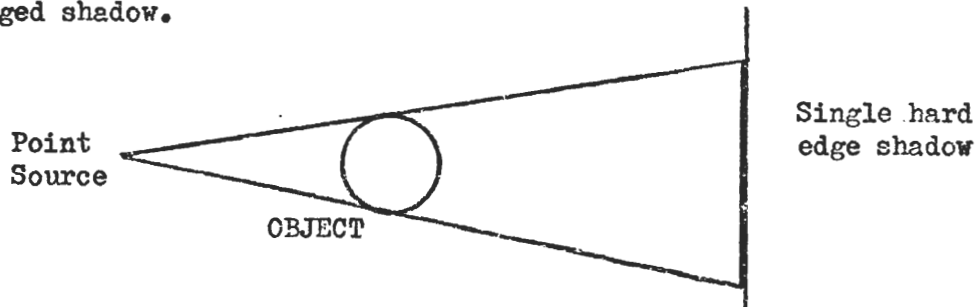


LIGHTING FOR TELEVISION - BASIC PORTRAITURE

Light Sources used in Portraiture

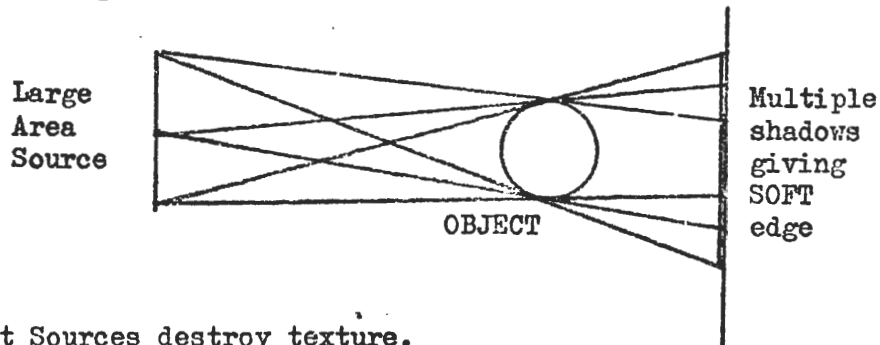
Generally these are divided into two classifications

1. Hard Source
 2. Soft Source
1. A Hard Source behaves as a point source and casts a single hard edged shadow.



A Fresnel spotlight is at its "hardest" in the fully flooded condition, the illumination is most even and the barn doors are effective.

2. A Soft Source behaves as a large area source taking into account the relative size of object and light source and the distance separating them.



Soft Sources destroy texture.

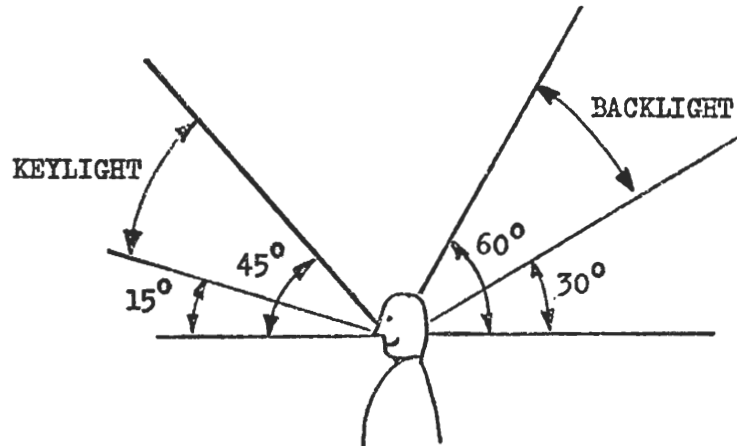
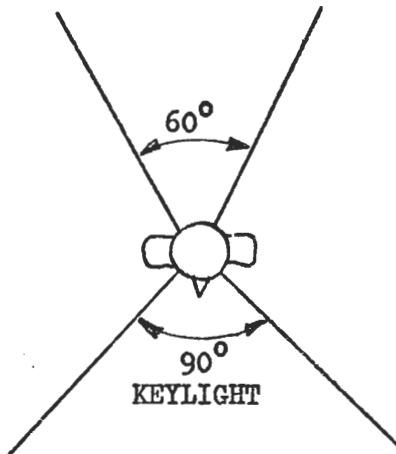
Four basic lamps used:-

1. KEYLIGHT - gives principle shape and modelling by casting shadows
It is the "sun" in the sky, there should only be one 'sun'.
Normally it is a hard source.
2. FILLER - controls the lighting contrast by filling in shadows. It can also provide catchlights in the eyes. Normally soft source.
3. BACKLIGHT/HAIRLIGHT - separates the body from the background, gives roundness to the subject and reveals texture. Normally it is a hard source.

4. **BACKGROUND LIGHT** - separates the person from the background, reveals background interest and shape. Normally it is a hard source.

Position of Artist At least 4', preferably 6' away from background to avoid artist's shadow on the background and to ensure that the backlight angle will not be too steep.

Positioning of lamps

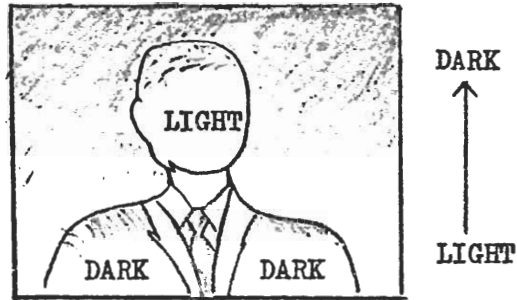


Keylight Within the area shown the result will be satisfactory viewed either full face or profile. Outside this area lighting will be unflattering and useful only for dramatic effect.

Backlight Satisfactory as shown. Outside this area it produces unwanted highlights on forehead and nose and a cascade of light over the front of artist.

Filler Most satisfactory from camera at lens level. The greater the angle between filler and camera the less effective it becomes for the above shots.

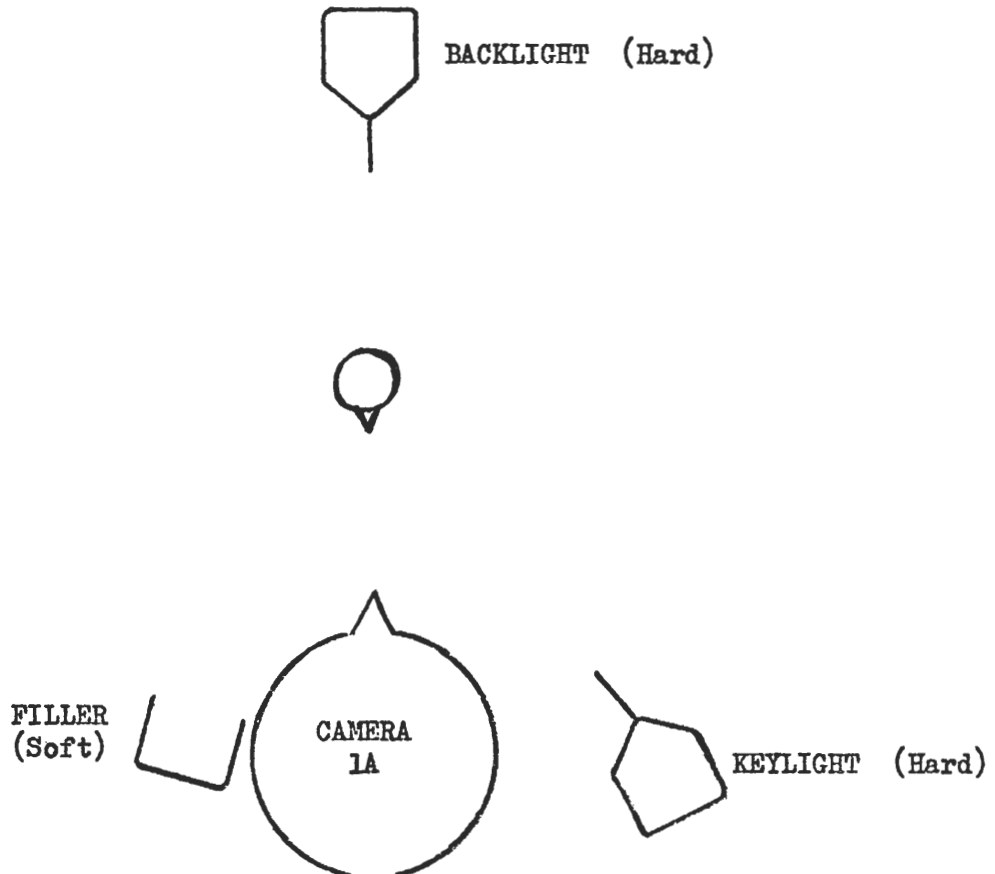
Background Can be plain or graded towards the top and the corners. Effects projectors can be used to project patterns onto the background but overall lighting should be added to avoid a too "dramatic" effect.



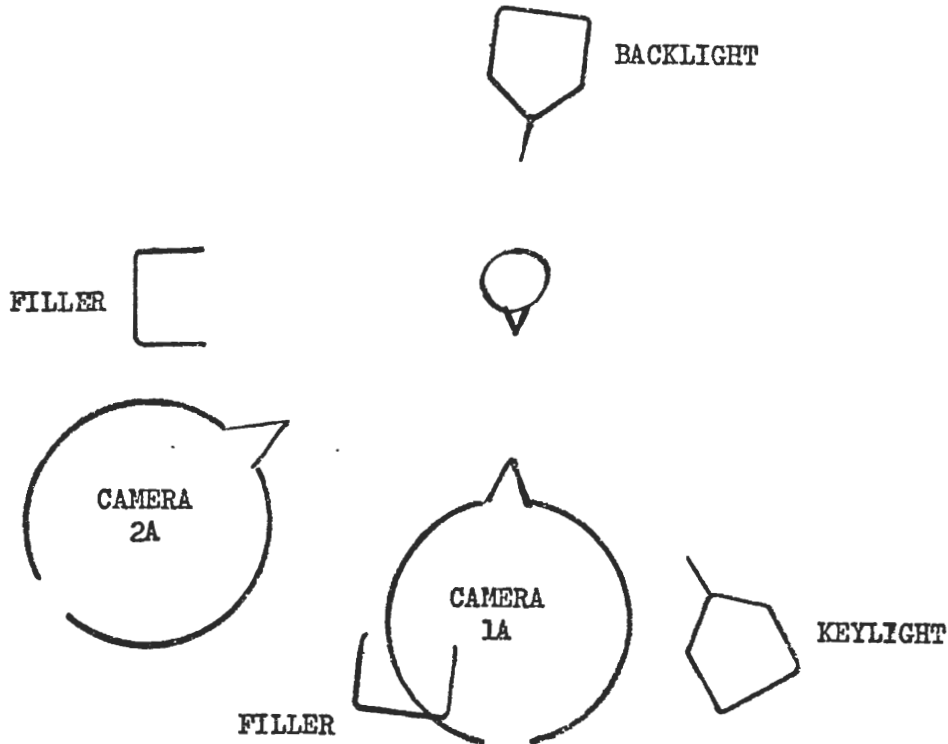
To ensure control of background lighting, whenever possible use barn doors to keep keylight off background. Similarly avoid background light catching artist.

In colour, plain backgrounds are often used; care must be taken to ensure that on the monochrome picture there is a difference in tonal value between the face and the background.

Basic lighting of the artist for a single camera



Basic lighting of the artist for 2 cameras, one frontal and one semi-profile



For 'long haired' artists two backlights are more effective but give two hard shadows towards the camera.

Lighting Balance - The 'Key' or 'Mood' of the picture is determined by the ratio of the relative intensities of Key and Filler, and the tonal distribution in the picture.

Low Key - Predominance of dark tones, large areas of shadow. Facial contrast approx. 5:1. Dramatic effect.

Med. Key - Normal tonal distribution. Facial contrast approx. 3:1

High Key - Predominance of light tones, small areas of 'thin' shadows. Facial contrast approx. 2 or $1\frac{1}{2}$:1. An almost 2D effect giving a gay, light mood.

For contrast ratio of 3:1 the ratios of Key to Filler should be 2:1.

The intensity of the backlight should be approx. the same as the keylight but will also depend on the subject.

The background intensity should be approx. the same as the key but will also depend on the nature of the background and effect required.

Present day lighting consoles allow for fairly swift 'balancing' of lighting levels using dimmers. However if no dimmers are available the lamps can be moved if practicable. The illumination approximately obeys the inverse square law for soft sources and soft edge (Fresnel) spotlights in the fully flooded condition

$$\text{Illumination} \propto \frac{1}{\text{Distance}^2}$$

and the Cosine law.

$$\text{Illumination} \propto \text{Cos } \theta \quad (\theta = \text{angle of incidence}).$$

Additionally a Fresnel spotlight may be "spotted" up but the illumination becomes less uniform and the barn doors become ineffective.

Illumination may also be reduced over the beam angle (or part of it) by using "wires" or " $\frac{1}{2}$ wires". This reduces the illumination by approx. 25%.