Scanner Review

The Imacon FlexTight II and the Nikon LS-2000

By Andrew Rodney

Imacon FlexTight II

The new FlexTight II scanner from Imacon is an ingenious hybrid unit that has more than its share of innovations. The FexTight II is technically categorized as a CCD drum scanner, scanning film on a rotating drum, but the actual sensor is an 8,000-element CCD. The film is "flexed" over a roller in direct sight of the CCD and lens. This eliminates any distortions caused by mirrors projecting the image into a lens, a problem associated with many flatbed scanners. Imacon's "direct line of sight" design produces an exceptionally high-quality scan.

The FlexTight II scans film from 35mm to 4x5 inches. The maximum resolution possible from a 35mm transparency is 5,600 ppi, 1,800 ppi for 4x5-inch film. The dynamic range is stated to be 4.2, with 14 bits per color, and this high-bit file can be saved to disk. The scanner takes up very little desk space, measuring a mere 9.7x13.8x25.6 inches. Great care has been taken to design the unit so that the power supply, CCD, and lamps are shielded from electrical interference, and the lack of noise in the resulting scans is clearly evident.

Imacon developed one of the most clever film carrier designs I've ever worked with for the FlexTight II. Using a flexible magnetic flat film carrier, that opens for insertion of film, it firmly holds the original in place over a small D50 light box on the scanner (see Figure 1). This light box makes placement of the film in the carrier quick and easy, thanks to the grids etched on the light box. Another benefit of the light box is that once the image is prescanned, the film exits the scanner and sits on top of the light box—making it easy for the user to inspect the original while setting the scanning parameters. The conventional drum scanner I use in my studio requires the user to open a lid and turn on the light source to inspect the film. And because the film is taped around the drum scanner's clear cylinder, it is more difficult to inspect.

Figure 1

Imacon's magnetic carrier takes a fraction of the time to load film for scanning compared to mounting it on a conventional drum scanner with tape. The FlexTight II carriers "snap" into perfect alignment on the scanner over the light box, using the magnetic strip to hold it in place. Since the carrier is open, there is no possibility of Newton rings or dust contamination from the two surfaces, a common problem with both flatbed and conventional drum scanners. Imacon supplies a number of film carriers for most common film formats. Custom film carriers are available for a very affordable price of $145. In addition, the scanner can accept reflective originals as large as 8.5x12 inches.

Scan previews are incredibly fast: a 4x5-inch prescan was completed in about six seconds. Imacon claims the scanner is productive enough to scan 15 images per hour, and based on our experience with the product, I see no reason not to believe this. The software that drives the scanner is quite good. It has all the tools and features needed to produce excellent scans. The preview window can be sized as large as the user wishes, and also allows zooming into the preview. The software has an excellent "Auto" button, and we found that the vast majority of the scans required nothing more than a click of the Auto button. Should the user wish to further manipulate the prescan, a full set of editable histograms (red, green, blue, or all three) is available (see Figure 2). A curves dialog is also available, as are adjustable white and black eyedropper tools. The software is fully ColorSync ICC-savvy, and users can scan directly into CMYK (or RGB) using a color profile.

A unique and powerful feature of the FlexTight scanning software is an on-the-fly Unsharp Mask filter. The software allows the user to select two different areas in the prescan and choose an unsharp
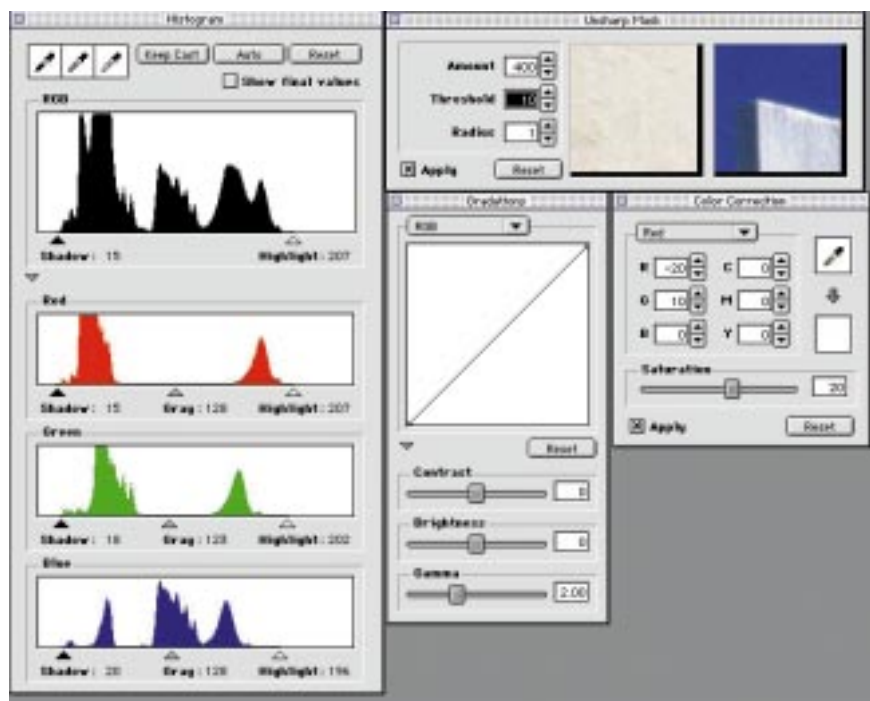

Figure 2

mask setting that the scanner can use to make a quick high-resolution prescan of those areas. This makes picking the right degree of sharpening at the scan stage more precise (see Figure 3). Not even our high-end drum scanner provides such a feature. My only beef is that the numeric scales used for amount, radius, and threshold seem to be vastly different than what I would normally see in an application like Adobe Photoshop. Nonetheless, the ability to see the exact amount of unsharp mask at the scan stage means that it is not necessary to sharpen after the scan—greatly accelerating the production process.

The software even has a selective color palette for changing specific

colors in the prescan. For example, you can make just the blues in an image a bit less cyan. And while the Selective Color could be a bit more robust, it gets the job done simply. I'd also like the ability to selectively affect tonality in an image, but this version of the software only allows you to selectively tweak color. Another minor inconvenience is the manner in which you set image size and resolution. The software has the necessary controls to set magnification and pick specific resolutions, but I'm spoiled with my conventional drum scanner software, which allows me to pick a specific file size or a specific number of pixels running the length of the film. These are very
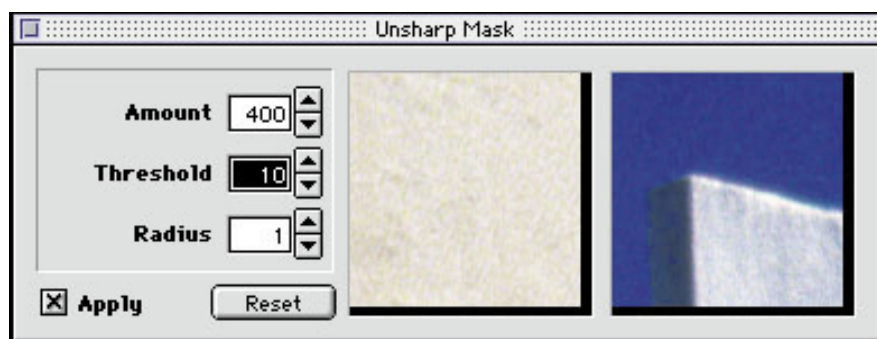

Figure 3

Imacon

minor annoyances, and few scanning interfaces allow me the flexibility of Color Quartet, the software that drives my conventional drum scanner.

The quality of the scans from the FlexTight II were superb. We scanned dozens of images from 35mm to 4x5 inches, including color and black-and-white negatives. Sharpness was excellent and we saw no sign of the noise or pixel blooming commonly found in CCD scanners. The FlexTight II easily exceeded our quality expectations (so much so, we plan to have a unit in our shop full time). At a cost of $16,995, there is not a film scanner that can touch it—even costing thousands of dollars more. With the FlexTight II's unique carrier system, speed, quality, and software, this unit is certainly one of the most impressive scanners I've worked with in many years.

Note: for those who purchased the original FlexTight, which had a 6,000-element CCD, there is an upgrade option available.

Nikon LS-2000

Nikon Electronics has released a new 35mm scanner, with an optional APS film module, that boasts a number of new innovations. The most impressive of these is called Digital ICE technology, which removes scratches and flaws present in the film's emulsion. Unfortunately, the software that drives this new scanner diminishes the advantages of the novel new technologies Nikon included in the LS-2000. The unit has a resolution of 2,700 ppi and a 12 bit per color bit depth. Dynamic range is stated to be as high as 3.6, with scans requiring about 20 seconds. The LS-2000 uses a supplied SCSI II cable to connect to the computer and is compatible with both Macintosh and Windows systems.

The one software feature that is sure to impress users is Digital ICE (Image Correction Enhancement). Developed by Applied Science Fiction Inc., Nikon is the first company to implement this new technology in its scanner. ICE does an impressive job of removing dust, minor scratches, and imperfections on the film,

although one shouldn't expect extremely deep scratches in the film emulsion to be removed. While there is a slight amount of softening noticeable when the ICE option is turned on, it's far superior to the Dust and Scratches filter in Photoshop. I certainly hope we will see other scanner manufacturers implement this technology in the future.

Another positive feature of the LS-2000 is its ability to make multiple scan passes (four or 16 multi-sample scans), which increases dynamic range and greatly reduces the tendency for noise in the shadows. The four-pass scans we made were far superior to single-pass scans, while the 16-pass scans were only marginally better than four-pass scans. However, the software's inadequacies begin to show the minute you start using the multiple scan feature. When the user wishes to create a scan preview, the software reverts to its multi-sample settings, significantly increasing the preview time. Resetting the multi-sample setting to a single scan requires opening a hidden interface palette and
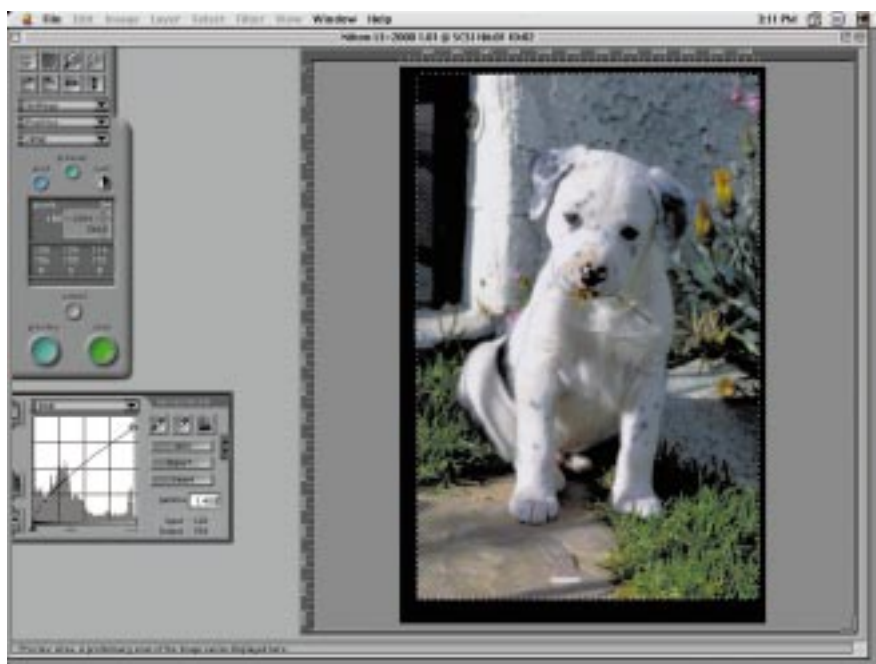

Figure 4

Nikon

accessing a pop-up menu. In fact, most of the controls routinely needed during the scanning process are buried in what Nikon refers to as "Drawers" (see Figure 4). While these may be stylish looking, they are impractical and can be somewhat annoying. I'll take a scanning interface with floating palettes over this design any day.

If you take away the ICE technology, and perhaps the multi-sample technology, what you end up with is a good piece of hardware that is hampered by a frustrating software interface. Hopefully, Nikon will realize this problem and soon ship a greatly improved scanning interface. Or perhaps someone such as LinoType or SliverFast will offer a third-party solution. If you are impressed by the ICE technology (and you probably will be), my advice is to hold off for another scanner that implements this great new technology, or at least wait for a new edition of the scanning software for the LS-2000. ◀

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