

Topic 015**Lighting Design Method - TV & Film****Television (TV) and Video Lighting:**

Lighting for television includes commercial and closed circuit television and professional video productions - either broadcast live or recorded. TV lighting design methods were ultimately born from the practice of stage and still photography lighting. Today it is estimated that throughout the world there are actually more designers working in the field of video and TV lighting, than any other lighting discipline. The TV designer is known as the LIGHTING DIRECTOR.

Both television and stage lighting design can be considered as an art form, at least when in the right hands. While the stage designer is most concerned with how the eye of the audience reacts to light, the television lighting designer is more concerned with how the TV camera responds to light.

In the early days of television, it was not uncommon for the first black and white cameras to require in the neighborhood of 250 foot candles or more. When color cameras were introduced, even more light was typically required. During the past several decades, the amount of light required for good picture signal has steadily decreased, as television camera technology has improved. Today it is not uncommon for state-of-the art color cameras to require less than 50 f.c. The television lighting designer is not just concerned with the quantity of light (foot-candles), he is also concerned with the quality of light, just as is the stage lighting designer. The TV designer is also concerned with color temperature and contrast (contrast between the performer and the surrounding set or background). In fact, the TV designer is much more concerned with contrast, or specifically differences in contrast, everywhere throughout the picture area. This is due to the fact that the TV camera tolerates much less of a contrast range than does the human eye. Although the human eye can adjust to contrast in the field of vision in the order of 100,000:1, the TV camera can only handle a contrast range of 100:1, at the best.

Television lighting techniques also should provide a degree of interest or visual balance to the picture. Typically, TV designers will provide a strong directional KEY LIGHT to a performer from one side and a softer, less intense FILL LIGHT, at an angle of approximately 90 degrees to the KEY light. Next, a BACK light is usually used to help visually separate the performer from the background. As in theatre, once the performer is lighted for visibility (or proper signal, in TV), the background and surrounding scenery is illuminated for visual balance, (BASE LIGHT). TV lighting fixtures resemble theatre fixtures except they are generally larger and of higher wattage. The 2, 5 and 10 Kw FRESNEL is commonly used for key, and back lighting. Other fixtures include SCOOPS and FLOODS are often used for fill and background lighting. Most TV fixtures are designed to be focused and adjusted from the studio floor using a 'long pole'.

Film and Motion Picture Lighting

Lighting for film is an art form within itself. Witness only, many of the fine (and not so fine) films produced during the past decades. In addition, film is a wonderful and valuable medium to capture and then study lighting and lighting techniques.

Lighting for film is a marriage between the cameraman, his film and the processing lab. Film lighting techniques are heavily dependent on the knowledge of how a particular film stock will react to a particular type of light - in respect to; intensity, contrast and color temperature. A multitude of image qualities are available by manipulating; exposure, color temperature and film processing.

Film Lighting Techniques:

Both daylight and artificial sources are commonly used for film lighting.

Lighting fixtures for the film industry are similar to stage lighting fixtures, except, they are larger and of higher wattage. Although incandescent fixtures are still used, many new fixtures using H.I.D. (high intensity discharge) sources, are now also commonly used.

The fresnel, open face flood (broad) and the '9 light' are all popular film lighting fixtures. The '9 light' unit, consists of 9 Par lamps mounted in a 3 x 3 matrix. This provides a 'large source size', and is excellent for 'key' or motivational lighting. Color temperature and color balance is very important in film. Often the sources will be balanced using color correction filters, either over each individual fixture, or on the camera lens itself.

Film lighting makes extensive use of reflectors (with various different types of surfaces) to bounce and reflect light and to 'fill' in the shadows.

Fixtures are usually mounted overhead, on stands or on trucks. When 'on location' large generators and 'miles' of cable are often used to power the fixtures.