

Day One: Lighting Design

Learning Target: Understanding basic terminology and equipment used in lighting design

Lighting for Stage



Day 1

The image features a central graphic of a stage lighting fixture. At the top, a semi-circular arch contains three overlapping beams of light that converge towards a central point. Below this, a bright, glowing oval shape represents the stage floor. The background is a dark, gradient-filled arch that frames the central elements.

Lighting Design

The basics of light design for theatre

Major concerns of lighting

1. To assure visibility (most important)
2. To help with the setting (create setting)
3. To help stage the story (where should the audience look)
4. To help with the mood of the play.



Quick Activity/Reflection:

1. Choose a familiar story. This could even be a childhood fairytale.
2. Consider the major concerns of lighting and answer the following questions:
 - a. What is one setting of your story? How could you use light to help create the setting? For example in *The Little Mermaid*, blue lights could be used to help create water.
 - b. What is the mood of your story? How could light be used to set the mood? For example, if you were staging an apocalyptic play the lights could be dark and have shadows.

Two styles of lighting



1. **Motivational**—The light appears to actually come from a specific light source such as a window or a chandelier.
2. **Non-motivational**—The light comes from anywhere. The stage is lit for visibility and artistic purposes.



Terminology

1. **Throw**—The distance from a lighting instrument to the area to be lit. The distance the beam of light will effectively travel.
2. **Gelatin and glass roundels**—Transparent color media placed on lighting instruments to produce different colors. Glass roundels are used on striplights in the little theatre. Gelatin is used on ERS's Fresnels, Pars, Scoops, and Cyc lights. The LED lights can change color based on what is selected in the computer.
3. **Color Frames**—metal holders which fit into a lighting instrument to keep a color gel in place.
4. **Dimmer**—An electrical device that controls the amount of current flowing into a lighting instrument, thus increasing or decreasing the intensity of the light. (It may help to think of the dimmer as a light switch)
5. **Circuit**—the complete path of an electrical current. (It may help to think of the circuit as the outlet for designing purposes. Each outlet has its own circuit number to designate where each instrument is plugged.)
6. **Key light**—Accent of highlight on an actor's face, usually in the direction of the motivating light.
7. **Fill light**—Wash or soft light that fills in the light on the actor's face from the direction opposite of the key light.
8. **Dimension lighting**—Lighting an actor from behind and/or the side so as to add dimension.

Types of instruments

- The instrument used in a light design depends upon the characteristics of the instrument and the desired effect.
- Each instrument has a different throw, beam spread, intensity, and light quality.
- Some instruments require a light gel or roundel to select colors. Others are LED instruments that have their color selected in the control board.

Ellipsoidal Reflector Spotlight



- Frequently called ERS or in some places, a Leko.
- A longer instrument with a strong beam of light that can be focused with internal shutters.
- The throw of this light is long.
- It should be hung from the catwalks or rails.
- A gobo (metal template with a shape) can be used in this type of instrument.
- Uses gel for color.
- Excellent for key and fill lighting, as well as special effects with a gobo.



Scoop

- A high-intensity flood light that provides a broad wash of light.
- Good for lighting scrims or drops, but is not easily focused.
- It can also be used for dimension lighting.
- The throw of this light is short and diffused.
- It will only be hung on the electrics.
- Uses gel for color.



Fresnel



- **Fresnel** is pronounced feh-nell with the emphasis on the last syllable. The “s” is silent.
- Small instrument that gives a soft edged pool of light, which makes blending easy.
- The throw is medium.
- Must be focused with barn doors (see picture on the right with barn doors on the front of it).
- Usually hung from the electrics over the stage.
- Uses gel for color.
- Provides excellent key and fill light or dimension lighting



Par Can



- This is a longer light that has a long throw.
- Cannot be focused internally. Barn doors can help with focusing, but the light does diffuse after it travels very far.
- The beam of the light is softer edged than an ERS.
- It is used for fill light or color tone and can be hung on catwalks and rails.
- Uses gel for color
- This instrument is lightweight and used frequently with garage bands, but has less practical application for stage.



Cyc light

- A large high wattage instrument that is used for coloring cycloramas or drops.
- Can also be used for dimension lighting on stage.
- Will be hung only from the electrics.
- Uses gel for color.



Striplight

- This is a strip of lights that can be controlled in sections.
- Usually the strips are comprised of 9 or 12 individual lamps that are circuited by 3's or 4's. For example, there could be a strip of 12 lamps with the sequence or red, blue, green and amber that repeats. All of the reds would be controlled together, all of the blues together, greens together, and ambers together. Each color would have its own circuit and dimmer.
- In old fashioned theatres, the striplights on the floor were footlights.
- Uses glass roundels for color.



TRi-tour PAR



- This is an LED instrument.
- It takes 12 addresses instead of the traditional 1 circuit to 1 dimmer.
- The color is built into the instrument and is selected on the light board.
- LED lights burn out much less frequently than traditional lights and do not require any color media such as gel.
- The throw of this light is medium to long.
- This light can be used on the electrics and in the catwalks.

LED Batten light

- An LED instrument
- Can be used as footlights on the ground, be placed on a batten, or mounted on scenery.
- The color is built into the instrument and is selected on the light board.
- Can be used for color tone, special effects, or mood setting.



LED Ovation cyc light

- An LED instrument
- This is a great replacement for the halogen cyc light.
- It can create any color but uses less power.
- It does not require any gel for color, as it is built into the instrument and is selected on the control board.
- It produces a broad wash of intense light.



Activity:

1. Today, you have reviewed numerous terms and vocabulary that you will need to understand to develop lighting designs.
2. To help us process this information, let's do a Tech Terms Task!
 - a. Choose three terms from Slide 8
 - b. Complete the following chart for each term(this works great on notecards if you have them):

Name of Term	Draw a picture that represents your understanding of the word.
Reminding Word (Word that is familiar to you that reminds you of the term.)	Definition in your own words