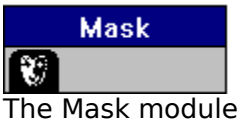
Contents

For Help on Help, Press F1

Mask Module



The Mask module is a powerful graphics tool that allows you to create advanced masking effects. Masking is the process of cropping selected areas of a graphic for special effects. The process of masking is usually done with specialized software and the resulting masked images are imported into a desktop publishing program, or a stat is created and pasted on a layout page.

However, there are some disadvantages to these methods: loss of quality is noticeable, especially with typefaces; interference patterns are evident when pictures of different resolutions are mixed; masked images cannot be manipulated after import. As a result, changes require the editing or reconstruction of masked images in an external program.

With the Mask module, you have the power to create and edit masked images within Calamus. In addition, images created by the Mask module use the same color and style lists as other modules, thereby allowing dynamic changes that ensure consistency with the rest of your document.

The Mask module should load when Calamus is launched. If it does not, click Modules in the File menu. Load MASK.CXM in the Modules dialog box. The Mask module icon will appear in the Module Row. To use Mask, click its icon. To automatically load Mask when you launch Calamus, use Save System Setup in the Options menu. As with all modules, the Mask module can be deleted when not in use.

Mask Fundamentals
Mask Functions Command Group

Mask Fundamentals

To use the Mask module to its potential, you need to understand some of its principles. Although it is basically a simple tool, it is capable of creating complex images. The Mask module can be combined with other modules to create sophisticated desktop publishing effects.

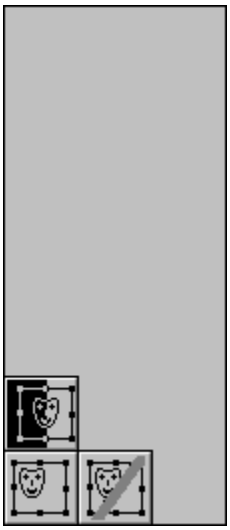
Creating a masked image requires at least two frames: a source frame and a masking element. Typically the source frame is an imported raster graphic, while the masking element can be any Calamus frame type, a text frame in a piping chain, a group of objects, a scanned photograph, or even another masked image. It is also possible to use multiple frames as a masking element.

When a masked image is created, information from the source frame is only shown where the masking elements' contents are black. Where the masking elements' contents are white or transparent, no information from the source frame is visible. The display of a masked object takes time since dynamic masking occurs during output to the screen.

Raster and Resolution
Half Transparency
Color and Grayscale Effects

Mask Functions Command Group

Functions:
Create Mask
Dissolve Mask
Invert Mask



The Mask module contains one command group with three commands: Create Mask, Dissolve Mask and Invert Mask. These commands all support dynamic linking which means you can use them on several frames at the same time.

Building a Mask
Rotate, Mirror and Write Mode
Editing Tips
Troubleshooting
Uses of the Mask Module

Create Mask

To create a mask, at least two frames must be selected. The background frame is the source frame while the foreground frame is the masking element through which the contents of the source frame will appear. To produce the masking effect, select the desired frames and then click the Create Mask icon.

As a step by step example, first import a graphic image to serve as the source frame:

Then create a circular raster area frame to be used as the masking element and place it on top of the graphic image:

With both frames selected, click the Create Mask icon and the masked image is created.
It is possible to use multiple masking elements.

Dissolve Mask

This function will undo a masked image. Simply select the masked frame and click the Dissolve Mask icon. All original frame elements will reappear in the order in which the mask was created.

Invert Mask

This command will invert the contents of a masked image, in effect reversing the displayed elements. The masked image will show the entire contents of the source frame with the exception of the area covered by the masking element. The masking element is essentially punched out of the source frame.

Building a Mask

It is recommended that masking elements contain black and white pixels rather than color or grayscale pixels. You can also combine several elements to create a mask by grouping them and placing the grouped elements in the background. You can even use a masked image as a masking element.

You can mirror, rotate, and change Write mode, raster settings and control lines, for any element in a mask group.

When masking frames are in Inverse Write mode, the overlapping areas will create corresponding holes in the masked frame.

A hole can be punched into a mask by placing an opaque white area on top of a black area. The mask will be white and the masked image will be transparent where the hole is. Grouping various black area frames can be used to create a variety of masking effects.

If you change your mind about a masking frame, you can dissolve its elements and begin again; see Dissolve Mask, above.

Rotate, Mirror and Write Mode

You can change a number of attributes for any masked image. In addition to altering size and location, you can also rotate or mirror a masked image and even change its Write mode or control line settings. If you dissolve a masked image, the original elements will maintain the altered attributes except for Write mode.

Editing Tips

There is an interesting method for altering one or more elements of a masked image without having to dissolve the mask. Simply make a virtual copy of the masked image and dissolve the copy. As the individual components of the copy are edited, dynamic linking will alter the corresponding element in the original masked image. You can even import a new graphic, edit text or alter the vector paths and objects in a vector graphic. As you do so, changes are immediately displayed in the masked image.

The virtual copy method allows changes in the masked image to be seen instantly without having to take it apart and recreate the masked image each time an element is altered.

Another method of using the virtual copy technique requires the Toolbox module. Begin by making a virtual copy of the masked image on top of the original frame. Dissolve the virtual copy and use the Toolbox module to make each element invisible. (Make Invisible Frames Selectable must be active in the Frame module.)

Edit the elements which rest invisibly on top of the actual masked image. Once again, changes to any of the dissolved elements can be seen in the masked image resting below the virtual copy.

This method is particularly effective when text is used in the masking element. Changes to text are immediately displayed on screen.

The virtual copy can be left in the document until the document is ready for printing; virtual copies use little memory. If invisible copies are present in the document, an alert will appear when you attempt to print the document.

Troubleshooting

Following are solutions to some common problems that can occur when using the Mask module. If a solution outlined below does not correct a specific problem, the masked image should be dissolved and recreated from scratch.

Problem:
The masked image is black and white instead of colored and may even be dithered.

Explanation:
The order of frames is incorrect. The frame that was supposed to be the source frame was not in the background and therefore ended up being the masking element. The color is being rastered and masks one of the frames which should have been the masking element.

Solution:
Dissolve the mask, rearrange the order of the frames and create the mask again.

Problem:
A masked image appears full of holes, like a sieve. The background shows through.

Explanation:
The masking element is not completely black. Colors and grayscales are always rastered in the mask. The raster points stamp only small parts out of the source frame and the space between raster points exposes the background.

Solution:
Dissolve the mask and set the color of the masking element to black.

Problem:
One or more frames has no effect and remains on the page after masking.

Explanation:
These frames were not selected before creating the masked image.

Solution:
Dissolve the mask. Correct the order of frames and ensure that all necessary frames are selected; then create the masked image.

Problem:
The masked image is empty or only partly visible.

Explanation:
There are a number of possible reasons: the mask is white; the mask does not overlap the object to be masked; frame elements are in the wrong order.

Solution:
Dissolve the mask, correct the order and position of masking elements and create the mask again.

Uses of the Mask Module

The dynamic masking abilities of the Mask module allow the creation of an infinite number of graphic effects. The following list is by no means complete, but is intended to demonstrate some possibilities:

Raster and Resolution

A mask is calculated each time it is created. This results in cleanly defined edges, especially when typesetting.

When you mask a raster graphic, even single pixels are cut cleanly by the masking elements, as are points in the masking element used. If you use a bitmap graphic as the masking element, the edge will be jagged. The lower the graphic's resolution, the more jagged the edge. If a clean edge is required, use a vector graphic frame as the masking element.

Half Transparency

The Mask module can create only opaque or transparent masks. Half transparencies are not possible with this version of Mask. The edges between the masked object and the background are always precise. You cannot blend one frame into another.

Color and Grayscale Effects

The mask is always calculated as though it is being drawn on a monochrome monitor. It is not useful to have the masking elements contain color or grayscale objects since they will be dithered to black and white. The black raster points in the masking element allow only small parts of the masked object to be visible. The same effect occurs with fill patterns in masked objects. Nevertheless, you may still create some interesting effects when using color or grayscale objects in a mask.

Rotated Picture

A rotated picture often appears distorted because of moiré patterns. A simple solution is to scan the picture at the desired angle of rotation. However, there will be a problem with the edge of the scan which will appear jagged due to the structure of pixels.

This problem is easily solved using the Mask module. Create a raster area the same size and rotation as the picture. Align the raster area on top of the picture, select both frames and create the mask.

The picture will have clean edges and sharp corners.

Mounting Pictures (Photographs)

If you wish to mount several pictures together, it is quite simple to create a matte for each one. Make a physical copy of the raster area shape that was used for masking the picture. Change its interior to transparent and its border to white in a weight of 10 pt or more. Align the white border frame on the masked photo and group the two frames. The white border frame will provide a matte for the masked photo below it. Repeat for each photo and arrange on a dark background for visual contrast. For creative effects, you may use a different raster shape for each photo. You may also use other colors and offset shadows for the matte.

Vector Cut-Outs

When absolute precision is not required, the Mask module can be used to cut out objects from a picture.

Place a vector graphic frame over a picture and zoom to a suitable level of magnification. Using the Vector Editor module, place a series of points as you trace the object to be cut out. Fill the interior of the path with black and the outside with white. Place the traced vector graphic behind the original picture and use it to create a mask of the picture.

Cut-Outs using Bitmap Graphics

A bitmap graphic can be used to mask another image. Select the bitmap graphic to be used as the masking element and increase its contrast until the image is very dark. (Use the Set Control Line function in the Frame module to adjust the contrast.) Use the Brush module to fill the interior of the masking element with black, and leave the exterior white. Overlay the blackened bitmap graphic on the bitmap graphic to be masked and click Create Mask.

Punch Holes

There is a simple way to create holes in a picture. First mask the picture with the shape of the hole. The picture will become transparent in all places except where the hole is intended. Then invert the mask.

Overlapping Objects

Overlapping objects can create an interesting effect. Simply mask one shape with another, using black for the masking object. The resulting masked image can be used as is, or to mask another object.

Fill Type with Pattern

You can fill headline or normal text with interesting fill patterns which have been created from scanned images that have been altered with the Set Control Line function.

Use text as the mask to accomplish the most creative results. If you want to try different fill patterns, make a virtual copy and import new patterns into the masking frame. The virtual copy technique is described in Editing Tips, above.

Gradient Fills in Text

In addition to scanned images, you can use gradient patterns to fill text. Place a text frame on top of a raster graphic frame created with the Blend module and then create a mask. When placed on top of another graphic frame, the masked image can produce interesting effects, particularly if inverted.

Partial Coloring

Entire text columns can be used in a masked image. The text column can even be part of a piping chain. When choosing the fill material, always consider the legibility of text. It is advisable to reduce the contrast of the foreground frame using the Set Control Line function. Combining high contrast and fine detail reduces legibility.

Partially Brighten Picture

You can use masking to partially lighten, darken or discolor part or all of a picture. Create a physical copy of a picture on top of the original. Use the Set Control Line function to alter the picture and then apply a masking element that matches the area of the picture you wish to affect. Select the changed picture and masking element and create the mask; you will find the changes visible only in the masked region.