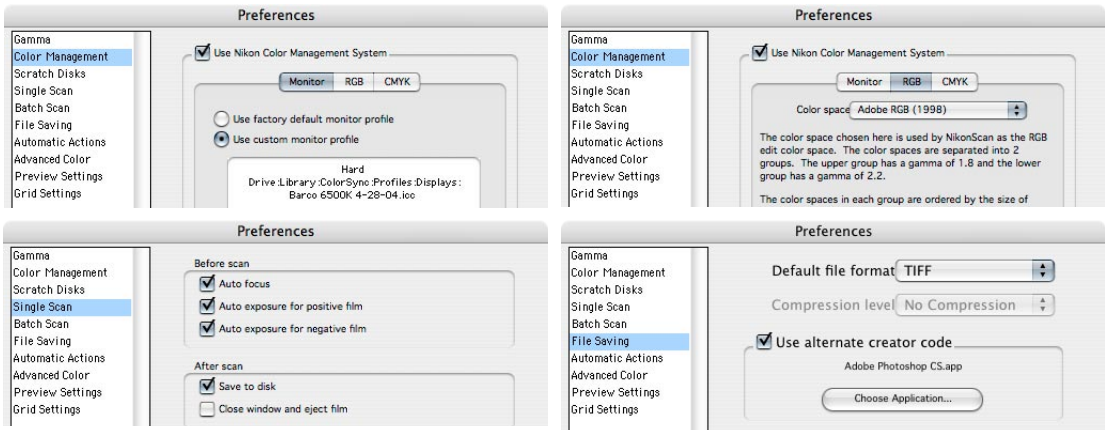
Nikon scanning workflow

The idea of this approach is to get the highest quality scan that the scanner is physically capable of, while spending as little time as possible in the Nikon software. As a former drum scan operator I can appreciate the differences between various scanners but have to give Nikon credit for appealing to a large group of small and medium format users. Nikon Scan is full of confusing terminology but you can create very good scans with it if you know a few tips.

1) Use Photoshop's new file dialog box (File>New...) as a scanning calculator to determine a scan's file size requirement in terms of megabytes (MB). For optimal quality, your scan should be at least 300 ppi at the largest size it will be printed. For example: if you will be making an 8x10 print, make sure your scan produces a 21MB RGB file that is equivalent to 8x10 at 300ppi. Be aware of the effect color modes and bit depth have on the file size. Scan to 360ppi at print size for optimal inkjet printing.
2) Clean your original, load and insert the film carrier.
3) Launch Nikon Scan, open the preferences and enable Nikon Color Management. Select your custom display profile under the monitor tab. Under the RGB tab choose the working space that you use in Photoshop so that your scans are in this same color space. Larger color gamuts like AdobeRGB are recommended. Under the single and batch scanning sections check the "Save to disk" checkbox. Under File Saving I'd suggest checking "use alternate creator code" and choose Photoshop. This will enable you to double click on your scans and have them open in Photoshop instead of Nikon Scan. Exit the preferences.



4) Select Positive or Negative for the film mode, RGB or Grayscale for the color mode, and select the film size. I wish Nikon had a 6x20cm option here that would let us see the whole 120/220 carrier.
5) [optional] In the thumbnail drawer (in the upper right hand corner of the command palette) click the icon with four internal squares to get thumbnails of each frame position. Once thumbnails are loaded into the drawer, the "strip film offset" (at the bottom of the tools

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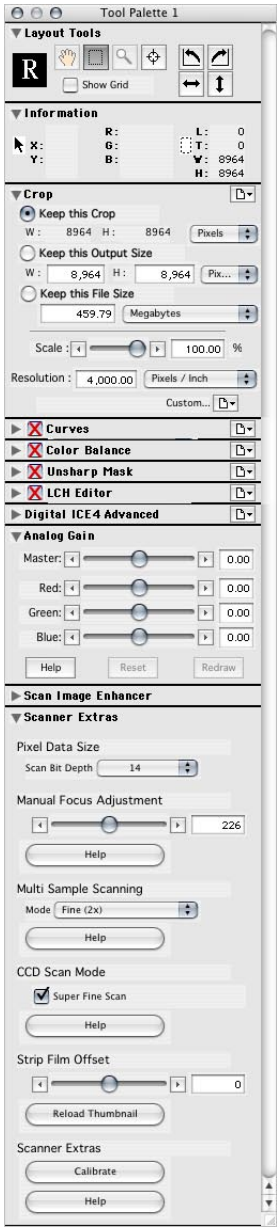
palette) can be adjusted for each selected frame which will adjust for any misalignment of the frames. Double click any frames you want to have a prescsan for.

6) In the thumbnail drawer, select the frame you wish to scan.
7) [optional] If you've done a prescan, draw a box to select the area of film to be scanned.



8) In the Crop section of the Tools palette, select "Keep this crop" and adjust the resolution till you get the file size in megabytes determined in step 1. I think you'll find this to be much easier than using the frustrating "Keep this Output Size" or "Keep this File Size" options.
9) Don't bother with Nikon Scan's image adjustment tools (Curves, Color Balance, USM, LCH editor) to change the appearance of the image. These adjustments can be performed later with Photoshop's more powerful and intuitive versions of these tools.
10) Most users prefer to scan without Digital ICE as it can sacrifice image sharpness. Some users find this to be negligible and prefer to use it to reduce the dust and scratches of their film.
11) When scanning negatives, you may need to decrease the analog gain to capture all available highlight detail. Avoid 255 values in image highlights. Many users find -0.30 to be ideal setting for many C41 films. Skip this step when scanning transparencies.
12) Skip the Scan Image Enhancer (a fine example of poor terminology) which applies additional automatic color correction. This is only available on the latest Nikon scanners.
13) In Scanner Extras, set the Scan Bit Depth to 14 (which actually produces a 16 bit file), Multi Sampling Mode to 2x, and check "Super Fine Scan Mode" (not available on some scanners). The higher bit depth setting will allow you to color correct your scan in Photoshop without banding or posterization issues. The 2x multi sampling setting produces greater and smoother highlight and shadow detail with less noise than 1x, while higher multi sampling options produce negligible improvements on the even the most dynamic originals (like TechPan) and don't justify their longer scanning times. The Super Fine Scan Mode (another fine example of poor terminology) addresses a buffering issue than can cause subtle lines on scans visible in smooth areas like skies.
14) Scan!
15) Select other frames from the thumbnail drawer and repeat steps 6-14 until you have queued all the scans in your batch.
16) Save the scanned image as "[name of image] scan.psd". If you save this file separately from any working versions of it you will be able to revert back to it, should something bad happen to the working file.
17) Open in Photoshop and apply global color correction using Curves and Hue/Saturation.
18) Convert image to 8 bits per channel mode. Once color correction has been applied there are few reasons to maintain the extra bit depth which creates large files and slows down Photoshop. 16-bit evangelists using Photoshop CS or higher may choose to skip this step.
19) Convert to grayscale if you are working in black and white.
20) Save the scanned image as "[name of image] master.psd" or something similar to indicate that this file is the working version of your image complete with layers.

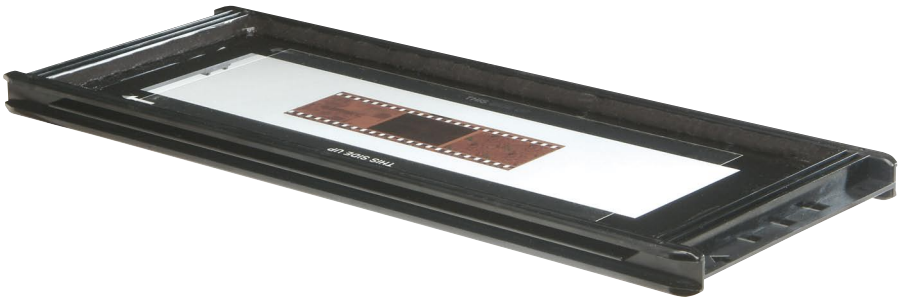
Color Management

I've found that the majority of Nikon Scan users are very happy with the color results when scanning with Nikon's CMS turned on with AdobeRGB or ProPhotoRGB set as the output space. Custom profiles cannot be reliably created for color negative scanning. Color geeks wanting to create custom scanner profiles for transparency scanning will need to purchase IT8 targets and use LaserSoft's SilverFast scanning software (www.silverfast.com) instead of Nikon's.

Negative Carriers

Nikon's negative carriers are not the best in the business. I have seen several users who were forced to file out their negative carriers as they all are slightly smaller than film's image area. The Nikon 8000 and 9000 have an extremely shallow depth of field. If a piece of film is not perfectly flat, a portion of the film is scanned out of focus. Because of this, the 120/220 negative carrier is frustrating to use and it takes a good bit of experience to learn how to clamp one slide of the film and pull the other side so that the film is taut and flat. Nikon offers two different glass trays, one that is fixed and one that swivels. Both use anti-newton glass which softens the image ever so slightly and doesn't always eliminate newton rings. Fluid mounting is impossible with Nikon's glass carriers as they are not meant to contain fluid and no one wants fluid leaking into their scanner.

Michael Grecco and Image Mechanics have designed and built a custom fluid mount scanner tray for the Nikon 8000 and 9000. Their tray has a single piece of Pyrex glass to which film can be mounted using mounting fluid. The tray is watertight so you won't have to worry about fluid leaking into the scanner and the glass doesn't have an anti-newton etching which would reduce image sharpness. Fluid mounting fills in surface scratches, reduces dust and reduces the time it takes to clone out these imperfections in Photoshop after scanning. Former drum scan operators like myself love this capability! For more information on this fluid mount scanner tray visit www.freestylephoto.biz/imagemechanics.php or call 800.292.6137.



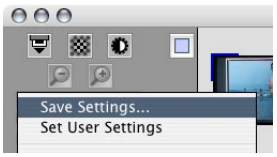
the Image Mechanics Fluid Mount Scanner tray

Speed Tips

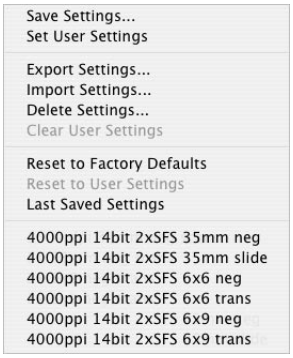
Cleaning originals before scanning will reduce dust and scratch cloning in Photoshop afterwards. Kami makes the best scanning supplies (film cleaners, mounting fluid, wipes, work pads, etc) used by the pros. In the US, you can buy Kami products from Aztek (www.aztek.com).

I think you will prefer using the standalone Nikon Scan software instead of the Photoshop plug-in as it will let you continue working while it scans in the background.

Annoyingly, Nikon Scan will not remember the settings used from the previous scan. If you would like to use the current settings for future scans you should choose “Save Settings...” in the Settings pop-up menu and name them. These settings can then be selected from the bottom of the settings menu for future scans.



I prefer to scan my originals at the highest resolution possible so that I can later use them for any size print. In the lower left screen grab I have saved settings that will provide the highest quality, highest resolution, highest bit depth scan possible for every format I may work with. Pictured on the lower right, Nikon Scan 4 finally comes with some similar and useful presets that utilize 14bit, 2x multisampling and Super Fine Scan.



The older Nikon scanners weren’t exactly known for speed, especially when generating low res previews. If you know the resolution you want to scan at and aren’t using Nikon’s image adjustment tools then you might as well skip prescanning and cropping altogether. This simplifies your workflow within the Nikon software to:

1) Insert film
2) Select frame in thumbnail drawer
3) Select scanning settings
4) Scan

Spend more time in Photoshop and less time in Nikon Scan!

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