Fujichrome MS 100/1000 Professional Slide Film

Speeds from EI 100–1000, with great image quality

by Jack and Sue Drafahl

Manufacturers provide an assortment of films to handle just about every photographic situation, because the quantity and quality of light varies as it falls upon a scene. Every time a photographer grabs a camera, a decision must be as to how many rolls of each film speed will be needed to cover all possible situations. If the photo world were perfect, we would only need one type of film to capture all the scenes we encounter. Fuji recently introduced a new transparency film dubbed Fujichrome MS 100/1000 that offers another solution. Use only one film and decide the film speed when you load the camera. Push-process the film exposed at higher EI speeds and process the rest at normal speed. Now, this concept is not new, but until recently, the resulting film quality fell short.

The concept of this multi-speed film is to be able to expose it at any speed from 100 to 1000 with very little change in image quality, color and contrast. That's a tall order, considering the fact that past films pushed 1–3 stops had drastic changes in image quality. So, now how is this possible? Film manufacturers don't try to re-invent the wheel every time they come out with a new film emulsion. Instead, they build on the technology they have developed for other film emulsions. They pick the best features and continue to improve it more. If each film had to start from scratch in its development, it would be

At its base EI 100 rating, MS 100/1000 can hold its own with the best of the ISO 100 color-slide films in all regards—fine grain, sharpness, color saturation and contrast. This makes it a great all-around slide film—if ISO 100 is fast enough, you give up nothing; if you need more speed, you get that, too—and then some. Note how, despite the saturated colors, whites and other neutral tones remain neutral. Natural colors reproduce well.

ALL PHOTOS BY JACK & SUE DRAFAHL

years before we would see new films. The Fujichrome MS 100/1000 emulsion builds on the technology from some of the latest Fujifilm emulsions such as Fujichrome Astia. All three emulsion are very similar in their scene capture, except that the new MS emulsion has greater tolerance to pushing beyond one stop.

Fujichrome MS 100/1000 incorporates two new emulsion technologies, in addition to three from past emulsions. Here is a brief description of each technology and how it affects Fujichrome MS 100/1000.

DDG (Distinctively Developing Grain): This is the next level of improved technology borrowed from Astia 100. This technology is used to raise the EI speed of the film as the development time increases. The key to this technology is that the tonal color balance is maintained as the film increases in speed. Images of the same subject exposed at different film speeds and processed at different times will look very much the same, and you can mix different-speed images with little difference in image quality.

MFIL (Multi-Functional Intermediate Layer): This is yet another technology borrowed from Astia that applies to each film layer, resulting in similar color accuracy at different EI ratings. In other words, a red shirt shot at EI 100 and at EI 400 will have the same tones of red. Contrast and tonal curves remain at similar levels throughout the entire range of pushing.

AGC (Accurate Gradation Control): Triple sublayers in each light-sensitive layer give the film a smooth gradation from deep shadows to bright highlights. This also maintains minimal increase in grain structure as the film is pushed to its limit.

SUFG (Super Uniform Fine Grain): Fuji's super fine grain technology is used in this emulsion to provide the finest grain structure, even when the film is pushed three stops.

DIR (Development Inhibitor Releasing Compound): This is one of the original emulsion technologies that is responsible for keeping the colors from bleeding into one another. This gives the processed images clean, brilliant, realistic colors. For example, solid greens and neighboring reds stay in their own areas, forming a sharp line where they meet.

IN USE

Using this film is really quite simple. When you load a roll, just select the EI that best fits the situation you're photographing. When you get to the end of the roll, mark the appropriate square on the side of the film canister and send it to the lab for processing. The corresponding EI rating and E-6 developer times are as follows:

EI 100	N	Normal processing
EI 200	P1	6–8 minutes
EI 400	P2	11 minutes
EI 800	P3	14 minutes
EI 1000	P4	15 minutes

It is very important that your lab follows Fujifilm's recommended first-developer push-processing times in order to achieve the desired results. Some labs base their film push times on the processor equipment manufacturer's recommendations, which very often do not agree with those of the film manufacturer. Also, keep in mind that most amateur photofinishers do not provide push-processing services, so this film should be handled only by a professional E-6 lab.

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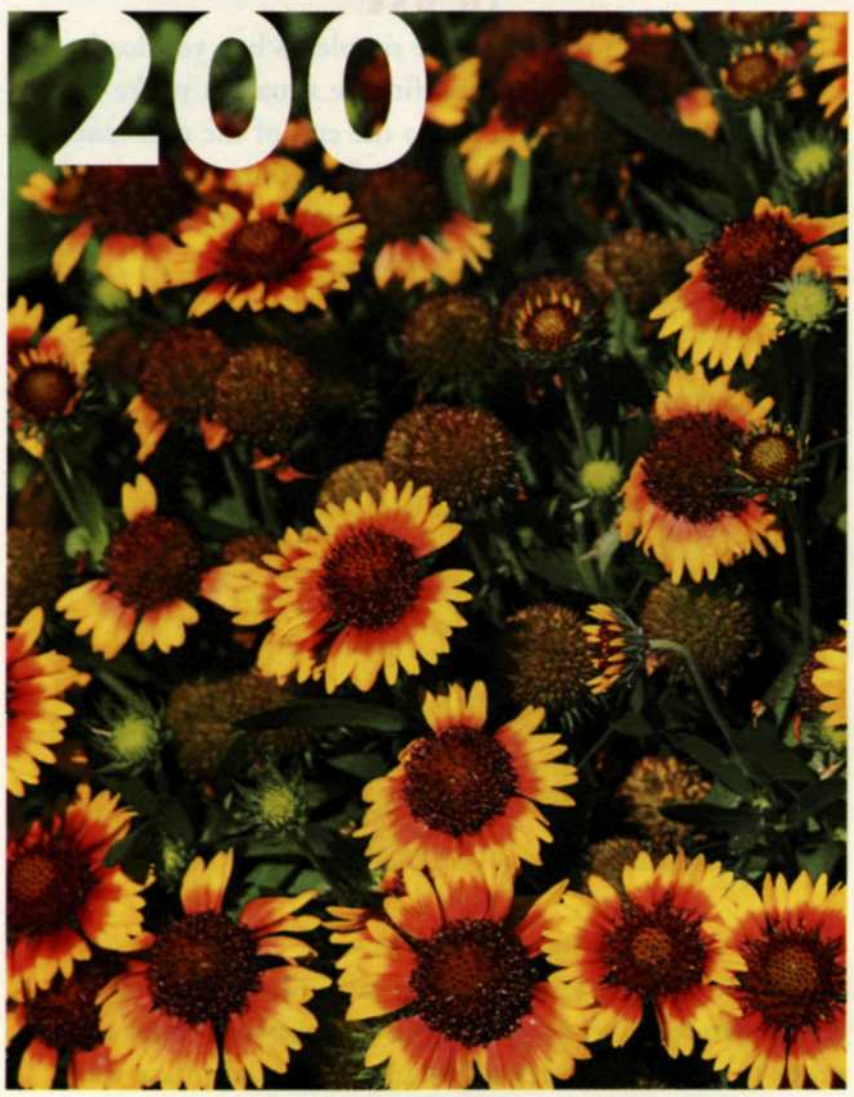
manually set the film speed when you use anything other than the normal EI 100 setting. Remember to set the EI back to the auto DX coding setting when you go back to normal film settings, or you may find yourself trying to push a film that wasn't exposed accordingly. You should also run a test roll with your favorite processing lab, as all photo labs are not created equal.

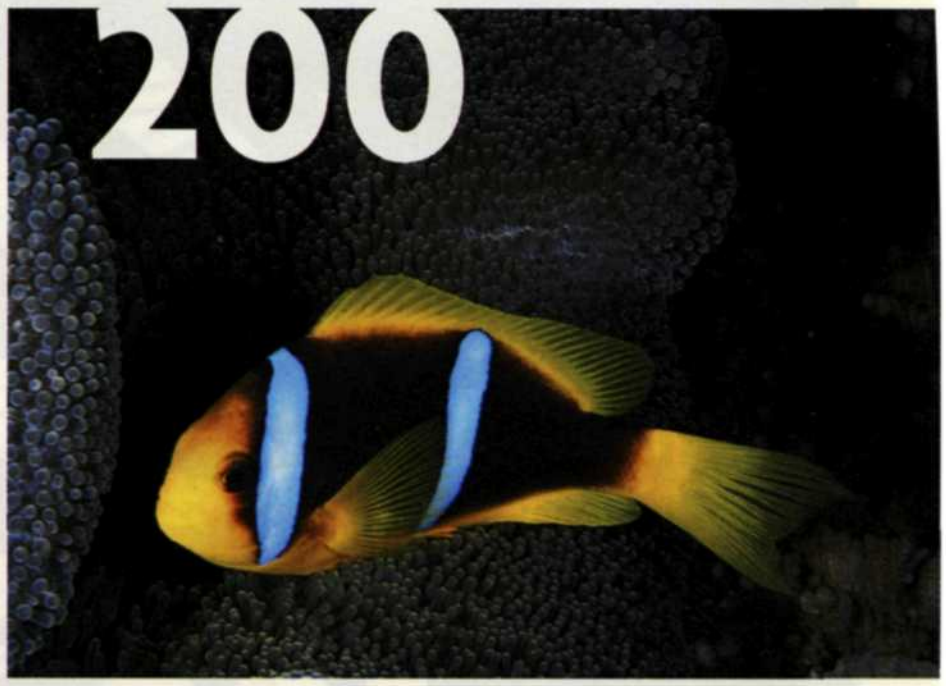
Fujichrome MS 100/1000 responds to lighting conditions other than sunlight much the same as previous

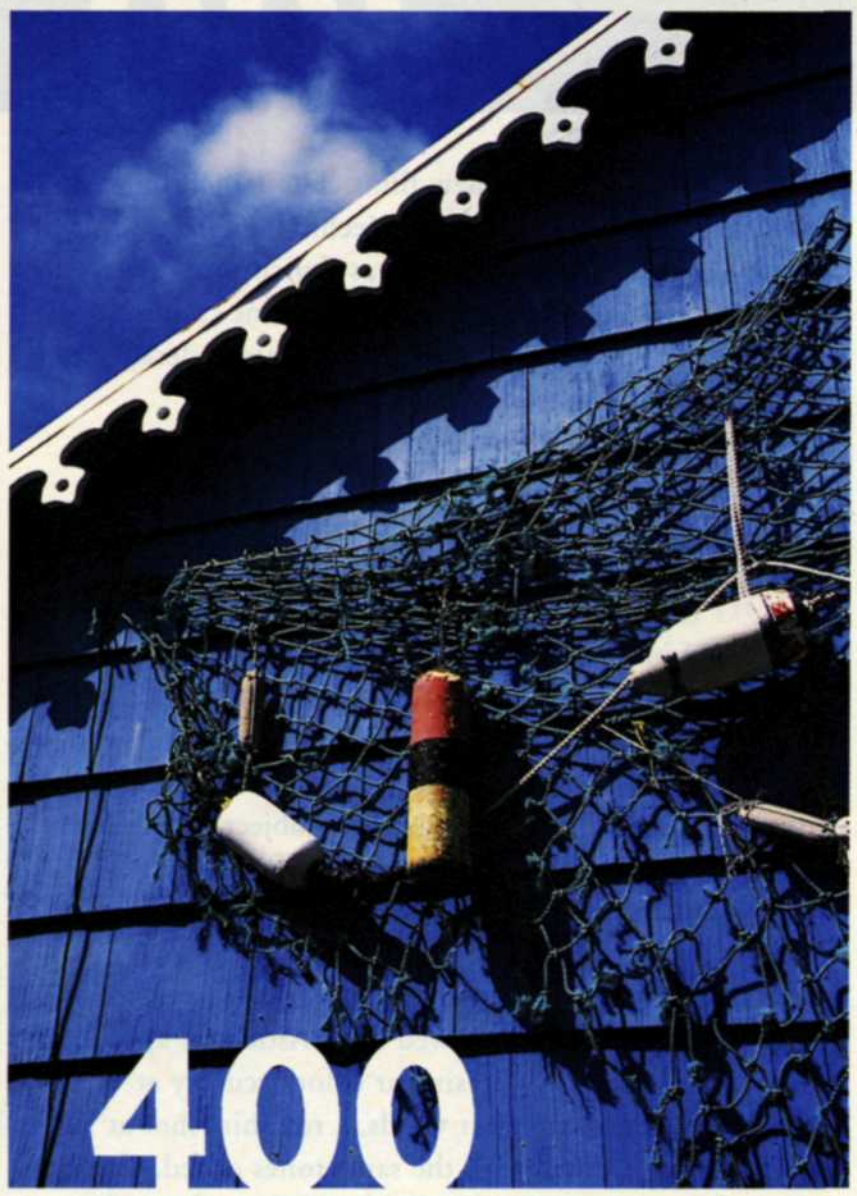
Daylight	Tungsten
100	32
200	64
400	125
800	250
1000	320



Fuji slide films. An 80A filter will allow you shoot under tungsten light, but remember that the rated EI will drop when you do.

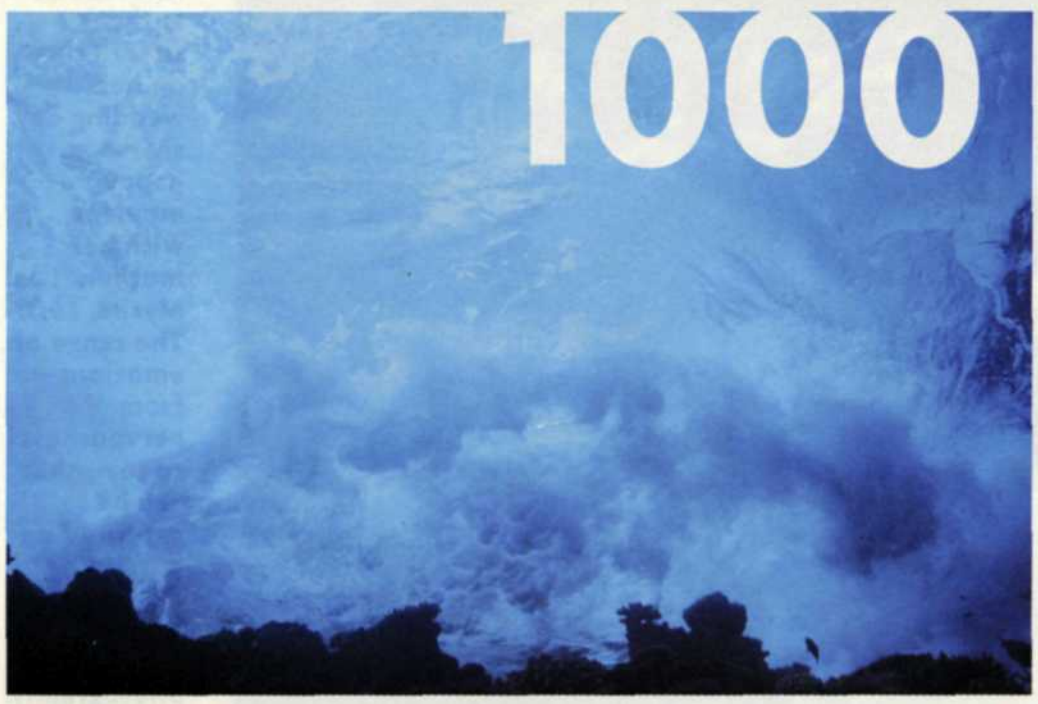
Reciprocity failure does not occur until you reach an exposure of 64 seconds, when you will need to add ⅓ stop





of exposure but no color correction. At two minutes you will have to add ½ stop, and it is not recommended beyond eight minutes.

Our first film test site was a sports area along the Oregon coast called Sand Lake. This is a favorite spot for off-road vehicles to gather and have some fun in the sun and sand. Yes, we do get sun occasionally in Oregon! Dune buggies, motor bikes, and small trucks crisscross the area, which gave us a chance to test the higher speeds of Fujichrome MS 100/1000. On our trip back to the lab, we stopped along the way to add even more tests in our camera bag. At each location we pre-metered the scene and analyzed the motion of the subjects. We then set the appropriate EI film value and started shooting.



We set in the P1–P4 processing times into our Wing-Lynch color film processor according to the data sheets sent us by Fuji. We laid the processed rolls out on the light box to get an overall view of how the different EI ratings compared to each other. We noted that the rolls from EI 100 to 400 were almost identical in all ways. The color saturation, color balance, tonal curves, and grain were very similar. The EI 800 and 1000 rolls did have a slight increase in density in the shadows on images that had an extreme exposure range. We also noted that the exposure latitude from 100–400 was about ±⅔ stop and dropped to ±½ stop when the film was pushed to 800–1000.

The images shot at the normal setting of EI 100 were extremely fine grain, and would compete with the best of the fine-grain slide films. We see this film as a great nature and sports film. You can use the normal EI rating of 100 for flowers, flash and landscapes, and then switch to the higher speed for long-lens use for birds, deer, zoos, baseball, soccer, or football. The uses are virtually endless! Who said you couldn't have quality and do it all with just one film?

For more information, contact Fuji Photo Film U.S.A., Inc., 555 Taxter Rd., Elmsford, NY 10523; 800/755-3854; on the Internet www.fujifilm.com. ■

When you push MS 100/1000 above EI 100, you still get terrific image quality. At EI 200, its RMS 11 rating makes it the finest-grain 200-speed slide film; at EI 400, its RMS 13 rating is two better than the next best 400-speed slide film. And its high/low-contrast resolving power remains at 135/55 lpm from EI 100–1000—ISO 100 resolving power even at EI 1000. Best of all, color saturation, color balance and tonal range remain excellent throughout the speed range—even at EI 1000. As a result, Fujichrome MS 100/1000 film can easily handle a tremendous range of lighting situations and subject matter, from fast action to underwater available-light, from grand scenic vista to macro study, from bright light to dim.