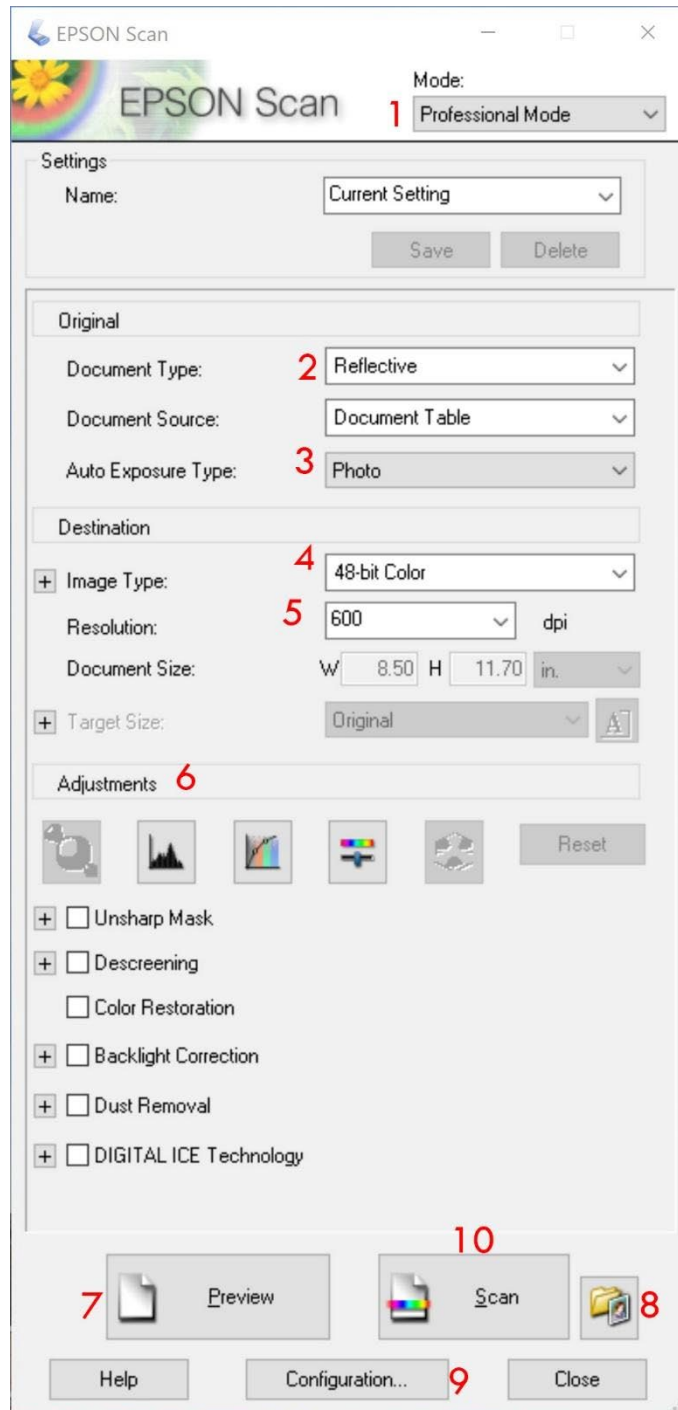


Digitizing Materials on Flatbed Scanners Utilizing EPSON Scan

John Dewees
Drafted 2021-04-15
Updated 2021-05-03

EPSON Scan is a powerful utility that is the bundled piece of software used to scan images and documents when working with the Epson flatbed scanners so common in libraries, archives, and museums. It can be used to great effect with everything from a more modest Epson V600 Photo Scanner to a more robust Epson Expression 12000XL Photo Scanner. Workflows associated with this software involve creating an initial set of configurations to allow proper reformatting. A numbered screenshot of the software configuration is provided below with each aspect discussed in detail.



1. Scan Mode: EPSON Scan provides four different modes when scanning materials: Full Auto Mode, Home Mode, Office Mode, and Professional Mode. When scanning cultural heritage materials only Professional Mode should be utilized to have the greatest number of customization options and to ensure that the software does not add post-processing effects to images that you scan when we want to be as representative of the original material as possible. Ensure that Professional Mode is selected.

2. Document Type: This allows you to select either reflective materials (photographs, documents, letters, etc.) or transmissive materials (slides, negatives, film, etc.). The image above indicates that we are set up for scanning reflective materials, however if you have slides or negatives you need to scan, the interface will change slightly and there will be a new dropdown with options for Color Negative Film, B&W Negative Film, or Positive Film. Ensure you select the appropriate type for your project.

3. Auto Exposure Type: This provides options for Photo and Document, though only Photo should be selected for any project engaged in. Photo provides a color-accurate reproduction of the object you are scanning, while Document will try to optimize the color for written or typed materials, changing the color profile. As it is generally desired that we provide as accurate a representation of the object as possible, always select Photo.

4. Image Type: This dropdown provides a whole variety of different options for different bit depths and color profiles including Black & White, 8-bit Grayscale, 16-bit Grayscale, Color Smoothing, 24-bit Color, and 48-bit Color. Given the types of material you are likely to be scanning on a flatbed scanner, it is recommended to only use 48-bit Color as your best option. Some types of formats like newspapers might be better suited for 16-bit Grayscale, but it's unlikely you'll be doing a mass digitization of newspapers on a flatbed scanner. Unless you have a pressing need based on more specific project needs, stick to 48-bit Color.

5. Resolution: This dropdown provides a wide variety of options for the resolution you wish to scan the materials at, ranging from 50 PPI to 12800 PPI with many options in between. Selecting the ideal resolution will be heavily dependent on what type of material you are scanning. A typed letter can likely be scanned at 400 PPI, a photographic print at 600 PPI, and a slide at 2400 PPI or greater. A good rule of thumb is to scan a test image of the item, open it up and check to see if you can make out all necessary details, if not then scan it a higher resolution. When working at the really large resolutions bear in mind that the size of the object you can scan will get smaller and smaller due to memory restrictions; you likely won't be able to scan an 8" by 10" photograph at 6400 PPI. Also, the higher resolution the longer it will take to scan the object which can be five minutes or more per image.

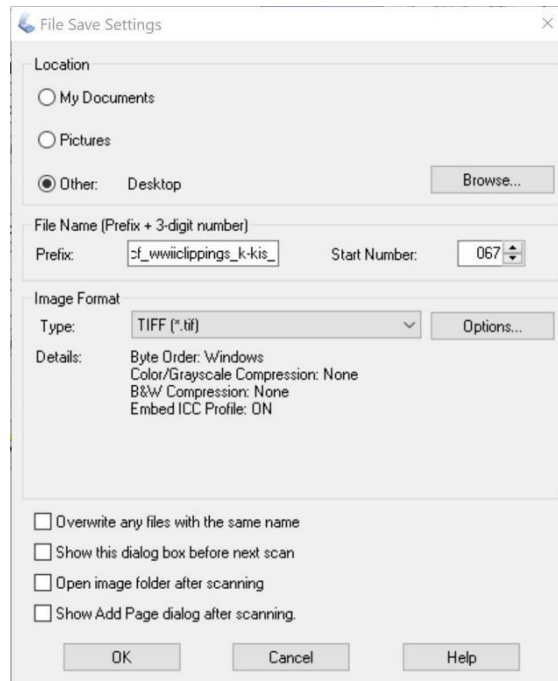
6. Adjustments: This entire section of checkboxes has a number of utilities that can clean up your image automatically during the scanning process, but as we've already discussed we want the images we generate to be as accurate to the original as possible. As a result we leave all these utilities unchecked and unused to ensure an accurate image is generated by the scanner. One side-benefit to this is that these utilities frequently increase the amount of time needed to scan the object, so this also is a time-saving option.

7. Preview: This creates a quick scan of the object on the flatbed scanner to get a preview image which also allows you to only scan part of the overall area available. After clicking this button a new screen will appear that looks like the following.



After scanning an object you can drag a box around what specific portion you would like to capture. In this case we can see the dotted line is surrounding the catalog card with a newspaper clipping attached, and only what is inside the dotted line will be scanned. It is also possible to use the tools in the Marquee section to customize the scan areas a bit. You can erase a scan area with the top-left button. You can make a duplicate of a scan area with the top-right button. You can have EPSON Scan make a guess at what it is you want to scan and automatically generate a scan area with the bottom-left button. Finally the bottom right, showing a square with the number "1", indicates how many areas are currently being scanned. Should you have a composite photograph that you would like to turn into several individual and separate images you can select multiple scan areas and EPSON Scan will methodically scan one after the other generating a series of images.

8. File Save Settings: Similar to Preview, this brings up a new screen with options for how you want to save and name your files.



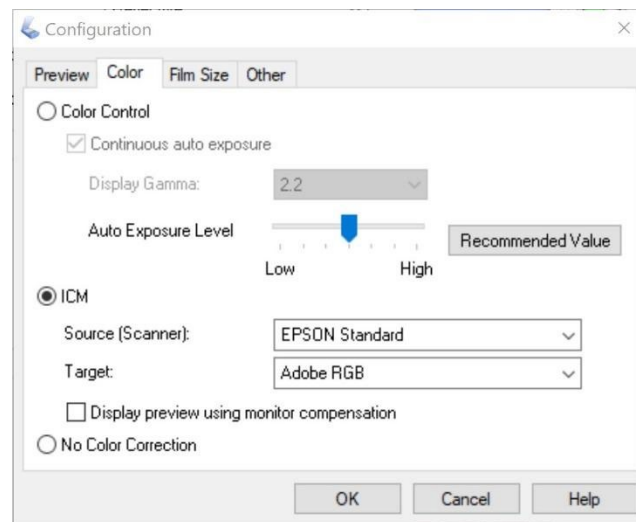
Location lets you choose what directory you want to save images into, with typical Windows directories of “My Documents” and “My Pictures” available as defaults, as well as the option to browse to a particular directory. If you are unable to find images you scanned, chances are good this was reset somehow, so check those locations for your files.

File Name provides a fairly rudimentary file-naming utility. You can assign a prefix of whatever you want and it will automatically add an auto-incrementing sequence number after it. This will always be a three digit number so there is a chance you’ll need to rename your files if there are less than 10 of them or more than 99 to have the correct number of leading zeros.

Image Format allows you to choose what type of file you want to save the image as, with TIFF being the recommended output if you are creating archival masters. If you are just scanning copies to satisfy a researcher request though you might want to scan directly to a JPEG. Make sure you avoid using Multi-TIFF as that is a difficult to use file format that was designed as an alternative to PDF that is poorly supported and a pain to work with. Each file type will have additional options that show up in yet another pop up window, but there is little that needs to be done here. Make sure the box for “Embed ICC Profile” is checked, and you can choose how small a JPEG you want to create by adjusting the “Compression Level” slider.

Finally on this screen there are several checkboxes with options. I would recommend leaving all of them unchecked as they generally just interrupt workflows when what you want to be doing is scanning one item after another. They are fairly self-descriptive so feel free to adjust to your particular needs.

9. Configuration: This provides some fairly advanced functionality though the only tab you should likely need to worry about is in Color, which handles how you want to handle color accuracy and reproduction.



Of the three options Color Control, ICM, and No Color Correction, we want to ensure that ICM is enabled. The Source (Scanner) dropdown likely only has one option and should be left as EPSON Standard. The Target dropdown will have multiple options and the best available color space should be utilized. If Adobe RGB is an option then it should absolutely be selected, but depending on your computer only sRGB may be an option, which is less ideal but may be the best you can do. Upgrading your computer monitor and computer color space to support Adobe RGB is a wonderful step in creating higher quality images at the point of capture.

10. Scan: Finally, what we've been waiting for, once all the options have been configured correctly this button can be pressed to have your scanner commence with actually creating an image of whatever it is you are trying to reformat. More than likely there is also a button on the scanner itself that can be pressed to begin the scanning process which may be more ergonomically comfortable depending on how your workstation is set up.