

## Competencies

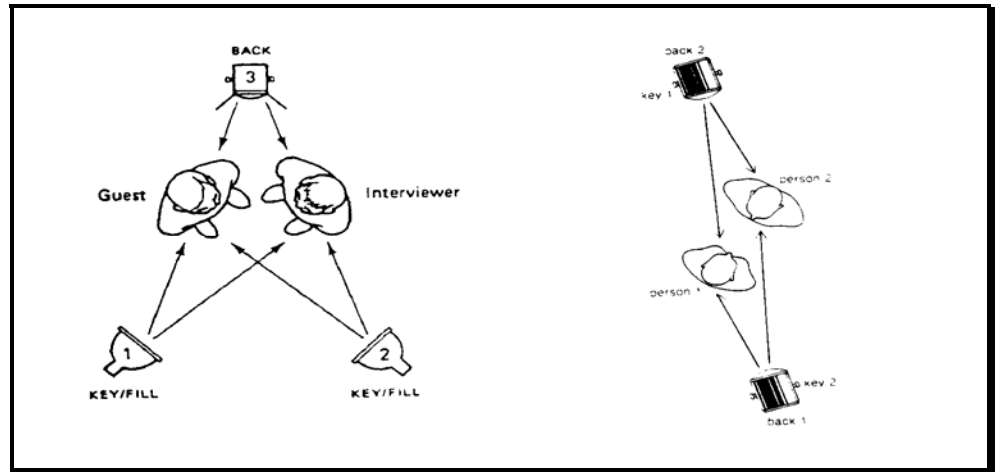
- The application of three-point lighting principle to Television lighting
- Lighting applications for moving subjects
- Lighting large areas
- Set and background lighting
- The use of side and kicker lights
- Lighting for day and night
- Applications for limbo and cameo lighting
- Lighting the cyclorama
- Chroma key lighting requirements
- Aiming, focusing and balancing lighting instruments

## Subject Movement

Basic television lighting has been derived from the photographic three-point principle. The three-point system is based on a static subject. There is little in television that is motionless. Subject movement creates several problems and opportunities for lighting. When lighting for TV, you must take into consideration the possible movements of the performers, and have the general area lit. Camera movement should also be considered.

## Lighting Multiple Subjects

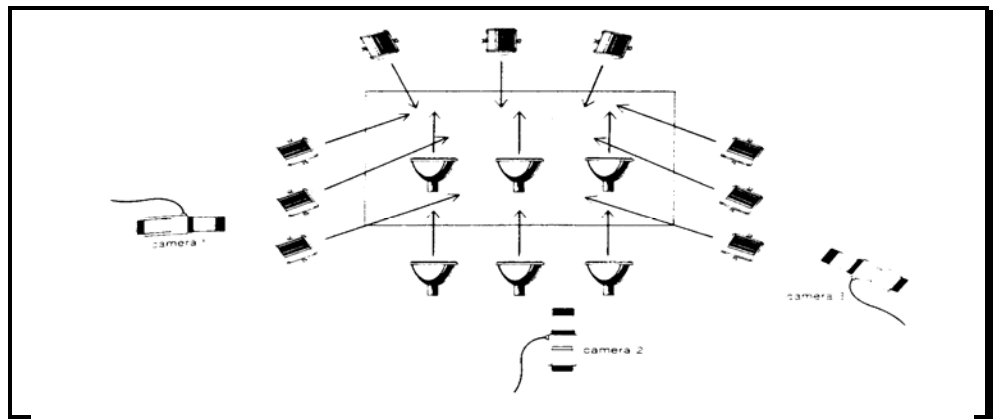
Fortunately, the basic principle for key, back, and fill lights can be multiplied and used for each performance area. If two subjects are side-by-side, one wide-angle key, back and fill can be used. If the two subjects are placed at right angles to each other as in a talk show setting, each subject should have their own three-point arrangement. If the subjects are turned to face each other, the backlight for one of the subjects can also be the key light for the other subject, and vice versa. Using this technique requires exact placement of the subjects.



## Large Area Lighting

For lighting a large area such as a big stage or an audience, the basic three-point principle can also be used. All you do is, partially overlap the triangles to adequately illuminate the area. However, instead of key lighting from just one side of the camera and fill light from the other side, you key light from both sides of the camera. This method is called cross keying. The key lights from one side act as fill for key lights from the other side. The backlights are strung in a row across the back of the area. The fill lights, if necessary, come directly from the front.

If the cameras are moved to the extreme sides of the area, some of the key lights will act as backlights. The cross-keying method does not provide as much control of shadows; however, it does provide for a good general illumination of a large area where specific subject placement and movement is not known beforehand.



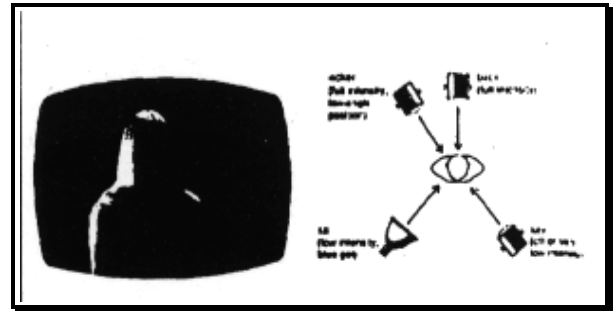
## Additional Light Sources

### Side Light

Generally placed directly to the side of the subject. It is used to reduce shadows not reached by the front fill instruments. The side can also be used when the camera arcs around the subject. The sidelight then acts as a key light. Sidelight is commonly used for lighting dance productions. The sidelights are then placed close to the floor. In other lighting situations, the sidelight is usually above the subject. Fresnels or even Lekos are usually used for sidelights.

## Kicker Light

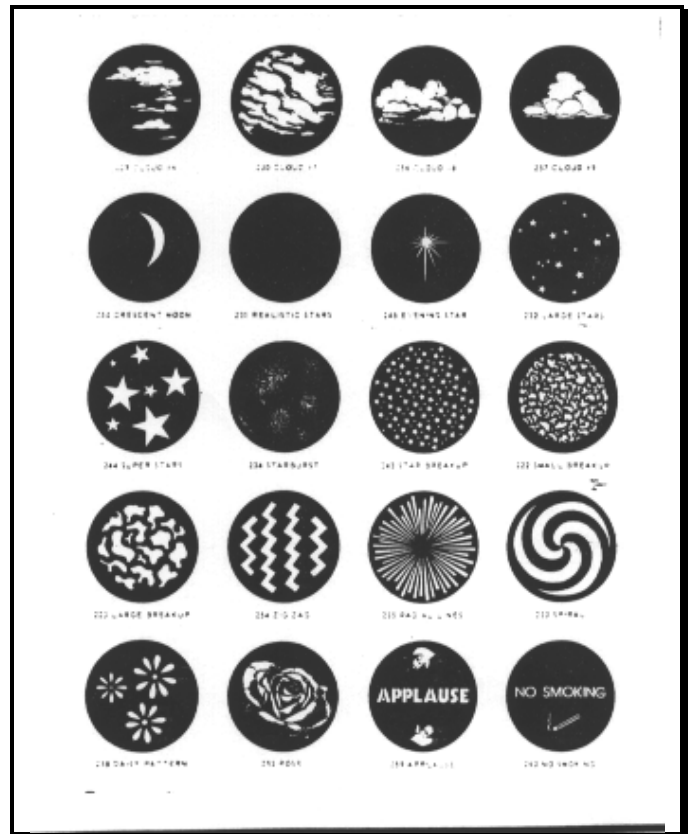
A kicker light is a special position for the backlight. The instrument is placed at the rear and to side of the subject. Its purpose is to place additional highlights on the head and hair. It usually strikes the subject at or below eye level. This adds extra highlights to the shoulder and hair.



## Pattern Projections

Projecting patterns of light onto sets, cycloramas, drapes, other background elements, or floors, is an effective method of using lighting to provide visual variety.

Ellipsoidal spotlights and especially designed instruments are used to project the patterns. Accessories allow the patterns to be rotated or scrolled.



## Background/Set Light

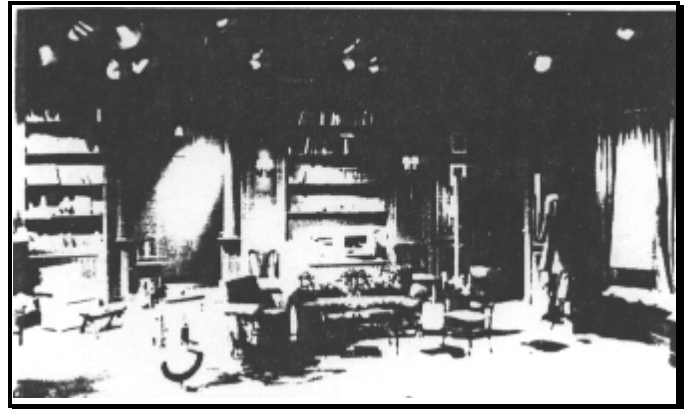
The most important additional light source is the background or set light. Its function is to illuminate the walls of the set that are not directly lit by the three-point arrangement. The TV camera needs a minimum amount of light to capture an image.

Make sure that the background light strikes the set from the same side as the key light strikes the subject. This is motivated lighting; lighting that appears from a specific source.

## Special Lighting Effects

### Lighting for Daylight

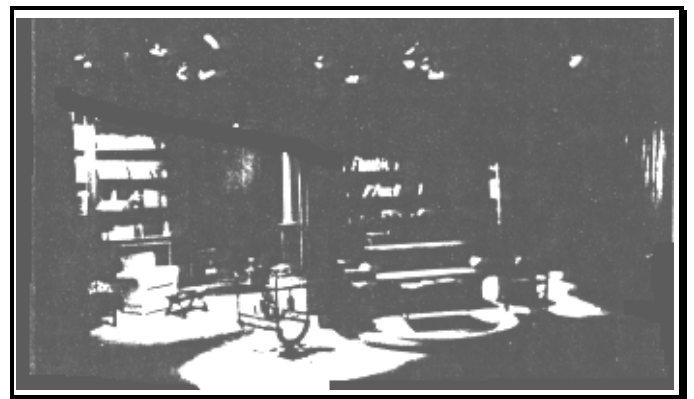
A crucial consideration when lighting an interior set is to motivate the major source of illumination. The key lights should come from the direction of windows or outside doors. The walls near these openings should be brighter than the interior walls.



To suggest exterior daylight inside the studio requires the use of hard, directional lighting. Even though the sun is a single source, multiple instruments must be used to give a good general coverage. Time of day can be suggested by varying the angle of the light, from near vertical to horizontal.

### Nighttime Lighting

A low-key approach is needed to produce a high contrast between the light and dark areas. Just dimming the overall illumination, will not create a nighttime scene.



Night effects are achieved by heavy back lighting with dark backgrounds. When lighting night scenes, remember the main

purpose of lighting is to provide illumination of the subject. Fresnels should be used almost exclusively because of the control they provide. Background lighting of interior sets should be brightest near the floor, and less intense near the top.

### Limbo and Cameo Lighting

Limbo lighting is a technique in which the foreground subject is seen against an undefined, infinite background. Cameo lighting is placing the subject against a totally black background.

A commonly used variation of the cameo effect is to begin the scene with a black background and then fade up the lights on the background.

Spotlights are the only instruments used for limbo and cameo lighting because of the control requirements.

### Cyclorama Lighting

The use of colored light with a cyclorama can produce some very effective and varied lighting for television. To light the cyc evenly, lights are aimed from above and below the cyc. A

ground row usually hides the instruments on the floor. By using different colored gels, different hues can be created by controlling the dimmers.

One of the most difficult problems in lighting a cyc is to keep the foreground (key & fill) illumination from spilling onto the cyc and washing out the color. This problem can be reduced if the angle of the key and fill are raised, and the performer is placed as far from the cyc as possible.

## Lighting for Chroma Key

Chroma key is an electronic matting technique that operates by using a particular hue as the key color. Green and blue are the two colors selected at the best colors to shoot the live action against. Shades of blue and green are farthest from the colors of skin tone, and these colors tend to key best. Keeping the foreground and background evenly lit is the prime consideration when lighting for chroma key. The subject should also be placed as far from the background as possible. This will keep shadows of the subject off the background and reduce the bounce light hitting the back of the subject. A yellow gel in the backlight will also help to increase the sharpness of the edge. A high intensity backlight is recommended.

## Focusing, Aiming and Balancing

After you have determined where your instruments should be placed on the grid, the key light should be aimed first. The Fresnel should be “spotted” and pointed in the general direction of the subject. You should not look directly into the light, but have the subject in correct position and use the light meter to judge whether the center of the light is in the correct position. Using the light meter, have the person aiming the light adjust the “focus/flood” control to set the footcandles.

The backlight is focused and aimed next. Use a 1:1 ratio first and fine-tune the balancing of the key/back light ratio. Adjust the intensity according to the lightness or darkness of the subject.

Barndoors should be used on the key and backlight to control the light spill. If the subject is not available when you are setting the lights, use a high intensity backlight. When the subject becomes available, use a dimmer to adjust the footcandles depending on the color of the subject's hair and clothing.

Finally, the fill light should be adjusted and balanced. The fill should be less than the key light.

Remember that you are lighting for television. The final judgment of the lighting should be made using a TV camera and monitor.

Have the subject move over the entire area and watch the movement on the monitor to insure that the viewer can easily see all the important action.