

STAGE ELECTRICS

A VISUAL GLOSSARY *of Stage Equipment for Education*

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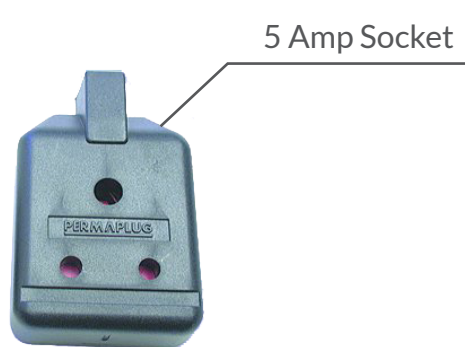
It is the standard power connector for stage equipment in the UK. Made of three round metal contacts (live, earth, neutral) and contains no fuse, distinguishing it from a standard domestic connector.

16 AMP



16 amp connectors, typically blue in colour. Used in some newer installations. Often used to power equipment that should not be connected to a dimmer (contains no fuse).

5 AMP



5 amp connectors were used prior to 15A, they are a scaled-down version of the 15A connector (contains no fuse).

AMPLIFIER

RCF AM2160



Yamaha P5000s



Equipment which boosts the low voltage signal from microphones, mixing desks or CD players, into a signal which is suitable for driving loud speakers. Each speaker in a sound system will normally require its own amplifier channel and so each amplifier unit will usually contain two channels - for left and right stereo speakers.

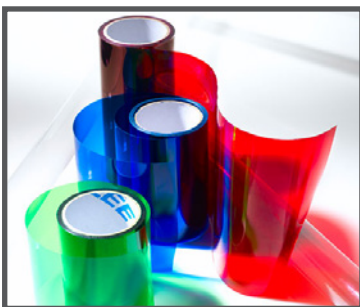
BIRDIE



James Thomas Par16

Small lantern used for lighting in limited spaces and over short distances, such as in a set. These lanterns create a bright, soft-edged light pool. Birdies look like small versions of parcan lanterns, so the light gains its name from 'birdie' - the golfing term for 'one under par.'

COLOURED FILTER (OR COLOURED GEL)



Coloured Filter - Lee Short Rolls

(AKA Coloured Gel) Coloured light is created from light by filtering out all of the other colours of the spectrum with a sheet of plastic containing coloured resin inside. Filters slot into the front of a lantern and are held in place using a frame. There are a number of filter manufacturers and so each colour identified by lighting designers uses a reference number and name e.g. 002- Rose Pink. Coloured Filters are sometimes known as coloured gels because originally filters were made of gelatine.

COMMS



Talkback Headset

(AKA Cans, Talkback) A network of headsets with microphones Stage Managers and technical crew wear to talk to with each other during a performance.

CUE LIGHTS



Cue lights are used to give technical staff and actors silent cues. In the UK, flashing red light means 'stand-by' and green means 'go.' The actor or technician acknowledges the cue by pressing a button which makes the red light stay on constant.

CYC



A type of flood light with an asymmetrical reflector which creates a soft and evenly distributed wash onto vertical surface a or cyclorama. They can be positioned on stage, front, rear, overhead or at floor level.

CYCLORAMA



Cyc (short for cyclorama) is a cloth that is usually hung at the back of the stage. It is normally white so that it can be lit in different colours.

DIMMER



Dimmers control the amount of electricity reaching the stage light by adjusting power. As the power arriving from the dimmer is decreased, the wattage and intensity of the light reduces.

DMX



DMX is a standard defining a binary control signal used to send commands to various pieces of stage equipment, the majority of which are associated with lighting. Each piece of equipment carries a unique address and receives commands such as turn on, move left etc. The latest development is RDM this allows two directional signal enabling information to be sent back from the unit to confirm that commands has been carried out.

FLOOD



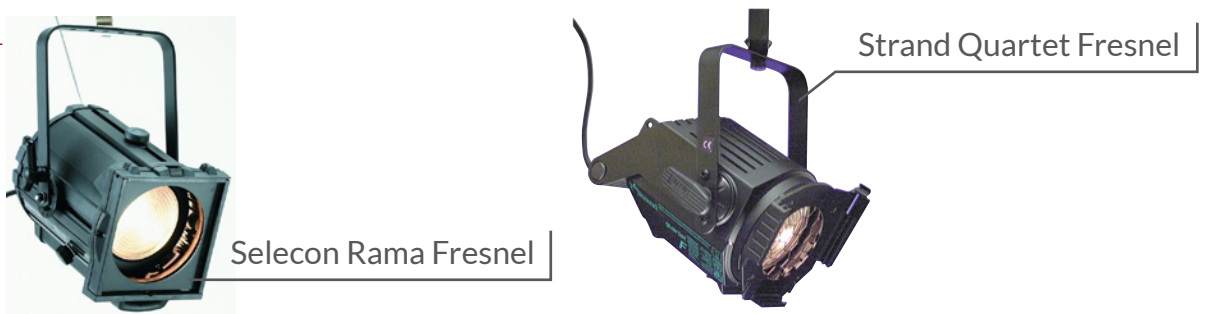
A lensless lantern with a fixed beam. Flood lights come in two types; symmetrical reflector and asymmetrical reflector. Symmetrical reflectors give a soft-edged wash of light and can be used for overhead washes or at stage level. Asymmetrical reflectors give a soft wash of light on vertical surfaces. They can be used to light cyclorama cloths and can be positioned overhead or at floor level.

FOLLOW SPOT



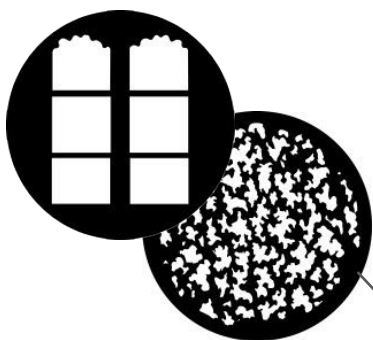
Powerful profile lantern, typically stand mounted, which can be easily moved to follow people on stage. Followspots come with their own dimmer, colour magazine, iris and shutters, which are controlled by an operator. Powerful followspots cannot be dimmed, so have mechanical dimming shutters attached to control the light output.

FRESNEL



A lantern fixture with a concentric stepped lens, to achieve a longer focal length. Fresnel lights create a soft-edged beam of light with a beam angle between 5° and 60°. These are often used with barndoors which control the light spill by closing the beam off. They were invented by Augustin Jean Fresnel in the 17th Century and were designed to be used on the lighthouses to cast light as far as possible out to sea.

GOBO



Two GOBOs, a window and a leaf pattern

A thin steel disc with a pattern etched through it or a glass disc with patterns and/or colours printed on to it. They are designed to project an endless variety of patterns and images onto the stage. For example, gobos can create the appearance of foliage, windows, cityscapes and more. Gobos are placed in a profile spot and the lenses are then used to focus the image. GOBO stands for Graphical Optical Black Out.

HAZER



A unit which creates a non-toxic fog and works in a similar way to smoke machines. Hazes are different because they produce less smoke and are more like an atmosphere haze. They are used by lighting designers to reveal/define light beams.

LeMaitre Neutron XS

LED LIGHTS



LED stands for 'Light Emitting Diodes'. These offer a low energy stage lighting source. They come in a range of fixtures and luminaries including strip lights, moving lights, light walls, blocks, profile spots and cyc lights. Most have the ability to create colour without the use of gel.

LED Lights - Chauvet Slim Par 64

LIGHTING BAR



(AKA IWB) An internally wired bar typically installed overhead at a high level for hanging stage lanterns from and distributing power and data.

6 way Internally Wired Bar (IWB) with 6 Par Cans

LIGHTING DESK



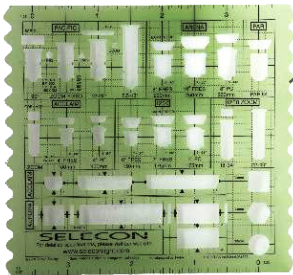
Juggler 12-24 (Manual)



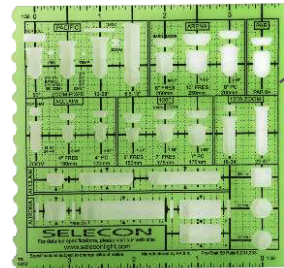
Avolites Pearl Tiger Touch II (Memory)

The main method of controlling stage lighting. At its simplest level a manual desk will use faders to tell the dimmer to adjust the voltage, controlling the intensity of the light. The next level adds memory to record and playback lighting scenes easily. Beyond this are complex computerised lighting consoles that record and playback the thousands of lighting states needed for a major performance.

LIGHTING STENCIL



Lighting stencil 1-25



Lighting stencil 1-50

Lighting stencils contain symbols that make up the visual shorthand lighting designers use to mark the position of lights in designs. The images are variations of the shapes of the main stage lantern types.

MICROPHONE

Audio Technica AT897



Sennheiser e604



Shure SM58



A device which converts acoustic sound waves into an electrical signal. These signals are typically very low so microphones need to be amplified on a mixing desk to line level and then it can be amplified further for performance or to be recorded. The three most common forms of microphone are dynamic, condenser and ribbon, with each having their own applications in live and studio environments.

MIXER



Yamaha LS9 - 16 channel



Yamaha MG82cx

(AKA Sound Desk, Sound Board) A desk which contains a number of input channels, where each source can be controlled individually as well as amplified. Many mixers can also change the sound, by boosting or attenuating certain frequencies; this is called 'equalisation.'

MOVING LIGHT



Beam - Clay Paky Sharpy



Spot - Martin MAC350 Entour



Chauvet Q-Wash 560Z LED Wash Light

Remotely controlled lanterns which are programmed to move by adjusting the pan/tilt motors as well as adjusting zoom, focus, beam, colour and Gobo. Some fixtures come with strobing effects, shutters or adjustable iris. The main types are Wash Lights, Spot Lights, Profile, Beam, Moving Mirror and niche adaptations that include Search Lights, LED panels, fans and projectors.

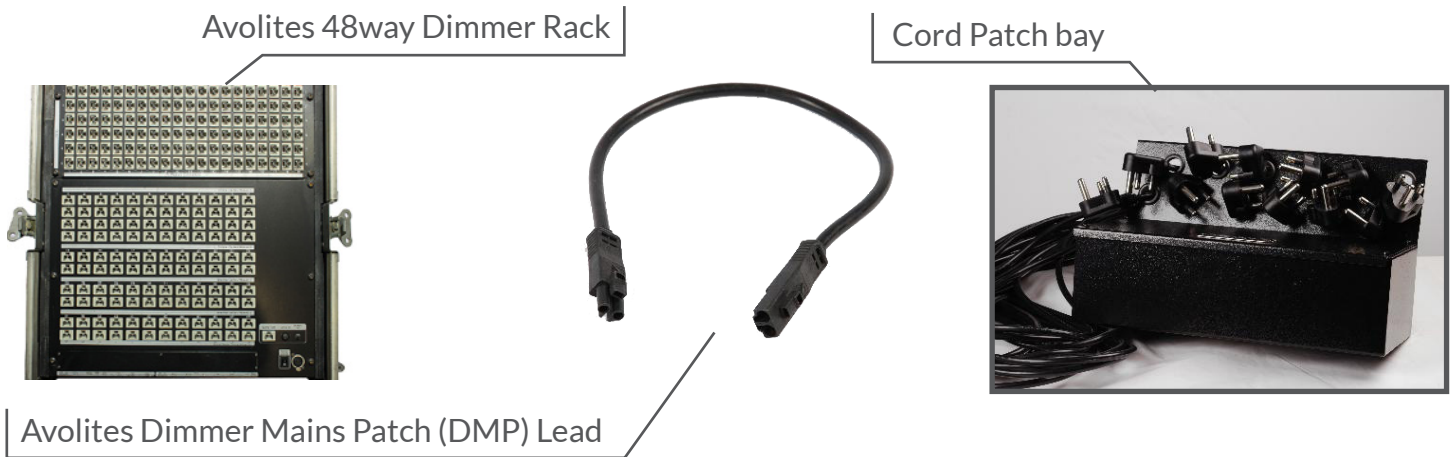
PARCAN



Par 64

A lantern fixture containing a Parabolic Aluminium Reflector Lamp. Parcans create an intense, near parallel beam of light, narrow to wide the beam angle is altered by changing the lamp. Used for general lighting, often used with strong, saturated colours in live music concerts. Can be placed overhead, side, rear or floor of stage or for special effects.

PATCHING



Mains Patching

A method which allows lighting technicians to cross-connect light circuits to dimmers. Traditionally this was done at the dimmer, where the electrical circuits were patched into the chosen dimmer.

Soft Patch

A digital way of assigning control channels on a lighting desk to dimmers, moving lights and other DMX devices.

PLOT

A plot is the plan for the technical elements of a performance. They are recorded cue by cue and scene by scene, for all lighting, sound, set and special effects adjustments.

POWERCON



A 'keyed' power connector (rated at 20 amps) used on patch panels, fixtures and an increasing variety of equipment as it is smaller than a standard 15 amp connector. The blue connector is the power inlet and the grey connector is the power outlet.

PROFILE



A lantern that creates a hard edged adjustable beam of light. Used to light performers and project GOBOs.

RADIO MICROPHONE



(AKA wireless microphone) A microphone head attached to a radio transmitter pack with batteries and aerial. The mains powered receiver picks up the signal, which is then sent to a mixing desk.

Lavalier - Sennheiser ew112

SCAFF BAR



A 48mm diameter piece of barrel pipe, often made from aluminium and used extensively with scaffolding connectors to form part of a larger structure. They are used for hanging lighting and stage equipment backstage or above the stage.

Scaff Bar

SMOKE MACHINE



(AKA: Fogger) A unit which creates a white non-toxic fog by vaporization of smoke fluid. Used for special effects on stage.

Jem ZR44

SPECIALS



Mirrorball (AKA – Glitterball, Discoball)

A ball covered in mirrors, which hangs above stage or in the middle of a room to create a decorative lighting effect when light is shone on to it. Mirrorballs are popular in discotheques and ballrooms.

Mirrorball



Chauvet LED Technostrobe



Martin Atomic 3000

Strobe

Gives off a series of intense pulses of light at fast, regular intervals. The speed of flashes can be adjusted remotely. Fast flashes can cause epileptic fits in susceptible people, so care must be taken when used in performance.

Pyro - LeMaitre Gerb



Pyro - LeMaitre Pyroflash



Pyro (Pyrotechnics)

Theatrical fireworks suitable for indoor use including theatrical flashes, coloured smoke, silver jets, confetti, glitter and maroons.

STAGE CURTAINS



(AKA Drapes) stage curtains mask the backstage areas and stage equipment from the audience and are made up of thick material that does not let light through. There are different types, covering different areas of the stage including, backdrop, borders, tabs, legs, teaser, tormentor and grand drape.

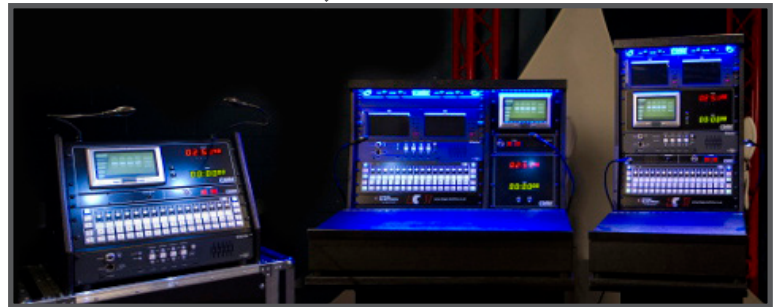
Stage Curtains

STAGE MANAGEMENT DESK

Stage Electrics Tabletop SM Desk



Stage Electrics bespoke SM Desk



(AKA Prompt Corner) is the control position backstage where the stage manager co-ordinates performances, traditionally located stage left. Contains the script with directions, intercom headset, red and green cue lights, telephone to front of house, public address system, silent fire alarm indicator and controls for the safety curtain.

STAGING

Doughty Easydeck



Prolite StageDex



Staging is used to elevate the performance area to increase the audience's view. Staging can also be used to define the performance areas or suggest particular locations. Modular staging systems are fixed size modules designed to allow easy setup and alterations.

STANDS



Push up stand



Wind up stand

A vertical structure with a tripod base, used to support lights, speakers and other equipment.

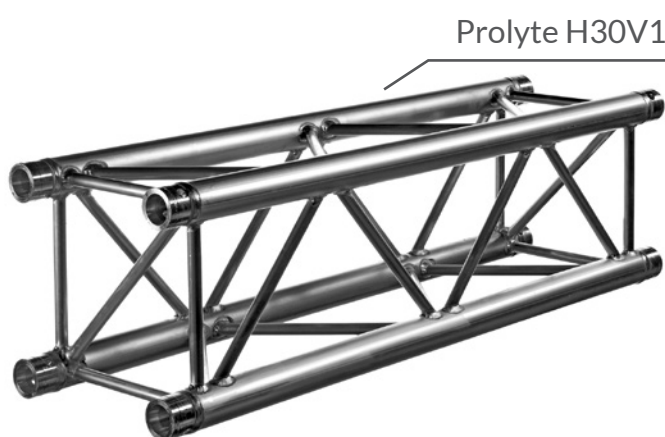
TANK TRAP



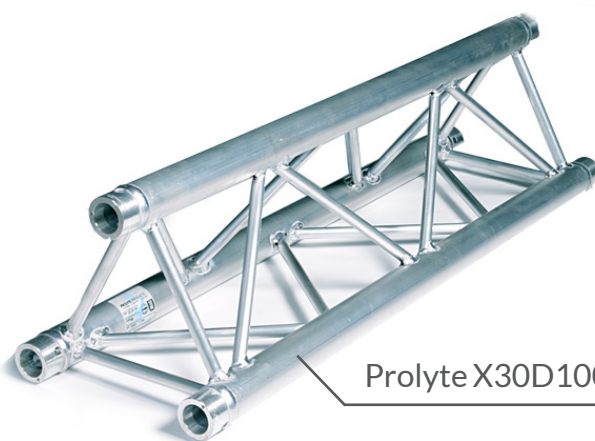
(AKA Boom Base) a heavy base with vertical scaffold tube adaptor, used as a base for lighting booms.

Doughty Tank Trap

TRUSSING



Prolyte H30V1000



Prolyte X30D1000

A welded framework of alloy bars and bracing designed to provide a strong and secure structure for hanging equipment.

XLR

3 pin Audio XLR Socket



3 pin Sound XLR Plug



5 pin lighting XLR Plug



5 pin lighting XLR Socket



(AKA 'Cannons' after a manufacturer of XLR connectors) a type of connector used in stage lighting and sound. Circular in design, these cables can have between three and seven pins. Most commonly used as three pin for sound and five pin for DMX (although three pin is also used for DMX).