Color Pictures by Existing Light

AE-20

The streaks of light from moving traffic give this shot a look of action. The photographer put the camera on a tripod, and used a slow shutter speed of 1/2 second at f/8 on KODAK High Speed EKTACHROME Film (Daylight)—ASA 160, to record the car lights as streaks.

Existing-light photography invites you to enter a new world of subject opportunities. Even the most ardent photo fan may occasionally run low on picture-taking ideas. The following suggestions will give you new and exciting ideas that will help you gain more pleasure from your fascinating hobby of picture-taking.

Photography by existing light, sometimes called available light, means taking pictures by using only the light that happens to be on the scene. This includes the light from table and floor lamps, ceiling fixtures, fluorescent lamps, spotlights, neon signs, windows, skylights, candles, fireplaces, and any other type of light that provides the natural lighting on the scene. In other words, existing light is the type of light found in homes, schools, museums,

churches, restaurants, stage shows, and auditoriums. Outdoor scenes at twilight or after dark also can be considered as existing-light situations.

Existing-light photography produces pictures that appear natural. Even a skillfully lighted flash or flood-lamp picture may look artificial and contrived by comparison with a good existing-light picture. Existing-light photography gives you the opportunity to make pictures that are dramatic, creative, soothing, romantic, or even harsh and pitiless. Also, existing-light photography allows you greater freedom of movement, because you don't use extra lighting equipment. You can easily photograph distant subjects because camera-to-subject distance doesn't affect exposure as it does when you're using a flash on your camera. And remember, shooting with existing light is less expensive than popping flashbulbs.

EQUIPMENT AND FILM

You'll need an adjustable or automatic camera with an *f*/2.8 or faster lens. For some pictures, you'll need a shutter that you can hold open for a time exposure. Long exposures are required in some types of existing-light photography, such as taking pictures of fireworks displays. For exposures longer than 1/25—1/30 second, you must place your camera on a firm support. A tripod is ideal, but instead you can use a tabletop, a hand railing, a wall, or a similar steady surface. It's a good idea to use a cable release to prevent jiggling the camera when you press the shutter release.

When you use a camera with an *f*/2.8 or faster lens and one of the Kodak high-speed color films that are available today, you can photograph many subjects without a camera support. You can hand-hold your camera when using shutter speeds of 1/25—1/30 second or faster. For sharp pictures, hold your camera steady as you gently squeeze the shutter release; this minimizes camera movement. Picture-taking with a hand-held camera gives you more flexibility than you have when using a camera support: You can shoot faster, more easily, and less obtrusively, so that you can capture those natural, candid expressions.

Since many existing-light scenes have low light levels, it's desirable in these situations to use a high-speed film.

However, if you want to take pictures where there is a lot of existing light, such as near windows or a skylight, or if you put your camera on a tripod, you can use a film with a slower speed. For those situations that don't require high film speed, you can successfully use KODACHROME II, Daylight Type (ASA 25), KODACHROME-X (ASA 64), and KODAK EKTACHROME-X (ASA 64) Films for color slides,* or KODACOLOR-X Film (ASA 80) for color prints.*

Using a high-speed film for existing-light picture-taking has many advantages. More film speed helps you get enough exposure for hand-held shots of dimly lighted scenes; lets you use faster shutter speeds for stopping action; enables you to use telephoto lenses, which require higher shutter speeds for hand-held picture-taking; and permits you to use a smaller lens opening to gain greater sharpness of near and far objects in the same picture—in other words, more depth of field. When you need a high-speed film, both KODAK High Speed EKTACHROME Film (Daylight)—ASA 160, and Tungsten—ASA 125, will give exceptionally fine results. The Tungsten film is designed for use with 3200 K photo lamps, but it's excellent for existing tungsten light, such as the light from household lamps.

Very often in existing-light picture-taking, you'll find that you need all the film speed you can get. By taking advantage of EKTACHROME Special Processing by Kodak, you can increase the film speed of both types of High Speed EKTACHROME Film 2 1/2 times—to ASA 400 for Daylight film, and to ASA 320 for Tungsten. EKTACHROME Special Processing is available for 135 and 120 film sizes only. In an emergency, you can expose EKTACHROME-X Film in sizes 135 and 120 at ASA 160 (instead of the normal ASA 64) and obtain special processing. To get this special processing, purchase the KODAK Special Processing Envelope, ESP-1, and the appropriate KODAK Prepaid Processing Mailer from your photo dealer. Or, take your film to the dealer for special processing by Kodak. Complete instructions are included with both the ESP-1 Envelope and the processing mailer.

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*You can also have color prints made from your color slides, or color slides made from your color negatives.

KODAK High Speed EKTACHROME Film and ESP-1 processing enable you to use fast shutter speeds for action pictures. This shot was taken on Tungsten film (ASA 320) at 1/250 second at f/2.8.

TAKING PICTURES INDOORS

For shooting indoor existing-light scenes that are illuminated by tungsten light, use tungsten film. For indoor pictures where windows or skylights are providing the light, use daylight film; you can also use tungsten film with a No. 85B filter. You'll find that an exposure meter is a great help in determining indoor exposures. This is true especially in a home or museum where you can easily approach your subject to make an exposure-meter reading. If a bright window or light is included in the background that will influence your exposure-meter reading, make a close-up meter reading of the principal subject.

Pictures taken indoors in existing daylight are especially pleasing because of the soft, diffuse quality of the lighting and the squint-free expressions your subjects will have. Indoor daylight pictures are easy to take because you usually have more light to work with than with other kinds of existing light. Open all the window drapes in the room and pose your subject so that diffuse daylight illuminates the front or side of his face. Avoid poses that will put too much of your subject's face in shadow, unless you want a special effect such as a silhouette. You can also photograph your subject in direct sunlight coming through a window. You'll have plenty of light, but the

The soft, diffuse quality of existing daylight is excellent for informal portraits indoors. This one was made on KODAK EKTACHROME-X Film (ASA 64) at 1/30 second at f/2.8.

lighting is contrasty and you'll want to watch out for squinting subjects.

Some artificial lighting is also quite contrasty. For example, subjects that are close to lamps are well illuminated, while other areas in the room are comparatively dark. Turning on all the lights in the room will make the light more even and will provide more light for taking pictures. Translucent lampshades let more light through and provide more uniform illumination for picture-taking than darker or opaque lampshades. Pose your subject so that the light illuminates the front or side of his face.

You can minimize contrasty artificial lighting in the pictures you take at home by bouncing fill light off a white ceiling. A simple way to do this in an average-size room is to position one or more reflector flood lamps near the camera and aim them at the ceiling. Tilt the lamps slightly so that the light will strike the ceiling between your camera and the subject. Adding bounce light means you won't be making "true" existing-light pictures, but this light will reduce the contrast of the existing lighting without spoiling its natural appearance. In addition, the extra light may let you use a shutter speed fast enough for hand-held shooting. Since bounce light makes the lighting more uniform, you can photograph your subject as he moves around the room in the general vicinity of the bounce light without changing your shutter speed or lens opening. This is especially convenient for photographing such subjects as birthday parties and Christmastime activities.

Fluorescent lamps in a room may cause odd color rendition in your pictures, since most fluorescent illumination is deficient in red. When fluorescent lights provide the main light source, use daylight film. Your results will probably still look greenish, but with tungsten film they would be decidedly blue. When fluorescent lamps are providing most of the light, you can minimize their effect by

aiming reflector floods at a white ceiling.

When your subject includes both very bright areas and large, very dark areas, such as an indoor ice show or any other event where spotlights are used, an exposure meter isn't much help. Your exposure meter "sees" the large dark areas surrounding the bright areas, and the meter needle barely moves. Actually, there is plenty of light on the spotlighted subject. Try an exposure of 1/60 second at *f*/4 with High Speed EKTACHROME Film (Daylight)—ASA 160. With the carbon-arc spotlights usually used in theatres and auditoriums, you'll get better results on Daylight film.

TAKING PICTURES OUTDOORS AT NIGHT

An excellent time to shoot "night" pictures outdoors is just before complete darkness, when some rich blue (or orange) still remains in the sky. The deep color of the sky at dusk provides a dramatic background for your pictures.

For outdoor picture-taking at night, choose either daylight film or tungsten film. This is a matter of personal taste. Pictures taken on tungsten film may look more natural, while pictures taken on daylight film will have a "warmer," more yellow-red appearance. Both types of film produce pleasing results.

When your subject is evenly illuminated and you can get close enough to take an exposure-meter reading, do so! Many floodlighted buildings, statues, and store windows are subjects of this type. Night sporting events also are usually evenly illuminated. Before you take your seat at the event, make an exposure-meter reading from a position close to where the action will take place, and set the lens opening and shutter speed on your camera. Use a very high-speed film, such as High Speed EKTACHROME Film (Tungsten) with ESP-1 special processing. This film and processing combination allows you to use a high shutter speed to help stop action in your pictures.

In many modern sports stadiums, mercury-vapor lamps illuminate the outdoor playing field. These lights have a slightly blue-green appearance compared to conventional tungsten lamps. With mercury-vapor lighting you'll get better pictures on daylight film, although they'll probably look bluish-green because the lights are deficient in red.

One of the most exciting and colorful subjects to photograph outdoors at night is an aerial fireworks display. Put your camera on a tripod, aim it in the direction of the display, and focus the camera on infinity. Set the lens opening according to the table on page 8, and with the shutter set on "BULB" or "TIME," keep the shutter open for several bursts. It's that easy!

EXPOSURE TABLE

The suggested exposures given in the exposure table are based on pictures taken by experienced photographers. The exposures are typical for the subjects listed; however, because specific conditions vary, the exposure data in the table is approximate. There is more latitude in the exposure for night existing-light pictures than for pictures taken in sunlight. A fairly wide range of exposures will usually yield pleasing pictures. The exposures in the table apply to either daylight film or tungsten film. You may want to modify these exposures to get the effect you prefer. The less exposure you use, the darker the shadows will be. With more exposure, your pictures will show more detail in the shadows, but the brightest areas, such as neon signs, may be too light. Generally, because of low light levels encountered in existing-light picture-taking, underexposure is a more common exposure error than overexposure.

Bracketing: When you want to be sure to get a properly exposed picture of an especially important subject, bracket the exposure. Take one shot at the suggested exposure, one at 1/2 the exposure, and another one at 2 times the suggested exposure. If it's a case of "now or never," take two more pictures—one at 1/4 and one at 4 times the suggested exposure.

After you have gained some experience taking existing-light pictures, you'll have increased confidence in your exposure determination. You'll get a higher percentage of properly exposed pictures when you record your exposure data for various subjects, especially unusual ones, and then refer to these exposures. In existing-light photography it's often a good idea to experiment: Judge the exposure as accurately as you can, and then shoot the picture. You'll often be pleased with the spectacular results you obtain.

Suggested Exposures for KODAK Films*

Picture Subjects	KODACHROME II	KODACOLOR-X KODACHROME-X EKTACHROME-X	High Speed EKTACHROME	High Speed EKTACHROME with ESP-1 Processing
Home Interiors at Night— Areas with bright light Areas with average light	1/4 sec *f*/2.8 1 sec *f*/2.8	1/15 sec *f*/2 1/4 sec *f*/2 ▲ *f*/2.8	1/30 sec *f*/2 1/8 sec *f*/2 ▲ *f*/2.8	1/30 sec *f*/2.8 ▲ *f*/4 1/30 sec *f*/2
Interiors with Bright Fluorescent Light†	1/15 sec *f*/2 ▲ *f*/2.8	1/30 sec *f*/2 ▲ *f*/2.8	1/30 sec *f*/2.8 ▲ *f*/4	1/60 sec *f*/4
Indoor and Outdoor Christmas Lighting, Christmas Trees	4 sec *f*/5.6	1 sec *f*/4	1 sec *f*/5.6	1/30 sec *f*/2
Ice Shows, Circuses, and Stage Shows—For spot-lighted acts only	1/30 sec *f*/2.8	1/60 sec *f*/2.8	1/60 sec *f*/4	1/125 sec *f*/4 ▲ *f*/5.6
Basketball, Hockey, Bowling	—	1/30 sec *f*/2	1/60 sec *f*/2	1/125 sec *f*/2 ▲ *f*/2.8
Night Football, Baseball, Racetracks, Boxing	1/30 sec *f*/2	1/30 sec *f*/2.8	1/60 sec *f*/2.8	1/125 sec *f*/2.8 ▲ *f*/4
Brightly Lighted Street Scenes (Wet streets make interesting reflections)	1 sec *f*/8	1/30 sec *f*/2	1/30 sec *f*/2.8	1/60 sec *f*/2.8 ▲ *f*/4
Brightly Lighted Night-club or Theatre Districts—Las Vegas or Times Square	1/30 sec *f*/2	1/30 sec *f*/2.8	1/30 sec *f*/4	1/60 sec *f*/4 ▲ *f*/5.6
Store Windows at night	1/30 sec *f*/2	1/30 sec *f*/2.8	1/30 sec *f*/4	1/60 sec *f*/4 ▲ *f*/5.6
Floodlighted Buildings, Fountains, Monuments	8 sec *f*/5.6	4 sec *f*/5.6	1 sec *f*/4	1/15 sec *f*/2
Fairs, Amusements Parks at night	1/4 sec *f*/2.8	1/15 sec *f*/2	1/30 sec *f*/2	1/30 sec *f*/2.8 ▲ *f*/4
Skyline—10 minutes after sunset	1/30 sec *f*/2.8	1/30 sec *f*/4	1/60 sec *f*/4	1/60 sec *f*/5.6 ▲ *f*/8
Burning Buildings, Bonfires, Campfires	1/30 sec *f*/2	1/30 sec *f*/2.8	1/30 sec *f*/4	1/60 sec *f*/4 ▲ *f*/5.6
Aerial Fireworks Displays—Keep camera shutter open on "BULB" or "TIME" for several bursts	*f*/5.6	*f*/8	*f*/11	*f*/16 ▲ *f*/22
Niagara Falls— White lights Light colored lights Dark colored lights	 30 sec *f*/5.6 30 sec *f*/4 1 min *f*/4	 15 sec *f*/5.6 30 sec *f*/5.6 30 sec *f*/4	 8 sec *f*/5.6 15 sec *f*/5.6 30 sec *f*/5.6	 6 sec *f*/8 6 sec *f*/5.6 12 sec *f*/5.6

*These suggested exposures apply to both daylight and tungsten film. When you take pictures under tungsten illumination, they will look more natural if you use tungsten film, while daylight film will produce pictures "warmer" or more yellow-red in appearance.

†Tungsten film is not recommended for use with fluorescent light.

Note: The symbol ▲ indicates the lens opening halfway between the two *f*-numbers shown.

Use a tripod or other firm support when using shutter speeds slower than 1/25—1/30 second.

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