Adobe℠ Customer Services

Working with Clipping Paths

A clipping path is a vector object that makes the background of an Adobe Photoshop selection transparent when an EPS file is imported into another application, such as Adobe Illustrator™. With Adobe Photoshop 2.5, you create clipping paths by making a selection with the pen tool, specifying the selection as a clipping path, and then saving the path with an EPS file.

A clipping path is a PostScript™ object, and although the path itself is invisible when printed, the printer treats the path as other PostScript objects. A common problem experienced with clipping paths is that the paths are too complex for a PostScript interpreter to output. If a clipping path is too complex for the output device, a *limit check error* is generated. In other cases, a general PostScript error may be the only error message; sometimes the printer never prints the path. By simplifying clipping paths, you can decrease the likelihood of printing problems.

This document discusses the important features of clipping paths and ways to simplify them for printing.

CREATING A CLIPPING PATH

To create a clipping path in Photoshop 2.5, you create a path with the pen tool (or with another selection tool and the Make Path command), save the path, and then choose the Clipping Path command from the Paths palette menu.

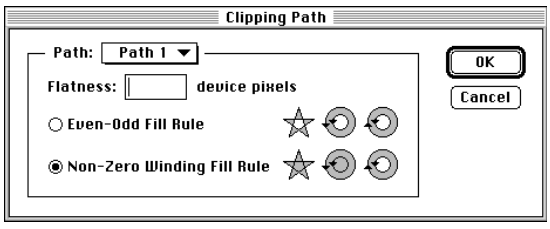
To define a selection as a clipping path:

1 Choose Show Paths from the Window menu to display the Paths palette.

2 Draw a path with the pen tool, or make a selection with another tool, and then choose Make Path from the Paths palette menu.

3 Save the path by choosing Save Path from the Paths palette, and then name the path.

4 Specify the path as a clipping path by choosing Clipping Path from the Paths palette. The Clipping Path dialog box appears.



5 Select the saved path from the Path menu in the Clipping Path dialog box.

6 If your path is complex, enter a Flatness setting. See "Avoiding Complex Selections and Simplifying Complex Paths" later in this technical note for more information on the Flatness value.

7 Choose one of the following options, depending on whether the path is compound or simple:

• If the path is a compound path (such as a cut-out caused by positive and negative spaces), select Even-Odd Fill Rule.

• If the path is a simple path (a single path without intersecting lines), select the Non-Zero Winding Rule Fill option. This option makes the file appear less complex to a PostScript printer.

8 Click OK.

9 If you will be printing the file, convert the file to CMYK mode. Choose Save As from the File menu and EPS from the File Format pop-up menu, specify the desired options in the EPS Format dialog box, and click OK to save the file for export as a CMYK file.

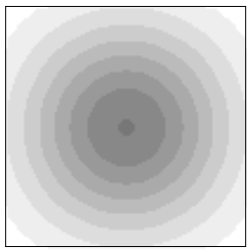
When the EPS file with the clipping path is placed into another application, such as Adobe Illustrator, any portion of the image that falls outside the clipping path won't display or print.

SAVING PATHS IN A DOCUMENT TO SAVE SPACE

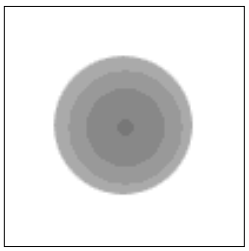
If you're using a version of Adobe Photoshop earlier than version 2.5.1 and your file contains multiple selections, you can help keep your file size to a minimum by saving selections as paths instead of in channels. Saving a selection as a path also eliminates the need to save two versions of a document when you are exporting the document (one in the export format and one in Photoshop format to preserve the selection). The saved paths will not affect the placement or printing of the documents unless the document is saved in EPS format as a clipping path.

However, not all selections can be saved accurately as paths. For example, if you feather a selection, some information may be lost when you convert the selection to a path. Feathering blurs the edges of the selection by building a transition boundary between the inside and outside of the selection. Using the Make Path command to convert a selection into a path will eliminate this transition zone. When the path is reconverted to a selection using the Make Selection command, it can be automatically feathered in the process, but the effect may be slightly different.

Selection boundary



Feathered selection



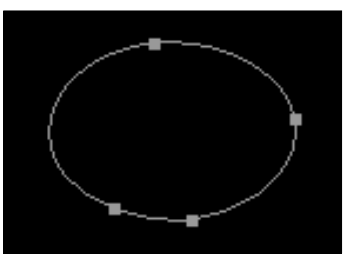
Path selection

AVOIDING COMPLEX SELECTIONS AND SIMPLIFYING COMPLEX PATHS

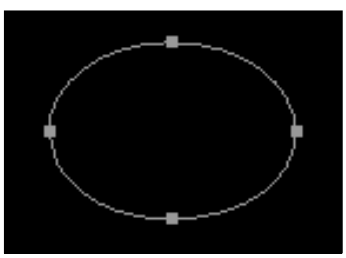
Some paths may be too complicated for a PostScript output device to print. A path is too complex if the number of straight lines that describe the path exceeds the printer's internally defined limit. A path that cannot be printed by a low-resolution (300-dpi) printer also won't print on a high-resolution printer. However, a path that will print on a low-resolution device may not print on a high-resolution printer. This is because the higher the printer's resolution, the more straight lines are required to describe a curve.

You can simplify paths in several ways. Complexity of a path often is due to a complex selection. You can delete points on a path to simplify it, or you can use the pen tool to redraw a path created using Make Path, as the following examples illustrate.

Original selection

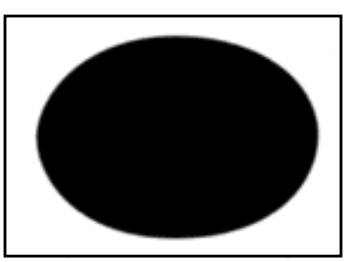


Path created by Make Path

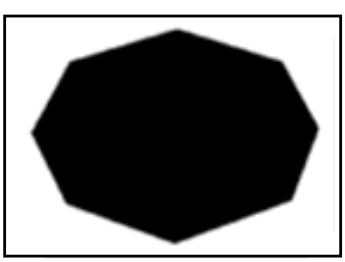


Path created by pen tool

Another way to simplify a path is to let the PostScript interpreter flatten the curves by increasing the Flatness setting in the Clipping Path dialog box. A higher flatness setting requires fewer straight lines to describe the curve; setting the Flatness too high, however, may change the shape of the path. A Flatness setting of 10 is recommended for high-resolution printing; a setting of 3 is recommended for low-resolution printing.



Flatness: 2



Flatness: 100

You can also simplify paths by increasing the tolerance in the Make Path dialog box, accessed from the Paths palette pop-up menu. Values can range from 0.5 to 10 pixels. The higher the tolerance, the fewer anchor points are used to draw a path, and the smoother the path.