

# LIGHTING TERMS GLOSSARY

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## A

### Accent Light

Illumination used to make something stand out. It may be done with intensity and/or color.  
A luminaire that provides such illumination.

### Amp

an abridged version of Ampere.

### Amperage (A)

The measure of electrical current in amperes.

### Ampere(A)

A unit of measurement for Electrical Current.

### AMX

Abbreviation for Analog Multiplex.

### Analog Multiplex (AMX)

A system that simultaneously transmits more than one analog signal.

### Analog Signal

A continuous communication signal where the amplitude or frequency of the voltage and/or current takes any value within a range of values.

### ANSI

Abbreviation for American National Standards Institute.

### ANSI Code

A three letter system that has been devised to describe lamps of different manufacture but the same application. The letters have no relationship to lamp description, but the same letters always designate the same type of lamp. Some of the application parameters they define are wattage, base type, envelope size, and light center length.

### Arc

The light caused by an electrical discharge between two electrodes in a gas such as xenon, argon, or air. The first usable arc as a practical light source was developed in 1809 by Sir Humphrey Davy.

### Automated Light

A luminaire that is robotic, i.e., certain functions such as panning, tilting, focusing, dimming, beam shaping and coloring, etc., are motorized and remotely operated from a control console.

### Axial

A term used to describe a luminaire whose lamp is mounted on the same axis as its optical system.

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# B

## Backlight

Illumination on a subject from behind, causing a separation of the subject from the background, often creating a fringe of light around the subject.

A luminaire that provides such illumination.

## Ballast

An electrical apparatus that limits the electrical current in a particular circuit, usually a circuit containing an arc source.

## Bank

A group of luminaires.

A group of dimmers or dimmer modules.

A group of sliders or channels on a control console.

## Bare Ends

Leads without a connector installed.

## Bare Leads

See the definition for Bare Ends.

## Barn Doors

An apparatus with adjustable flaps, usually 2, 4 or 8, that attaches to the front of a luminaire. It is used to block or shape the beam.

## Barrel

An abridged version of Lens barrel.

A male turn-around, generally used for the connection of control cables.

## Base

The bottom of a stand used for mounting luminaires.

The part of a lamp to which the electrical connections are made, i.e., the part with the contacts. It is often the mechanical support and/or heat sink for the lamp.

The flat, bottom support for some luminaires.

## Batten

A horizontal pipe on which luminaires, scenery, curtains, and some distribution equipment are hung.

## Batten Strip

a connector strip hung from a batten.

## Beam

Generally, the conoid, or in some cases, the pyramid of light emanating from a luminaire.

In Photometry, the circular area of the base of a cone-shaped beam where the intensity is at least 50% of the maximum intensity. The maximum intensity is ideally located at the center of the base. It should be noted that some luminaires, such as ellipsoidal spotlights and follow spots, can be adjusted or designed such that the light emanating from them does not include the entire beam, i.e., the edge of the beam is greater than 50% of its center.

## Beam Angle

The angle of the vertex of a cone shaped beam where the perimeter of the base is defined by where the intensity is 50% of the maximum intensity.

### Beam Pattern

The complete shape of the beam, as defined in the general sense. It includes any realistic or abstract patterns introduced into the beam as well as any apparatus that alters the contour of the beam.

### Beam Spread

See the definition for Field Angle.

### Black light

A luminaire with a beam whose wavelengths are too short to be visible, i.e., 320 to 380 nm.

These ultraviolet wavelengths excite fluorescent materials, paints, etc., in theatrical applications.

### Blackout

To remove or the removal of all or almost all light on the performing area, usually done rapidly.

### Bleed Through

The effect created by adjusting the intensity of the illumination directly on a theatrical scrim inversely with the intensity of the illumination behind it. This causes the scrim to go through a phase of changing transmission.

### Boom Base

A heavy, steel or iron base used in the theater industry to support a boom.

### Borderlight

A striplight often used at some border on a stage or over a stage. This could be an area between two curtains or at the edge of the stage floor, cyclorama, runway, etc.

### Breakout

A special power cord that has one male or female multiconnector electrically connected to a plurality of female or male connectors, respectively, via separate cables or sets of sleeved wires. In most cases, each contact of the multiconnector is electrically connected to only one of all of the collective contacts on the other connectors.

### Bubble Machine

A machine that emits a continuous stream of soap-based bubbles.

### Bump

To change the intensity of a luminaire or group of luminaires instantaneously, usually for a short duration of time, often to the beat of music as if to create a pulsing effect.

### Burnout

The melting of a lamp filament.

A term used to describe certain roadies.

### Bus

A conductor comprising a thick metal strip, usually copper, brass, or aluminum, to which other devices, such as fuses and circuit breakers, as well as a means to make electrical connections, may be attached. Buses are often used in power distribution equipment that handle large amounts of electrical current, e.g., panelboards and switchboards.

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# C

## C-Clamp

See definition for Pipe clamp. In the film and video industries, a "C" shaped clamp that attaches onto a pipe and locks with the aid of a bolt, that when tightened, presses like a vice onto the pipe. It also has a stud or studs for the attachment of luminaire, grip equipment, etc.

## C-Stand

see Century Stand

## Cable

A rope of wire used to transmit electricity or data.

To run, hook up, and/or interconnect electrical cables and the items to which the cables are connected.

A strong, flexible, wire rope made of steel, used to support pipes, battens, truss, etc., from an overhead structure.

## Cable Bundle

A group of electric cables attached at various points by tape, rope, etc.

## Cable Cradle

A metal sling used to support heavy stage cable as it hangs from a batten, while simultaneously preventing the cable from entering horizontal sight lines from the house to the stage. It can also take strain away from the point where the cable exits a piece of distribution equipment.

## Cable Drop

An overhead electric cable or group of electric cables that extends downward for the connection of luminaires or other electrical apparatuses. The cable(s) may be connected to some type of overhead support, or directly to a piece of distribution equipment.

## Cable Hook

A hook that attaches to a stand used to hold excess coils of electric cable, often found on follow spot stands.

## Cable Mount

A term used to describe a connector designed to be electrically attached to the end of a cable.

## Cam-lok

A commonly used type of insulated, locking, single conductor cable connector manufactured by Crouse-Hinds Inc. The name Cam-lok is trademarked.

## Candle (cd)

The unit of Luminous Intensity of a light source.

## Candlepower (cp)

A term often used in place of Luminous Intensity.

## Cap

The removable or hinged, rear cover of some luminaires that contains the lamp socket, lamp, and power cord.

See definition for Base.

## Carbon Arc

An arc source in which the arc is formed in air between a pair of carbon electrodes.

## Card

In general, a circuit board.

See Dimmer Card or Control Card.

### Catwalk

A raised, overhead platform used in film industry studios, used for mounting and accessing luminaires and other types of production equipment. Located around the perimeter of the studio floor, they are often painted green and are always provided with handrails.

### Century Stand

A grip stand manufactured by Matthews Studio Equipment Corp. The name Century Stand is trademarked.

### Channel (ch)

An individual control output on a control console, accessed and regulated by a slider, switch, or button, or in, some cases, accessed by a discretely assigned address and regulated by a data input apparatus.

### Chief Electrician

Master Electrician or Gaffer.

### Chief Lighting Technician

Master Electrician or Gaffer.

### Circuit (ckt)

A complete electrical path leading from an electrical supply through conductors and perhaps dimmers, distribution equipment, electrical devices, electronic items, etc. to the load and returning to the source. The load is quite often a lamp.

### Circuit board

A plastic or fibrous card that contains electronic components and the wiring and/or tracers that interconnect them.

### Circuit Breaker

An electrical device designed to open and close a circuit by non-automatic means and to open the circuit automatically on a predetermined over current without damage to itself.

### Circuit Breaker Panel

A panelboard that houses circuit breakers.

### Cold Mirror

A mirror that transmits heat, i.e., infrared radiation, but reflects light.

### Cold Start

A term used to describe the ignition of a cold arc lamp, i.e., a lamp that has not been electrified for a relatively long period of time.

### Color

(see color medium) To place color media in front of a luminaire to alter the color of the beam.

### Color Balance

An arrangement of hue, chroma, and value within a design that produces a sense of equilibrium, i.e., no colored area commands attention to the detriment of the entire arrangement.

### Color Changer

(also color scroller, color wheel) An apparatus that attaches to a luminaire and allows one to manually introduce one or more color frames into the beam. Color changers are most often found on follow spots.

### Color Correction

Adjusting the color temperatures of various luminaires so that they are all the same, or to make them match existing light sources, e. g., sunlight or fluorescent light. This is usually accomplished by utilizing color media, but adjusting the input voltage levels is a method sometimes used for some luminaires.

### Color Filter

see color medium.

### Color Frame

An apparatus used to hold color media or other types of filters. It can be of various shapes and sizes, and may comprise one or more pieces.

### Color Medium

Any colored transparent material that can be placed in front of a beam to color the light. They can be of the absorption or reflection type.

### Color Rendering Index (CRI)

A single number approximate evaluation of the effect of a light source on the visual appearance of a colored surface. The number falls on a scale from below 0 to 100, with daylight at 100.

Objects and people viewed under lamps with a high CRI generally appear more true to life.

### Color Scroller

An electronic, motorized apparatus that mounts on the front of a luminaire, and allows for the automatic placement of one of a number of gels to be placed in front of the beam.

### Color Temperature

The temperature, in degrees Kelvin, of a black-body that generates light with the closest visual color match to the source being specified, i.e., a measure of the color appearance of light, not the actual temperature of the light.

### Color Wheel

An apparatus holding several different gels that can be rotated by hand or motor such that any one gel can be placed in front of a luminaire with relative ease.

### Colorine

lamp dip

### Complementary Colors

Two colors of light that combine to make white light in the additive color mixing system. For red, green, and blue, the complementary colors are cyan, magenta, and yellow, respectively.

### Complementary Tints

Two colors in the additive color mixing system that combine to make nearly white light.

### Computer Board

memory board

### Concave

A term used to describe a lens side that is inwardly and usually spherically curved.

### Conduct

To carry electrical current.

### Conductor

Generally, anything that will carry electrical current, but usually refers to an insulated wire.

### Cone

see Snoot.

### Cone Light

A soft light luminaire that uses a single ended lamp and a cone shaped reflector.

### Connector

Specifically, the name for a family of electrical wiring devices, such as plugs and receptacles, comprising one or more contacts, a means for electrically attaching a conductor to each contact, a means for electrically insulating each contact from the other, and an overall insulating material

around the complete assembly such that only the contacts are exposed when the connector is properly installed to the item containing the conductors.

Generally, any item used to make an electrical connection between two or more separate conductors.

**Connector Box**

see Plug-In Box

**Connector Strip**

A piece of power distribution equipment comprising an elongated metal housing, and a plurality of female flush mount connectors or female pigtail connectors for the purpose of supplying electricity to luminaires. It usually hangs from a batten and has many circuits, the line side is usually hard-wired, and it gets its electrical supply from dimmers.

**Console**

see Control Console.

**Control Board**

see Control Console.

**Control Cable**

A cable used to transmit digital or analog signals from a control console to the apparatus to be controlled.

**Control Card**

Specifically, a circuit board that receives the control signal from the control console and, in turn, individually controls the independent outputs of a bank of dimmer modules.

Generally, any circuit board that performs many of the control functions of an electronic apparatus, e. g., a ballast or automated light.

**Control Console**

An electronic apparatus, run by an operator, that converts the settings of various items, such as sliders, switches, buttons, or some form of data input, into a digital or analog signal that is thereby transmitted to a control card, dimmer bank, or some other electronic apparatus. Some control consoles are also equipped with monitors.

**Convex**

A term used to describe a lens side that is outwardly and usually spherically curved.

**Cool Color**

Generally, a color that is in the green-blue-violet range.

**Cool Light**

Light having a color temperature of approximately 3600°K to 4900°K, i.e., bright-white to blue-white.

**Cord Wrap**

A loop made of rope attached to a yoke for the purpose of supporting excess coils of electric cable.

A round bracket provided on the rear of some luminaires for the purpose of retaining coils of electric cable when the luminaire is to be stored or transported.

**Crew**

see Lighting Crew

**CRI**

Color Rendering Index

### Cross Bar

In the theater industry, a bar mounted horizontally on top of a stand. It contains two or more sliding tees for mounting luminaires, and a fixed tee for mounting the bar to the stand.

In the film and video industries, a bar mounted horizontally between two stands for the purpose of hanging luminaires or grip equipment.

### Cross Connecting Panel

see Patch Panel.

### Cross Fade

A relatively slow change from one control console setting to another.

### Cross Fader

A slider on a control console that enables a cross fade.

### Cross Light

A luminaire used for cross lighting.

### Cross lighting

Illumination from two sources on opposite sides of the subject.

### Cue (Q)

An event in a production that is the signal for a specific action.

The signal given in order to cause such an action.

The response to such a signal, which may include a change in intensity settings for a luminaire(s), or a change in action by an apparatus(es).

### Cue Light

A light used to signal a cue. Red usually means stand by and green usually means execute the cue.

### Cut

To remove illumination from a scene or subject.

To block a portion of a light beam.

### Cut Sheet

Also known as data sheet; a paper, pamphlet or leaflet that has detailed information about a lamp, luminaire, piece of equipment, etc., usually supplied by the manufacturer.

### Cutoff

A general term for anything used to block a portion of a light beam, e. g., flags, cutters, shutters, barn doors, etc.

### Cyc

see Cyclorama

### Cyc Light

See Cyclorama Light

### Cyclorama

A vertical surface which is used to form the background for a theatrical type setting, usually made of heavy cloth drawn tight to achieve a smooth, flat surface. It usually represents the sky or suggests limitless space. Traditionally, cycloramas were dome shaped or horizontally curved, but may now also be flat or vertically curved as well.

### Cyclorama Light (Cyc Light)

A luminaire mounted at the top and/or bottom of a cyclorama in order to light it in a smooth, uniform manner.

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# D

## D/A Converter

Digital-to-Analog Converter

## Data Sheet

see Cut Sheet.

## Daylight

Light that has a color temperature of approximately 5500-5600°K, which has been approximated to be the color temperature of ordinary sunlight during the day under normal atmospheric conditions.

## Daylight Booster

see Punch Light.

## Daylight Filter

A filter used to balance light from a source such that the spectral distribution will approximate daylight, i.e. 5500-5600°K.

## DC

Abbreviation for Direct Current.

## DC Volts (VDC)

A unit of measurement for Voltage Potential, specifically for direct current voltages.

## Dead

Anything that is supposed to be carrying, or has the potential to carry electrical current, but isn't.

## Dichroic

A type of metallic coating applied to glass and some other materials that allows certain wavelengths of light, or other electromagnetic radiation, to pass while reflecting all others.

## Diffuse

To scatter light using diffusion material.

A term used to describe a somewhat dull and/or stippled surface that is moderately reflective.

## Diffuser

Generally, something made of diffusion material.

In the film and video industries, a fabric panel, used for diffusing, with the light source being a luminaire or sunlight. They are available in a variety of sizes and shapes, and materials of varying textures.

## Diffusion Frame

An apparatus used to hold diffusion material. It can be of various shapes and sizes, and may comprise one or more pieces.

## Diffusion Material

Any reflecting or transmitting media for which the reflected or transmitted light is distributed uniformly, i.e., scattered over a wide range.

## Diffusion Media

see Diffusion Material.

## Digital Multiplex (DMX)

A system that simultaneously transmits more than one digital signal.

## Digital-To-Analog Converter (D/A Converter)

An apparatus that converts digital signals to analog signals.

## Dim

To change the intensity of a luminaire.  
The state of a luminaire at very low intensity.

## Dimmer

An apparatus used to control the intensity of a luminaire.

## Dimmer Card

A circuit board that contains some or all of the electronic components needed to electronically dim a luminaire.

## Dimmer Module

A discrete apparatus that contains a dimmer card, its enclosure or mounting apparatus, and perhaps other related items such as pilot lights or handles.

## Dimmer Pack

A portable housing that contains a group of electronic dimmers, usually not less than 4 or more than 24. Some dimmer packs are designed such that they can be permanently installed.

## Dimmer Panel

An apparatus, usually 19" long, that contains a group of electronic dimmers that get installed into a dimmer rack.

## Dimmer Rack

An apparatus designed to contain a large group of electronic dimmers. Permanently installed dimmer racks comprise a metal frame and housing in their construction, and are hard wired. Portable dimmer racks are provided with connectors for a tie-in, and are usually provided with wheels, handles, and a metal frame in a metal-lined wooden housing.

## Dimmer-Per-Circuit

A situation or design where each electronic dimmer used in a theater or studio affects only one circuit.

## Direct Current (DC)

An electrical current that maintains constant direction.

## Direct Current Voltage

A voltage that maintains constant polarity.

## Direct Lighting

Illumination on a subject or area that goes directly from the front of the luminaire in a straight line to the subject or area.

## Disappearing Footlight

A footlight mounted into a stage floor, that when closed, has its lid completely flush with the floor. The lid is usually made from the same material as the stage floor.

## Distribution

see Light Distribution.

## Distribution Equipment

Any electrical apparatus that routes electrical current to another apparatus, usually luminaires.

## DMX

Abbreviation for Digital Multiplex.

## DMX 512

A somewhat unique digital multiplex signal with specific characteristics that is commonly used in the stage and studio lighting industries. Control consoles designed to generate this signal were originally designed to control a maximum of 512 apparatuses, usually dimmers, but now can control many more.

### Donut

A flat metal apparatus with a circular hole in the center used to reduce halation and sharpen the image when using patterns.

### Door

A single flap on a Barndoor.

A cover to an access opening in the housing of a luminaire or other apparatus.

### Double Ended Lamp

A somewhat elongated lamp that has a base and contact on each end.

### Double Header

A tee bar with two individual, or sets of, studs or receivers.

### Double Pipe Clamp

Two pipe clamps connected together via a short stud with their serrated jaws on opposite ends. It is used to connect two pipes together.

### Double Pipe Clamp Extension

Two pipe clamps connected together via a narrow pipe, usually 24" or more, with their serrated jaws on opposite ends. It is used to connect two pipes together.

### Down Light

Downward illumination, almost perpendicular with the floor.

A luminaire that provides such illumination.

### Downstage

The stage area nearest the audience, also containing the apron.

### Drafting Template

A translucent mask with traceable patterned cutouts of luminaires and other items used to draw a light plot.

### Dress

To arrange electric cables in a neat and orderly fashion.

### Drop Box

see Plug-In Box.

### Drop-In Iris

An iris mounted to a plate that can be installed, i.e., dropped into or removed from a luminaire.

### Duvetyn (Duvatyne, Duvetine, Duvetyne, Duvyteen)

An opaque material used for butterflies, cutters, flags, gobos, and overheads in the film and video industries.

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## E

### Edison Connector

The standard household male, parallel blade connector that may or may not have a ground pin.

### Edison Lampholder

The standard household screw-type lamp socket that accepts medium screw type lamp base.

### Effects Projector

A special, lensed luminaire designed to project images by placing one or more glass, film, or plastic slides or metal patterns into its beam. The first crude effects projector was developed by Steele MacKay in the late 1880's.

### Egg Crate

A square or rectangular, partitioned apparatus that, when installed on large open face luminaires, reduces glare.

### Electric

An abridged version of Electric's Pipe.

A term used by professional film and video industry people to refer to those operating or utilizing luminaires and related equipment, such as cable, distribution equipment, dimmers, etc.

### Electrical Distribution

see Power Distribution.

### Electrical Frequency

The cycles per second of alternating current, in Hertz. In North America, and parts of South America and South East Asia, the frequency is 60 Hz. The rest of the world operates at a frequency of 50 Hz.

### Electrical Noise

A general term for an unwanted electronic disturbance in conductors or electrical or electronic equipment. This equipment can also be the cause of electrical noise.

### Electrical Panel

see Panelboard.

### Electrical Supply

Anything that has the potential to provide voltage and electrical current, i.e., electrical power.

### Electrician

Generally, one versed in the field of electricity and its application.

A term used by professional stage lighting people to refer to those operating or utilizing luminaires and related equipment, such as stage cable, dimmers, etc.

### Electric's

A catch-all term used to describe any type of power distribution equipment hung from or attached to an electric's pipe.

### Electric's Pipe

A horizontal pipe on which luminaires and some distribution equipment are hung. It should not be used to hang scenery and/or curtains.

### Ellipsoidal

An abridged version of Ellipsoidal Spotlight.

### Ellipsoidal Reflector

A reflector designed to converge light rays to a single point, except that point which is occupied by the point source, eventually resulting in a beam that varies in width, depending on the distance between the two points. It has the shape of the end section of an ellipsoid.

### Ellipsoidal Reflector Spotlight (ERS)

See Ellipsoidal Spotlight.

### Ellipsoidal Spotlight

A spotlight that embodies an ellipsoidal reflector and framing shutters, and sometimes an iris and pattern slot.

### End Prong Base

A lamp base, 1/2" deep, with two flat, parallel contacts protruding from the bottom.

### Envelope

The outer glass part of a lamp.

ERS

Abbreviation for Ellipsoidal Reflector Spotlight.

Even Field

A field that has a relatively uniform decrease in intensity as viewed from the center to the edge of the field, i.e., a field that does not have a noticeable hot spot.

Extended End Prong Base

A lamp base, approximately 1-1/4" deep, with two flat, parallel contacts protruding from the bottom.

Extension

A catch-all term used to describe any item that stretches the reach of, or increase the length of something, e. g., side arms, extension arms, stage cables, etc.

Extension Hanger

A telescoping grip hanger.

Eye

The fresnel lens of a fresnel spotlight.

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## F

F/Stop

A rating often applied to scrims used in the film and video industries on the ability to dim light. This rating is directly related to a camera's ability to allow for the admittance of light.

Fade

To gradually increase or decrease the intensity of light.

Fade In

The gradual increase in intensity of light.

Fade Out

The gradual decrease in intensity of light.

Fade-To-Black

To gradually decrease the intensity of all lighting to a blackout.

Fader

An item found on most control consoles, such as a slider, used to fade.

Far Cyc

A cyclorama light placed at a distance from the cyclorama, generally 8' or more.

Feed

See Electrical Supply.

Feeder Cables

A set of electric cables, usually individually insulated conductors with a high ampacity, used to remotely connect portable dimmer racks, power distribution racks, and the like, to the electrical supply. They are usually of the wire types W or SC, and are often provided with Cam-lok connectors.

Feeders

See Leads, short for Feeder Cables.

## Female

A term applied to a connector that contains the holes and/or slots for receiving the pins, prongs, blades and/or tabs of a male connector. The female connector should always be attached to the line side of a circuit.

## Field

In Photometry, the circular area of the base of a cone shaped beam where the intensity is at least 10% of the maximum intensity. The maximum intensity is ideally located at the center of the base. It should be noted that some luminaires, such as ellipsoidal spotlights and follow spots, can be adjusted or designed such that the light emanating from them does not include the entire field, i.e., the edge of the beam is greater than 10% of its center.

## Field Angle

The angle of the vertex of a cone shaped beam where the perimeter of the base is defined by where the intensity is 10% of the maximum intensity.

## Field Diameter

The diameter of the base of a cone shaped beam where the perimeter of the base is defined by where the intensity is 10% of the maximum intensity.

## Filament

The wire inside an incandescent lamp envelope that glows and emits light when heated, i.e., when electricity passes through it.

## Fill

To create the illumination needed to reduce shadows in an area or on a subject.

## Fill Light

Supplementary illumination used to reduce shadows, preventing them from appearing black. A luminaire that provides such illumination.

## Filter

A term that refers to color media, diffusion material, or neutral density filters.

## Filter Frame

see Color Frame.

## Fire Up

To switch on a luminaire or some other electrical apparatus.

## Firing Card

see #1 of Control Card.

## First Border

The borderlight and/or its position on the first electric.

The first teaser curtain upstage of the proscenium arch.

## First Electric

The electric pipe and/or its position, which is located immediately upstage of the proscenium arch.

## Fixed Focus

A term used to describe an optical system whereby the lenses in a luminaire remain at a fixed distance from one another, although they may move as a group within the system.

## Fixed Lens System

An optical system where the lens or lenses in a luminaire remain stationary, i.e., they lack the ability to move.

## Fixture

A term that is often used interchangeably with Luminaire.

#### Fixture Extension Clamp

A pipe clamp connected by its base to a narrow pipe, usually 24" or more, with a bolt and washer on the other end for the purpose of extending the mounting position of a luminaire.

#### Flex Scrim

A small fabric scrim that is not intended for use on an open end frame, i.e., they are intended to dim the full beam.

#### Flicker

The strobing of some luminaires that cannot be visually detected because of the frequency of its output voltage, but can adversely affect the way motion picture film records light.

#### Flicker-Free

A term used to describe electronic ballasts that electronically alter the electrical frequency that causes flicker.

#### Flies

The space above a stage where scenery, luminaires, etc. are hoisted above horizontal sight lines.

#### Flood

The position of a movable lamp, lens, or pair of lenses on a spotlight that produces the widest field angle.

To direct a large amount of light on a relatively large area.

#### Flood Light

A luminaire consisting of a reflector, lamp, and sometimes a single lens, used to direct a large amount of light on a relatively large area.

#### Floor Box

See Floor Pocket.

#### Floor Bracket

See Floor Trunnion.

#### Floor Pocket

A stage pocket whose cover is flush mounted with the floor to which it is mounted.

#### Floor Trunnion (Floor Trunnion)

A metal bracket with a base used to support a striplight. Always used in pairs, a trunnion attaches to each end and can sit on a floor or can be attached to pipe clamp for hanging. They can also be provided with casters.

#### Fluorescence

The property of certain materials to absorb radiation of certain wavelengths, usually ultraviolet, and re-emit the radiation as light.

#### Fluorescent Lamp

A lamp that uses fluorescence as its light source.

#### Flush Mount

A term used to describe anything whose upper surface, when installed, is flush with the surface to which it was installed. This term is used to describe floor and wall pockets, disappearing footlights, ceiling ports, and certain types of connectors.

#### Fly

To lift scenery, truss, luminaires, etc., into the air by support cables, chain, or ropes, with the aid of motors, pulleys, winches, and the like.

#### Fly Tower

The support structure mounted to the stage wall that contains the ropes or cables and pulleys that go between the flies and the flyrail or pinrail.

### Flyrail

In modern theaters, it is a sturdy, steel structure with an assortment of pulleys and counterweights, and cam-like clamps or clutch mechanisms which secure the ropes that support the battens and electric pipes. These apparatuses are often motorized.

In older theaters, the flyrail is a pinrail.

### Foamcore

A polystyrene, styrofoam material used as a substrate for some reflector boards, effective because of its light weight and ease of mounting via reflector forks.

### Focal Length

The distance between a particular point of a lens or reflector, and the focal point.

### Focal Plane

The plane that is perpendicular to the axis of an optical system and also contains the focal point.

### Focal Point

The small region where a lens or reflector concentrates the light from a light source.

### Focus

To aim and adjust a luminaire to give the beam its desired size (spot or flood), edge (soft or hard), field (even or peak), and/or shape (round, patterned, or cut).

To aim and adjust a lens, pair of lenses, light source, reflector, or any combination of these so that the light is concentrated at the focal point.

### Focus Lens

A movable lens in a multi-lens optical system that adjusts the focus of a luminaire.

### Focus Range

The ratio of spot focus to flood focus.

### Focusing Instrument

A luminaire whose beam can be adjusted from spot focus to flood focus.

### Follow Spot

A narrow-beam focusing instrument that is manually operated, and usually comprises a powerful light source, an iris, shutters, a color changer, and perhaps other features. It is usually operated from an adjustable stand and is used to follow performer(s) on a stage with its beam, surrounding the performer(s) in a large pool of light.

### Foot

The very front of the stage.

### Footcandle (fc)

A non-metric unit of measurement for Illumination, i.e., 1 lumen per square foot.

### Footlight

A luminaire, often a striplight, that is used from the floor of a stage, runway, or other performing area. This luminaire received its name because it was originally used to illuminate the feet of dancing performers on stage.

### Framing Projector

A spotlight that has framing shutters.

### Framing Shutters

Thin, movable, heat-resistant metal plates that are introduced into a beam such that a portion(s) of the beam is blocked off, i.e., framed, affecting the beam pattern, usually forming a sharp edge in the beam. They are used in various types of luminaires, but extensively in ellipsoidal spotlights, usually 4 (top, bottom, right, and left), and follow spots, usually 2 (top and bottom), always situated internally, and usually at the aperture. Framing shutters generally can be



independently adjusted, but those used in follow spots usually move simultaneously with a single control mechanism.

#### Frequency

The speed at which something pulses or cycles.

An abridged version of Electrical Frequency.

#### Fresnel

short for Fresnel Spotlight.

#### Fresnel Spotlight

A spotlight employing a single fresnel lens that produces a soft edged beam, and usually provided with a spherical reflector and a means to adjust the focus from spot to flood.

#### Front Light

Illumination from the general direction of the viewer(s).

A luminaire that provides such illumination.

#### Front-of-House (FOH)

The complete area of the theater in front of the stage, i.e., the audience area.

#### Frost

A term used to describe a lamp whose envelope has been stippled to the point of being translucent for the purpose of diffusing the light. A type of colorless diffusion material made of glass fibers or high-temperature plastic.

#### Full Scrim

A metal scrim whose screen occupies the complete frame.

#### Full Stage Plug

A wide, male slip connector designed to carry a relatively large amount of current.

#### Funnel

see Snoot.

#### Fused Quartz

A relatively pure, high-temperature glass used to manufacture lamp envelopes. It has a melting point of approximately 1650°C.

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## G

#### Gaffer

A term used by professional film and video industry lighting people to refer to someone overseeing those operating or utilizing luminaires and related equipment, such as electric cables, dimmers, etc.

#### Gaffer Grip

A large, spring-loaded clamp with serrated or rubber cushioned jaws. It usually has a stud or studs for the attachment of luminaires and grip equipment.

#### Gas Light

A luminaire that uses burning gas as its light source.

#### Gel

An abridged but commonly used version of Gelatin.

To place gelatine in front of a luminaire to alter the color of the beam.

## Gel Frame

See Color Frame.

## Gel Scroller

See the definition for Color Scroller.

## Gel String

A series of different color gels connected together in a row for use in a color scroller.

## Gelatine (Gelatin)

A type of color media originally made from gelatine, an organic substance made from animal tissues, but now refers to color media made from very thin high-temperature plastic as well.

## Generator

An electrical supply, usually portable, that comprises a diesel or gasoline powered machine and electromagnets for the purpose of generating electricity.

## Ghosting

A term used to describe a filament, lamp or luminaire that is barely glowing.

## Glitch

An unintended surge or brief interruption in an electrical current or signal. This can sometimes be detrimental to the integrity of the signal or to electronic equipment.

Any error in the execution of a cue from a control console.

## Go Button

A button on a control console that executes a cue.

## Gobo

See definition for Pattern.

In the film and video industries, a general term for any opaque item placed into the beam of a luminaire that blocks a portion of the beam or the whole beam.

## Gooseneck

A small worklight, supplied with some control consoles and other equipment, that has a long, narrow, adjustable support, similar in appearance and mobility to the neck of a goose. They are usually removable and dimmable.

## Graduated Scrim

In the film and video industries, a round, framed metal screen whose density gradually decreases from one side of the frame to the other.

## Grand Master

A slider on a control console that controls all other sliders on the console, including masters and sub masters.

## Grid

The wood or metal framework located in the flies that supports the pulleys containing the steel wires or rope holding up scenery, battens, etc.

The metal structure of pipes in a studio ceiling for the purpose of hanging luminaires, power distribution equipment, or grip equipment. A ballast for carbon arc spotlight.

## Gridiron

A grid made of iron and/or steel.

## Gridiron Junction Box

A piece of distribution equipment that houses electrical connections. Although quite often located on a gridiron, it can be located anywhere in the stage area or flies where electrical connections need to be made and protected.

## Grip

A term used by professional film and video industry lighting people to refer to someone utilizing grip equipment and other related items.

An abridged version of Gaffer Grip.

## Grip Equipment

A catch-all name for portable items that a member of a film or video industry lighting crew may use, such as luminaires, stands, clamps, flags, cutters, scrims, nets, dots, fingers, etc.

## Ground

A conducting connection between an electrical circuit or electrical equipment and earth, or to some conducting item that serves in place of the earth. In most alternating current circuits, ground has a voltage potential of zero.

## Ground Cyc

A cyclorama light used from the floor.

## Ground Pin

The pin, prong, blade, or tab on some male connectors for the purpose of making a connection ground.

## Ground Row

A piece of scenery placed upstage to suggest items near the horizon, often used to hide ground cycs from view of the audience.

## Ground Row Cyc

A cyclorama light placed between the ground row and the cyclorama.

## Ground Support

The truss, lifts, towers, etc. that are set up at ground, stage, or platform level and used to support other truss or equipment above.

## Grounded

To have a conducting connection to ground.

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# H

## Half Scrim

A metal scrim whose screen occupies one half of its frame such that the straight edge of the screen is located at the diameter of the frame.

## Halogen

The name for a family of gases used in lamps to maintain proper color temperature and to keep the inside wall of the envelope clean.

## Hanging Arm

A metal bracket with a pipe clamp on one end used to hang short (generally less than 10') striplights from a batten. Always used in pairs, a hanging arm attaches to each end of the striplight.

## Hard Light

Illumination that has a hard edge and produces sharply defined shadows. Often this light is very intense.

A luminaire that provides such illumination.

## Head

A general term for a fresnel spotlight.

The part of a follow spot that contains the light source, i.e., not the stand, ballast, or interconnect cable.

The part of a metal halide luminaire that contains the lamp, i.e., not the ballast or interconnect cable.

The part of an ellipsoidal spotlight that contains the reflector, i.e., not the lens barrel or the cap.

## Heat Filter

A filter which transmits visible light and either absorbs or reflects infrared in order to reduce the amount of heat in a beam.

## Heat Shield

A thin, heat-resistant metal plate(s) that surrounds a lamp base in order to reduce the amount of heat reaching the lamp socket in order to reduce pinch temperatures.

## Heat Sink

A metal form whose sole purpose is to absorb heat on one surface and radiate that heat from other surfaces.

## HMI

Abbreviation for Hydrargyrum (Greek for Mercury) Medium-Arc Iodides. This is a commonly used type of metal halide lamp manufactured by Osram-Sylvania Corp. The term Osram HMI is trademarked.

## Horizontal Sight Lines

Imaginary lines drawn from the seats furthest from the center line of the audience area, to any obstructions on the sides of the stage, to determine what portions of the performing area will be visible to all of the audience.

## Hot Patch

To make a connection on a patch panel while the circuit is live, thereby creating a potentially dangerous arc.

## Hot Spot

The spot of light with the highest intensity, ideally located at or near the center of a beam that has been focused for a peak field.

## House Electrician

The electrician employed by a facility who is in control of house lighting and any electrical or electronic equipment owned or responsible for by the facility.

## House Lights

General lighting provided for the audience area.

## Hue

The red, orange, yellow, green, blue, violet, magenta aspect of color, without regard to other aspects such as saturation and luminance, i.e., the property of light that distinguished it from gray of the same luminance.

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# I

## Ignite

To cause an arc to form across the electrodes of a light source, either manually, as with carbon arc sources, or by using an ignitor, as with arc lamps.

## Illumination (E)

Generally, a term for light or lighting.

In photometry, the amount of light, i.e., luminous flux per unit area incident on a surface, in Footcandles or Lux.

## Image

The actual design of a pattern.

The reproduction of an object formed by an optical system.

## Incandescence

The emission of light from heated objects.

## Incandescent

A term used to describe a lamp, or a luminaire that utilizes such a lamp, that employs the incandescence of a filament as its light source. Such a lamp was first developed by Thomas Edison (United States) and Joseph Swan (Great Britain), independently, in 1879.

## Indirect Lighting

Illumination that falls on an area or subject by reflection, e. g., bounce lighting.

## Inky

A small fresnel spotlight with a 1.5" to 3" lens diameter, usually 100-250 watts.

## Inlet

a recessed male connector.

## Instrument

In the theater industry, another term for Luminaire.

## Integrated Circuit (IC)

An electronic component that includes circuits, rectifiers, and perhaps transistors and other electronic components, processed and contained entirely within a single, compact package with terminals for making electrical connections.

## Intelligent Light

see the definition for Automated Light.

## Intensity

An abridged version of Luminous Intensity.

## Interconnect Cable

An electric cable and connector assembly that electrically connects a ballast to a luminaire that uses an arc as its light source.

## Interconnecting Panel

See the definition for Patch Panel.

## Iris

An abridged, but commonly used version of Iris Diaphragm.

## Iris Diaphragm

An arrangement of thin, movable, heat-resistant metal plates, i.e., leaves, that form an adjustable circular opening. They are usually placed within an ellipsoidal spotlight or follow spot in order to adjust the diameter of the beam, or in some cases, to mechanically dim the beam.

Iris Slot

A narrow opening in some luminaires for the purpose of inserting a drop-in iris.

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## J

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## K

Kelvin (K)

In the metric system, a graduated scale used to measure temperature with 0° (-273°C) being the total absence of heat (absolute zero). Each degree is the same magnitude as a degree in the centigrade scale.

Key Light

the principal source of light which establishes the character of the actor together with the atmosphere and mood of the scene.

Kill

To disconnect electrical current to one, some, or all luminaires, motors, or other electrical equipment.

Kilo (k)

A numerical prefix denoting 1000.

Kilovolt (kV)

1000 volts.

Kilovolt-Ampere (kVA)

1000 volt-amperes.

Kilowatt (kW)

1000 watts.

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## L

Lamp

Any light source in a self contained package, comprising an envelope, filament or electrodes, base, contacts, gas, and any support structures. The source can be of the incandescent, fluorescent, or arc type.

Quite often this term is used interchangeably with Luminaire, especially in the theater industry.

To install a lamp in a luminaire.

Lamp Bar

A pipe, usually aluminum, that has a plurality of luminaires attached at even intervals. The power cords for the luminaires enter the pipe at even intervals. The power cords for the luminaires enter the pipe via a strain relief, and are electrically connected to wires within the pipe. The internal wires usually terminate into a multiconnector.

### Lamp Dip

A colored transparent or translucent lacquer used on low-wattage incandescent lamps in those instances when it is not practical or possible to use standard color media.

### Lampholder

The electrical device that supports a lamp in a luminaire, and generally contains the contacts that make the electrical connection to the contacts of the lamp base.

### Lantern

A term that is often used interchangeably with Luminaire, and is preferred over Luminaire in Europe.

### Leads

The electric cable(s) or sleeved, insulated wires, attached to a luminaire or piece of power distribution equipment via a strain relief, that terminate in a connector for the purpose of providing an electrical connection to the electrical supply or to another luminaire.

### Leaf

A single thin, heat-resistant metal plate from an iris or some mechanical dimmers.  
See definition #1 for Door.

### Leko

A commonly used term for an ellipsoidal spotlight. Named after its inventors Levy and Kook, the names Leko and Lekolite are trademarked by Strand Lighting Co.

### Lekolight

See the definition for Leko.

### Lens

A transparent material, usually glass, shaped to bend light rays as they pass through it. Colored lenses can also be used as color media.

### Lens Barrel

The movable, inner tube of a focusing lens system in an ellipsoidal spotlight.

The complete tubular front section of an ellipsoidal spotlight that contains the lenses.

### Lens Holder

Any apparatus used to retain a lens.

See definitions #1 and #2 for Lens Barrel.

### Lens Size

A term used in the theater industry to describe plano-convex or bi-convex lenses in terms of diameter and focal length (in inches), e. g., 6x9, 4.5x12.

Generally, the diameter of a lens.

### Level

An abridged version of Light Level.

The position of a slider on a control console.

### Lift

A height adjustable stand or tower, sometimes motorized or operated with a crank mechanism or by gas or liquid pressure.

### Light

Illumination, i.e., the aspect of radiant energy of which a human observer is aware through the visual sense. Its electromagnetic shorter than infrared radiation, i.e., approximately 380nm (violet) to 750 nm(red). A term that is often used interchangeably with Luminaire.

### Light Console

See the definition for Control Console.

**Light Distribution**

The way in which illumination of any color or quantity is spread over a particular background.

**Light Ladder**

A steel or iron, ladder-like apparatus used to hang a plurality of luminaires.

**Light Leak**

Unwanted light that escapes a luminaire from a location other than its intended opening.

**Light Level**

The average illumination on a subject, performing area, or part thereof.

**Light Meter**

Any apparatus used to measure various quantities of light, i.e., color temperature, footcandles, lux, etc.

**Light Plot**

The diagrammatic layout of luminaires and related equipment, and their application(s) for a lighting production.

**Light Source**

Anything that emits light, such as an arc or a filament, or in early stage light, the flame of a burning wick or gas.

**Light Spill**

A general term used to describe any stray light, including light leak.

**Light Tree**

A stand with arms attached.

**Lighting Crew**

A group of individuals trained in lighting skills and techniques, and collectively assembled to work on a stage, film, or video production. The group may include any or all of the following stagehands: electricians, electricians, roadies, gaffers, grips, operators and lighting technicians.

**Lighting Design**

The complete layout and presentation of the lighting designer.

**Lighting Designer**

One who plans lighting compositions, lays out light plots, directs the focusing of luminaires, and determines the various intensities, colors, looks, and cues for a lighting production.

**Lighting Director**

One who is responsible for the execution of the lighting design for a production, and, in some instances, may also be the Lighting Designer.

**Lighting Grid**

See the definition for Grid.

**Lighting Technician**

One trained in the lighting skills and techniques necessary for the implementation of the lighting design for a particular production.

See definition #2 for Electrician.

**Liquid Dimmer**

See the definition for Salt Water Dimmer.

**Live**

Having any voltage potential in reference to neutral or ground.

**Load Rating**

The maximum electrical load that something, such as wire, fuses, electrical connectors, etc., can safely accommodate.



The maximum weight that something can safely accommodate.

#### Location Fresnel

A fresnel spotlight used primarily in non-standard production settings, i.e., locations other than stages or studios. Because portability is generally a concern, they tend to be smaller in size when compared to studio fresnels of the same wattage.

#### Long Throw

A term used to describe a luminaire that has an effective intensity at a relatively long distance. This term is very subjective and dependent on the type of luminaire used.

#### Lowboy (Loboy)

A heavy-duty stand designed to hold luminaires or heavy grip equipment. The stand is equipped with wheels and short risers, and a 1-1/8" receiver and a grip head.

#### Lumen

A unit of measurement for Luminous Flux.

#### Luminaire

A complete unit for the purpose of generating usable and somewhat controllable light that comprises one or more lamps, parts designed to distribute the light, parts used to position and protect the light source, and a means to connect the light source(s) to an electrical supply.

#### Luminance

A measure of the light, i.e., luminous flux, per unit area leaving a surface in a particular direction. This quantity was formerly known as Brightness.

#### Luminous Intensity (I)

A measure of the strength of a light source in a particular direction, in Candles or Candelas. It is independent of the distance from the source.

#### Lux

A metric unit of measurement for Illumination, i.e., 1 lumen per square meter.

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## M

#### Main Light

See the definition for Key Light.

#### Male

A term applied to a connector that contains the pins, prongs, blades, and/or tabs for insertion into the holes or slots of a female connector. The male connector should never be attached to the line side of a circuit.

#### Master

A slider on a control console that controls groups of sliders on the console, including some or all sub masters, with the exception of the grand master, if the console is so equipped.

A term used to describe a control console that has control over another control console(s).

#### Master Electrician

In the theater industry, the supervising electrician on a production, i.e., the person ultimately responsible for all other electricians, luminaires, and related equipment, such as stage cable, dimmers, etc.

#### Matrix

A patching apparatus that can be a patch panel or a diode pin matrix.

### Medium Base

A lamp base that falls in the middle range of sizes for the type of base in question, i.e.. approx. 1" diameter for screw and prefocus type bases, approx. 7/8" post-to-post distance for bi-post bases, approx. 3/8" pin-to-pin distance for two-pin bases, and approx. 1/2" prong-to-prong distance for side prong bases.

### Medium Throw

A term used to describe a luminaire that has an effective intensity at a relatively moderate distance. This term is very subjective and dependent on the type of luminaire used.

### Memory Board

A control console that has computerized functions and an ability to electronically store data.

### Midget

See the definition for Inky.

### Mini Strip

A compact striplight that uses 1 to 4 groups of ten 12 volt lamps wired in a series circuit, manufactured by Lighting & Electronics, Inc. The name Mini Strip is trademarked.

### Mirror Ball

A sphere whose surface is covered with a plurality of small, individual mirrors, that when rotated and shined upon by a light source, gives the effect of a multitude of moving spots of light swirling and sweeping across surrounding surfaces.

### Module

An abridged version of Dimmer Module.

### Mogul Base

A lamp base that falls in the larger range of sizes for the type of base in question, i.e., approx. 1-1/2" diameter for screw and prefocus type bases, approx. 1-1/2" post-to-post distance for bi-post bases, and approx. 11/16" prong-to-prong distance for end prong and extended end prong bases.

### Monitor

An apparatus that renders a visual representation of the instructional information that was, is, or will be sent from a control console to a control card, dimmer bank, or some other electronic apparatus, and also a visual representation of the status of these items.

### Moving Light

See the definition for Automated Light.

### Multi Cable

An abridged version of Multiconductor Cable.

### Multiconductor Cable

An electrical cable that generally has more than three conductors.

### Multiconnector

A connector that generally has more than three contacts.

### Muslin

A material used for fabric scrims used in the theater, film, and video industries.

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## N

### Near Cyc

A cyclorama light placed close to the cyclorama, general less than 8'.

## NEMA

Abbreviation for National Electrical Manufacturers' Association.

## NEMA Configuration

An alpha-numeric code applied to connectors to guarantee consistency and interchangeability among manufacturers.

## Neutral

The connection point in a delta or wye system that is earth grounded, or electrically connected to an item that serves in place of the earth.

A term used to describe any point on a neutral conductor.

An abridged version of Neutral Conductor.

Without color.

## Neutral Conductor

A current carrying conductor that is electrically connected to neutral.

## Neutral Density Filter

A filter that reduces the intensity of light without affecting its color.

## Non-Dim

A term used to describe a circuit that does not pass through a dimmer.

A term used to describe a load that is not intended to be connected to a dimmer.

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# O

## Offstage

Out of sight from the audience.

## Ohm

A unit of measurement for Resistance, Reactance, or Impedance.

## Ohm Meter

An apparatus that measures resistance.

## Ohm's Law

A basic electrical formula that simply states that voltage is equal to electrical current multiplied by resistance, i.e.,  $V=IR$ .

## Onstage

In sight of the audience.

## Open Circuit

A circuit that has a physical break or disconnection, whether intentional or accidental, in its electrical path.

## Open End

A term used to describe a U shaped mounting frame for a scrim that supports the scrim on three sides, allowing the fourth side to remain free from a frame section. When this side is partially introduced into the beam, the straight edge of the dimmed portion of the beam casts no dark shadow line.

## Open Face

A term used to describe luminaires that use no lenses.

## Operating Light

A work light used by the operator of a control console.

### Operating Pole

A long, lightweight rod with a handle on one end and an attachment on the other for the purpose of adjusting or switching on pole-operated yokes, luminaires, pantographs, etc.

### Operator

A person designated to operate a control console, follow spot, generator, or some other apparatus that requires some degree of training and/or skill to use.

### Outlet

A female connector.

### Outriggers

Sturdy support legs that assist in stabilizing some stands and lifts. They are generally removable or easily folded away to assist in transporting or maneuvering the stand or lift.

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## P

### Pan

To rotate from side to side around a vertical axis.

### Panel

A general term that can refer to an overhead, butterfly, or large framed scrim, diffuser, or reflector.

An abridged version of Breaker Panel, Circuit Breaker Panel, Electrical Panel, or Panelboard.

### Panelboard

A piece of power distribution equipment comprising a box-like metal enclosure with a hinged cover, accessible only from one side, to allow access to internally mounted circuit breakers, switches, and fuses.

### Par

An abridged version of Par Lamp, Par Can, or Par Light.

### Par Can

See the definition for Par Light.

### Par Light

A generally lightweight luminaire that utilizes a PAR lamp. The beam characteristics depend on the type of PAR lamp used.

### PAR-Lamp

A designation for a type of lamp. In the case, one with a parabolic aluminized reflector.

### Parabolic Reflector

A reflector designed to align light rays generally parallel to the axis formed by the point source and the center of the reflector, eventually resulting in a cylindrical-to-wide beam. The reflector has the shape of a paraboloid.

### Patch

To make electrical connections on a patch panel, i.e., hard patching, or, to assign dimmers to channels on a control console, i.e., soft patching.

### Patch Bay

See the definition for Patch Panel.

### Patch Panel

A large, metal cabinet that comprises a plurality of female connectors electrically connected to dimmers, and a plurality of patch cords for the purpose of changing around the load(s) that are connected to the dimmer(s). Some patch panels use parallel bus bars electrically connected to dimmers, and another set of parallel bus bars mounted 90° to the first set and electrically connected to the loads, and slidable connectors that electrically connect any bus bar from one set to any bus bar from the other set.

### Pattern

A very thin, heat-resistant metal plate with a design cut out of its surface. When placed into the aperture of an ellipsoidal spotlight or follow spot via the pattern slot, an illuminated representation of the design is projected.

Also available in glass. See [Lithograph](#).

### Pattern Holder

A metal frame with a knob used to place patterns into the pattern slot of a luminaire.

### Pattern Rotator

A motorized pattern holder that spins the pattern.

### Pattern Slot

A narrow opening in some luminaires for the purpose of inserting a pattern holder or pattern rotator.

### Phase

The fraction of a cycle through which a wave has passed at any instant, measured as an angle with 360° representing one complete cycle. "Phase" is often symbolized by Ø.

### Photometry

The science of measuring light and its properties.

### Pigtail

The relatively short electric cable, power cord, or leads on a luminaire or piece of power distribution equipment that may or may not have a connector installed.

### Pigtail Connector

A connector that is installed on a pigtail.

### Pin

A thin prong used as a contact on some male connectors and lamp bases.

### Pin Connector

A type of connector in which the male comprises three elongated, cylindrical shaped linear contacts, and the female comprises three linear contacts with cylindrical holes. Older versions had only two contacts due to the fact that there was no provisions for a ground connection.

A type of insulated, single conductor cable connector used in the film and video industries.

### Pin-Beam Spotlight

See the definition of Pinspot.

### Pinspot

A spotlight that has an extremely narrow beam.

### Pinspot Adapter

An apparatus placed on the front of some luminaires in order to make the beam extremely narrow. Most have lenses and some have framing shutters or other devices to shape the beam.

### Pipe

A long, hollow, cylindrical bar made from iron for strength, used for battens, booms, gridirons, etc.

See the definition for Batten.

#### Pipe Clamp

A "C" shaped clamp with jaws that attaches onto a pipe and locks with the aid of a bolt, that when tightened, bites into the pipe and locks the clamp in place. It also has a secondary bolt for the attachment of luminaires, distribution equipment, etc.

#### Pipe Mount

A term used to describe something that has a means for mounting itself to a pipe.

#### Plano

A term used to describe a lens side that is perfectly flat.

#### Plano-Convex Lens

A lens that is plano on one side and convex on the other. These lenses converge light rays passing through them.

#### Plug

A male connector.

#### Plug-In Box

A piece of power distribution equipment comprising a metal housing, and one or more female flush mount connectors or female pigtail connectors for the purpose of supplying electricity to luminaires. It usually has several circuits, its line side is usually hard-wired, and often gets its electrical supply from dimmers.

#### Pocket

An abridged version of Stage Pocket, Floor Pocket, or Wall Pocket.

A socket on a patch panel.

#### Pole-Operated

A term used to describe a luminaire, yoke, pantograph, or other apparatus that can be controlled via an operating pole.

#### Power (P)

A general term that can mean heat, candlepower, and/or wattage.

#### Power Distribution (PD)

A term used to describe electrical equipment that is specially designed to intake electricity and route it to an output wiring device or devices. Wire, electric cable, and other electrical such as circuit breakers, terminal blocks, connectors, etc., are some of the items employed by power distribution equipment.

#### Power Supply

See the definition for Electrical Supply.

#### Pre-Focus Base

A cylindrical shaped lamp base with a flange around the top to hold it into its socket. The flange fits into the socket only one particular way such that the filament ends up in a predetermined orientation, i.e., it ends up pre-focused. It has one contact on the bottom and the flange acts as the second contact.

#### Pre-Rigged Truss

A truss section, usually provided with wheels, that has lamp bars installed.

#### Preset

An abridged version of Scene Preset.

To have something on a control console set up in advance of need.

## Primary Colors

Colors in terms of which all other colors may be described, or from which all other colors may be evolved by mixtures. In light, the primary colors are red, green, and blue. Combined in pairs, two primary colors give the complementary color of the third. All three colors combine to form white light.

## Projecting Lens

The lens in an optical system that converges light rays sufficiently to bring them to a clear, defined focus.

## Projection Lens

See the definition for Projecting Lens.

## Proscenium

The architectural opening on a stage through which the audience views the performance.

## Protocol

The specific type of digital or analog signal, AMX or DMX 512 e. g., used by a control console and the equipment it controls.

## Punch Light

A high intensity luminaire that floods an area with light whose color temperature is approximately that of daylight, often comprising a plurality of lamps.

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# Q

## Quad-Box

A piece of power distribution equipment comprising a small, metal enclosure housing four, flush, female connectors, and a permanently installed power cord whose conductors are electrically connected to the female connectors.

## Quartz

An abridged version of Fused Quartz.

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# R

## Rack

An abridged version of [Dimmer Rack](#) or Power Distribution Rack, or an apparatus that is a combination of the two.

## Rain Light

A pinspot generally hung overhead with its beam aiming downward.

## Range

A term that usually means Throw Distance, but sometimes refers to Beam Diameter or Field Diameter.

## Rated Lamplife

The total length of time that a lamp should operate effectively, as set by the manufacturer.

## Reactor

A ballast that uses an electromagnetic component to limit current flow.

## Reflector

Generally, anything that caused reflection.

A metal or glass apparatus, usually curved in some manner, used in most luminaires for the purpose of directing light rays from a light source. In the film and video industries, a metallic or reflective fabric panel, used for bounce lighting, or simply to redirect light, with the light source being a luminaire or sunlight. They are available in a variety of sizes and shapes, and materials of varying reflectance.

## Relamp

To replace a lamp in a luminaire

## Relay

A contractor that generally handles less electrical current than a standard contractor, and often gets mounted via a relay socket.

## Response Time

The time it takes for a dimmer to reach its intended level from the initiation of an input control signal.

the time it takes a lamp filament to react to a change in voltage.

## Rig

A complete structural assembly for hanging or supporting luminaires, scenery, and/or other production equipment comprising some or all of the following: truss, motors, support cables, clamps, pulleys, pipes, and other hardware, for the purpose of creating a somewhat portable and temporary performing area.

To set up and connect support items, such as cables, ropes, pulleys, hoists, motors, chains, or slings between the points and the items to be flown.

## Rigger

A person who rigs.

## Rigging

Generally, the support items used by rigger, such as cables, ropes, pulleys, hoists, motors, chains, slings, etc.

## Risers

The ridged surfaces on a fresnel lens or a stepped lens between sections of the active lens surface. They are sometimes opaqued with black ceramic enamel to reduce stray light rays.

Flat platforms of various sizes, usually portable, used for supporting luminaires or other production equipment, or sometimes used as portable stages.

The pipes or tubes that make up a telescoping stand.

## Road Case

A sturdy, rugged box, often supplied with handles, and castors or wheels, used to transport and protect production equipment such as control consoles, dimmer racks, luminaires, and related equipment.

## Roadie

A member of a production work crew that travels with a touring production from facility to facility.

## Roundel (Rondel)

A round piece of glass that can be used as a lens, a color medium, and or a lamp protector.

## Runway Lights

Footlights that are used on stage runways.

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# S

## Safety Cable

A steel cable that has a clip on one end and a loop on the other. It is intended to be threaded through a piece of hanging equipment and around a support structure, such as a batten or truss, and then clipped to its loop. It then acts as a safety support should the primary support, such as a pipe clamp or hanging arm, fail.

## Safety Mesh

A metal wire mesh, placed at the front of a luminaire, designed to retain large pieces of broken glass should the lens break.

## Safety Screen

A metal wire screen, placed at the front of an open face luminaire, designed to retain large pieces of broken glass should the lamp break.

## Safety Switch

A switch that disconnects electrical current to any uninsulated conductor that a person may come in contact with internally when a housing door is opened or damaged. The switch is automatically activated by the door or some part of the door, e. g., a lens.

A switch that disconnects electrical current to an apparatus if the apparatus or any part experiences an overtemp situation.

## Salt Water Dimmer

An early resistance dimmer that used a container of salt water as its resistor. The distance between two electrodes placed into the solution is varied in order to change the resistance between them.

## Saturation

The aspect of color that determines the difference from white at a constant hue, i.e., the property of any color that distinguishes it from a gray of the same brightness. High saturation is one with little or no white light added to the color, deep red e. g. Low saturation is one with a large amount of white light added to the color, light pink e. g.

## Scene Master

A single slider that controls a scene preset on a control console.

## Scene Preset

A set of predetermined light levels that can be set up on a control console in advance of need, and to which the operator may fade or go to when desired.

A term used to describe a control console that has such a capability.

## Scenery Bumper

A large, ring-shaped stand-off, that when mounted to a batten, prevents anything on that batten from interfering with scenery or curtains raised or lowered on an adjacent batten.

## Scissor Hanger

A mounting apparatus comprising a stud connected to a scissor-like clamp designed to attach to the metal gridwork of a hung or drop ceiling.

## Scoop

Named for its scoop-like shape, an open face flood light with a large, diffused reflector that is essentially the body of the luminaire. The reflector is parabolic, spherical, or ellipsoidal, and is generally made from unpainted aluminum.

### Screw Base

A threaded, cylindrical shaped lamp base with a single contact on the bottom. The threaded part of the base holds the lamp into its socket and acts as the second contact.

### Scrim

In the theater industry, a thin, gauze-like curtain. When illuminated from the front, it appears opaque, and when illumination is present behind it but not on it, the scrim becomes almost transparent. It can also appear translucent when there is some illumination directly on it, and some illumination present behind it, in the proper proportions.

In the film and video industries, a fabric panel, used for dimming, with the light source being a luminaire or sunlight. They are available in a variety of sizes and shapes, and materials of varying density.

In the film and video industries, a round, framed metal screen, available in various densities, placed on the front of a luminaire to act as a dimmer. They are also available such that only half of the frame is screened, therefore allowing for only a portion of the light beam to be dimmed.

### Scrim Set

A set of metal scrims comprising a full double density, half double density, full single density, and half single density.

### Scroller

An abridged version of Color Scroller.

### Sealed Beam Lamp

A lamp with an integral light source, reflector, and lens, all of which are either sealed within, or are a part of the envelope.

### Sharktooth

A material used for fabric scrims used in the theater industry.

### Shin Buster

A luminaire placed as close to the stage floor as possible. It is focused such that no light shines on the floor, thus giving the illusion that the subject is floating. Generally, any luminaire mounted close to the stage floor.

### Short Throw

A term used to describe a luminaire that has an effective intensity at a relatively short distance. This term is very subjective and dependent on the type of luminaire used.

### Shutter Blade

A single framing shutter.

### Shutters

An abridged version of Framing Shutters.

A rectangular, metal apparatus that resembles a Venetian blind in form and function, generally used as a mechanical dimmer or blackout mechanism on large spotlights.

### Side Arm

In the film and video industries, any apparatus with a pipe or rod that attaches to another pipe or stand via some type of clamp on one end, and has a stud or receiver on the other end for mounting a luminaire or grip equipment.

In the theater industry, a length of narrow pipe, containing one or more sliding tees, with a pipe clamp attached to one end and a rivet through the other end to retain the sliding tees. It is used to extend the mounting position of a luminaire(s).

### Sight Lines

Imaginary lines drawn from the most extreme seats in the house to the performing area to determine what portions of the performing area will be visible to all of the audience.

### Single Ended Lamp

A lamp that has only one base and all of its contacts on the base.

### Single Phase

A term for an alternating current electrical supply that has one hot leg and a neutral leg, or, two different hot legs whose phases are 120° apart, with or without a neutral leg.

A term used to describe something that requires a single phase electrical supply to operate.

### Slider

A small, linear potentiometer often used as a setting adjuster on a control console.

The mechanism on some patch panels that makes the electrical connection between two bus bars.

### Snoot

A metal tube, available in various sizes and shapes, that mounts on the front of some luminaires to control light spill. Some snoots used in the film and video industries have a means to install circular rings, i.e., apertures, to the front in order to change the size of the opening.

### SO Cable

A type of hard service, oil resistant electric cable rated for extra hard usage.

### Socket

Derived from "Socket", see the definition for Lampholder

A female connector.

A hollow, cylindrical shaped mounting item used to accept studs, generally equipped with a tee-handle or bolt for setting into the stud. This prevents the receiver-stud combination from unintentionally uncoupling, and can also prevent the stud from rotating within.

A relay holding device that comprises terminals for making electrical connections to the socket, and contacts that make the electrical connections to the relay.

A miniature hole with two internal contacts on a diode pin matrix for the insertion and electrical connection of diode pins.

In general, any threaded, round opening.

The part of a carbon arc luminaire that holds the carbon rods.

### Soft Edge

A beam pattern edge that is not very clear and distinguishable, i.e., one with a fuzzy or blurry perimeter.

### Soft Light

Illumination that produces shadows with a soft edge.

A luminaire that provides such illumination.

### Soft Patch

A term used to describe a patch system whereby the dimmers can be interchangeably assigned to any one of any number of channels. This type of patch system is usually found on memory boards.

### Solid State

A general term used to describe an electronic component that uses immobile solids, usually semiconductors, to do what moving parts, liquids or gases once did. Transistors, thyristors, and diodes are examples of solid state components.

A term used to describe an apparatus that uses these components.

### Solid State Relay (SSR)

A relay that uses thyristors in lieu of an electromagnetically operated switch. These items are usually available in a small, cube shaped, low profile package with terminals for making the electrical connections.

### Spill Ring

A metal plate placed around the lamp socket base of some luminaires to prevent light leak.

### Split Cross Fader

A pair of sliders on a control console that performs a cross fade when moved side by side, or can be moved independently to adjust two separate control settings at different rates.

### Splitter

Generally, any connector that is electrically connected to two or more other connectors, all constructed as a single unit.

A twofer or a threefer.

### Spot Light

Generally, any of several types of luminaires capable of emitting a beam pattern that is round, or in some instances, oval in shape, but more specifically this term refers to fresnel spotlights, ellipsoidal spotlights, and follow spots.

### Stage Left

The left side of the stage when facing the audience.

### Stage Light

A luminaire intended to illuminate any portion of, or anything on, a stage or similar performing area, exclusive of practical lights and work lights.

### Stage Plug

A male pin connector.

A male slip connector.

### Stage Pocket

In the theatre industry, a piece of flush mounted power distribution equipment comprising a metal box with a hinged, protective cover, notches in the cover to allow for stage cable to enter the cover in the closed position, and one or more female connectors mounted internally for the purpose of supplying electricity to luminaires, or other electrical apparatuses. Its line side is hard wired.

In the film and video industry, a female slip connector.

### Stage Right

The right side of the stage when facing the audience.

### Stagehand

One trained in the physical skills and techniques necessary for the implementation of a stage production.

### Stand Adapter

An apparatus used for converting one type of mounting hardware attached to a stand, such as a pin e. g., to another, such as a receiver.

### Stand By

To be prepared to receive and hence execute a new cue, or to have just received a signal that a new cue is imminent.

### Stepped Lens

A lens consisting of tiered, concentric rings on one side that are segments of the flat portion of a plano-convex lens. The other side is convex. It controls the light similar in manner as a plano-convex lens.

### Stippled

A term used to describe a surface that is dimpled or covered with small indentations or bumps.

### Strain Relief

An item mounted to a piece of electrical equipment or a luminaire designed to retain a permanently installed power cord such that any reasonable pull or twist on the power cord will not cause the power cord to get damaged at the point of entry, fall out, or adversely affect the conductors within the electrical equipment, luminaire, or electrical connector.

### Striations

Stripes or bands of light in a beam pattern, usually undesirable.

### Strike

See the definition for Ignite.

To remove all lighting and related equipment for storage and/or transport when a production is over.

### Striplight

A multi-lamp luminaire with its lamps mounted in a straight row.

### Strobe

To cause an intense light source to turn on and off repeatedly at a relatively fast rate. This is usually done in an area devoid of all other illumination to create a flickering, slow motion effect. An abridged version of Strobe Light. usually using an arc lamp as its light source.

### Studio Fresnel

A fresnel spotlight used primarily in studios for the film and video industries. Because portability is generally not a concern, they tend to be larger in size when compared to location fresnels of the same wattage.

### Sub Master

A slider on a control console that controls groups of sliders on the console, and perhaps other sub masters. They can usually be controlled by masters and the grand master if the console is so equipped.

### Subtractive Color Mixing

The removal of energy from various wavelengths of light, usually by filtering. When filters are superimposed, each tends to remove energy at the wavelengths it would have if acting independently.

### Surface Mount

A term used to describe anything whose bottom surface, when installed, is flush with the surface to which it was installed. This term is used to describe certain types of connectors, lamp sockets, plug-in boxes, and gridiron junction boxes.

### Surge

An instantaneous and usually brief increase in voltage or electrical current in a circuit. This can sometimes be detrimental to the integrity of a signal or to electronic equipment.

### Swivel Yoke

A semi-circular yoke with a slot running centrally through most of its length to allow for the mounting of luminaires at various angles.

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# T

## Teaser

In the theater industry, a curtain hung at the top of a stage opening to make the opening of the proscenium arch adjustable. In the film and video industries, a set piece placed in front of a luminaire to hide it from view of the camera.

## Telescoping Stand

A height-adjustable stand that has two or more concentric tubular sections, i.e., risers, that slide inside one another and lock into place.

## Three Phase

A term for an alternating current electrical supply that has three hot legs, with each leg at a phase that is 120° apart from the other, with or without a neutral leg.

A term used to describe something that requires a three phase electrical supply to operate.

## Threefer

A special power cord that has one male connector electrically connected to three female connectors via three separate cables or sets of sleeved wires.

## Throw

To direct the light emanating from a luminaire in a particular direction.

An abridged version of Throw Distance.

## Throw Distance

The effective distance between a luminaire and the area or subject to be illuminated.

## Tie In

To connect the line side leads of power distribution equipment, dimmer racks, etc., to the primary electrical supply for a location, such as a company switch, circuit breaker panel, or other piece of power distribution. This is generally done with feeder cables.

## Tilt

To rotate up and down around a horizontal axis.

## Tint

A color low in saturation.

## Top Hat

See the definition for Snoot.

## Transmission

The ability of light to penetrate through something.

## Transmission Factor

The ability of a medium to allow for the transmission of light, expressed as a percentage.

## Trim

To finely adjust the height of battens, curtains, or any item whose exact height is critical.

To finely adjust the voltage output of some electronic dimmer at the lowest control setting.

To finely adjust the focus, beam direction, shutter positions, etc., for a group of luminaires set up for a production.

## Triple Header

A tee bar with three individual, or sets of, studs or receivers.

## Truss

A structure fabricated from various truss sections, used to hold up luminaires, scenery, and/or other production equipment. Truss can be ground-supported, or suspended overhead with rigging.

## Truss Section

A sturdy, lightweight support structure fabricated from tubular aluminum in various shapes and sizes.

## Truss Spot

A short throw follow spot operated from a truss rig.

## Twist-Lock Connector

A commonly used type of locking blade connector that requires a twisting action to lock the mating connectors together, manufactured by Harvey Hubbel, Inc. The name "Twist-Lock" is trademarked.

## Twofer

A special power cord that has one male connector electrically connected to two female connectors via two separate cables or sets of sleeved wires.

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# U

## U-Clamp

A "U" shaped clamp that attaches onto a pipe and locks with the aid of a bolt, that when tightened, bites into the pipe and locks the clamp in place. It also has a secondary bolt for the attachment of equipment of light-to-moderate weight.

## UL

Abbreviation for Underwriters' Laboratories, Inc.

## Umbrella

An umbrella made from reflective fabric used for bounce lighting.

## Underwriters' Laboratories, Inc. (UL)

An independent, not-for-profit organization testing for public safety. This organization Lists and Labels products and materials and Recognizes parts, components, and materials, and is acceptable to most jurisdictional authorities, e. g., electrical inspectors, fire marshals, insurance underwriters, and governmental agencies.

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# V

## Variable Lens System

See definition #1 for Zoom.

## Vertical Sight Lines

Imaginary lines drawn from the highest seats of the audience area, often in a balcony, and from the seats in the front row, to the lowest hanging obstructions over the stage to determine what portions of the performing area will be visible to all of the audience.

## Voltage Potential (V)

Often considered to be the force of electrons moving from one point to another. Technically not a force at all, but the potential for electrons to move from one point to another, as measured in volts.

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# W

## Wall Box

See the definition for Wall Pocket.

## Wall Bracket

A sturdy metal arm that attaches to a wall and provides a means for attaching a luminaire.

## Wall Pocket

A stage pocket whose cover is flush mounted with the wall to which it is mounted.

## Warm Color

Generally, a color that is in the yellow-orange-red range.

## Wash

An even, overall illumination over a large area.

To create such an illumination.

## Wash Light

A luminaire used to produce a wash.

## Watt (W)

A unit of measurement for heat or Electrical Power.

## Wattage (W)

The measure of electrical power in watts.

## Wavelength

The distance, measured in the direction of propagation, of a repetitive electromagnetic wave between two successive points.

## Wing

See definition #1 for Door.

The areas to the left and right of the stage or performing area not visible to the audience.

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# X

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# Y

## Yoke

A sturdy, U-shaped metal bracket that attaches to opposite sides of a luminaire, or, video and film industry reflectors, butterflies, etc., such that it allows either to tilt freely. A locking mechanism is provided to prevent slippage when the desired position has been achieved. Also provided at the center of the yoke is a hole, stud, or receiver for mounting the yoke.

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# Z

## Zip Strip

A compact striplight that uses 1 to 4 groups of ten 12 volt lamps wired in a series circuit, manufactured by Altman Stage Lighting, Inc. The name Zip Strip is trademarked.

## Zoom

An abridged version of Zoom Focus.

A term used to describe a luminaire with such a focus. Some ellipsoidal spotlights and many follow spots have a zoom focus system.

## Zoom Focus

A term used to describe an optical system whereby the lenses in a luminaire adjust such that a beam pattern with a hard edge can be attained at various sizes at various distances without sacrificing beam lumens.

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