

Adobe PhotoShop can't open 16-bit TIFF images, or displays them as black

Abstract

Adobe PhotoShop can't process 16-bit TIFF images.

Instructions

Update your copy of PhotoShop if needed, and do the following:

PhotoShop 3.0: Update to PhotoShop 3.0.4 or PhotoShop 5.0.2 or later, then proceed as follows.

PhotoShop 3.0.4: This version includes in its "Images" menu a menu item called "Adjust" that has a submenu item called "Curves". This command adjusts the display of 16-bit images. Tweak its graph (by default a straight line) or use two of the three pencil icons at the bottom right (left is low scale, middle does nothing, right is high scale).

You can save the "curve" (essentially a 16-bit LUT) to a file with an ACV file. then go to the "Mode" menu, choose the "Gray Scale" menu item, and check on the "8-bit" item instead of the "16-bit item".

PhotoShop 5.0 or 5.0.1: Update to PhotoShop 5.0.2 or later, then proceed as follows.

PhotoShop 5.0.2: Read a caution on the use of PhotoShop 5 before proceeding.

First, a note on loading from files saved without a LUT -- in other words, files saved from image windows that were displayed using the Monochrome LUT that's built into the software and available using the image window's Display Mode tool.

The opened image appears black. This version of PhotoShop includes in its "Image" menu a menu item called "Adjust" that has a sub-menu item called "Auto-levels." This command is similar to the "Auto Scale" setting of MetaMorph's Scale 16-Bit Image command. If the autoscaling doesn't work as well as you require, the "Levels" command in the same submenu adjusts the 16-bit scaling based on the image histogram.

Next, notes on opening TIFF files saved with a LUT.

Photoshop 5.0.2 will not load images from 16-bit MetaMorph TIFF files saved with a LUT.

Let's start with a TIFF file named IMAGE.TIF, saved by MetaMorph and containing a 16-bit image. As long as IMAGE.TIF was produced from an image window that used the standard Monochrome LUT, Photoshop 5.0.2 will open it without complaint. If MetaMorph then opens IMAGE.TIF, displays it using the Pseudocolor LUT and then saves the image window as IMAGE2.TIF, the result will be an

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IMAGE2.TIF that PhotoShop 5.0.2 can not load. Opening IMAGE2.TIF with MetaMorph, selecting the Monochrome LUT again and saving the image window as IMAGE3.TIF produces a file that PhotoShop 5.0.2 opens without complaint.

If you have MetaMorph 4.0 or later, and you must load a pseudocolored image into PhotoShop 5, you can use MetaMorph 4.0's *Create 24-bit Presentation Image* command to produce an image that PhotoShop 5 will load.

If you have a version of MetaMorph earlier than 4.0, you can use Scale 16 Bit Image to create an 8-bit result, apply the pseudocolor LUT to that result, and save that it for use with PhotoShop.