

Lighting Instruments

Ellipsoidal: (Ellipsoidal Reflector Spotlight, ERS) instrument for throwing a strong, focused beam from a distance, also called a Leko

Main Brands of Ellipsoidals:

Altman (360Q)



Source Four



Fresnel: instrument for shorter throws covering a large area with soft light (adjustable beam size)



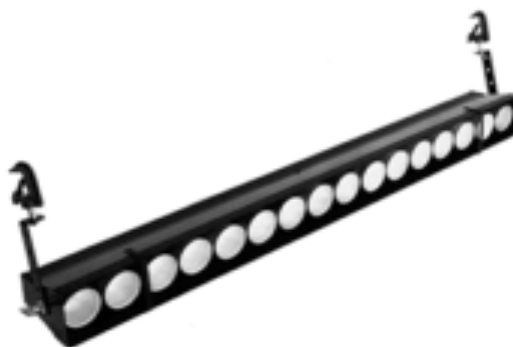
Scoop: (a.k.a. Ellipsoidal reflector floodlight), instrument for illuminating large areas of the stage, good as work lights



PAR: (Parabolic Aluminum Reflector, Par Can) instrument for general lighting from a short distance, often used outdoors or for concerts



Strip Lights: (Border lights) for washing light over a large area of the stage or onto the scenery



Followspot: Instrument for throwing bright, focused light on a moving performer



Cyc Lights: Similar use to strip lights, used to light large areas, backdrops, or cycs (much more effective than strip lights)



Lighting Supplies

Lamps

Incandescent: (standard house bulbs, screw bases) for use in strip lights, floodlights, and wall sources. The basic lightbulb, very limited in the amount of light it can produce because of size and heat



Halogen: (energy efficient, high-intensity lamps) for use in ellipsoidals, followspots, fresnels, cyc lights, and PAR. Very high intensity, do not touch a halogen lamp with bare hands! (Oil from your hands will rub off and cause the lamp to overheat).

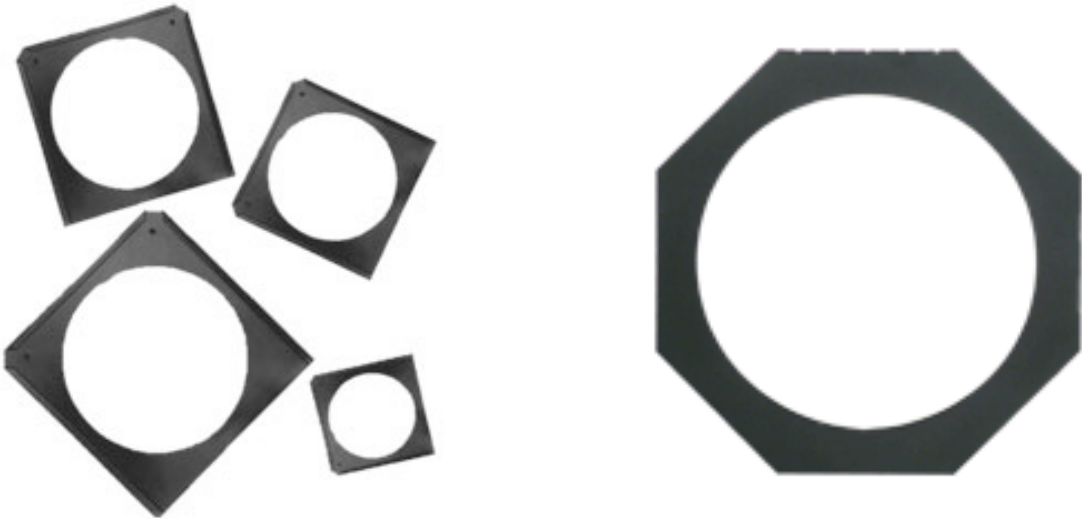


LED: (Light emitting diode): newer in theatrical lighting, very high efficiency, low energy/high output.



Lighting Gels: (color filters) thin colored film, changes color of light

Gel Frames: for holding gels, frames slide into slot in front of the instrument



Gobo: Thin metal disc with cut pattern, for casting light patterns from an ellipsoidal spotlight. Modern gobos can be made from glass.



Gobo Holder: Does what it sounds like...holds gobo, slides into lighting instrument.



Top Hats: For narrowing the beam of an instrument, or for keeping the light out of audience's eyes



Barn Doors: (Folding flaps on a metal frame), for shaping the beam of a light



Lighting Control

Circuit: The specific outlet that a lighting instrument plugs into (these are all numbered, often 1-96, or 1-192). Ours are numbered on our catwalk and first electric.



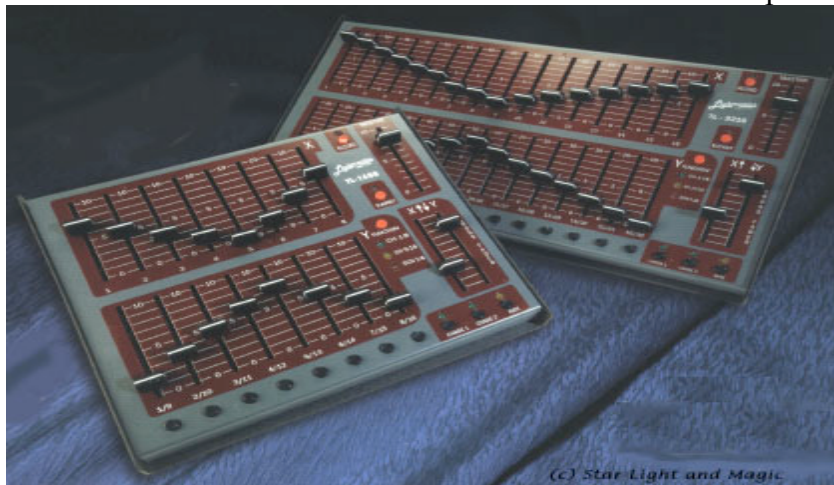
Dimmer: Device used to vary the brightness of a lighting instrument. Dimmers are often in racks (1-96, 1-192), and circuit numbers usually correspond to the same dimmer number. The dimmers are directly connected to those circuits.



Light Board (Lighting Console, Control Board). Electronic boards, control the intensity of multiple lighting instruments through the dimmers.



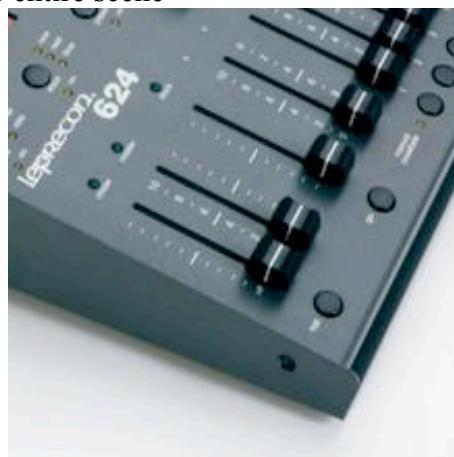
Preset (2 scene preset, 4 scene preset): Preset boards are the most basic lighting consoles. They consist of two or more identical fader banks, called **scenes**. The faders on these scenes can be manually adjusted. Each scene has the same number of channels which control the same dimmers. So the console operator can build a scene offline, and use a crossfader to fade one scene down and the next scene up smoothly.



Fader: The Individual slider on a light board. They are usually numbered 1-24, or 1-48. Each individual slider can be assigned to control one single lighting instrument, or multiple instruments at the same time. Faders are ‘patched’ to control specific dimmer/circuit numbers.



Crossfader: Faders that control specific scenes, allowing an operator to have one scene up while he builds the second scene while it is down. He is then able to ‘cross-fade’ between the two scenes smoothly, while only using two faders, instead of the entire scene



Submaster: Faders that can be patched to control an individual fader, or a group of faders within a scene.

Lighting Instrument Parts

Power Connectors

Stage Pin (a.k.a. 3 pin). Standard for many theatres, what we use here at Pinecrest as well.



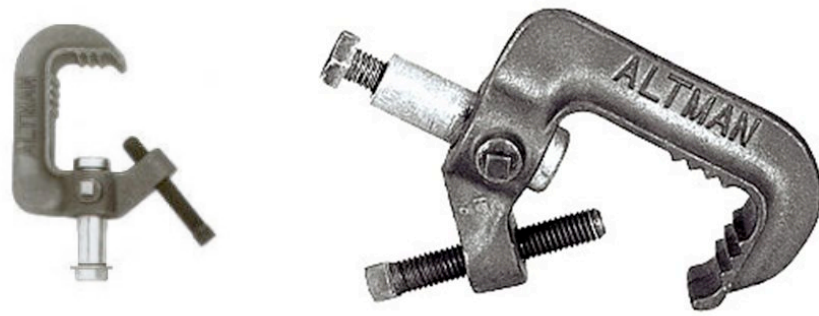
Twist Lock: Used in some theatres, very secure when connected.



Edison: Standard household plugs, used in some low power instruments



C-Clamp: Used to secure lighting instruments to bars or battens.

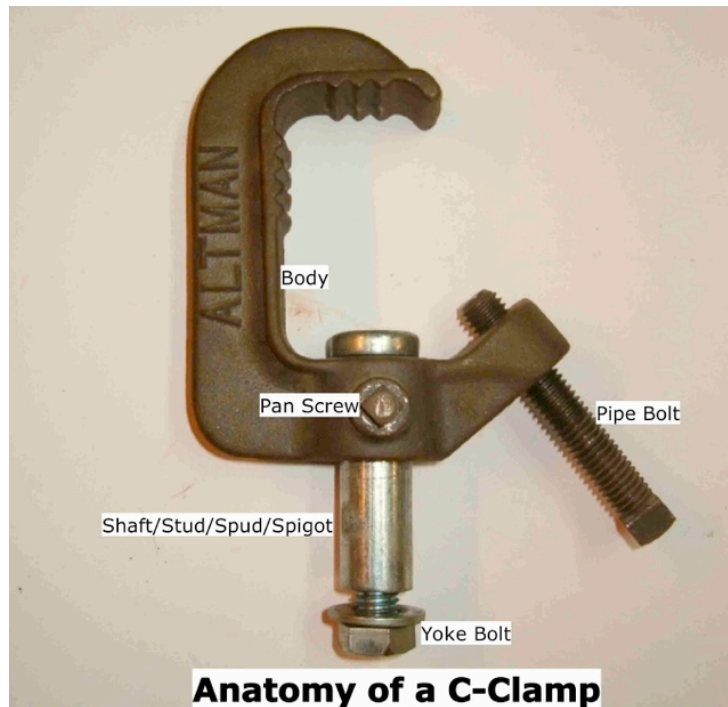


C-Clamp Parts:

Pipe Bolt: affixes the c-clamp to the pipe or batten, holding the instrument in place

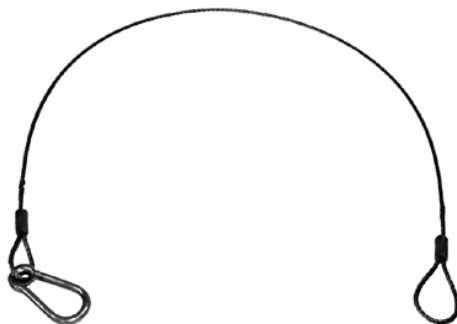
Yoke Bolt: affixes the c-clamp to the Yoke, this is a very important bolt!!!

Pan Screw: loosening this square bolt allows you to move the instrument side to side (panning) to focus

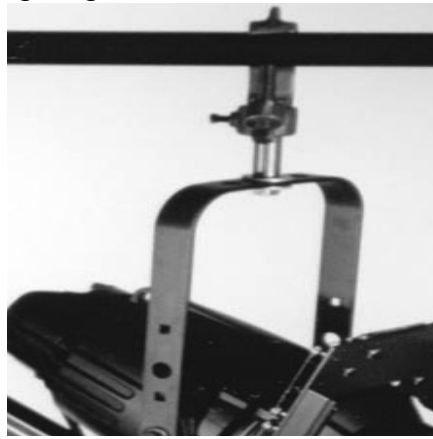
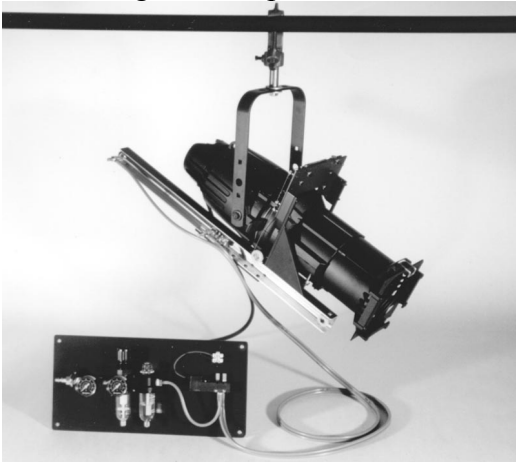


Anatomy of a C-Clamp

Safety Cable: used for extra security, should always be the first thing attached (after finger tightening pipe bolt), and the last thing taken off when hanging instruments. Attaches yoke to batten or pipe.



Yoke: large 'Y' shaped metal bracket, affixes the lighting instrument to the C-Clamp.



Yoke Nut: secures the yoke to the lighting instrument, tightening and loosening this bolt allows you to focus the instrument by tilting it up and down.



Shutters: 4 handles that around the body of the instrument, these allow you to shape the beam of light projected.



Running the Barrel: Sliding the barrel (lens casing) back and forth in the instrument housing, this allows you to focus the instrument by softening and hardening the edges of the beam



Source Four Diagram (Ellipsoidal)

