

## 3-Point Lighting

The standard studio lighting setup consists of three lighting elements:

- the key light
- the fill light
- the backlight

### Key Light:

The key light is your main lighting source. It is the first light you set up. It is usually the strongest light and usually is set at a high angle, pointing down onto the subject, and is placed to the side of the camera.

### Fill Light

The fill light defines the intensity of shadows created by the key light. It is either a weaker light or a bounce card. The fill light fills in the shadows created by the key light.

### Back Light, also called Hair Light

The back light is placed behind the subject, at a high angle, set to point down onto the back of the subject's head and their shoulders. It creates a ring of light or halo around the person's hair. The backlight's main function is to separate the subject from the background. It creates an edge light which can either be distinct or soft, depending on how close to the subject the light is placed. Try not to make it too strong as this light may distract from the subject or cause a lens flare.

For a back light, either place the light above the person's head, creating a top light, or directly behind the person, creating a ring of light on their hair.

NOTE: You can add a Background Light, which differs from the back light in that it is used to light the background of the scene and *not* the subject. The background light may light the wall, for example. The back light, lights the head and shoulders of the subject in order to separate them, visually, from the wall.

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## Lighting equipment

### Light stands

Very lightweight stands for holding the light fixtures. These are adjustable based on the height you need for your light source. Because light stands are very lightweight and the fixtures themselves are often heavy, the feet of the stands must be wide enough to prevent the entire sight from tipping over. Often sandbags are placed at the base of light stands for stability.

### Barn doors

Barn doors are metal frames that attach to the light fixture. They are used to direct the path of the light, to shape it and mask it so that it will go where you want it to go. They become very hot and should only be touched when using heavy work gloves.

### Umbrellas

An umbrella looks and acts exactly like an umbrella. But umbrellas for lighting are silver and are placed in front of the light, usually attached to the same light stand. They are used to send reflected light onto your subject. This diffuses and softens shadows and creates a wider throw for the light.

### Gels and filters

Gels and filters are plastic sheets that can be pinned to the barn doors with clothes pins (standard lighting equipment). They are used to change the color temperature of the light, or to diffuse the light – to create a softer-quality light. Gels and filters are made of heat-resistant material but should not be placed too near the bulb. When using filters, make sure that when you attach them to the barn doors, you arc them away from the bulb.

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### Light fixtures – available for checkout by CIN 111

#### Lowell DP

The Lowell DP is a focusable spotlight that can be used as a powerful key light, a backlight, or to light a background. Use an umbrella or other diffusion to create a soft key or fill light. The DP is called a “fresnel” light (pronounced fra-nel’), which indicates that it can be focussed from hard spotlight to softer floodlight by turning a knob on the side of the fixture.

Color temperature: 3000 – 3200k (kelvin) tungsten-halogen (warm light)

The DP & T (Tota light) kits combine the focusing ability of the DP with the wide angle throw of Tota lights. This kit takes care of several lighting needs.

#### Tota lights

500watt, oblong, quartz lights. Most people use Totas with umbrellas for a broader lighting spread/throw. On their own they’re good to create an even back wall lighting or bringing the overall brightness level up in a large space.

Color temperature: 3200 – 3400k tungsten (warm light)

#### Arri 150 kit

Lights are fresnel lights (pronounced fra-nel’), meaning the light can be focused using a knob at the back of the light – the same as with the Lowell DP, to create either a spotlight for a narrower beam, or a flood light for a wider beam.

Color temperature: 3200k tungsten (warm light)

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## Lighting Safety

- Do not touch the bulb with your fingers – cover your hands with a piece of cloth if you need to handle the bulb at all. Most likely, you will not need to handle the bulb. The oil from your fingers will heat up much hotter than the surface temperature of the glass, causing the bulb to explode.
- Extend the light stand to whatever height you need for your shoot *after* the light fixture has been securely attached.
- Cables should not be stretched across the floor. If your lighting cable is too short, use a grounded extension cord. Tape your cords to the floor using Gaffer's Tape to secure the cords.
- Use sandbags to stabilize your light stands.
- Have someone on the set whose job it is to watch the light stands and cables during a shoot. It is very easy to forget where they are in the middle of shooting and knock them over.
- Do not aim the camcorder lens directly at lights. Pointing it directly at a strong light source overloads the electronic pickup device and may damage the camcorder.
- Always turn off the lights before unplugging the cord.
- If you find it necessary to handle the light fixture while it is hot, wear protective work gloves, even when adjusting barn doors. The lights become hot enough that the barn doors are too hot to handle with bare hands.
- After shooting, always wait for the bulb to completely cool down before closing the barn doors, taking the fixture off of the light stand, and putting everything back into the kit.