

High Performance Modes

There are several different 'modes' of operation in CSX that provide better performance than Basic mode. In Basic mode, when an image is going to be inserted into a sheet, the document is opened, resized, it's copied and pasted into the sheet, then closed. Basic mode works with all image formats on both platforms.

In High Performance Mode 1 (HP1), the document is, instead, *placed* into the sheet as a smart object. That smart object is converted to a normal layer completing process. HP1 works with all images on both platforms. However, raw and dng images will cause ACR to be opened when placing the image making HP1 useless for all but single sheets when raw images are present.

In HP2, the *ImageMagick* application is used to create a thumbnail of the image which is then placed into the sheet as is done in HP1. ImageMagick does not have universal image format support on OSX. In particular, it does not support raw or dng files. On XP, the file format support is much better and includes dng files, but not raw files.

HP3 is identical to HP2 except that instead of using *ImageMagick*, the *exiftool* application is used to extract a jpeg thumbnail from the image instead of actually creating a thumbnail of the image. *exiftool* works fine with file formats that contain Preview Images including raw and dng files.

HP2

HP2 is a high performance mode that uses the ImageMagick program to create thumbnails from source images. The reasoning behind using an external program to perform this task is appearance of slow performance on the part of Photoshop in reading and rendering large images. By using an external program, the rendering portion of the process can be avoided and should cut the time spent reading and resizing an image significantly.

ImageMagick

ImageMagick (IM) was chosen for this task because 1) it's free, 2) it run on OSX and XP, and 3) it works well with a large number of image formats. You can download binaries of IM from <http://www.imagemagick.org>.

Installation and Setup

Windows XP

The binary you should download is *ImageMagick-6.3.0-5-Q16-windows-dll.exe* or some more recent version. Run the IM installer and you're set. CSX works with IM with no additional installation steps on your part.

OSX

If you already have IM on your machine, you can skip to the *hp2mac.sh* section.

The instructions for installation on the IM site assume you are using *bash* or *sh* as your terminal shell. If you are using *csh*, *tcsh*, or some other shell you will need to start a bash shell at the command prompt:

```
% bash
$ echo $SHELL
/bin/bash
```

Note that a '%' prompt typically indicates that you're in *csh* shell while a '\$' prompt indicates a *bash* shell. The prompt may formatted differently on your machine.

At this point, follow the instructions on the IM website. I recommend installing IM under either your home directory (e.g. */Users/xbytor*) or under */Applications/Utilities*.

hp2mac.sh

After you have IM completely installed and verified, you need to tell CSX how to find it. Change to the Presets/Scripts/csx directory underneath your CS2 installation folder. In there, you will find a script called *hp2mac.sh*. This script expects the *MAGICK_HOME* environment variable to be set. If you just installed IM, you can run the script immediately like this and you're done.

```
% bash hp2mac.sh
```

Complete and detailed instructions on the *hp2mac.sh* can be found inside of it. After it has been run, you're set.

HP2 Usage

HP2 is most easily used from the Advanced UI. The settings for this can be found in the *Advanced* tab.

The two settings we need to concern ourselves with are *hiperfMode*, and *hp2submode*. For the first, select '*HP Mode 2*'. For HP2, there are four different submodes. These trade off performance and quality in different ways. The default, *thumbnail*, reaches a good balance between the two for most cases.

When these options have been set, CSX will now use IM to create the thumbnails instead of creating them in Photoshop.

HP3

HP3 is a high performance mode that uses the *exiftool* program to create thumbnails by extracting prebuilt preview images from the file. As with HP2, it eliminates the need to open, render, and resize a very large file. HP3 can only be used on file formats that have embedded preview images including *dng* and *raw* formats.

exiftool

exiftool (<http://www.sno.phy.queensu.ca/~phil/exiftool/>) is primarily a tool for reading and writing metadata in image files. Preview images are a part of the metadata, so it is a fairly straightforward task to extract a preview image from an image file. Not all image formats support preview images, but when they do, this provides the fastest way in CSX to create contact sheets.

Installation and Setup

Windows XP

Download the standalone Windows executable and unzip it on your desktop. Change the name of the executable from 'exiftool(-k).exe' to 'exiftool.exe' and copy it to 'C:\Windows\System32' or wherever you have WinXP installed. To verify that it has been installed correctly, open a command line window and enter 'exiftool' and press Enter. You should see a lot of text being displayed that describes how to use *exiftool*.

OSX

1) Open a Terminal window.

2) Create a directory under your home directory called 'pkg'.

```
% mkdir ~/pkg  
% cd ~/pkg
```

3) Download the current version of exiftool to your desktop. Note that what you download may be a different version than the one I refer to below. Just change the numbers as needed.

4) Extract it in the pkg directory. This will do the extraction from the command line.

```
% gunzip -c < ~/Desktop/Image-ExifTool-6.63.tar.gz | tar -xvf -
```

5) Verify that it has installed correctly.

```
% ~/pkg/Image-ExifTool-6.63/exiftool
```

You should see a lot of text being displayed that describes how to use *exiftool*.

6) Since you may have a different version of *exiftool* or may change versions later, edit the CSX ini file to reflect the new version. The ini file is at ~/Libraries/Application Support/xtools/ContactSheetX.ini. There will be an 'exiftool' property that looks like
exiftool: ~/pkg/Image-ExifTool-6.63/exiftool

Change this as needed to reflect the correct location (if you don't use the ~/pkg path) and to match the version of *exiftool* that you have installed.

HP3 Usage

HP3 is most easily used from the Advanced UI. The settings for this can be found in the *Advanced* tab.

Change *hiperfMode* to '*HP Mode 3*' and you'll be set. If there are any problems with the installation or configuration, you'll see error messages saying that there was some problem with thumbnails.