Fast-Film Applications

Put a faster film in your camera, and get sharper pictures

Text and photos by Jack and Sue Drafahl

Above: The only way to capture the dim ambience of the room was with fast film (Kodak Gold 800, here) and a 20mm lens. The resulting exposure was 1/15 at f/4.
Above right: The high-speed action of a dog running on the beach at sunset was captured with Kodak Portra 400VC color print film. A Nikon F5 and a 28–200mm zoom were used to capture the action.
Right: Extreme low light level of fireplace was captured with a 28–200mm zoom and Agfa Vista 800 color negative film.

It seems that ISO 400 color-negative film is quickly becoming the film choice of amateur photographers. This film speed provides a great combination of image quality and increased f-stop/shutter-speed capabilities. It performs well in most any given situation including sunlight, low light, fast action and even with flash. Since there are few situations where ISO 400 film would not excel, this is where film manufacturers have concentrated their research and development efforts.

For many years the standard film was ISO 100 and the increased grain and contrast, and

Above: Extreme depth of field with a 24mm lens was possible with Fuji 400 color print film. Focus point was on the cat. **Above right:** Mixed low light and subject movement were controlled with the use of Agfa 400 color negative film. **Right:** Kids' soccer game was captured with a 75–300mm zoom lens and Fuji 800 color print film. The light level was less than 2–3 stops from sunlight and resulted in exposures at 1/1000 second at f/5.6.

decreased image sharpness discouraged photographers from using higher-speed color-negative films. The higher-speed films were used only as a last resort when light levels dropped and the slower films just couldn't do the job.

Today new film technologies make the ISO 400–800 films as good as the ISO 100 films from just a few years ago. Since the bulk of today's images never get enlarged beyond 4x6 inches, most any speed film will do an adequate job. The only time it will be an image-quality factor is when you make extreme enlargements, since the grain will increase slightly and fine detail may be lost with magnification.

The two basic principles of photography, namely f-stop and shutter speed, are directly affected by this increased film speed. It may not seem like much of a change from ISO 100 to ISO 400, but this two-stop increase can make a definite improvement in your photographic images. Let's take a look at a few photo situations where it would come in handy.

Sometimes it is tough to get everything you desire in focus. A higher film speed allows you to select a smaller aperture, which creates a greater depth of field. What most photographers often don't realize is that the extended focus range is not proportional on either side of the focus point. The ratio is actually ⅓ between the camera and subject, and ⅔ beyond your subject. As you stop down your aperture to compensate for the exposure increase due to the higher film speed, your focus extends twice the distance beyond your subject as in front. This allows you to focus on subjects close to the camera and still keep the area in the distance sharp.

This is a great advantage when photographing a large group of people at varying distances from the camera. For example, with a 35mm lens and ISO 100 film, a depth of field from 4–7 feet increases to 3–12 feet when you switch to ISO 400 film and stop the lens down accordingly. That is quite a jump in depth of field considering that image quality changes very little. If you use ISO 800 film, the depth of field extends from 2.5–20 feet at the same focused distance, thanks to the ability to shoot at the next smaller aperture. Of course this is assuming that your subject motion is under control and you are only changing the aperture to accommodate the change in film speed.

Speaking of subject movement, this is a situation where it really comes in handy using a higher-speed film so you can increase your shutter speed. Each time you increase the shutter speed by one setting, the recorded action becomes twice as sharp as at the previous setting. Increasing the shutter speed two clicks will, in effect, make your image four times as sharp. If you are trying your hand at photographing the kids at the local soccer game, this increase in shutter speed can make a big difference in your image quality. Keep in mind that if you are having both depth-of-field and movement problems, you can split the extra speed between the two, or try ISO 800 film for even more control.

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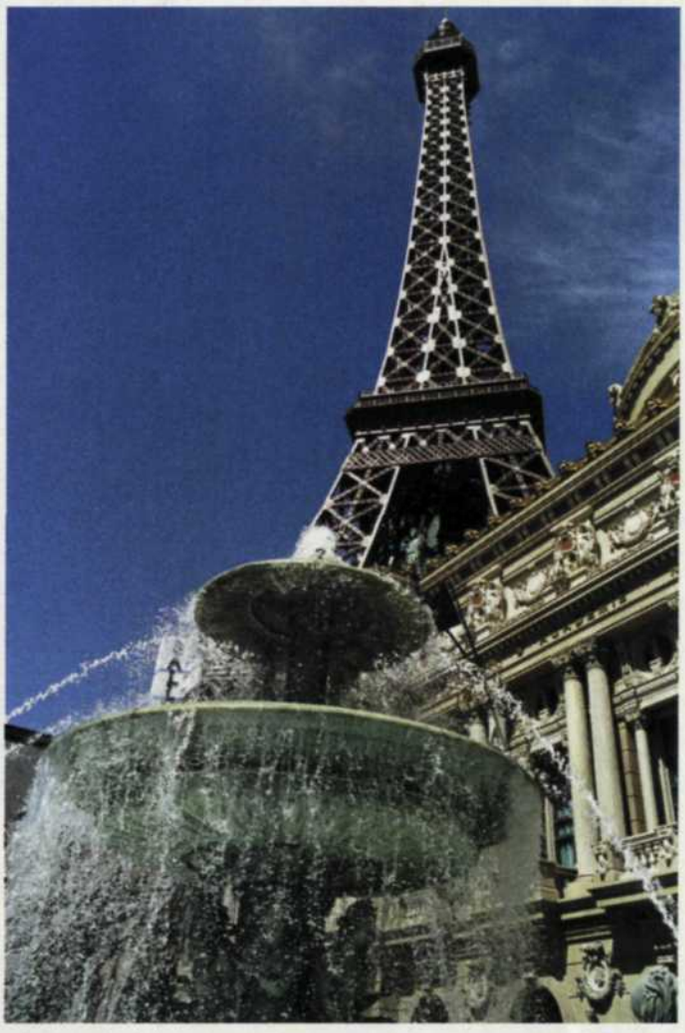
Point-and-shoot cameras have become very popular, but they generally have small internal flash units with limited distance range. With a higher-speed film, the flash in your camera can pack a bigger wallop. Here's how it works. If your flash has a maximum distance of 8 feet with ISO 100 film, it can be extended to 11 feet with ISO 200, 16 feet with ISO 400, and 22 feet with ISO 800. This is why so many one-time-use cameras are loaded with ISO 400 or 800 films.



Right: Underwater scene with diver and turtle required extreme depth of field to keep both in focus. Fuji Superia 400 color negative film was used in a Nikonos-V camera with a 15mm lens. **Far right:** Kodak Supra 400 was used to stop the action of the fountain and keep the extreme depth of field in this 20mm shot. **Below right:** Wide-angle underwater image had a very low light level. A Nikonos-V with 15mm lens was used with Kodak Ektapress 640 to capture this scene.

Zoom lenses are very popular due to their flexibility and price tag. Even many of the point-and-shoot camera offer some zoom capability. Often when you zoom to the maximum, it requires a higher-speed film to extend the range of the internal flash in order to achieve a good exposure, because the zoom lenses in point-and-shoot cameras have very small maximum apertures at their longest focal-length settings.

You will find that using higher-speed films will be an advantage if you own a more advanced camera system with an external TTL flash. With higher-speed film, the scene doesn't require as much light to achieve a good exposure, so the flash will shut off sooner, recycle faster, thus saving battery power.

With a higher-speed film, you can also bounce flash off a high ceiling more successfully than with ISO 100 film. This works really well when two subjects are quite far apart and a direct flash will burn out the close subject and underexpose the distant one. If you used ISO 100 film and a bounced flash, the lens would probably have to be wide open and all the subjects would not be in focus. The gain in film speed allows increased depth of field that will cover subjects both near and far.

If you use an SLR camera and like to shoot with long lenses, you'll find that you'll need high shutter speeds to minimize the effects of camera shake when hand-holding the lens. The rule of thumb is that you should use a shutter speed at least equal to the focal length of the lens. For example, a 500mm mirror lens will require at least 1/500 to hand-hold the lens and keep the image reasonably sharp, assuming that the subject is not very active. If a 500mm mirror lens has a minimum aperture of f/8, it would require a shutter speed of 1/400 or slower in full sunlight with ISO 100 film. When the light level drops, exposures would be in the 1/125–1/250 range and unacceptable. With ISO 400 film, the same lens in sunlight would require an shutter speed

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Below: Kodak Portra 800 used in low light with a 28–200mm zoom lens. The high speed of the film provided the necessary depth of field in the available light, giving a more natural look than flash would have produced.
Right: Summer fun in Hawaii with a 75–300mm zoom and Fuji Superia 800 produced images with stopped action and good depth of field.
Below right: Kodak Max color print film was used to capture the action on the ice. A Nikon N8008 with 28–200mm zoom lens was used to document the scene.

of 1/600, which would increase your odds of getting a sharp image.

Often when using long lenses, you don't have full sunlight, and you require more depth of field than is available with the lens aperture wide open. If you change films, the two or three extra f-stops may be all you need for success. If you still think that you must use ISO 100 film with your long lenses, you must ask yourself if you would rather have a grainless blurry image or a sharp image with slight grain when enlarged.

For those trying high-speed films and scanning them into their computer, there is even better news. A company called Applied Science Fiction has come up with a new technology called Grain Enhancement Management or GEM. Some of the new flatbed and film scanners on today's market incorporate this new technology that reduces the grain structure of the film as it is scanned.

If we lived in a perfect world, then ISO 100 film would be the film for every photo situation. But . . . we all know that photo opportunities arise where ISO 100 is inadequate. What you need to realize is that when you grab the higher ISO films, you are not compromising quality, but rather taking control of the situation. This allows you to devote your concentration on image aesthetics, rather than technical issues. ■