

Continuous Lighting Equipment Reference Guide

Welcome to the reference guide for continuous lighting equipment. The lighting kits and their various accessories can be extremely useful for getting the most out of your photography and video projects. However, proper procedures should ALWAYS be followed when using any equipment from the cage in order to maintain it in working order, ensure your safety and to achieve the best results in your final project.

Checking Out Equipment from the Cage

- The number one rule of using anything borrowed from the cage is to treat it better than you treat your own equipment!
- Be sure to bring back all accessories and equipment included in your kit when you return it, otherwise you will be charged for anything that is missing.
- Studio lighting kits are very expensive, so be careful and gentle with them!

Item Checklist

The ARRI three-point lighting kit should include the following items:

- Three differently-sized tungsten lights with attached metal “barn doors”
- Three tripod stands for lights
- A pair of gloves

You may also want to check out some of the following items and accessories:

- Video or Photo camera tripod
- Extension cables
- Sand bags for securing the light stands or C-clamp base
- Gaffers tape (to mark positions on the floor for lights, actors or props & to tape down cables)
- Gels, screens and diffusers, with clips to attach them to the lights
- Different colored backdrops (white, black, chromakey)
- A paper lantern light for intimate, soft indoor lighting
- Reflectors for additional bounce light in indoor and outdoor shoots

Lighting Studio Rules & Reservation Policy

- The lighting studio is reserved on a first-come, first-serve basis
- Sign up calendars for reservations are located right outside the lighting studio
- **Only one reservation per-student per-day, AND a reservation may not exceed 3 hours** (but the studio may be used by a student multiple times in a single day if it does not conflict with any pre existing reservations).
- A lighting studio key can be checked out for only 3 hours at a time from the art library
- The lighting studio is operated on honor code: if your time ran out and someone is waiting for their reservation, *get out!*
- When planned efficiently, a good studio photographer/videographer can efficiently execute a controlled shoot in under an hour or two. Don't book 3 hours unless you have a large production that calls for it!
- Talk and share! If your session is in low need of floor space or noise control, offer to double up with your peers!

- Be tidy! When leaving the space, reorganize the equipment and pick up after yourself
- Always lock the doors when exiting the lighting studio.
- Any questions? Contact Thomas Willis (twillis@wellesley.edu).

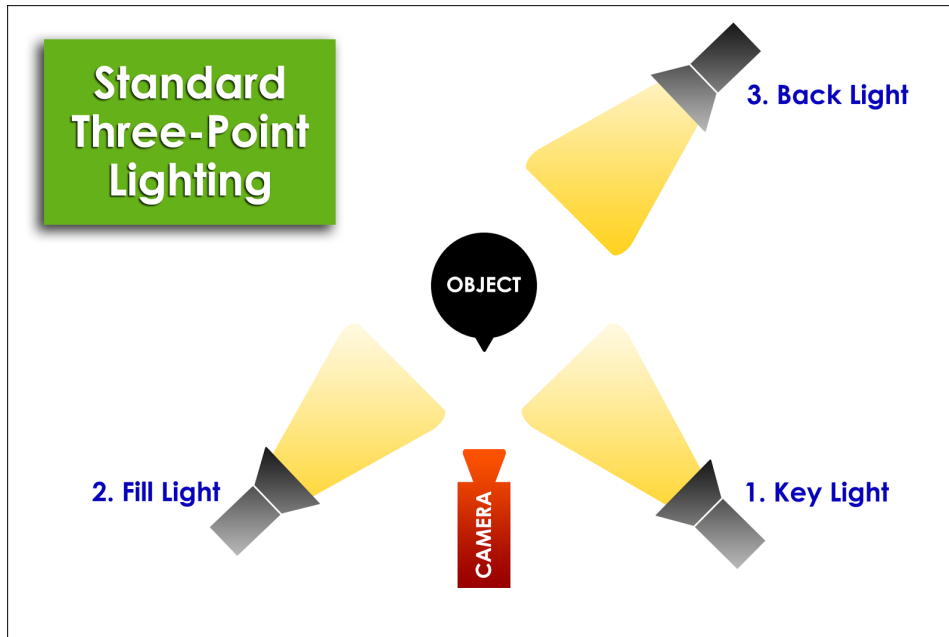
Safety Information

- **ALWAYS:**
 - Wear gloves when handling lights while they are both on and cooling down, as they get EXTREMELY hot and can cause serious burns!
 - Wait 10 minutes after turning off lights to pack them back into the case. They need time to cool down, otherwise they could melt the equipment or case.
 - Tighten and loosen bolts securely so that the equipment does not fall over or break!
 - Attach gels with metal clamps as far from the bulb as possible to prevent melting or fires
- **NEVER:**
 - Leave anything flammable touching the lighting equipment (paper, clothing, etc...)
 - Plug multiple lights into the same outlet, as the large amount of current can cause a fuse to blow. Use a power strip or extension cable if necessary.
 - Touch the light bulbs themselves with bare hands, even if they are off. The oil from your fingers can damage the bulbs.

Setting Up the Arri Light Kits

1. Take lighting stands out of kit case. Unscrew and assemble the stands so that the cross-bar at the bottom forms a 90 degree angle for the strongest and safest assembly.
2. Unscrewing the bolt at the top of the lights and place the light atop the stands
3. Plug in each light to a different light socket, using extension cords or power strips if necessary.
4. Put on gloves and turn on lights individually using the switch on the power cord.
5. Roughly position lights as desired (see section on General Lighting Principles)
6. Tighten and loosen the bolts on the base of the light stands to adjust the height and tilt the light itself to adjust the angle.
7. Adjust the dial on the back of the light to control both the intensity and diffusion of that light source
8. Open or close the metal “barn doors” on the lights to focus or block out excess light
9. (Optional) Clip on gels or diffusers to the metal rings in front of the lights to adjust light color and diffusion, simulating indoor, outdoor and special effect lighting.
10. (Optional) Set up a backdrop behind your subject, unfurling the roll on two of the metal C-stands available in the lighting studio and securing it with clamps. You may want a partner or to ask Jack or Thomas to help you with this.

General Three-Point Lighting Principles



A typical Three-Point lighting setup uses three types of lights:

Key Light:

- The most powerful and largest bulb (650 Watt)
- Position at a 45 degree angle to your subject

Fill Light:

- Roughly 50% intensity of the Key (300 Watt)
- Fills in the harsh shadows left by the Key light
- Position at a 45 degree angle to your subject on the opposite side of the key light

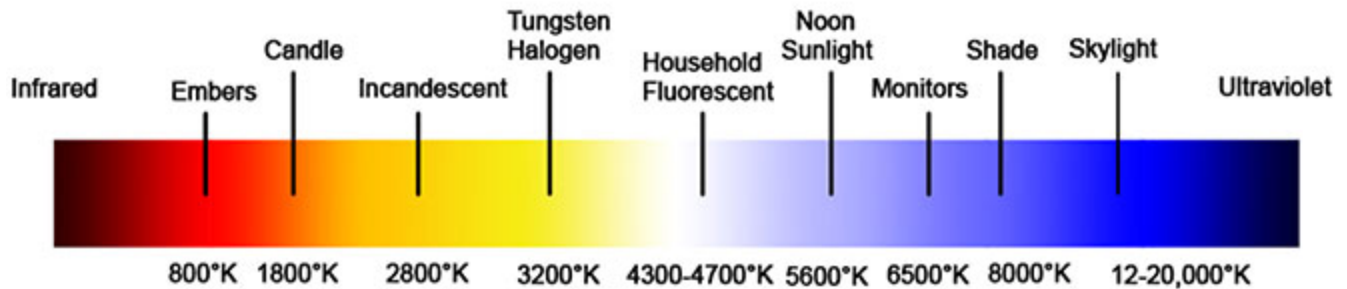
Back Light (also called the Rim, Edge or Hair Light):

- Roughly 50% intensity of the Fill (150 Watt)
- Separates the subject from the background by adding a thin ring of illumination around the back edge
- Position behind subject at roughly 120 to 180 degrees from the camera

Feel free to play around with the angle, intensity, number and color of lights in your setup for different visual looks, such as:

- Using fewer lights to create darker shadows
- Pointing a light at a white backdrop (typically the Back or Fill Light) to remove any visible wrinkles and spots from the background
- Positioning the Fill and Key Lights across from each other at 90 degree angles to the camera
- Using a single light pointed directly at the subject
- Attaching a diffuser for softer shadows
- Substituting a reflector for the Fill or Back Lights, held by an assistant or clamped to a C-stand

Light Temperature



- The temperature (color) of light is measured in degrees Kelvin (°K), as depicted in the graphic above.
 - The Arri light kits use 3200°K Tungsten-Halogen bulbs. Note that this is slightly higher than standard Incandescent bulbs (2800°K), so subtle use of a gel may be useful to simulate indoor light in a studio context.
 - Dorm room lighting is typically fluorescent between 4300-4700°K. You may want to use additional lighting or reflectors in this context, as the lighting tends to be dim and create unflattering overhead shadows.
 - Sunlight varies wildly in color temperature depending on the time of day
- You can simulate different light temperatures by attaching gels to the lights with metal clamps, changing the color to suit the situation.
- **CAUTION:** The lights are very hot, so try to clamp the gels as far away from the bulb as possible to prevent them from melting or catching fire.
- Manually set the white balance in your photo or video camera based on the color temperature of your lights for consistent lighting across different times of day and locations.
 - For information on setting the white balance and other settings, check out the video tutorials on the [Videos & Documentation](#) section of the Art Department site.