

Calculating Light Requirements

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Holding the Camera

Keeping the Camera Steady

Many photographs have been ruined because of camera movement. Unless your goal is a blurred picture, keeping your camera steady when shooting is crucial. The longer the exposure or focal length lens you use, the more crucial holding your camera steady becomes. Therefore, there are many instances when the use of a tripod or some other type of camera support is necessary. This chapter provides general guidelines for the various methods used to support a camera to ensure quality results. These are not necessarily the only or even the best ways to support a camera. You should practice supporting your camera using various methods; then select those that are most appropriate for the situation and the subject being photographed. Practice should include all the camera functions you normally use on actual photographic assignments. Concentrate on composing through the viewfinder, focusing, selecting shutter speeds and f/stops, holding the flash off the camera, depressing the shutter release, and winding the film.

One thing you can do to learn to steady your hand is to hold a full glass of water in your hand and not spill anything. Then put it on the back of your hand and do not spill anything. Once you have learned this, practice walking around the house in the same fashion. It takes time, but can be learned.

Handholding the Camera

Of the various methods to keep your camera steady, the best is to use a tripod, but often you may not have one with you or the situation makes the use of a tripod impossible. In these situations, if you use proper precautions, it is possible to take high-quality pictures using hand-held methods. Under normal circumstances, you should not handhold your camera at shutter speeds longer than about 1/60 second. When a long lens is used, this becomes even more critical, because the images produced by long lenses are affected more by camera movement. In addition, it is more difficult to control the weight and greater size of a long lens when it is hand-held. Generally, the slowest recommended shutter speed is the reciprocal of the focal length of the lens. For example, when you are using a 500mm lens, the slowest shutter speed you should use is 1/500 second. When a shutter speed does not exist for the focal length of the lens, use the next highest shutter speed; for example, 1/30 second for a 25mm lens, 1/50 second for a 50mm lens, 1/125 second for a 100mm lens, 1/250 second for a 200mm lens, and so forth.

When handholding your camera, be sure to have a good, solid, but not tense, grip on the camera with both hands. Use your whole body as a firm support imagining yourself as a tripod. Your elbows should be close to your body and your feet spread apart to shoulder width in order to provide good balance. In this position, your body is acting as a tripod. When possible, you should try steadying yourself by leaning against something solid like a wall, tree, or post. When using an eye-level camera, press the camera against your forehead and face, while holding it with both hands. A waist-level camera should be pulled solidly against your body. Just before releasing the shutter, take a deep breath, let out part of the air – hold the rest, and squeeze the shutter release gently as if firing a gun. When nothing is available to support your camera other than yourself, try sitting down, squatting, or kneeling, and firmly rest your elbows on one or both knees.

When you are taking low-angle photographs, try lying on the ground with the camera in front of you. This is another simple way to keep the camera reasonably steady

When taking high-angle photographs with your camera, try to take the shoulder strap and string it around the back of your neck. Pull the strap tight with the camera while holding it in both hands. This will give you a little bit more stability.

Camera shake

Camera shake is the bane of many photographers. It can cause fuzzy photographs. Some cameras even have built-in capabilities that help reduce camera vibration or shake. For instance, on a single-lens reflex (SLR) camera, the mirror “jumps” up when the shutter is fired-that causes

some vibration. On some SLRs you can lock the mirror up before taking the picture to avoid this. The disadvantage of locking the mirror is that you are unable to see through the viewfinder. In addition, the pressure of your finger on the shutter release can cause some camera shake. This does not happen on cameras with a delayed shutter release because the camera compensates by automatically delaying the shutter release. Additionally, a cable release can be used to fire the shutter without handling the camera.

With digital photography, there are now lenses by different manufacturers that can prevent and compensate for camera shake. They tend to add a bit of noise in the dark areas, but in some cases, it might be worth the investment.

Camera Supports

To ensure sharp photographs, you must use some type of camera support. Few photographers can hold a camera completely steady, especially for exposures longer than about 1/60 of a second or even shorter, when using long-focal-length lenses. When using telephoto lenses or shooting motion, you must remember, that camera movement can become critical. When making an enlargement, even the slightest camera movement will be magnified. The ideal camera support should be strong, firm, and allow as much adjustment of camera height and angle as possible. The design of a support to be carried should be compact and lightweight, while still providing a firm, rigid camera support. Most pictures are taken holding the camera by hand because camera supports are often bulky, heavy, and inconvenient to carry on many assignments; however, you should use a camera support as often as possible. This allows you to produce the sharp pictures that are characteristic of a truly professional photographer.

Tripod

The best way to support your camera is with a sturdy, rigid, tripod. Tripods are three-legged camera supports with flat platforms or heads in which cameras are secured. Most tripods are equipped with a head that has an elevator center post. The camera is attached to this center post and is raised or lowered easily by cranking the post up or down. These elevators eliminate the need for readjusting all three tripod legs for making small, last minute adjustments to the camera height. Tripods come in a variety of designs, sizes, and weights. The heavier models are the

sturdiest and provide the best support; however, if too heavy, they are not very portable. As a general rule, the heavier your camera, the heavier and stronger your tripod must be. For some of the light, full-size tripods, rigidity can be improved by hanging a bag of sand or another weight from the tripod head. This is especially useful in high winds. Another method is to hang a strap from the tripod head, and use the strap as a foothold on which to apply downward pressure.

There is so much new technology in lightweight but sturdy tripods. They are now made of titanium. The only drawback is that they are quite expensive. For the photographer who shoots on location, it might be worth the extra funds.

Tabletop Tripod

Tabletop tripods are also available and can be used almost anywhere a flat surface is available. These small tabletop tripods can even be braced against the photographer's chest. Because of their small size, they can easily be carried in a camera bag.

Monopod

A monopod is a single pole on which a camera is mounted. Monopods are useful for keeping the camera steady for location work when a tripod is too bulky or difficult to use; however, the use of a monopod is not advisable when using large, heavy cameras or when shutter speeds below about 1/15 second are used. Standing or kneeling with a monopod braced against your body or leg provides a camera the extra support and steadiness required for it to be an effective tool

Clamps

Another practical way to support your camera is to use one of the many clamps available for this purpose. A camera clamp has a mount that screws into the tripod hole or socket on the camera and has jaws that can be clamped to a convenient object. Camera support clamps can be attached to furniture, doors, posts, fences, and other firm anchor points. There are even clamps with suction cups for mounting cameras on smooth, flat surfaces, such as a window.

Operation

To set up a tripod, extend one leg straight ahead toward the subject. This way the camera may be aimed by pivoting the tripod on this one leg. Extend the other two legs and adjust them to level the tripod platform horizontally. When setting up a tripod on level ground, you can waste a lot of time trying to get the tripod level if the leg sections are not fully extended. An easy solution to the problem is to mark the tripod legs in specific increments with a marking pen, or piece of tape. Doing this helps to reduce your frustration, saves time, and allows you to level your camera on the tripod with less effort. When a tripod is set up on an uneven surface, several adjustments of the side legs are normally necessary. Readjustment of the front leg levels the camera vertically so the platform or head is level. Most new tripods have platforms that can be adjusted by eliminating the need for minor leg adjustments. Some tripods even have a level bulb on them so you can visually see when it is level. To mount the camera on the tripod head, you secure it in place by tightening the tripod screw into the camera tripod socket. Secure the camera by tightening the camera clamp screw locknut. After the camera is mounted on the tripod, test the camera to ensure all camera controls are accessible and function properly. The camera should be stable and not shake when the camera controls are operated.