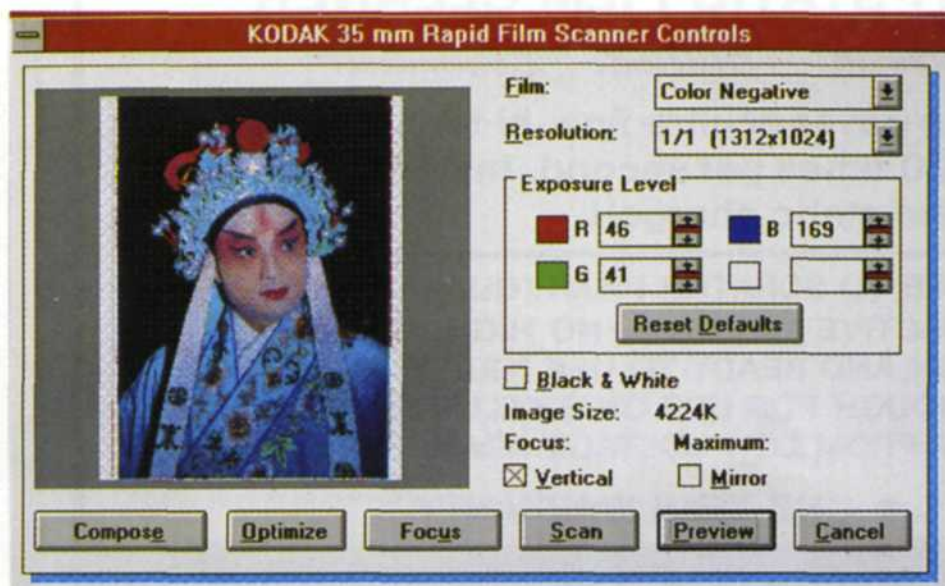


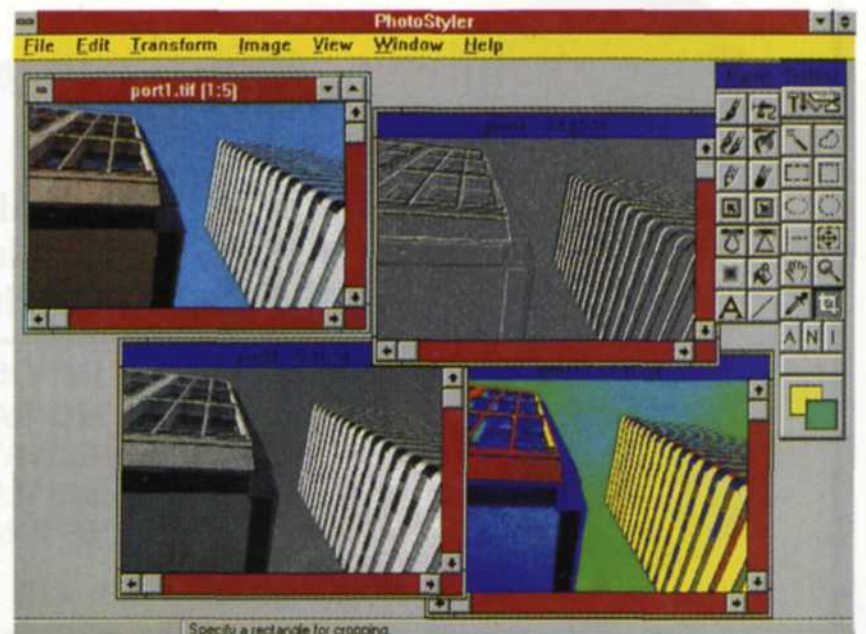
Kodak 35mm Rapid



Image Manipulation Photostyler.

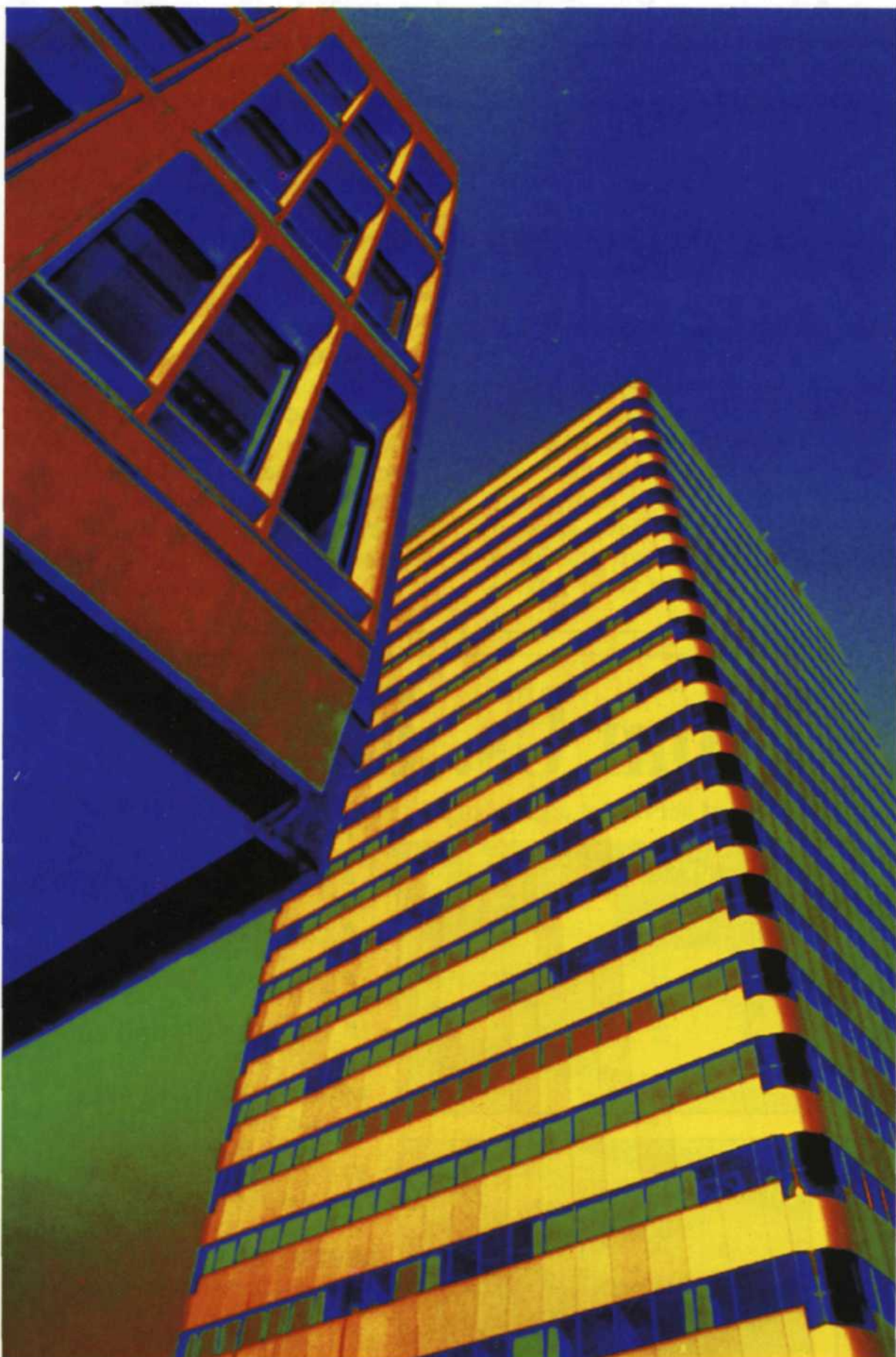


Scanner Edit Screen Photostyler Preview Screen.



Special Effects Preview Screen.

Film Scanner



Posterization Photostyler.

Jack and Sue Drafaht

ONE OF THE most difficult decisions lab managers will have to make in the next few years is just how much they want to get involved with electronic imaging. No matter how much you see and hear at the photo conventions, making investments over \$100,000 for non-traditional lab equipment is really a tough decision. This article is part of a continuing series covering the new equipment flooding the market.

One alternative to making the massive investment mentioned above would be a less expensive system that could supplement your lab services. We'll focus here on the Kodak Rapid 35mm Film Scanner—one answer for smaller labs.

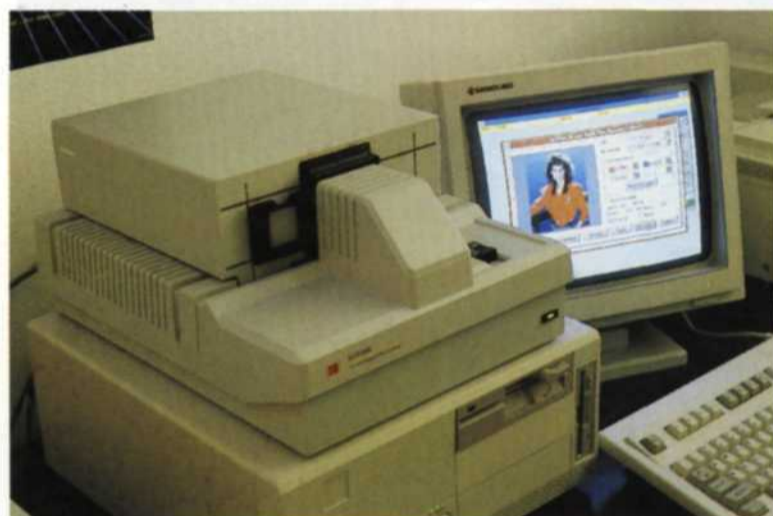
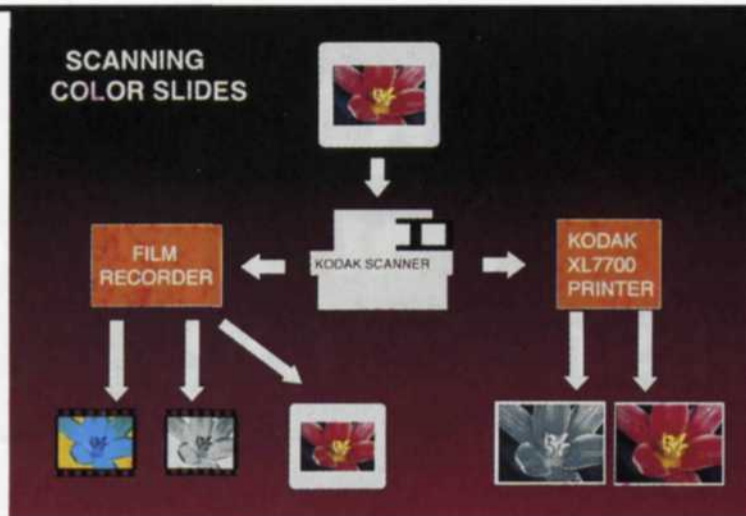
This "introductory" system includes a high speed computer, the Kodak Rapid Scanner, and an output device such as the Kodak XL-7700 color printer or high resolution film recorder.

What can this new scanner do for you? The most obvious answer is that it can scan in slides and negatives and output them to printers and/or film recorders. This would be especially handy for labs that do not have the ability to produce prints from slides. Instead of sending the slide to a larger lab or making an interneg, you can simply scan the slide into your computer and output it directly to a color thermal printer such as the XL-7700. You could also offer black and white print services from color negatives, black and white negatives, and color slides. Using the scanner software, you could fix scratches and restore old photos.

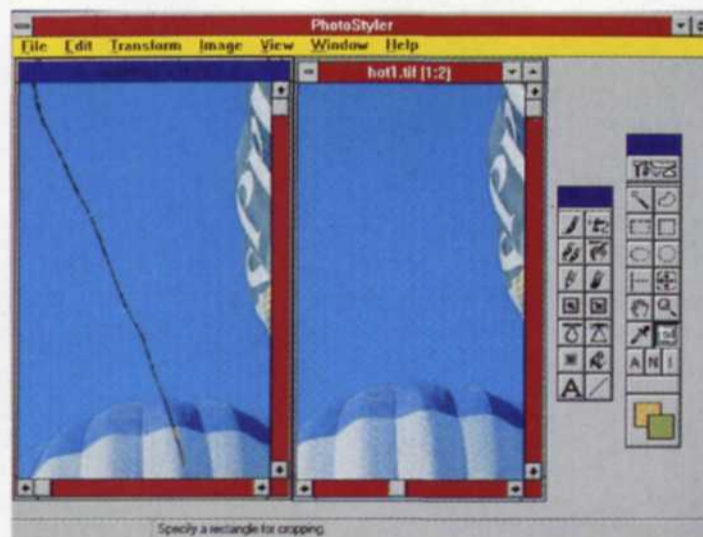
How Does the Scanner Work?

The scanner is about the size of a slide projector and is usually situated next to the computer that will be used to manipulate the images. Communication between the scanner and the computer is with an SCSI (Small Computer System Interface) cable that connects the scanner to SCSI hardware located in the computer.

(Continued on page 24)



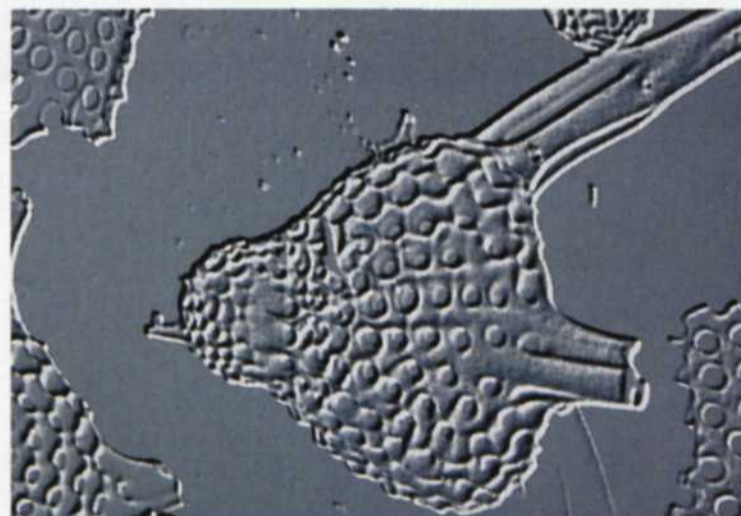
Kodak 35mm Film Scanner.



Scratch repair side by side edit.



Repair of cut neg Photostyler.



Emboss filter Photostyler.

Kodak 35mm Scanner

(Continued from page 24)

sive memory to store these images. You can select the lower resolutions if you are going to use the images at a reduced size along with other photos or graphics.

Full resolution images take about 4 megabytes of disk space, and have a resolution of 1312x1024. Scan time for a full resolution slide or negative can take from 25 seconds to 4 minutes, depending on the speed of your computer. Macintosh FX and IBM 386/486 computers will give the fastest scan times.

If you want to preview the image one last time before the scan, you

can select the "Preview" function and it will make a low resolution scan so you can make any final adjustments. Once you make your final preview, select the "Scan" function. The scanner will then make green, red, and blue exposures through your image, and display the high resolution final image in the edit portion of your scanner software. From there you can make dozens of adjustments to the image before it is output to a printer or film recorder.

Scanner Software Editing Controls

Once the image has been scanned into your computer system, you can alter the image using a variety of

creative and technical methods. The technical controls allow you to change exposure, gamma, contrast, color balance, cropping or file format for saving the image. Some of the creative controls take advantage of various software tools that allow you to change the color of skies, remove scratches, add text, re-attach photos that are cut apart, or just about anything you can image.

Lab Applications

So, now you're halfway convinced that this scanner has potential. But, you still want to know just what it can do for you. Here are a few ideas:

(Continued on page 28)

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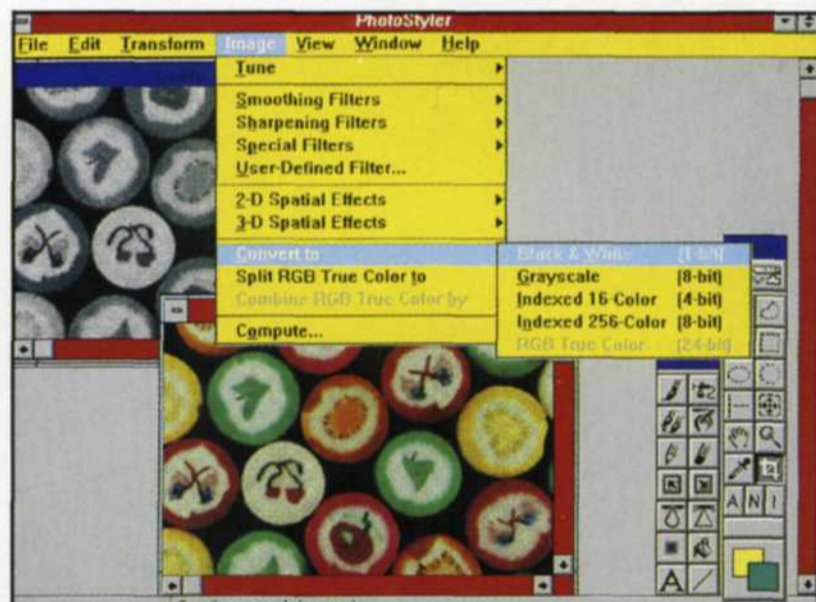


Image Enhancements Printer Screen.

Kodak 35mm Scanner

(Continued from page 26)

1) If a customer brings in damaged slides or negatives, you can use a variety of software tools to repair the damage. The most common repair is from scratches deep in the emulsion. Using the airbrush, smudge or fill tools, you can quickly fill in the scratches, even if they cross several levels of color and exposure.

2) Old and faded color slides can be scanned in and corrected for exposure and color. Once these corrections are made, a new slide can be imaged on a film recorder or a print created on a thermal printer.

3) Customers who want to add text, logos or symbols to their prints

can have you scan in their photos, then add the text extras using graphics software programs and output a finished print.

4) Undoubtedly you will encounter a customer who needs a composite photo of two or more negatives. Simply scan in each negative and combine them using the scanner software. You could even add text before providing the customer with the finished composite print.

5) More and more photographers are getting involved in desktop publishing. They need to have their images transferred to files that can be imported into their own computer systems. You can provide that scanning service.

(Continued on page 30)

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Kodak 35mm Scanner

(Continued from page 28)

6) Customers involved in producing audio-visual shows will love what you can do with their images. Multi-image effects can be accomplished by scanning in several images and placing them in various positions in the film frame. When the images are projected, the effect simulates multiple projectors. The special effects are only limited by the extent of your imagination.

Testing the Kodak Scanner

Installation was very easy for us and it only took a few minutes to put the scanner into operation. The scanner software took more time to understand, and we recommend that it be reviewed before ever starting your first scan.

We found focusing a little difficult at first, but solved this problem by making coarse adjustments with a Kodalith image of a line grid. We found we rarely needed to re-focus an image using our grid focus slide.

The "Optimize" function of the scanner software is outstanding. The color balance and exposure values determined for each image were always perfect. We tried Scotch, Konica, Fuji, Kodak and Polaroid negatives, using only the corrections determined by the "Optimize" function. It certainly does its job well—every image looked great!

We really wanted to see just how well the edit portion of the software worked, so we took drastic measures. Looking through our negative files, we found an excellent color negative of hot air balloons. The next step was to take a graphic arts knife and run the blade across the emulsion so flakes of cyan, magenta and yellow fell on the floor. The destroyed image was scanned into the computer, and in three minutes the scratch was repaired using the select and smudge tools.

Finding this a bit too easy, we took a pair of scissors and cut through another negative and scanned each piece back into the system, rejoined them and made a new image from the two halves. The biggest problem with having all these controls is that you become so wrapped up in altering images, you forget the reason you originally scanned the photo.

Conclusion

The Kodak Rapid Film Scanner is designed to work fast and efficiently. This scanner was targeted for the one hour labs, desktop users, or audio visual houses. Because its highest resolution is 1312x1024 lines, it may not be satisfactory for high-end users.

The scanner's versatility is excellent. It allows almost any 35mm image to be scanned, manipulated, modified and improved before it is output to a variety of devices. With this dynamite tool your creative juices can go into overtime. The sky is the limit, and even that can be manipulated to a brighter blue!

If you are thinking of taking the plunge into electronic imaging, check out your options carefully. Following are the specs for the Kodak Scanner:

Power: 120 Volt 60HZ or 220-240 Volt 50/60HZ

Warm-up Time: none

Resolutions: 1312x1024 pixel area.
Subsamples down to 1/64 area

Film Type: Color negative, slide and B&W negative

Color Levels: 256 levels per color
Color Separation Method: CCD area array sensor, RGB filter wheel, Xenon strobe

Computer Interface: SCSI (Small Computer System Interface)

File Size: 4 megabyte at full color,
1.3 megabyte at full B&W

Size: 12.38 in. wide x 16.62 in. long
x 7.62 in. high

Weight: 21 lbs.

Price: \$6,995

Kodak info number: (800) 445-6325.

Aldus PhotoStyler (\$795)

Aldus Corp.
411 First Ave. South
Seattle, WA 98105

Adobe PhotoShop (\$895)

Adobe Systems, Inc.
1585 Charleston Rd.
Mountain View, CA 94039

Jack and Sue Drafahl own and operate a full-service commercial photo lab just outside Portland, OR. Services include audio visual productions, computer graphics and stock photography. The Drafahls are also contributing editors to Petersen's Photographic, and specialize in photo lab procedures.