric character-set (the numerals 0 to 9 only) and a check number. The input of the check number is optional, but recommended. If you enter the code without a check number, it will be generated and added by the module. To avoid input errors, we recommend you always enter the check number, when available. Thus the module can check if your input was correct. Due to its high information density the EAN code is not suitable for all printing methods. In practice this means that if you want to print on an output device with low resolution (like old laser and inkjet printers), you should ensure that you do not fall below an empirically derived minimum size so that the readablility of the codes is retained.

EAN 8

The EAN 8 code, which has been developed for small-sized articles, is a shortened version of the EAN 13 and contains seven digits for code information data and a check number, so eight digits in total.

EAN 13

The most frequently used EAN code has 13 digits in total. The first two places from the left carry the country prefix. Germany uses the prefix codes 40 to 43. The following five digits define the barcode owner, in most cases a manufacturer or merchant. The individual article number is coded in the next five digits. The final digit is the check number.

EAN 13 Press 2

This code is used for newspapers and magazines. It is an EAN 13 code with two additional digits that contain the relevant issue number. It aids press wholesalers to calculate retailer's discounts. Please note that that the check number has to be the 13th digit here too.

EAN 13 Press 5

The EAN 13 Press 5 code is used to mark books. It allows the publisher to control returned copies. Therefore the content of the additional 5 digits can be defined very freely by each publisher. Please note that here too the check number has to be the 13th digit.

5.2.2 UPC codes

The UPC ("Universal Product Code") is the predecessor of the EAN. It was introduced on April 3rd, 1973, and is used in the USA and Canada exclusively. Just like the EAN code, the UPC has a fixed number of digits, a numeric character-set (the numerals 0 to 9 only) and a check number. The input of the check number is optional, but recommended. If you

enter the code without a check number, it will be generated and added by the module. To avoid input errors, we recommend you always enter the check number, when available. Thus the module can check if your input was correct. Due to its high information density the UPC is not suitable for all printing methods. In practice this means that if you want to print on an output device with low resolution (like old laser and inkjet printers), you should ensure that you do not fall below an empirically derived minimum size so that the readablility of the codes is retained.

UPC A

The UPC Version A is the standard version and can be compared with the EAN 13 code but is made up of 12 digits only. It is mainly used in everyday durable and consumer product areas, in a wide range of pharmaceutical packages and sanitary articles. The first digit is the system sign and is coded as follows:

0: Goods for everyday use and consumption

2: Domestic labelled goods, e. g. with variable weights

3: Pharmaceutical and sanitary articles (with variable internal code structures)

5: Coupons (vouchers for price reductions)

The following five digits describe the code owner who is encoded in a producer number. The next five places take the individual article number of the producer or dealer; the last digit is the check number. A barcode scanner that can decode an EAN 13 will be able to read an UPC A, too, because it is a subset of the EAN code.

UPC E

UPC E is an eight digit short version of the UPC A code for articles in small packages. With a method of null suppression, certain number series of 12-digit numbers can be represented in a shortened form of 8 digits as well. When decoding, unlike with EAN the suppressed null digits are filled in again. Therefore you will not find short numbers here as in EAN but only short line-symbols, meaning that all UPC numbers have 12 digits.

5.2.3 Code 2/5

Of the code family 2/5 (read "two from five"), both of the most important representatives are implemented. The 2/5 code is a numeric code with variable length. Thus you can only code numerals from 0 to 9.

Code 2/5 Industrial

The 2/5 Industrial is the oldest code of the 2/5 family. It was developed back in 1968 and is in use e. g. in stores, on flight tickets or on photo processing envelopes. It only provides a very small information density.

Code 2/5 Interleaved

The best known and most used barcode from the 2/5 family. It is very often used in industry and goods distribution areas and contains a much higher information density than the 2/5 Industrial. As the numbers here are coded in pairs, numbers with an odd number of digits can be coded only by adding a leading zero. This is done by the Barcode module automatically.

5.2.4 Codabar

The Codabar, which is sometimes called Code 2/7, has been used since 1972 mainly by libraries and medical users. In 1977 the Codabar became the standard code for blood banks. It has a variable length and a character-set built of the numerals "0" to "9" and the special characters "-", "$", ":", "/", "." and "+". Furthermore this code has to have explicit start and stop characters added to it. Valid start and stop characters are the letters "A", "B", "C" and "D". Codabar users may in some circumstances define in their application standards special start/stop combinations to classify different information. For example, the "American Blood Commission" has made an agreement about the combinations of Codabar symbols which means that if a Codabar ends with the stop mark "D", another Codabar with the start mark "D" will be expected in the following 19 mm. If this second symbol is recognized, both information items will be combined into one, with the two "D" characters suppressed.

5.2.5 Code 39

Until 1975 barcodes could only offer the ten numerals plus some special characters. The Code 39, often called 3/9 as well, for the first time offered a larger character-set. To the numerals "0" to "9" are added by the capital letters from "A" to "Z" and the special characters "-", ".", "$", "/", "+", "%" plus the space character. The asterisk "*" is always used as start and stop sign. Its input is optional and can be added by the Barcode module automatically. It is recommended that very long codes are split into two or even more shorter codes to enhance their readability. If the first character in a barcode field is a space character, the barcode decoder takes the new information and appends it in its buffer to the codes decoded before (eliminating the space). Often the special characters of this code define special functions or escape codings. So this code is of interest to everyone who wants to handle clear text information in barcodes.

1 ASCII import/export

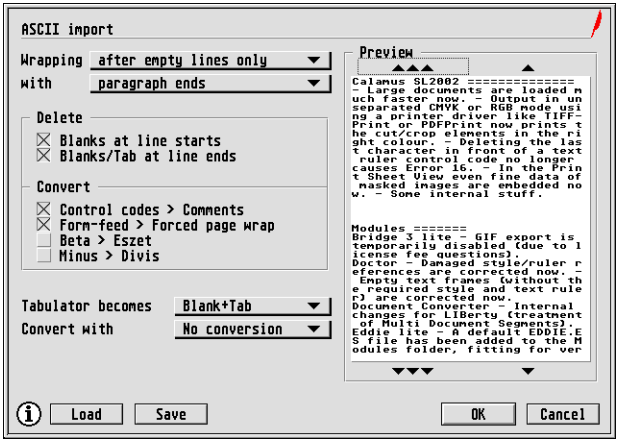
The ASCII import/export driver (abbreviated to ASCIImEx) is a very fast and extremely powerful text import driver. With it you can load any file into a Calamus Text frame.

The ASCIImEx driver is loaded and used like any other import/export driver, i. e. you can only use it when a text frame is selected.

During both import and export, ASCIImEx makes a parameters dialog available in which you can make a large number of settings.

1.1 ASCII import

First of all select the text that is to be imported in the file selector. After this the following dialog appears:



On the right of the dialog you will see a large preview field, which will display the text according to the parameters set in the left half. With the arrow buttons at the top and bottom of the preview field you can scroll the preview contents back and forth line by line (single arrows) or page by page (triple arrows).

The ASCII import dialog offers the following selectable parameters:

Wrapping

Here you can specify how body copy should be formatted after importing. You can choose between the following options:

- *as comment control code*
  Line wrapping will not be executed, but only "marked" as a control code (recognizable as a red "[K]" in the Preview at the right of the dialog). With this you achieve text importation without any line wrapping.
- *after each line*
  Every line that ends with a line-end character in the source text will also have one in the Calamus Text frame. Which one that is can be set in the next parameter. With this setting you will almost always achieve the same line wrap positions as in the source file, which can be useful with data import, for instance.
- *after empty lines only*
  A check will be made during import whether the source text contained any empty lines (i. e. two line-end characters directly following each other). If this was the case, then each is replaced in the Calamus Text frame by a line-end character. Which one that is can be set in the next parameter. With this setting, paragraphs will be imported without line-wrapping markers, which is very useful for setting text for books etc., for instance.

with

This parameter determines how the wrapping set above ("after each line" or "after empty lines only") is to be formatted. You can choose between the following line ends:

- hard line ends
- paragraph ends
- variable paragraph ends

Delete

It may be desirable to delete certain characters directly during import. The following options are offered for selection:

- Blanks at line start
- Blanks/Tab at line end

Convert

It may be desirable to convert certain characters directly during import. The following options are offered for selection:

- Control codes -> Comments
- Form-feed -> Forced page wrap
- Beta -> Eszet
- Minus -> Divis

Tabulator becomes

Tabulator characters are used in very different ways in various programs. Therefore there is also an option to convert a Tab character:

- *[HT] comment*
  The Tab will not be used but "marked" as a comment control code (recognizable as a red "[K]" in the Preview at the right of the dialog).
- *Tabulator*
  Tabulator characters are replaced by themselves, which means that Tabs remain unaltered.
- *Blank+Tab*
  As Calamus, unlike many other programs, uses so-called "sticky" Tabs, it is usually recommended to insert a space before the Tab character for source texts originating from other programs, so that it becomes a ranged-left Tab in the Calamus text frame.

Convert with

ASCII is a standardized format for the exchange of text. However, only the first 128 characters of the total of 256 possible characters are standardized. The second half of the ASCII characters ("upper ASCII") can vary from country to country and computer to computer. (Actually the latter also applies to most control-code "characters" below ASCII 32).

So that you do not see incorrect umlauts or even strange "special" characters in Calamus running on a Windows computer after importing a text that was exported from, say, SimpleText on an Apple computer, there is a very powerful character converter built in that works with editable character transformation tables. Many different ones are included in the ASCII.TAB folder. You can alter or supplement these tables, or create new ones. How this works is described in detail in the "ASCII tables" section below.

So if you assume that the text to be imported contains umlauts or other accented characters that do not correspond to the Calamus character assignment, you can select one of several converters in this popup. If you don't want to do this, or if ASCIImEx did not find its ASCII tables when launched, then the popup menu offers only the entry "No conversion".

With the "I" button you can call up the Info dialog of the driver, in which you will find the current version number and information about the authors.

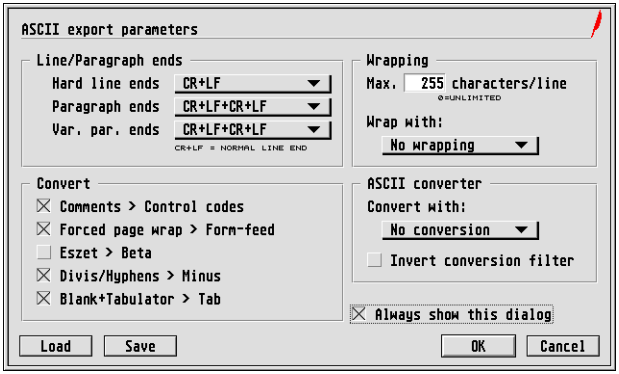
Naturally you can save the settings and load them again, so that you do not have to adjust them each time. That is what the two buttons "Save" and "Load" are for. ASCIImEx on launching always looks for a file named ASCIIMEX.SET in its start path, i. e. normally in the DRIVERS folder. Therefore you should save your most frequently used settings under this name and path.

If you want to save sets for less frequently required applications, just use a slightly different name, e. g. ASC_Mac.SET for special Apple settings etc.

With the "OK" button the text will be taken over into the Text frame, exactly as you see it in the Preview. The "Cancel" button breaks off the complete import function.

1.2 ASCII export

If you have chosen ASCII export, then normally the following dialog appears:



If you should not see this dialog during export, hold down the [Control] key when calling the driver in the object selector. After that you should check whether the "Always show this dialog" checkbox switch was perhaps in its deactivated state.

The ASCII export parameters dialog offers the following selectable parameters:

Line/Paragraph ends

Calamus can handle various line-end and paragraph-end markings. Therefore you can, and should, specify here how these line/para end-markings should be treated during export. For each of the available types you can specify which control code combination of CR (Carriage Return) and LF (Line Feed) is to be used.

- Hard line ends
- Paragraph ends
- Var. par. ends

Convert

It may be desirable to convert some characters directly during export. The following options are available, which so-to-speak reverse the various conversion parameters available for importing:

- Comments -> Control codes
- Forced page wrap -> Form-feed
- Eszet -> Beta

- Divis/Hyphens -> Minus
- Blank+Tabulator -> Tab

Wrapping

Here you can specify whether text lines should have a maximum length during export or not (value "0"). Not every program can handle text with infinitely long lines, so that you can insert hard line-breaks into text lines here. Note that this does not take into account word boundaries or hyphenation points!

A line-break in ASCII formats always consists of the control characters CR (Carriage Return) or LF (Line Feed) or a combination of both. In the popup you can choose which control characters are to be used.

ASCII converter

Just as for ASCII import you can also use the flexible ASCII converters during ASCII export. Select the desired converter from the popup menu, or select the "No conversion" item if you do not want any ASCII characters to be converted by a converter table.

If you have a well-functioning import converter table (e. g. "Apple > Windows"), but the corresponding transformation table for the reverse direction has not been created yet, you can overcome this by activating the "Invert conversion filter" checkbox. This swaps over all conversion parameters of the selected table.

You can switch the ASCII export dialog to "invisible", which is sensible if you always want to export with the same parameters. To do this, deactivate the "Always show this dialog" checkbox.

Naturally here too you can save the settings and load them again, so that you do not have to adjust them each time. That is what the two buttons "Save" and "Load" are for. ASCIImEx on launching always looks for a file named ASCIIMEX.SET in its start path, i. e. normally in the DRIVERS folder. Therefore you should save your most frequently used settings under this name and path.

If you want to save sets for less frequently required applications, just use a slightly different name, e. g. ASC_Mac.SET for special Apple settings etc.

With the "OK" button the text will be exported from the selected Text frame. You still have to assign a sensible filename in the file selector that appears. The suggested file extension is "TXT".

The "Cancel" button breaks off the complete export function.

1.3 ASCII tables

What are these ASCII tables all about?

As may be guessed from its name, the folder ASCII.TAB contains a variety of ASCII tables for the converter part of the ASCIImEx (import/export) driver. These ASCII tables must carry the file extender *.ATT (stands for ASCII Transformation Table) combined with any desired filename.

The thing that matters is their content, and as these files are constructed as pure ASCII they are easily read, and can be opened and edited with any ASCII editor – even with the ASCIImEx driver.

Please take a closer look at the existing drivers. They are all constructed in the same simple manner and you can alter them more or less freely to suit your requirements. Just go along with James Dean ("because they do not know what they are doing . . .).

Here is a very simple example of such an ATT-file, which does no more than convert all capital A's of a file during import to capital B's.

```
-----------------------------------------------------
CALAMUS ATT             # ATT = ASCII Transformation Table
DISPLAYNAME=A -> B      # maxlen = 15
VALUEFORMAT=1           # 0 = hex, 1 = dec

# comment lines start with '#',
# empty lines are ignored.
# 1st value = source
# 2nd value = target
065=066                 # A becomes B
-----------------------------------------------------
```

If you cut the text between the two horizontal lines and save it to a file named A_TO_B.ATT in the <Calamus>\DRIVERS\ASCII.TAB folder, you will have this converter available immediately when you next launch Calamus, and can convert all "A" characters to "B" – and who hasn't always wanted to do that . . .? ;-)

The file must always start with a so-called "Header" (CALAMUS ATT). If these 13 characters are missing at the start then the file will be ignored by the ASCIImEx driver.

This is followed by a line containing a "magic word", "DISPLAYNAME=", with which you can assign any desired name to this ATT table. You could also name this converter "John", but you will certainly be able to find a more sensible and meaningful name.

This is followed by the magic word "VALUEFORMAT=". If you put a "1" after this then the following values will be interpreted as "decimal values", whereas if you put a "0" the ASCIImEx driver expects so-called "Hexadecimal values" for the character conversions.

Between and after these lines you can see some comments, which always start with a "#" character. To look at it another way: As soon as a "#" appears in a line, the rest of the line will be ignored.

After this comes the last, and in this example only, converter instruction: "065=066". As the VALUEFORMAT is set to 1 (decimal), this means that all characters with the decimal ASCII value 065 (A) are to be converted, namely to a character with the decimal ASCII value 066 (B).

You are likely to know some "famous" ASCII values that you can input in various programs (and of course Calamus) by holding down the [Alternate] key and quickly pressing a three-number sequence on the numeric block at the right of your keyboard. The French ê (e circumflex) for instance in Atari-ASCII has a decimal value of 136. The Atari-ß (sz) takes the value 158, the similar greek Beta character (ß) is at 225, etc.

If after this long explanation for a small converter :-) you take another look at the other files of this type, you will quickly discover how you can define your own ASCII-converter tables to suit your own purposes.

Important: If you create your own tables for very special cases, or even just for everyday use that we have not yet covered, then we would be grateful if you would send these files to us so that we can include them directly with the ASCIImEx driver. Make a note in a comment line that you have created the file and possibly where you can be contacted in order to agree improvements etc.

2 Preview drivers

There is a type of Calamus drivers that do not have to be loaded by the user, but will be loaded automatically when Calamus is launched provided they are in the path defined for drivers (the DRIVERS folder by default).

They have the extender CPI = Calamus Preview Import.

The previews are shown in the "Preview" field of the Calamus file selector, but naturally only if the "Show preview" checkbox is active (crossed).

2.1 BLD preview

This preview driver shows a preview of raster images in Megapaint BLD format.

2.2 BMP preview

This preview driver shows a preview of raster images in BMP format.

2.3 CDK preview

This preview driver displays the first page of each document saved with Calamus SL (from SL2002 onwards) as large as possible in the Preview field of the Calamus file selector.

It shows also page format and number of pages on CDK files which have been saved at least with SL2006.

2.4 CFN preview

This preview driver displays the font "thumbnail" image contained in every CFN font in the Preview field of the Calamus file selector.

2.5 CRD preview

The Calamus raster document format is supported by this preview driver.

2.6 CRG preview

Calamus raster images are also shown by a preview driver.

2.7 CTD preview

Calamus text documents are previewed by this preview driver.

2.8 GIF preview

This GIF Preview displays all the common GIF images (87a, 89a, interlaced) in the Preview field of the Calamus file selector.

2.9 IMG preview

The GEM Image format (IMG) is shown by this preview driver.

2.10 JPEG preview

The well-known JPEG format is supported by this driver since SL2006.

2.11 PICT preview

This is a Mac-system preview that only works under MagiCMac in Calamus SL, as it uses the system preview of the MacOS. The PICT format is used by many applications (e.g. Photoshop) under MacOS to embed a small, low-resolution "thumbnail" preview in images.

In order to be able and use the PICT preview with MacOS X, a MacOS X library file named CSLMacPreview.lib has to be placed in the MagiCMac X folder. Besides, the preview driver Pict_OSX.cpi has to be placed in the Calamus drivers folder.

2.12 PS Type 1 preview

This preview driver uses a system font to display the font name of a PostScript Type 1 font.

2.13 T602 preview

The T602 text format is mainly used in Middle and Eastern Europe. It is supported by this preview driver.

2.14 TIFF preview

This TIFF Preview displays all common TIFF images, that are also recognized by the optional extended TIFF import driver TIFFI, in the Preview field of the Calamus file selector.

2.15 Text preview

This Text preview displays a portion at the start of all files with the following extender: TXT, DOC, DAT, ASC, SET, INF, CSV, LOG, UPL, LST in the Preview field of the Calamus file selector. No further checks are made whether these are really ASCII text formats, so that DOC files from MS Word or 1st Word Plus will appear "a little peculiar".

2.16 TrueType preview

This preview driver uses a system font to display the font name of a TrueType font.

1 MacPrint

With MacPrint you can use virtually any MacOS printer driver for Calamus SL (from SL99 on) as well. This makes MacPrint the fastest, easiest and most flexible way to print from Calamus on MacOS-compatible computers.

Further properties:

- The "Set paper format" and "Set printing" dialogs of the MacOS drivers can be called directly from within Calamus.
- Full SoftRipping support also on PostScript printers.
- Free choice of resolution with editable resolution list.
- Settings are stored separately for each available driver in the MacOS selector and selected automatically when changed in the selector.
- Choice of monochrome, greyscale, RGB colour or CMYK colour output.
- Accelerated colour mode for test printing.

This is how MacPrint works

To obtain maximum precision and control at all times, Calamus normally works with its own printer driver interface, which produces identical results with the same drivers on all platforms (Mac, PC, Atari). The basis is always Calamus's own SoftRipping system, which processes the document data and delivers it to the printer driver.

Under MagiCMac it is of course sensible to offer the use of the printer drivers already installed for the MacOS in addition to the Calamus-specific ones. And this is exactly the task of MacPrint for Calamus SL.

For this the processed pixel data of the SoftRipping engine in Calamus SL is converted in such a way that the printer driver in the MacOS can accept it and deliver it to the connected printer. This uses graphics functions in the MacOS that are contained there in the "QuickDraw" library.

No further interpretation or changes of the document objects takes place. Everything is output exactly the way you created it in the document and saw on the screen, down to the last pixel – even with PostScript printers.

1.1 Installing MacPrint

MacPrint is loaded in exactly the same way as other printer drivers. The driver looks for the file MACPRINT.SET containing its settings in the folder from which it was loaded. (Normally this will be the PRINTERS folder in your CALAMUS directory.)

After this it makes contact immediately with the currently selected printer driver in the MacOS. If the MacPrint Setup file already contains settings for this MacOS driver, then they will be restored automatically.

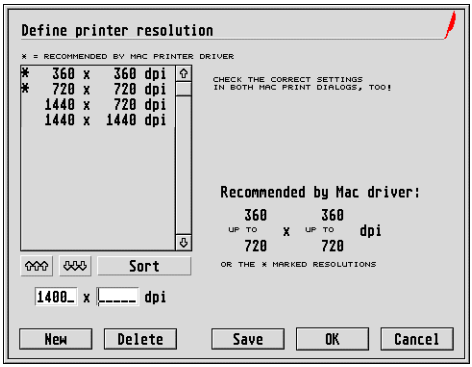
1.2 MacPrint in the Print dialog

Printer name

The name of the MacOS printer driver with the addition "(MacPrint)" will be displayed here. The name of the printer actually connected is not accessible "externally" with some drivers (including the "LaserWriter" driver among others) and therefore can not be displayed in such cases.

Resolution

This button calls up the MacPrint resolution dialog. In this dialog you can save all current driver settings as well.



Colour depth

This setting determines the data format that Calamus SL should create for output. For correct colour printing, in particular, the settings of the MacOS driver are relevant as well.

Format

With this button you call up directly the "Paper format" dialog of the current MacOS printer driver. Here you can choose not just the paper formats available for this printer, but with many printer drivers you can also perform certain driver-specific preliminary settings. In the Calamus dialog the button is always labelled with the currently selected format.

Warning: The settings changed here are saved in the MacPrint Setup file as a rule (very few MacOS drivers use their own Preferences file for this). To do this you have to use "Save" in MacPrint's Resolution or Info dialog.

Feed ("Set printing")

Here you will find not only the selection for paper feed, but the complete "Print" dialog of the MacOS driver. That is why the button is labelled "Set printing".

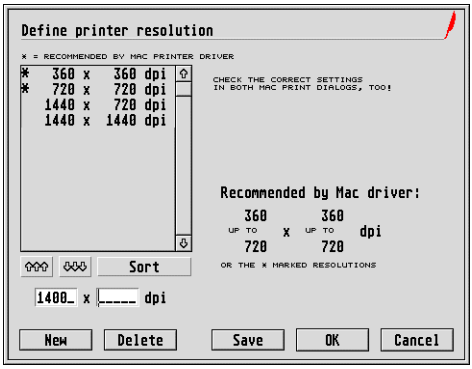
Port

The port will always be shown as "Other". A click on this button also calls the "Set printing" dialog of the MacOS.

Information

Calls the MacPrint Info dialog which shows you its version number and offers you the option of saving the settings.

1.3 MacPrint resolution



This dialog is extremely important for outputting from Calamus SL, as its SoftRipping engine basically produces pixel data at a given resolution, though many MacOS drivers do not offer any usable information about the resolutions actually available. That is why you can choose here freely the resolution in which Calamus is to create its output data. The dialog shows you first of all the resolutions that the MacOS driver recommends. For this it can specify one or more individual resolutions, which are marked with an asterisk ("*") in the resolution list. In addition, various drivers also specify a range of resolutions that are particularly recommended.

Both values though are not binding (and occasionally even incorrect): You can use any other desired resolution notwithstanding. For this, use "New" to create an additional entry in the list, and alter the resolution to suit your purposes. With the two move buttons (arrows up / down) you can rearrange the list entries manually; "Sort" arranges the list in ascending order.

"Delete" removes the selected entry. But please note that the asterisked "recommended resolutions" will be restored the next time the driver is called, provided that the resolutions are still supported.

Incidentally, the resolution list – like all other settings – is managed separately for each individual MacOS driver. If another MacOS driver is chosen in the selector, MacPrint will switch over automatically to the corresponding settings.

"Save" therefore does not just save the current resolution list, but the complete settings of MacPrint for all MacOS drivers used previously.

1.4 MacPrint colour depth

As for the resolution, you can choose the format in which MacPrint should pass the final pixel data to the MacOS driver here. All colour depths are always selectable, independent of the printer driver selected on the MacOS side. The amount of data given below for various types of output refers to A4 format paper at 300 dpi in each case. If you double the area (A3) you double the quantity of data, for doubling the resolution the data quantity is quadrupled.

Black & white (screened)

Calamus performs screening (or "rasterizing") itself or uses the internal dithering.

(Quantity of data: around 1 MB)

Greyscale (not screened)

MacPrint passes on unrasterized data, which are then rasterized either by the MacOS printer driver (setting "Black & white") or (for instance with PostScript printers) even by the printer itself.

(Quantity of data: around 8 MB)

RGB TrueColor (16 mill. colours)

MacPrint passes on unrasterized data as with "Greyscale", but with 16 million possible colour shades in RGB colour space (printer drivers under MacOS up to at least OS 8.6 only support RGB). As printers generally work with CMYK colours, the MacOS printer driver has to perform the required colour separation itself.

(Quantity of data: around 32 MB)

CMYK print colours, screened

Calamus separates and rasterizes the colour data itself in CMYK colour space. Thanks to this, pre-separated images and document colours can be reproduced on most printers, despite internal RGB restrictions, in the same way as if using imagesetting or offset printing. In particular, various rasterizing and dithering processes will be reproduced in the way you are used to in Calamus.

For this you can not use the rasterizing and dithering processes of the various MacOS drivers (only full area raster points will be passed, no intermediate tones).

(Quantity of data: around 8 MB)

216 colours (dithered)

This mode is suited particularly for test printing on slower computers or with tight memory. Instead of passing the full 16 million colour shades to the MacOS driver, Calamus reduces the quantity of data to a quarter and dithers the output with 216 colours (this corresponds to the screen display in 256-colour mode).

The result in most cases is identical to full-colour output, and suffices above all for test printing. Depending on the MacOS driver, though, there may be small deviations – particularly at the extremities of blends (graduated tints).

(Quantity of data: around 8 MB)

As many MacOS drivers have to buffer the complete page, colour printing in particular requires a corresponding amount of space on the hard disk – even if only temporarily. Usually such spool files will be created on the Start volume.

Warning: With some MacOS printer drivers (such as the LaserWriter driver for instance) its setting dialog may have an additional setting for colour depth. As a result the "lowest" colour depth will be printed each time ("Screened" is smaller than " Not screened", "Grey" is smaller than "Colour").

1.5 MacPrint: Set printing

If you click on "Set printing" in the Calamus Print dialog, the printing dialog of the current MacOS driver will open. Here you can make all the desired adjustments and then click on "Print" to return to the Calamus dialog (the actual printout will only be started of course from the Calamus dialog).

As with other Mac applications, the saving of settings of the MacPrint dialog is dependent on the specific printer driver in each case:

Settings are retained

This is the most common case. The set parameters are retained for the next call of the dialog and can be saved at any time with the MacPrint Setup.

Settings are not retained

Some drivers do not save certain information at all: The settings have to be made anew each time.

LaserWriter

The settings of the Print dialog of the LaserWriter driver are handled somewhat differently:

All settings are only valid up to the next call of the LaserWriter Print dialog. When you call it next, the previous values will appear again.

Only if you select "Save" before quitting the LaserWriter dialog will the new values also appear when it is next called up. But even in that case the settings will be saved permanently only with the MacPrint Setup.

This difference can be very useful if you occasionally wish to print "out of turn" with different settings; for instance, a few pages with manual feed. At the next call of the LaserWriter dialog the driver will return to automatic feed from the tray once more.

1.6 MacPrint in practice

1.6.1 MacPrint in practice: Memory

MacPrint itself requires no additional memory; it makes use of the memory management of Calamus SL.

Things look different on the MacOS side: In order to be able to process the data passed on by MacPrint, many MacOS drivers require additional memory. While normally it is sufficient for MagiCMac to leave 2 to 5 Megabyte free for the MacOS, some individual MacOS printer driver may well require more. So if "Out of memory" messages appear occasionally during printing, you should increase the memory allocation for the MacOS.

Many MacOS printer drivers require not just space in memory: Often the page information is saved temporarily to the hard disk (if background printing is active this will always be the case). As the quantity of data can encompasss a considerable amount, the required amount of space must be left free on the boot volume of the MacOS; with background printing switched on, possibly even enough for several pages.

Under MacOS a printer driver can choose where it obtains its buffer memory from. Most MacOS printer drivers (such as the Epson driver, for instance) do this cleanly from the system. In that case it is important that MagiCMac leaves sufficient memory free for the MacOS. The OKI driver, on the other hand, attempts to obtain the memory from the relevant application – which in the case of Calamus SL is MagiCMac.

Solution:

Increase the memory allocation accordingly for every Mac program that reports this error.

In the case of MacPrint:

- In Finder, select the MagiCMac program icon.
- Call "Information" (Command(Apple key)-I).
- In the "Memory" dialog (with newer MacOS select via the popup) increase the previous value by several Megabytes (with the OKI driver some 5 MB extra should be required).
- Close the dialog.

Important: If Calamus reports shortage of memory when building up the page, you should make more RAM available for Calamus instead. There are several possible ways to do this:

- Remove unused modules and/or documents from memory.
- Allocate more memory to MagiCMac.
- Allocate more memory to Calamus (reduce "Min. system memory" in the System module).
- Switch on Virtual memory in Calamus (the virtual memory of the MacOS is less useful here).
- Lay-off image data with the Fine data manager to hard disk; then only the currently required images will be loaded into memory.

1.6.2 MacPrint in practice: Resolution

The current MacOS printer driver plays an important role for the selection of the most favourable output resolution.

Selection of resolution with the LaserWriter driver

If output is via the LaserWriter driver, then simply set the highest resolution there that the printer supports (usually under "Printer-specific options"). After this you will have free choice of all "suitable" resolutions in MacPrint.

The printing speed depends on the resolutions set in MacPrint above all, because Calamus will build up the page and pass it to the printer at this resolution.

The conversion to the actual print resolution will only occur in the printer itself and in most cases will require little additional time.

Selection of resolution with other ("QuickDraw") drivers

With other printers (i. e. those that are controlled via QuickDraw) the resolution set in the MacOS driver affects the printing speed considerably. With these printers the page will be converted to the final print resolution already in the computer. The quantity of data that has to be transferred to the computer is increased correspondingly.

Here it will pay to be careful about choosing the higher resolutions of the MacOS driver. A higher resolution than set in MacPrint is only sensible if, say, one requires finer reproduction of colour nuances while detailed drawing of fonts etc. is less important.

The MacPrint resolution nevertheless determines how large a quantity of data is passed internally to the MacOS printer driver. As this usually lays off the data to hard disk, it too should be chosen with care.

But the rules described in the following section apply to this category of printers as well.

"Suitable" resolutions

There is a very simple rule for the combination of print resolution (setting in the MacOS driver) and MacPrint resolution:

The MacPrint resolution should always be an integer fraction of the print resolution – so either the same, one half, a third, a quarter etc.

Above all, if the rasterizing is performed by Calamus already (MacPrint colour depths "Black & white", "CMYK" and to a lesser extent "216 colours" as well), ugly Moiré effects may arise otherwise.

Examples of sensible resolution combinations:

Print resolution: 1,200 dpi

MacPrint resolutions: 1,200, 600, 400, 300, 240, 200, 150, 120, 100 dpi

Print resolution: 720 dpi

MacPrint resolutions: 720, 360, 240, 180, 144, 120 dpi

Setting a higher resolution in MacPrint than in the MacOS driver only wastes time and memory. It may also lead to Moiré effects.

1.6.3 MacPrint in practice: Colour depth

With black and white printers you only have one choice:

With the "Black & white" setting Calamus performs the rasterizing itself and naturally also makes use of frame-specific raster settings as well as various raster types (point raster / dithering).

For "Greyscale" Calamus leaves this decision to the MacOS printer driver. The MacOS driver can then output the page unscreened as well, of course, provided the printing process permits this.

The LaserWriter driver on its part even offers the same choice once again whether it should perform the rasterizing itself (not normally recommended) or whether the connected PostScript printer should look after this.

Besides the two monochrome modes, colour printers offer three further modes: "RGB TrueColor" makes uses of the special colour optimization and rasterization of colour printers and in general offers the smoothest colour reproduction. For this Calamus transfers unrasterized data.

In "CMYK" mode on the other hand Calamus itself takes over the complete colour separation and rasterizing. All separation and raster settings will be observed and transformed as required.

Although MacOS printer drivers can normally only handle RGB data, the four-colour structure is retained almost exactly (exception: As opposed to real four-colour printing,

black covers the "process colours" C, M and Y). On most printers, though, the result corresponds closely to conventional four-colour printing.

Finally, the "216 colour" mode is, so to say, "RGB light": It too works in RGB colour space, but with a clearly reduced quantity of data. With dithering Calamus nevertheless manages to display all 16 million colour shades. How well the dithered Calamus output compares with the rasterizing or dithering process of the MacOS printer driver used you should best try for yourself. In any case the quality should be more than sufficient for quick test printouts.

1.6.4 MacPrint in practice: Background printing

As a rule it is recommended to switch off background printing to obtain maximum printing speed at all times.

It is worth while only in exceptional cases when the pure data transfer to the printer takes a very long time but you nevertheless want to continue working immediately. However switching on background printing is accompanied by a number of consequences:

- The whole output process takes considerably longer. It can take several minutes before the printer even starts printing the first page.
- During MacPrint output the MacOS printer driver only collects the data for all pages to be printed. Transmission to the printer therefore only starts at the earliest when Calamus has already finished its output.
- As the data for all pages is always stored on the hard disk, the internal spool files of the MacOS driver can assume enormous proportions: For four A4 pages at 720 dpi RGB (TrueColor) for instance, over 800 Megabytes! (Direct printing would occupy at most 200 Megabytes four times in succession.)
- So that the spooler of the MacOS printer driver can operate in the background, MagiCMac has to cede CPU time to the MacOS. But for this the SpeedDoubler, if present, has to be switched off as well. Both these factors again reduce the working speed considerably.
- Possibly you may have to switch to the Finder first to make the spooler even start its output.

  In general it is only seldom sensible to activate background printing. If you should suddenly have to wait very long for the output to start, check whether perhaps background printing has been switched on.

1.6.5 MacPrint in practice: Quantity

The quantity that you can set in the MacOS driver is simply ignored by most drivers; only the quantity from the Calamus dialog will be used instead at all times.

Exception: With many "page printers" (i. e. with laser printers above all) both settings will be respected. The quantity in the Calamus dialog determines how often MacPrint passes the page to the MacOS driver; the setting in the MacOS dialog tells the printer how often it should repeat printing each of these pages.

With these printers you can best obtain maximum speed if you always order only one copy in the Calamus print dialog, and enter the actual number of copies required in the MacOS driver.

1.6.6 MacPrint in practice: Magnification and page imposition

Although most MacOS printer drivers also have a setting for varying the magnification, you should not use it (leave it at 100 %). This is because if the pages transmitted by MacPrint are scaled afterwards, then rastered areas in particular will give rise to Moiré effects. The scaling in the Calamus Print dialog, on the other hand, operates before the rasterizing process, and therefore gives completely clean results.

The same applies to options for page imposition ("sheet mounting") in MacOS printer drivers. There too the pages that have been calculated by Calamus are often re-scaled, which can result in Moiré effects (if necessary, try it out). The Imposition module for Calamus again operates before rasterizing or screening takes place and is of course Moiré-free.

1.6.7 MacPrint in practice: Fonts

When printing via MacPrint it is completely immaterial which fonts are present in the printer, in the MacOS or in the MacOS printer driver. Equally all font settings in the MacOS driver have no effect ("Add fonts", "Smoothe fonts" . . .).

In each case and without further settings you will get exactly the same font reproduction that you have seen on the monitor screen.

1.6.8 MacPrint in practice: Image options in MacOS driver

For this there is a simple rule: Switch them all off!

All options of the "Smoothe graphics", "Adapt image size" or similar kind can markedly slow down output with MacPrint and reduce the print quality. So always make sure that these options are switched off all the time. In particular the LaserWriter driver activates these settings every time the printer is changed, so take care!

1.7 MacPrint: Problems & solutions

Calamus produces print data, but the printer doesn't start.

Either the print process simply takes a long time (on slower computers or with high resolution colour printing), or background printing is active in the MacOS printer driver.

Solution: Switch off background printing.

The printout takes an unusually long time.

Here the following changes may help:

- Switch off background printing.
- Switch off image "optimization" in the MacOS printer driver.
- Reduce the quantity of data (lower resolution, lower colour depth).
- Reduce output resolution.
- Connect printer via a faster port (e. g. Ethernet).

Crashes keep occurring when printing via MacPrint.

This can be caused by several things:

- The MacOS printer driver is not working cleanly:
  Here a more generous memory allocation to the MacOS may provide a remedy. But cleanly programmed printer drivers should display a correct error message even when short of memory.
  If possible, try to use a different printer driver.
- One of your software components is not up to date:
  The items in question are above all MagiCMac or the SpeedDoubler, if installed. Reboot the computer without SpeedDoubler and try it again. We recommend MagiCMac in Version 6.0.4 or newer as well as the SpeedDoubler in Version 8.1.2 or newer. Equally the updating of the MacOS can be helpful.
- If you have activated "Right-Shift support" in MagiCMac and the error message "Error when resetting the keyboard" appears when switching back to the MacOS, then with MagiCMac versions up to 6.0.4 inclusive this could lead to problems with MacPrint. In that case switch off "Right-Shift support" or update your MagiCMac version.

2 VDIPrint

This universal printer driver requires NVDI as a system extension in the host operating system under which you launch Calamus. The correct way for installing NVDI will be found in the NVDI manual.

After the printer driver is installed, it establishes contact with NVDI and printing will be always via GDOS/VDI. Paper format, printer options and similar settings have to be made in the NVDI driver installed in the system. As a rule this is done via a suitable desk accessory or the Control Panel. Please also consult the documentation for your GDOS, NVDI or special printer driver.

If you click on the "Output devices" button at top right of the Calamus Print dialog, a selection dialog appears that permits you to change the current NVDI driver if required.

Memory for VDIPrint

In order to be able to print from Calamus via GDOS/VDI, Calamus must leave sufficient memory free for the system. If the alert "No VDI printer driver found!" appears while trying to load the printer driver, then this may be due to the fact that the memory settings in the System parameters module have been set too low. In that case, increase the set values in the System parameters module that specify how much memory Calamus should keep free for the operating system:

- Open the list of loaded modules (File menu, "External modules").
- Select the "System parameters" entry (SYSTEM.CXM module) and click on "Execute".
- Check whether the two values for "Min. system memory" (ST RAM and TT RAM) have a value of at least 1000000. Please note that some systems do not have two types of memory (for instance if continuous ST-RAM is set in MagiCMac). There only the ST-RAM exists and the value for TT-RAM is then meaningless.
- If both values are smaller, then enter the value 1000000 in one field. Calamus will then keep that many bytes of memory free for the operating system.
- Close the dialog with a click on the "OK" button and also exit the dialog of External modules.
- Save these settings by calling the "Save system settings" entry in the Options dialog.
- Exit Calamus and restart it (memory allocation only takes place during program start and cannot be altered any more once Calamus is running).

2.1 VDIPrint – What's it for?

The printer driver problem is as old as Calamus itself. Unfortunately in the early days of Atari computers there were few standards. The VDI/GDOS provided was not very powerul and had many limitations.

For this reason Calamus had its own printer driver concept developed for it. As a result a special Calamus printer driver had to be made available for every printer. That was the usual method for many applications for a long time.

Since then some very powerful VDI extensions have appeared, of which NVDI from Behne & Behne Systemsoftware has become the best known. There are many VDI printer drivers from which most of the commonly used printers can be accessed.

With MagiCMac an additional problem arose: The Mac printers could not be addressed directly by a lot of Atari software. There were also no corresponding VDI drivers that would have made output even possible. Power-Print or MacSTout offer a relative simple solution for this, though neither can control the normal Apple printers.

In the meantime an NVDI also exists for the Mac, which can make a printer installed on the Mac side available as a VDI/GDOS device.

However, we no longer recommend VDIPrint for accessing Mac printers, but the much easier to use MacPrint, which you can also find in the standard Calamus SL distribution.

2.2 VDIPrint – Operation

Calamus establishes all parameters for the margins, page dimensions, resolution etc. via the printer driver and converts it to its own format. In some circumstances this may be slightly incorrect if the VDI driver does not return exact values.

During printing Calamus now passes the built up pages or tiles as data in the standard VDI format to the printer driver, which itself prepares these for the printer. If necessary VDI will create its own spool files for temporary data storage. As a rule these will be created in the main Calamus directory, but after the printing job is completed they will be deleted again automatically.

Please note:

If you want to print on the Macintosh in the background via the Quickdraw print manager, then you have to make CPU time available for the MacOS. You can do this by activating "Cede CPU time for Mac applications" in the MagiCMac setup options. However, background printing has proved to be not worth recommending, as in most cases the printing process will be slowed down considerably.

If problems arise, please check first that the configuration of your NVDI or the corresponding VDI printer driver is correct. If necessary, check whether printing from other applications that use VDI/GDOS for output is possible.

2.3 VDIPrint – Known problems

The VDI printer driver can be used in most cases without problems. Should difficulties arise nevertheless, then perhaps you can find a description of your problem and its solution in this section.

Slow printing in colour or greyscale

Depending on the speed of the computer and the interface over which the printer is connected, printing in high resolutions in the "TrueColor" mode of the NVDI can take a very long time in some circumstances (particularly with high resolution colour inkjet printers).

Remedy:

In the NVDI control panel switch "Printer" from "Greyscale" to "Black/White" or if appropriate from "TrueColor" or "16 million colours" to "8 colours".

But have no fear: Even in this mode all colours and grey tones will be printed. The difference is only that the rasterizing for the intermediate tones is now no longer performed by NVDI and its drivers, but by Calamus itself.

For this you can employ not just the Raster generator (which is recommended primarily for all laser printers), but also make use of Calamus' own dithering process for output if you wish (particularly well suited for inkjet printers).

Simply call up the Raster generator (from within the Print dialog) and set there whether Calamus should always use its own ordered dithering ("Always use ordered dithering" active) or not.

As an additional bonus the quantity of data created by the VDI printer driver for the 8-colour mode will be reduced to such an extent that output is speeded up appreciably. Naturally you can also use the StarScreening module or the FM-Dither filter of the optional Filter module for the creation of a "Floyd-Steinberg" dither, which can also be output in 8-colour mode.

Crash when launching Calamus / Loading the driver

If other programs that use VDI too output correctly, then the error could also lie in the *.SYS drivers (see also "Nothing works"). Try first to print from other applications via various printers. If this works with all printers, then please report the error to us. Otherwise change over to the correct driver. Or obtain a VDI update.

Nothing works

Try first whether VDI printing works from other applications. If this is not the case, then the error should be looked for in the VDI installation. In such cases check that all settings have been made correctly.

If necessary install the new driver files MACPRN.SYS and PAGEPRN.SYS from the GEMSYS folder.

Important: These files only work from NVDI version 4.11 onwards!

720 dpi and higher

If printing does not work in high resolutions, then this can be due to several causes. Check first that there is sufficient free space on the hard disk. For printing an A4 page in colour at 720 dpi in TrueColor mode you require up to some 150 MB (!) on the VDI spool partition; if this has not been set (possible from NVDI 4.11 onwards) then this will be the partition from which Calamus was launched too.

If printing should not be possible despite sufficient space, check first that you have installed the current driver versions for VDI (PAGEPRN.SYS, MACPRN.SYS etc. . .).

If printing works in lower resolutions but not in the higher, then the error should be looked for normally not in the VDI printer driver for Calamus, but somewhere between this and the printer. In such cases please contact your dealer or the (N)VDI service hotline.

Wrong resolution

The Print dialog of Calamus does not show the resolution that you have set in the Control Panel for the VDI driver. You are probably working with an older version of NVDI, or you have forgotten to install the latest version of the CPX module.

Invalid VDI handle

This is a VDI error message. Unfortunately we can offer no solution either for this sporadically occurring error. It seems to be an error in VDI, which appears only rarely.

Error messages

A driver cannot be loaded without a properly installed GDOS.
No VDI/GDOS has been installed.
You cannot access VDI/GDOS right now
or
Communication with VDI/GDOS does not work.

For some reason the printer is not accessible. Check the VDI settings and the free system memory in the file CALAMUS.SET.

The printer defined in VDI/GDOS uses an unsupported format

The driver reports back a format to which Calamus can not output as yet. Please be sure to report this error to us.

Memory is full or this page size is too large

Calamus no longer has enough memory available to create a buffer required for converting data to the VDI format. If appropriate, switch on Calamus' virtual memory. Then try to load the printer driver once more.

Known problems with the PowerMacintosh

For using the VDI driver under PowerMacs you should have at least System 7.5.3 Rev. 2 installed. With older versions you get system crashes.

3 WinPrint

This universal printer driver in the Calamus WindowsPack makes available to Calamus all the printer drivers that have been installed under Windows.

The installation is very simple:

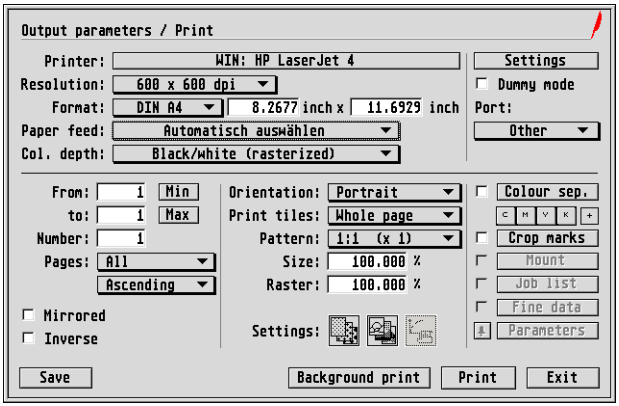
1. Make sure that the most up-to-date GDIprn.DLL file is present in the Calamus directory (in other words at the same folder level as CALAMUS.EXE).
2. Open Calamus's "Print" dialog from the File menu.
3. Click on the line containing the printer name.
4. In the file selector that appears select the printer driver named WinPrint.CDT.
5. Exit the "Print" dialog and save your Calamus setup.

After the printer driver has been installed, it establishes contact with the GDI (Graphic Devices Interface) of Windows and reads out from the Windows printer pool the parameters of the current Windows printer driver. These parameters will then be displayed also in the Calamus "Print" dialog. The printer name shows through a prefixed WIN: that it has been "obtained" by WinPrint from the Windows printer driver.

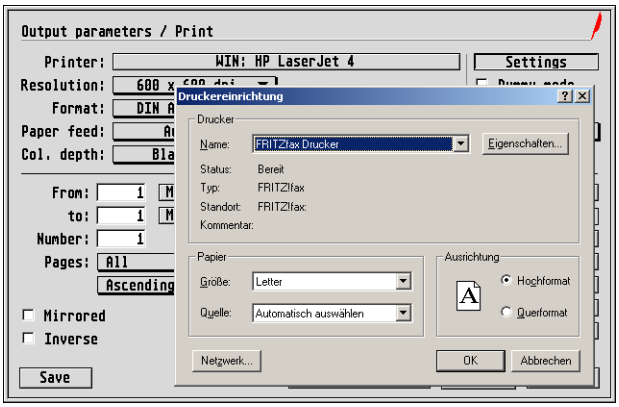
You can alter the parameters at any time in various ways:

- Under Windows call the current printer driver (Start > Settings > Printer) and alter the parameters of the current printer driver there. The changes will then be adopted by the Calamus "Print" dialog.
- Or in the Calamus "Print" dialog click on the button Settings at top right. The standard Windows "Print" dialog opens in which you can make the desired changes. When you exit the Windows "Print" dialog, the parameters will be adopted in the Calamus "Print" dialog as well.
- Or click on the popups in the Calamus "Print" dialog. WinPrint offers you the opportunity to alter the values of various parameters there directly as well.

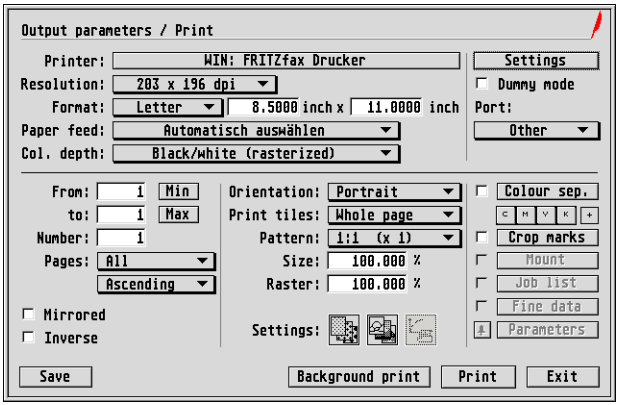
The "Print" dialog for HP4-Laserjet printer driver via WinPrint. Click on the "Settings" button:



The Windows "Print" dialog appears. In that select the desired printer driver, for instance Fritz!Fax:



After this the new printer parameters will be set in the Calamus Print dialog.



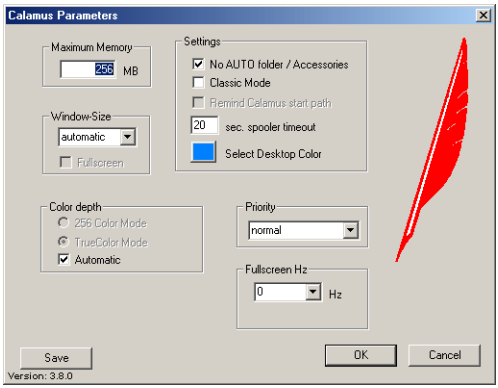
3.1 WinPrint: Tips

Calamus runs in WindowsPack under a built-in emulator. This makes it possible for Calamus to run on Windows computers by emulating a TOS operating system. Due to this Calamus is a little slower than on a TOS-compatible computer or on an Apple computer with MagiCMac. This is because the TOS processor instructions have to be byte-swapped completely each time so that they can be understood by the Windows PC processor – instruction by instruction, over and over again. This alone slows things down in comparison to an operating system where this byte-swapping of functions is not necessary. For this reason the emulator is assigned under Windows to work with a sensibly chosen (high) priority. Because – unlike other Windows applications – it doesn't really know when you are working with Calamus or when Calamus is simply "lying around".

If you now use Calamus to print out a file via WinPrint, then the following happens as a rule:

1. Calamus builds up the page in the memory of the WindowsPack emulator.
2. The print data is then sent by WinPrint to the Windows printer spooler.
3. The printer spooler then passes the received data via the GDI to the Windows printer driver.
4. The Windows printer driver prints.

During this process there are a number of places where problems can arise, which you can solve yourself. An important role is played by the "Calamus parameters" dialog here, which you can call by holding down the [Ctrl] key while launching Calamus.



Memory

If possible, do not assign more memory to Calamus than is actually present in your PC. It is possible to assign more (depending on the amount of free space on the relevant hard disk), but the WindowsPack emulator then has to swap back and forth continuously between physical RAM and the hard disk. This does not exactly speed up the process!

Timing

Calamus can tell the Windows printer spooler that it should accept a file as completely received only after xx seconds. But sometimes it may happen that the printer spooler is set to a very low timeout value, and with a very large page, which is possibly being printed from Calamus in colour, starts to print the page while Calamus is still sending data to the printer spooler. In that case set the Spooler wait time in the Calamus Parameters dialog to a higher value, say to 60 or 120 seconds.

Priority

As already described in the introduction to the WinPrint printer driver, Calamus always runs with a very high priority. When you have printed a page in Calamus, it may be advantageous to "minimise" Calamus, in other words click at top right of the window containing Calamus on the minimiser icon so that Calamus only appears in the Windows taskbar. Then the Calamus "process" will be set to the lowest priority under Windows – provided that you have set the "Save CPU time when minimized" switch in the Calamus Parameters dialog. In that case the Windows printer spooler can pass the data it has received at full speed to the Windows printer driver, without being slowed down continuously by Calamus.

3.2 WinPrint: Error recovery

Sometimes we are informed by Calamus users that WinPrint does not "understand" the parameters of native Windows printer drivers correctly. The main reason is that many Windows printer driver developers do not keep strictly to the documentation of the Windows GDI interface.

Although you might be able and print from other Windows applications using the same printer driver, this must not be true for Calamus. WinPrint tries to convert the printer driver informations correctly into the Calamus print system. But if e.g. an EPSON inkjet printer driver offers 720 dpi maximum print resolution, WinPrint can offer just 720 dpi – even if the product advertisements on your printer package tell you about higher resolutions.

You can help yourself and us to fix problems with Windows printer drivers. If you cannot print with your current printer driver from Calamus, then follow the steps described below:

1. Each time you print with WinPrint, it writes a log file. You will find this ASCII readable file under C:\GDIPRN.LOG on your hard drive.
2. Please send this log file via e-mail to our WinPrint developer and send a Cc: copy to the Calamus support. Use the following e-mail addresses:
   winprint@calamus.net
   support@calamus.net
3. Please give us in your e-mail detailed informations about your computer, your Calamus version and the according printer.