

AdobeSM Customer Services

The Adobe Photoshop Raw File Format

The Raw file format is intended for images saved in undocumented formats, such as those created by scientific applications on minicomputers or mainframe computers. The format allows you to port uncompressed binary files and open them in Adobe Photoshop. (For the Macintosh version, an ASCII-encoded file must first be converted to binary values before it can be opened in the Raw format in Adobe Photoshop.) The Raw format may also be used to export Adobe Photoshop files to other applications or platforms.

The Raw format is a stream of numbers (bytes) describing the color information in a file. Starting from the upper left pixel in the file and moving across and down, the color values of each pixel are described in binary format where 0 = black and 255 = white. For RGB and CMYK color images, more than one channel is needed to describe the colors.

***Note:** The Photoshop file format is an enhanced version of the unencoded binary Raw format. The Photoshop file format contains additional information about the image including information about the channels, rows, columns, bit depth, and mode of the image; it also supports all the available Photoshop image modes (Bitmap, Grayscale, Duotone, Indexed Color, RGB, CMYK, Lab, and Multichannel).*

IMPORTING A RAW FORMAT FILE INTO ADOBE PHOTOSHOP

Use the Open As command to import a Raw format file into Adobe Photoshop. In most cases, the information about the document entered in the Raw dialog box is available from the application used to create the document.

To import a Raw format file into Adobe Photoshop:

- 1 Choose Open As (Windows=Open) from the File menu and Raw from the Open As pop-up menu. Click OK. The Raw dialog box appears.
- 2 Specify the following options:
 - Width and height in pixels (the range is 1 to 30,000).
 - Number of channels. The number depends on the mode of the image and whether the image contains additional channels. By default, a Grayscale or Indexed Color image has one channel, an RGB image has three channels, and a CMYK image has four channels; add to the number of channels any additional channels created in the document.
 - Header value (in bytes); the default is 0. If you are missing the dimensions or header value, have Adobe Photoshop estimate the parameters. Enter either the correct height and width values to estimate the header size or the correct header size to estimate the height and width; then click the Guess button.

3 Click OK.

In Raw format, a CMYK image opens as an RGB image with an alpha channel. To revert to the file's original form, first choose Multichannel from the Mode menu, then choose CMYK.

EXPORTING A RAW FORMAT FILE FROM ADOBE PHOTOSHOP

When saving a file in the Raw format, note the options you choose to save the file, as well as the file's height and width for use when reopening the file. No color table is saved with a Raw file; as a result, when you save an Indexed Color image as a Raw file, you lose the file's color information.

To export a Raw format file from Adobe Photoshop:

1 Choose Save As from the File menu and Raw from the Save As pop-up menu. The Raw dialog box appears.

2 Specify the following options:

- Width and height in pixels (the range is 1 to 30,000).
- Number of channels. The number depends on the mode of the image and whether the image contains additional channels. By default, a Grayscale or Indexed Color image has one channel, an RGB image has three channels, and a CMYK image has four channels; add to the number of channels any additional channels created in the document.

3 Specify the following parameters in the Raw Options dialog box when saving a file in Raw format:

- File Type and File Creator. The file type and file creator values can be any four-character values; the values will not affect reopening the file in Adobe Photoshop, but will affect whether other programs will recognize the file.
- Header value (in bytes); the default is 0.
- Interleaved Order or Noninterleaved Order. The interleaved format (the default) stores the color values sequentially by pixel. For example, in an RGB image, the red value for the first pixel is stored first, followed by its green value, followed by its blue value. The noninterleaved format stores information by color so that the red values are stored first, followed by the green values, followed by the blue values.

4 Click OK.