

Glossary for a light designer

Center of higher education in theater studies

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Terms and concepts important and crucial for effective communication and implementation in theatre lighting design

General Terms

Lighting Designer (LD): The person responsible for creating the lighting concept for a production, including the design and implementation of the lighting plot.

Lighting Plot: A detailed plan or map that shows the location, type, and color of all the lighting instruments used in a production.

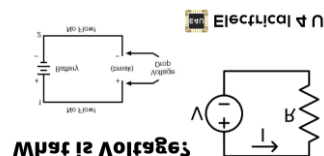
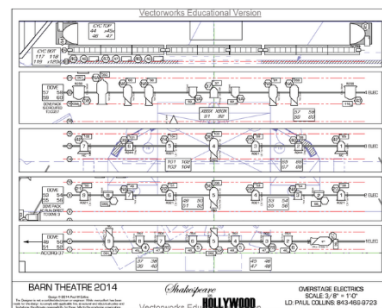
Cue: A specific action or series of actions that lighting follows during a performance, often triggered by dialogue or a particular event on stage.

Watt: A unit of power, used to measure the energy consumption of lighting fixtures.

Ampere (Amp): A unit of electrical current, often abbreviated as "amp."

Volt (V): A unit of electrical potential or electromotive force, symbolized as "V," essential for understanding the power requirements of lighting fixtures.

Voltage Rating: The maximum voltage that a lighting fixture or electrical component can safely handle, critical for ensuring safe operation and preventing damage.



Standard Voltage:

In many theaters, the standard voltage for lighting equipment is 120V or 230V, depending on the regional electrical infrastructure, which determines the compatibility of the equipment used.

Instrument Schedule:

A list detailing every lighting instrument used in a production, including its type, position, and purpose.

Magic Sheet:

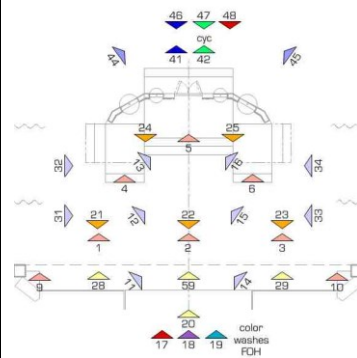
A simplified diagram created by the lighting designer to help them quickly reference the layout and function of the lighting instruments.

Intensity:

The brightness of a light

Throw Distance:

The distance between the lighting fixture and the illuminated object.



Lighting Instruments

PC theater lights, also known as PC (Pebble Convex) or Plano Convex lights, are a type of lighting fixture commonly used in theater, stage, and studio productions. These lights consist of a plano-convex lens, which is a lens with one flat side and one convex side (curved outward). PC lights can control with this kind of lens and focus the light output. The convex side of the lens helps to converge and direct the light rays, while the flat side allows for easy mounting and adjustment.



Fresnel:

A type of spotlight with a soft-edged beam, often used for general lighting and area lighting.



Ellipsoidal

Reflector Spotlight (ERS): Also known as a Leko, this instrument has a sharp-edged beam and is used for precise lighting control.



Profile theater fixtures,

or Leko lights, provide sharp, focused beams ideal for highlighting actors and set pieces. They offer precise control over shape, edge, and texture through shutters and gobo patterns. Essential for creating dramatic lighting effects, these fixtures enhance visual storytelling on stage.



Par Can:

(PAR+Parabolic Aluminized Reflector)A type of lighting instrument that provides a powerful, even light, often used for creating washes of color.



LED Fixtures:

Modern lighting instruments that use light-emitting diodes, offering energy efficiency, color versatility, and long lifespan.



Follow spot:

A manually operated spotlight used to follow performers around the stage.



Moving head Lights

Automated lights that can pan, tilt, change color, and adjust focus, often



Intelligent Lights

Used for dynamic and complex lighting effects.



Practical:

A light source that is visible to the audience and is part of the set design, like a table lamp or chandelier.



Lighting Control

Dimmer:

A device used to control the intensity of a lighting instrument.



Light Board

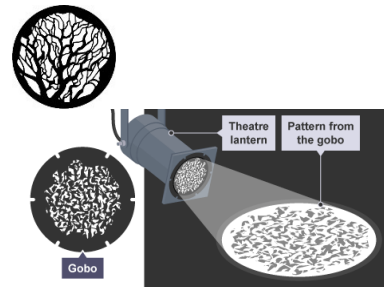
The control desk used by the lighting operator to manage all the lighting

Lighting Console: cues and intensities during a performance.



DMX (Digital Multiplex): A standard for digital communication networks that are used to control stage lighting and effects.

Gobo: A stencil or template inserted into a lighting instrument to project patterns or shapes.



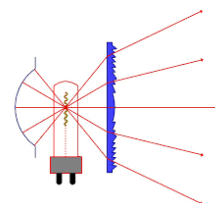
Iris: An adjustable diaphragm used to control the size of the beam of light.



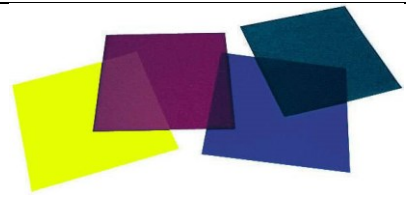
Lens: A piece of glass or other transparent material that focuses or diffuses light beams.



Reflector: A surface that reflects light, used to direct or diffuse light beams.



Gel (Color Filter): A colored piece of material placed in front of a lighting instrument to change the color of the light it emits.



Shutter or barndoors: A device used to shape or block light from an instrument, often used in ellipsoidal reflector spotlights.



Dichroic Filter A glass filter that selectively reflects and transmits different wavelengths of light, used for creating pure colors.

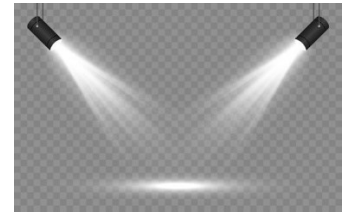


Lighting Effects

Wash: A broad, even area of light covering a large part of the stage.



Spot: A focused beam of light that illuminates a specific area or actor.



Backlighting:

Lighting that comes from behind the actors, often used to create a sense of depth and separation from the background.



Footlights:

Lights placed at the front edge of the stage floor, traditionally used to illuminate actors from below.



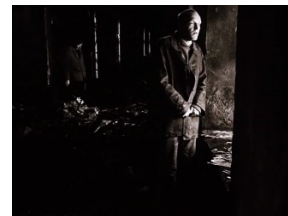
Up-lighting:

Lighting from below, often used to create dramatic or eerie effects.



Down-lighting:

Lighting from directly above, used for highlighting and creating a natural look.



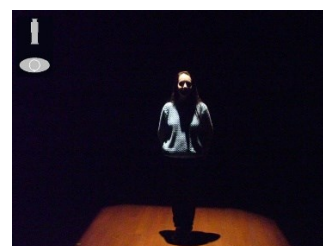
Cross-lighting:

Lighting from the sides to reduce shadows and create a more three-dimensional look.



Sidelight:

Light coming from the side of the subject, used to highlight the shape and texture.

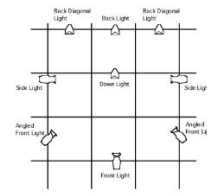


Toplight:

Lighting from directly above the subject.

Beam Angle

The angle at which light spreads from a lighting fixture.



Techniques and Concepts

Key Light:

The main source of light in a scene, used to highlight the primary subject.

Fill Light:

A softer light used to fill in shadows created by the key light, creating a more balanced lighting effect.

Back Light:

Light that comes from behind the subject, helping to separate them from the background and adding depth.

Floodlight:

A broad-beamed, high-intensity artificial light.

Side Light:

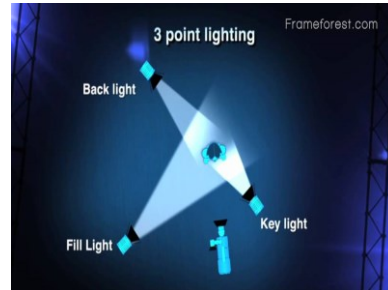
Light that comes from the side, used to sculpt and highlight the features of the actors.

Accent Lighting

Lighting used to emphasize a particular object or area.

Ambient Light:

General illumination that sets the overall level of light in a scene.



Practical Lighting: On-stage lighting sources that are part of the set design, such as lamps, candles, or neon signs, which are used to add realism to the scene.

Specials: Specific lights used for particular moments or effects in the production, not part of the general stage wash or key lighting.

Cue Stack: The sequence of lighting cues programmed into the lighting console, used to automate the transitions between lighting states during a performance.

Fade: A gradual increase or decrease in the intensity of light.

Crossfade: The gradual transition from one lighting cue to another, allowing for smooth changes in the lighting state.

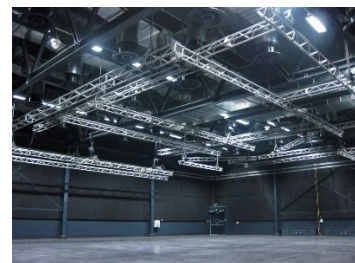
Ground Row: A row of lights placed on the floor of the stage to provide up-lighting

House Lights: The lights that illuminate the audience area of a theater

Rigging: The process of installing lighting fixtures and other equipment in a theater.

Focus: The process of adjusting a lighting instrument so that its beam hits the desired area on stage.

Zoom Lens: A lens with an adjustable focal length, allowing the size of the light beam to be changed without moving the fixture.



Lamp:

The bulb inside a lighting instrument, which produces the light.



Safety and Maintenance

Safety Cable:

A steel cable used to secure lighting instruments to their mounts, preventing them from falling if their primary attachment fails.

Circuit Protection:

Use circuit breakers and surge protectors to prevent electrical overloads.



Grounding:

Ensure all electrical equipment is properly grounded.

Codes and Regulations: Adhere to local and national safety codes and regulations regarding theater lighting.

Fire Extinguishers:

Keep fire extinguishers readily accessible near lighting control areas.

Emergency Exits:

Ensure clear and accessible emergency exits in case of a fire or other emergencies.



Training:

Train staff on emergency procedures and how to handle lighting-related emergencies.