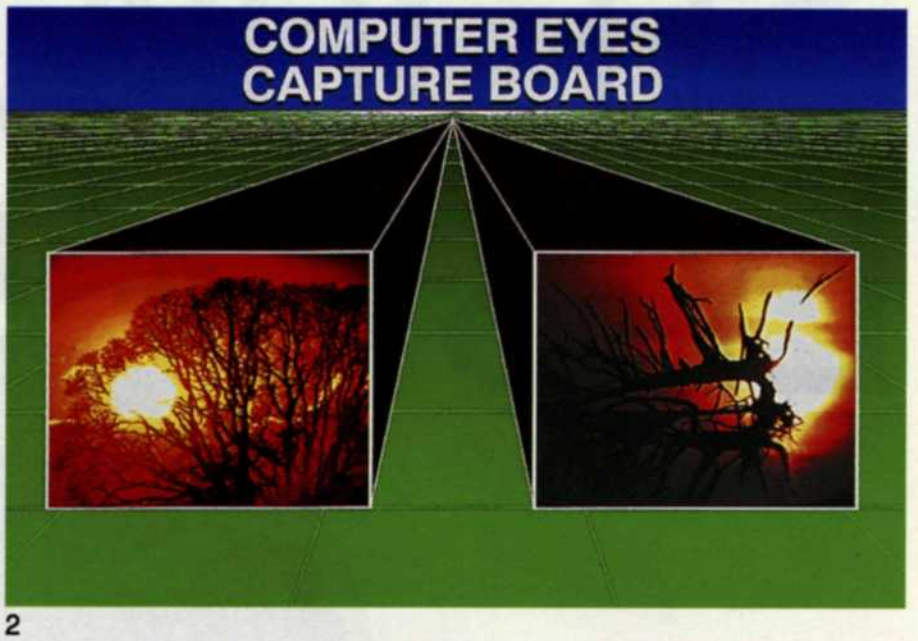
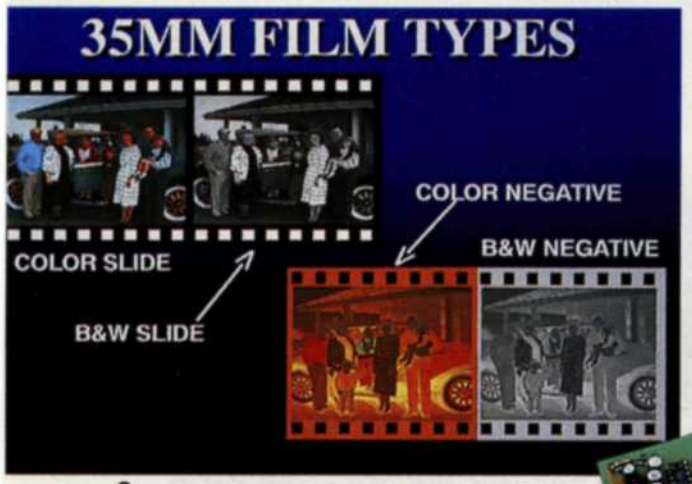
1



2



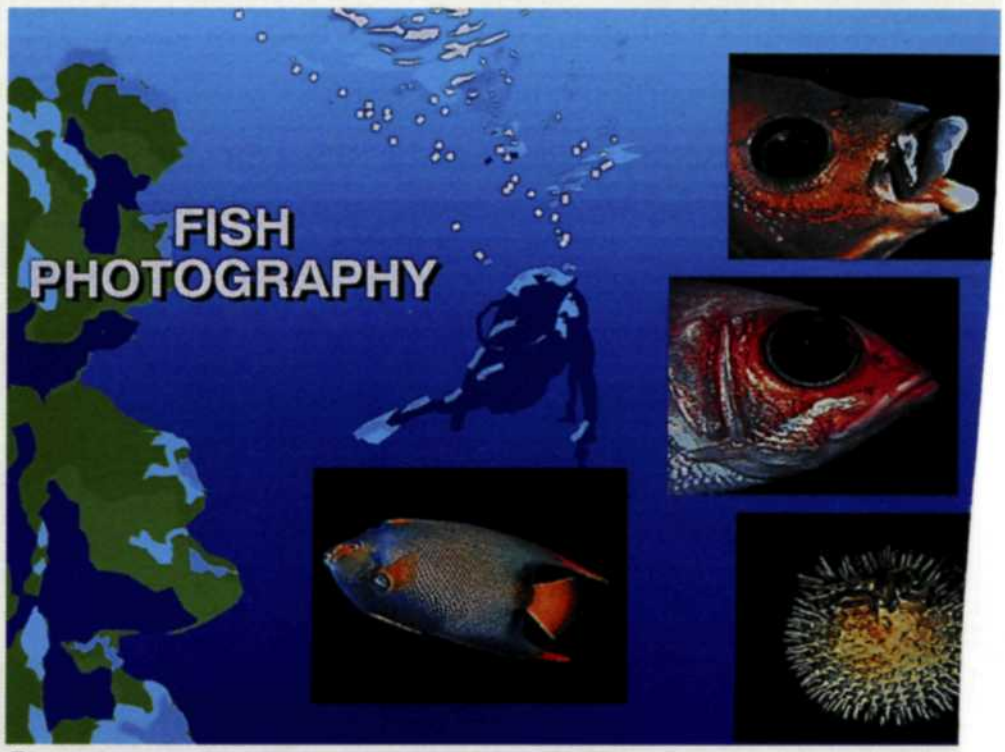
3

4

5

ALL COLOR PHOTOS BY AUTHORS

6



7

COMPUTER EYES

Image-Capture Board for Photography

By Jack and Sue Drafahl

PHOTOGRAPHIC'S USER REPORT

Until a few years ago, still photography, video, and computers all lived in separate worlds. Now all that has changed. Software and hardware manufacturers have developed new techniques for combining those media into one versatile photographic tool called an image-capture board. With the introduction of capture boards, photographers can now move their favorite photos into the video media and onto computer screens. In this product review, we will show you one of the more popular image-capture capture boards, called "Computer Eyes," and how it can be used by photographers.

WHAT IS A CAPTURE BOARD?

An image-capture board is a circuit board that plugs into your computer and is controlled by software in the computer. A video camera, still-video camera, VCR, or video-display device such as the Tamron Fotovix, is attached to the end of the circuit board. Slides, prints, or video images are then converted into a video signal by one of these devices. The image is then placed on the computer screen, where it can be modified or edited for use in other media. The final image can be mixed with other images, computer graphics, or incorporated into a desktop-publishing format.

HOW THE BOARD WORKS

Digital Vision, the creator of Computer Eyes, started making economical capture boards in 1984, and continues to make a variety of capture boards for various brands of computers. The eight-inch Computer Eyes board fits easily into most computers. Special software that operates it is installed on the hard disk or kept on the floppy disk.

If you want to capture images with your video camera, you use one of the two jacks furnished on the back edge of the board to attach the camera and card together. You then will be able to preview the image on the computer screen. Once you have the desired scene, press the capture function and the image is captured to memory. This image can be manipulated in a variety of ways, and finally sent to computer files, desktop publishing on a laser printer, or to a film recorder.

The VCR works in a similar manner, except you must pause the VCR image while making the capture. A video viewer is an excellent candidate for use with the capture board. The video viewer is for photographers who want to preview slides and negatives on a TV monitor without having to make prints or project the slides in a slide projector. (See the Tamron Fotovix article in the August 1990 issue of PHOTOgraphic.) The video viewer connects directly to the capture board and eliminates the need for a separate monitor on the video viewer itself. The image is viewed directly on the computer screen, where it can be adjusted in contrast, brightness, and color balance.

FIELD TESTS

Installation of the board itself took less than ten minutes, and required no special modifications. We then took an additional ten minutes to install the software on our hard disk. We started up the program and were presented with a blue-and-cyan menu screen. Our first test was conducted using an IBM clone and a VGA screen. Red letters in the lower right indicated that we had no video signal, so we attached an RCA cord to the back of the card and attached the other end to our video camera. We pointed the camera at a library shelf full of books and turned on the camera. The "No Video Present" changed to "Video Present."

We then pressed the preview function and a video image of our bookcase came up on the screen. After we pressed the capture function, the computer started making a ticking sound and the picture began to scan across the computer

1. A video camera was mounted on a copy stand and set up to copy the color print of a butterfly. The video image was then captured into the computer using Computer Eyes, and combined with computer-graphics symbols and background from the Microsoft "Powerpoint" graphics program.
2. To produce this image, the video camera was set up on a slide duplicator, and the two sunset images were captured via the Computer Eyes board. They were manipulated to the desired contrast and intensity, then mixed with the Zenographics "Mirage" graphics program.
3. A color slide was captured into the computer and manipulated with the Computer Eyes software. The color slide was reversed and shifted in color to create the color negative. The color slide was then changed to a full gray tone to create the black-and-white slide. Finally, this black-and-white slide was reversed to make a black-and-white negative. All four images were combined with text and graphics to create a photography-lecture slide.
4. A captured image of a color print was duplicated several times and positioned behind a computer-graphic mask of the word "FLY."
5. Computer Eyes consists of hardware, software, and book—a complete package for the photographer.
6. Several slides were captured into the computer via Computer Eyes and combined with text and colored backgrounds to create a color slide that could be used as a title slide for a slide presentation.
7. Pictures captured using a video camera on a copy stand with a slide duplicator were combined together with graphic images from Ashton Tate's "Draw Applause II" graphics program.

All photos were output onto Fujichrome Velvia slide film using an Agfa Forte film recorder. Readers can get the same quality images by taking their computer image files to a Slide Bureau for imaging. Other output devices for making your final image include thermal color printers, laser printers, and smaller desktop film recorders.

STOP

Before you get locked into any Medium Format System...get this FREE Buying Guide.

Find out about all of your medium format options

• 6x4.5cm • 6x6cm • 6x7cm and Polaroid

• Check the limited time **FREE $600 BONUS PAKS** or up to **$500 CASH REBATE** offers on the Mamiya RZ67, RB67 Pro SD, M645 Super and Mamiya 6.

☐ Please send me the Mamiya Medium Format Camera Buying Guide and Rebate and Bonus Pak Certificates.

Attach business card or print your name and address below.

Name_____

Address_____

City_____ State_____ Zip_____

Check if you own a Mamiya:
☐ M645 ☐ RB ☐ RZ ☐ C330 ☐ M6

Mail to: Dept PP9

MAC Mamiya America Corporation
8 Westchester Plaza, Elmsford, NY 10523

COMPUTER EYES

screen. In about 12 seconds, the screen returned to normal. This was relatively easy compared to some of the computer hardware applications we had seen in the past.

A picture of our bookcase was not very exciting, so we mounted the video camera on our copy stand, and placed several different black-and-white and color prints under the lens. We previewed each subject and saved the image to disk. In each case the computer screen indicated the screen resolution (320x200) or (640x480), how many colors (256), and how long it would take to capture the image (12–24 seconds).

Next, we eyed our slide duplicator. We removed the 35mm camera and installed the video camera in its place. We set the camera to extreme macro, and started going through our slide files. After copying more than a dozen subjects from our files, we decided to "play" with the images we had saved on our hard disk. Manipulation of these images is done through a function called "Image Enhancement." When we pressed this function, a new screen appeared. We had our choice of nine adjustments to the image.

The first is called "Adjust Palette." With this function you can lighten or darken, increase or decrease contrast, and alter the overall color balance of the picture. The second and third adjustments allowed us to smooth or sharpen the overall image. "Flip" turns the picture around, and "Invert" changes negative to positive, or positive to negative. The "Shrink/Expand" and "Scroll" commands do exactly as the name indicates. The last two adjustments convert the image to high contrast or halftone.

On an additional menu, we found that you could also change the overall format (graphic display) of the image. For instance, you could change a full-color image to a full black-and-white image, or posterize it using the false-color control. We found that by combining the "Convert" command on the previous screen, we could come up with some nice variations. For example, we changed a full-color slide image to a black-and-white picture using the format change, and then used the "Invert" command to change the image to a black-and-white negative. We then adjusted the contrast with the palette control, so that it looked exactly like a black-and-white negative. At each step we saved the image as a new image. We then converted the image to a color negative, posterized it, made it into a high-contrast negative and positive, and finally converted it to a halftone. All these variations were done using only about ⅓ of the controls possible. We then combined several of these images into a computer-graphics program, and created several photography lecture slides that we would use later.

CAPTURING IMAGES AWAY FROM YOUR COMPUTER

In some cases, we wanted to use the video camera to capture outdoor scenes, but couldn't lug the computer along with us. The solution was to take a camera tripod, and record 20–40 seconds of the still subject we wanted to capture. When we returned to our computer room, we plugged in the video camera and played back the images. As soon as the desired image came into view, we pressed the capture function. If we photographed a subject that moved, there was a pause mode that captured the image "frozen."

If you own a still-video camera such as the Canon Xap Shot, you would merely shoot your pictures on location, and then bring them back to your computer where you would transfer them to the capture board.

IS THERE A COMPUTER EYES BOARD FOR YOUR COMPUTER?

Variations of the Computer Eyes board are available for Macintosh, Apple II, Commodore, Atari, and IBM computers and their compatibles. Black-and-white and color versions of the board are available, varying in price from $249.95 to $449.95, depending on which computer and version of Computer Eyes you select. Each board and its accompanying software features a variety of import and export file formats compatible with your specific computer.

CONCLUSION

We found the Computer Eyes capture board to be a versatile tool for a variety of photographic applications. The software and hardware are extremely easy to use and will give excellent results in a matter of minutes. We feel that the capture board is an excellent way for photographers to economically experience the excitement of combining video, photography, and computers.

For further information, contact Digital Vision, Inc., 270 Bridge St., Dedham, MA 02026; (617) 329-5400. ■