

KODAK EKTACHROME P1600

A New, Super
Superspeed
Slide Film

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PHOTOGRAPHIC'S USER REPORT

Long lenses and long exposures have always been a problem for photographers trying to capture those special photos. One solution has been to use very fast lenses. This solution is long on expense and bulk, so the approach employed by most photographers is to use very-high-speed film. Instead of fine-grain pictures with blurred images, the trade-off is sharp pictures with larger grain. In the past, high-speed color-slide films were a last resort, but with Kodak's introduction of its new Ektachrome P1600 film, we need to take a new look at the whole subject of super-speed films.

FIRST LOOK

One of the best parts of reviewing films for *PHOTOGRAPHIC* is being among the first to use the latest and greatest products from the film manufacturers. It had been quite a long spell since a brick of plain yellow boxes showed up on our doorstep. These were crudely marked "Kodak P1600—push-2-stop slide film." No data sheet, no instructions, just film. We grabbed a camera, loaded a roll, set the ISO to 1600, and aimed the lens out the back door, as it was pouring rain. We set the autobracketing to 11 exposures, in $\frac{1}{2}$ -stop increments, so we could see the film's exposure latitude on the first roll.

After photographing some very boring subjects, we moved into the lab, set the computer on our E-6 processor for a two-stop push, turned off the lights, and loaded the film in the processor. An hour later, we put the first roll on the lightbox and grabbed our best loupe. We immediately noticed that the expo-

sure latitude seemed wider, the grain structure much finer, and the color saturation much better than those of the Ektachrome P800/1600, the new film will be replacing.

The new P1600 definitely needed more research and testing. We put in a quick call to Kodak for more information and data sheets. For those who want to know just what's new about this film, here's the information that Kodak passed on to us.

LIGHT-MANAGEMENT EMULSION TECHNOLOGY

Kodak's solution to improving its high-speed technology was to utilize its R and D from other films, and blend the best into one high-speed emulsion. Incorporating the T-Grain technology found in many other Kodak films improved sharpness and reduced graininess. Kodak also used a new class of yellow coupler, along with new yellow and magenta filter dyes.

Another special technology utilized in this new emulsion is called an "inter-layer scavenger." Basically, this prevents cross-talk of color between emulsions, resulting in better color reproduction from subject to film. Finally, new spectral sensitizers have been added, to improve the film's response to a variety of lighting conditions. The combination of all this new and old technology improves shadow detail and provides a better D-Max.

Ektachrome P1600 is a daylight-balanced 400-speed film that is designed to be pushed two stops to 1600, and actually produces better results at 1600 with push-processing than at 400 with normal E-6 processing. It can be used under tungsten light with an 80A or 80B filter and a rating of 800. If the light source is predominantly fluorescent, you can use a fluorescent-correction filter (in most cases, a CC30 magenta filter will provide adequate correction). Exposure corrections between 1 second and $\frac{1}{10,000}$ are unnecessary, and pretest-

ing, or bracketing exposures, should be done if you exceed these values.

FIELD TESTS

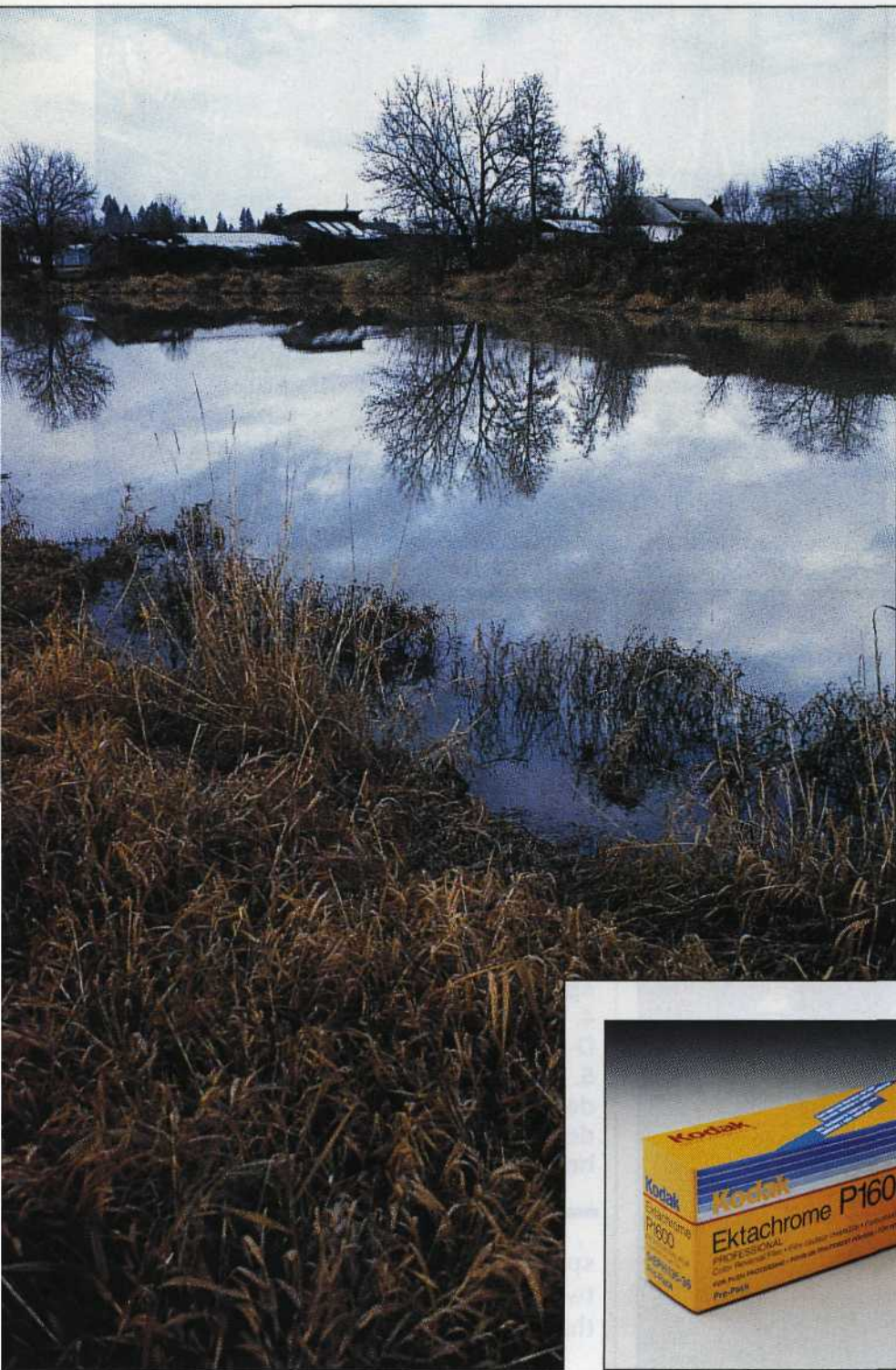
The forecast for the next two weeks was rain, with the possibility of more rain. The sun was going south for a couple of weeks, which made it perfect testing weather for a superspeed film, but not necessarily ideal for our temperaments. We looked for prime lens candidates to use for the field tests, and found a couple that were very compact and slow. We grabbed half a dozen rolls of P1600, and headed for the dark, rainy streets of our city.

Our first stop was the main square, where many of the locals stop to enjoy a pleasant lunch hour. Our first subject was a man feeding pigeons on the brick steps of the center square. A 300mm f/5.6 lens allowed us to capture the action from the opposite side of the square, yet keep the scene as natural as possible. With ISO 1600 film, we were impressed when the speed indicator hovered around $\frac{1}{2000}$ at f/5.6. We were thankful for the fast shutter speeds, considering that we had to handhold the long lens, and the pigeons were in constant motion.

As we loaded another roll and headed to our next destination, we spotted a woman a block away in a red raincoat with red umbrella. She was moving away from us at a brisk pace, and the camera's autofocus system was working overtime as we squeezed off a dozen exposures. We finished the roll with wet pedestrians, and decided that it was time to come in out of the rain and reload for some interior testing.

We switched to a 20mm lens and set the aperture to f/5.6, so that everything would be in focus. Tripods were not allowed in the building, so we handheld each shot. The lighting included diffused daylight, tungsten, gelled lights, and a smattering of fluorescent lights. Sprinkle in a few people on escalators, and we had the perfect situation for testing this high-speed film. We set our autobracketing to $\frac{1}{3}$ -stop increments, and ran off several 11-step series. Shutter

1. Ektachrome P1600's great speed lets you shoot handheld in poor lighting, yet still maintain adequate depth of field.
2. New Ektachrome P1600 is available in individual 36-exposure 35mm cassettes, and in five-roll Pro-Packs.
3. Rainy-day shooting is easy with ISO 1600 film. Note the excellent red tones.
4. A good D-Max black is lacking in most superspeed slide films, but P1600 shows a good one.
5. Handheld night photography is possible with a 1600 film speed.



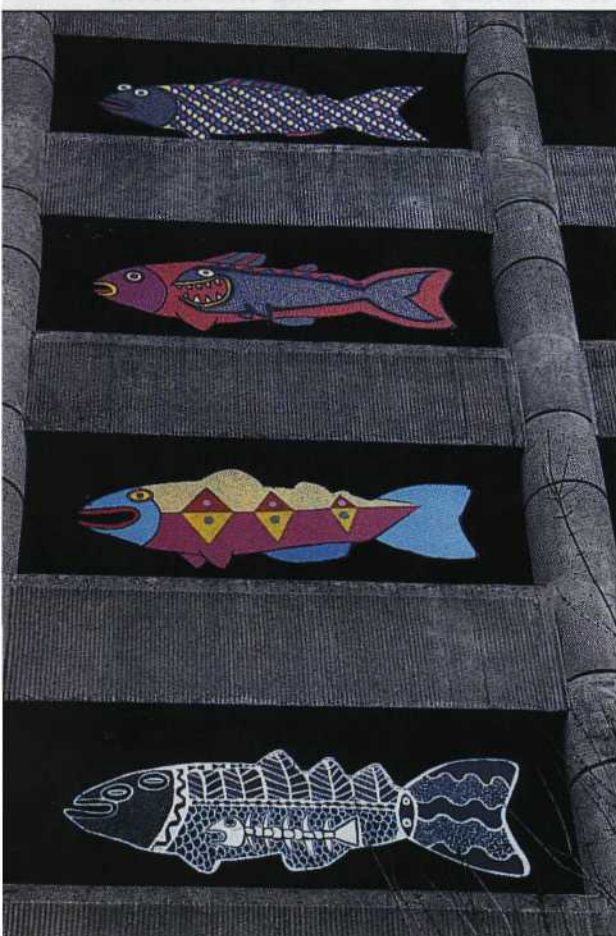
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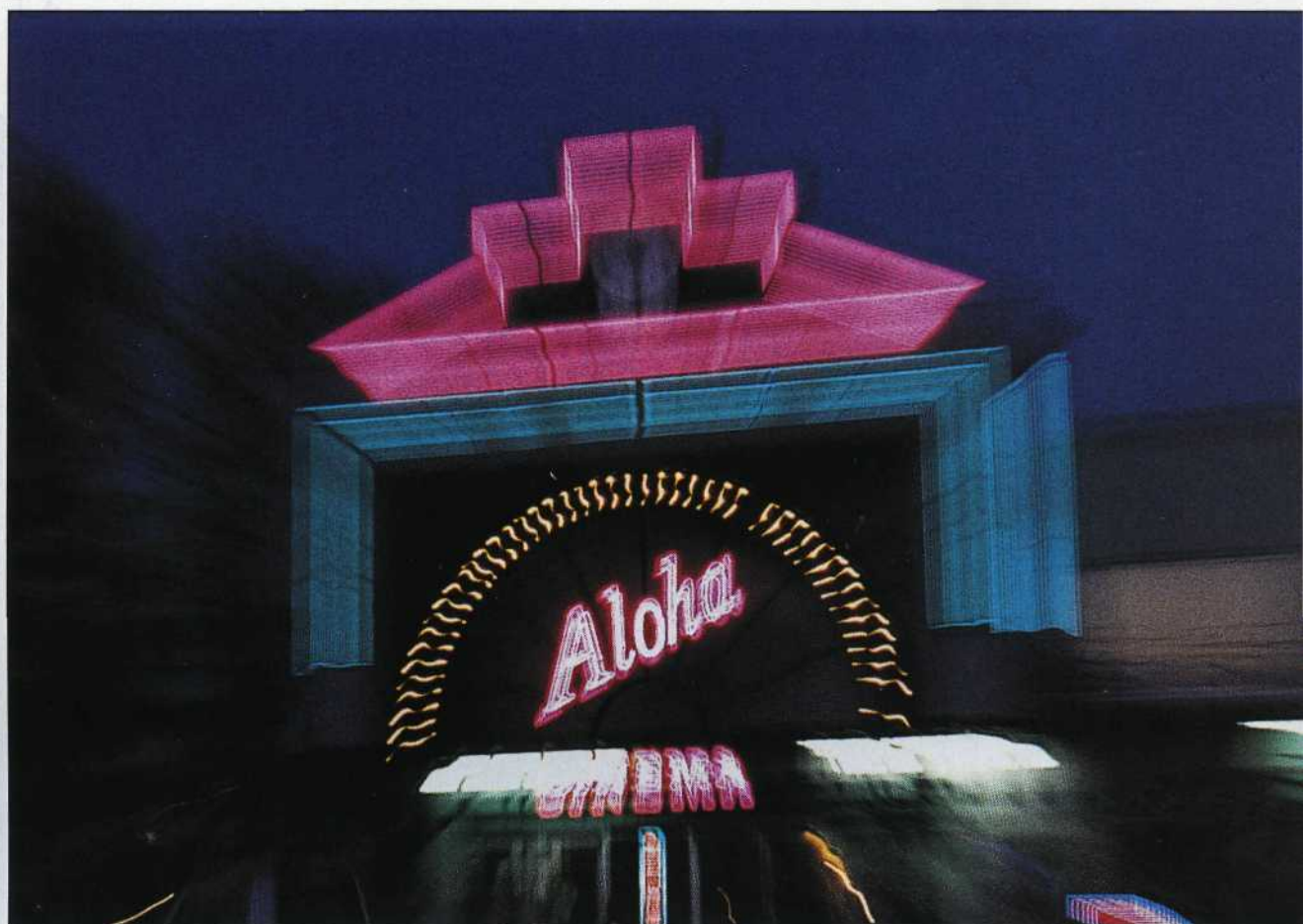
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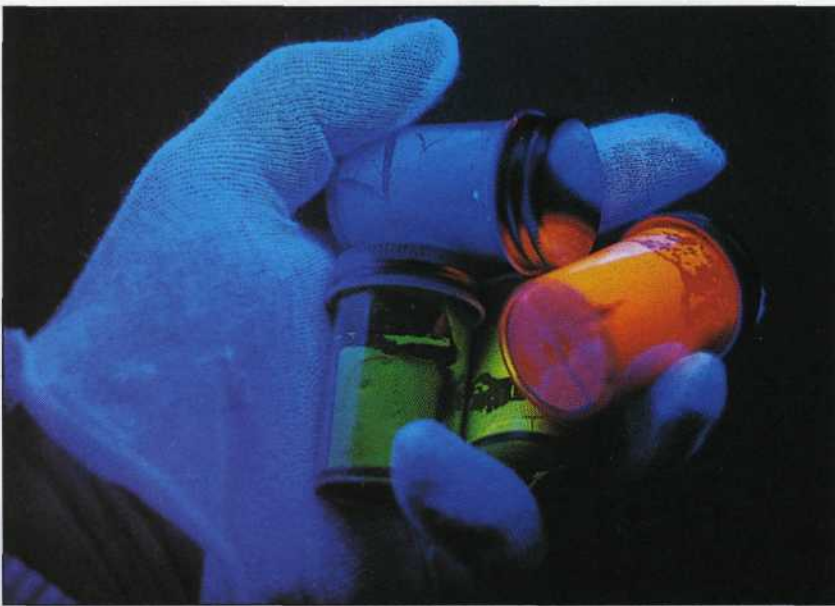
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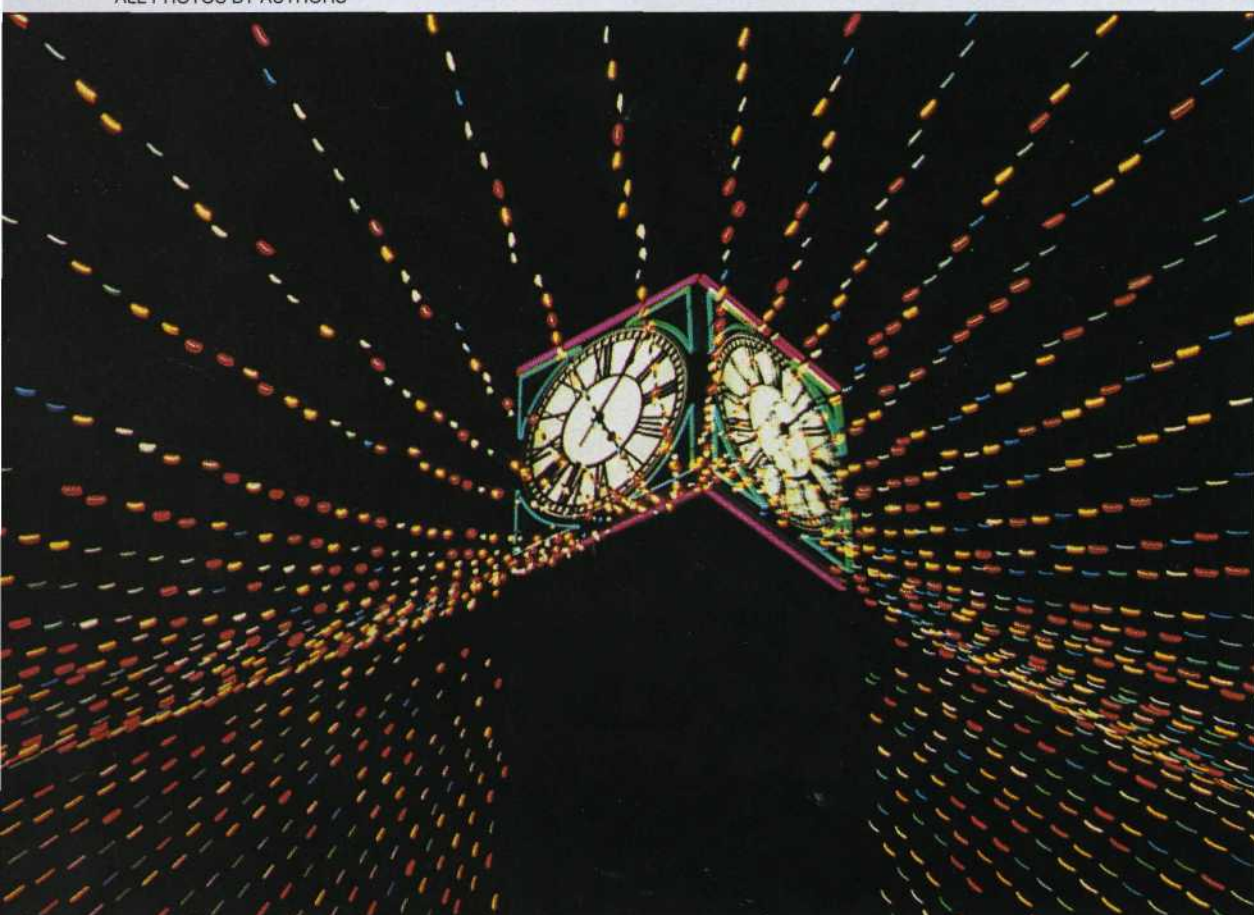
ALL PHOTOS BY AUTHORS

KODAK P1600

1. Providing exposures of $\frac{1}{25}$ at $f/8$, Ektachrome P1600 makes possible handheld blacklight photography of fluorescent-painted subjects.
2. Color reproduction and sharpness of detail are excellent for a 1600-speed film.
3. P1600's high speed enabled us to photograph this scene handheld with a 300mm lens, while retaining good image quality.
4. Handheld night shooting with a good D-Max black—P1600 makes it possible.
5. Ektachrome P1600 is sharp enough, despite its superhigh speed, to use for detail shots, and let us get them while handholding a 300mm lens.

speeds for the base exposure ran between $\frac{1}{25}$ and $\frac{1}{250}$. It was hard to believe that getting the shots could be so easy.

Back in the studio, we conducted a "weird-lighting test," using fluorescent paints and a blacklight. When we have tried this combination with previous



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films, it required long exposures and a tripod. With the P1600, we were able to handhold the camera for $\frac{1}{25}$ at f/8 with a standard macro lens.

The final test was to copy the Macbeth color chart. We ran a series of bracketed exposures on two rolls of P1600, so we could process them at different EIs for our push-processing tests.

THE RESULTS ARE IN

We processed the city scenes at a two-stop push and viewed them on the lightbox. Our first roll, of the man feeding the pigeons, was most impressive. The bricks were sharp, the movement of the pigeons was frozen in time, and the color saturation was excellent. The grain was still there, but its structure was much tighter than with P800/1600, and it seemed to "hide" better in the scene. The sharpness of the lettering in the sign located in the lower right corner of the image was far better than we ever could have imagined. The ISO 1600 exposure was the best, and exposures up to $\pm\frac{2}{3}$ stop on either side were good.

We were pleasantly surprised with the number of good images of the elusive lady with the red umbrella. With all the movement, low light, and handholding of the long lens, we were still able to get several sharp pictures. However, the best part of all was the intense saturation of the reds, which looked as good as they do with many of the slower slide films on the market. The grain in the out-of-focus areas beyond the umbrella was considerably less than we would have found if we had used one of earlier ISO 1600 films.

The roll of interiors shot with mixed lighting showed perfect depth of field and stopped action. The color balance was on the money, but the correct exposure was not at the center of the bracket test. The +1-stop exposure captured the best range from highlight to shadow.

The D-Max level in all the shots we took at ISO 1600 was the best we have ever seen at this film speed, and was very similar to that of many of the ISO 400 slide films used today.

The push tests of the P1600 did not come out the way we expected. We assumed that, if the two-stop push was excellent, the one-stop push (ISO 800) and "normal" (ISO 400) rolls would be better. Not the case. Of all the push-pull tests we tried, we preferred the recommended ISO rating of 1600. We also tried a three-stop push to ISO 3200, but felt the loss of quality in the D-Max was not worth the trade for one extra stop.

CONCLUSIONS

Common photographic sense dictates that quality comes with lower-ISO

films. The problem is that the world offers diverse lighting situations, and subject movement can't always be controlled. This often rules out the use of the slower films. When the situation demands speed, you need a film that can help you achieve the desired results, and yet maintain the best quality possible. Kodak Ektachrome P1600 film gives photographers that competitive edge, rain or shine.

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