Learn About the Lighting Technique and Tips For the Best Three-Point Lighting Setups Written by MasterClass

Three-point lighting is the standard form of professional lighting in video production and still photography. It involves using three light sources placed in three different positions. By playing with the size, distance, intensity, and position of these light sources, including their degree angle, it is possible to control how light and shadow fall on a subject, creating different moods.

What Is Three-Point Lighting?

Three-point lighting is a traditional method for illuminating a subject in a scene with light sources from three distinct positions. The three types of lights are key light, fill light, and backlight.

1. **Key light**. This is the primary and brightest light source in the three-point lighting setup. It gives a scene its overall exposure. Cinematographers typically position this main light slightly off to the side of the camera and the front of the subject, on a light stand at a 45-degree angle to the camera, which creates shadows on the opposite side of the subject's face, giving it dimension and depth. The primary light creates the mood of a scene. Depending upon its position and the supplemental lights used in the overall lighting, it can create a high-key image (evenly, softly lit and atmospherically upbeat) or a low-key image (high contrasts, deep shadows, and very moody).

2. **Fill light**: Mirroring the key light on the opposite side of the camera, the fill light literally fills in the shadows that the key light creates on a subject, bringing out details in the darkness. Typically, this secondary light is less bright than the key, and cinematographers control the overall feel of their shots based on how much they dim or lighten the fill light. A dim fill light, where the fill ration is high, creates a high-contrast, film-noir type of shadow, while a brighter light with a lower, more balanced ratio gives the subject a more even look. The second light isn't always a light: it can be a reflector, a bounce card, a wall, or anything that bounces back some light onto the subject to fill in the shadows. Together with the key light, the fill light determines the mood of a scene.

3. **Backlight**: The third source in this lighting technique, the backlight (also known as the "rim light" or "hair light") shines on a subject from behind, completing the light setup. This creates a rim of light or outline around their head that pushes the subject away from the background and gives a sense of depth. Typically, cinematographers position the backlight directly behind the subject or high enough to be out of frame, opposite the key light, and pointing at the back of the subject's neck.

How Is Three-Point Lighting Used?

There is no set formula for how three-point lighting is used. This often depends on the scene, the subject matter, and the overall mood that a cinematographer or photographer wants to evoke.

1. Good lighting creates a more interesting and dynamic image where the subject is seen with more dimension and where the cinematographer has more control over shadows.

2. The lighting setup helps bring dimension to characters. Three-point lighting also helps shape a subject to bring out the best or worst of them.

3. By placing a soft key light slightly off center with a 2:1 fill ratio, a cinematographer creates a soft, flattering look that also tends to hide blemishes in the skin when your subjects are people. This soft lighting is called "high key lighting" and creates an optimistic, upbeat, youthful, light, and airy mood that is common in sitcoms and comedies.

4. If a cinematographer opts for a higher fill ratio, like 8:1, the key light casts sharp-edged shadows that contrast sharply with the light. This is "low key lighting," which creates a dramatic, mysterious, unsettling, and alienating mood and can display a range of deep negative emotions. As such, it is common in dark dramas, thrillers, horror, and film noir.

What Is Four-Point Lighting?

Four-point lighting utilizes an additional "background light" to illuminate what is behind the subject. Unlike the backlight, which creates a ring or an outline of the subject, the background light illuminates background elements, such as walls or outdoor scenery.

1. Cinematographers use this technique to eliminate shadows cast by foreground elements onto the background or to draw attention to the background.

2. The fourth light also helps the camera give depth to the subject.

3. To achieve the look, the cinematographer positions a background light behind the subject, either low to the ground or on a high grid, facing toward background elements, such as walls or outdoor scenery.

5 Tips for Setting Up Three-Point Lighting

There are several key components to successfully setting up three-point lighting and creating a polished, professional video.

1. **Establish your light's "motivation."** Before you begin setting up your lighting kit, you have to know precisely what look you want to achieve and why. Lighting setups are never random. The source of light in your scene needs to make sense based on the environment that your characters exist in. Is it an overcast sky? Sunset? A dark alley? Once you have established the motivation, you can proceed to place and adjust your light kit to achieve that effect. (You may also want "unmotivated" light. In horror, having unnatural light gives the sense that something is off and unsettles viewers. You must still establish that beforehand.)

2. **Consider light source size and distance**. The size of a light source relative to the subject size determines how "hard" (sharp, distinctive edges) or "soft" (smooth, feathered edges) your shadows will be. A smaller light source creates harder, distinct edges, while a bigger one softens the shadows. In studio lighting, if you want a softer look, you place enlarging modifiers such as an umbrella, softbox, or another diffusion between the light source and the subject. Due to this relative size condition, the distance of the light source to the subject will also affect shadow softness.

If you put the source closer to the subject, the shadows will be softer. The shadows will be harder if you pull the light back from them, making the relative size to the subject smaller.

3. **Consider the intensity of your light source**. "Brightness" is the measure of a light source's intensity. You measure it in lumens with a light meter. With LED lights, fluorescent lights, and incandescent lights, you control the output intensity, which affects the look of your scene. Brighter light will create harsher edges and shadows.

4. **Consider the position of your light sources**. Where you place your lights relative to your subject and the camera determines where shadows fall. This relates again to sensibly creating an environment—if your key light represents the sun, it should accurately reflect the angle and height of that source. How you position your fill and backlight affects whether there are deep, moody shadows or an optimistic, even light cast across your scene.

5. **Test your setup**. After you have determined your lights' motivation, their size, distance, intensity, and position, set everything up so you can see exactly how all the lights work together and whether or not their effect is precisely what you intended it to be. If it is not, make adjustments until everything is perfect.