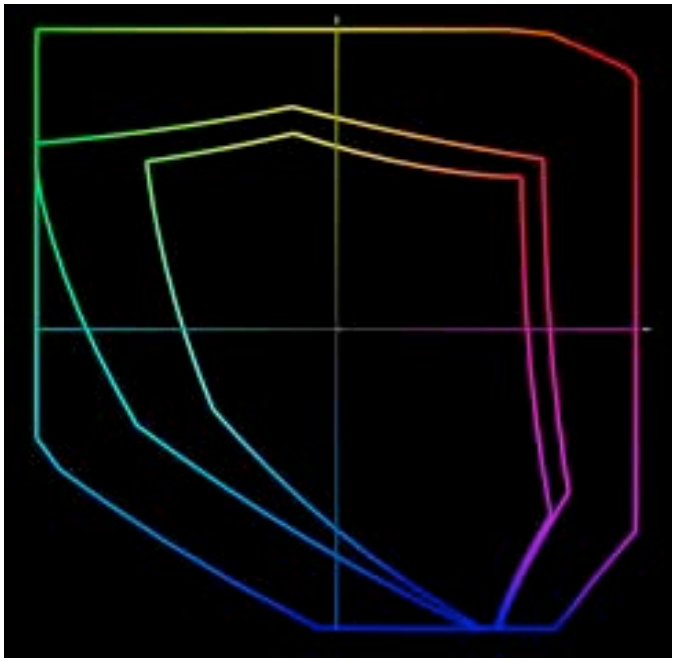
JOHN PAUL CAPONIGRO

TIPS



From smallest to largest gamut:
sRGB, Adobe RGB (1998), and Pro Photo

SETTING DIGITAL CAMERA COLOR SPACE AND FILE FORMAT

"Why do my digital camera files have an sRGB profile?"

sRGB is the default color space for most digital cameras today. Most camera interfaces will allow you to can change this default. Interfaces and options will vary. The widest gamut default color space most digital cameras support is Adobe RGB (1998). It's a good choice. I recommend you reset your camera's default to Adobe RGB (1998) because it's a wider gamut editing space capable of containing greater levels of saturation. The profile for the camera's default color space is attached to JPEG files but not to RAW files.

"Is Adobe RGB (1998) the widest gamut I can get with my digital camera?"

No. The camera sensor is capable of quite a lot more. To access color spaces with a wider gamut than Adobe RGB (1998) you typically need to shoot in a RAW file format. This also allows you to acquire a high bit file (16-bit instead of 8-bit).

"Where do RAW files get their profiles?"

RAW files don't have profiles until they are converted, either with the manufacturer's software or another RAW file converter like ACR (Adobe Camera Raw). The profiles created this way are synthetic profiles that produce a change in appearance in the file not by changing the numbers (editing) but by changing the meaning of the numbers (assigning a profile). Subsequently the file is converted into a standard editing space such as sRGB, the wider gamut Adobe RGB (1998), or the widest gamut ProPhoto.

"Which color space do you recommend?"

The short answer: Adobe RGB (1998).

The long answer made short: Carefully consider when you want to make the transition to a wider gamut editing space – like Pro Photo.

The long answer: If you've got a number of files in sRGB, don't panic. While it's a smaller gamut editing space, it's not as bad as many will lead you to think. Do aim for wider gamut at the point of capture; I recommend Adobe RGB (1998). In time, the industry will move to an even wider gamut editing space, most likely Pro Photo. Currently Pro Photo is for trail blazers who are willing to manage color conversions and corrections carefully to avoid posterization and who are willing to deal more frequently with potentially printable colors that are outside the gamut of monitors. (In a few cases, with wide gamut editing spaces, you can print a very saturated color, but you can't see its full saturation on a monitor. Instead of seeing it before you print it, you see it after you print it.) All wide gamut editing should be done in 16-bit to avoid posterization.

"Should I convert my sRGB files to Adobe RGB (1998)?"

Converting from sRGB to Adobe RGB (1998) will neither degrade nor improve image quality. If you do it, do it only for the sake of convenience.

"Should I convert my 8-bit files into 16-bit files?"

No. You won't increase the quality of the data in the file. You will get a bigger file. If you want a 16-bit file, start with a 16-bit file. In some cases, this will mean reacquiring and remastering a file.

"Should I be concerned about my files being in 8-bit mode?"

Yes and no. Be concerned. Don't panic. Know what to look for – posterization. If a file has been edited in 8-bit but displays no posterization, don't worry. If it does contain posterization, reacquire if possible, and reedit the image in 16-bit mode.

"Should I save my JPEGs in another file format?"

Once you've edited them, it's a good idea to save JPEGs as TIFFs to avoid additional JPEG compression artifacts.

"Is RAW always better than JPEG?"

RAW file formats contain higher quality data than JPEGs. They're wider gamut, higher bit, and free of compression artifacts. Because they require conversion to be edited or used, the time needed to make the conversion may or may not be justifiable depending on specific production concerns or uses for an image. You can set your camera to shoot both RAW and JPEG for every shot. A camera creates a RAW file every time it makes an exposure. Setting a camera to create a JPEG file requires it to make a conversion, which it does almost instantaneously. If a camera is set to JPEG, it will replace the RAW file. If a camera is set to RAW + JPEG it will create a JPEG copy in addition to the RAW file.

"How do you set color space on a digital camera?"

Camera interfaces and terminology vary. On the Canon 1Ds Mark II, you can toggle between sRGB and Adobe RGB (1998) by pressing the Menu button and going to the Recording menu (the first icon, a camera), then dialing down to Color matrix and continuing within that to Set up.

"How do you set file format on a digital camera?"

Again, camera interfaces and terminology vary. On the Canon 1Ds Mark II, you can set image-recording quality by pressing the Quality button (a square icon that breaks into pixels) and dialing to the setting of your choice. Four quality settings are available – one RAW and three JPEG: Large/Fine, Large/Normal, and Small/Fine.

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I would personally like to thank Adobe, Apple, Canon, ColorByte, Epson, Imacon, and Gretag-MacBeth for their support.

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