

Although it's important to choose a good camera for your shoot, the one thing that will have the greatest impact on the quality of your image has nothing to do with your camera. Lighting can make a bigger difference in the look of your movie than any other factor (well, any other factor that you can control, that is). Lighting conveys mood and atmosphere, and is also the key to a successful video-to-film transfer. In this chapter, we will discuss tips for film-style lighting, basic lighting setups, lighting for different exterior and interior situations, and lighting for special situations, such as blue-screen photography.

Film-Style Lighting

If you've done any research on using video to shoot feature projects, you've probably encountered this piece of advice: "If you want your video to look like film, you need to light it like film." So, what's so different about lighting for film?

Shooting on film is technically more challenging than shooting on video, because film stocks need to be exposed properly, and proper film exposure requires lots of light. Film lighting specialists, known as *cinematographers* or *directors of photography* (D.P.s), have taken advantage of the limitations of film and turned them into ways of precisely controlling the final image. Cinematographers do more than use lots of lights; they use special equipment to control the path of the light, the quality of the lights, the brightness of the lights, and the color of the lights. The amount of light coming from every light source is meticulously measured with a *light meter* in order to achieve the desired contrast ratio between the highlights and shadows. By controlling these elements, the cinematographer is able to direct the viewer's eye within the frame.

Lighting, focus, and framing (which we cover in Chapter 7, "Shooting Digital Video,"), all add to the visual vocabulary used in filmic storytelling. Film-style lighting is not so much a distinct visual style as an artistic choice that helps tell the story (Figure 6.1).

Shooting Video for Film

If you are going to finish your project on film, you should research and find a film recordist now. Each film recording company uses a different process, and they'll have specific tips for how to light and shoot in order to achieve the best look for your project.



FIGURE 6.1 A Digital Betacam professional shoot on a soundstage.

THE ART OF LIGHTING

Lighting is one of the most powerful yet subtle filmmaking tools available. *Film noir* classics, such as *The Maltese Falcon*, are known for their creative use of light and shadow, while modern comedies often feature a bright, simple lighting style more similar to that of television. No matter what your film is about, creative lighting can add an extra layer to enhance the mood and emotion of your story.

Three-Point Lighting

Three-point lighting is usually the basic, jumping-off point for more complicated lighting setups. Three lights are used in a three-point light setup. The primary light source, called the *key light*, is used to illuminate the subject and is usually positioned at an angle (Figure 6.2). The key light is a strong, dominant light source and is often motivated by some existing light source in the scene (Figure 6.3a).

A second light, called the *fill light*, is used to "fill in" the strong shadows caused by the key light. Usually the fill light is quite a bit dimmer and more diffuse than the key light (Figure 6.3c). The idea is not necessarily to get rid of the shadows, but to achieve a pleasing ratio between the lights and shadows on the subject.

The third light, called the *back light* or sometimes the *kicker*, is positioned behind the subject and is used to separate it from the background. This separation

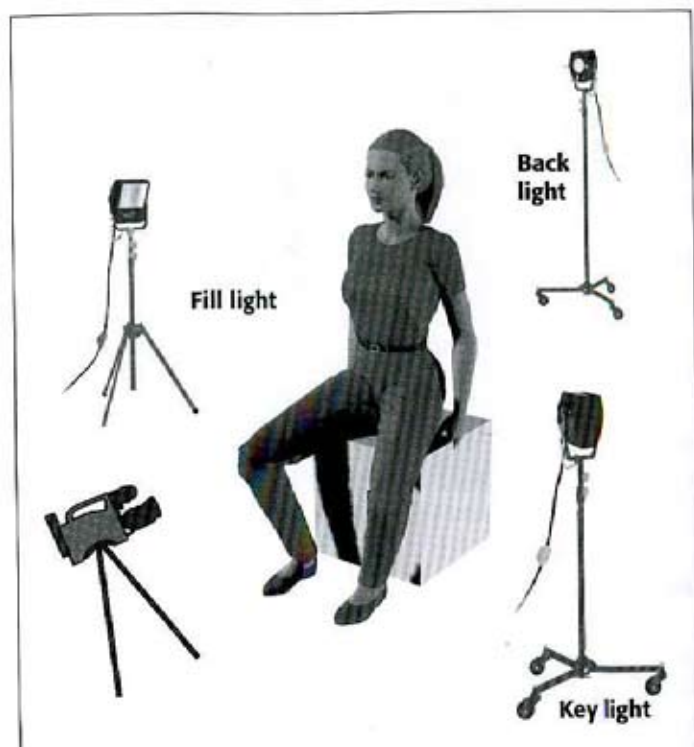


FIGURE 6.2 A diagram of a typical three-point lighting setup, including camera placements and subject.

lends a sense of depth to the image and helps make your subject “stand out” better. Sometimes the back light is a different color—bluish or orange (Figure 6.3b). Making choices about the relationship between the key, fill, and back lights is part of the art of cinematography. After we present a few more key lighting concepts, you’ll be ready to try your hand at the tutorial on later in the chapter.

INT

Knowing the types of lights that are available for shooting is like knowing what colors of paint you have available to paint a portrait. Professional lights fall into two basic categories: tungsten balanced (or indoor lights) and daylight balanced (or sunlight). These two categories represent two very different areas of the color spectrum. The light from a conventional indoor light bulb tends to look orange or yellow, whereas the light out-



A. Key light only



B. Key light and back light



C. Key light, back light and fill light

FIGURE 6.3 In this example of three-point lighting, the actor is first lit with a diffuse key light (a), then a hard back light is added (b), and a soft, subtle fill light brings out the left side of his face without losing the high-contrast look (c).

side at mid-day tends to appear more white or blue. Your camera probably has a setting that lets you choose a light bulb icon (for tungsten) or a sun icon (for daylight). By informing your camera whether you are in daylight or tungsten light, you are letting it know the overall color-cast of the scene. Setting this control is known as *white balancing*. We will discuss white balancing in detail in Chapter 7, but in order to understand it, you first need to understand how light and color are related.

Color Temperature

First, a quick science lesson: Light is measured in terms of *color temperature*, which is calculated in *degrees Kelvin* (K). Indoor tungsten lights have a color temperature of 3200° K, whereas daylight has an approximate color temperature of 5500° K.

Color Plate 1 shows the color difference between tungsten light and typical daylight. As you can see, tungsten light at 3200° K is heavily shifted toward the orange part of the spectrum, which results in the warm, golden cast of household lights. On the other hand, daylight at 5500° K is heavily biased toward the blue part of the spectrum, which results in more of a bluish-white light. Be aware that as the sun rises and sets, its color temperature changes and it decreases into the orange part of the spectrum.

While you might not be able to discern that household light looks orange and sunlight looks blue, the main thing to realize is that daylight is much stronger. (Think of the hotter, blue flames in a burning fire.) Daylight balanced lights are over 2000° K stronger than tungsten lights, and if you try to mix them together, the daylight will certainly overpower the tungsten light. If you can't avoid mixing tungsten and daylight—for example, if you're shooting a day interior scene that absolutely requires that a real window be in the shot—you need to account for the color temperature differences by *balancing* your light sources. Balancing your light sources means that you'll use special lighting accessories to change the color temperature of some of the lights so that they are all either tungsten-balanced or all daylight-balanced. We'll talk more about the specific tools you can use to balance your light sources later.

OTHER TYPES OF LIGHTS

Tungsten lights and daylight balanced lights aren't the only types of lights. *Fluorescent* lights have a color temperature that ranges from 2700° to 6500° K, and *sodium vapor* lights, with a color temperature of about 2100° K, are yellow-orange. *Neon* lights vary wildly in temperature. All of these lights introduce special challenges.

Fluorescents are notorious for flicker and for having a greenish tint, which can be exacerbated on film or video. You can buy or rent special *Kino-Flo* tubes that fit into normal fluorescent fixtures, and get rid of the flicker and the green color. Yellowish-orange sodium lights use a very limited section of the visible color spectrum. The result is an almost monochrome image. If you try to color correct later, you'll have very little color information with which to work. Neon lights can easily exceed the range of NTSC color, especially red and magenta neon. Even though they tend to be quite dim in terms of lux or footcandles, they appear bright and overexposed due to their extremely saturated colors. (See Color Plate 10).

Wattage

Lights are also measured in terms of the amount of electric power they require, or *wattage*. The higher the wattage, the brighter the light. Typical film lights range from 250 watts to 10K (10,000 watts). The powerful HMI lights used to mimic the sun and to light night exteriors require as much as 20,000 watts, whereas a typical household light needs a mere 60 watts. The professional lights best-suited for use with video are those with a wattage of 2K or less. Figure 6.4 shows a typical video light kit.

THE BASIC LIGHT KIT FOR VIDEO

A basic light kit for video provides the minimum lighting equipment necessary for three-point lighting. The typical cinematographer won't be happy with it, but it's a considerable step above single source lighting. A basic video kit costs around \$40 a day to rent and includes something like the following:

- Two 650-watt lights (with fresnel lenses)
- Two single scrims
- Two single half-scrims
- Two double scrims
- Two double half-scrims
- Two sets of barndoors
- One 1K or 650W softlight
- One egg crate (used to make the softlight more directional)
- Three gel frames
- Three light stands

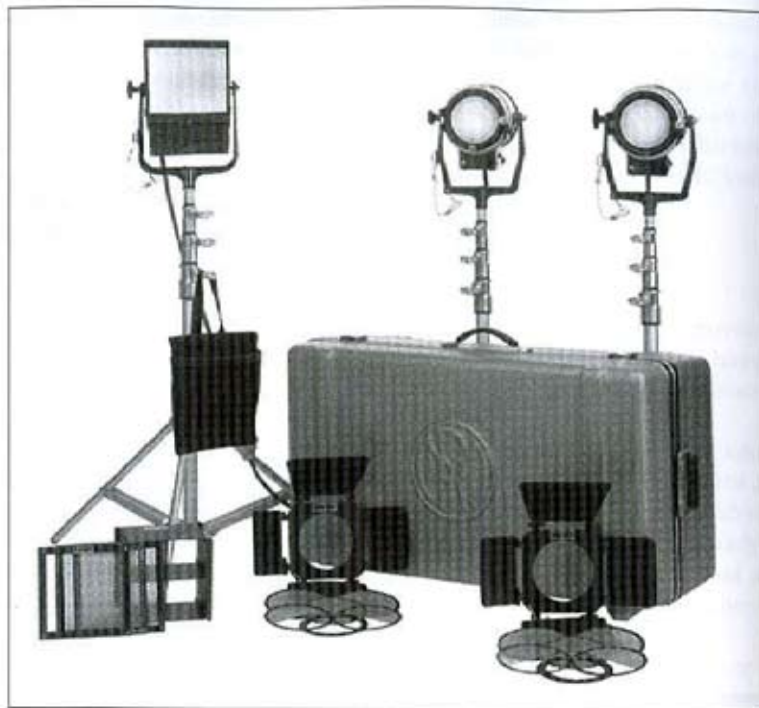


FIGURE 6.4 This Teenie-weenie/Softlite combo kit from Mole-Richardson is a good example of a typical video lighting kit.

Camera Mount Lights

Camera mount lights, also called *sun guns*, are a great quick fix for run-and-gun photography. However, if a film look is your goal, save the camera mount light for your next documentary-style project. If you do need to use them, try adding some diffusion fabric to reduce the "hot spot."

Controlling the Quality of Light

In addition to having different color temperatures, lights have different *qualities*. They can be direct or *hard*, they can be soft or *diffuse*, or they can be *focused*, like a spot light. Figure 6.5 (page 117) shows the same subject lit with a (a) diffuse key light and a (b) hard key light.



A. Soft key light



B. Hard key light

FIGURE 6.5 The choice between a hard or diffuse key is an aesthetic one—this actor is lit with a (a) diffuse key and a (b) hard key.

There are all types of lighting accessories that can be used to control the quality of professional lights. A special *fresnel* lens attachment lets you adjust the angle of the light beam from flood to spot light. *Barndoors*

attach to the light itself to help you control where the light falls. Round *scrims* fit into a slot between the light and the barndoors and allow you to decrease the strength of a light without changing the quality. Single scrims (with a green edge) take the brightness down by one-half f-stop, and double scrims (with a red edge) take it down a whole f-stop. (See the sidebar *Measuring Light* for more about f-stops.)

Lighting gels are translucent sheets of colored plastic that are placed in front of the light not only to alter the color of the light, but to decrease the brightness (Color Plate 2). The most common use of lighting gels involves converting tungsten to daylight, or vice versa. *Diffusion gels* are usually frosty white plastic sheets that make the light source appear softer. *Gel frames* allow you to place lighting gels behind the barndoors, but it's easier to use clothespins to attach gels directly to the barndoors.

Bounce cards (often just pieces of white foamcore) are also used to create soft, indirect lighting, while *reflectors* (shiny boards) are used to redirect lighting from a bright light source, such as the sun.

T

The intensity of a light stays the same no matter how far the subject is from the light; what changes is the amount of illumination given off by the light. Illumination is measured in either footcandles (based on the English measurement system) or lux (based on the metric system) as expressed in these formulas:

Where D is the distance in feet between the light source and the subject.

Where D is the distance in meters between the light source and the subject.

Light meters are devices that measure light in footcandles and/or lux, and translate the measurements into f-stops.

If you've ever used an SLR camera, you're probably familiar with f-stops. F-stops are defined as the ratio of the focal length of the lens to the aperture of the lens. The aperture is the hole that governs how much light passes through the lens and onto the imaging surface, or focal plane. When you adjust the f-stops on an SLR camera, you are opening or closing the aperture of the lens. Many better video cameras also have f-stop marks on their lenses, or in their viewfinder displays. Because of how they relate to exposure in film, f-stops are often used in video to describe increments of light.



FIGURE 6.6 A soundstage with lots of flags on C-stands to control the light.

C-stands (short for *Century stands*) hold flags, nets, and other objects in front of the lights to manipulate and shape the light that falls on the subject (Figure 6.6). We'll talk more about how to use these items as we cover traditional interior and exterior lighting.

LIGHTING GELS

Gels are an indispensable tool if you're serious about lighting. Rosco and Lee make swatch books like the one in Color Plate 2 that contain samples of the different gels they produce. Gel swatch books are usually available at any professional camera store.

Colored gels can be used to add just about any color in the rainbow to your light sources. It's a good idea to have a choice of colors on hand. Remember that the brighter the light shining through the gel, the less intense the color will be. Adding colored gels will always decrease the brightness of the light.

Color temperature orange (CTO) and **color temperature blue (CTB)** gels can change the color temperature of a daylight-balanced light to tungsten, or tungsten to daylight.

Neutral density gels cut down the intensity of light without changing the color temperature. These gels are extremely useful when shooting video and come in handy when it's necessary to shoot out windows.

Lighting a person is always a bit more challenging than lighting an object—the human face has many angles, and it's easy for bright lights to cast strange and unflattering shadows. In addition, bright lights can magnify every little flaw on a person's face, while the wrong color lighting can result in an unnatural-looking skin tone. Whether your goal is to make your actors look beautiful or ugly, the right lighting will enhance your characters and story. The following three-point lighting tutorial provides a tried-and-true method for lighting an actor.

Three-Point Lighting

This tutorial assumes you have a typical video light kit (like the one described in the sidebar *The Basic Light Kit for Video*), a selection of gels (see the sidebar *Lighting Gels*), and a suitable subject to light, preferably a person. If possible, you should also have your camera set up on a tripod in order to see how the different lighting possibilities look through the lens. If you have a field monitor, you should use that too. If you don't have a field monitor, consider recording a videotape as you experiment with the lights so that you can later view your results on a full-size monitor. You'll also need a pair of work gloves for handling hot lights. Finally, you should start with a large, dark room. A sound stage is ideal, but any dark room will work. If you're doing this tutorial at home, see the following tip on how to avoid blowing a bulb.

STEP 1

To begin, set up your key light. Take one of the 650-watt lights from your kit and set it up on one of the stands. Attach the barndoors to the light itself—they usually just slide into place. Direct the light toward your subject and turn it on. Don't worry about the background yet; we'll deal with that later. Just focus on lighting your subject as best you can.

Now that you have light on your subject, find a pleasing angle at which to place the light. Try extending the stand to its full height and aiming the light down at your actor. Try lowering it. Try placing the light at different distances from your subject. Does it look better close or farther away? Since this is video, you can set up the lights any way that looks good to your eye. Just make sure that the light is not so bright that it overexposes in your viewfinder. (If your viewfinder provides a Zebra display, turn it on to help identify hot spots.)

Because of the shadows cast by a person's nose, the key light is usually placed about 30 to 45 degrees off-center from the person's face. This position gives definition to the features of the face and allows the shadow from the nose to fall to the side without becoming huge or distorted. The diagram back in Figure 6.2 shows a typical three-point lighting setup. Once you're happy with the angle, play with the focus knob on the fresnel lens. Does it look better tightly focused or flooded? (Figure 6.5 shows the difference between a hard key and a soft key.) Try adding some diffusion. Play around until you find a look you like, and then move on to the next step.



Don't Waste Expensive Light Bulbs

Avoid touching high-wattage light bulbs, or globes, as they are professionally known. The oil from your fingers can overheat and cause them to explode (the globes, not your fingers).

STEP 2

Now it's time to add the back light. As with the key light, set it up on the stand and play around with different positions. Back lights are usually quite bright and often filtered with lightly colored gels. Usually, the best position for a back light is either high overhead pointing down at the back of the subject's head, or way down near the ground pointing up at the back of the subject's head. The reason for this is that you need to avoid both having the light itself visible in the shot and having the light pointed directly at the camera (which will cause a lens flare). Figure 6.7 shows the actor illuminated with the back light only, and Figure 6.3b shows that actor illuminated with the back light and key light.



Fire Hazards

Avoid putting diffusion gels, lighting gels, and any flammable materials too close to professional light globes—you might end up with a stinky, smoldering mess stuck to your light, or worse, you might start a fire!

In addition, use your gaffer's tape to tape down your light's power cords. It can be easy to trip over cords and pull over your lights as you work around them.

STEP 3

Now you are ready to set up the fill light. Take the 1K soft light from the kit and set it up on the stand. Your goal with the fill light is to make the shadows cast by the key light less severe. Usually, this means placing the light on the opposite



FIGURE 6.7 The actor lit with a back light only.

side of the subject from the key light, typically at a 30- to 45-degree angle directed at the unlit side of the actor's face (see the diagram in Figure 6.2).

The brightness of the fill light is very important, since this is how you control the contrast ratio of your scene. Remember that video doesn't handle high-contrast lighting as well as film does. Try placing the light at different distances from the subject to see how the contrast ratio changes. It's often nice to have a fill light that's a different color than the key light. Experiment with different colored gels until you're satisfied with the fill light. Figure 6.8 shows the actor illuminated with a soft 1K fill light only, and Figure 6.3c shows a subject lit with key, back, and fill lights.

STEP 4

Now that you have your three lights set up, it's time to look at the overall scene. Are colored areas washing out too white? Are there hot spots, bright reflections from cheekbones or foreheads? In other words, is it overlit? Try adding single or double scrims to the lights that seem too bright.

How does the background look? It's pretty hard to light the subject and the background with only three lights, but see if you can move the fill light so that it fills in the background as well as the shadows on the subject. Is there too much light falling on the background? Try using the barndoors on the key light

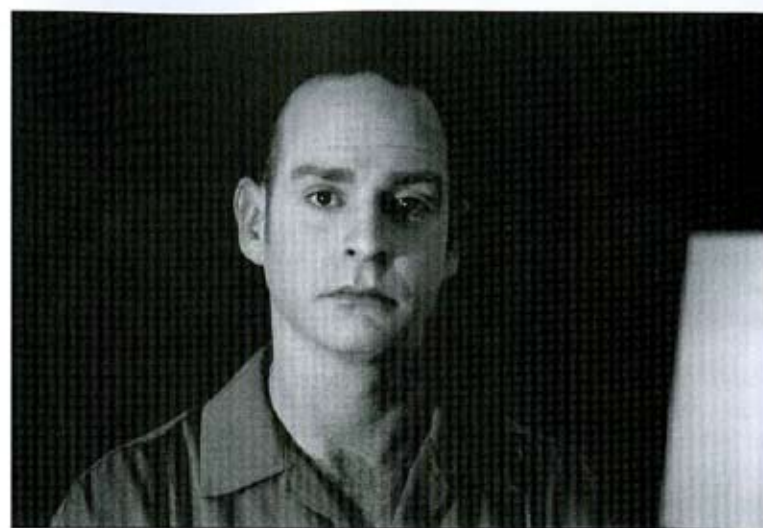


FIGURE 6.8 The same actor lit with a fill light only.

to direct the light onto the subject only. If you have barndoors for the fill and back lights, adjust them as well. Remember to wear gloves when you're adjusting lights that have been on for awhile—they get very hot. If your lights are still too bright, try moving them further from the subject, or add more scrims or diffusion to your setup.



Lighting for Darker Skin Tones

When an actor has darker-toned skin, it can be difficult to get enough light on the person's face without overlighting the background, because darker complexions simply require more light. If you can, keep the actor farther away from the background so that the light falls on the actor but not the background.

INTERIOR LIGHTING

Lighting an interior scene can present all sorts of challenges, not the least of which is choosing a location that can facilitate your lights. Ideally, you would use a soundstage with an overhead lighting grid, lots of available power, and plenty of space for setting up lights as far from your subject as needed. Shooting in a normal house or office building will save you the

trouble of having to build a realistic set, but you'll be hampered by less space, a limited power supply, and less control over how much exterior light enters the set.

Power Supply

If you're using professional lights at a location, you'll have to be careful not to overload the electrical circuits. A little pre-shoot prep work can save lots of headaches later. First, you need to map out the electrical circuits at the location. Arm yourself with some masking tape and a socket tester or an easily moveable household lamp. Plug the lamp into the first outlet and turn it on. Go to the breaker box and turn the circuits on and off until you find the one that controls the lamp. If the circuits aren't labeled, use the masking tape to label each with a number. Then, take some masking tape and label the outlet to correspond with the circuit number. Work your way around until you find and label several outlets on different circuit breakers. To be safe, when lighting use one light for each 10-amp circuit. Most household circuits range from 10 to 40 amps, and the amperage of each circuit should be clearly engraved on the switches in the breaker box.

Mixing Daylight and Interior Light

Because of the different color temperatures of daylight and interior light, mixing them together can present a challenge. The simplest solution is to choose which light source you wish to have dominant, and balance the other light sources to match the color temperature of that source.

For example, if the dominant light source in your scene is the light streaming through a window, you should balance your light sources for daylight by using daylight balanced lights. You can also use Color Temperature Blue (CTB) lighting gels on tungsten lights, but remember that CTB gels decrease the intensity of the lights and might render them useless. If your dominant light source is a 650W tungsten light, you should balance your light sources for tungsten light using Color Temperature Orange (CTO) lighting gels on daylight balanced lights and windows with daylight streaming through. You might also need to add neutral density (ND) gels to control the brightness of the daylight coming through the window. In general, shooting a daytime interior against a window is best avoided.

Using Household Lights

Because video requires less light than film does, you can often get away with using normal household lights. Generally, household lamps are less than 3200° K and lean more toward the orange side of the spectrum.

Unfortunately, ordinary household lights are not directional, which makes it harder to control where the light falls in your scene. There are a couple of ways to make household lights directional. You can buy directional or "spot" light bulbs, or you can surround the bulb with tin foil or some other light-proof material. Filter manufacturers such as Rosco and Lee sell black wrap, a heavy duty tin foil with a black matte coating that can be used to create makeshift barndoors.

Even if you're not concerned with the light being directional, replacing low-wattage light bulbs with brighter bulbs is a good way to create "practical" lights. "Practical" lights are those that are actually visible in the scene, such as a household lamp that the actor turns on. You can hide diffusion materials or gels in the lamp shade for more lighting control. By using a low-wattage bulb and keeping it several feet away from the actor, the household lamp in the background of Figure 6.3 does not cast any light on the subject.



Clamp Lights

Cheap clamp lights available at any hardware store can be a good way to get some extra, budget illumination. Replace the bulbs with high-wattage directional bulbs, and use black wrap to make them even more directional.

Dealing with Overlit Situations

Whether you're shooting a daytime or a nighttime interior scene, it can be hard to avoid overlighting the set, especially if you're in a small room. "Flat" lighting means there is not enough contrast between your key and fill lights, which will result in a lack of sculpting. Here are some ways to deal with an overlit scene:

- **Block out sunlight.** Because sunlight is so powerful, it might be the cause of your overlighting. Duvetine is a black light-blocking fabric that can be used to cover windows. A cheaper alternative is to cover them with black plastic garbage bags. If windows are in the shot, you can use ND gels (see the sidebar *Lighting Gels* earlier in the chapter) to tone down the light coming through the windows.

- **Turn off lights, especially overhead fixtures.** If your set is small, you simply might not be able to use all the lights you want without overlighting the scene.
- **Move lights away from the subject.** If space allows, move your lights back. The farther they are from your subject, the less illumination they'll cast on your subject.
- **Black nets and black flags.** Black nets and black flags attach to C-stands and are versatile tools for controlling and blocking light.
- **Studio wallpaper.** Shooting in a room with white walls is like having four giant bounce cards surrounding your scene. You can buy different colors of studio wallpaper to tone down the walls or to create blue/green backdrops for compositing. If you're shooting a night scene, use black studio wallpaper to make a room look bigger than it is—but be careful not to allow any light or hot spots to fall on the black paper.
- **Scrims.** If one or more of your lights are too bright, add scrims to take them down. Most lights will take at least two scrims at once.
- **Barndoors.** Narrow the opening between the barndoors to make a light more directional.

ING

The concept of exterior lighting might sound silly—who needs lights outside when you have the sun? However, if you're bent on a film-style look for your project, you'll need to do more than just point and shoot. Daylight, defined as a combination of skylight and sunlight, is an intense source of light—often too intense for video, especially if you're going for a video-to-film transfer. Think of the sky as a big giant bounce card reflecting the sun. It's a powerful light source in its own right, comparable to a 30,000 watt fixture on the ground and more than 50 times the illumination of a 650W tungsten light. Your light kit will be useless on an exterior shoot unless you have at least a 2K. The art of exterior "lighting" has to do with blocking, diffusing, filtering, reflecting, and controlling the light of the sun and sky.

ENHANCING EXISTING DAYLIGHT

If you're shooting outside on a sunny day at noon, you'll get a brightly lit image with very harsh shadows. If you're armed with the items listed in the *Lighting Equipment Checklist* sidebar, you will be able to exert some

LIGHTING EQUIPMENT CHECKLIST

You should have the following items on-hand and easily accessible during your shoot:

- 2" cloth tape—to tape down cables so that people won't trip over them.
- Power cables and heavy-duty extension cords (25', 50', 100').
- Three-prong to two-prong adapters for older locations.
- Clothespins—used to attach lighting gels or diffusion to barndoors, and so forth.
- Heavy work gloves—for handling light globes and hot equipment.
- Lighting gels.
- Diffusion materials.
- Reflectors.
- Bounce cards—often nothing more than a big piece of white foam-core, bounce cards can help you get more mileage out of your lights.
- Duvetine, black felt, or black garbage bags for blocking windows.
- Kino-Flo bulbs—these color temperature-corrected, flicker-free light bulbs are used to replace standard fluorescent light tubes in location fixtures.
- Clamps with rubber handles—similar in function to clothespins, but with more grip.
- Extra light globes—650W and 1K bulbs to go with your light kit, household bulbs in high wattages, and so forth. You should have at least one extra globe for every light in your kit.
- C-stands.
- Flags and nets.

control over the harsh conditions of bright daylight. Here are a few tips for brightening up those dark shadows:

- Try positioning a piece of foamcore below your subject and off to one side, so that the light of the sun bounces off the white foamcore and up into the shadows on your subject's face. This is a variation of three-point lighting—think of the sun as your key light, and the bounced light as your fill. Use a C-stand to secure the foamcore.

- Use flags, black screens, and diffusion to cut down the intensity of the sun on the subject.
- Use a reflector or a bounce card to create a back light.
- If the contrast ratio is still too high, you need a stronger fill light. Try placing the sun behind your subject, and use the bounce card as a soft key light from the front.
- Change locations. If you can't get the look you want in direct sunlight, try moving to a shadier location and using a bounce card to add highlights or positioning a large silk over your subject.

Golden Hour

The hour or so before sunset, also known as "golden hour," is one of the best times of day to shoot exteriors. The warm cast of the light is very flattering to human skin tones, and the chance of your scene being overlit is reduced. In addition, the low angle of the sun creates sharp, dark shadows, throwing everything in your scene into sharp relief. Unfortunately, you'll have to work fast to take advantage of this quality of light, as it does not last long.

DEALING WITH LOW-LIGHT SITUATIONS

Modern video cameras can do a good job of producing an image when there's very little light. Unfortunately, they accomplish this by boosting the gain, which adds noise. If you turn off the gain boost, you'll have noise-free video, but probably little or no image. The only solution in this case is to use lights. You'll have to weigh the benefit of noise-free video against the difficulty of lighting. If your eventual goal is a video-to-film transfer, noise should be avoided at all costs. (More on gain in Chapter 7, "Shooting Digital Video.")

Battery-Operated Lights and Generators

Renting a generator might be out of your league, but for those situations where electrical power is unavailable, try using battery-operated lights.

IG SITUATIONS

Lighting does more than illuminate actors and locations. It also plays a key role in creating a believable setting, pulling off some types of special effects, and producing successful blue- or green-screen photography.

Using Lights to Create a Scene

With a little imagination, lights can be used to suggest a location. Here are a few typical ways to create a scene with lights:

- **Car interiors.** A nighttime driving scene can be shot on a soundstage using a few focused lights placed outside the car, along with a fill light. The focused lights should be gelled to match the lights of passing cars, street lights, and brake lights. Each light (except the fill) needs to be manned by a grip who will move the light past the car at irregular intervals to replicate passing lights.
- **Day-for-Night.** Use slightly blue-colored gels to create light that looks like nighttime, and ND filters on your camera to make the image darker. Later, use digital compositing tools to matte out the sky and tweak the contrast ratio.
- **Firelight.** Dark orange gels can make your light source the same color as firelight. Wave flags in front of the light source to create a fire-like flicker. A fan with paper streamers in front of the light can add hands-free flicker.
- **Other illusional spaces.** Carefully flagged lights in the background can create the illusion of space, such as a doorway.



Smoke and Diffusion

Fog machines and diffusion spray are used to create an atmospheric haze in a scene, which can be very heavy or very subtle.

Lighting for Blue and Green Screen

If you will be shooting blue- or green-screen shots for later compositing with other elements, it's critical that you light your screen smoothly and evenly. For best results, consider the following:

- **Choose your compositing software before you shoot.** Different apps have different needs. Becoming familiar with your compositing software and its specific needs will save you time and headaches later. See Chapters 16 and 17 for more on compositing apps.
- **Place your subject as far from the blue/green background as possible.** If your subject is too close to the background, you'll end up with *blue spill* (or *green spill*)—reflective blue light bouncing off the blue screen and onto the back of your actor, resulting in a bluish backlight. This can make it extremely difficult to pull a clean matte later. If you can't avoid blue spill, try to make up for it by adding a hotter orange back light to cancel it out.