



# KLIEGL

## Two Scene Pre-Set Control Console

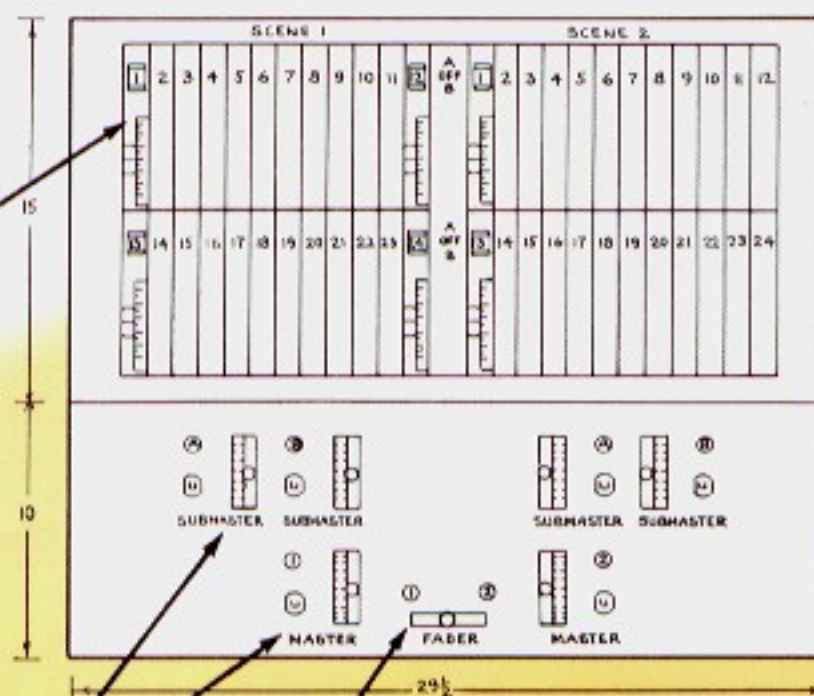
### PLUG-IN TYPE POTENTIOMETERS

These are used for the control of each dimming and non-dim circuit. The three-position switch enables the operator to switch the control "off" or to either the "A" or "B" sub-master control within the same scene. This extra flexibility is an exclusive Kliegl standard feature.



### SUB-MASTERS AND MASTER CONTROLS

There are two sub-masters and one master for each scene. The master controls all the activated potentiometers within the scene. The sub-masters can be assigned specific potentiometers within the scene (through the use of the 3-position selection switch) and will control only those specifically selected. It is, therefore, possible to assign one group of potentiometers to one sub-master and the balance to the other sub-master and still have final control of all potentiometers through the master.

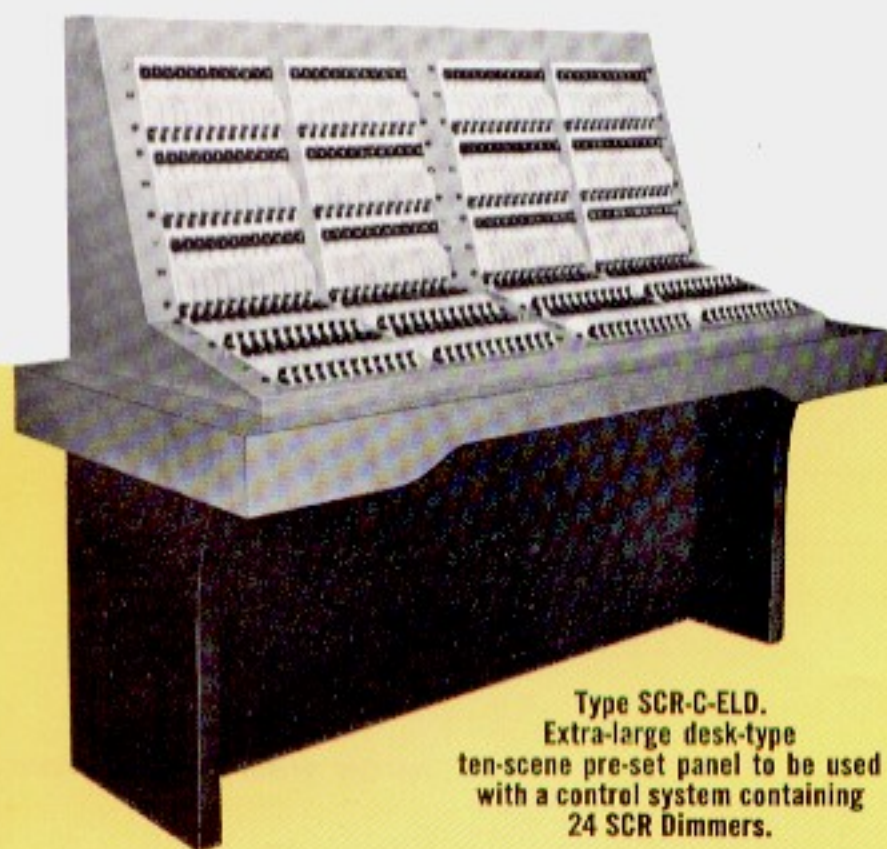


### NON-DIP FADER

The fader transfers the control of the lights from one scene (one set of potentiometers and its related master and sub-master controls) to the other scene (the second set of potentiometers and its related master and sub-master controls). Operation of the fader causes one scene to fade out as the other scene builds up in intensity. The speed of transfer is dependent upon the needs of the operator and may be done either rapidly or slowly.



The sketch above shows the major component layout of a typical two-scene pre-set control console. For each scene, the basic components include a set of potentiometers (one for each dimming or non-dim circuit), two sub-master controls and a master control. To transfer control from one scene to another, a non-dip fader is provided.



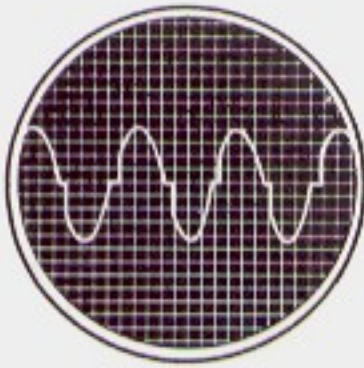
Type SCR-C-ELD.  
Extra-large desk-type  
ten-scene pre-set panel to be used  
with a control system containing  
24 SCR Dimmers.



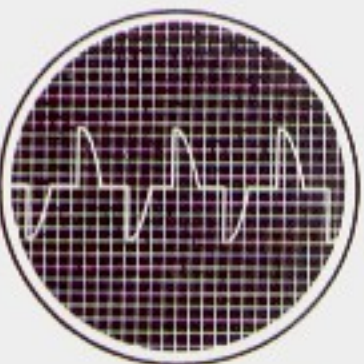
Type SCR-C-D.  
Desk-type two-scene  
console for the control  
of 24 SCR Dimmers.



# VOLTAGE WAVE FORM FOR SQUARE LAW CURVE



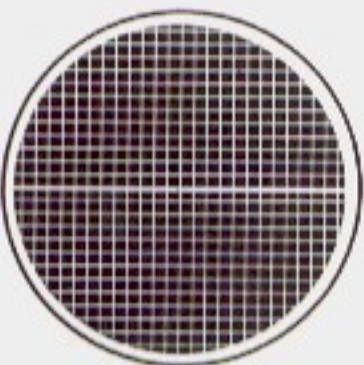
Potentiometer Setting **10**  
% Voltage **100%**



Potentiometer Setting **5**  
% Voltage **67%**



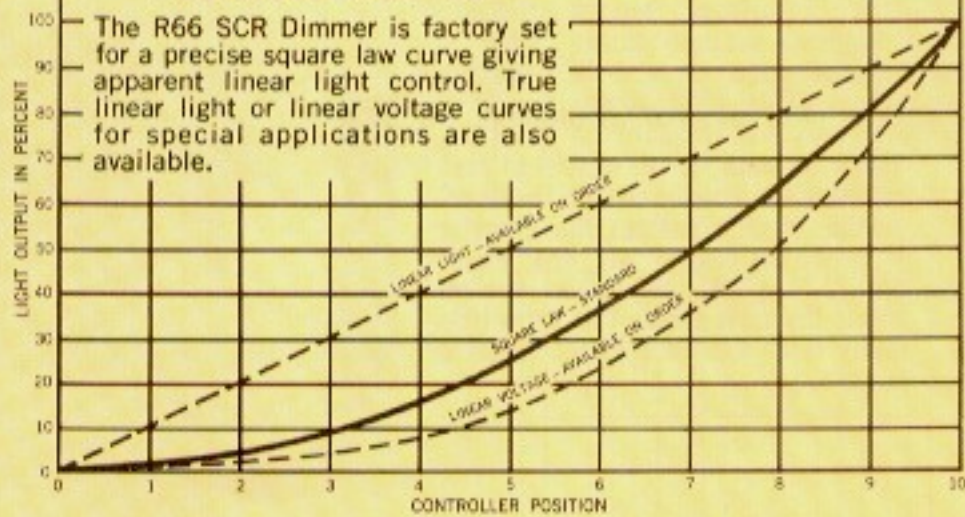
Potentiometer Setting **0**  
% Voltage **10%**



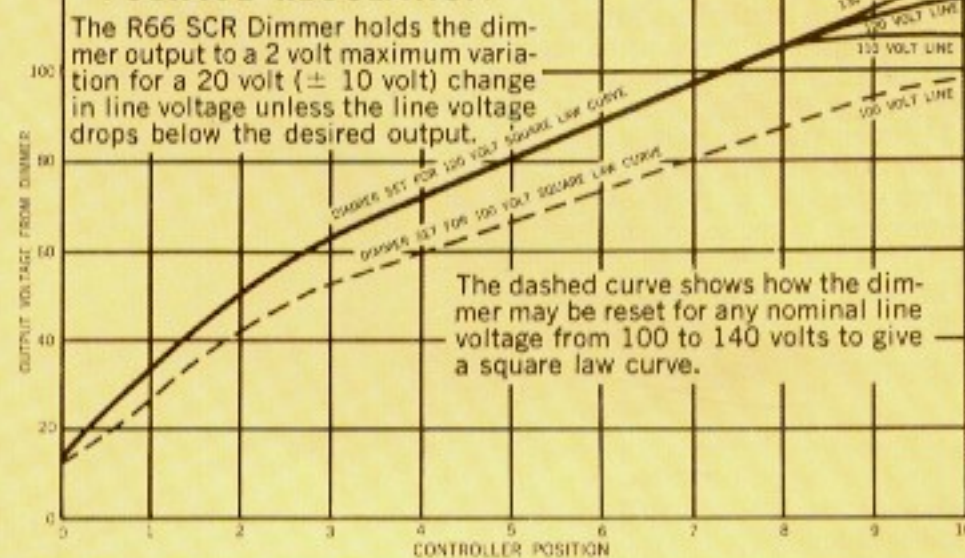
Potentiometer Setting **"OFF"**  
% Voltage **0%**

The above shows the true wave form as seen on an oscilloscope at various potentiometer settings. The percentage of voltage is the percent of voltage appearing at the output of the SCR Dimmer.

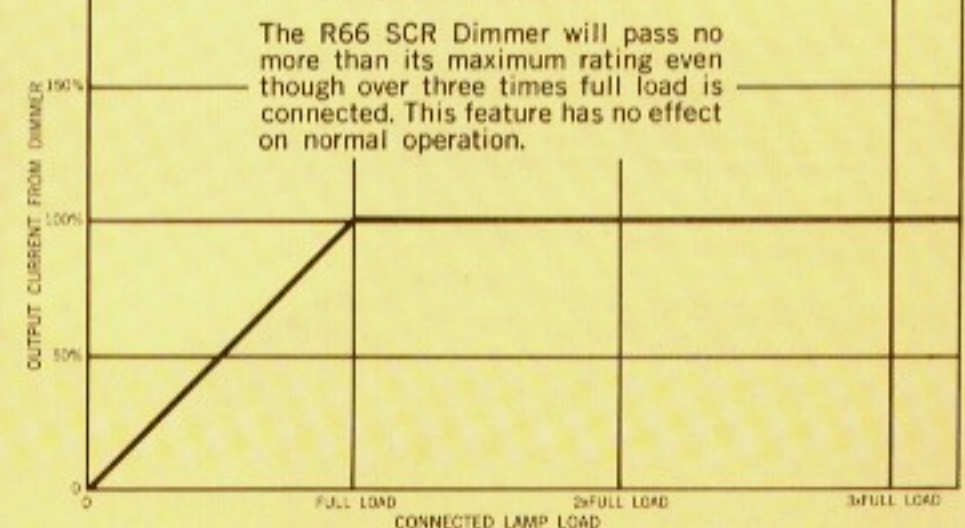
## CONTROL CURVES



## VOLTAGE REGULATION

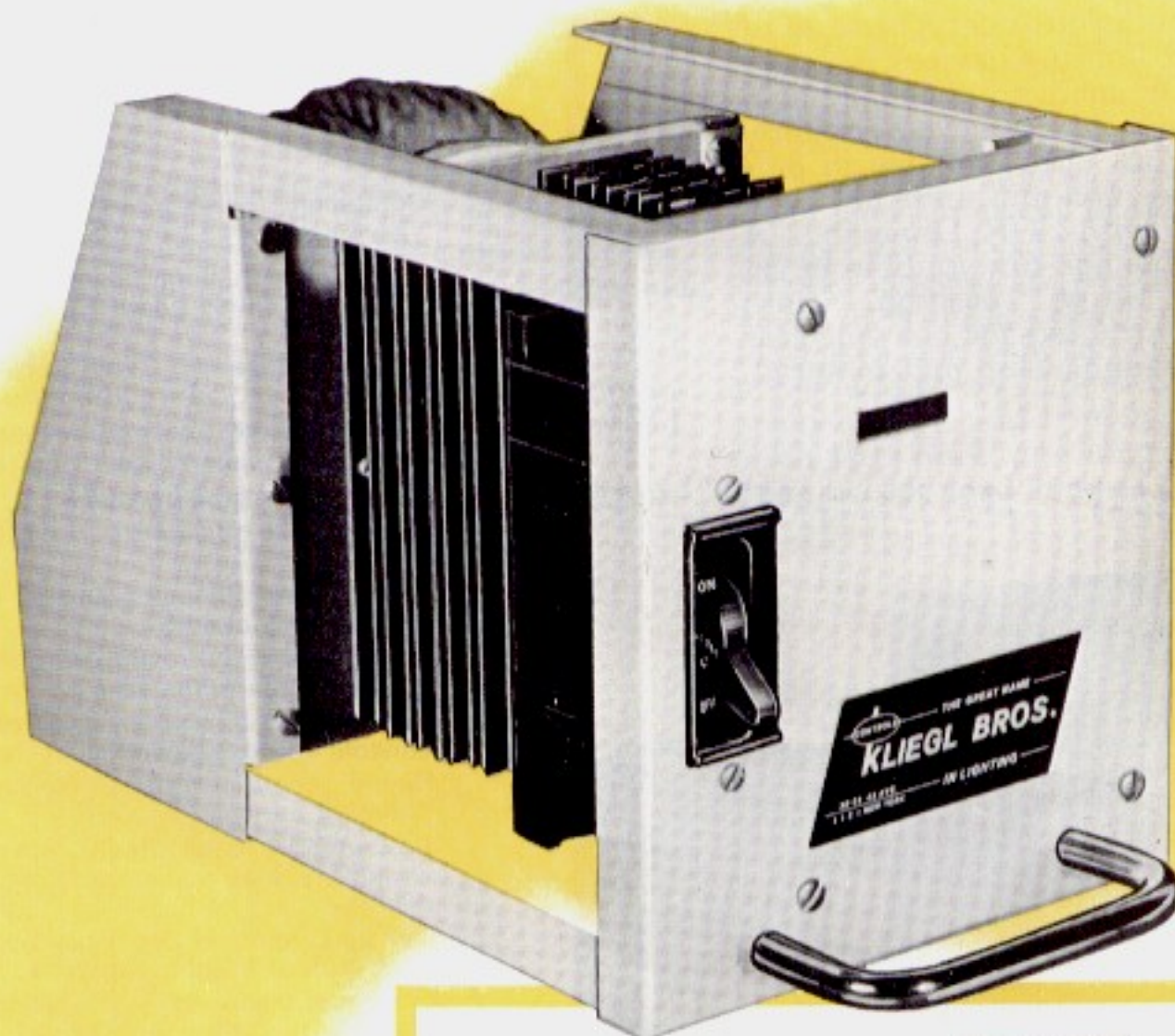


## CURRENT LIMITING

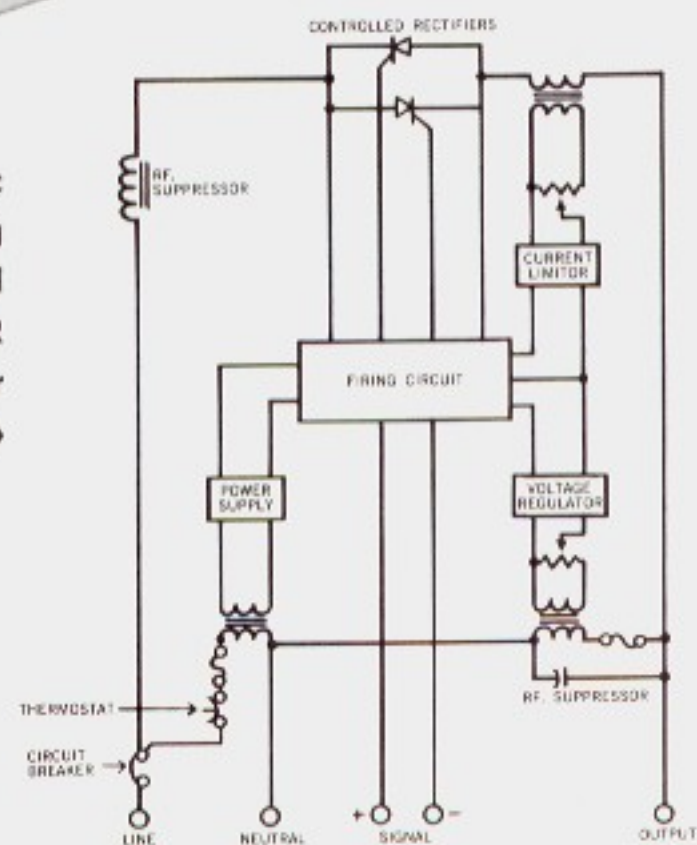




# *SCR DIMMER*



Schematic  
drawing  
of Kliegl  
SCR  
Dimmer  
Model R66

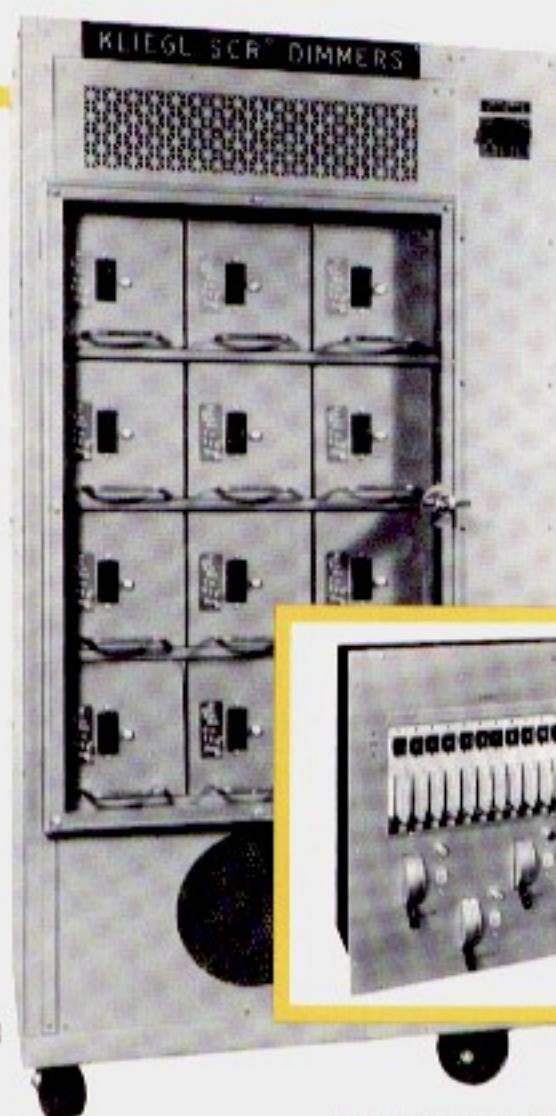




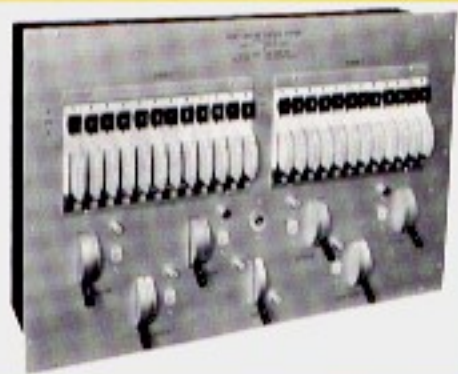
# *improved method of accurate, control of light intensity*

watts at a time with complete safety because of their automatic current limiting devices.

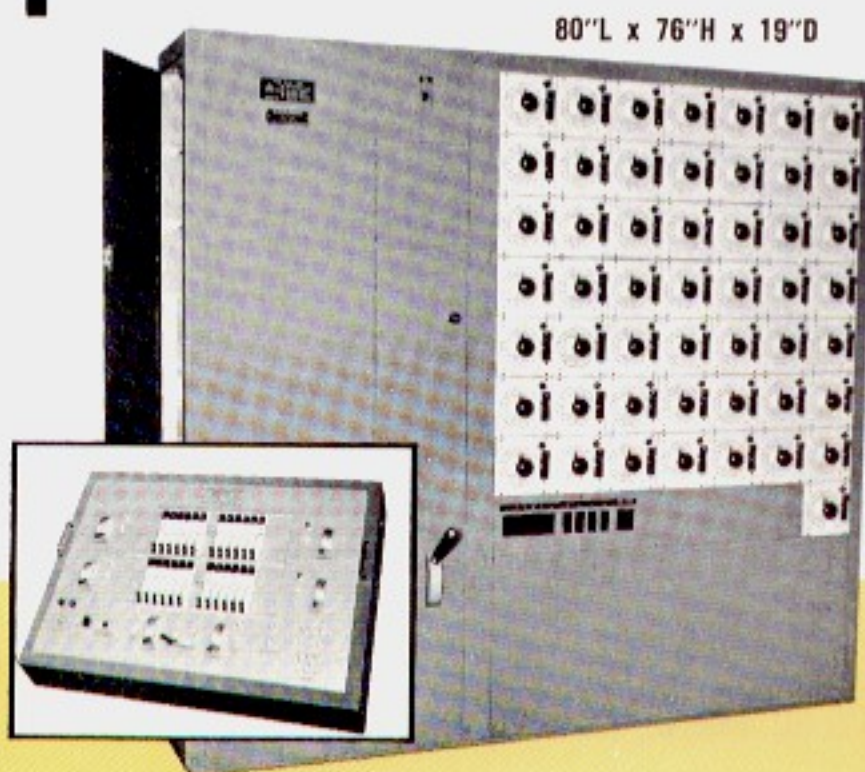
Models of these SCR Dimmers are available in 3, 7 and 12 KW capacities to meet every requirement. Non-dim units are also available in 3, 7 and 12 KW sizes. These non-dim units are completely interchangeable with SCR Dimmers. A built-in device permits the non-dim units to be set at any predetermined "on/off" position. Both types are completely warranted for one full year against all defects in workmanship and material.



30" L x 60" H  
x 18" D



A typical type SCR-DB dimmer bank containing 12 — 6KW SCR Dimmers and a typical type SCR-C-WF flush wall mounted 2-scene pre-set control console.



80" L x 76" H x 19" D

A typical type SCR-RLU dimmer bank and cross-connect system containing 12 — 6KW SCR Dimmers and 50—12 point Rotoselectors and a typical type SCR-C-P portable 2-scene pre-set control console.

## OUTSTANDING FEATURES

- Completely fool-proof—cannot be overloaded—
- Low voltage control —not exceeding 28 volts—
- Plug-in type modular construction—can be disconnected safely under full load—no tools required—
- Loading range from 10 watts to full rated capacity—
- Completely RF shielded—causes no interference to TV, audio or radio equipment—
- Rapid response to control—
- Requires no outside air conditioning or cooling—
- Utilizes two silicon-controlled rectifiers in a back-to-back circuit—
- Small, lightweight, compact units take a minimum of room to house—
- Can be located remotely or as part of a control console and cross-connect system—
- Highly accurate control produces square law dimming curve—
- Protected by fused circuits, overload magnetic circuit breakers and automatic current limiting device—
- Can be connected and disconnected under full load without tripping protective devices—
- Fully guaranteed against defects in workmanship and materials for 1 year—
- Available in 3, 7 and 12 KW capacities—



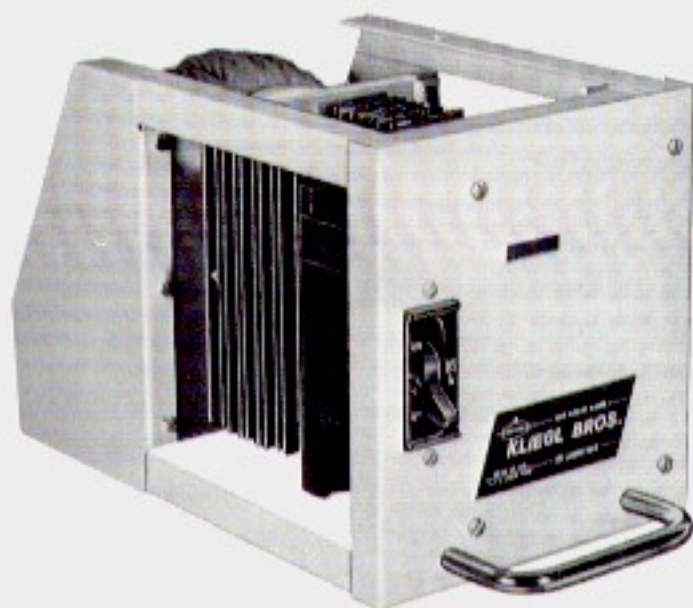
# KLIEGL

## SCR<sup>®</sup> DIMMER

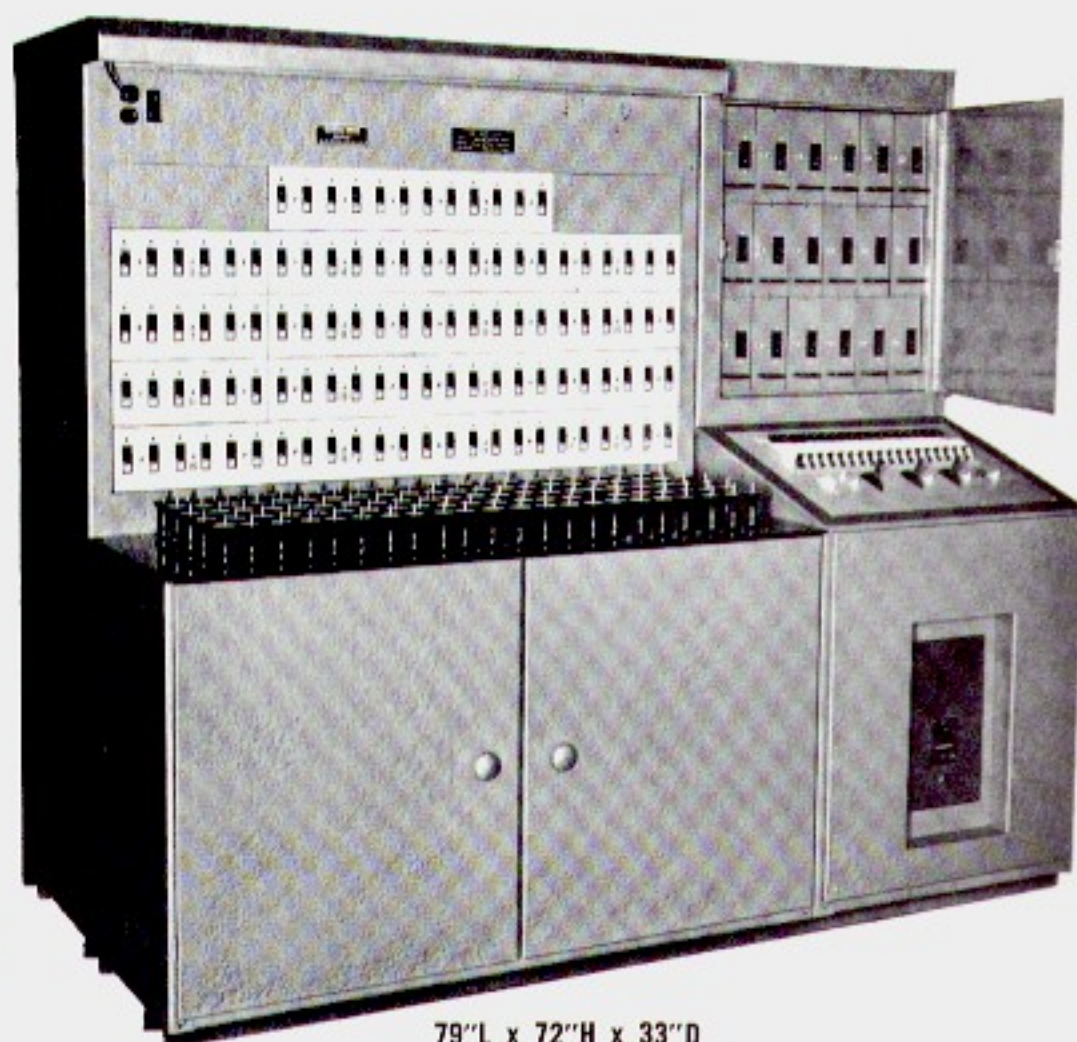
*The modern,  
stepless*

The new Kliegl SCR Dimmer is the most modern method yet devised to obtain completely stepless light intensity control. These dimmers are completely flexible and can be used on every application. They are small in size and require no outside cooling. Dimmer banks can be located remotely or as a part of a console and cross-connect system. Added flexibility in both installation and operation is gained through modular construction of the units. SCR Dimmers are completely interchangeable with SCR Non-Dim units. And—they can be safely inserted or removed from the board, while under load, without tripping any protective devices. With SCR Dimmers, the response to control is in-

stantaneous . . . no warm-up periods are required. The units are designed for continuous operation even at an ambient temperature of 40°C. These unique dimmers are the most fool-proof systems yet devised. They simply *can't be overloaded!* Even when loads in excess of the rated capacity of the dimmer are hot patched into the unit, it does not become inoperative. Instead, the unit merely operates at reduced voltage until the overload is removed. In fact, a partially-loaded 3KW dimmer will accept additional loads in multiples of 1,000 watts—safely and without tripping any protective devices. With sizes 6KW and larger, partially-loaded dimmers accept load increases in multiples of 5,000



The above photo shows a Kliegl 6KW SCR Dimmer that plugs into the dimmer rack.



A typical type SCR-SPC-C control system containing 18—6KW SCR Dimmers, 110 circuits in the Saf-patch panel and a single scene control console.

79"L x 72"H x 33"D



# control systems

## SCR® DIMMER®

The SCR Dimmer, an outstanding engineering achievement of Kliegl Bros., represents the ultimate in modern design concepts for exacting control of light intensity. The largest percentage of present remote control dimming installations are utilizing SCR Dimmers. This dimmer should be used on stages, television studios, etc. wherever dramatic activity takes place. The wide-range capacity of SCR Dimmers also makes them especially desirable for auditorium lighting and other applications where large lighting loads are involved.

## CONSOLES

Consoles are the required control centers for any remote dimming installation. They are usually custom designed to meet individual job requirements and are available in many varying sizes and shapes.

## PROGRAMMERS

Programmers are custom designed control centers that open limitless horizons in the field of decoration and display. They are used where there is a need for automated control of light and/or sound and/or motion.

## AUTOTRANSFORMER DIMMERS

Manually-operated autotransformer dimmers are to be used in installations where there are strict budgetary restrictions and there is no need or desire for pre-setting intensities or control from a remote location.

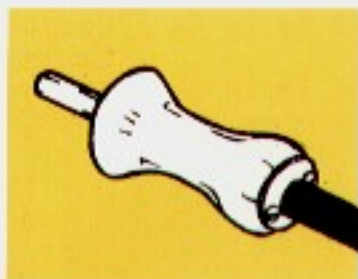
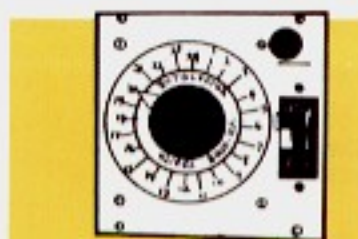
Motor-operated autotransformer dimmers can be used in applications such as hotel function rooms, dining rooms, etc., where there are not going to be any dramatic presentations. The dimmer response to control movement is on a timed basis and the application in question should not require a varying response speed. Positioner dimmers are available for accurate control of intensity.

## ROTOLECTOR®\*

A Rotolector is a rotary circuit selector that is used to cross-connect lighting load circuits to dimming or non-dim feeder lines. It is the fastest and simplest cross-connect circuit selection system available. It is limited in use to lighting control systems that have up to 24 dimmers which must be inter-connected to the various lighting loads.

## SAFPATCH®

A Safpatch panel is a cold-patch circuit selector system for the cross-connecting of lighting load circuits to dimming and non-dim feeder circuits. The system consists of load plugs and female receptacles. The Safpatch system can be used for any number of dimmers and must be used in place of the Rotolector for systems where a total of more than 24 dimmers are to be inter-connected to the various lighting loads.





# KLIEGL... *fully flexible lighting*

## *Build your system to meet your needs*

The Kliegl Lighting Controls described in this catalog have been developed to meet the exacting requirements of today's lighting artists and engineers. Kliegl Bros. have pioneered the development of these components and, without exception, their first introduction was by this firm. Many of the components shown continue to be exclusive Kliegl features.

This catalog is designed to enable the reader to visualize the various components of a complete lighting system. Careful inspection will enable the reader to choose and describe these components in order to formulate a system that will be custom-designed to his individual requirements. Needless to say, the services of the expert Kliegl staff are always available for personal consultation.

## HERE'S HOW IT WORKS

### MANUALLY-OPERATED SYSTEM

Manually-operated systems may be recommended for more simplified dimming applications where requirements are very moderate. In this system, the dimming units and their controls are mechanically manipulated and it should be remembered, therefore, that ease and flexibility of control will not duplicate that of a corresponding remote system. A mechanical system is subject to various forms of interlocking so as to provide for control of a few or all the dimmers at any one time by means of sub-master levers and a grand master lever. The autotransformer dimmer is the major component of a manually-operated system. This dimmer is used only where the power source is A.C. (For D.C. installations, contact Kliegl Bros.) The diagram below illustrates a typical manually-operated autotransformer system. As you will note, a cross-connect circuit selection panel (either Safpatch or Rotolector) for the interconnecting of lighting loads and dimmers is located between the dimmer bank and the lighting fixtures.



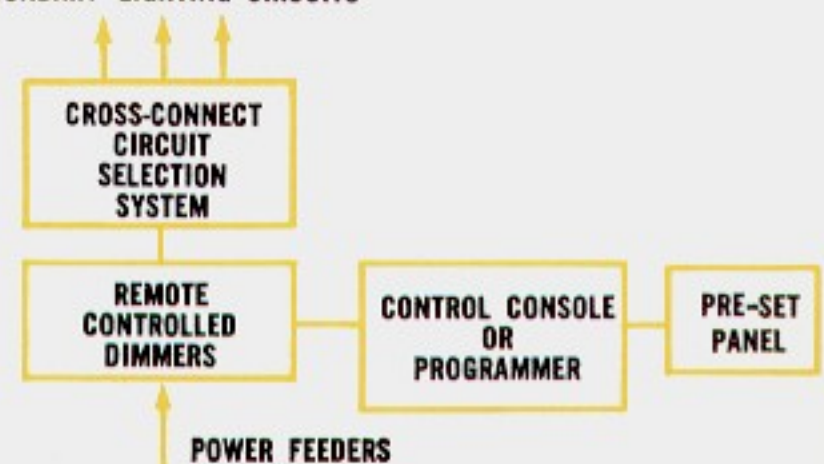
### REMOTE CONTROL SYSTEM

Remote operation represents the ultimate in sophisticated lighting control systems. Its use is mandatory under certain circumstances: where pre-setting of scenes is desired; where two or more control stations are called for; where remote location of the control console is required.

With a remote system, diminutive fingertip controls are assembled in a control console. This control center may then be located away from the dimming bank in any desired location. At the same time, the power units can be located conveniently near the lighting fixtures so that feeder runs and other wiring may be kept to a minimum.

The diagram below illustrates a typical remote control system. As you will note, the control console and pre-set panel (if required) may be located at a good vantage point away from the dimmer bank. Located between the dimmer bank and the lighting fixtures is a cross-connect circuit selection panel (either Safpatch or Rotolector) for the interconnecting of lighting loads and dimmers.

### SECONDARY LIGHTING CIRCUITS





# INTRODUCTION TO LIGHTING CONTROL SYSTEMS

The desire for controlled lighting is almost as old as the theatre itself . . . from primitive rituals by fireside to the most elaborate productions of today. Blazing pine knots, oil lamps, candles, gas, the limelight, the electric arc and finally the incandescent lamp . . . each new light source brought new methods of lighting control.

The era of the incandescent lamp has demanded the most exacting lighting control. It has run the gauntlet from the bulky resistance and reactance dimming control boards of the 20's to the bench and console type boards of today which use autotransformer or fully electronic dimming systems. In order to answer today's demands for complete circuit selection flexibility between all lighting loads and all dimmers, our firm has developed the Safpatch® and the Rotolector® circuit selector systems for coupling with these new types of boards. These systems are U/L approved, dead front, safe, sturdy, fool proof and easy to operate.

Not satisfied with just being abreast of the times, we take pride in being the leader in the development of new lighting and control equipment. The Kliegl SCR Dimmer®† . . . first new dimension in lighting control in almost 30 years . . . was invented and introduced to the lighting field in 1958. These units, utilizing two silicon-controlled rectifiers in a back to back circuit, make available the only truly solid state electronic dimmer that is designed to handle all the idiosyncrasies of lighting circuits. Our research continues on newer products. Present fields of study include: control devices for zirconium and xenon arc light sources and punch and tape devices for recording an unlimited number of lighting pre-sets.

The following pages list the latest in control equipment. We invite you to review it. At the same time we extend an invitation to use our planning department for whatever assistance you may desire in designing the most compact and versatile control equipment needed to fill your requirements. For further information on Lighting Control Systems as well as complete engineering specifications send for Catalog No. S-65.

†Patented



# KLIEGL ARC SPOTLIGHTS

Kliegl arc spotlights are simple in operation, durably constructed of the finest materials and will give exemplary service in every respect. Arc lamp mechanisms are of the manual-feed type. All adjustments are accomplished simply and directly by means of extension rods and turn handle controls conveniently located outside the lamp housing. All units are fully focusable from flood to spot. They are especially efficient as a follow spot due to their very clean sharp edge, even white light and very narrow beam spread. Units operate on A.C. or D.C.



NO. 11



## FEATURES:

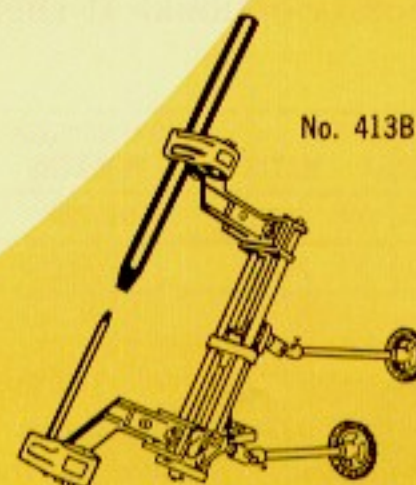
- Fully focusable from flood to spot.
- Smooth working, correct burning arc mechanism.
- Properly ventilated hoods to assure proper cooling.
- Peep holes for safe observation of burning arc.
- Large access doors for changing carbons.
- Light tight double wall construction.
- Sturdy cast aluminum and sheet steel construction.

No. 11: — A 70 ampere, 125 volt unit with a recommended throw of 35 to 100 feet. Has a 6" condensing lens, properly mounted to provide for unrestricted expansion. Adjustably mounted on a telescopic floor stand, can be raised or lowered from 37" to 67" above the floor. Comes complete with a base mounted arc ballast for proper arc stabilization and is wired with asbestos leads, 25' cable and switch. Has a 21" hood length. Accessories: No. 566 color frame; No. 22 color wheel; No. 26 color box and No. 257 iris shutter at additional cost.

No. 18 — Same as No. 11 but with a recommended throw of 50 to 120 feet, an 8" condensing lens and a 24" hood length. Accessories: No. 26A color box and No. 258 iris shutter at additional cost.

## Arc Lamp Mechanisms

70 AMPERE MECHANISMS — NO. 413B	
CAT. NO.	DESCRIPTION
413B	Arc lamp complete with rear feed
1466	Top carbon holder, complete with mica insulation
1467	Top front carbon holder
1467A	Top front carbon holder clamp
1468	Bottom carbon holder, complete with mica insulation
1469	Bottom front carbon holder
1469A	Bottom front carbon holder clamp
1470	Thumb screws for carbon holder
1471	Focusing bracket mounting



No. 413B

## Arc Resistors

Pedestal Type Resistors: designed for mounting on pedestal stand of Kliegl arc spotlights. No. 497 is furnished complete with external hinged terminal box for simplified connections with lighting unit; rated for 125 volts, 35-70 amperes.



No. 497



# SPOTLIGHTS (CONT.)

## Super-Klieglights

No. 1174

2,000 watt high intensity Super-Klieglights, with a 12" step lens, producing a high intensity beam for a recommended throw of 50-100 feet. These units are very similar in design and construction to the Dyna-Beam Klieglights with the exception that they have a smaller wattage lamp and do not have a spread lens. All controls are rear mounted. Cast aluminum and sheet steel construction.

Using iris and curtain shutters, light beams may be shaped as follows:



- A. Head or follow spot of any size by use of iris shutter.
- B. Large circular flood with both shutters wide open.
- C. Horizontal cut off with curtain shutters partly closed.

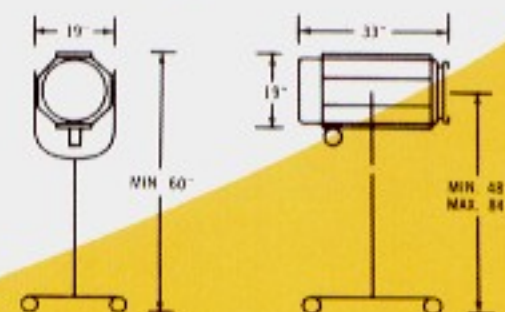
Unit has a beam spread of approximately 15 feet at a throw of 75 feet. The approximate average footcandle value, using a 2M/T30/1 watt lamp, at a throw of 75 feet is 55 foot candles.

Units equipped with slide grooves for color frame (No. 1039 color frame) or No. 17 color wheel, telescopic roller caster stand, pin plug connectors, 25 feet cable, 30 ampere toggle type line switch. A.C. blower motor normally furnished, D.C. blower motors optional at slight additional cost.

CAT. NO.	WATTS	LENS	RECOMMENDED THROW	RECOMMENDED LAMP
1174	2000	12"	50'-100'	2M/T30/1
1175	2000	12"	50'-100'	2M/T30/1



No. 1174

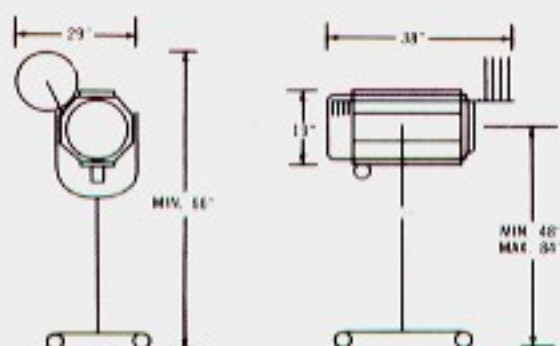


NO. 1174 NET WGT. 94 lbs.



No. 1175

No. 1175 Super-Klieglight with color boomerang. Unit contains four circular color frames for Cinemoid with individual rear controls mounted on standard No. 1174 Super-Klieglight.



NO. 1175 NET WGT. 100 lbs.

### GROUNDING EQUIPMENT

All listed units can be supplied with 2 wires plus ground and may be specified by addition of suffix "G" to unit catalog number.

### MOUNTING DATA

All listed units may be furnished with heavy duty pipe clamp mounting, instead of roller caster stand, for overhead pipe mounting.



## Dyna-Beam Klieglights

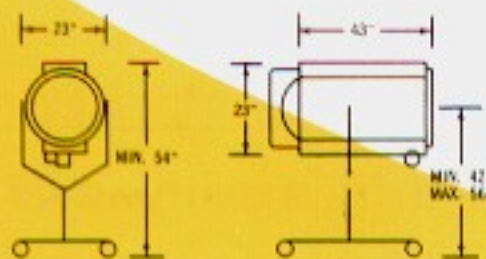
No. 1178

A 3000 watt high intensity unit, with a 12" step lens and a 9" spread lens, intended for long range throw or for high intensity work at shorter ranges. This unit has a recommended throw of up to 200 feet.

All units complete with properly weighted adjustable telescopic roller caster stand, 30 ampere toggle type line switch, recessed in housing, and 25 feet of cable, unless otherwise specified. All units provided with front slide grooves for No. 1039 color frame or No. 17 color wheel. Unless otherwise specified unit is furnished with 30° horizontal divergence spread lens. A.C. blower motors normally furnished, D.C. blower motors optional at slight additional cost.



No. 1178



NO. 1178 NET WEIGHT, 372 lbs.



Unit has same beam control features as No. 1376.

Unit has a beam spread of approximately 20 feet at a throw of 100 feet. The approximate average footcandle value, using a 3M/T32/2 watt lamp at a throw of 100 feet is 49 foot candles and at a throw of 200 feet is 12 footcandles.

CAT. NO.	WATTS	LENS	RECOMMENDED THROW	RECOMMENDED LAMP
1178	3000	12"	100'-200'	3M/T32/2
1179	3000	12"	100'-200'	3M/T32/2

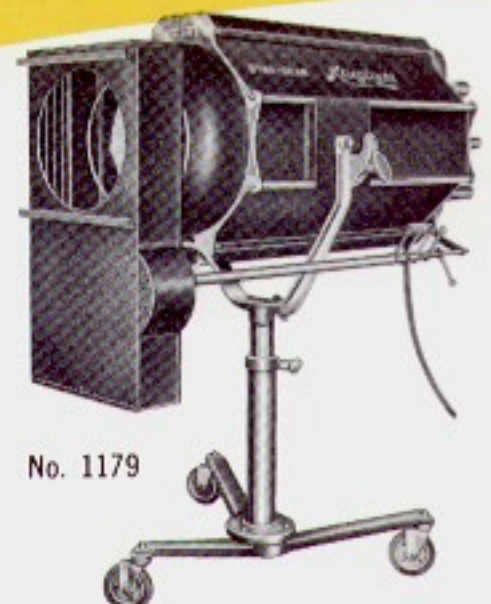
### GROUNDING EQUIPMENT

All listed units can be supplied with 2 wires plus ground and may be specified by addition of suffix "G" to unit catalog number.

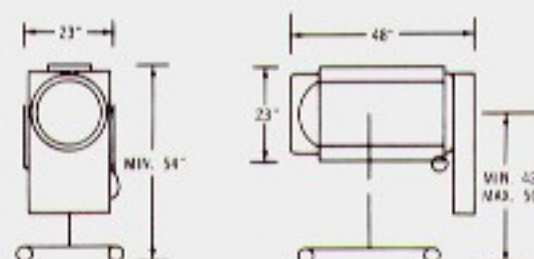
### MOUNTING DATA

All listed units may be furnished with heavy duty pipe clamp mounting, instead of roller caster stand, for overhead pipe mounting.

No. 1179 — Dyna-beam with permanently attached fast acting color boom-rang containing 5 regular color frames in vertical gangways operated by individual rear levers. Unit contains standard No. 1178 Klieglight and No. 26DD Color Box.



No. 1179



NO. 1179 NET WEIGHT, 398 lbs.

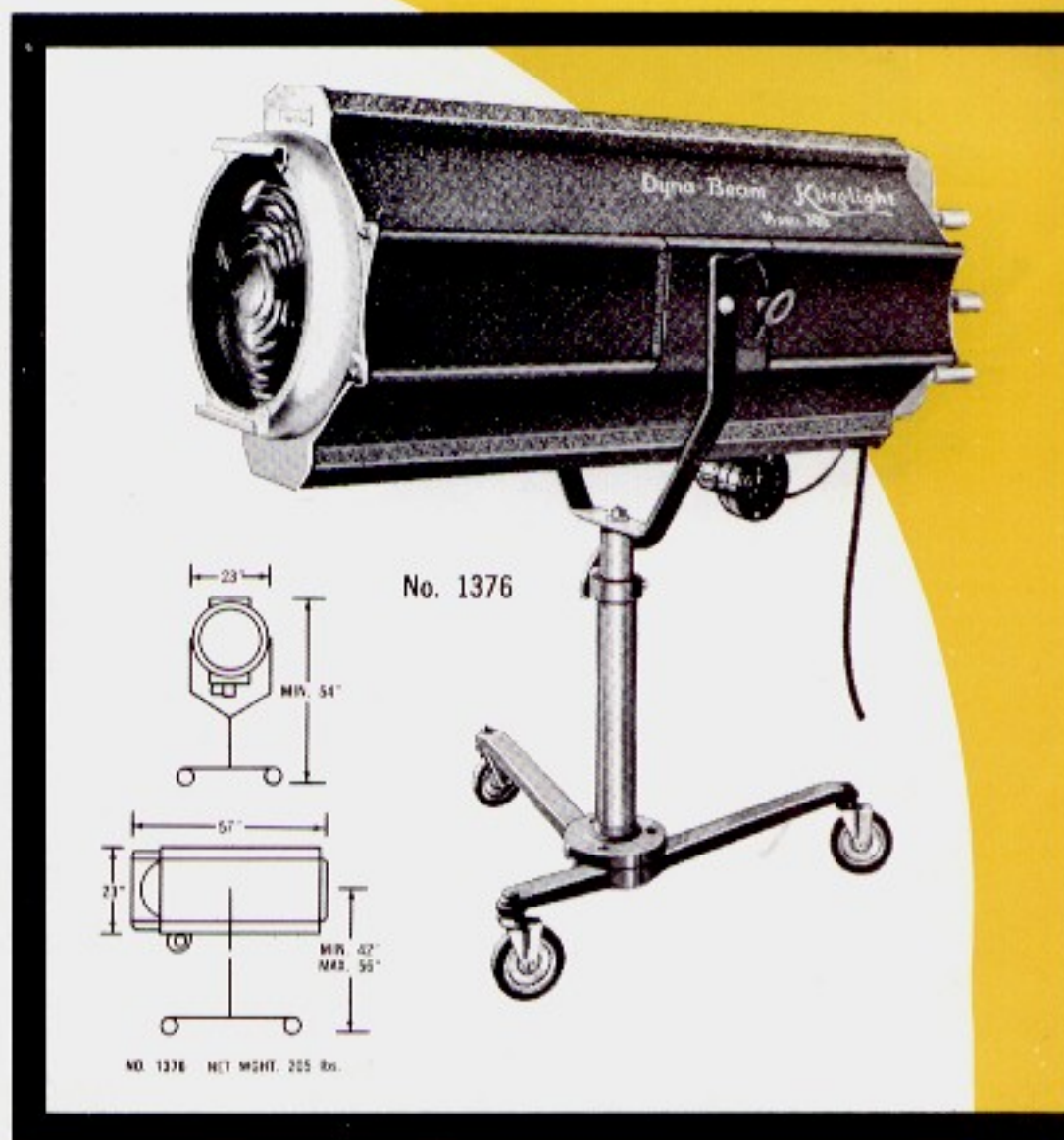


# SPOTLIGHTS

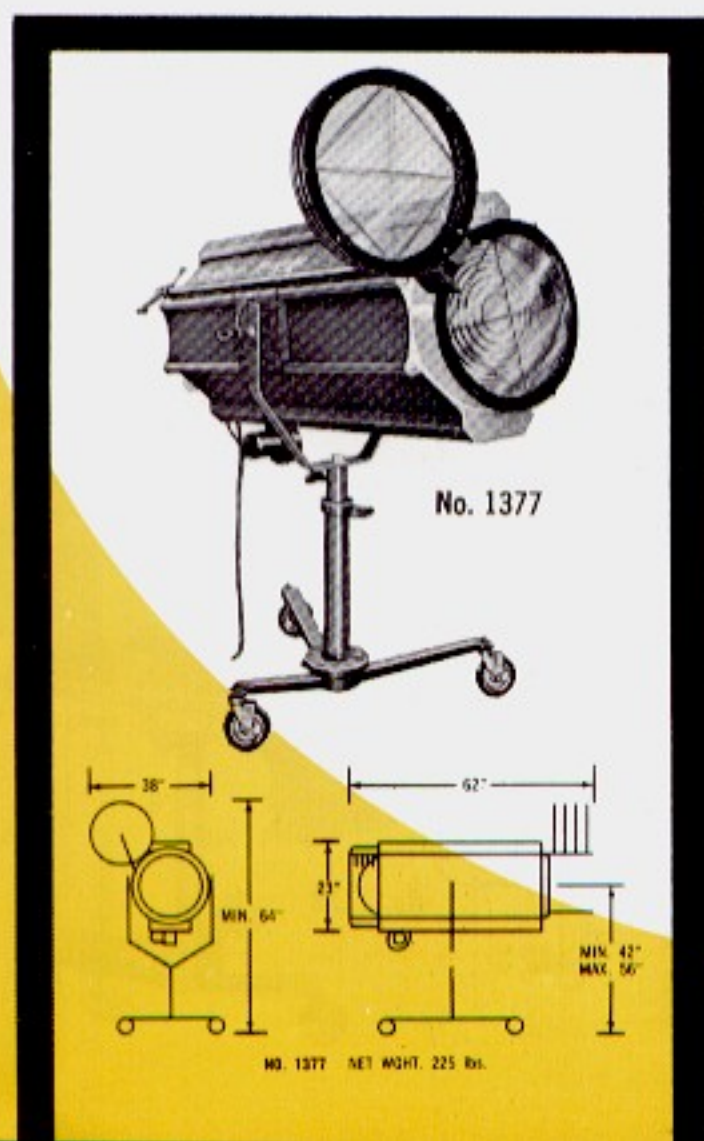
## No. 1376—Model 300

A 3000 watt very high intensity unit, with a  $14\frac{3}{4}$ " step lens and a 9" spread lens, intended for very long range throw or for extra high intensity work at shorter ranges. This unit has a recommended throw of up to 300 feet. Units of this type are being used at Marine Stadium, Jones Beach, N. Y. where the throw from the spotlight gallery to the center of the stage is 315 ft.

All units complete with properly weighted adjustable telescopic roller caster stand, 30 ampere toggle type line switch, recessed in housing, and 25 feet of cable, unless otherwise specified. All units provided with front slide grooves for No. 581 color frame or No. 17 color wheel. Unless otherwise specified unit is furnished with  $30^\circ$  horizontal divergence spread lens. A.C. blower motors normally furnished, D.C. blower motors optional at slight additional cost.



Unit has a beam spread of approximately 35 feet at a throw of 250 feet. The approximate average footcandle value, using a 3M/T32/2 watt lamp, at a throw of 150 feet is 46 footcandles and at a throw of 300 feet is 12 footcandles.



No. 1377. Dyna-Beam with color boomerang. Unit contains four circular color frames for Cinemoid or gelatine with individual rear controls mounted on standard No. 1376 Model 300 Dyna-Beam Klieglight.

### GROUNDING EQUIPMENT

All listed units can be supplied with 2 wires plus ground and may be specified by addition of suffix "G" to unit catalog number.

### MOUNTING DATA

All listed units may be furnished with heavy duty pipe clamp mounting, instead of roller caster stand, for overhead pipe mounting.

CAT. NO.	WATTS	LENS	RECOMMENDED THROW	RECOMMENDED LAMP
1376	3000	$14\frac{3}{4}$ "	150'-300'	3M/T32/2
1377	3000	$14\frac{3}{4}$ "	150'-300'	3M/T32/2



# KLIEGL BOOTH

## Dyna-Beam Klieglights

3000 watt high intensity Dyna-Beam Klieglights, for long range throws, produce an exceptionally powerful beam of light. Cast aluminum and sheet steel are combined to produce a very rugged unit with lowest allowable weight. Perfectly balanced in swivel yoke. Quickly locked or unlocked and easily swung into any desired position. All control levers are located at rear of housing assuring rapid, easy operation. Housing top removable to provide ready access to interior. Iris and curtain shutters of special heat resisting metal—eliminates heat erosion. Quiet blower system to assure proper lamp life. Spread lens increases beam width without affecting beam height. Projected beams have approximate uniform intensity of light over entire illuminated area. Shuttering light provides little change in intensity of remaining lighted area.



Using iris and curtain shutters, light beams may be shaped as follows:

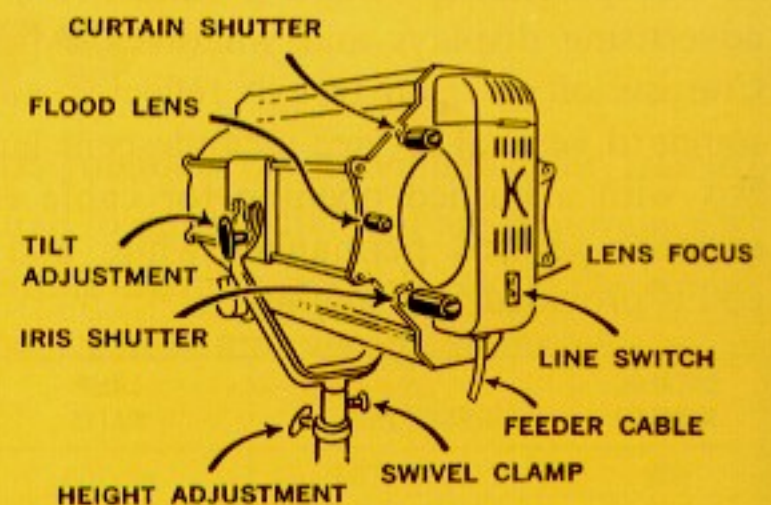
- A. Head or follow spot of any size by use of iris shutter.
- B. Large circular flood with both shutters wide open.
- C. Horizontal cut-off with curtain shutters partly closed.
- D. Elongated flood with spread lens in position and both shutters open.
- E. Elongated flood with curtain shutter cut-off as used to floodlight a chorus or large stage.

### FEATURES:

- 1. Uniform illumination at maximum efficiency with factory set lamp holder.
- 2. Convenient rear controls.
- 3. Well ventilated, light tight construction coupled with quiet blower system assures proper lamp life.
- 4. Hinged cap and detachable lamp holder permit relamping with least effort and time loss.
- 5. 9" horizontal divergence spread lens and Step lens with black ceramic risers.
- 6. Ellipsoidal spun aluminum Alzak finished reflector.
- 7. 2½ to 3½ times the lumen output of conventional spots of equal wattage.
- 8. Minimum physical dimensions. Fits projection booths.
- 9. Well defined cut-off of light.



Hinged cap and detachable lamp holder permit fast, easy relamping.



Conveniently located rear and side operating controls assures rapid adjustment and operating ease.



# KLIEGL PROSCENIUM LIGHTS

## Strip Lights



No.  
599

Kliegl proscenium strip lights produce a directed flood of light for the illumination of the first entrance acting area. They are of sheet steel construction with a sheet steel face which fully encloses all of the individual spun aluminum semi-matte Alzak finished reflectors into light tight compartments which guarantees purity of color as well as increased strength and rigidity. Naturally colored glass roundels are held in hinged holders; assuring safe, easy relamping.

No. 599 — Individual reflector type; uses 60/100 watt A21 medium screw base lamps. Receptacles alternately wired on three or more 2-wire circuits for independent color control. Uses 3¾" roundels.

No. 598 — Same as No. 599 but uses 150 watt lamps and 5½" roundels.

No. 597 — Same as No. 599 but uses 200 watt lamps and 7½" roundels.

CATALOG NUMBER	DESCRIPTION	OUTLETS		NET WEIGHT LBS./FOOT
		WATTS	CENTERS	
599	INDIVIDUAL REFLECTOR TYPE — HINGED RING HOLDERS AND ROUNDELS	60/100	4"	5
598		150	6"	6
597		200	8"	9

## Tormentor Lights



Kliegl tormentor spotlights are a grouping of standard Kliegl incandescent units, mounted on a vertical support on each side of the proscenium arch or in front entrances. Selection of the proper units depends upon the size of the stage, nature of presentation as well as individual preferences and requirements. Normally, 250 to 500 watt spotlights are used on a small stage; 1000 watt units for a stage with an opening of approx. 30 feet; 1000 to 2000 watts or higher for large stages. Any type and arrangement of spotlights may be had. For information regarding various Kliegl Spotlights, refer to pages 6 through 21.

## STRIP FLOODLIGHTS

Kliegl stage striplights give a widely distributed flood of light at close range. Used at stage entrances, back of transparencies, behind ground rows, etc. Also ideal for such non-theatrical purposes as show rooms, advertising displays and wherever a portable light strip of this kind is required for temporary service. Consists of an open trough reflector and wireway with a series of medium screw base receptacles for standard general service incandescent lamps, wired on one—2 wire circuit terminating in a suitable splice box with a bushed opening for cable extension. Constructed of galvanized sheet steel with reflecting surfaces painted permanent white and external surfaces a chip resistant black. Swing hook on one end is provided for hanging.

CATALOG NUMBER	DESCRIPTION	LAMP WATTS	LENGTH* FEET	NET WEIGHT LBS./STRIP
649	2-LIGHT STRIP	40/150	1½	4
650	4-LIGHT STRIP	40/150	3	8
651	6-LIGHT STRIP	40/150	5	14
652	10-LIGHT STRIP	40/150	8	20

\*Longer lengths and strips with more than one circuit are made to order.

Note: For 3-color strips, see portable footlights which are also adaptable for striplighting purposes.



NO. 650



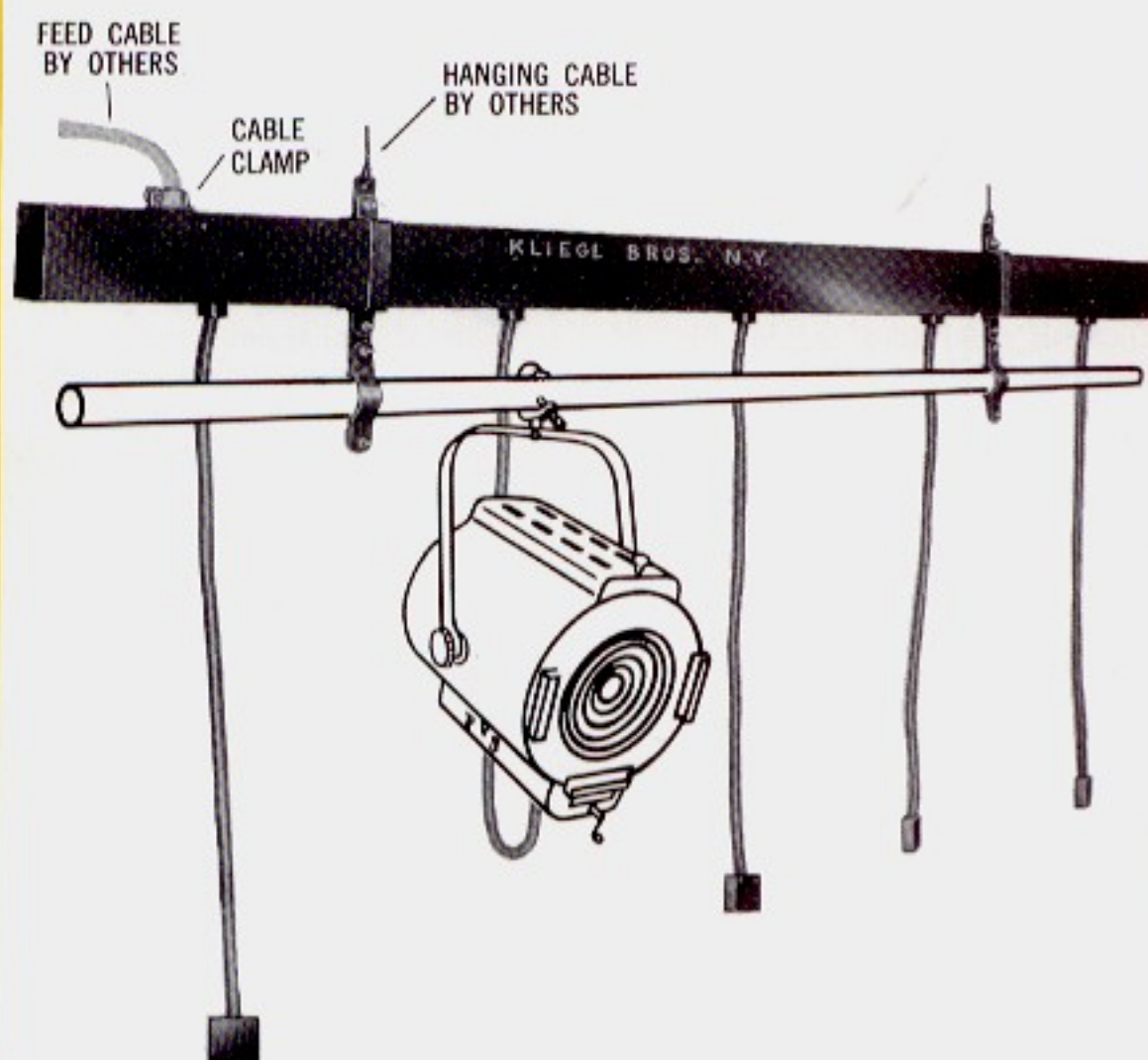
# KLIEGL No. 619 BATTEN PLUGGING STRIPS

Provides safe and convenient facilities for connecting spotlights, floodlights etc., where units are hung from an overhead pipe batten. Consists of a continuous 2" x 4", 20 gauge steel wireway equipped with clamps for proper suspension and for mounting of 1 1/4" pipe batten (approx. 4" below wireway). Available with either pigtails (female connectors on 18" leads), flush mounted plug receptacles or a combination of both in 20, 30 or 50 ampere capacity, either grounded or ungrounded. Excellent for providing tormentor spot outlets. The front cover is removable for access to terminals. Standard finish is flat black. Circuit designations, stenciled on front, in 2" letters, available if desired. Batten plugging strips are manufactured to meet individual job specifications. All prices on application.

## ORDERING INFORMATION

When ordering Batten Plugging Strips, please include the following information:

1. Length of strip required.
2. Number of circuits.
3. Number of flush receptacles.
4. Number of pigtail connectors and length of pigtails.
5. Desired amperage of outlets.
6. Are connectors to be grounded or ungrounded?
7. Proper end for location of terminal box — either right or left when facing auditorium.
8. Desired individual circuit designations.



## CYCLORAMA LIGHTS

Cyclorama footlights and cyclorama borderlights with colored glass roundels or individual color frames, single or double row, from 200 to 500 watts in size are manufactured to meet individual job requirements. This equipment, when properly installed, produces the finest cyclorama lighting possible. Both the Radio City Music Hall and the Metropolitan Opera House are so equipped. Prices and specifications sent upon request.





7"

No.  
610



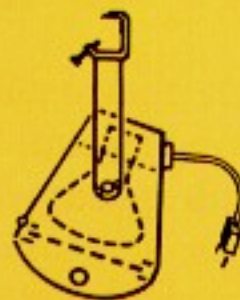
7½"

No.  
610 C



7½"

No.  
590 C  
SHOWN WITH  
GLASS ROUNDELS



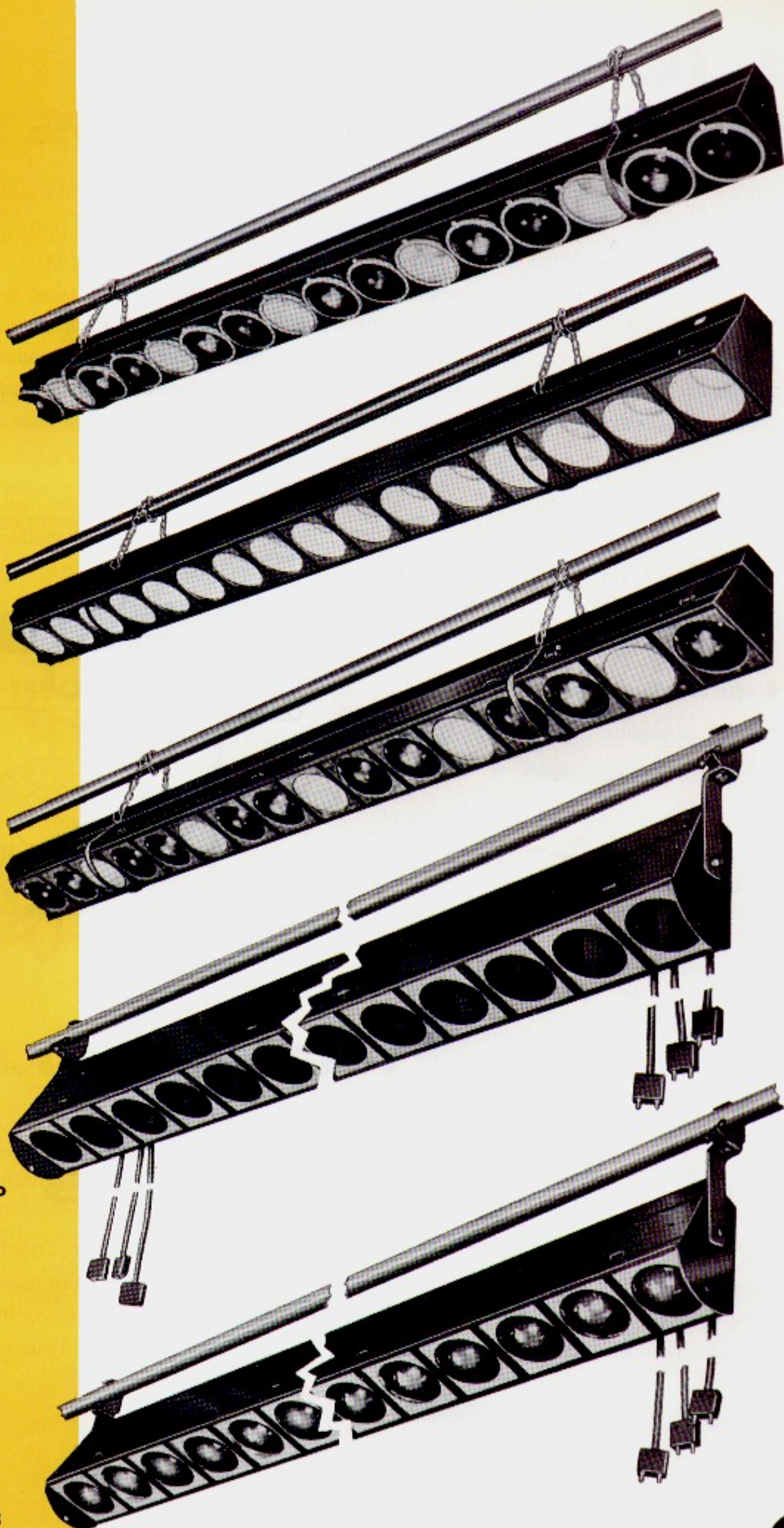
7½"

No.  
5906 CP



7½"

No.  
610 CP  
SHOWN WITH  
GLASS ROUNDELS





# KLIEGL BORDERLIGHTS

Suspended above stage from pipe batten, they are designed to provide maximum light output with proper light distribution. Sturdily constructed, well ventilated and light-tight, provided with chain hangers and scenery guards. Circuits extend to terminal block in splice box for making feeder connections. Spotlight pigtail connector outlets can also be furnished, spaced as desired.

When ordering, specify: type, length, wattage of lamps, number of colors, number of circuits per color and location of splice box (right or left end when standing on stage and facing audience). Comply with all Underwriters' requirements.



## ROUNDEL TYPE

Housing is constructed with a sheet metal front which fully encloses all reflectors in a light-tight compartment and at the same time gives greatly increased strength and rigidity.

Each lamp receptacle has an individual spun aluminum Alzak finished reflector and colored glass roundel clipped into place in its own hinged holder. At no time during relamping need the roundel be removed from its holder.

Relamping is done by simply opening the hinged holder and replacing the lamp.

## COLOR FRAME TYPE

Housing is constructed with a sheet metal front which fully encloses all reflectors in a light-tight compartment and at the same time gives greatly increased strength and rigidity. Furnished with individual removable color frames which are equally adaptable for holding Cinemoid, gelatine or glass roundels. (Color mediums are not included in price unless specifically specified.) Slide holders are provided with self-closing light shields to prevent spill light.

Designs for "A" type lamps have individual spun aluminum Alzak finished reflectors for each lamp receptacle. In reflector lamp "R" designs, each lamp is in a separate light-tight compartment. Both of the above methods of light-tight construction assure absolute purity of color values.

### ROUNDEL TYPE PERMANENT BORDERLIGHTS

No.	Watts	Centers	Roundels	Width in Position	Shipping Weight Pounds per Foot
610	100	6"	5 $\frac{3}{8}$ "	7"	11
610A	150	6"	5 $\frac{3}{8}$ "	7"	11
602	200/300	8"	7 $\frac{1}{4}$ "	9"	15
603	300/500	12"	11 $\frac{1}{4}$ "	13"	20

### COLOR FRAME TYPE PERMANENT BORDERLIGHTS

No.	Lamp	Watts	Centers	Width in Position	Shipping Weight Pounds per Foot
610C	A	100	6 $\frac{3}{8}$ "	7 $\frac{1}{2}$ "	11
610AC	A	150	6 $\frac{3}{8}$ "	7 $\frac{1}{2}$ "	11
602C	A	200	8"	10"	15
590C	R*	150	6"	7 $\frac{1}{2}$ "	11

\*Reflector Lamp

## PORTABLE SHORT SECTION BORDERLIGHTS

Correspond in general construction to color frame type permanent borderlight of similar design. Made in standard eight foot lengths. Receptacles wired alternately on three two-wire circuits. Furnished with short cable extensions and pin-plug connectors on one end unless otherwise specified. Adjustable end brackets with pipe clamps are supplied for suspension of strip from pipe battens. Furnished with color frames which are adaptable for holding Cinemoid, gelatine or glass roundels. (Desired color mediums are furnished at additional cost.) Available in the following designs:

### PORTABLE SHORT SECTION BORDERLIGHTS

No.	Lamp	Watts	No. of Outlets	Length	Width in Position	Shipping Weight Pounds
610CP	A	100	15	8'0"	7 $\frac{1}{2}$ "	88
610ACP	A	150	15	8'0"	7 $\frac{1}{2}$ "	88
602CP	A	200	12	8'0"	10"	120
590CP	R*	150	15	8'0"	7 $\frac{1}{2}$ "	88
6106CP	— Same as 610CP but with pigtails on both ends.					
6106ACP	— Same as 610ACP but with pigtails on both ends.					
5906CP	— Same as 590CP but with pigtails on both ends.					

\*Reflector Lamp



# ROUND EL TYPES

Housing is constructed with a sheet metal front which fully encloses all reflectors in a light-tight compartment and at the same time gives greatly increased strength and rigidity.

Each lamp receptacle has an individual spun aluminum Alzak finished reflector and colored glass roundel clipped into place in its own hinged holder. At no time during relamping need the roundel be removed from its holder. Relamping is done by simply opening the hinged holder and replacing the lamp.

Units are made in single or double row design.

Usually supplied with semi-matte finished reflectors and non-diffusing roundels. Also furnished with polished reflectors and diffusing roundels if desired. Roundels are generally supplied in clear, red and blue. Other colors are also available.

Made in several sizes for lamps of different wattages as listed:

ROUND EL TYPE PERMANENT FOOTLIGHTS					
	CAT. NO.	WATTS	CENTERS	GLASS ROUNDELS	SHIPPING WGHT. LBS./FT.
SINGLE ROW DESIGN	620	75/100	4"	3 3/4"	15
	620A	100	6"	5 5/8"	15
	620B	150	6"	5 5/8"	15
DOUBLE ROW DESIGN	621	75/100	4 1/2"	3 3/4"	30
	621A	100	6"	5 5/8"	30
	621B	150	6 3/4"	5 5/8"	30

# COLOR FRAME TYPE

Housing is constructed with a sheet metal front which fully encloses all reflectors in a light-tight compartment, assuring absolute purity of color, and at the same time gives greatly increased strength and rigidity. Individual, removable color frames, equally adaptable for Cinemoid, gelatine or glass roundels are provided. (Color mediums are not included in price unless specifically specified.) Slide holders are provided with self-closing light shields to prevent spill light.

Designed for "A" type lamps with individual spun aluminum Alzak finished reflectors for each lamp receptacle.

Available in two sizes for different wattage lamps, as listed:

COLOR FRAME TYPE PERMANENT FOOTLIGHTS				
CAT. NO.	WATTS	CENTERS	GLASS ROUNDELS	SHIPPING WGHT. LBS./FT.
620C	100	4 5/8"	3 3/4"	15
620BC	150	6"	5 5/8"	15

# PORTABLE SECTIONS

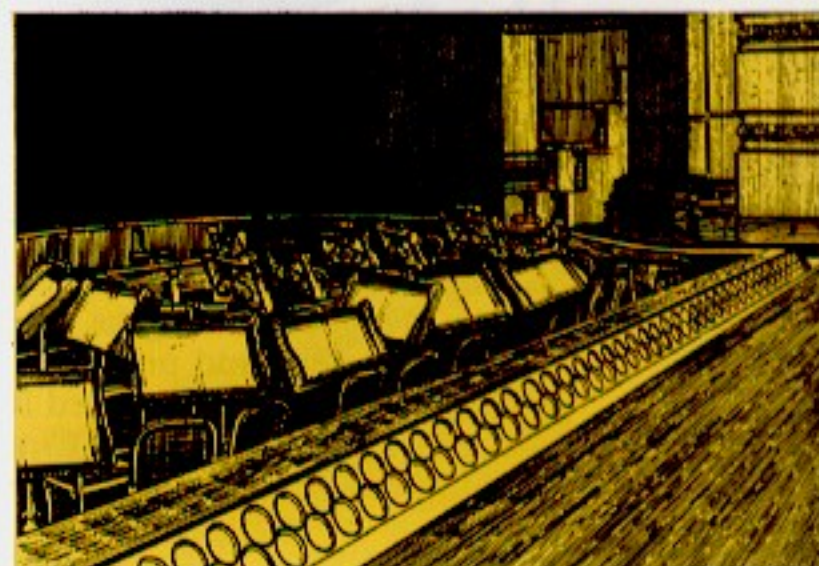
Serviceable when and where footlights are temporarily required and no permanent equipment is available. Simply set in position on the stage or platform. No recess in the floor is necessary. Height is minimized to make them unobtrusive. Designed to project the light properly.

Furnished in standard eight-foot lengths. Several sections may be coupled together electrically and fed from one end. Wired for three colors, with pigtail cable extensions and pin-plug connectors on both ends. Each lamp receptacle is provided with a spun aluminum Alzak finished reflector and slide grooves for removable color frames which are adaptable for Cinemoid, gelatine or glass roundel color mediums. Normally supplied with color frames only. (Desired color mediums are furnished at additional cost.)

Available in different wattage sizes as listed:

PORTABLE SECTIONS					
CAT. NO.	WATTS	CENTERS	LENGTH	GLASS ROUNDELS	SHIPPING WGHT. LBS./FT.
620CP	100	6"	8' 0"	5 5/8"	11
620BCP	150	6"	8' 0"	5 5/8"	11
629	60/100	3"	8' 0"	*	7

\* Open trough type using natural colored lamps

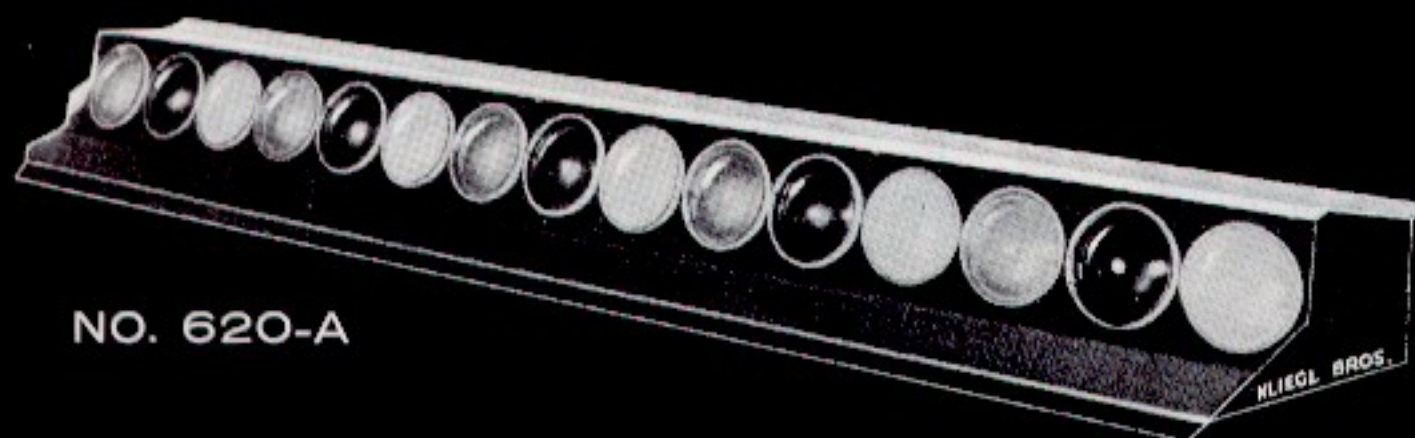




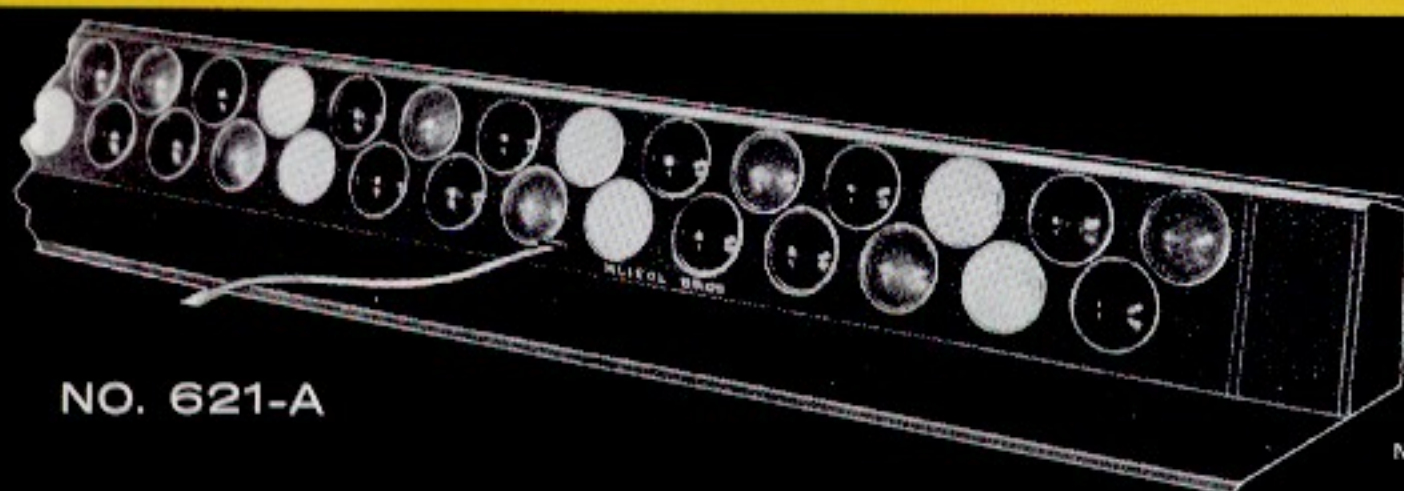
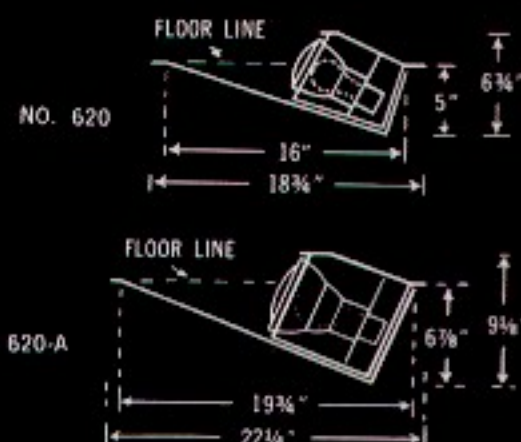
# KLIEGL PERMANENT FOOTLIGHTS

Fixed in position and generally preferred where stage is regularly used for musical or dramatic productions. Semi-flush in structure, they protrude but a few inches above the stage floor. Furnished straight or curved in any length desired.

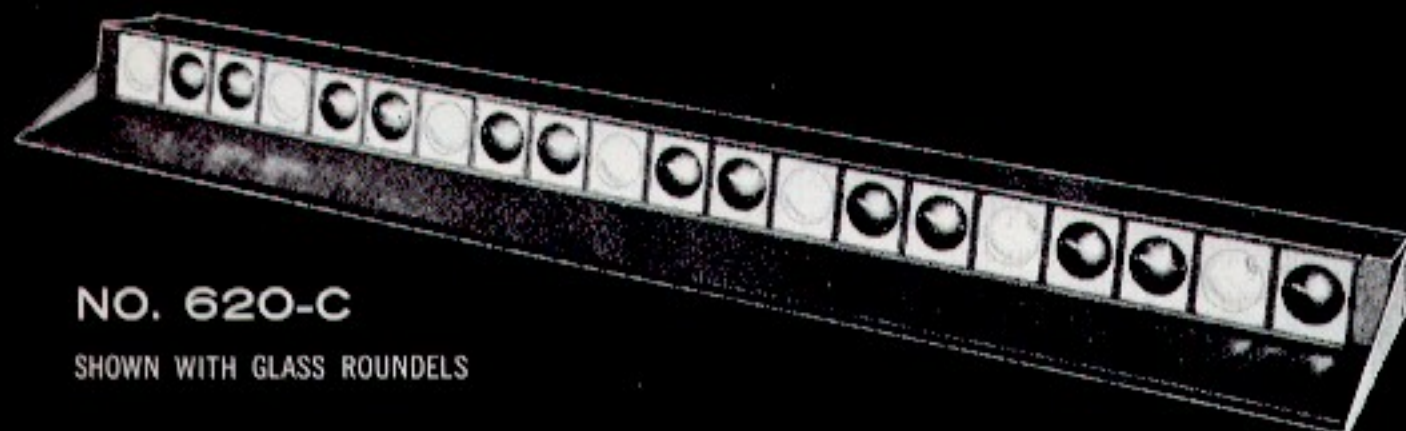
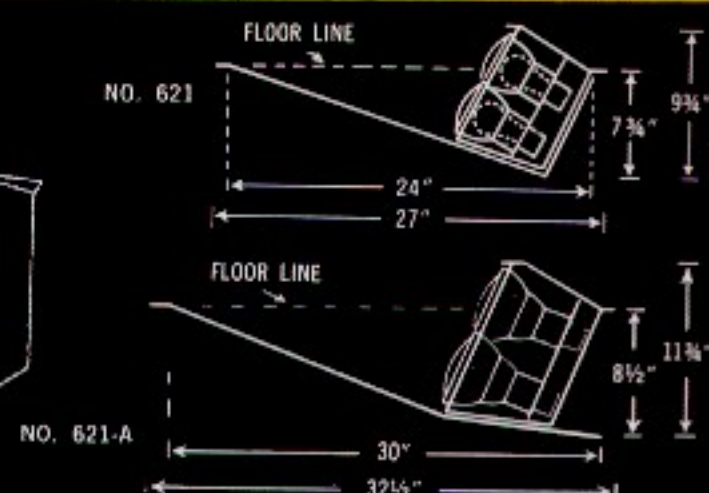
Wired alternately for independent control of any number of colors, usually three or four with splice box on either end as specified. Can also be supplied with built-in plug outlets for auxiliary lighting. When ordering, specify type, length, straight or curved (radius of curve) wattage of lamps, number of colors and location of splice box (right or left end when standing on stage facing audience).



NO. 620-A

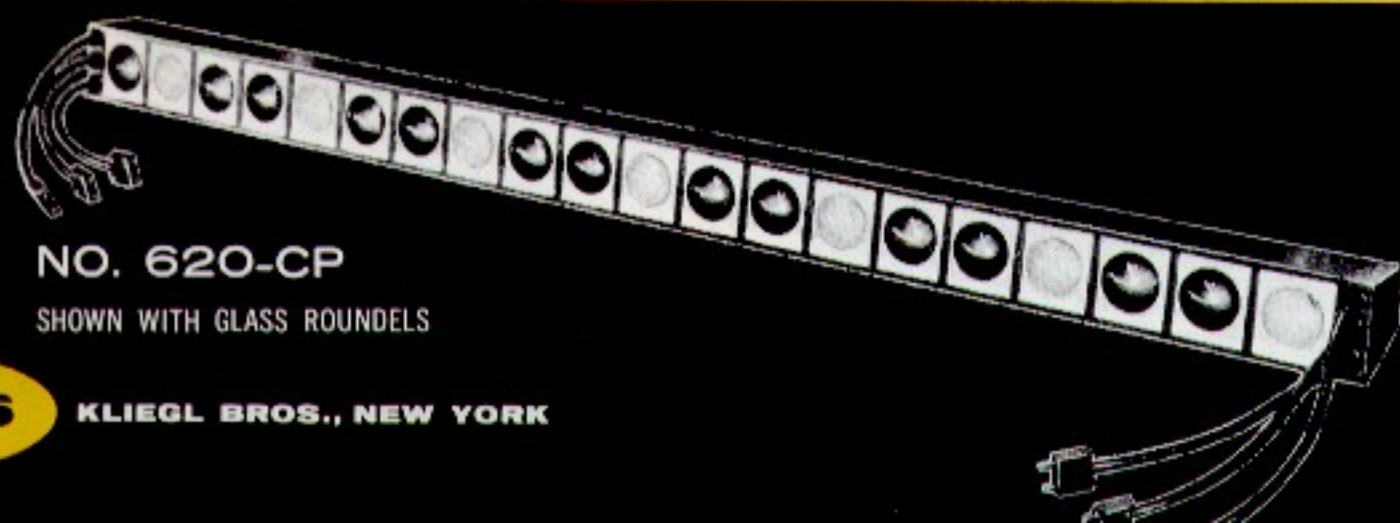


NO. 621-A



NO. 620-C

SHOWN WITH GLASS ROUNDELS

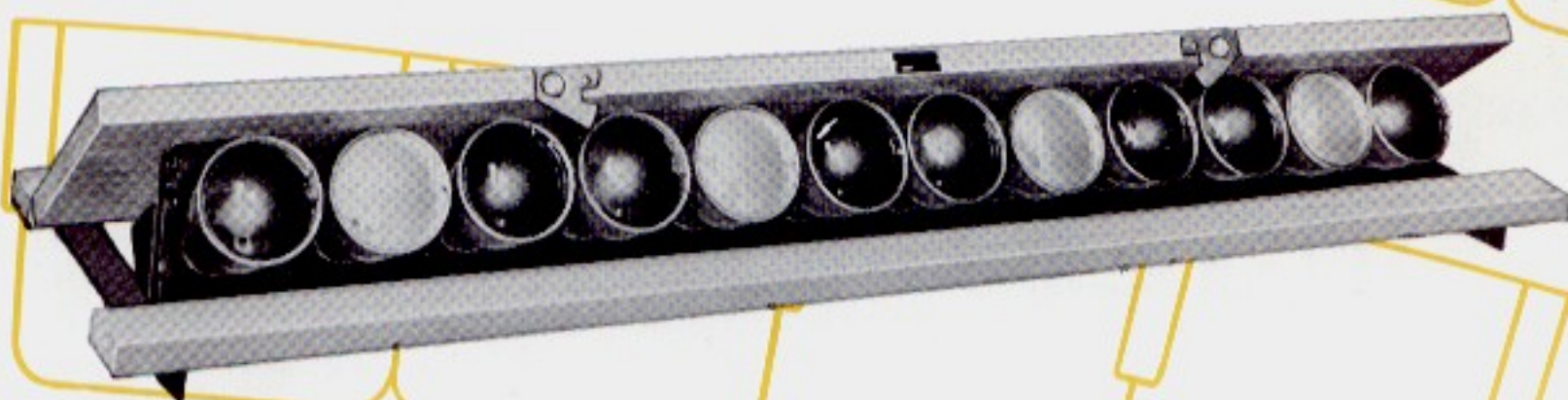


NO. 620-CP

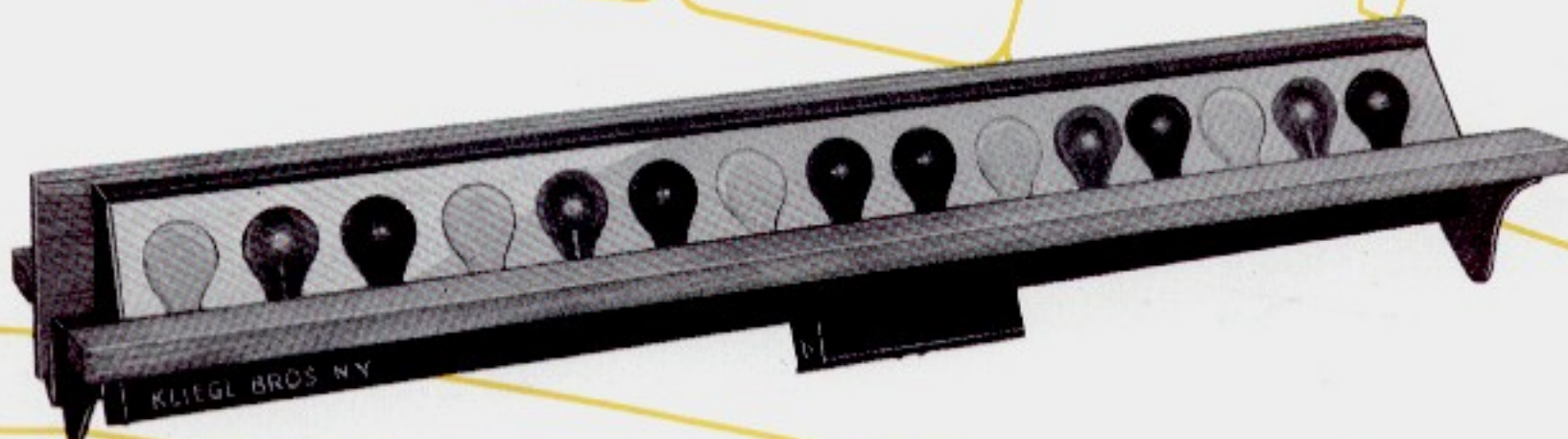
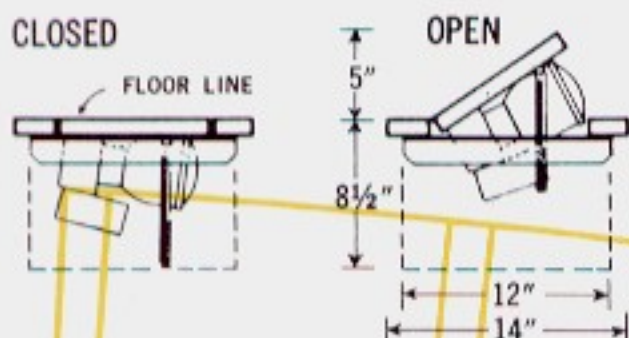
SHOWN WITH GLASS ROUNDELS



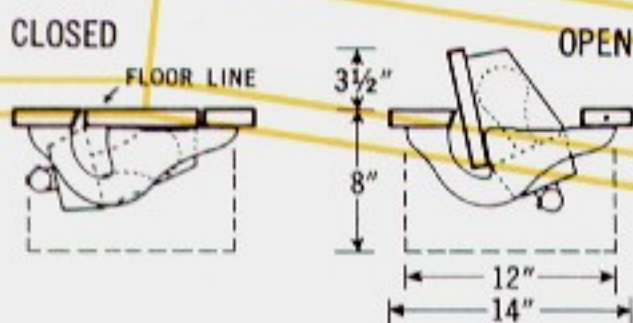




**No. 832** Single row reflector-type disappearing footlights; five-foot sections with 12 receptacles for 100 watt A lamps. Equipped with individual Alzak aluminum reflectors and 4" glass roundels. Wired for three colors and supplied with blue, red and clear color roundels. Oak flooring with floor panel hinged to back strip with swinging bracket for tilt adjustment. Provided with splice box, terminal block and automatic cut-off mercury switches. Shipping weight—60 pounds per section.



**No. 829** Single row open-trough type disappearing footlight for colored lamps; five-foot section with 15 receptacles for 60/100 watt lamps. Reflecting surfaces spray painted permanent white. Oak flooring. Wired for three colors. Provided with splice box, terminal block and automatic cut-off mercury switches. Shipping weight — 60 pounds per section.



CLOSED



5 Ft. Section



8° MAX.

PLAN — STRAIGHT INSTALLATION

STANDARD SECTION  
5 Ft.



PLAN — CURVED INSTALLATION

FOR CURVED INSTALLATION  
ENDS MAY BE MITERED TO FIT  
THE CURVATURE. STANDARD CON-  
STRUCTION PERMITS MITERING  
UP TO 8 DEGREES.

Other types and models available.  
Maple flooring at additional cost.



Kliegl Bros. disappearing footlights are very serviceable for installations where footlights are only occasionally required as in school auditoriums, recreational buildings, assembly rooms, gymnasiums, concert halls, hotel ballrooms, community centers and the like. They perform their function equally as well as permanent footlights of similar types. When not in use, footlights may be closed flush with the stage floor, leaving an unobstructed platform for speakers and other purposes.

## DISAPPEARING FOOTLIGHTS

Made in standard five-foot unit lengths, compact, highly efficient, completely assembled with lamp receptacles wired alternately on three two-wire circuits for independent control of each color. Furnished with clear, red and blue roundels—other colors available. Lighting element is attached to underside of floor panel and is provided with terminal block in pull box for circuit connections. Each section equipped with automatic disconnecting switches which eliminates possibility of leaving lamps lighted when section is closed.

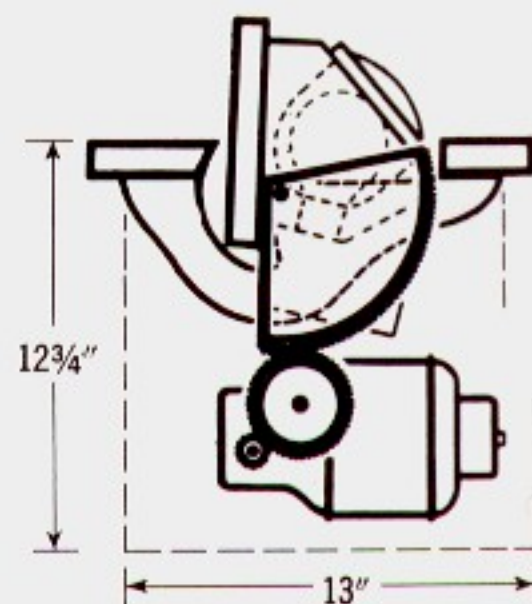
Flooring of sturdy hard wood (oak) construction, stripped, cross grained and impregnated to prevent warping and to withstand wear. Simple positive latch holds footlights closed when not in use.

When raised, row of adjoining sections presents an unbroken front to the audience.

Furnished in straight sections with sufficient allowance to permit mitering of ends for curved installations.

Units may be had with motor drive attached to each section for opening and closing footlights from switchboard or other locations.

Comply fully with Underwriters' requirements.





# FLOODLIGHTS

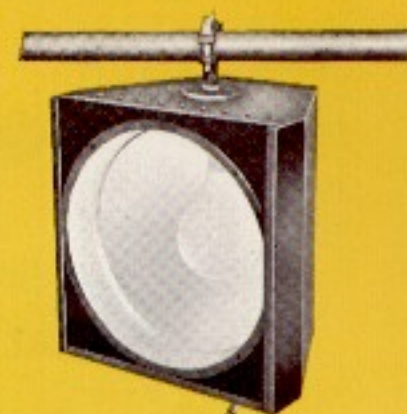
Kliegl suspension type floodlights are ideal for added localized high lighting or effect lighting of acting areas. Units flood a wide area with even uniform illumination. All units are equipped with color frame holders and semi-matte Alzak finished aluminum reflectors.

**No. 546** — May be mounted in any direction. Furnished with a pipe clamp and asbestos leads. Uses a 500 watt PS 40 lamp. Reflector is parabolic type.

**No. 547** — Same as No. 546 but for a 1000 watt PS 52 lamp.

**No. 548** — Uses a compound double-curvature inbuilt spun aluminum, semi-matte Alzak finished reflector. Uses a 200 watt PS 30 lamp. Furnished with suspension chains and asbestos leads.

**No. 548A** — Same as No. 548 but for a 500 watt PS 40 lamp.

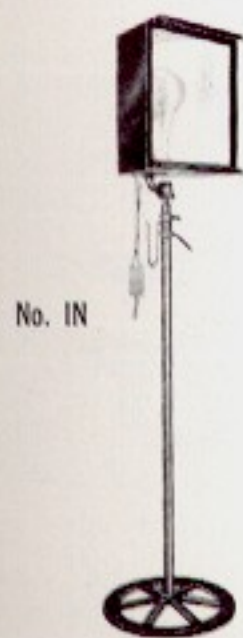


No. 546



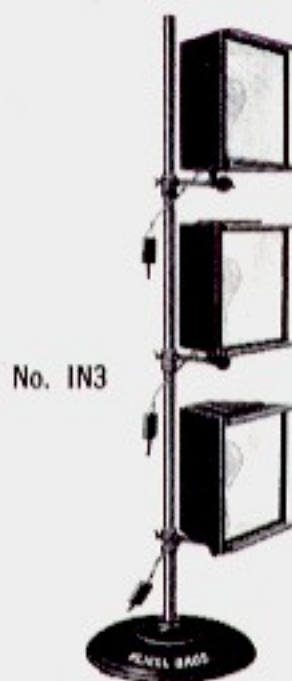
No. 548

**OLIVETTES** — Kliegl standing floodlights are ideal for lighting stage entrances, broad surfaces or acting areas from side wings or other comparatively close range locations. They cover a wide area with even, uniform illumination. All units are furnished with a heavy base floor stand, asbestos leads, pin-plug connector and 25 ft. flexible cable.



No. 1N

**No. 1N** — Open box pedestal type with heat resisting white interior reflecting surfaces. Accommodates a 500 watt PS 40 lamp or a 1000/1500 watt PS 52 lamp.



No. 1N3

**No. 1N3** — Three independently wired No. 1N units ganged, one above the other, on a heavy base floor stand.



No. 2N

**No. 2N** — Parabolic stage floodlight. Similar to 1N except equipped with an inbuilt spun aluminum semi-matte Alzak finished reflector. Uses 1000/1500 watt PS 52 lamp.

## COLOR FRAMES

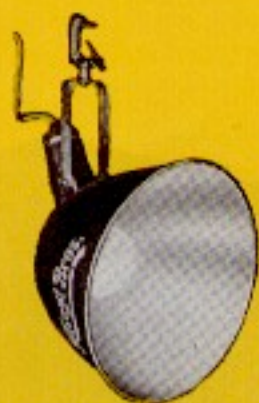
COLOR FRAME CAT. NO.	1037	1038	580	580G	585 or 588
FLOODLIGHT CAT. NO.	546	547	548	548A	1N — 2N — 1N3

## GROUNDING EQUIPMENT

Units can be supplied with two wires plus ground. To specify, add suffix "G" to catalog number.



# KLIEGL STAGE



No. 1155—18" Scoop; uses 750/2000 watt PS 52 lamp.



No. 1122—15" Scoop; uses 300 watt PS 35 lamp or 500 watt PS 40 inside frosted lamp.



No. 1143—15" Kliegsun; uses a 1000/1500 watt G40 or a 2000 watt G48 mogul screw base lamp.



No. 1158—Long range scoop uses a 750/1000 watt T24 med.bi-post base-up burning 1M hour frosted lamp.

No. 1155 and No. 1122 are high candlepower scoop type floodlights. The scientifically designed reflector assures extremely efficient operation; produces exceptionally smooth, even illumination of high intensity. Matte Alzak finished reflector assures permanent trouble free reflector life. May be directed from floor to any desired position, straight up or straight down. Unit is perfectly balanced and spring tension holds any adjustment until purposefully readjusted. Ideal for highlighting and to augment base lights.

No. 1143 produces a brilliant shaft of light. Additional front spherical reflector redirects forward light rays from lamp bulb into Alzak finished parabolic aluminum reflector, greatly increasing beam candlepower and eliminating spill light. Universal yoke mounting permits angling in any direction. Screw feed focusing adjustment guarantees that the lamp stays put at desired focal point.

No. 1158 is a long range high candlepower scoop type floodlight. Has a spindle type beam spread adjustment. Combination polished and matte Alzak finished aluminum reflector. Smooth, uniform, high intensity illumination. When used from short ranges, it gives an added punch of light. Directionable 45° up and 45° down on vertical axis.

Accessories for	1155	1122	1158	1143
Color frame	1078	1078C	1078B	1078C
Barn Doors—2 Way	1091	1084	1092	1084
Barn Doors—4 Way	1091A	1084A	1092A	1084A
<b>Roller Caster Stands (for Above Units)</b>				
19" Base—Adjustable Height 3' to 5'				1420
25" Base—Adjustable Height 3' to 5'				1421

**Grounded Equipment**—Units can be supplied with 2 wires plus ground. To specify, add suffix "G" to catalog number.

All listed units are furnished with pipe clamp and asbestos leads unless otherwise specified.

## UTILITY FLOODLIGHTS

CATALOG NUMBER	LAMP			DIA.	COLOR FRAME
	WATTS	BULB	BASE		
533	250/400	G-30	MED. SC.	11"	580
537	500/1000	G-40	MOG. SC.	14½"	581

To specify desired mounting, add appropriate suffix to catalog number: Wall Bracket—"A"; Table Base—"B"; Pipe Clamp—"E". If grounded equipment is desired, add suffix "G" to catalog number.

### No. 533 and No. 537

Utility floodlights have a general usage on a stage for localized lighting of the acting area. They are also serviceable for a wide variety of other lighting applications. They consist of a parabolically spun aluminum Alzak finished semi-matte reflector. The standard lamp receptacle is in a fixed focal position, wired with a pair of asbestos leads, provided with slide grooves for color frames. Supplied with wall bracket, table base or pipe clamp as required.



NO. 533A



NO. 533B



# SPOTLIGHTS

## N SERIES

2000 watt long range units; cast aluminum and sheet steel housings with double wall construction. Designed primarily as floor stand models, all units provided with directional grip handles and rear focusing control. Contain spun aluminum Alzak finished reflectors. Special ventilation system assures proper lamp life. Light-tight construction; hinged access door provides easy relamping.

### 6N19

A long range unit having a 6" lens for a recommended throw of 50-75' with a beam spread of 9' in the spot position and 54' in the flood position at a throw of 60'. Unit furnished with a heavy base telescopic floor stand, pin-plug connectors and 25' cable unless specified otherwise. Accessories: No. 22 hand color wheel, No. 31AC motor color wheel and No. 257 Iris at additional cost.

### 8N20

A long range unit having an 8" lens for a recommended throw of 50-100' with a beam spread of 10' in the spot position and 95' in the flood position at a throw of 75'. Unit furnished with a heavy base telescopic floor stand, pin-plug connectors and 25' cable unless specified otherwise. Accessories: No. 23 hand color wheel, No. 35AC motor color wheel and No. 258 Iris at additional cost.

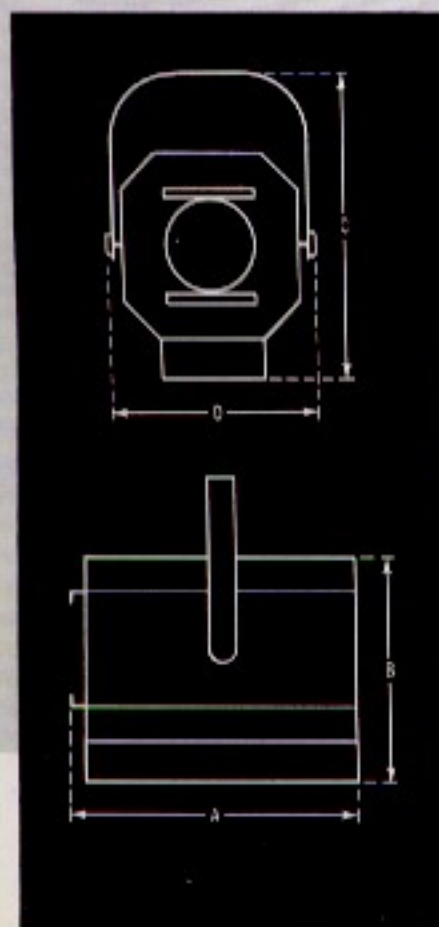
### 8N24

A long range unit having an 8" lens for a recommended throw of 50-100' with a beam spread of 10' in the spot position and 105' in the flood position at a throw of 75'. This unit has a longer hood than the 8N20 to accommodate the longer focal length lens. Unit furnished with a telescopic roller caster stand, pin-plug connectors, line switch and 25' cable unless specified otherwise. Accessories: Same as No. 8N20.



NO. 8N24

Catalog Number	Watts	Lens Size	Dimensions in Inches				Wght. Lbs.	Recommended Lamps Ordering Abbreviations	Color Frame	
			A	B	C	D			Cinemoid	Glass
6N19	2000	6"	20½"	15½"	—	10"	24	2M/G48/4	566	566G
8N20	2000	8"	21½"	16½"	—	11½"	30	2M/G48/4	570	570G
8N24	2000	8"	26"	17"	—	13"	34	2M/G48/4	570	570G

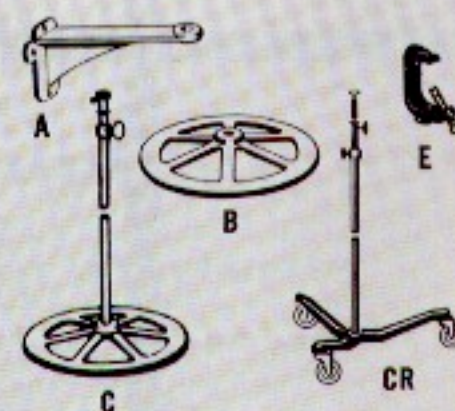


For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount, (for Series 53, 5310, 70 and 71 only).

Suffix	Description	Accessories
A	Wall bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connector & 25 feet of cable.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Asbestos Leads. "C" clamp shown — Bridge type furnished where desired.

Example: — No. 71E indicates a No. 71 Plano Convex Spotlight with a Pipe Clamp Mount and 2 foot Asbestos Leads.

**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to unit catalog number.





# KLIEGL PLANO-CONVEX

## FEATURES:

- Easily focused from flood to spot.
- Light-tight housing construction.
- Well ventilated for maximum air circulation and cooling.
- Hinged door makes relamping very fast and easy.
- Sturdily constructed of aluminum and sheet steel.
- Designed to take color frames or color wheels.
- Available from 250 to 2000 watts.
- Baked wrinkle exterior finish, dull black interior.



NO. 53B

## 53 SERIES

A compact 250/400 watt short range spotlight with 4½" lens; very serviceable where concealment is necessary or space is limited. Unit has a recommended throw of 5-15' with a beam spread of 4' in the spot position to 10' in the flood position at a throw of 10'. Light-tight sheet steel housing. Well ventilated to assure proper lamp life. Hinged top for easy relamping. All units are equipped with color frame holder, five-foot heater cord and attachment plug. The medium screw base lamp receptacle is mounted on an adjustable carriage providing easy focusing. Accessories: No. 14 hand operated color wheel, No. 14AC motor operated color wheel, No. 941 Alzak Reflector and No. 941F reflector holder at additional cost.

## 5310 SERIES

A 250/400 watt medium range spotlight with a 4½" lens. Same type design and construction as 53 Series with the exception that a longer focal length lens is used and the housing correspondingly lengthened. Unit has a recommended throw of 10-25' with a beam spread of 5' in the spot position to 30' in the flood position at a throw of 25'. Accessories: Same as 53 Series.

Catalog Number	Watts	Lens Size	Dimensions in Inches				Wght. Lbs.	Recommended Lamps Ordering Abbreviations	Color Frame	
			A	B	C	D			Cinemoid	Glass
53	250/400	4½"	7¾"	8"	10"	6¾"	5	250G/SP 400G/SP	574	—
5310	250/400	4½"	10½"	8"	10"	6¾"	6	250G/SP 400G/SP	574	—



NO. 70

## 70 SERIES

A 1000/1500 watt medium range spotlight with a 6" lens, cast aluminum and sheet steel construction. Recommended throw is 20-40' with a beam spread of 5' in the spot position and 20' in the flood position at a throw of 25'. Rigid, light weight construction combines strength with handling ease; hinged-top access door for easy relamping. Light tight and correctly ventilated to assure proper lamp life. Equipped with spun aluminum Alzak finished reflector and mogul prefocus base lamp receptacle on a sliding carriage for focusing ease. Accessories: No. 22 hand color wheel, No. 31AC motor color wheel and No. 257 Iris at additional cost.

## 71 SERIES

A 2000 watt medium to long range spotlight with a 6" lens having the same type design and construction as 70 Series with the exception that the housing is proportionately larger to accommodate the larger wattage lamp and longer focus lens. The recommended throw of the unit is 30-60' with a beam spread of 8' in the spot position and 36' in the flood position at a throw of 40'. Accessories: Same as 70 Series.

Catalog Number	Watts	Lens Size	Dimensions in Inches				Wght. Lbs.	Recommended Lamps Ordering Abbreviations	Color Frame	
			A	B	C	D			Cinemoid	Glass
70	1500/2000	6"	13"	11½"	16½"	10"	14	1000/G40/PSP 1500/G40/15	566	566G
71	1500/2000	6"	15"	13"	17½"	11"	18	1000/G40/PSP 1500/G40/15	566	566G



# SPOTLIGHTS (CONT.)

Catalog Number	Watts	Recommended Lamps		Weight	Dimensions
	Lens Size	Color Frames		Throw	
		Cinemoid	Glass		

## ROUND BEAM WITH SPINDLE FOCUSING UNIT

43N3	100*/150	100/G16½/1DC 150/16½/3DC		3 lbs	A. 5¼"
	3"	1032	1032G	2' to 10'	B. 5½"
					C. 7½"
					D. 4½"
43NS6	500*/750	500/T20/64 750/T20P/SP		6 lbs	A. 9"
	6"	1036	1036G	5' to 25'	B. 9"
					C. 11½"
					D. 9"
43P6	500*/750	500/T20/70 750/T24/5		6 lbs	A. 9"
	6"	1036	1036G	5' to 25'	B. 9"
					C. 11½"
					D. 9"
43N8	1M/2M*	1M/G40/23 1500/G40/21		15 lbs	A. 13"
	8"	2M/G48/5		15' to 40'	B. 15"
		570	570G		C. 21"
					D. 12½"
43P8	1M/2M*	1M/G48/11 2M/G48/17		15 lbs	A. 13"
	8"	570	570G	15' to 40'	B. 15"
					C. 21"
					D. 12½"
43N12	2000*	2M/G48/17		29 lbs	A. 18"
	12"	578	---	20' to 50'	B. 18"
					C. 24"
					D. 18"
43N16	5000	5M/T64/3		42 lbs	A. 24"
	16"	585A	---	30' to 60'	B. 20"
					C. 28"
					D. 22"
43N20	10,000	10M/G96/2		70 lbs	A. 30"
	20"	586	---	30' to 60'	B. 28"
					C. 36½"
					D. 29"

**43N3** — Cast aluminum housing. Hinged top for easy relamping. Double contact bayonet base lamp receptacle. Supplied with 6' heater cord and plug.

**43NS6** — Streamlined sheet steel housing with double wall construction. Hinged front door for easy relamping. Medium prefocus base lamp receptacle. Aluminum spindle in brass slide guide with front and rear focus adjustments with pin-point focus position indicator on housing side.

**43P6** — Cast aluminum and sheet steel construction. Hinged front door for easy relamping. Double wall construction. Medium bipost lamp receptacle. Aluminum spindle in brass slide guide with front and rear focus adjustments with pin-point focus position indicator on housing side.

**43N8** — Same construction and details as 43P6 but with mogul prefocus base lamp receptacle.

**43P8** — Same construction and details as 43N8 but with mogul bipost lamp receptacle.

**43N12** — Same construction and details as 43N8 but with wire side adjustment handles and a mogul bipost lamp receptacle.

**43N16** — Same construction, lamp receptacle and details as 43N12.

**43N20** — Same construction, lamp receptacle and details as 43N16.

## ROUND BEAM WITH SLIDING CARRIAGE • KNOB FOCUSING

43N6	500*/750	500/T20/64		6 lbs	A. 9"
		750/T20P/SP			B. 9"
	6"	1036	1036G	5' to 25'	C. 11½"
					D. 9"

**43N6** — Streamlined sheet steel housing with baffled vents. Hinged front door for easy relamping. Medium prefocus base lamp receptacle on sliding focusing carriage with knob adjustment.

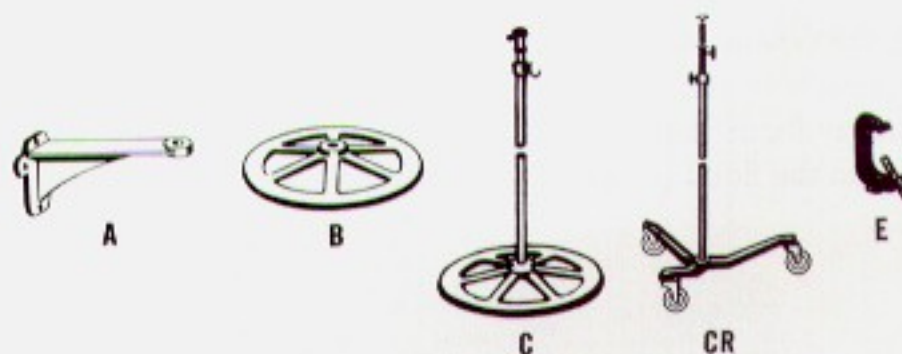
\* U/L Approved with indicated lamp.

## MOUNTING DATA AND INFORMATION

For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.

Suffix	Description	Accessories
A	Wall Bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connector and 25 feet of cable—All 12", 16", and 20" units also equipped with knife switch.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' asbestos Leads. "C" clamp shown — Bridge type furnished where desired.

EXAMPLE: No. 43N8-E indicates a No. 43N8 Round Beam Fresnel Lens Spotlight with a pipe clamp mount and 2 foot asbestos leads.





# KLIEGL FRESNEL LENS

## FEATURES:

- Exceptionally efficient in light output
- Light weight, sturdy construction
- Easy to focus, simple to adjust
- Polished Alzak aluminum reflectors
- Slide grooves in front for color frames
- No stray reflections or spill light
- Universally mounted
- Crystallized baked enamel finish

**Lens:** Heat resisting Pyrex glass, designed to assure most efficient control and distribution of light rays. Each lens has ceramic black risers to eliminate side glare.

**Ventilation:** New 360° placement of air vents provides maximum air circulation and cooler operation. Redesigned system assures longer lamp life.

**Construction:** New type light-tight aluminum and sheet steel construction gives highest possible unit strength without sacrifice of handling ease or increased weight. Carefully inspected before shipment.

**Available:** From 100 to 10,000 watts; 3" to 20" lens diameter with a wide range of optional mounts.

Listed spotlights are furnished with yoke only; 2' asbestos leads; no lamp. For proper order number for lamps, see chart. For information concerning mounts, see list on following page.

Catalog Number	Watts	Recommended Lamps		Weight	Dimensions
	Lens Size	Cinemoid	Glass	Throw	

## OVAL BEAM WITH SPINDLE FOCUSING UNIT

43NS06	500*/750	500/T20/64 750/T20P/SP		6 lbs	A. 9"
	6"	1036	1036G	5' to 25'	B. 9"
43P06	500*/750	500/T20/70 750/T24/5		6 lbs	C. 11½"
	6"	1036	1036G	5' to 25'	D. 9"
43N08	1M/2M*	1M/G40/23 1500/G40/21		15 lbs	A. 13"
	8"	570	570G	15' to 40'	B. 15"
43P08	1M/2M*	1M/G48/11 2M/G48/17		15 lbs	C. 21"
	8"	570	570G	15' to 40'	D. 12½"

**43NS06** — Streamlined sheet steel housing with double wall construction. Hinged front door for easy relamping. Medium prefocus base lamp receptacle. Aluminum spindle in brass slide guide with front and rear focus adjustments with pin-point focus position indicator on housing side. Oval Fresnel Lens.

**43P06** — Cast aluminum and sheet steel housing. Double wall construction. Hinged front door for easy relamping. Medium bipost lamp receptacle. Aluminum spindle in brass slide guide with front and rear focus adjustments. Pin-point focus position indicator on housing side. Oval Fresnel Lens.

**43N08** — Oval Fresnel Lens — Same as 43N8.

**43P08** — Oval Fresnel Lens — Same as 43P8.

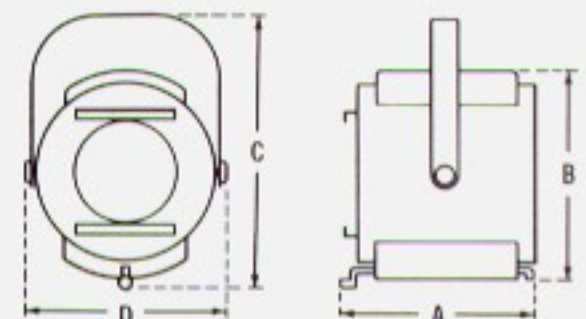
## OVAL BEAM WITH SLIDING CARRIAGE • KNOB FOCUSING

43N06	500*/750	500/T20/64 750/T20P/SP		6 lbs	A. 9"
	6"	1036	1036G	5' to 25'	B. 9"
					C. 11½"
					D. 9"

**43N06** — Oval Fresnel Lens — Same as 43N6.

\* U/L Approved with indicated lamp.

**Grounded Equipment:** All units can be supplied with two wires plus ground and may be specified by adding the suffix "G" to the catalog number.





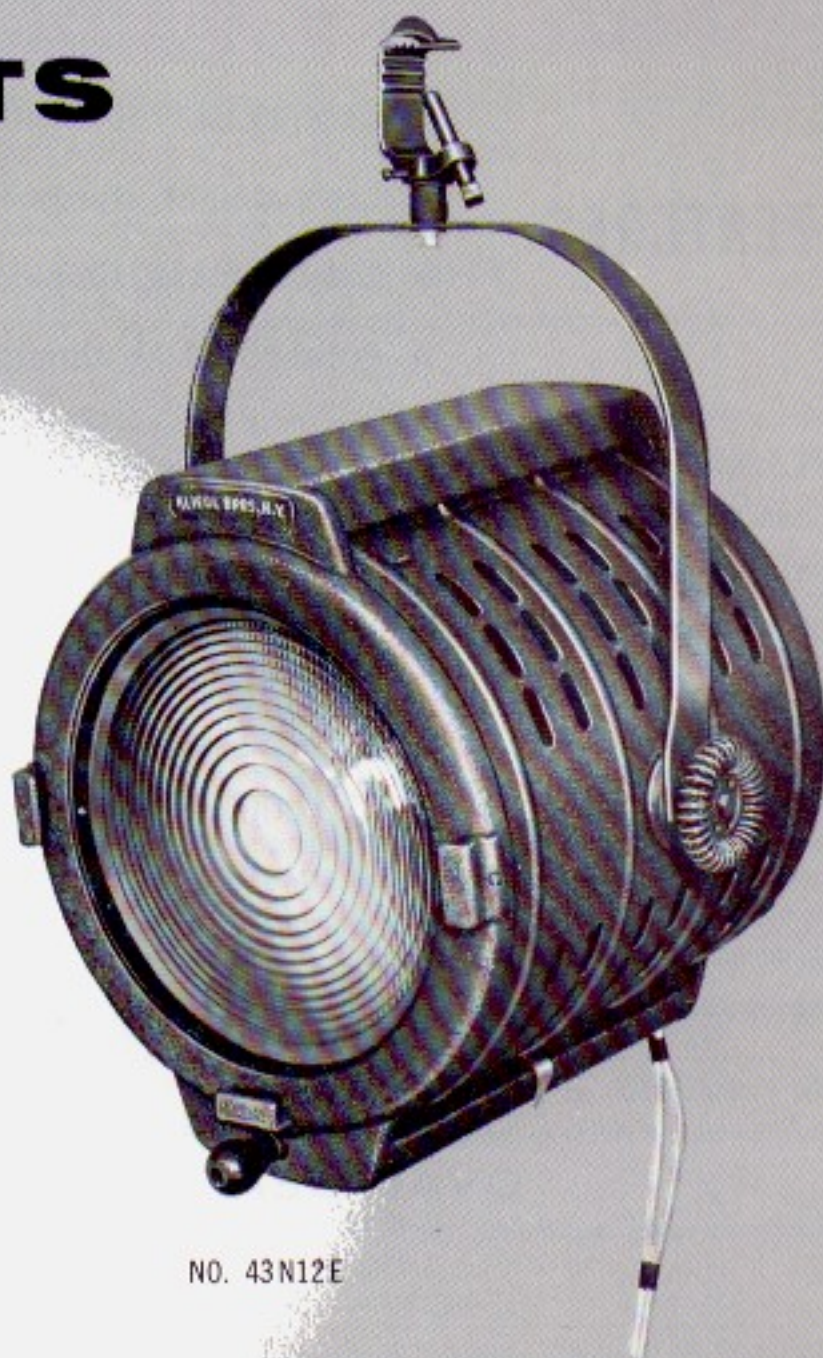
# LENS SPOTLIGHTS

## Round Beam

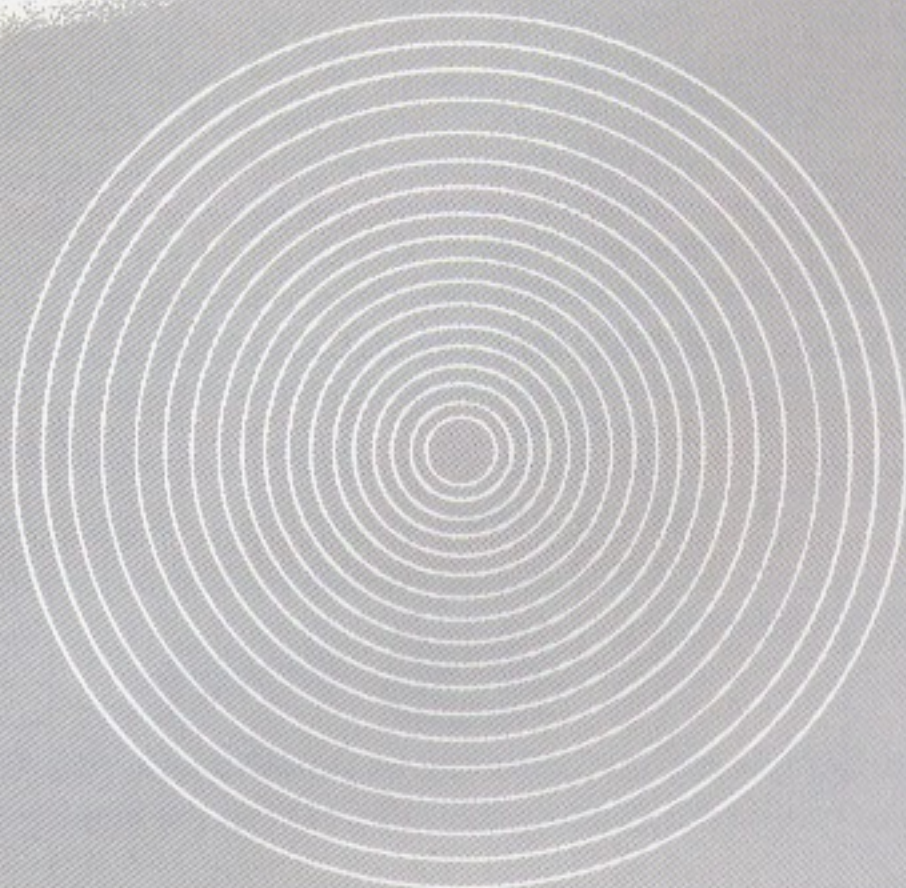
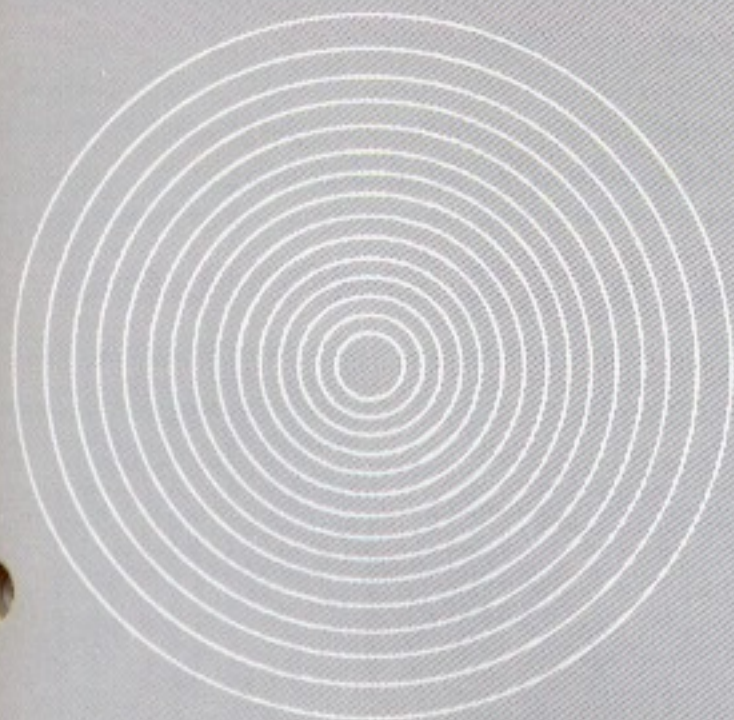
The conventional Round Beam Fresnel Spotlight is an exceptionally versatile instrument. It produces a circular beam of light for either general area illumination or soft edge high intensity spotting.

Very efficient and easy to handle, and with its companion unit, the Oval Beam Fresnel Lens, provides the most useful unit for stage production lighting. Focusing ranges from a minimum spot, clear, clean and free from filament images, to a maximum flood which is surprisingly uniform in distribution. Available from the smallest 3" diameter lens with 100 watt lamp to largest 20" diameter lens for 10,000 watt lamp.

Beam spread from spot to flood is approximately  $10^{\circ}$  to  $55^{\circ}$  and is always of uniform intensity without filament image or dark center.

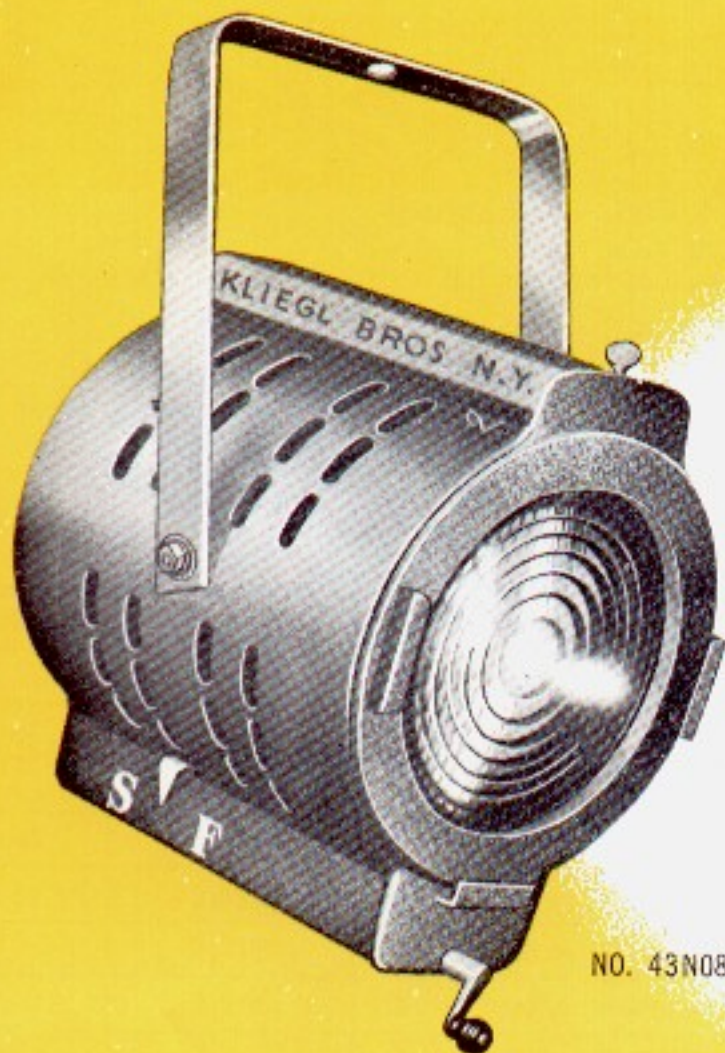


NO. 43N12E





# KLIEGL FRESNEL



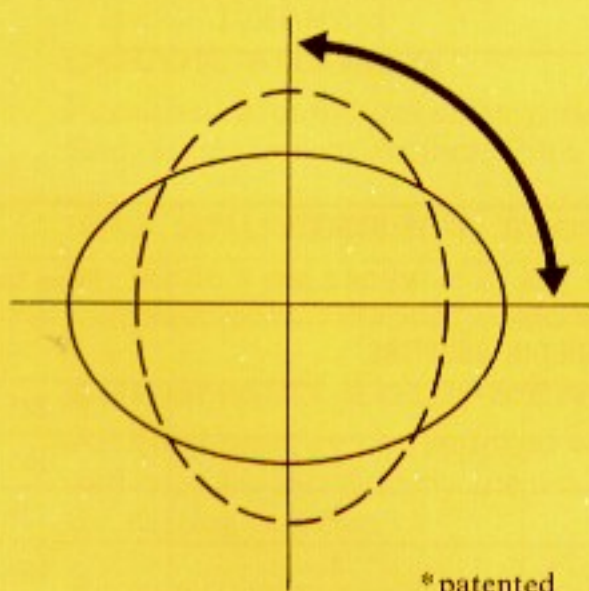
NO. 43N08

## Oval Beam

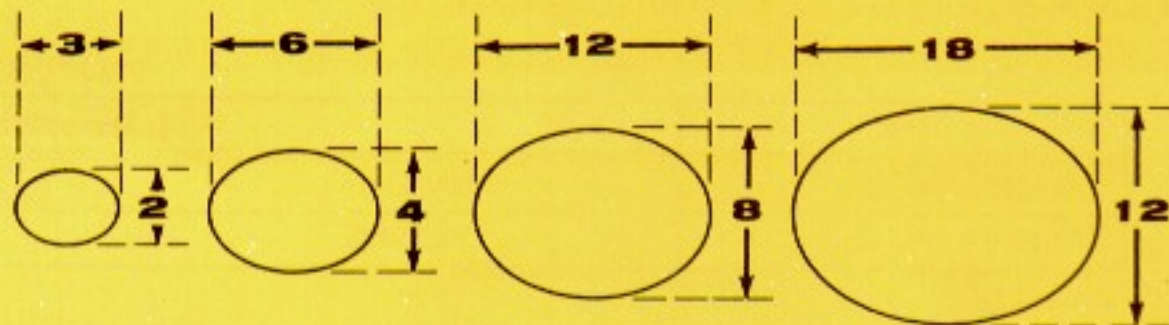
### *Another KLIEGL First!*

Fresnel Spotlights, equipped with the new Kliegl scientifically designed lens\* employing a revolutionary optical principle, provide a controlled oval shape beam of light that satisfies a long-felt demand for elongated illumination. Focusable from spot to flood and excellent for use from the balcony front for curtain and front stage lighting, ideal for batten spots and back lighting. For wing positions where light must be projected through a narrow opening, simply rotating the lens does the trick.

Any desired degree of vertical or horizontal placement of the oval beam may be accomplished by merely rotating the lens . . . see sketch.



\*patented



This controlled oval beam always maintains a spread ratio of approximately 3 to 2 regardless of whether floor or spot positions are required . . . see diagram.





# REMOTE COLOR CONTROL

## FEATURES:

- Uses high intensity Klieglight.
- Cast aluminum motor housing.
- Solid bronze counterweights.
- Provides for projection of many colors from limited space and from a single light source.
- Available with two colors and white or four colors and white.
- Permits color blending.
- Smooth, silent, quick action.
- Permits complete color control regardless of location of light source.

Catalog Number	Lens Size & Type	No. Colors Plus White	Recommended Throw	Size Spot At Indicated Throw	Intensity of Given Spot*	Test Lamp Used
1365W-BAC/4	6" Wide Beam	4	10' to 30'	18' Spot @ 30' Throw	27 F/C	500/T14/8
1365W-BAC/2	6" Wide Beam	2	10' to 30'	18' " @ 30' "	27 F/C	"
1365-BAC/4	6" Standard Beam	4	15' to 50'	7.5' " @ 25' "	96 F/C	"
1365-BAC/2	6" Standard Beam	2	15' to 50'	7.5' " @ 25' "	96 F/C	"
1366W-BAC/4	6" Wide Beam	4	30' to 50'	30' " @ 30' "	30 F/C	2M/T30/1
1366W-BAC/2	6" Wide Beam	2	30' to 50'	30' " @ 30' "	30 F/C	"
1366-BAC/4	6" Standard Beam	4	30' to 80'	30' " @ 60' "	30 F/C	"
1366-BAC/2	6" Standard Beam	2	30' to 80'	30' " @ 60' "	30 F/C	"
1368-BAC/4	8" Narrow Beam	4	30' to 90'	19' " @ 60' "	50 F/C	"
1368-BAC/2	8" Narrow Beam	2	30' to 90'	19' " @ 60' "	50 F/C	"

\* Indicated foot candles are for white light only and are only approximate.  
If more exacting data is required, send for our distribution curves.

Units	Recommended Lamps		
All 1365 units	500/T14/8	750/T14	
All 1366 & 1368 units	1M/T24/5	1500/T24/6	2M/T30/1

## COLOR CHANGERS FOR 6" AND 8" SPOTLIGHTS

**BAC-26** 2-color changer for 6" spotlight

**BAC-46** 4-color changer for 6" spotlight

**BAC-28** 2-color changer for 8" spotlight

**BAC-48** 4-color changer for 8" spotlight

Above units are furnished with 2' leads, male connector and matching female-half connector, and are for Cinemoid or gelatin color medium. Add suffix "GL" if glass color media is required.

2-color changers require 3 wires.

4-color changers require 5 wires.

115 volt AC operation

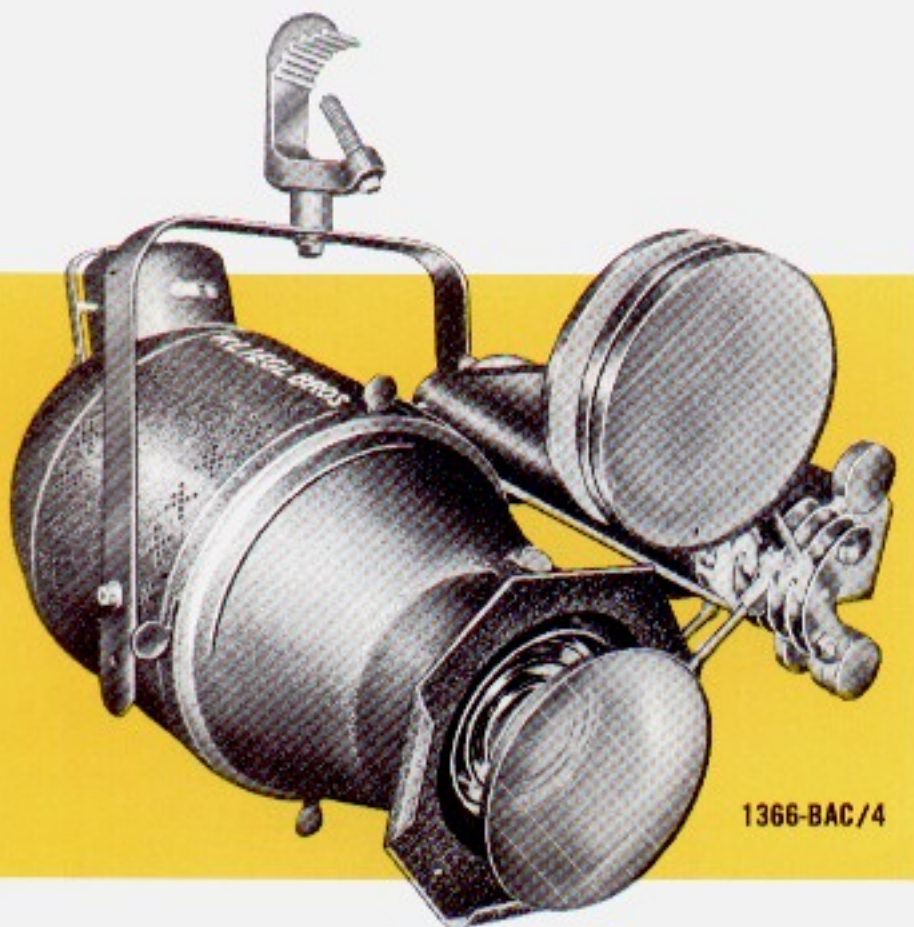
FRONT LIGHTS WITH REMOTE COLOR CONTROL			
Catalog No.	Watts	No. of Colors	Beam Spread
UNITS WITH BUILT-IN SHUTTERS			
2170-BAC/4	500/750	4	32°
2170N-BAC/4	500/750	4	18°
2171-BAC/4	1500/2000	4	32°
2171N-BAC/4	1500/2000	4	18°
UNITS WITH DROP-IN SHUTTERS			
2165-BAC/4	500/750	4	53°
2167-BAC/4	1000	4	53°
2169-BAC/4	1500/2000	4	53°



# KLIEGLIGHTS with

High intensity Klieglights coupled with remote color control units eliminate manual color changes by permitting distant control of several colors and white from a single light source.

Available with standard, wide or narrow beam spreads with either two or four colors, plus white. Colors may be used separately or blended, as desired. Units of 500 to 2000 watts. Where several light sources are used to obtain light from different locations, all color changes can be coordinated by one operator from one central location.



1366-BAC/4

## MOTOR CONTROL

In the motor-operated units, each color frame is independently driven by its own fractional horsepower motor. Individual limit switches prevent all current flow except when frame is actually moving. The 115 volt AC motors provide noiseless, smooth, even color changes or blending without hesitation. Control of one or many units is possible from control panel at a distant point.

## MOUNTING DATA AND INFORMATION

All units are provided with a pipe clamp for 1½" pipe unless otherwise specified. For other available mounts, please refer to mounting section, pages 70 and 71.

## COLOR FRAMES

Furnished with natural color glass inserts. Available colors: Red, Blue, Green, Amber, Pink and Surprise Pink.

## IRIS SHUTTERS

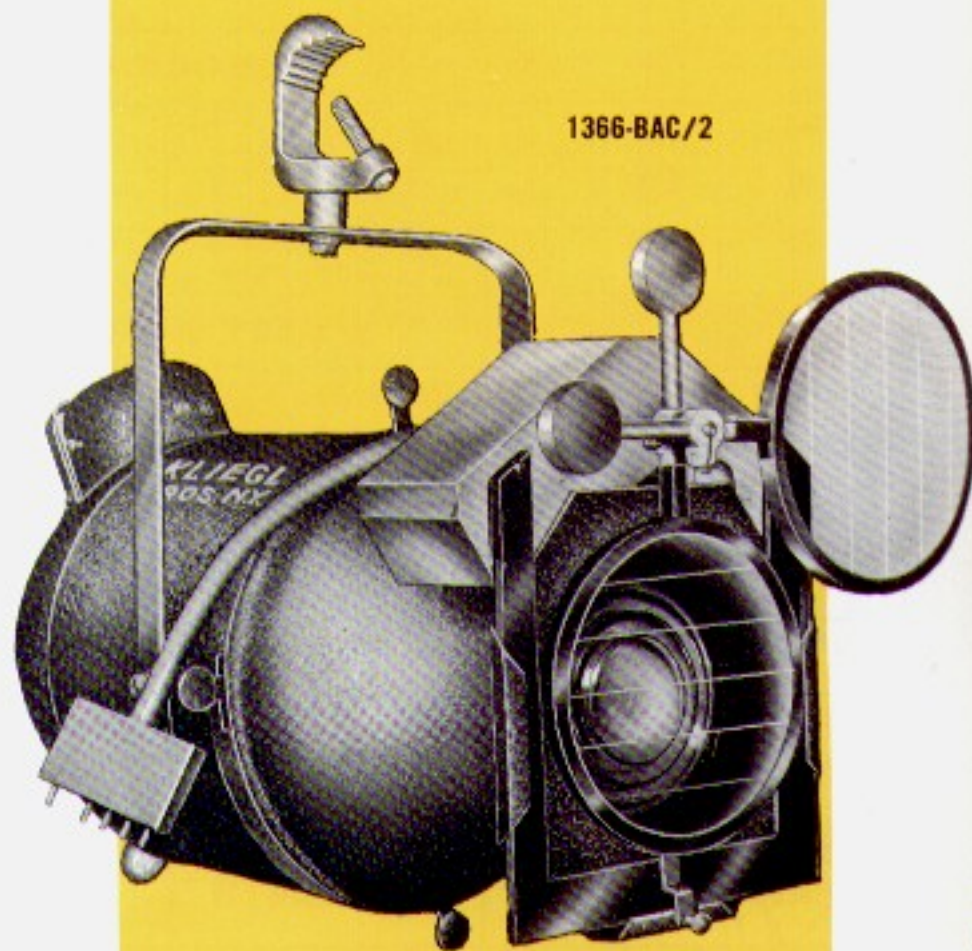
Iris shutters are available in any of the listed units at slight additional cost. To specify, add word "iris" to catalog No.

## GROUNDING EQUIPMENT

All listed units can be supplied with two wires plus ground and may be specified by the addition of the suffix "G" to the catalog number.

Remote color control is also available on other Kliegl Spotlights, such as Front Lights, found on page 12. Particulars regarding any specific unit sent upon request.

Units with Selsyn-synchro control are available where absolute coordination of all units is required. Prices and information sent upon request.



1366-BAC/2

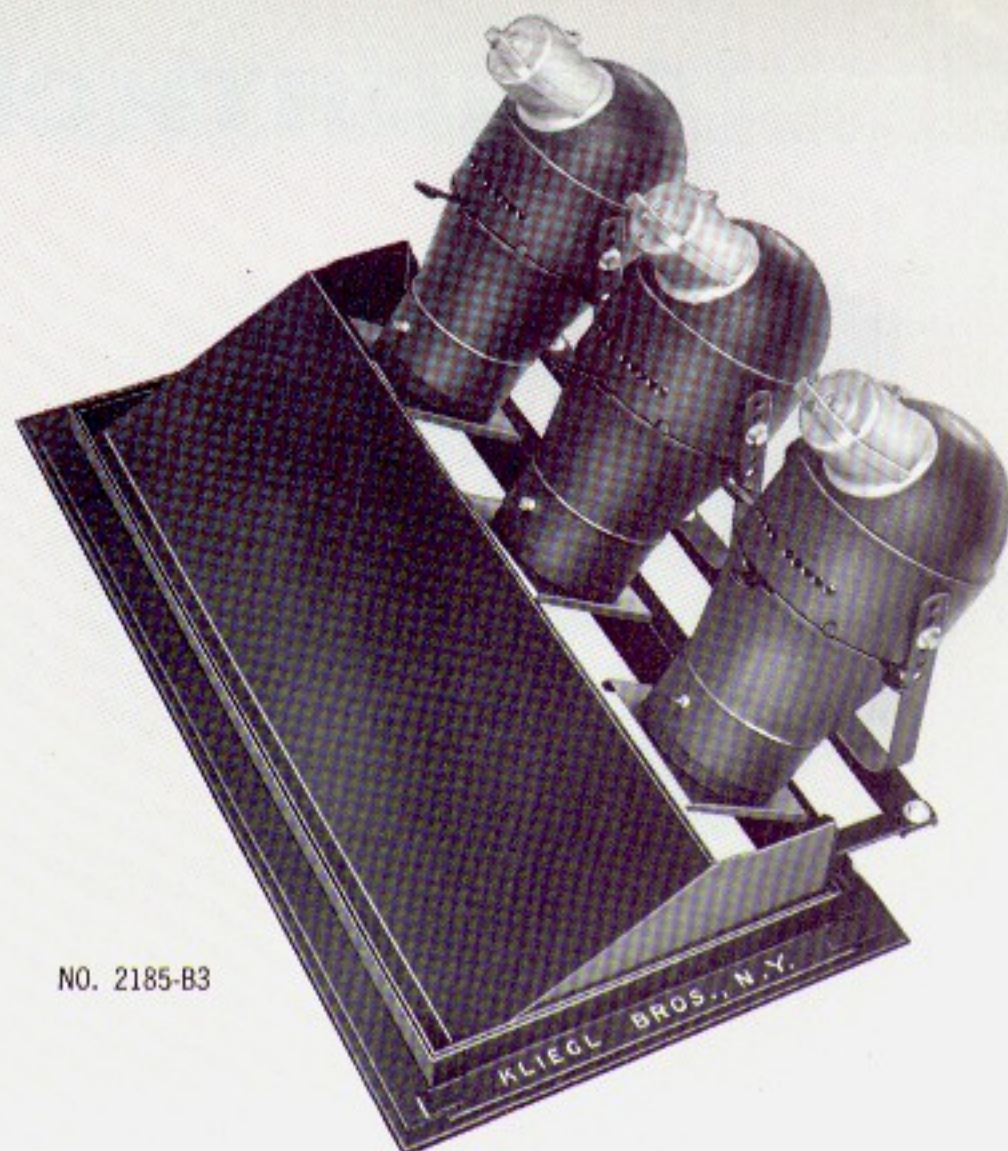


# FRONT LIGHTS

## ANGULAR MODELS

### CEILING MOUNTING

- Selective lens system for either standard or wide beam spread.
- Ideal for front lighting a stage, spotlighting people or objects, a floor show etc.
- Recommended use: 500/750 watt units for schools, night clubs, hotel ball rooms, tributary theatres and the like. 1500/2000 watt units for professional theatres and other locations where projection distances exceed 40 feet.



NO. 2185-B3

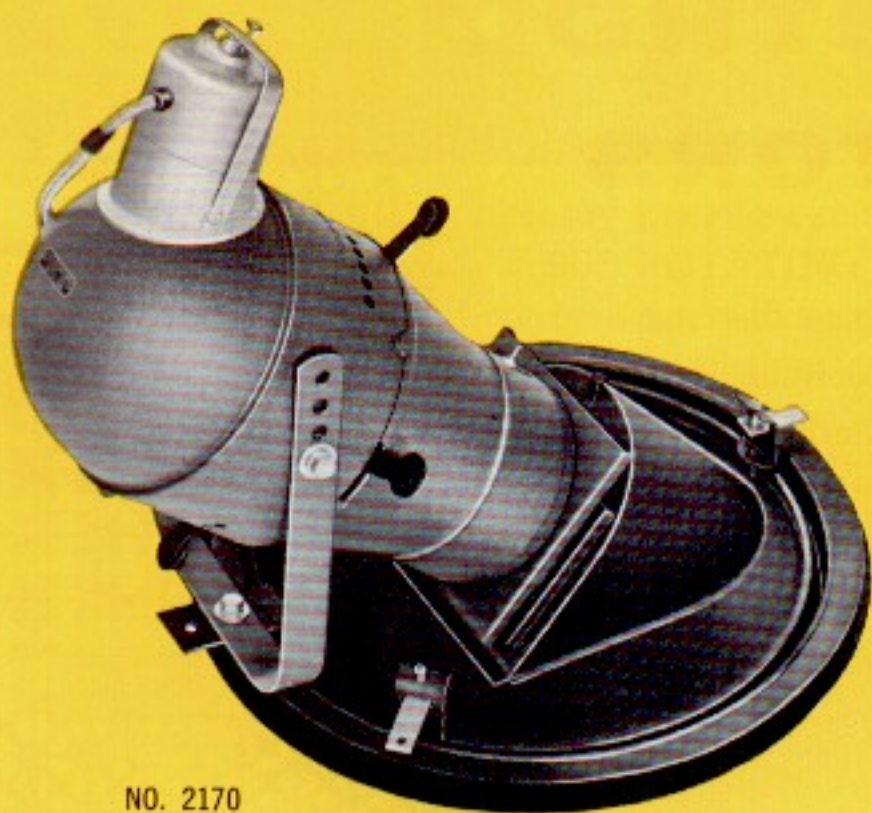
Catalog Number	Watts	Dimensions in Inches				Weight in Lbs	Beam Spread	Beam Lumens Per Unit		Recommended Lamps Ordering Abbreviations	Color Frames			
		A	B	C	D			Watts	Lumens		Gelatine	Glass		
SINGLE UNITS WITH BUILT-IN SHUTTERS														
2170	500* 750	18	20	16¼	3½	18	32°	500 750	3100 4650	500/T14/8 750/T14	1036	1036G		
2170N		20	20	16¼	6½	19	18°	500 750	3000 4500					
2171	1500* 2000	23	20	16¼	9	33	53°	1500 2000	8700 12500	1500/T24/6 2M/T30/1				
2171N		26	20	16¼	12	34	28°	1500 2000	7400 10550					
SINGLE UNITS WITH DROP-IN SHUTTERS														
2165	500 750	17	20	16¼	1½	16	53°	500 750	2500 3750	500/T14/8 750/T14	1033	1033G		
2167	1000	23	20	16¼	9	26	53°	1000†	6000	1M/T24/12	1036	1036G		
2169	1500 2000	23	20	16¼	9	27	53°	1500 2000	8400 12000	1500/T24/6 2M/T30/1				
3 UNIT ASSEMBLIES WITH BUILT-IN SHUTTERS														
2185B3	500* 750	20	21x42	17x37½	10½	71	32°	500 750	3100 4650	500/T14/8 750/T14	1036	1036G		
2185B3N		20	21x42	17x37½	10½	74	18°	500 750	3000 4500					
2186B3	1500* 2000	23	21x54	17x49½	19	116	53°	1500 2000	8700 12500	1500/T24/6 2M/T30/1			570	570G
2186B3N		23	21x54	17x49½	19	120	28°	1500 2000	7400 10550					
4 UNIT ASSEMBLIES WITH BUILT-IN SHUTTERS														
2185B4	500* 750	20	21x54	17x49½	10½	94	32°	500 750	3100 4650	500/T14/8 750/T14	1036	1036G		
2185B4N		20	21x54	17x49½	10½	98	18°	500 750	3000 4500					
2186B4	1500* 2000	23	21x66	17x61½	19	154	53°	1500 2000	8700 12500	1500/T24/6 2M/T30/1			570	570G
2186B4N		23	21x66	17x61½	19	158	28°	1500 2000	7400 10550					

† 1000 hour life lamp; all others are 200 hour life.

\* U/L Approved with indicated lamp.

Glass color frames recommended.





NO. 2170

All units, unless specified as having drop-in shutters, are equipped with four-way framing shutters with individual shutter control and angular adjustment. Iris shutters are available for all units. All units are equipped with color frame holders and plaster rings. All units may be relamped from above or below the ceiling.

We suggest that the following three points be considered when selecting a front light for a specific use:

1. Throw — The distance from the unit to the object to be illuminated.
2. Beam Spread — Select the unit with a beam spread which just covers the maximum area to be lighted.
3. Wattage — Select the unit with the wattage which produces the desired intensity.

## SINGLE UNITS

Adjustably mounted on circular frame with hinged front plate. Circular plate makes installation easy and eliminates any possibility of directional error in mounting. Units may be rotated and tilted to direct beam in required angular direction.

# KLIEGLIGHTS...

## ADJUSTABLE BEAM

### FOR FLUSH

## FEATURES:

- Perfected method of mounting simplifies installation.
- Light beams may be controlled by shutters to conform with area to be illuminated.
- Uses standard Klieglight with highly efficient ellipsoidal reflector and focusable lens system.
- Provides high-intensity accent lighting from least obvious source.

## MULTIPLE UNITS

Groups of three or four Klieglights on a single light outlet mounting to be used either singularly with different colors or in groups for high intensity output.

## ORDERING DATA

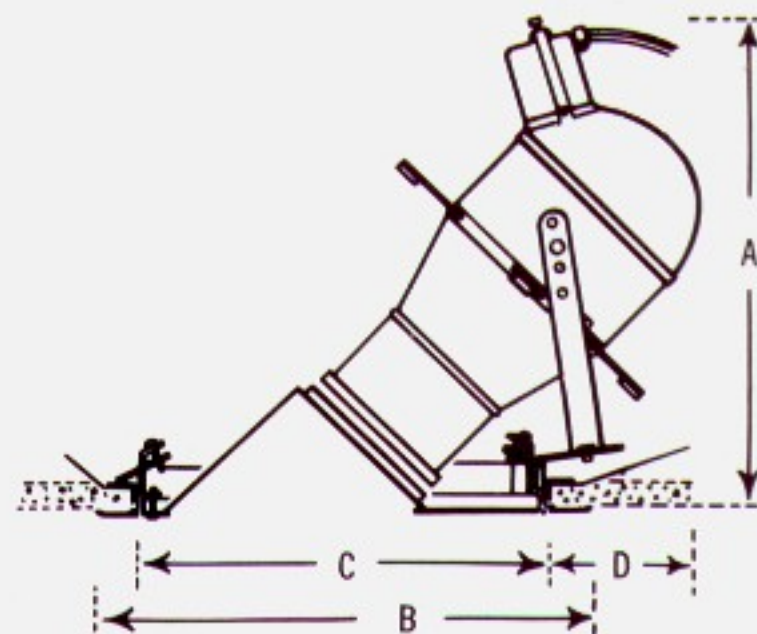
All units may be had with remote control color changers. For information on color changers, see page 14. Specifications and prices sent on application.

All units regularly furnished with five-foot leads and Greenfield Connector. Beam spread of  $53^\circ$  is equal to approximately one foot of spread for each foot of throw. Beam spread of  $28^\circ$  is equal to approximately one-half foot of spread for each foot of throw.

*Iris shutters* — All listed units may be had with iris shutters at slight additional cost. To specify when ordering, add word "iris" after catalog number.

*Grounded equipment* — All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to the catalog number.

For surface, cove or balcony front mounted units, see "Klieglights" pages 6-10.





# KLIEGLIGHTS (CONT.)

## PATTERN PROJECTORS

Pattern projectors are standard model Klieglights that have been modified to permit the projection of patterns of various shapes and designs. All of these units are of the identical construction, size, characteristics and performance specifications as their corresponding Klieglight counterparts. For dimensions, weights, etc., please refer to the catalog page showing standard counterparts. (1365 units — Page 7, 1366 units — Page 8, 1374 units — Page 9). All units are supplied with built-in four-way shutter and pattern holder.

Catalog Number	Recommended Lamps
1365P 1365PW	250/T14/9    500/T14/8 500/T14/7    750/T14
1366P 1366PW	1M/T24/5    1500/T24/6 2M/T30/1
1374P 1374PW	3M/T32/2

Catalog Number	Lens Size	Test Lamp	Size Spot @ Throw†	Projection Intensity†	Color Frames	
					Cinemoid	Glass
1365P	6"	500/T14/8	7.5' @ 25'	96 F/C	1036	1036G
1365PW	6"	500/T14/8	15' @ 25'	35 F/C	1036	1036G
1366P	6"	2M/T30/1	12' @ 25'	172 F/C	570	570G
1366PW	6"	2M/T30/1	25' @ 25'	43 F/C	570	570G
1374P*	6"	3M/T32/2	12' @ 25'	280 F/C	570	570G
1374PW*	6"	3M/T32/2	24' @ 25'	70 F/C	570	570G

\* These units are available with iris shutters (in place of four-way shutter) and pattern holder. To order this model, add word "iris" to unit catalog number.

† These figures are for the projector with slide removed and are only approximate. If more exacting data is required send for our distribution curves.

† Beam spread reduced by 0.7 when slide is inserted.

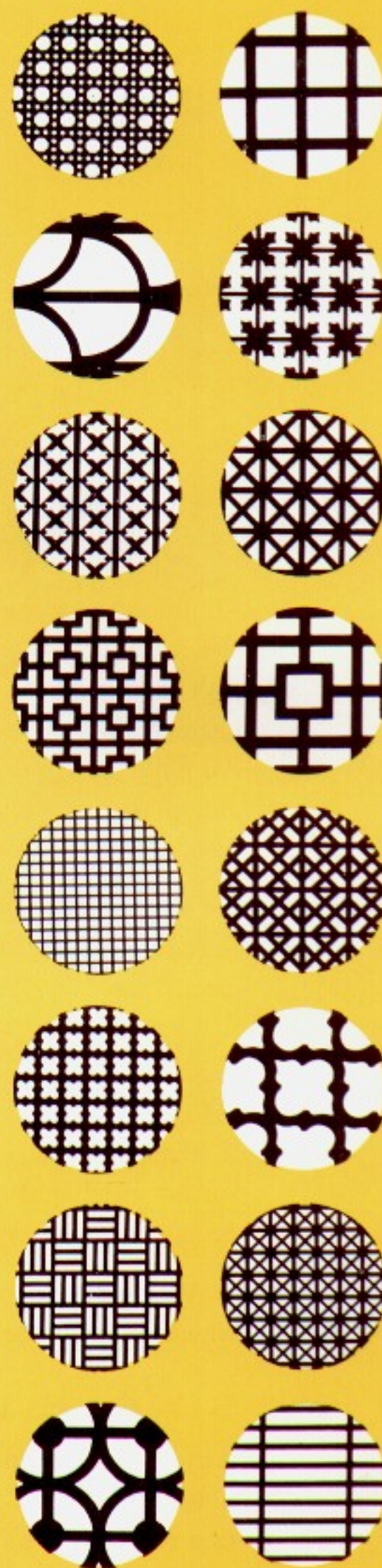
**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to catalog number.

## MOUNTING DATA AND INFORMATION

For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.

Suffix	Description	Accessories
A	Wall Bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connector and 25 feet of cable — All 1366 & 1374 series also equipped with knife switch.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Asbestos Leads. "C" clamp shown — Bridge type furnished where desired.

EXAMPLE: No. 1365P-E indicates a No. 1365P Pattern Projector with a pipe clamp mount and 2 foot asbestos leads.



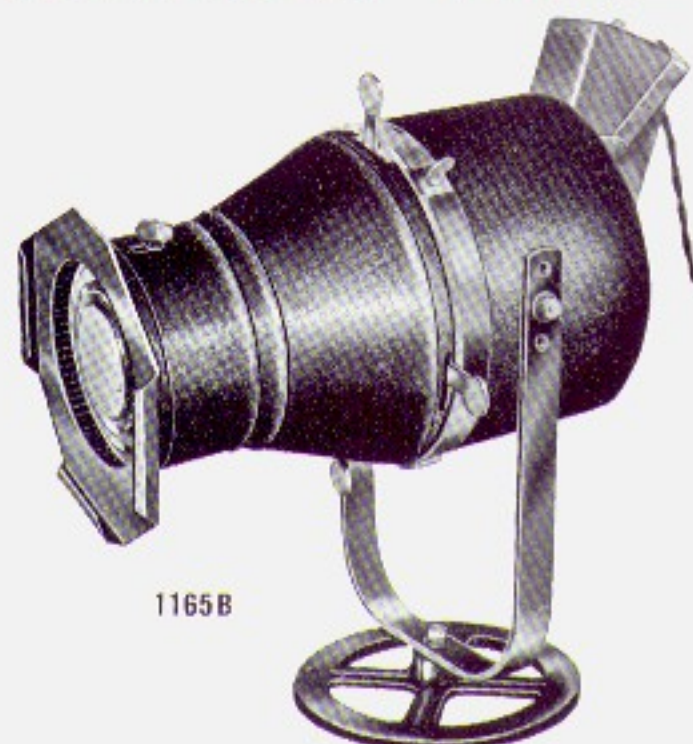
Catalog Number 1097: A set of 16 patterns (as shown) designed for use in all listed pattern projectors.



# KLIEGLIGHTS (CONT.) SERIES 1165

A 250/750 watt high-intensity Klieglight suitable for medium throw. Equipped with a 90° ROTATING ADJUSTABLE HEAD. Has 4-way built-in shutters. Larger reflector gives higher lumen output than other medium range Klieglights. Cast aluminum and sheet steel construction. Stepped lens and color frame holder. Furnished in Standard Beam (No. 1165), Wide Beam (No. 1165W), and Narrow Beam (No. 1165/8).

RECOMMENDED LAMPS			
250/T14/9	500/T14/7	500/T14/8	750/T14



1165B



1164B

## SERIES 1163-1164-1167

A low cost line of Klieglights similar to other standard beam and wide angle beam Klieglights of comparable wattage with the exception that these units are equipped with one four-way drop-in type adjustable framing shutter and three fixed round-hole drop-in type shutters. Supplied in Standard Beam (No. 1163 - 1164 - 1167) and Wide Angle Beam (No. 1163W - 1164W - 1167W).

RECOMMENDED LAMPS				
Series 1163	Series 1164	Series 1167		
500/T14/8	1M/T24/12	1M/T24/5	1500/T24/6	2M/T30/1

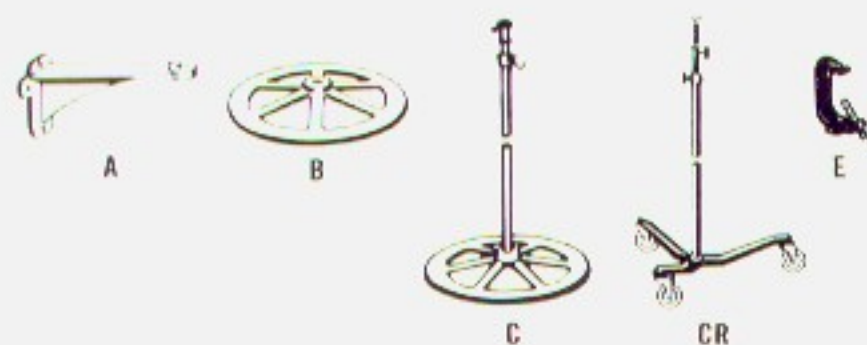
Catalog Number	Lens Size	Test Lamp	Size Spot @ Throw	Spot Intensity*	Color Frames		Recommended Throw	Wght. Lbs.
					Cinemoid	Glass		
1165	6"	500/T14/8	10' @ 25'	150 F/C	566		15' to 40'	14
1165W	6"	500/T14/8	20' @ 25'	90 F/C	566		15' to 40'	14
1165/8	8"	500/T14/8	6' @ 25'	230 F/C	570	570G	20' to 60'	15
1163	5"	500/T14/8	12' @ 25'	75 F/C	1033	1033G	15' to 40'	8
1163W	5"	500/T14/8	25' @ 25'	40 F/C	1033	1033G	10' to 25'	8
1164	6"	1M/T24/12	24' @ 50'	30 F/C	1036	1036G	30' to 75'	18
1164W	6"	1M/T24/12	50' @ 50'	25 F/C	1036	1036G	30' to 50'	18
1167	6"	2M/T30/1	24' @ 50'	60 F/C	1036	1036G	30' to 75'	19
1167W	6"	2M/T30/1	50' @ 50'	25 F/C	1036	1036G	30' to 50'	19

\* These figures are only approximate. If more exacting data is required send for our distribution curves.

**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to catalog number.

## MOUNTING DATA AND INFORMATION

For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.



Suffix	Description	Accessories
A	Wall Bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	(No. 1165 only*) Wired with pin plug connector and 25 feet of cable.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Asbestos Leads. "C" clamp shown - Bridge type furnished where desired.

EXAMPLE: No. 1165E indicates a No. 1165 Klieglight pipe clamp mount with 2 foot asbestos leads.  
\* 1163-4-7 - normally not used with floor stands



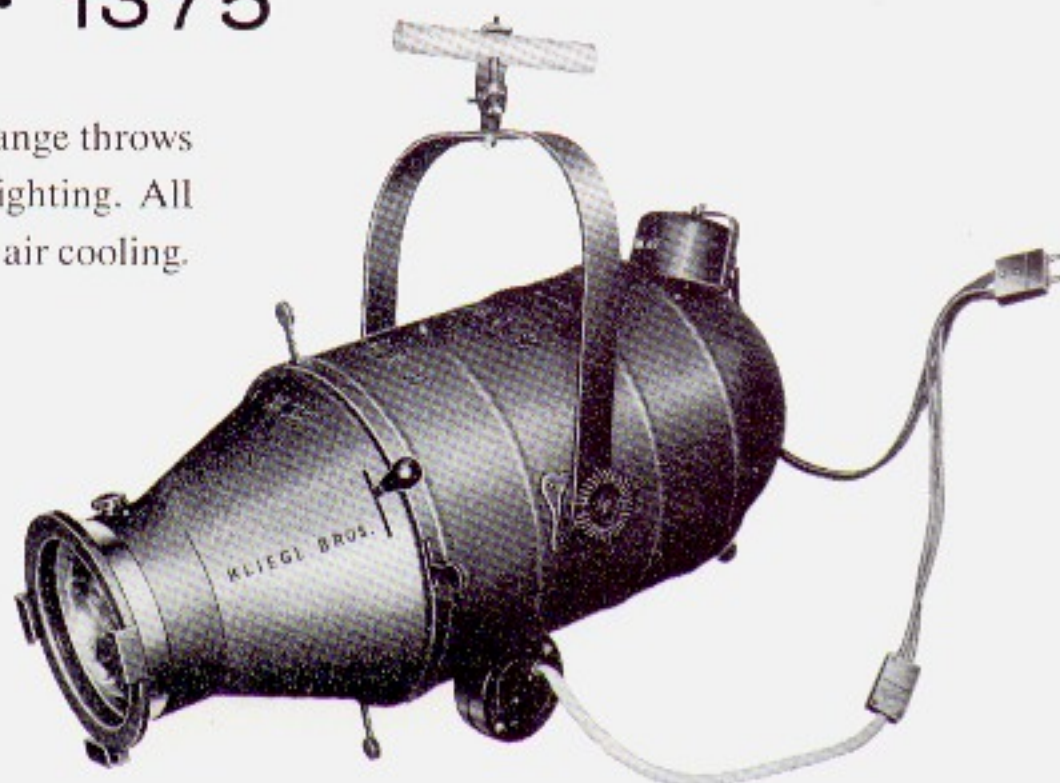
# KLIEGLIGHTS (CONT.)

## SERIES 1373 • 1374 • 1375

3000 watt high-intensity Klieglights suitable for long range throws or for extra high intensity short and medium range lighting. All units are equipped with silent blower system for proper air cooling.

### FEATURES:

- All-aluminum construction provides for light weight and handling ease without any sacrifice in rigidity or strength.
- Built-in 4-way shutters with individual shutter control and angular adjustment. All units have built-in iris shutter.
- All units provided with directional grip handle and color frame holder.



No. 1375E

**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to catalog number.

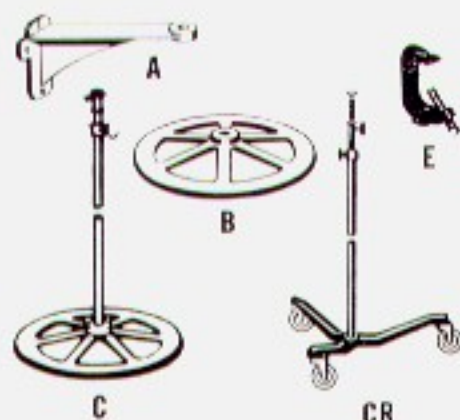
Lens	1374 6" Standard Beam		1375 8" Narrow Beam		1373 8" Very Narrow Beam	
Recommended Throw	50' to 100'		50' to 100'		50' to 100'	
Size Spot @ Above Throws	24' @ 50'	48' @ 100'	16' @ 50'	32' @ 100'	12' @ 50'	24' @ 100'
Intensity of Above Spots*	70 F/C	18 F/C	140 F/C	35 F/C	140 F/C	35 F/C
Test Lamp Used	3M/T32/2		3M/T32/2		3M/T32/2	
Color Frame No. For Cinemoid	570		570		570	
Color Frame No. For Glass	570G		570G		570G	
Weight — Net — Lbs.	41		42		45	
Recommended Lamp	3M/T32/2					

\* These figures are only approximate. If more exacting data is required send for our distribution curves.

## MOUNTING DATA AND INFORMATION

For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.

Cat. No.	A	B	C	D	E	F	G
1373	24"	19"	18 1/4"	11"	22"	24"	31"
1374	21"	19"	18 1/4"	11"	22"	24"	31"
1375	21"	19"	18 1/4"	11"	22"	24"	31"



Suffix	Description	Accessories
A	Wall Bracket	2' Leads and Pin Plug Connectors
B	Table Base	2' Leads and Pin Plug Connectors
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connectors, 25 feet of cable and knife switch.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Leads and Pin Plug Connectors. "C" Clamp shown. Bridge type furnished where desired.

EXAMPLE: No. 1375E indicates a No. 1375 Klieglight with a pipe clamp mount with 2 foot asbestos leads and Pin Plug Connectors.



# KLIEGLIGHTS (CONT.) SERIES 1366 • 1368



No. 1366E

A 1000/2000 watt high-intensity Klieglight suitable for medium to long range throw. Equipped with Pyrex glass stepped lens with black ceramic risers. Universally mounted with directional grip handle and color frame holder.

## FEATURES:

- Light-tight rigid sheet steel construction combines strength with low weight; provides for easy adjustment and handling.
- Built-in 4-way shutters with individual shutter control and angular adjustment.
- Iris shutter available as optional equipment.

**Iris Shutter:** If iris shutter is desired, add word "iris" after catalog number of desired unit.

**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to catalog number.

Lens	1366 6" Standard Beam		1368 8" Narrow Beam	
	30' to 80'		30' to 90'	
Recommended Throw	30' to 80'		30' to 90'	
Size Spot @ Above Throws	14.5' @ 30'	40' @ 80'	9.5' @ 30'	30' @ 90'
Intensity of Above Spots*	120 F/C	17 F/C	200 F/C	23 F/C
Test Lamp Used	2M/T30/1		2M/T30/1	
Color Frame No. For Cinemoid	570		570	
Color Frame No. For Glass	570G		570G	
Weight — Net — Lbs.	25		26	
Recommended Lamps	1M/T24/5	1500/T24/6	2M/T30/1	

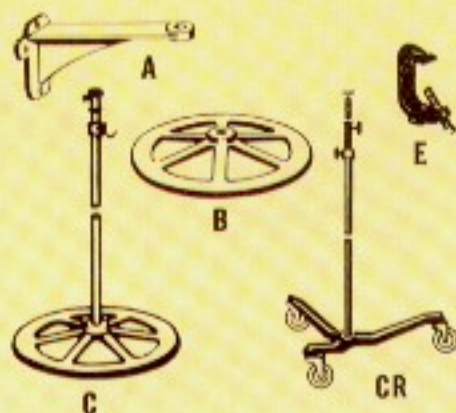
\* These figures are only approximate. If more exacting data is required send for our distribution curves.

## MOUNTING DATA AND INFORMATION

For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.

Suffix	Description	Accessories
A	Wall Bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connector, 25 feet of cable and knife switch.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Asbestos Leads. "C" clamp shown — Bridge type furnished where desired.

EXAMPLE: No. 1366E indicates a No. 1366 Klieglight with a pipe clamp mount with 2 foot asbestos leads.



Cat. No.	Mounting Dimensions (inches)						
	A	B	C	D	E	F	G
1366	12 1/4"	13"	15"	10 1/2"	18"	18"	24"
1368	15 3/4"	13"	15"	10 1/2"	18"	18"	24"



# KLIEGLIGHTS

## SERIES 1365

A 250/750 watt high-intensity Klieglight for medium throw. Cast aluminum and sheet steel construction with built-in four-way framing shutter.

### FEATURES:

- Individual frame control and angular adjustment
- Pyrex glass stepped lens . . . black ceramic risers
- Swivel yoke for universal mounting . . . color frame holder
- Hinged lens holder provides easy access to interior



NO. 1365

**Iris Shutter:** If iris shutter is desired, add word "iris" after the catalog number.

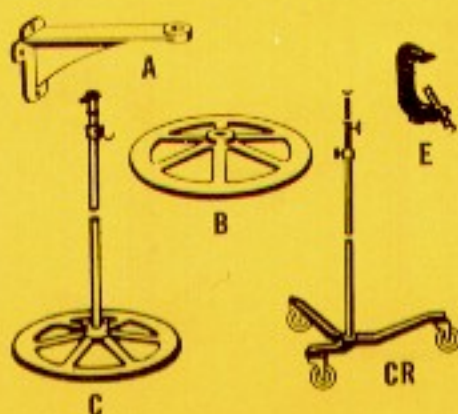
**Grounded Equipment:** All listed units can be supplied with two wires plus ground and may be specified by addition of suffix "G" to catalog number.

	1365		1365W		1365/8	
Lens	6" Standard Beam		6" Wide Beam		8" Narrow Beam	
Recommended Throw	15' to 50'		10' to 30'		20' to 80'	
Size Spot @ Above Throws	4.5' @ 15'	15' @ 50'	6' @ 10'	18' @ 30'	4.5' @ 20'	18' @ 80'
Intensity of Above Spots*	250 F/C	24 F/C	220 F/C	27 F/C	240 F/C	15 F/C
Test Lamp Used	500/T14/8		500/T14/8		500/T14/8	
Color Frame No. For Cinemoid	1036		1036		570	
Color Frame No. For Glass	1036G		1036G		570G	
Weight — Net — Lbs.	10		10		11	
Recommended Lamps	250/T14/9		500/T14/8	500/T14/7	750/T14	

\* These figures are approximate. If more exacting data is required, send for our distribution curves.

## MOUNTING DATA AND INFORMATION

Cat. No.	A	B	C	D	E	F	G
1365	12"	7"	10½"	6½"	13½"	14"	17"
1365W	10"	7"	10½"	6½"	13½"	14"	17"
1365/8	16¾"	7"	10½"	8½"	13½"	14"	17"



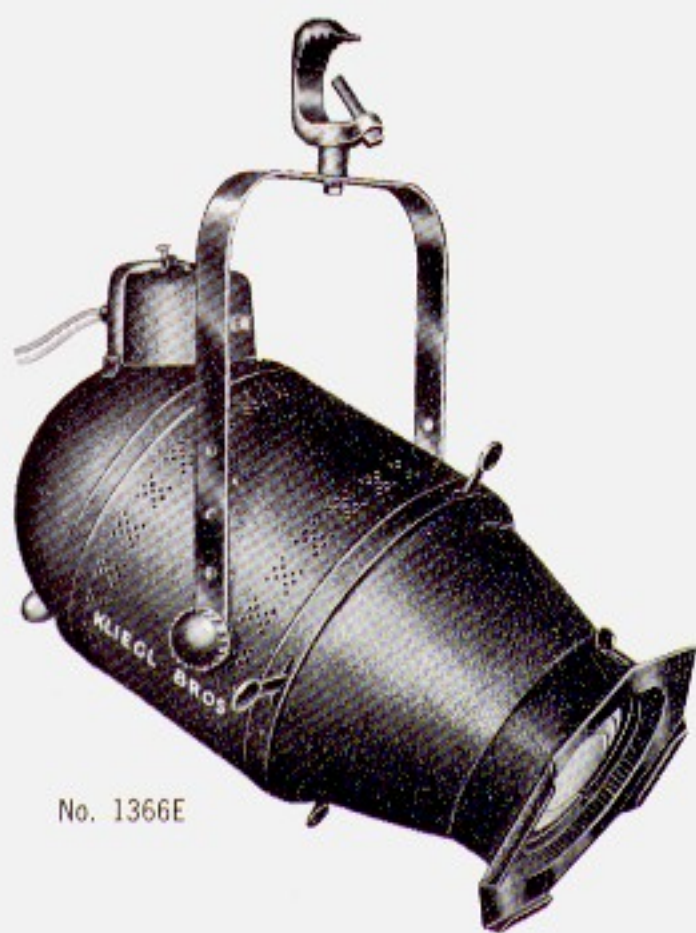
For selection of desired type of mount, add to any catalog number the suffix shown by the description of the desired mount.

Suffix	Description	Accessories
A	Wall Bracket	2' Asbestos Leads
B	Table Base	2' Asbestos Leads
C	Telescopic Heavy Base Floor Stand	Wired with pin plug connector and 25 feet of cable.
CR	Telescopic Roller Caster Stand	
E	Pipe Clamp	2' Asbestos Leads. "C" clamp shown — Bridge type furnished where desired.

EXAMPLE: No. 1365E indicates a No. 1365 Klieglight with a pipe clamp mount and 2 foot asbestos leads.



# KLIEGLIGHTS



No. 1366E

In 1933 the first Klieglight, (an ellipsoidal spotlight) was used in the spectacular outdoor pageant "Romance of the People", at the Polo Grounds in New York. Its first indoor use was in the Earl Carroll Vanities of the same year.

Since that time, Kliegl Bros. have continued to improve and expand their line of famous Ellipsoidal Spotlights. With the cooperation of the various lamp manufacturers, the present base-up burning lamp was developed so as to obtain longer maintained efficiency and higher wattage units.

While the name "KLIEGLIGHTS" has a universal meaning, Kliegl Bros. are the originators and only producers of the genuine Klieglights. Look for the name!

The diagram at the right shows a few of the many sharp, uniform and brilliant light patterns that can be formed with Klieglights. All projected spots are *controlled* and have approximate uniform intensity of light over the entire illuminated area. Shuttering produces virtually no change in intensity of remaining lighted area.



## FEATURES:

- Up to 3½ times the lumen output of conventional spots of equal wattage.
- Well defined cut-off light.
- Ellipsoidal spun aluminum Alzak finished reflector . . . permanent finish, easy to clean.
- Lamp holder set at ideal position to produce uniform illumination at maximum efficiency.
- Simple, easy relamping.
- Special heat-resisting metal shutters eliminate heat erosion.
- Correctly ventilated, light-tight housing assures rated lamp life.
- Uniform illumination of every size light area.
- Pyrex glass, heat-resisting lenses with black risers.
- Sturdy, light-weight aluminum and sheet steel construction.

**Sizes:** Available from 250 to 3,000 watts: lens diameters of 5" to 8" providing a light intensity and a beam characteristic for any specific purpose.

**Ventilation:** Engineered ventilation allows for proper air circulation when used within recommended mounting angles of 10° above horizon and 70° below horizon, assuring rated lamp life. Blower systems in high-wattage units.

**Construction:** All workmanship to highest standards. Units inspected and tested before shipment.

### SELECTION OF PROPER UNIT . . .

We suggest that the following three points be considered when selecting a Klieglight for a specific use.

- 1 **Throw** — The distance from the unit to the object to be illuminated.
- 2 **Beam Spread** — Select the unit with a beam spread which just covers the maximum area to be lighted.
- 3 **Wattage** — Select the unit with the wattage which produces the desired intensity.



Stepped lenses are exactly produced from heat resistant Pyrex glass. They have black baked ceramic risers to eliminate side glare and spill light.



Accessible socket cap assures simplified relamping. Socket cap contains adjustment screws for minute lamp holder positioning to obtain an illumination pattern other than the standard factory-set uniform intensity. Uses standard bipost base-up burning concentrated filament lamps which eliminate any possibility of lamp bases breaking off or sticking in lamp holder.



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**KLIEGL BROS.**  
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.

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# *Introduction*

Compiled to serve the reference needs of professional people, this catalog has been thoughtfully planned to provide a valuable and dependable source of information on innumerable Kliegl items now available.

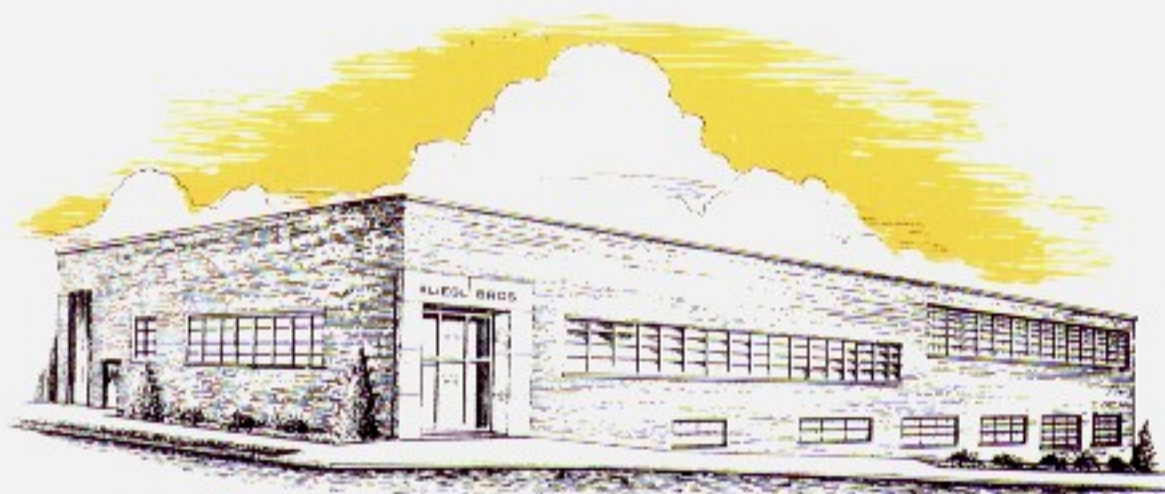
Completely revised, it includes many new and improved products, presenting a selected variety of Kliegl specialties customarily required for stage lighting in theatres, schools, community centers, public buildings and for other diversified applications.

Other Kliegl items, unlisted in this catalog, used in fields of illumination distinct from stage lighting, are also available, and particulars are furnished upon request.

Additional catalogs are available covering Kliegl products for architectural lighting; equipment for lighting television studios; and for other special adaptations of illumination. A request stating your particular field of activity will enable us to forward literature pertinent to your interests.

**KLIEGL BROS.**  
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.





Since the founding of Kliegl Bros. in 1896 to the present day, "Quality" and "Progress" have been the yardstick of our growth.

Our trade mark, "Kliegl Bros.", is a symbol of quality and fine craftsmanship known throughout the world. It is our never ending intention to continue to manufacture only to the very highest standards. Reputations are not fabricated, they are earned. Years of successful accomplishment in theatre lighting and switchboard control have been responsible for our being the recognized leader in the field.

Over the years, Kliegl research and development has resulted in Kliegl innovations which have become standard theatrical equipment items. Just a few of the more notable developments directly related to theatrical equipment are:

- 1903 — Complete lighting and control system installed in the Metropolitan Opera House.
- 1905 — Plugging boxes, floor pockets, stage plugs and connectors.
- 1911 — 1st arc Klieglight used in motion picture industry.
- 1915 — 1st disappearing footlight.
- 1922 — Introduction of Linnebach projection to America.
- 1928 — 1st remote — color changer spotlight.
- 1929 — Introduction of Fresnel-lens into spotlight apparatus.
- 1932 — 1st incandescent Klieglight (ellipsoidal reflector spotlights).
- 1932 — 1st pin-hole down light for auditorium use.
- 1932 — 1st 5000 watt wide-angle scenic projector.
- 1936 — Ceramic color risers on spotlight lenses.
- 1939 — 1st 2100 watt wide-angle scenic projector.
- 1943 — Projection system for Waller anti-aircraft gunnery trainer.
- 1949 — Dynabeam — 1st long throw 3000 watt ellipsoidal reflector Klieglight.
- 1951 — 1st rotary circuit selector system with a cold make and break.
- 1952 — 1st 3-phase electronic dimming system.
- 1954 — Safpatch — 1st cord-plug type cold patch circuit selector system.
- 1956 — Pole-Op — 1st pole-operated adjustable spotlight.
- 1956 — 1st Oval-Beam lens Fresnel spotlights.
- 1956 — Memory-switcher.
- 1958 — 1st SCR® Dimmer.
- 1964 — 1st complete line of equipment for lighting with quartz-halogen lamps.

That Kliegl Bros. designs and manufactures to only the very highest standards of both lighting excellence and control is, today, both an industry maxim and an extra assurance of "quality above all" . . . for those who specify Kliegl.



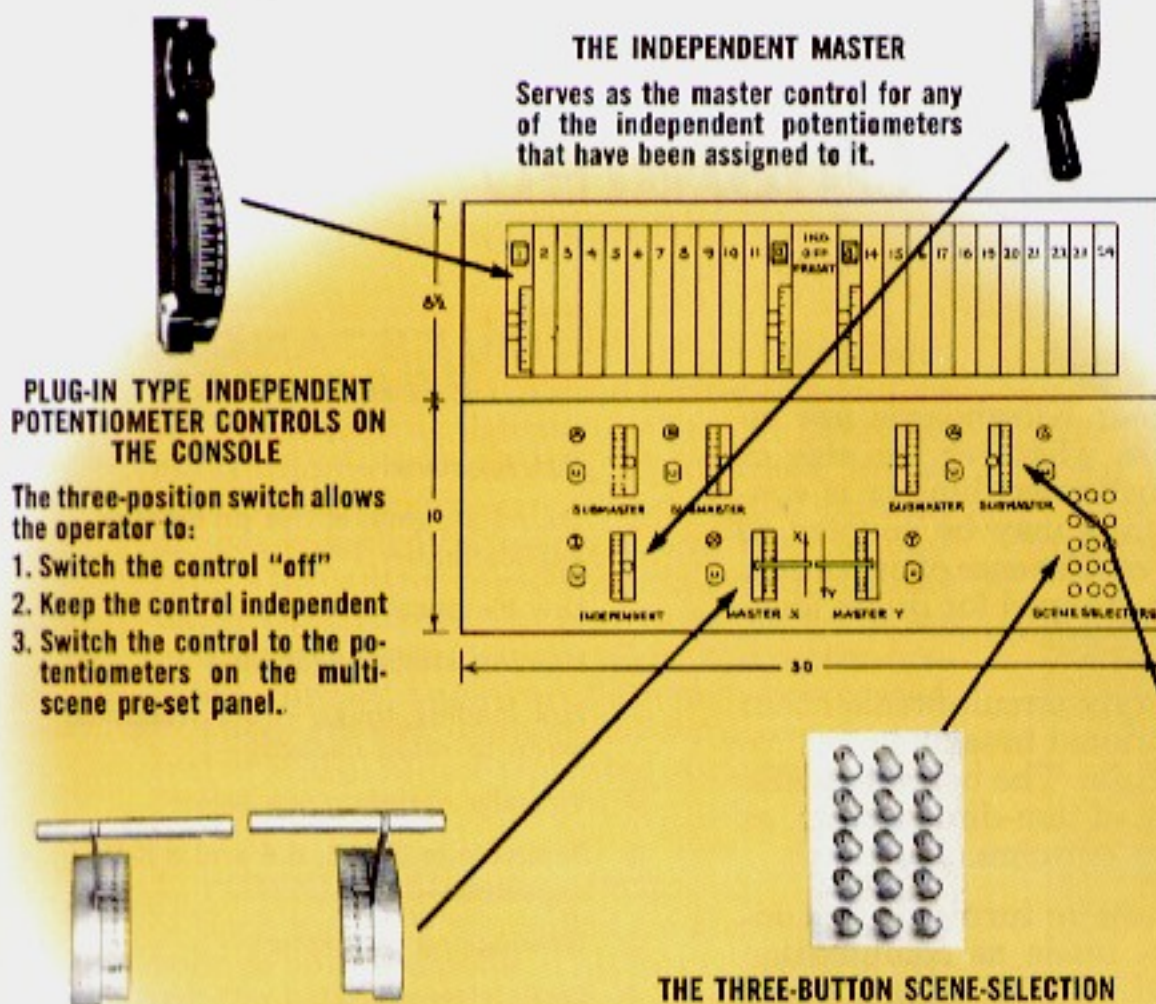


**KLIEGL**

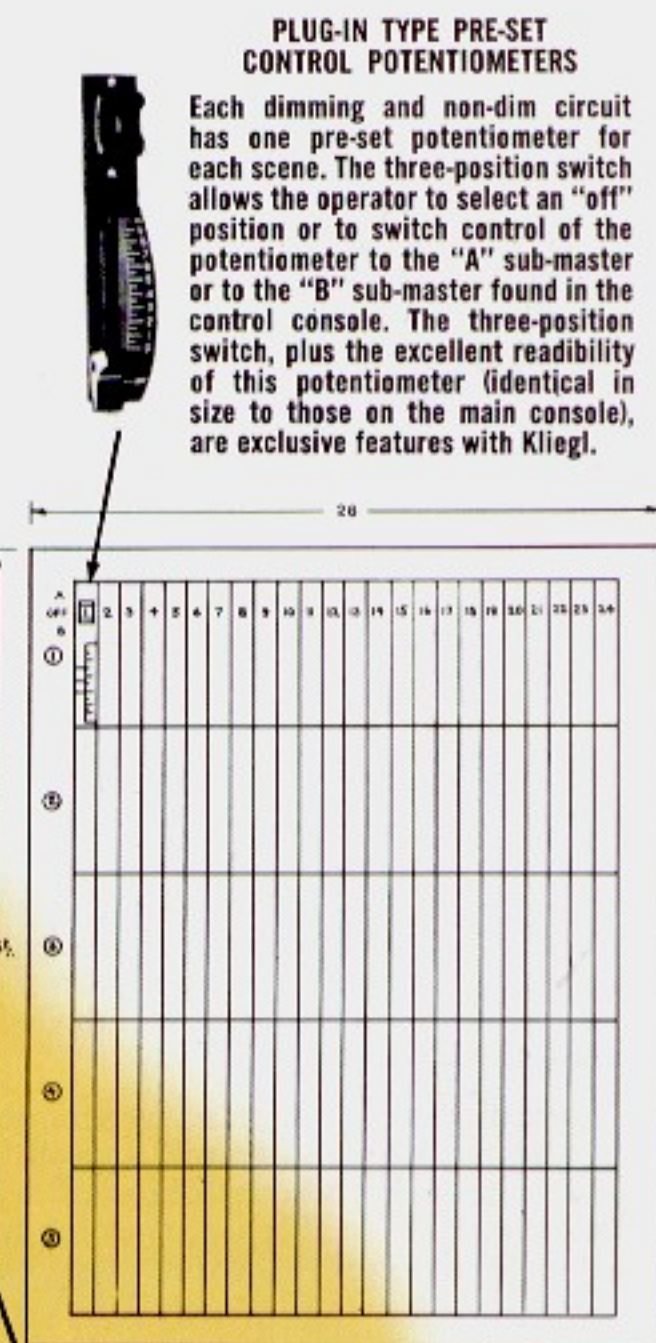
*The Great Name in  
Theatrical Lighting*



# Multi-Scene Console With Pre-Set Panel



- SPLIT-FADER CONTROL**  
This exclusive Kliegl feature will perform the following functions:
1. Fade directly from one scene to another with a single action of the control handles (one hand operation).
  2. Operate either of the fader control levers independently or jointly.
  3. Fade in or out of desired scenes completely or partially, as desired.
  4. Change individual scene fade in or out time at the will of the operator by being able to fade one scene faster or slower than the next one.
  5. Each fader control can serve as the master dimmer for the sub-master controls on the same side of the fader, thereby making proportional dimming of sub-masters possible.



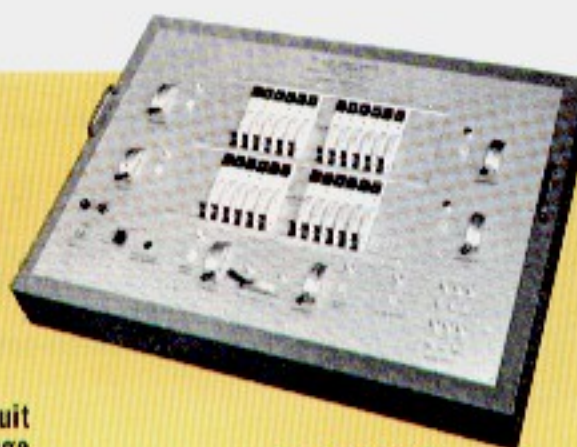
## THE THREE-BUTTON SCENE-SELECTION SYSTEM

The system (one set of buttons for each scene) assigns the control of scenes (groups of pre-set potentiometers) to a selected side of the fader control. Right button (Y) places control on the right side (Y) of the fader. Left button (X) places control on the left side (X) of the fader. Center button serves as the "off" position. Proper selection of buttons allows scene-to-scene fading, pile-on or other effects as desired.

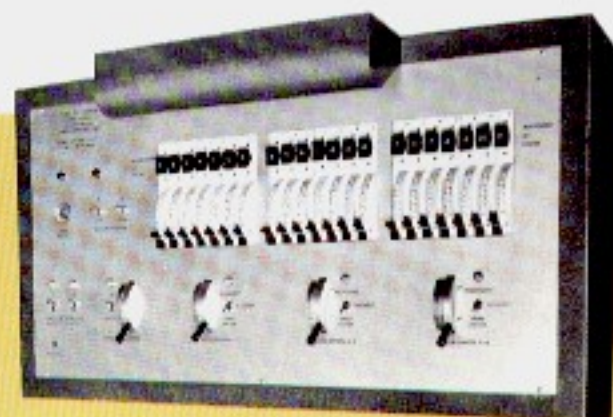
The sketches above show the major component layout of a typical control console and five scene pre-set panel. The basic components on the control console consist of a set of independent potentiometers (one for each dimming and non-dim circuit), an independent master control, four pre-set sub-master controls (two for each side of the fader), a push button scene-selection system and a split-fader control. The basic components on the pre-set panel consist of a set of potentiometers for each scene.



Kliegl circuit selector. A low voltage pre-set patching system for patching dimmers and masters using miniature banana plugs and a printed circuit selector card. A 12" x 24" card controls 60 circuits on 24 masters.



Type SCR-C-P. Portable two-scene console for the control of 12 SCR Dimmers.



Type SCR-C-WS. Surface wall-mounted, single-scene console for the control of 21 SCR Dimmers.



# KLIEGL ALZAK REFLECTORS and HOLDERS

Spherical concave reflectors fully utilize the light source and increase the intensity of the light beam when placed in back of the lamp in a Kliegl incandescent spotlight. These reflectors are of polished Alzak Aluminum which will not tarnish, peel or discolor under the heat of the lamp.

Reflector Holders, with an adjustable mounting bracket for mounting in spotlight units, are furnished as listed.



NO. 945



NO. 945-F

CAT. NO.	DESCRIPTION	SIZE DIAM.
<b>Alzak Reflectors</b>		
940	spherical polished	2 1/4"
941	spherical polished	2 1/2"
945	spherical polished	5 1/4"
947-B	spherical polished	7 1/4"
944	spherical polished	9"
946	spherical polished	8"
<b>Reflector Holders</b>		
941-F	for No. 941 reflectors	
945-F	for No. 945 reflectors	
947-BF	for No. 947-B reflectors	

## SOLDERLESS LUGS

Solderless lugs are designed for use where wiring terminals are exposed to excessive heat. They are of stamped copper and are easily attached to any flexible or solid wire of its rated range. Bared wire end is inserted through hole in center strip and bent back between the wings of the lug, which are then clamped tight around the wire and insulation. In the event a large number of lugs are to be used, we recommend our special pliers for speed and efficiency, otherwise regular pliers or a hammer will insure a good connection.



NO. 450



FIG. 2



FIG. 1



FIG. 3

CATALOG NUMBER	FOR CABLE SIZE NUMBER	RATING AMPERES
450	10 and 12	25
460	6 and 8	50
461	4	100
459	2	150



NO. 471

Special pliers: No. 470 for No. 450 lugs, No. 471 for No. 460 and 461 lugs.

## INCANDESCENT LAMPS

Various lamps have been recommended for use in specific lighting units. All of these lamps, in addition to virtually all styles of incandescent lamps for lighting devices, or general lighting are carried in stock in very large quantities. They are sold at regular lamp schedule prices. Complete lamp list and prices available on application.

## ARC CARBONS

Standard carbons of best domestic grades are available for arc lamps.

Furnished in sets or individual types, for DC or AC, for use in high or low intensity arc lights.

60-75 AMP. CARBONS FOR SPOTLIGHT NOS. 11 & 18

TYPE	SIZE	NO. PER PKG.	NO. PER CASE	CASE WGT.
DC	7/8"x12"-U 3/8"x 6"-L	50	250	100 lbs. 14 "
DC	3/4"x12"-U 1 1/32"x 6"-L	50	250	70 " 11 "

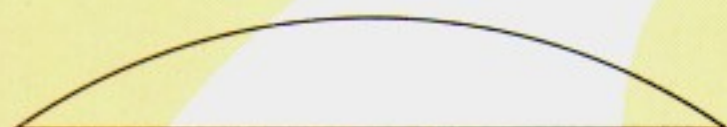
U-UPPER, L-LOWER



# KLIEGL LENSES

## Condensing Lens

Plano-convex clear crystal glass-exceptionally high quality. For use in conventional Plano-convex spotlights.



CONDENSING

CAT. NO.	DIAMETER	FOCUS	CAT. NO.	DIAMETER	FOCUS
890	4½"	6½"	907	6"	15"
891	4½"	7½"	909	8"	8"
892	4½"	9"	910	8"	9"
896	5"	5½"	911	8"	10"
897	5"	7½"	912	8"	12"
898	5"	9"	913	8"	13"
899	5"	12"	914	8"	15"
901	6"	7"	915	8"	18"
902	6"	8"	916	8"	20"
903	6"	9"	917-12	10"	12"
904	6"	10"	917-18	10"	18"
905	6"	12"	917-26	10"	26"
906	6"	13"	918-30	12"	30"

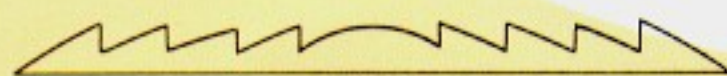
Heat-resisting glass condensing lenses, prices on application.

## Step and Fresnel Lenses

Kliegl step and Fresnel lenses are manufactured in our own molds from the finest heat resisting glass. These lenses were designed by Kliegl engineers and conform to the highest specifications. — Lenses have baked on black ceramic risers which eliminate all stray light. Step lenses are used in Klieglights, Fresnel lenses in Fresnel lens spotlights.



STEP

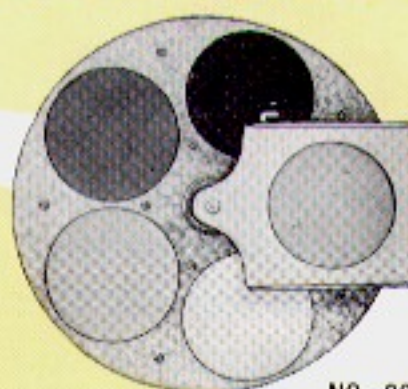


FRESNEL

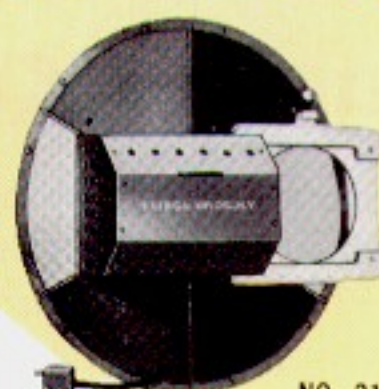
STEP LENS		FRESNEL LENS	
CATALOG NO.	DIAMETER	CATALOG NO.	DIAMETER
2070-B	5"	2061-B	3"
2071-B	6"	2062-B	6"
2071W-B†	6"	2063-B	8"
2072-B	8"	2064-B	12"
2073-B	12"	2065-B	13¾"
2074-B	14¾"	2066-B	16"
		2067-B	20"
		2362-B*	6"
		2363-B*	8"

\* OVAL BEAM  
† WIDE ANGLE

# COLOR WHEELS



NO. 22



NO. 31

Cat. No.	Dia. of Wheel	No. of Colors	For Lens Size	Application
<b>HAND OPERATED</b>				
14	13½"	5	4½"	53, 5310
15	13½"	5	4½"	1163
16	18"	5	6"	43N6, 1365, 1164, 1167
22	18"	5	6"	11, 6N19, 70, 71
24	21¼"	7	6"	11, 6N19, 70, 71
23	24"	5	8"	18, 8N20, 8N24, 43N8, 1168, 1366, 1373, 1374, 1375
17	36"	5	12"	1174, 1178, 43N12
<b>A.C. MOTOR OPERATED</b>				
14AC	15⅝"	6	4½"	53, 5310
14ACL*	15⅝"	6	4½"	53, 5310
15AC	18"	5	6"	1163
15ACL*	18"	5	6"	1163
16AC	20"	6	6"	43N6, 1365, 1164, 1167
31AC	20"	6	6"	11, 6N19, 70, 71
31ACL*	20"	6	6"	11, 6N19, 70, 71
35AC	24"	5	8"	18, 8N20, 8N24, 43N8, 1168, 1366, 1373, 1374, 1375
35ACL*	24"	5	8"	18, 8N20, 8N24, 43N8, 1168, 1366, 1373, 1374, 1375
17AC	36"	5	12"	1174, 1178, 43N12
17ACL*	36"	5	12"	1174, 1178, 43N12

\* Furnished with glass color inserts; all others listed are for use with Cinemoid or gelatine color mediums.

Prices for universal motor operation on application.

## COLOR BOXES



NO. 26

Cat. No.	Size of Box	No. of Frames	For Use Unit No.	Lens Size	Frames Cat. No. & Size
26	17" x 10" x 5"	5†	*	6"	566; 8" x 9"
26A	24" x 12" x 5"	6†	18-8N20-8N24	8"	570; 10" x 11"
26DD	30" x 15" x 4⅞"	5‡	1178	12"	1039; 14" x 14"

\* No's 11, 70C, 71C, 6N19.

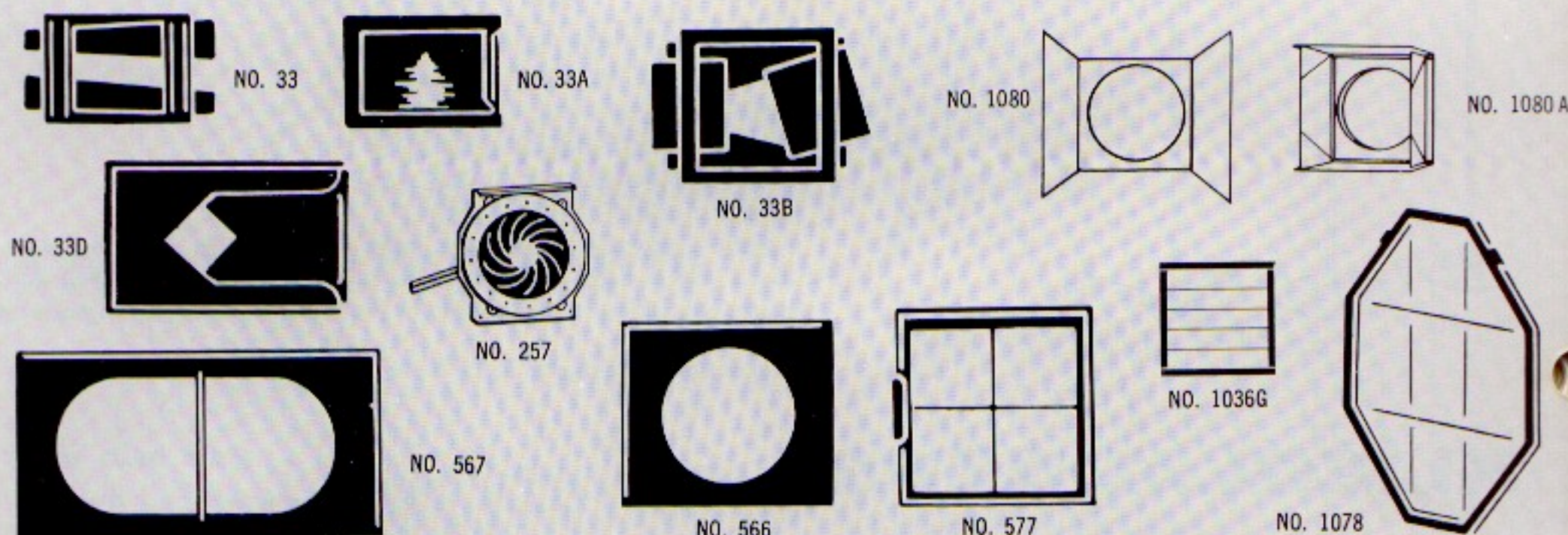
† Side lever controls.

‡ Rear lever controls on left side.



# KLIEGL SHUTTERS • BARN DOORS

Cat. No.	DESCRIPTION	Cat. No.	DESCRIPTION
<b>Framing Shutters</b>		<b>2-Way Barn Door</b>	
33	Two blade cut-off, for effects, metal	1080	Barn Door for 43N6
33A	Variegated cut-off, for water ripple effects	1081	Barn Door for 43N8
33B	Irregular four blade cut-off; 9" x 8" for 5" spotlights	1082	Barn Door for 43N12
33C	Similar No. 33B; 11" x 10" for 8" spotlight	1083	Barn Door for 43N16
33D	Diamond 2-way cut-off, 12" x 8" for 5" spotlights	1084	Barn Door for 1122, 1143
33E	Similar 33D, 15" x 11", for 8" spotlight	1091	Barn Door for 1155
1088	Regular four blade cut-off for No. 1163	1092	Barn Door for 1158
1085	Cut-off slide, 1" dia. hole; for No. 1163	<b>4-Way Barn Door</b>	
1086	Cut-off slide, 2" dia. hole; for No. 1163	1080A	Barn Door for 43N6
1087	Cut-off slide, 3" dia. hole; for No. 1163	1081A	Barn Door for 43N8
<b>Iris Shutters</b>		1082A	Barn Door for 43N12
2256	4" opening, for 1168, weight 1 lb.	1083A	Barn Door for 43N16
257	5 5/8" opening, for 6" spotlight, weight 1 3/4 lbs.	1084A	Barn Door for 1122, 1143
258	8" opening, for 8" spotlights; weight 5 1/2 lbs.	1091A	Barn Door for 1155
2260	10" opening, for 10" spotlights, weight 7 lbs.	1092A	Barn Door for 1158
<b>Iris Dissolver</b>			
256	2 1/4" opening; for half size objectives, per pair		



## COLOR FRAMES

Cat. No.	Frame Size	No. of Colors	For Units (Applications, etc.)	Cat. No.	Frame Size	No. of Colors	For Units (Applications, etc.)
1032	3 1/2" x 3 1/2"	1	43N3	1038	14 3/4" x 18"	1	547
1033	5 1/8" x 5 1/2"	1	1163	1078C†	15" x 15"	1	1122, 1143
574	5 1/4" x 6"	1	53-5310	1078B†	15 3/4" x 15 3/4"	1	1158
1036	6 1/2" x 6 1/2"	1	43N6, 1365, 2166, 2167	581	16" x 16"	1	537, 1376
566	8" x 9"	1	11-70-71-6N19-1165	1078	18" x 18"	1	1155
567	8" x 15"	2		585A	18" x 18"	1	43N16
568	8" x 21"	3		585	18" x 20"	1	1N, 2N, 1N3
570	10" x 11"	1	18, 43N8, 8N20, 8N24 1366, 1368, 1373, 1374, 1375	588*	18" x 20"	1	1N, 2N, 1N3
580	12" x 12"	1	533, 548, 548A	<b>Metal Frames with Glass</b>			
577	12 1/2" x 12 1/2"	1	540	1032G	3 1/2" x 3 1/2"	1	43N3
578	12 3/4" x 14"	1	541	1033G	5 1/8" x 5 1/2"	1	1163, 2164, 2165
1039	14" x 14"	1	43N12, 1178, 1174	1036G	6 1/2" x 6 1/2"	1	43N6, 1365, 2166, 2167
1037	14 1/4" x 15"	1	546	566G	8" x 9"	1	11, 70, 71, 6N19, 1165
				570G	10" x 11"	1	18, 43N8, 8N20, 8N24, 1366
				580G	12" x 12"	1	548, 548A

These color frames can be had with a special quick change snap on feature in addition to special construction providing maximum air cooling so as to hold cinemoid or gelatine for an indefinite period of time. Prices on application.

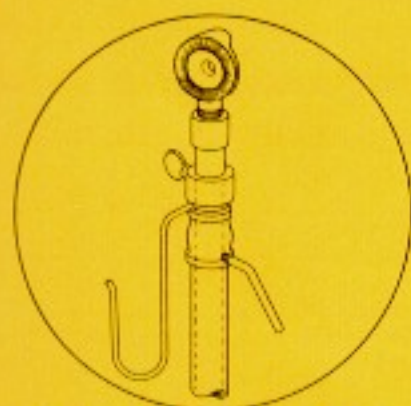
\* Wooden Frame

Other sizes, of metal or wood, with or without color mediums available. Prices on application.

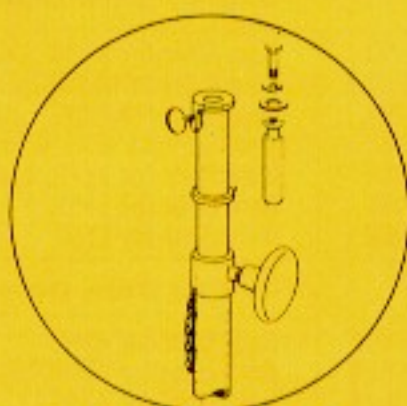


# KLIEGL TELESCOPIC FLOOR STANDS

## Platform and Roller Caster Bases



SWIVEL TYPE



STUD TYPE



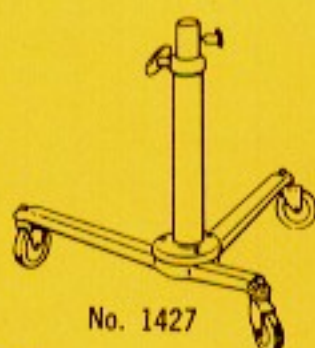
No. 1410



No. 1415



No. 1421



No. 1427

CAT. NO.	TYPE BASE	TYPE FITTING	APPROX. HGHT. † MIN. — MAX.	FOR UNITS IN GROUP
1402	11" ROUND	BOLT	28" — 48"	1
1410	18" SPOKE	SWIVEL	30" — 58"	2
1411	18" SPOKE	SWIVEL	48" — 88"	3
1415*	18" SPOKE	STUD	36" — 64"	4 & 5
1420*	19" R. C.	STUD	36" — 64"	4
1421*	25" R. C.	STUD	36" — 64"	5
1422*	30" R. C.	STUD	36" — 64"	6
1427	30" R. C.	STUD	24" — 40"	7

### UNIT CLASSIFICATION

GROUP 1 — 43N3, 43N6, 53, 5310

GROUP 2 — 75N, 6N19, 8N20

GROUP 3 — 1N, 2N

GROUP 4 — 70, 71, 43N8, 1122, 1143, 1155, 1158, 1165, 1365

GROUP 5 — 43N12, 1174, 1175, 1366, 1368, 8N24

GROUP 6 — 43N16, 1373, 1374, 1375

GROUP 7 — 43N20, 1178, 1179, 1376, 1377

\*For extra high adjustable stands (approx. 55" to 99") add suffix "XH" to appropriate catalog number.

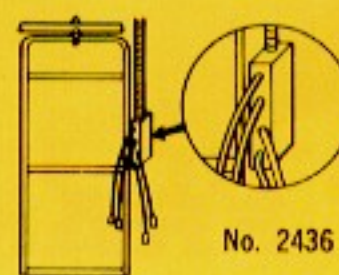
†Measured from top of stand to floor.

## KLIEGL LADDERS

Sturdily constructed of heavy channel steel with 1" supporting pipe cross bars (18" long). No. 1430 is 45" high and No. 1431 is 63" high. Ladders are painted dull black and are complete with proper pipe clamp.



No. 1431



No. 1430

No. 2436

### LOAD END BOX

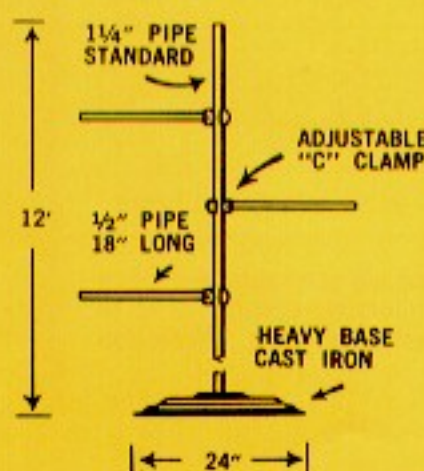
Load-end Box No. 2436 for use with Klieg ladders. Steel housing (10" x 4 3/4" x 2 1/2") with up to four 12" pigtails using either No. 955 or No. 955G connectors (2436G).

## PORTABLE LIGHT TOWERS

Cross lighting of the stage is often accomplished from light towers in the side wings. A selected grouping of spotlights and floodlights are mounted on a movable steel structure containing plugging facilities and operation platform. Designed to meet individual requirements, prices on application.



Typical large tower with plugging facilities, roller casters, operation platform, etc. Illustrated unit was designed for the stage of Radio City Music Hall.



No. 1414A

Typical light boom for average stage use or travelling shows. Has a heavy cast iron floor base, 1 1/4" upright pipe (12 feet long) and six pipe clamp side arms for support of spotlights, floodlights, etc.



# KLIEGL PIPE CLAMPS

Facilitate mounting of spotlights, openbox lights etc. on pipes in any position or angle. Quickly and easily attached, firm secure grip. Made in "C" clamp and bridge clamp styles.

## "C" CLAMP TYPES



No. 1852



SPACER  
SEPARATE

No. 1850

CAT. NO.	DESCRIPTION
<b>FLAT FLANGE BRIDGE TYPES</b>	
874	Small size, for 1/2" pipe; cast brass, with flange drilled and tapped for 1/4"-20 threaded screw. Weight 1 lb.
877	Medium size, for 1/2" to 1" pipe; malleable iron, with flange drilled and tapped for 1/4"-20 threaded screw. Weight 1 1/2 lbs.
877A	Same as No. 877, except drilled and tapped for 3/8"-16 threaded screw.
880	Large size, for 2" pipe—malleable iron, with flange drilled and tapped for 1/2"-13 threaded screw. Weight 4 1/4 lbs.
<b>FLAT STEM BRIDGE TYPES</b>	
876	Medium size, for 1/2" to 1" pipe; malleable iron, side tapped stem with thumb screw. Weight 1 1/2 lbs.
<b>THREADED STEM BRIDGE TYPES</b>	
875	Medium size, for 1/2" to 1" pipe; malleable iron, threaded stem for 1/2" pipe coupling. Weight 1 1/2 lbs.
<b>FLAT FLANGE HOOK TYPES — "C" CLAMP</b>	
1852	Medium size, for 3/8" to 1" pipe; malleable iron, with flat flange drilled and tapped for 1/4"-20 threaded screw.
1852A	Same as No. 1852 except drilled and tapped for 3/8"-16 threaded screw.
1850	Large size, for 1" to 2" pipe; malleable iron with flat flange, drilled and tapped for 1/2"-13 threaded screw.
1850A	Same as No. 1850 except flange drilled and tapped for 1/2" pipe connection.
1850B	Same as No. 1850 except flange drilled and tapped for 3/8"-16 threaded screw.
1850C	Same as No. 1850 except flange drilled and tapped for 1/4"-20 threaded screw.

All "C" clamps, if desired, can be furnished with a one inch spacer at no additional cost.

## BRIDGE TYPES



No. 875



No. 877

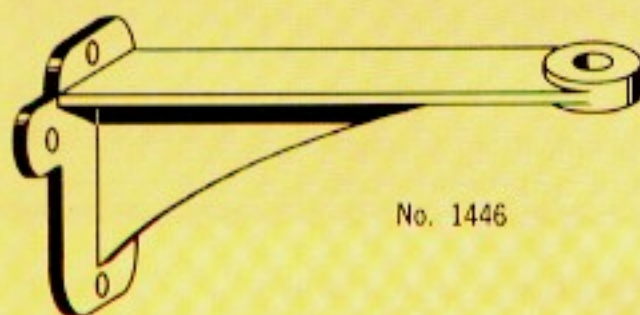
## TABLE BASES



No. 1440

CAT. NO.	DIA.	DESIGNED FOR USE WITH UNIT NUMBER
1437	4"	43N3
1438	5 7/8"	43N6, 53, 5310
1439	9"	43N8, 43N12, 70, 71, 533, 1122, 1143, 1155, 1158, 1163, 1164, 1165, 1167, 1365, 1366, 1368
1440	18"	43N16, 1373, 1374, 1375 All BAC/2 and BAC/4 color units

## WALL BRACKETS



No. 1446

CAT. NO.	SIZE	DESIGNED FOR USE WITH UNIT NUMBER
1443	3 1/8" x 2 1/8"	43N3
1444	7" x 3 1/4"	43N6, 53, 533, 5310
1445	9" x 4 7/8"	70, 1122, 1143
1446	10 1/2" x 4 7/8"	43N8, 71, 1155, 1158, 1163, 1165, 1365
1447	13" x 13"	43N12, 43N16, 1164, 1167, 1366, 1368 All 1365 BAC/2 and 4, and all 1368 BAC/2 and 4 units

## Cable Supports



No. 636



No. 635

Cradle support with grooved cable rest, clamps, tie rope or hoist cable hole. Used to take up feeder cable slack and prevent drooping when borderlights are in raised position. Cable clamp, attached to pipe batten at feeder end of borderlights, holds cable and prevents connection pull when borderlight is raised and lowered.

No.	DESCRIPTION
<b>CRADLE SUPPORTS</b>	
636	For cable 5/8" to 1 3/4" diameter—Wght. 5 lbs.
6362	For cable 1 1/2" to 2 1/2" diameter—Wght. 9 1/4 lbs.
<b>CABLE CLAMPS</b>	
635	For 1 1/4" pipe — Wght. 5 1/2 lbs.
6352	For 2" pipe—Wght. 8 1/4 lbs.

## Pipe Clamp Side Arm



No. 1860

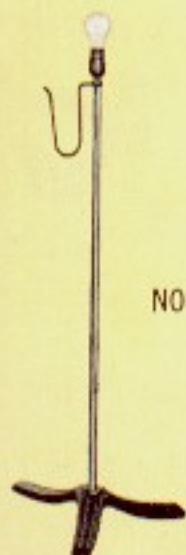
Used for side arms from which to hang lights in tormentor or boomerang position or for hanging spotlights from borderlight pipe above borders. Also useful for pipe stiffeners to prevent sway or tipping on pipe battens.

CAT. NO.	PIPE LENGTH	PIPE DIA.
1860	12"	1/2"
1860A	18"	1/2"
1860B	12"	1"
1860C	18"	1"



# KLIEGL PORTABLE WORK LIGHTS

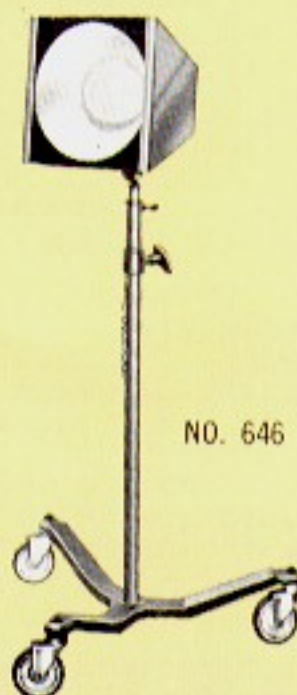
Kliegl portable work lights are indispensable where temporary lighting is required; cleaning theatre auditoriums, repairs in garages and shops, inspection work, emergency lights, etc. Available in various type floor stands. Cable passes through stand and out from under the base so that it is not easily overturned if cable is dragged. They are provided with a hook for hanging coiled cable when work light is not in use. Exposed parts are finished in black enamel.



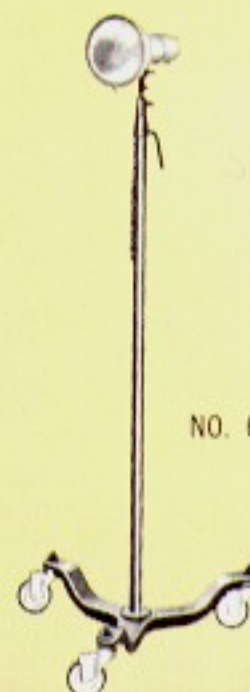
NO. 655



NO. 654



NO. 646



NO. 647

No. 655 — One-light stand; 3 feet fixed height, medium screw base receptacle for any size lamp from 100 to 300 watts. Cast iron tripod base. Weight 7½ lbs.

No. 654 — One-light stand; 5 feet fixed height, outlet box with medium screw base receptacle and wire lamp guard for 200 watt lamp. Cast iron tripod base. Weight 12 lbs. No. 653: Similar to 654 but with a mogul screw base receptacle for 500 watt lamp. Weight 14 lbs.

No. 646 — One-light stand; telescopic pedestal, height adjustable from 5' 6" to 8' 6". Open front spun aluminum matte Alzak reflector fitted with mogul screw base receptacle for 500 watt lamp, suitably enclosed in sheet metal housing and adjustably mounted on pedestal. Stabilized cast iron base with 4" rubber-tired roller casters. Weight 36 lbs.

No. 647 — One light stand. Similar to No. 646 except equipped with spun aluminum reflector, receptacle for 150 watt lamp, and a diffusing glass roundel in hinged ring holder in front. Weight 34 lbs.

Cable extensions and attachment plugs furnished to individual specifications at additional cost. No. 18-2 conductor type SJ rubber covered flexible cord is recommended.

## ENCLOSED SWITCHES

### Main Switches

are double-pole single-throw unfused knife-blade type. Suitably enclosed with special clamp for fastening to a pipe standard. Switch mounted on slate base—switch box has a hinged slotted cover, made of select steel finished in black enamel. Safe to use, easy to wire.



NO. 525

CAT. NO.	RATING	CLAMP SIZE
525	30 AMP, 125 VOLTS	FOR 1" PIPE
526	60 AMP, 125 VOLTS	FOR 1" PIPE
527	100 AMP, 125 VOLTS	FOR 1" PIPE

### Booster Switches

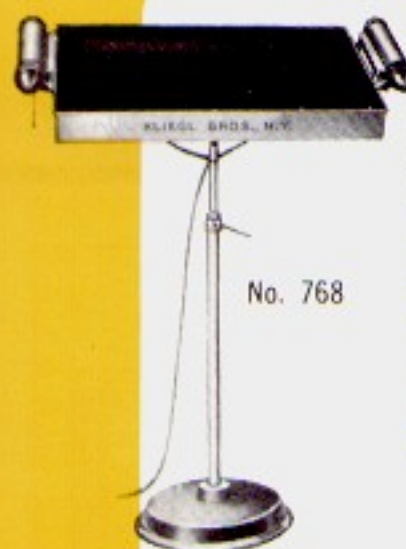
are used with high-amperage arc spotlights. Permits starting or operating at lower than normal running current values. Consists of a main switch and one or more separately operated single pole switches. Sheet steel enclosure with hinged front for access to terminals. Porcelain bushed holes for circuit wires. Mounting holes are provided for fastening to a flat surface.

CAT. NO.	RATING		SWITCHES	
	AMPS	VOLTS	MAIN	BOOSTER
522	100	250	3 POLE	2 STEP
523	200	250	3 POLE	2 STEP



# KLIEGL MUSICIANS' STANDS

Kliegl musicians' stands are well balanced and constructed. They are not easily upset and the units equipped with lights are correctly designed to provide proper and adequate illumination, eliminating eye strain, without light leaks so annoying to the audience. All music rests are amply proportional and sturdily mounted. All visible surfaces are attractively finished.



## ALL METAL LEADER'S STAND

A sturdy all metal stand having a music rest 28½" x 19", light guards on four sides, height and incline are adjustable, two light fixtures, one on each side of music rest, round cast-iron extra heavy base plate; telescopic iron pedestal; finished in gold, except inner surfaces of music rest which are dull black; completely wired; furnished with 12 feet of cable. Weight 38 lbs.

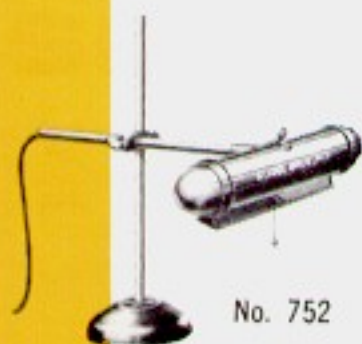
No. 768



## ALL METAL MUSIC STAND

Music rest, 24" x 15", at set angle with light guards on all four sides. Light fixture has pull chain socket for one lamp. Base is tripod type of cast iron. Telescopic iron pedestal provides for music rest height adjustment. Finished in gold, except inside of music rest which is finished in dull black; completely wired with 8 feet of cable.

No. 766



## PIANO AND ORGAN STAND

Stand lamp with pull-chain twin lamp socket. Reflector is a cylindrical brass casing with bell-shaped ends, removable for lamp replacement. Accommodates two 25 watt T-10 lamps. Heavy base insures stability. Reflector may be adjusted vertically, horizontally and angularly, allowing it to be set in any relative position to properly direct the light. Dull brass finish. Completely wired with 10 feet of cord. Upright height 17", projection arm extends 10", reflector length 12", weight 15 lbs.

No. 752

## DEMOUNTABLE MUSIC STAND

Wooden, open frame type, music rest, 20" x 14¾", with hinged shelf at set angle, height adjustable. Cast-iron tripod base. Metal parts finished in black enamel. Open trough light fixture with deep curved metal reflector to direct all light downwards.

No. 744 same as No. 744WLF but without light fixture.



No. 744WLF

## VIOL TYPE MUSIC STAND

Artfully designed music rest; 19¾" x 14½", made of aluminum, head piece holds light fixture fitted with twin-lamp pull chain socket. Light unit furnished with special diffusing glass to evenly illuminate music score. Adjustable, square, free-sliding height adjustment pedestal. Cast iron base with spun aluminum top cover. Finished in gold, base offset black. Wiring concealed. Furnished with 12 feet of cable. Weight 22½ lbs.



No. 821

## LIGHTED BATON

For conducting orchestrations in darkened auditoriums, leaders find Kliegl lighted batons highly successful. The baton is made of light weight metal. It has a small electric light on the extreme end, which enables all movement to be very clearly seen in the dark by the musicians. Current is supplied by a dry battery. Furnished complete with lamp and battery.



No. 769



# KLIEGL EFFECTS

For use with Spotlights, Sciopicons, Stereopticons, Open-box Floodlights, etc. for the reproduction of natural phenomena, as well as scenic and stage illusions by mechanical, electrical and optical means. Listed effects are standard; if individual requirements cannot be met with these, special effects are designed to specification or requirements.

**Spotlight Effects** — Various appliances for producing visual impressions, color effects and scenic illusions of different kinds.

NO.	DESCRIPTION	NO.	DESCRIPTION
257	Iris shutter for fading-out effect; 6" opening		Radium dance effect produced with the following:
240	Optiscope (Lobsterscope)	1180	Radium liquid visible only in ultra-violet light
238	Zig Zag lightning, for Sciopicon effect	1183	Ultra-violet filter; 6½" square heat resisting glass
239	Cloud lightning for sciopicon effect	1183A	Metal frame for ultra-violet filter
237	Lightning shutter	1185	Water shield for ultra-violet filter

**Sciopicon Effects** — Natural scenic illusions or fantastic images (moving clouds, flowing water, rising flames etc.) hand painted on mica discs, or on sectional glass discs all enclosed in metal casing with motor drive.

NO.	DESCRIPTION	NO.	DESCRIPTION
77	American flag waving; slide and waving disc with A.C. Motor	135	Moving fleecy clouds (*)
77A	American flag; slide, hand painted	138	Moving storm clouds (*)
78	Aurora Borealis, 4 slides and color wheel with A.C. Motor	150	Ocean Ripple, 3 mica painted slides
83	Blizzard effect; single disc and slide (*)	151	Ocean Waves (*)
90	Cyclone effect, single disc (*)	154	Panorama, moving country scene (*)
94	Dissolving colors, with attachment and slide carrier, 3 design slides and color wheel with clockwork	155AE	Panorama: moving, winter, desert, railroad, etc. (†)
98	Falling flowers, highly colored (*)	158	Rain effect (*)
100	Falling Roses, highly colored (*)	161	Rainbow effect; glass prisms
103	Fireworks, bursting explosions, falling colored stars (*)	164	Rising Fire and Smoke (†)
104	Flame effect (*)	168	River of souls (*)
105	Flowing Water (*)	175	Sand Storm (*)
106	Flying angels in groups (*)	176	Sand Storm (†)
107	Flying Birds (*)	179A	Scene slides, star slides, etc
108	Flying Butterflies (*)	181	Snow effect (*)
112	Flying Ghosts and Skeletons (*)	186	Swimming Fish (*)
117	Inferno spectacular (†)	188	Twinkling moon, comical, hand movement
122	Lightning, zigzag; 3 brass cut slides with lightning shutter	192	Volcano Eruption (*)
132	Moving clouds with rising or setting moon; 18" disc and slide (*)	195	Waterfall (*)
		196	Water Ripple, mica slide and Framing Shutter No. 33A

\* 18 inch single disc with A.C. Motor

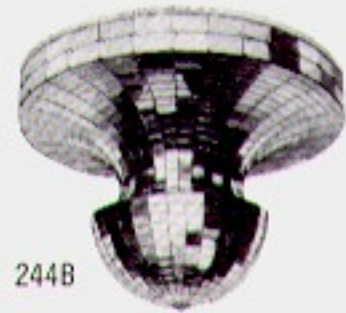
† 18 inch double disc with A.C. Motor

Effects can be furnished with Universal or D.C. Motor.

**Electro-mechanical Effects** include various lighted or motivated illusions or properties. Listed units are most frequently used, but special effects can be made to order.

NO.	DESCRIPTION	NO.	DESCRIPTION
233	<b>DISCONTINUED</b>	224	Mephisto Spark effect. Sparks produced between two metals without using current. Hand sparkle, shoe plate, dancing mats, etc., prices on application
209	Electric smoke boxes; single unit	225	Moon Box, 13" diameter, without cable
209A	Electric smoke powder for No. 209, 1 pound	1190	Smoke Pots; 1 minute, white smoke, per dozen
215	Flash or explosion boxes	1191	Smoke Pots; 1 minute, black smoke, per dozen
215A	Flash powder for No. 215, 2 oz.	2286	Twinkling stars, set of 24 with keyboard for stage
214	Fireflies, in sets of 24; with battery and keyboard	201	Torch, flaming; with lamp and battery
230	Hand lightning, without rheostat	229	Torch, Lycopodium

**Crystal Showers** — Rotating mirrored devices, suspended from the ceiling, to reflect light that has been directed towards them from outside sources, such as Kliegl Spotlight No. 5310. An exceptionally pleasing effect is created when light sources are equipped with a motor driven color wheel, such as Kliegl No. 14A.C. Sparkling and moving spots of light are reflected to all parts of a room. Excellent for ballrooms, banquet halls and other places of public entertainment.



NO. 244B

NO.	DESCRIPTION	NO.	DESCRIPTION
244A	18" Diameter, 10" high; weight 13½ pounds	244C	30" Diameter, 16" high; weight 36 pounds
244B	24" Diameter, 13½" high; weight 24 pounds	244D	<b>DISCONTINUED</b>



# KLIEGL OBJECTIVE LENS

Supplementary lens system used with Sciopticons, Stereopticons etc. for projection of slides, scenic and fantastic effects. Completely assembled with brass tube, adjustable lens and proper holder to fit effect or slide carrier. Short range objective lenses are generally used when the projector is located on the stage. Half size objective lenses are for medium to long range throws.

## SHORT RANGE OBJECTIVE LENSES

No.	Focus	Size of Projection on Screen at distance of	
		15 Ft.	50 Ft.
280	12"	6-10 ft.	24-34 ft.
281	10"	8-12 ft.	32-42 ft.
282	8"	14-18 ft.	38-54 ft.
283	6"	20-34 ft.	
284	4"	40-60 ft.	
285*		12-16 ft.	
286*		20-23 ft.	

\*Special short-focus lens.

NO. 283



## LONG RANGE HALF SIZE OBJECTIVE LENSES

No.	Focus Inches	Distance from Screen, in Feet													
		20	30	40	50	60	70	80	90	100	110	120	130	140	150
		Size of Projection on Screen, in Feet													
267	8	8	12	16	20	24									
268	10	6	9	12	15	18	21	24							
269	12		7	10	13	16	19	22	23	25					
270	15		6	8	10	12	14	16	18	20	22	24			
271	18				8	10	11½	13	15	17	19	21	22½	24	26
272	20				7½	9	10½	12	13½	15	16½	18	19½	21	22½
273	24				6	7½	8¾	10	11	12½	14	15	16	17½	19
274	30				5	6	7	8	9	10	11	12	13	14	15
275	36						6	6½	7	8	9	10	10½	11	12

NO. 268



# ACHROMATIC LENS

No. 285A — Color and distortion corrected lens with an approximate one foot beam spread for every foot of throw. For use with 4" x 3¼" and 4" x 5" slides.

# EFFECT HOLDERS

No.	DESCRIPTION
838A	With 6" Diameter Lens—Wgt. 4 Lbs.
838B	With 8" Diameter Lens—Wgt. 7½ Lbs.

Auxiliary attachment for use in effect projection. Furnished with condensing lens. Fits slide grooves on spotlights and Sciopticons. Retained in position by a set screw. Holder is cast aluminum construction.

NO. 838A

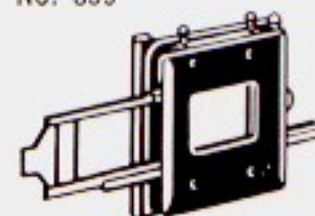


# SLIDE CARRIERS and ADAPTORS

No.	DESCRIPTION
264	Slide Carrier of Metal for Slides 3¼"x4"
262	Slide Carrier of Metal for Slides 4"x5"
839	Adapter with Slide Carrier No. 264
839A	Adapter with Slide Carrier No. 262

Auxiliary equipment for effect projectors facilitating the use of regular lantern slides or replacement equipment for slide projectors. Slide carriers hold two slides and permit quick change of scenes. Adaptors for slide carriers permit ordinary lantern slides to be used with Sciopticons. Consist of a cast aluminum frame that fits grooves in front of effect holder. Holds slide carrier and is provided with grooves in front to hold objective lenses.

NO. 839



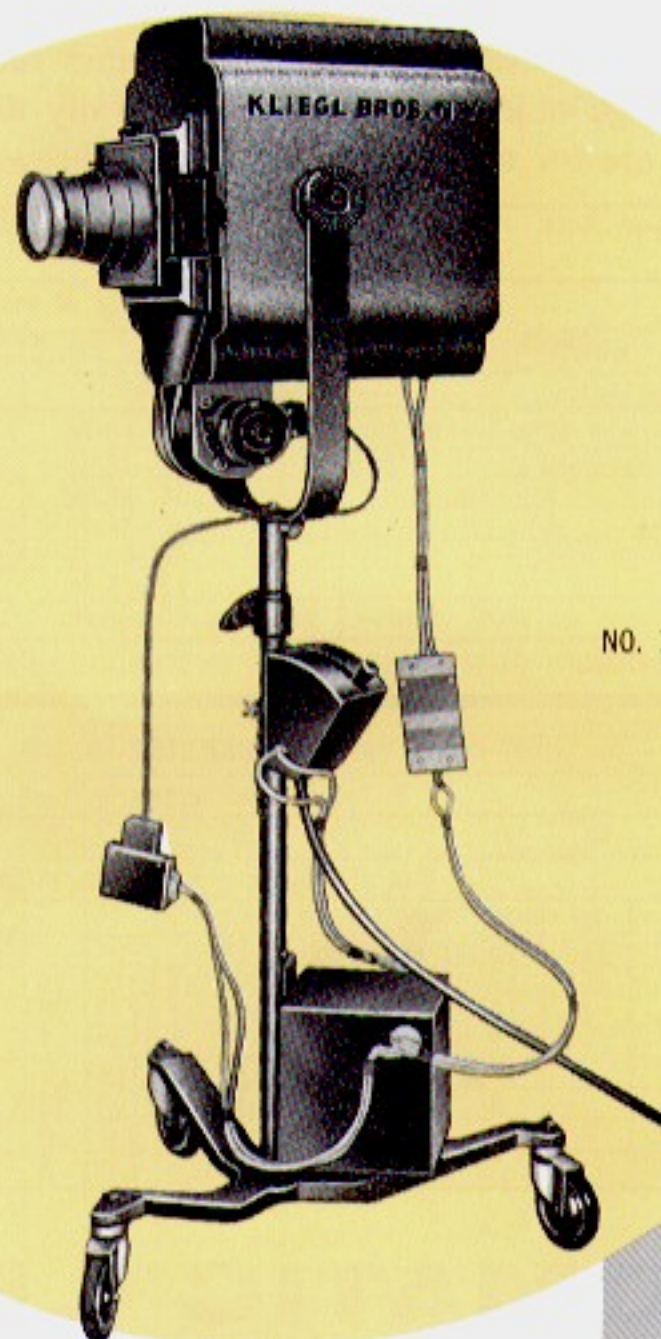


# KLIEGL SCENIC SLIDE PROJECTORS

Precise projection of either hand painted or photographically processed slides. Gives clear sharp detail with no loss of color value. Units have an aluminum and sheet steel housing with hinged top for easy relamping. Excellent ventilation coupled with quiet forced air blower system assures proper lamp life.

## FEATURES:

- Sturdy light weight construction.
- Light tight construction.
- Properly ventilated- quiet blower system.
- Easy relamping & interior inspection.
- Triple condenser lens system.
- Highest quality materials & workmanship.



NO. 1674

## Achromatic Lens Units

Units are equipped with recommended achromatic, color and distortion corrected lens having an approximate one foot beam spread for every one foot of throw.

No. 1674-A — Achromatic lens unit. 2100 watt, 65 volt T24 mogul bipost lamp; equipped with transformer for use on 110 volt A.C., telescopic roller caster stand, 25 feet of cable, pin plug connectors.

No. 1676-A — Achromatic lens unit. 5000 watt, 120 volt T-32 biplane filament bipost base lamp. Equipped with No. 1422 telescopic roller caster stand, 25 feet of cable, pin plug connectors.

## Standard Objective Lens Units

Units are furnished with one focal length lens, (No.'s 280 through 284 found on page 66). Units will also accommodate half size objective lenses No.'s 267 through 275 found on page 66. Half size objective lenses are optional at slight additional cost.

No. 1674 — Same as No. 1674A but with standard objective lens.

No. 1676 — Same as No. 1676A but with standard objective lens.

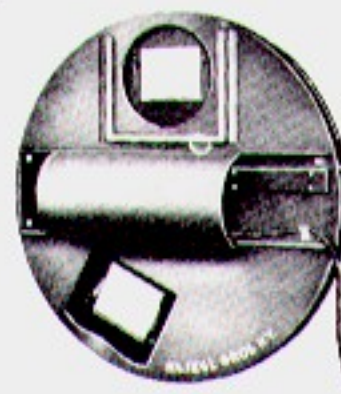
HEAT RESISTING GLASS FOR SLIDES	CAT. NO.	DESCRIPTION
	1683	4" X 3 1/4" — FOR NO. 1674 and NO. 1674A PROJECTORS
	1684	4" X 5" — FOR NO. 1676 and NO. 1676A PROJECTORS

## Automatic Slide Changers

Sturdy light weight, aluminum and sheet steel construction. Equipped with inbuilt positioner switch, to assure proper alignment of slides, A.C. Motor, 3 way wiring and pin-plug connectors. Holds a total of seven slides.

No. 1677 — For use with No. 1674A and No. 1674 projectors. Holds seven 4" x 3 1/4" slides.

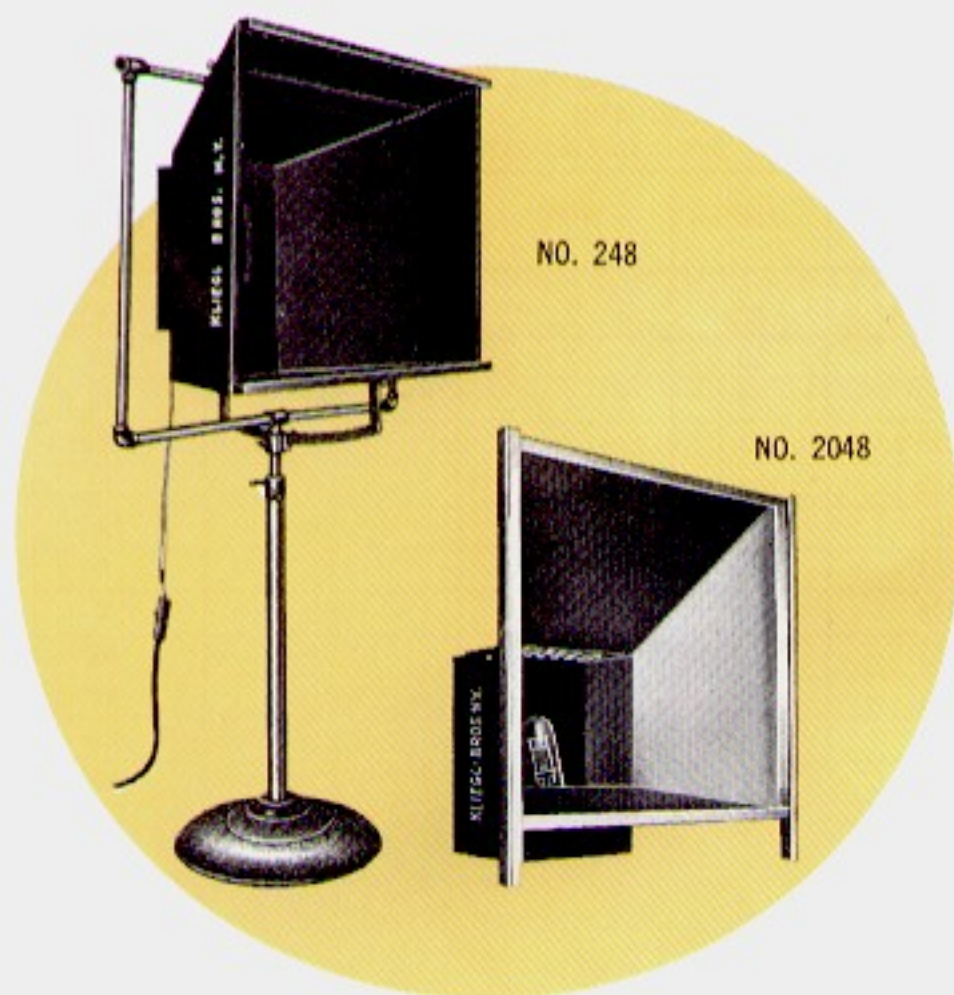
No. 1678 — For use with No. 1676A and No. 1676 projectors. Holds seven 4" x 5" slides.



NO. 1677



# KLIEGL LINNEBACH TYPE SCENIC PROJECTORS



Designed for the projection of scenery on rear curtains or similar large flat areas. Desired scene is painted, or otherwise applied, on a glass slide and is then projected on a curtain or back drop without the use of lenses. Based on the shadow box principle and using a single concentrated light source all colors and designs are clearly projected—outlines are slightly diffused producing a soft-toned appearance. All units wired and furnished with 25 feet of stage cable.

No. 2048 — projects a scene 15 feet wide, from a 15 foot throw. Takes 24" x 24" glass slide and uses a 1000 watt T20, C13D biplane filament mogul prefocus base lamp.

No. 248 — projects a scene 30 feet wide from a 10 foot throw. Takes a 28" x 40" glass slide and uses a 2100 watt 65 volt mogul bipost lamp. Unit equipped with a transformer for use on 110 volt A.C. and 25 feet of stage cable.

## FRAMED SLIDES

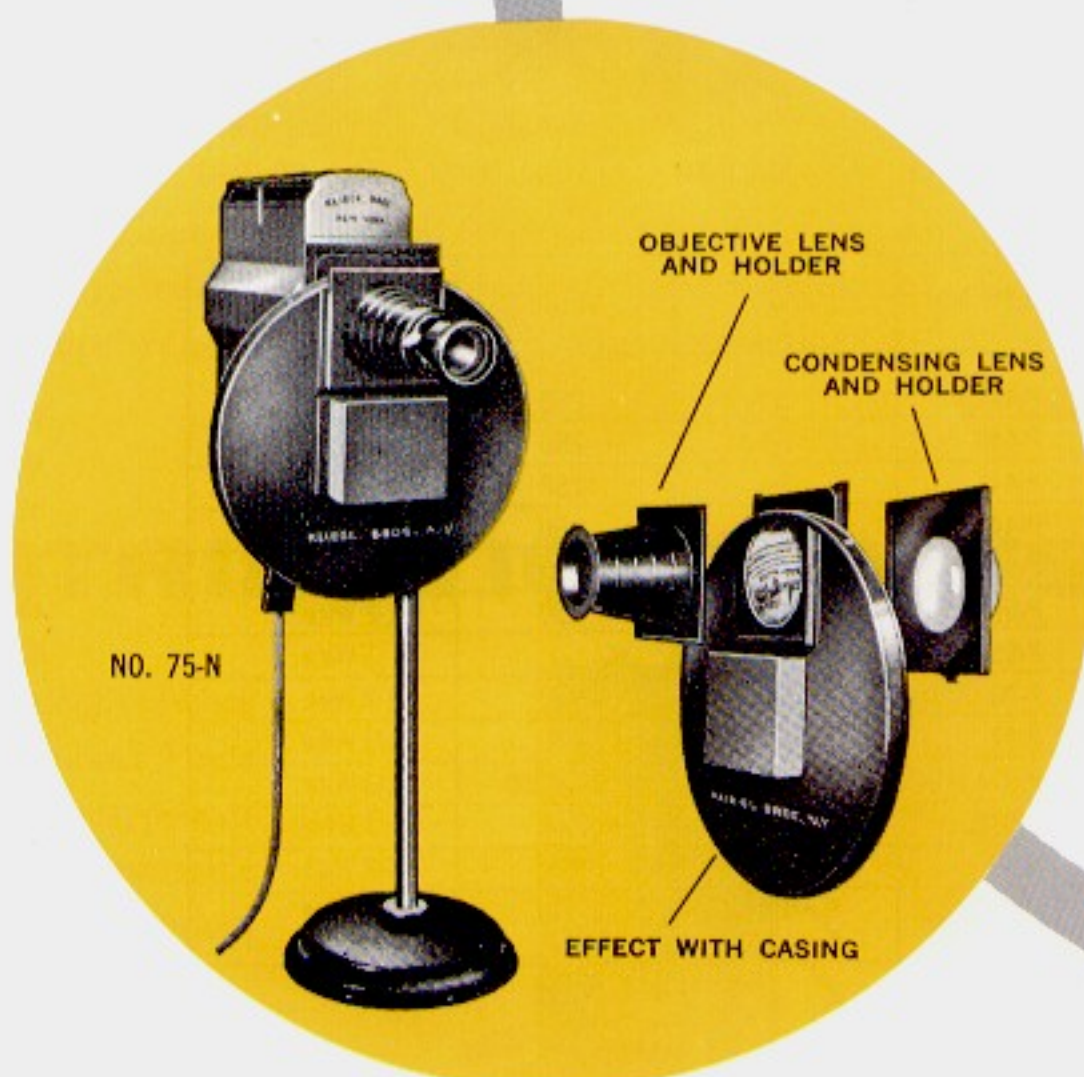
No. 2049 — 24½" x 24½" wooden frame with glass slide for unit No. 2048.

No. 249 — 28½" x 40½" wooden frame with glass slide for unit No. 248.

## SCIOPTICONS Scenic Effect Projectors

Principally used for the production of animated scenic illusions, such as rippling water, moving clouds, rising flames etc., upon a backdrop from rear of stage, side wings or balcony. Unit is designed for use with Kliegl Sciopticon Effects, found on page 67, or is adaptable for slide projection using No. 839 adaptor with slide carrier, as found on page 66.

No. 75N consists of a standard 6N19 Plano-Convex spotlight (which may be used as a regular follow spot when not being used for effects or slides) equipped with a second condensing lens (Dutchman No. 838A) and one objective lens (No. 280-284), heavy base telescopic floor stand, pin-plug connector and 25' of stage cable. Effects or No. 839 Slide Carrier and Adaptor are not included in the base price and must be independently ordered.





# KLIEGL HEAVY-DUTY PLUGS



NO. 301 1/2



NO. 301



NO. 302



NO. 315



NO. 2301



NO. 1301



NO. 4301



NO. 389



NO. 3301

Heavy duty plugs are made in various designs for current capacities ranging from 30 to 400 amperes. They are regularly furnished with Kliegl floor pockets, wall pockets, plugging boxes and similar wiring devices, but extra plugs or replacements are occasionally required.

Standard plugs in different arrangements, with flat-blade contactors on a solid fibre insulating body. Cable extends through handle, well into the body of the plug and is held by a ridged metal clamp which grips the cable firmly and eliminates strain on terminal connections. Contact strips are of heavy-gauge copper, one fixed in position, the other floating and backed with a spiral spring to insure perfect sliding contact at all times.

CATALOG NO.	AMP	WIRE	VOLTS	TYPE
301 1/2 *	30	2	250	R
301 *	50	2	250	NR
302 *	30	2	250	NR
315 *	30	2 & GD.	250	NR
389	100	2	250	R
1301	100	2	250	R
4301	200	2	125	R
328	400	2	250	R
2301	30	3	125/250	NR
2302	50	3	125/250	NR
3301	100	3	125/250	NR
323	200	3	125/250	NR
325	400	3	125/250	NR

\* U/L APPROVED, TYPE: R—REVERSIBLE, NR—NON-REVERSIBLE

## PLUG RECEPTACLES



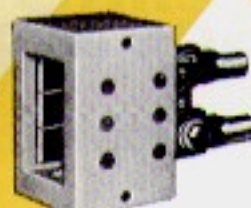
NO. P-445



NO. P-447



NO. P-448



NO. P-93



NO. P-95



NO. P-96



NO. P-97A



NO. P-97

CATALOG NO.	AMP	VOLTS	NO. OF CIRCUITS
P-447	30	250	2-2 Wire
P-448	30	250	2-2 Wire
P-445	30	250	1-2 Wire & GD.
P-449	50	250	1-2 Wire
P-95	50	250	1-2 Wire
P-95A	50	250	1-2 Wire
P-95C	100	—	1 Wire
P-96	50	250	1-2 Wire
P-97	100	250	1-2 Wire
P-97A	30	125/250	1-3 Wire
P-97C	200	—	1 Wire
P-93	200	125	1-2 Wire
P-93C	400	—	1 Wire

Used primarily as a structural part of Kliegl stage pockets, wall pockets, plugging boxes, portable dimmer boxes and the like. These plug receptacles are supplied separately for purposes of repair and replacement of equipment in service. Each receptacle is furnished as a complete unit, ready for installation. Consists of a one-piece porcelain mounting block with copper contact parts and wiring plugs attached.



# KLIEGL PANEL POCKETS

Panel pockets consist of several heavy duty Kliegl plug receptacles wired to a branch cutout or service panel housed in a suitable metal enclosure. These plug receptacles, individually fused, provide convenient service outlets for connecting spotlights, sciopticons, stereopticons, portable motor driven tools and other lighting equipment or electrical apparatus requiring considerable current.

Used primarily in theatre balconies, on borderlight bridges, in projection booths, photographic studios, machine shops, etc.

Fitted with two, four or more Kliegl plug receptacles and a fused distribution panel enclosed in a steel cabinet having a hinged door with a snap lock. Main bus bars are arranged for either two or three wire service feeders. The two wire branch outlets are individually fused with cartridge fuses. They are furnished fully wired, complete with fused end plugs. Panel pockets with a greater number of outlets, or with polarized plugs, or other arrangements than those listed can be supplied to meet special requirements.



NO. 374

CATALOG NUMBER	NO. OF OUTLETS	AMP. PER OUTLET	VOLTS	PLUG NO.
2-WIRE MAIN: 2-WIRE OUTLETS				
371-2*	4	30	120	301½
375-2*	8	30	120	301½
3-WIRE MAIN: 2-WIRE OUTLETS				
371-3*	4	30	120	301½
375-3*	8	30	120	301½
372	2	50	250	301
374	4	50	250	301

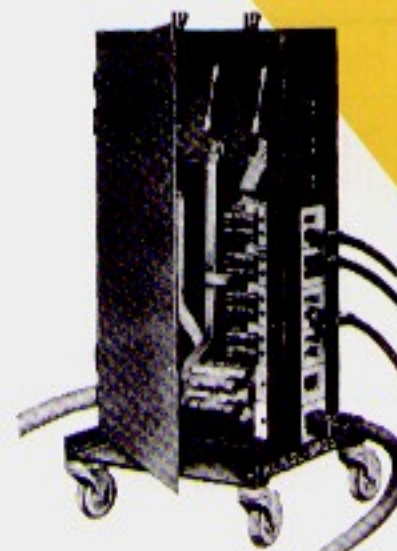
\* U/L APPROVED

## POWER SERVICE OUTLETS

Portable extensions with extra heavy duty plugging facilities, for servicing large current consuming devices such as motor driven equipment, welding machines, etc., are manufactured to meet individual requirements. Designs for 3-phase 4-wire service with outlets up to 200 amps. capacity available. Prices on application.

## PORTABLE DISTRIBUTION UNITS

Portable control units with plugging facilities and control switches are manufactured to meet individual job specifications. Units usually contain Steel Cabinet, main and selective switches, proper fusing, desired number of plug outlets of required sizes, portable roller caster stand and required feeder cable. Prices on application.



TYPICAL UNIT



# KLIEGL STAGE FLOOR POCKETS

Stage floor pockets are set flush in the floor providing outlets for the connection of portable lamps and other electrical devices. They consist of a sturdy sheet iron box with a reinforced cast iron surface plate that has a molded safety tread. The cover has a hinged selfclosing, notched door (for cable passage) which will not accidentally open if stepped on. Outlets are properly set at an angle to prevent dirt from accumulating therein. All floor pockets are furnished with proper plugs.

## Stage Floor Pockets — PLUG TYPE NOT GROUNDED



CATALOG NUMBER	PLUG OUTLETS	RATING AMP/OUTLET	VOLTS	PLUG NUMBER
2 WIRE OUTLETS: NO GROUND				
351*	1	50	250	301
352*	2	1-25 1-50	250 250	302 301
353*	3	25	250	302
354*	4	25	250	302
348*	2	30	250	301½
349*	4	30	250	301½
350*	6	30	250	301½
1350*	1	100	250	1301
4350	1	200	250	4301
3 WIRE OUTLETS: NO GROUND				
3350	1	100	110/220	3301
3352	1	150	110/220	323

## GROUNDED

CATALOG NUMBER	PLUG OUTLETS	RATING AMP/OUTLET	VOLTS	PLUG NUMBER
355	1	30	250	315
356	2	30	250	315
357	3	30	250	315
358	4	30	250	315

## DIMENSIONS AND WEIGHTS

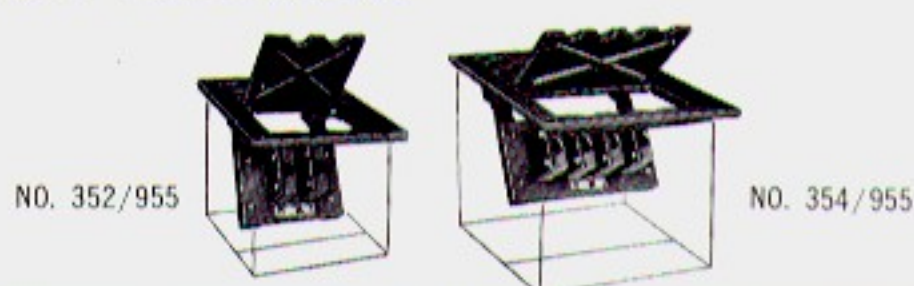
CAT. NO.	348	349	350	351	352	353	354	355	356	357	358	1350	3352	4350
A	6⅞"	9¼"	12"	6⅞"	9¼"	12"	14½"	6⅞"	9¼"	12"	14½"	6⅞"	9¼"	9¼"
B	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"	11⅞"
C	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"
D	5"	7⅞"	10¼"	5"	7⅞"	10¼"	13⅜"	5"	7⅞"	10¼"	13⅜"	5"	7⅞"	7⅞"
E	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"	9⅞"
WGHT. LBS.	19	31	38	17	27	32	38	17	22	32	38	22	38	36

Nos. 351/955, 351/955G, 352/955 and 352/955G — same dimensions as No. 351.

Nos. 353/955, 353/955G, 354/955 and 354/955G — same dimensions as No. 352.

\* U/L approved.

## Stage Floor Pockets — CONNECTOR TYPE NOT GROUNDED



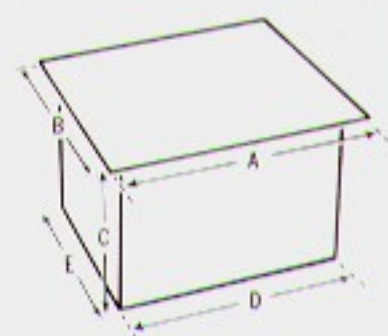
CATALOG NUMBER	PLUG OUTLETS	RATING AMP/OUTLET	VOLTS	CONNECTOR NUMBER
2 WIRE OUTLETS: NO GROUND				
351/955	1	20	250	955
352/955	2	20	250	955
353/955	3	20	250	955
354/955	4	20	250	955

## GROUNDED

CATALOG NUMBER	PLUG OUTLETS	RATING AMP/OUTLET	VOLTS	CONNECTOR NUMBER
351/955G	1	20	125	955G
352/955G	2	20	125	955G
353/955G	3	20	125	955G
354/955G	4	20	125	955G

## WATERPROOF FLOOR POCKETS

Waterproof floor pockets having a special cover which prevents water, dirt, sweepings, etc. from entering the receptacle are available in individual outlet ratings of from 30 to 100 amperes. Prices on application.

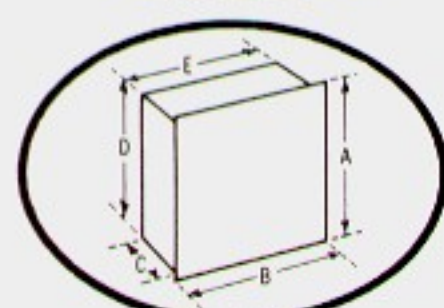
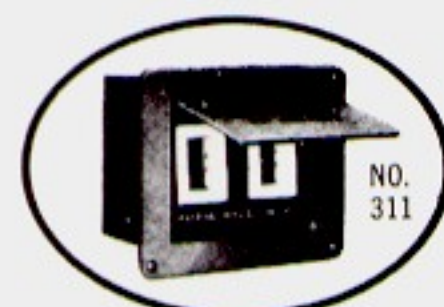
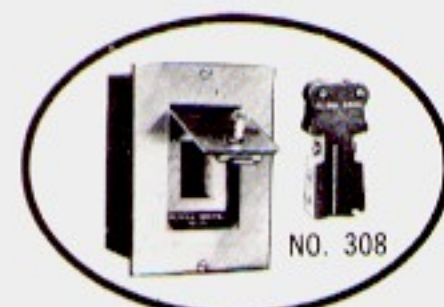
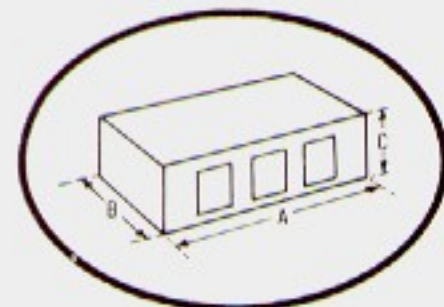
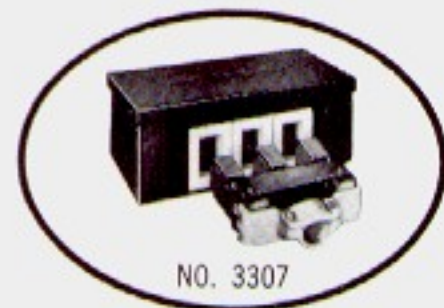
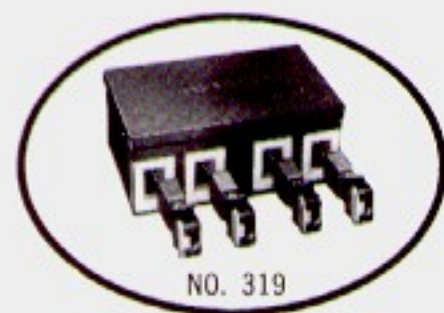




# KLIEGL WALL POCKETS

Wall pockets provide plugging service **outlets** where temporary heavy circuit connections are required. Surface types are intended for **mounting** on the face of a wall. Flush types are intended for recessed installation. All pockets are furnished complete with proper plugs.

## Surface Wall Pockets



CATALOG NO.	OUTLETS	WIRE	AMPS	VOLTS	PLUG NO.	A	B	C	WGHT-LBS.
2-WIRE OUTLETS: NO GROUND									
307	1	2	50	250	301	4 3/8"	6"	2 1/2"	2 1/2
317	2	2	50	250	301	11"	7 1/4"	5"	9 1/2
318	3	2	50	250	301	11"	7 1/4"	5"	10 1/2
319	4	2	50	250	301	11"	7 1/4"	5"	11
1307†*	1	2	100	250	1301	5"	6"	3 3/4"	4 1/2
4307†	1	2	200	125	4301	11"	7 1/4"	5"	11
327†	1	2	400	125	328	15"	11"	6"	20
3-WIRE OUTLETS: NO GROUND									
2307	1	3	30	125/250	2301	5"	6 1/4"	3 3/4"	4 1/2
2308	1	3	50	125/250	2302	11"	7 1/4"	5"	10
3307†*	1	3	100	125/250	3301	11"	7 1/4"	5"	10 1/2
322†	1	3	200	125/250	323	15"	11"	6"	20
324†	1	3	400	125/250	325	18"	12"	8"	26
2-WIRE OUTLETS: PLUS GROUND									
366	1	2G	30	250	315	5"	6"	3 3/4"	5
367	2	2G	30	250	315	11"	7 1/4"	5"	9 1/2
368	3	2G	30	250	315	11"	7 1/4"	5"	10 1/2
369	4	2G	30	250	315	11"	7 1/4"	5"	11
2307G	1	2G	60	250	2301G	5"	6 1/4"	3 3/4"	5
4307G†	1	2G	100	250	4301G	11"	7 1/4"	5"	12

## Flush Wall Pockets

CATALOG NO.	OUTLETS	WIRE	AMPS	VOLTS	PLUG NO.	A	B	C	D	E	WGHT-LBS.
2-WIRE OUTLETS: NO GROUND											
308§§	1	2	50	250	301	7 1/2"	5"	3 3/4"	6 1/4"	4 1/2"	6 1/4
309§	1	2	50	250	301	7 1/2"	5"	3 3/4"	6 1/4"	4 1/2"	6 1/4
310*	1	2	50	250	301	7 1/2"	5"	3 3/4"	6 1/4"	4 1/2"	7 1/4
311*	2	2	50	250	301	7 1/2"	9"	4"	6 1/2"	7 3/4"	8 1/4
312	3	2	50	250	301	7 1/2"	10 1/2"	4 3/4"	6 1/4"	8 1/2"	9
313	4	2	50	250	301	7 1/2"	12 1/2"	4 1/2"	6 1/4"	11"	11
1310†*	1	2	100	250	1301	7 1/2"	6 3/4"	6 1/4"	6"	5 1/4"	10
4310†	1	2	200	250	4301	7 1/2"	9"	7"	6 1/2"	7 3/4"	12
3-WIRE OUTLETS: NO GROUND											
2310	1	3	30	125/250	2301	7 1/2"	6 3/4"	6 1/4"	6"	5 1/4"	10
2311	1	3	50	125/250	2302	7 1/2"	10 1/2"	4 3/4"	6 1/4"	8 1/2"	10
3310†	1	3	100	125/250	3301	7 1/2"	10 1/2"	6"	6"	8 1/2"	12
3311†	1	3	200	125/250	323	7 1/2"	12 1/2"	8"	6 1/4"	11"	24
2-WIRE OUTLETS: PLUS GROUND											
361	1	2G	30	250	315	7 1/2"	6"	3 3/4"	6 1/4"	4 1/2"	8
362	2	2G	30	250	315	7 1/2"	9"	4"	6 1/2"	7 3/4"	8 1/2
363	3	2G	30	250	315	7 1/2"	10 1/2"	4 3/4"	6 1/4"	8 1/2"	9 1/2
364	4	2G	30	250	315	7 1/2"	12 1/2"	4 1/2"	6 1/4"	11"	11 1/2
2310G	1	2G	60	250	2301G	7 1/2"	6 3/4"	6 1/4"	6"	5 1/4"	12
4310G†	1	2G	100	250	4301G	7 1/2"	9"	7"	6 1/2"	7 3/4"	14

\* - U/L Approved    §§ - Brass face plate with lock & key.    § - Brass face plate without lock.  
 † - For use in series with switches and not for closing or opening circuits under load.

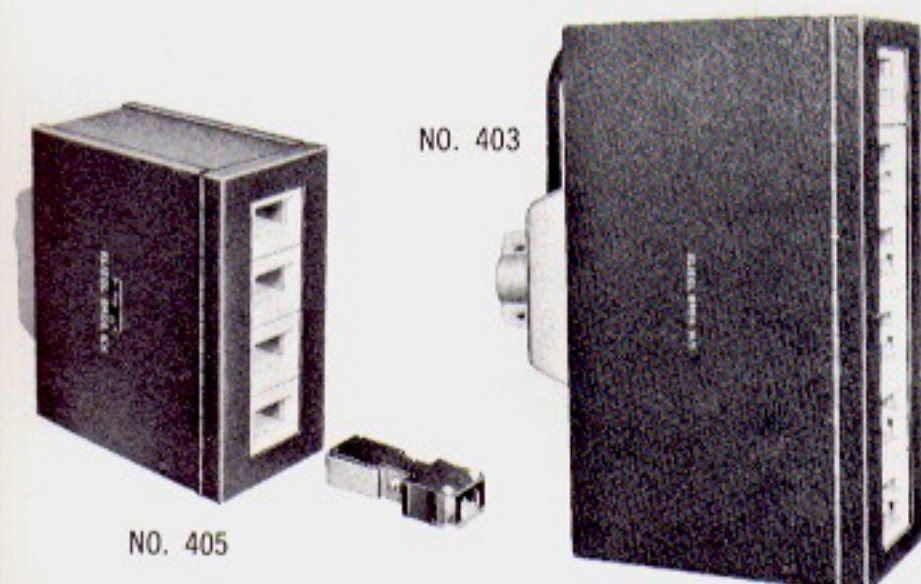


# KLIEGL PLUGGING BOXES

Portable plugging boxes provide individually fused outlets for quickly and conveniently connecting several lighting units or electrical devices to a single feeder. Designed so as to be permanently attached to one end of a flexible feeder cable. Plugs or connectors, of the proper rating and type, are furnished with all boxes. Special cable clamp prevents strain on terminal connection when box is dragged over the floor. Designed for rough usage.

## Plug Type - Cartridge Fuses\*

NOT GROUNDED



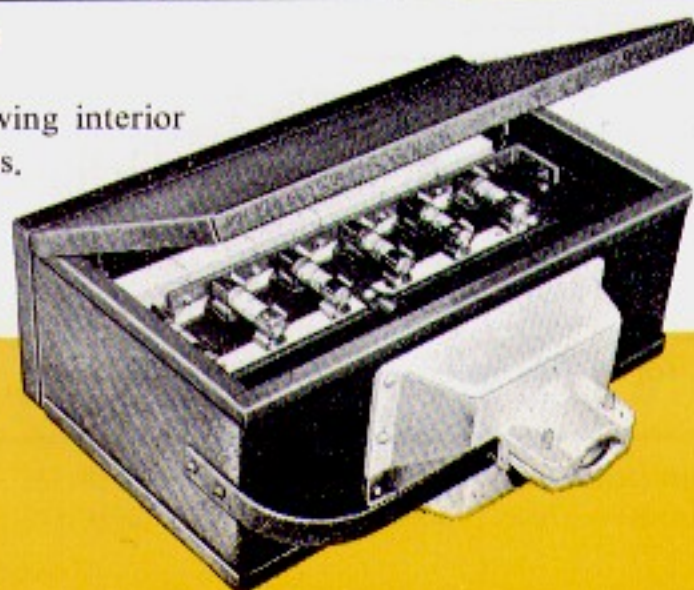
CATALOG NO.	OUTLETS	AMPS/OUTLET	VOLTS	PLUG NO.
2-WIRE MAIN: 2-WIRE OUTLETS				
346-2	6	30	250	301½
401	12	30	250	301½
404	4	60	250	301
406	6	60	250	301
3-WIRE MAIN: 2-WIRE OUTLETS				
346-3	6	30	250	301½
403	12	30	250	301½
405	4	60	250	301
407	6	60	250	301

## GROUNDED

CATALOG NO.	OUTLETS	AMPS/OUTLET	VOLTS	PLUG NO.
2-WIRE PLUS GROUND MAIN: 2-WIRE PLUS GROUND OUTLETS				
474	4	30	250	315
476	6	30	250	315
3-WIRE PLUS GROUND MAIN: 2-WIRE PLUS GROUND OUTLETS				
475	4	30	250	315
477	6	30	250	315

\*-U/L Approved

No. 477 showing interior cartridge fuses.



## Connector Type - Circuit Breaker Protection

NOT GROUNDED



CATALOG NO.	OUTLETS	AMPS/OUTLET	VOLTS	CONNECTOR NO.
2-WIRE MAIN: 2-WIRE OUTLETS				
456	6	20	250	955
457	6	30	250	956
3-WIRE MAIN: 2-WIRE OUTLETS				
456-3	6	20	250	955
457-3	6	30	250	956

## GROUNDED

CATALOG NO.	OUTLETS	AMPS/OUTLET	VOLTS	CONNECTOR NO.
2-WIRE PLUS GROUND MAIN: 2-WIRE PLUS GROUND OUTLETS				
456G2	6	20	125	955G
457G2	6	30	250	956G
3-WIRE PLUS GROUND MAIN: 2-WIRE PLUS GROUND OUTLETS				
456G3	6	20	125	955G
457G3	6	30	250	956G
4-WIRE PLUS GROUND MAIN: 2-WIRE PLUS GROUND OUTLETS				
456G4	6	20	125	955G
457G4	6	30	250	956G

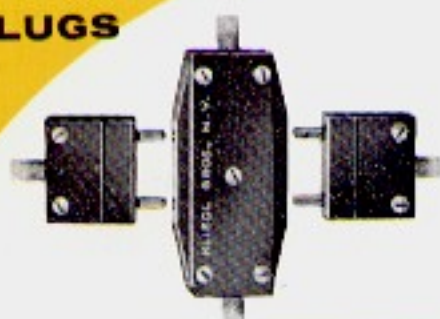


# KLIEGL CONNECTORS (CONT.)

## Double Branch-Off

WITH TWO PLUGS

NO. 995

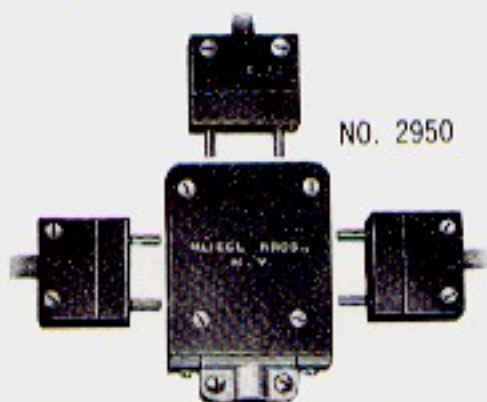


CATALOG NUMBER	OUTLETS	AMPS.	VOLTS	CABLE NUMBER		STYLE
				OUTLET	MAIN	
995*	2, 2-wire	5	250	14	12	R

## Multiple Circuit

2 WIRE MAIN  
3-2 WIRE OUTLETS

NO. 2950

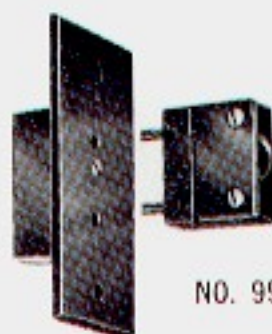


Spring catch for connectors can be furnished at additional cost.

CATALOG NUMBER	AMPS.		VOLTS	CABLE NUMBER		STYLE†
	OUTLETS	MAIN		OUTLETS	MAIN	
2950*	5	15	250	14	12	R
2955*	15	45	250	14	8	R

## Wall Outlets

Other arrangements, for two, three or four plugs, or for connector with three or more poles can be furnished to suit requirements. Prices on application.



NO. 999

CATALOG NO.	AMPERES	VOLTS	CABLE NO.	STYLE†
999	5	250	14	R
999-N	5	250	14	NR
1000	15	250	12	R
1000-N	15	250	12	NR
1001	30	125	10	R
1001-N	30	125	10	NR

## Armored-Cable



NO. 977

CATALOG NO.	AMPERES	VOLTS	CABLE NO.	STYLE†
977	15	250	14BX	R

## Chandelier Connectors

NON-AUTOMATIC TYPE



NO. 998

Consists of several Klieg No. 950 connectors assembled in a metal box, with passage for wires and sliding cover. Made for three or four circuits, but can be furnished for greater number of circuits if required.

CATALOG NO.	CIRCUITS	AMPS/CIRCUIT	VOLTS
997	3, 2-wire	5	125
998	4, 2-wire	5	125

AUTOMATIC TYPE

Consists of a ceiling mounted, fixed connector housing and a traveling plug connector. When the chandelier is dropped for relamping or cleaning, the traveling plug connector is withdrawn from the stationary housing and contact is automatically broken. When chandelier is raised, contact is automatically made when proper height is reached.



NO. 996B

CATALOG NO.	CIRCUITS	AMPS/CIRCUIT	VOLTS
996A	1, 2-wire	30	250
996B	1, 3-wire	30	250
996C	1, 4-wire	30	250

## Battery-Charging



NO. 965

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE
965*	50	125	6 Duplex	NR

\* U/L approved. Styles: R—reversible, NR—non-reversible.

† Reversible styles listed can be furnished polarized, non-reversible, fitted with fibre pin, at additional cost.



# KLIEGL CONNECTORS (CONT.)

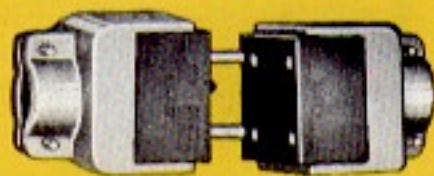
## Three-Pole



NO. 3950

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE‡
3950*	5	125-250	14	R
3955*	20	125-250	12	R
3956*	30	125-250	10	NR
3957*	60	125-250	4	NR
3958†	100	125-250	1	NR
3959†	DISCONTINUED			

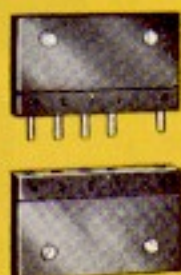
## Four-Pole



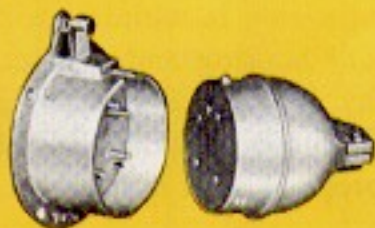
NO. 4950

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE‡
4950	5	125-250	14	NR
4955	20	125-250	12	NR
4956	30	125-250	10	NR
4957	60	125-250	4	NR
4958†	100	125-250	1	NR

## Multi-Pole



NO. 5950



NO. 5950-C



NO. 6950-A



NO. 8950-A

CAT. NO.	AMPS.	VOLTS	STYLE	SHAPE
FIVE-POLES				
5950	5	250	NR	Flat
5950-A	5	125	NR	Round
5950-B§	5	125	NR(F)	Round
5950-C§	5	125	NR(M)	Round
SIX-POLES				
6950	5	250	NR	Flat
6950-A	5	125	NR	Round
6950-B§	5	125	NR(F)	Round
6950-C§	5	125	NR(M)	Round
EIGHT-POLES				
8950-A	5	125	NR	Round
8950-B§	5	125	NR(F)	Round
8950-C§	5	125	NR(M)	Round

## Grounded Connectors

These units have the customary number of poles plus an additional pin with terminal provisions for the extra ground wire inherent in such systems. They are similar to standard Kliegl connectors except for this added feature.



NO. 955-G

## Two-Pole PLUS GROUND

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE‡
955G*	20	125	12	NR
956G*	30	250	10	NR
957G*	60	250	4	NR
958G*	100	250	1	NR

## Three-Pole PLUS GROUND

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE‡
3957G*	60	125/250	4	NR
3958G*	100	125/250	1	NR

## Four-Pole PLUS GROUND

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE‡
4957G*	60	125/250	4	NR

\* U/L approved.

† For use in series with switches, and not for closing or opening circuits under load.

‡ R—Reversible, NR—non-reversible. Reversible styles listed can be furnished polarized non-reversible, fitted with fibre pin inserts, at additional cost.

§ For wall mounting (F) Female receptacle (M) Male receptacle. Fibre insulating components on all above. Aluminum casing on all multi-pole connectors except Nos. 5950 and 6950.



# KLIEGL CONNECTORS . . .

For over 50 years, Klieg Pin-Plug Connectors have been the standard for use in theatres, studio, showrooms, garages and industrial plants. Durable — practically indestructible — made only of the finest materials, with electrical capacity far above the U/L approval requirements. Tension exerted by the split male pins, whose close fit and "sweeping action" assures self clearing, low resistance, positive contacts. Listings are of standard sizes. Special units can be made to meet individual job requirements.

## Single-Pole



NO. 972

CAT. NO.	AMPS.	VOLTS	CABLE NO.
FIBRE INSULATING COMPONENTS			
971	5	250	14
972	15	250	12
973	30	250	10
PHENOLITE INSULATING COMPONENTS			
974	60	250	4
975†	100	250	1
976†	200	250	000

## Two-Pole



5 AMP  
NO. 950



15 AMP  
NO. 955



30 AMP  
NO. 956



60 AMP  
NO. 957



100 AMP  
NO. 958

### REGULAR TYPE—DUPLEX CABLE BOTH ENDS

MALE END "LOAD" FEMALE END "LINE"

DUPLEX  
CABLE



DUPLEX  
CABLE

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE†
950*	5	250	14	R
955*	20	250	12	R
956*	30	250	10	R
957*	60	250	4	R
957N*	60	125	4	NR
958*†	100	250	1	NR
959*†	200	250	000	NR

\* U/L approved.

† For use in series with switches, and not for closing or opening circuits under load.

### TWO POLE CONT.

A. C. TYPE: DUPLEX CABLE ONE END, PAIR SINGLE CONDUCTORS OTHER END

TWO SINGLE  
CONDUCTORS



DUPLEX  
CABLE

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE†
950-A. C.	5	250	14	R
955-A. C.	20	250	12	R
956-A. C.	30	250	10	R
957-A. C.	60	250	4	R
958-A. C.†	100	250	1	R

### A. A. TYPE: PAIR SINGLE CONDUCTORS BOTH ENDS

TWO SINGLE  
CONDUCTORS



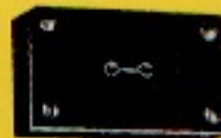
TWO SINGLE  
CONDUCTORS

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE†
950-A. A.	5	250	14	R
955-A. A.	20	250	12	R
956-A. A.	30	250	10	R
957-A. A.	60	250	4	R
958-A. A.†	100	250	1	R

### TWO-POLE WITH SPRING CATCH

REGULAR TYPE—DUPLEX CABLE BOTH ENDS

NOTE THIS SPRING



NO. 1950

CAT. NO.	AMPS.	VOLTS	CABLE NO.	STYLE†
1950*	5	250	14	R
1955*	20	250	12	R
1956*	30	250	10	R

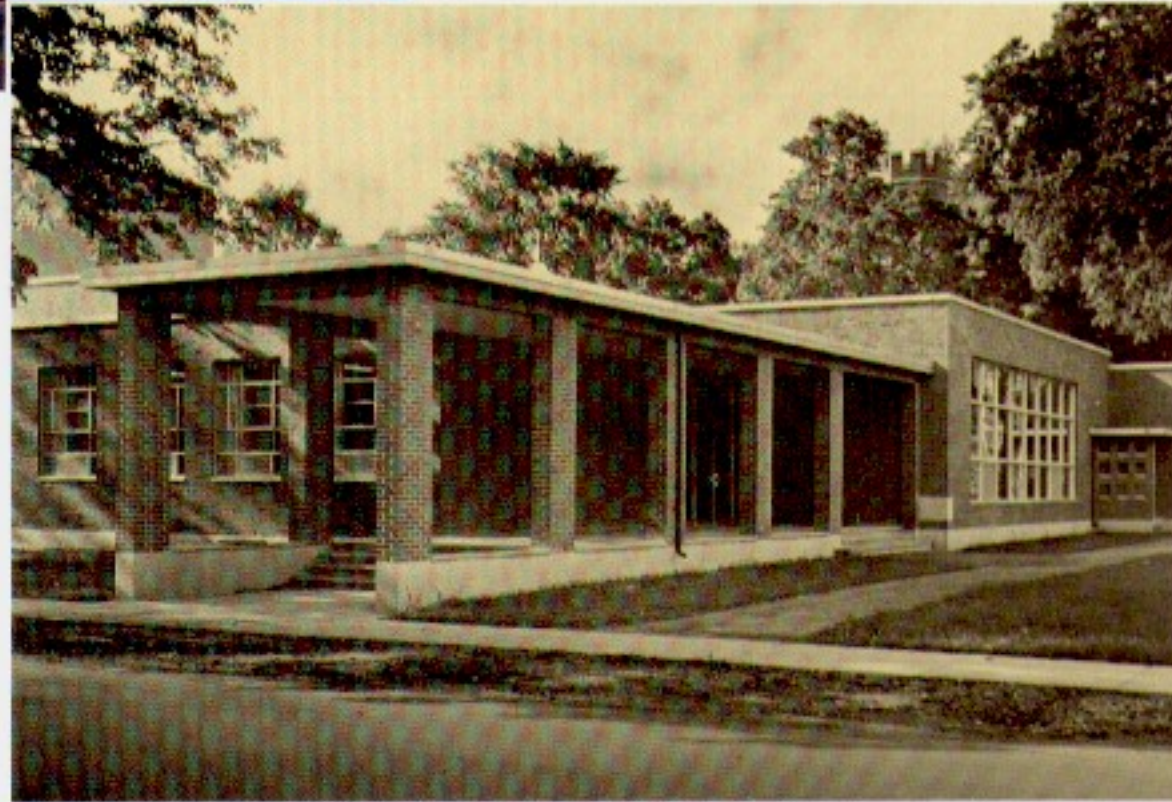
‡ R—reversible; NR—non-reversible. Reversible styles listed can be furnished, polarized non-reversible, fitted with fibre pin, at additional cost.

All two pole connectors have fibre insulating components. Aluminum collar regularly furnished on heavy duty connectors Nos. 957N, 958, 959.





WESTFIELD HIGH SCHOOL  
WESTFIELD, NEW JERSEY



ELMIRA COLLEGE ACTIVITIES BUILDING  
ELMIRA, NEW YORK  
Fudge & Underhill, Architects & Engineers



CHRIST THE KING SCHOOL  
HILLSIDE, NEW JERSEY  
William Mitchell, Architect

- State University Teachers College  
Geneseo, New York
- Alice Statler Auditorium  
Cornell University  
Ithaca, New York
- Stevens Institute of Technology  
Theatre  
Hoboken, New Jersey
- South Providence Elementary School  
Providence, Rhode Island

- Student Union  
Centenary College  
Shreveport, Louisiana
- Summit High School  
St. Francis Xavier  
Newark, New Jersey
- Teatro Maduro  
Honduras, C. A.
- Temple Beth-el  
Providence, Rhode Island
- Toledo Zoo Amphitheatre  
Toledo, Ohio
- U. N. Building  
New York City, N. Y.

- Uniondale High School  
Hempstead, Long Island
- Vienna Opera House  
Vienna, Austria
- War Memorial Auditorium  
Rochester, New York
- Westfield High School  
Westfield, New Jersey
- Woodland Junior High School  
East Meadow, Long Island
- York Community High School  
Elmhurst, Illinois



ALICE STATLER AUDITORIUM  
 CORNELL UNIVERSITY  
 ITHACA, NEW YORK  
 Holabird & Root & Burgee, Architects



ROCHESTER WAR MEMORIAL  
 ROCHESTER, NEW YORK  
 Kaelber & Waasdorp, Architects



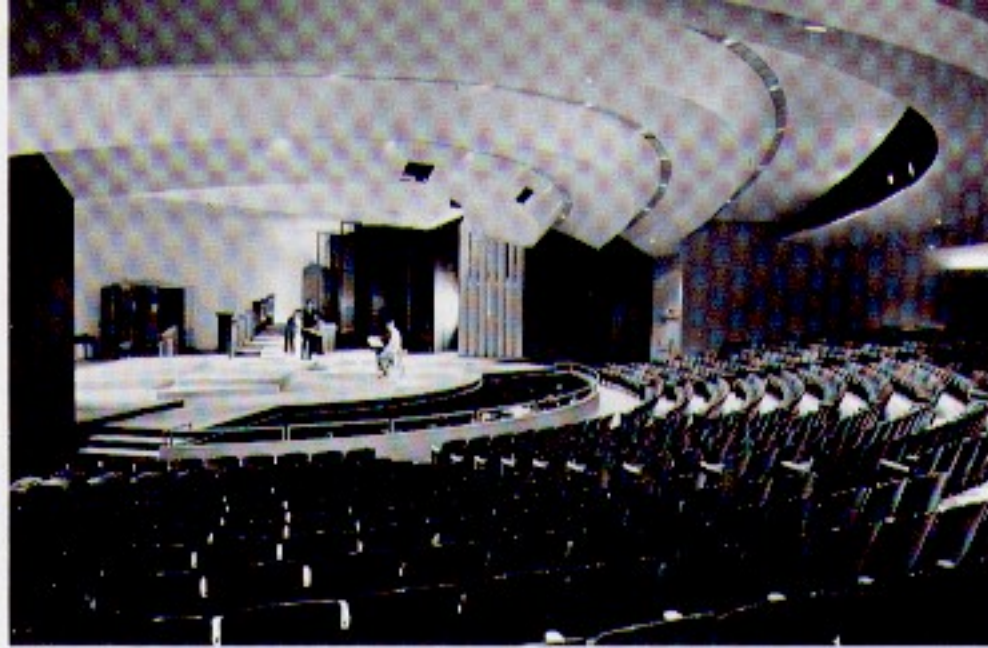
UNITED NATIONS BUILDING  
 NEW YORK CITY



## A PARTIAL LIST OF OUR DISTINGUISHED CLIENTELE (cont.)

- National Institute for the Blind  
Toronto, Canada
- Newton High School  
Newton, New Jersey
- New York City Center  
New York City, N. Y.
- New York High School of Printing  
and Architectural Drawing  
New York City, N. Y.
- North High School  
Tucson, Arizona
- Notre Dame School  
Elmira, New York
- Parkland School  
Siegersville, Pennsylvania
- Passaic Senior High School  
Passaic, New Jersey
- Pope Pius XII High School  
Passaic, New Jersey
- Presentation Hall  
Columbus & Southern Ohio  
Electric Co.  
Columbus, Ohio
- Public Service Gas & Electric Co.  
Auditorium  
Newark, New Jersey
- Radio City Music Hall  
New York City, N. Y.
- River Road Elementary School  
Wilmington, Delaware
- Rivoli Theatre  
New York City, N. Y.
- Roxy Theatre  
New York City, N. Y.
- Saint Stanislaus Noviate  
Lenox, Massachusetts
- Scotch Plains High School  
Scotch Plains, New Jersey
- Stanford University  
Music Building  
Stanford, California



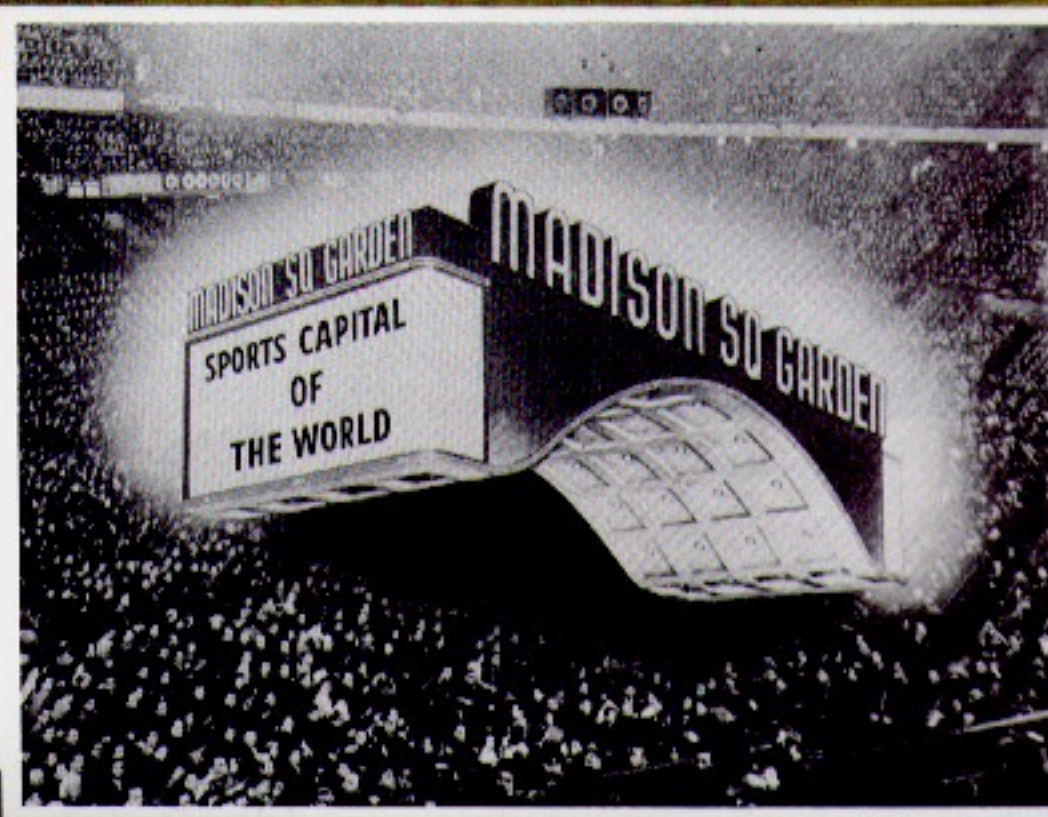


STANFORD UNIVERSITY AUDITORIUM  
STANFORD, CALIFORNIA  
Pflueger, Spencer & Ambrose, Architects



EWING TOWNSHIP HIGH SCHOOL  
TRENTON, NEW JERSEY  
Micklewright & Mountford, Architects

MADISON SQUARE GARDEN  
NEW YORK CITY



- Glen Ridge High School  
Glen Ridge, New Jersey
- Hofstra College  
Hempstead, L. I., N. Y.
- Huron Auditorium Arena  
Huron, South Dakota
- Immaculate Conception  
High School  
Lodi, New Jersey
- Immaculate Heart of  
Mary Church  
Maplewood, N. J.
- Kapaun Memorial High School  
Wichita, Kansas
- Kennett Square High School  
Kennett Square, Pennsylvania

- Lago High School  
Aruba, Netherland West Indies
- Lakewood High School  
Lakewood, New Jersey
- Linmoor Junior High School  
Columbus, Ohio
- Little Theatre  
Charlotte, N. C.
- Livingston High School  
Livingston, New Jersey
- Madison Square Garden  
New York City, N. Y.
- Maryland of the Oranges  
High School  
South Orange, New Jersey

- Marymount College  
Speech & Theatre Building  
Salinas, Kansas
- Miami University Theatre  
Oxford, Ohio
- Middletown High School  
Middletown, New Jersey
- Midland Community Theatre  
Midland, Texas
- Millburn Senior High School  
Millburn, New Jersey
- Morris Hills Regional  
High School  
Morristown, New Jersey



**KLIEGL  
THEATRICAL  
LIGHTING  
UNITS ARE  
SPECIALLY  
DESIGNED  
TO PROVIDE  
UTMOST  
EFFICIENCY AND  
FLEXIBILITY**

Through the past 63 years we have endeavored to supply our customers with the finest, most modern, best designed and constructed equipment available. The thousands of lighting installations we have done and the discriminating list of our clientele is indicative that we have accomplished this fact in the past. We assure you that we shall continue this aim in the future.

A contributing factor in a Kliegl installation is the effort of our famous planning service which works in cooperation with architects, engineers, consultants and the eventual purchaser of the equipment. This mutual effort insures the use of the most efficient and modern components and designs, and results in an installation precisely tailored to the customers' exacting requirements.

Shown on the following pages are a representative grouping, taken at random, of a few of our most recent installations. We trust no one will feel slighted if their project is not included, but space does not permit us to list all of the jobs of which we are proud.



THOMAS A. EDISON JR.-SR. HIGH SCHOOL  
ELMIRA HEIGHTS, NEW YORK  
Fudge & Underhill, Architects & Engineers

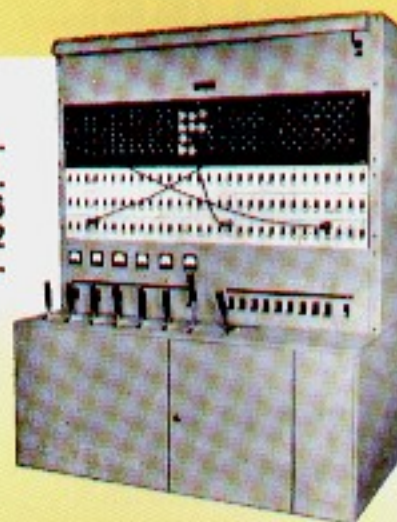
**A PARTIAL LIST OF OUR DISTINGUISHED CLIENTELE**

- Abington Township High School  
Abington, Pennsylvania
- American Academy of  
Dramatic Arts  
New York City, N. Y.
- Bowdoin College  
Theatre Building  
Brunswick, Maine
- Carrcroft School  
Wilmington, Delaware
- Centenary College Playhouse  
Shreveport, Louisiana
- Christ the King School  
Hillside, New Jersey
- Church of the Assumption  
Morristown, New Jersey
- Clark Regional High School  
Clark, New Jersey
- Coke Place Junior High School  
Linden, New Jersey
- Consistory Hall  
Scottish Rite Temple  
Trenton, New Jersey
- Dayton High School  
Dayton, Virginia
- East Side School  
Newark, New Jersey
- Eastern New Mexico University  
Portales, New Mexico
- Thomas Edison Junior  
High School  
Elmira Heights, New York
- Elmira College Theatre  
Elmira College  
Elmira, New York
- Emerson School  
Plainfield, New Jersey
- Ewing Township High School  
Trenton, New Jersey
- Freehold Regional High School  
Freehold, New Jersey
- Georgia State College for Women  
College Theatre  
Milledgeville, Georgia

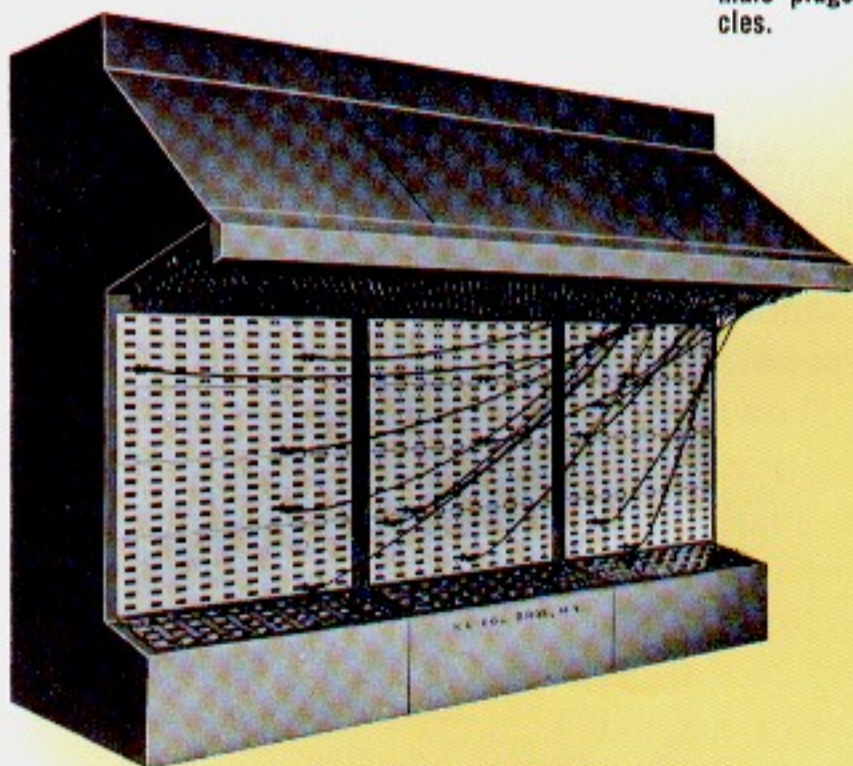


# *automatic cold patch circuit selector*

Type ATC-SPU combined autotransformer dimmer and Safpatch panel. This system contains a total of 6 non-dim circuits, 7 dimmers, 112 male plugs and 90 female receptacles.



64"L x 83"H x 33"D



Type SP-OH Safpatch panel containing a total of 720 circuits.  
154"L x 116"H x 70"D



Type SPC-1 Safpatch panel containing a total of 72 circuits.

52"L x 59"H x 31"D

## OUTSTANDING FEATURES

- U/L Approved—
- Guarantees cold patching—
- Circuit breaker must be in off position before plug can be inserted—
- Plug automatically trips circuit breaker on withdrawal, before pin contact is broken—
- No arcing, no pitting of contacts—
- 20 and 42 ampere outlets available—
- Female receptacles cannot take male plugs of incorrect amperage, prevents overloading—
- Circuits protected by standard magnetic-type circuit breakers—
- Patch cords properly counterweighted—
- Plug cable clamp relieves strain on terminal—
- Long trouble-free life—
- Simple, automatic, easy operation—
- Reasonable in cost—





# KLIEGL

## SAFPATCH® ... safe, fast, accurate,

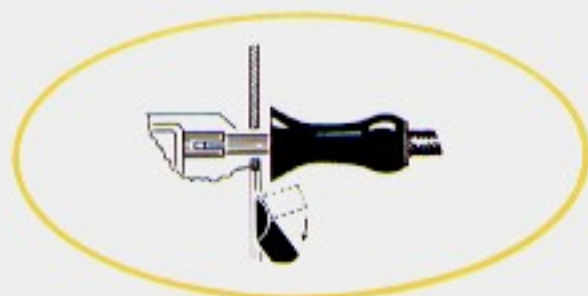
A SAFPATCH panel, utilizing a uniquely designed molded plug and cord set, is a cold patch circuit selector for the cross-connecting of light load circuits to dimming and non-dim feeder circuits. Exclusive features of the SAFPATCH automatically prevent a "make" or "break" of a "hot" circuit and entirely eliminate arcing, pitting or deterioration of contact parts.

The system consists of load plugs and female receptacles. Each receptacle is controlled by an individual, silent-acting, magnetic-type circuit breaker. These breakers serve as "on-off" controls for their associated receptacles and may be used for individual changes without affecting other lights. Individual load plugs, one for each lighting circuit, are equipped with exclusive Kliegl Cable Clamps that eliminate all strain on internal connections.

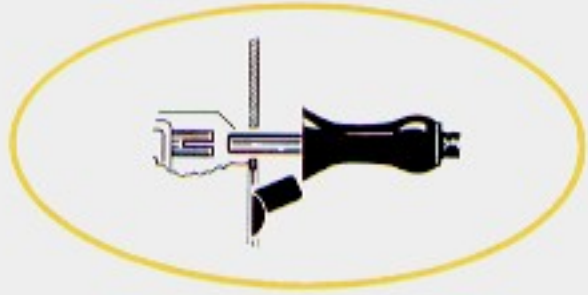
The special shape and design of the load plugs make it impossible for them to be inserted into a receptacle when circuit breakers are in "on" position. And—when the plugs are removed from receptacles—they automatically trip the breakers to "off" position *before* the plugs are completely withdrawn, eliminating any possibility of a "hot" break. As an additional safety feature, load plugs of different capacities cannot be interchanged and can only be connected to the properly rated female receptacle. Both plugs and patch cords are properly counter-weighted for automatic restoring when not in use.

Individual standard SAFPATCH panels are furnished with 6 female receptacles, although panels of 3 or 4 can be furnished upon request. Groups of these panels form a SAFPATCH Klieg-board. The female receptacles can be of 20 or 42 ampere size and freely intermingled. Groups of female receptacles are generally wired together and fed by a dimming or non-dim circuit.

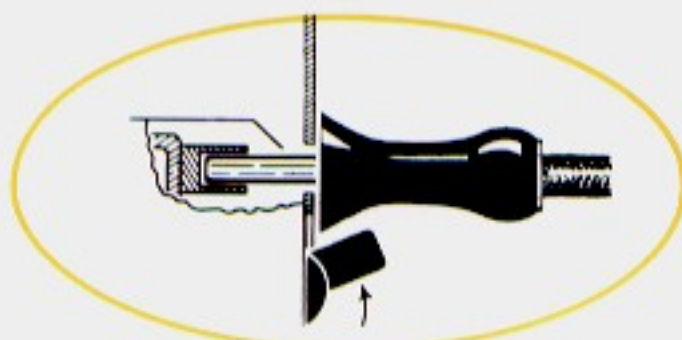
Complete SAFPATCH Kliegboards are fully U/L Approved. They are made to the highest possible standards of workmanship and materials without compromising safety or quality. Yet—despite these high standards of quality, SAFPATCH systems are competitively priced with systems that do not include the cold patch features.



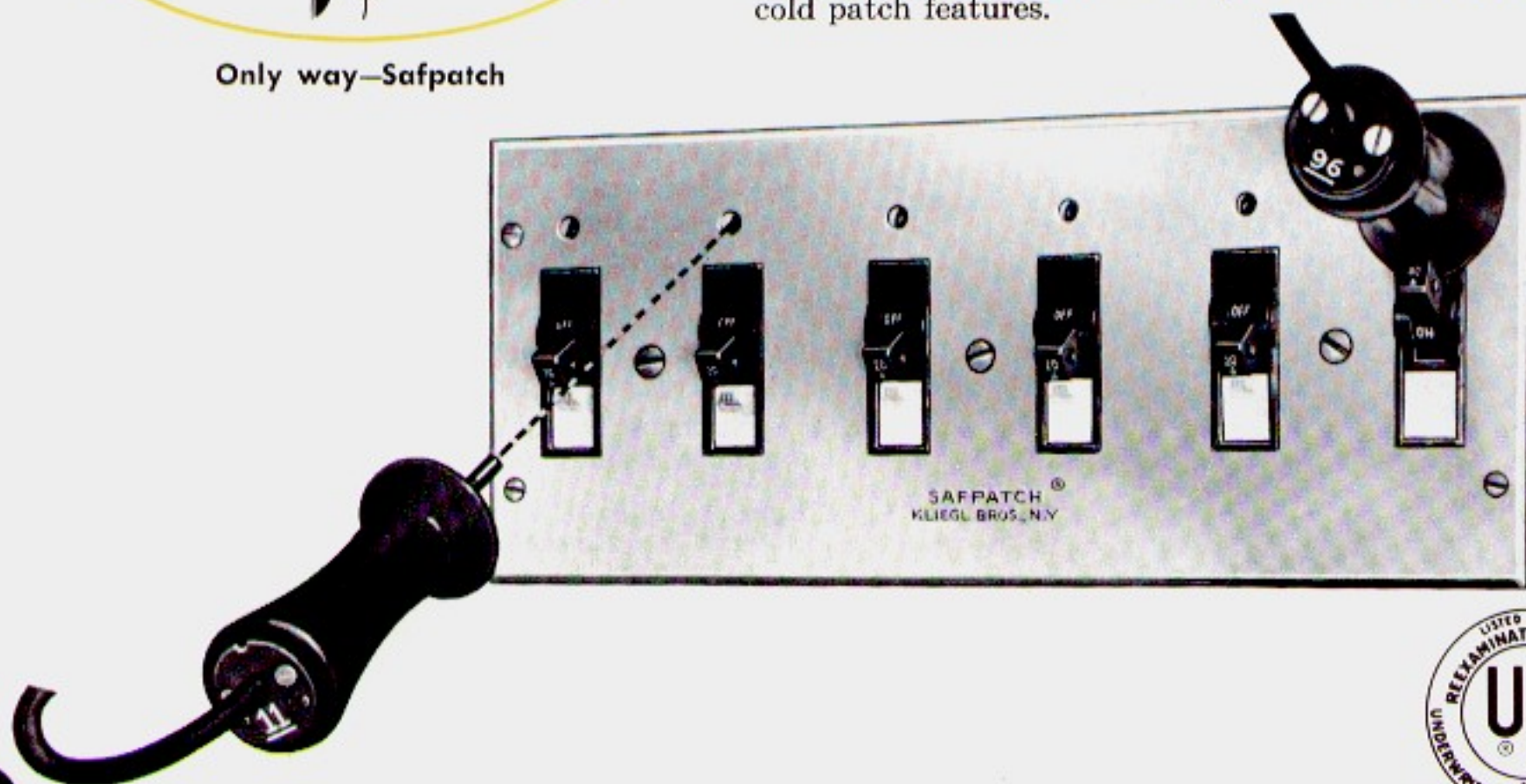
Can't "break" hot



Can't "make" hot



Only way—Safpatch



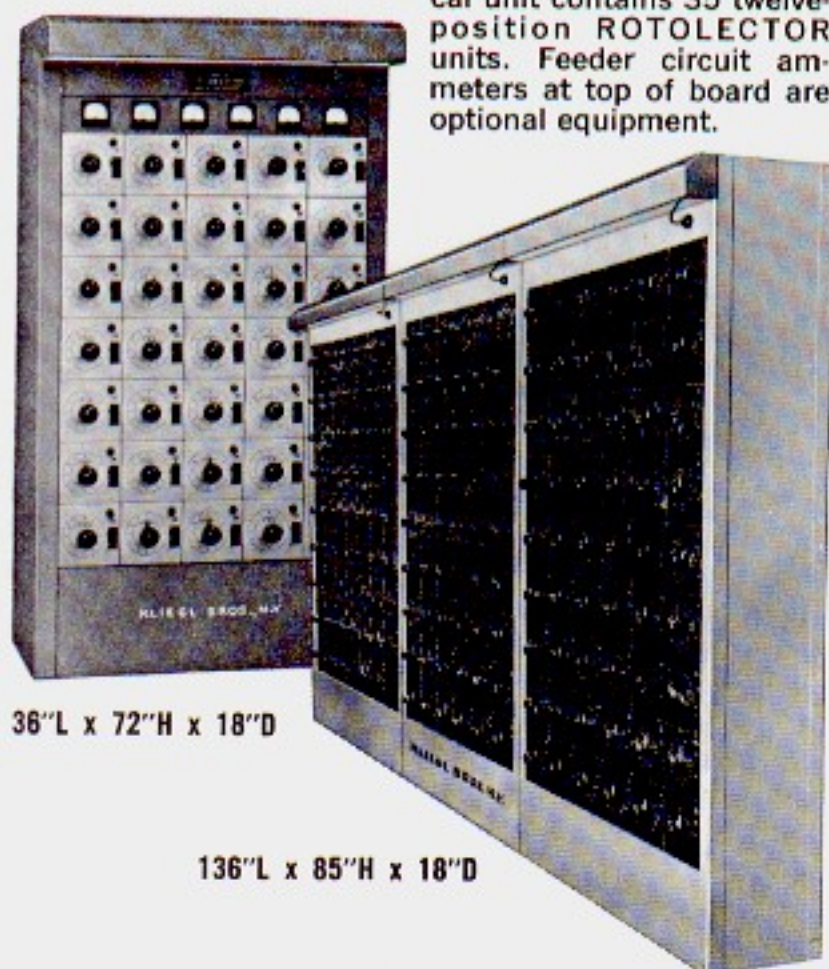


# automatic, cold patch rotary circuit selector

## SPECIFICATIONS\*

### Typical ROTOLECTOR Kliegboards

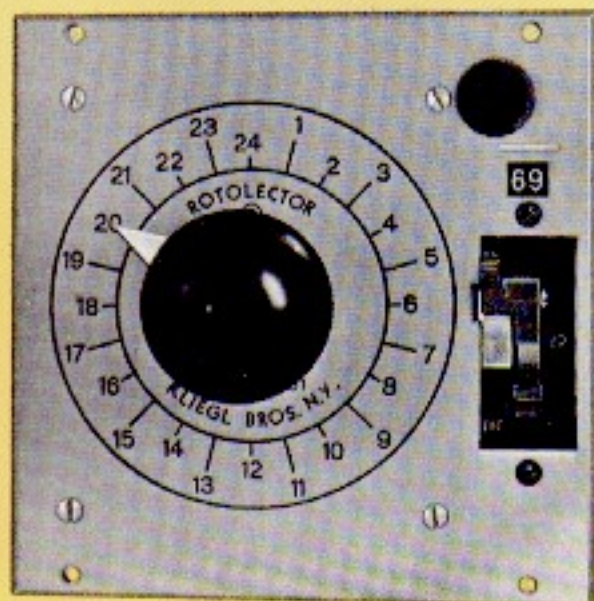
Type No. RLU-1. This typical unit contains 35 twelve-position ROTOLECTOR units. Feeder circuit am-meters at top of board are optional equipment.



36"L x 72"H x 18"D

136"L x 85"H x 18"D

Type No. RLU-3. This large ROTOLECTOR board contains a total of 150, twenty-four-position units arranged in three sections.



24 POINT ROTOLECTOR UNIT

### 207R - ROTOLECTOR CROSS-CONNECT SYSTEM

- 207R.** The cross-connect system shall be of the automatic cold make-and-break, rotary selector switch type, designed to permit the complete interconnection of any lighting circuits with any dimmer and non-dim circuits. At the same time, the cross-connect system shall serve the function of providing secondary circuit breaker protection for the lighting circuits. This system *must be* U/L approved.
- 207R.2** The automatic cold make-and-break rotary selector switch shall be so designed that arcing and pitting of components can not take place.
- (a) The circuit breaker shall be mechanically interlocked within each unit in such a way that it will automatically open whenever the contacts are changed from one point to any other point, prior to the disengagement of these contacts.
  - (b) It shall be impossible to engage any contacts unless the circuit breaker is open.
  - (c) The rotary selector switches shall be capable of being changed from one point to any other point, in either direction, without making contact with intermediate points or without reaching a stopping point.
- 207R.3** The cross-connect system shall be of the dead-front type, substantially framed and enclosed with sheet metal panels. Complete accessibility of interior components shall be provided. Finish shall be air-dry, hammertone grey. Terminal strips of adequate rating shall be provided for all connections to the panel, each clearly and permanently identified by circuit number.
- 207R.4** Each rotary selector switch device shall be complete in itself with components (rotor, contact points, circuit breaker, lock-out devices and pilot light) mounted on a single plate approximately 6½" x 6½". These plates shall be, in turn, vertically mounted in the system rack and shall be individually removable from the front of the rack for servicing. The ROTOLECTOR pilot light shall be so wired as to indicate the intensity of the circuit it services at any one given time.

- 207R.5** Provide a total of . . . (12) (24) point rotary selector switches, each rated at the ampere capacity indicated in the schedule. The circuit number and designation shall be engraved on individual plates affixed to unit.
- 207R.6** Rotary selection switches shall be furnished according to the following schedule:

Circuit Number	ROTOLECTOR Number	Designation	Ampere Capacity	
			20A	50A
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

- 207R.7** (FOR FREE STANDING MODEL ONLY)—Overall size shall not exceed . . inches long by . . inches deep by . . inches high.





# KLIEGL

## ROTOLECTOR®...the finest, safest,

The ROTOLECTOR is a 12 or 24 position rotary circuit selector that is used to cross-connect lighting load circuits to dimming or non-dim feeder lines. It is the fastest and simplest cross-connect circuit selection system and eliminates the use of patch cords and plugs. Each branch lighting circuit is wired directly to its own ROTOLECTOR. The ROTOLECTOR, in turn, is connected to the various dimmer and non-dim feeders (i.e. a 12 point ROTOLECTOR can be fed by 10 dim and 2 non-dim or any combination). To patch the load to any one of the ROTOLECTOR feeders, the operation is as follows:

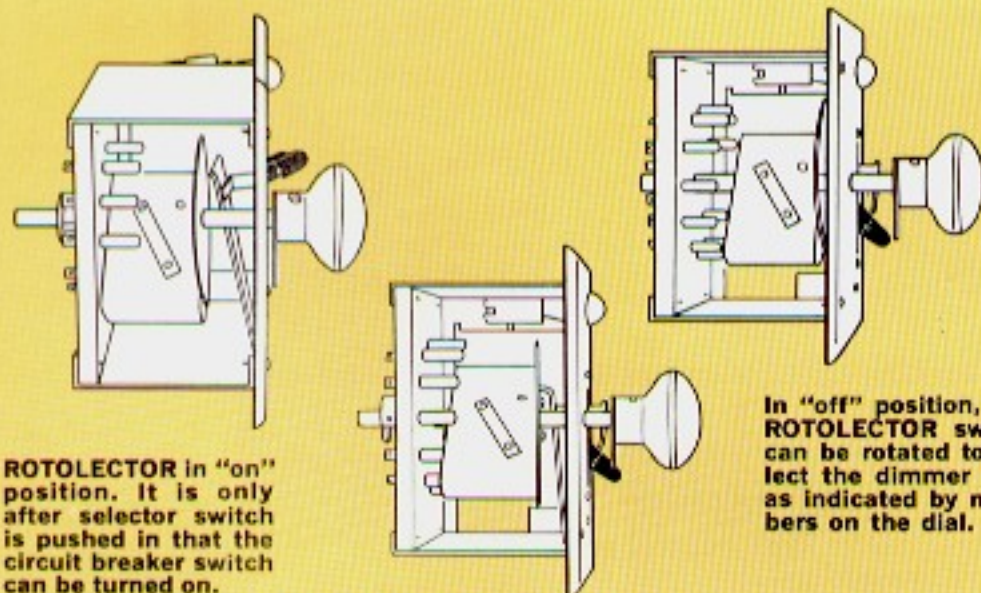
1. The handle of the ROTOLECTOR is withdrawn. This automatically trips its circuit breaker before the load contact is broken.
2. The handle is then rotated to the selected position, as indicated by the numbers on the ROTOLECTOR'S dial and then pushed in until contact is made.
3. When contact is made, then—and only then—its circuit breaker switch can be turned on to energize the circuit.

"Hot" connections and dangerous arcing are automatically eliminated. The unit is so simple and effective that even a young child can operate it with complete ease and safety.

The magnetic-type circuit breaker built into the ROTOLECTOR properly protects its outgoing lighting circuit and, at the same time, can be used as an "on-off" switch control. Each 6½" x 6½" unit can be furnished with either 12 or 24-positions and is available in two sizes to handle either 20 or 50 ampere lighting loads.

### OUTSTANDING FEATURES

- U/L Approved—
- Simplified, high speed operation. Simply turn the dial of the selected load circuit to a desired dimming or non-dim feeder circuit, push in and turn on circuit breaker switch—
- Circuit breaker is automatically tripped, breaking "hot" connection before change in feeder selection can be made—
- Guarantees cold make and break—no arcing—no pitting of contacts—
- Correct design—neat appearance—instant visual circuit identifications—finest workmanship—
- Long, trouble-free life—simple, automatic, easy operation—highest safety standards—
- Circuits protected by standard magnetic-type circuit breakers—
- Circuits may be pre-set "turned on" or "turned off" as desired—
- 12 to 24 circuit units — available to 50 amperes — (6000 watts)—



ROTOLECTOR in "on" position. It is only after selector switch is pushed in that the circuit breaker switch can be turned on.

In "off" position, the ROTOLECTOR switch can be rotated to select the dimmer unit as indicated by numbers on the dial.

As the ROTOLECTOR switch handle is withdrawn, the circuit breaker is automatically tripped before contact elements have parted.

### Typical Schematic of KLIEGL "ROTOLECTOR SYSTEM"

One ROTOLECTOR for each light circuit.

Each light circuit may be connected through its ROTOLECTOR to any dimming or non-dim feeder circuit.



Several light circuits may be grouped for control from any dimming or non-dim feeder circuit.

Circuit breaker provides individual control with protection from overload.

To all Rotolector contact points correspondingly numbered



Nos. 1 through 12 represent dimming and/or non-dim feeder circuits.

\*PATENTED





# DIMMER BOARDS

## *Motor Operated*

Kliegboards using motor-driven autotransformer dimmers have proved highly satisfactory for architectural lighting control in churches, auditoriums, restaurants, night clubs, homes and similar applications. These rugged units are almost completely foolproof and easy to operate. The control console, containing miniature finger tip controls, can always be placed in the most convenient location while the motor-operated dimmer bank can be remotely situated.

There are two methods used for remote control of Kliegl Motor Operated Autotransformer Dimmer Boards:

### 1. POTENTIOMETER CONTROL

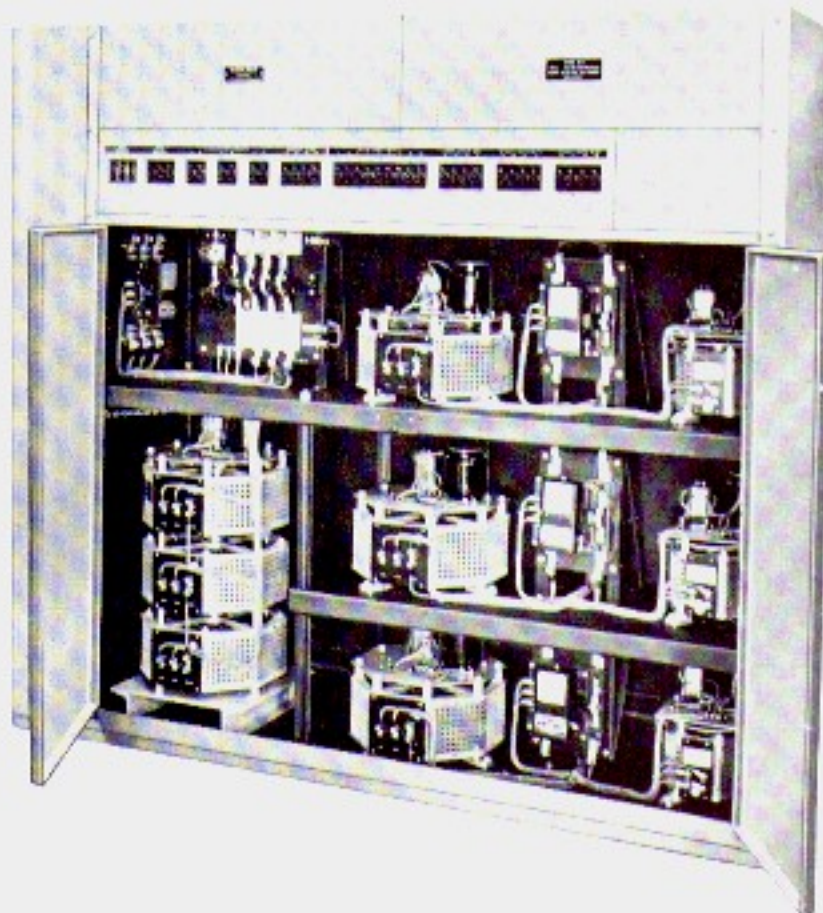
Each motor is controlled by a sensitive low-voltage potentiometer. This form of control permits pre-selection of desired intensity, pre-setting, proportional mastering, etc.

### 2. UP/DOWN CONTROL

Each motor is controlled by an up/down toggle switch instead of potentiometer control as detailed above.

Motor-operated autotransformer dimmers can be easily incorporated with other types of boards. They may be combined with SAF-PATCH or ROTOLECTOR cross-connect sys-

tems to increase their flexibility and use. In addition to controlling incandescent lights, motor-operated autotransformer dimmers can be used to control cold cathode lamps and hot cathode rapid-start fluorescent lamps when used with the proper ballasts.



## OUTSTANDING FEATURES

- U/L Approved—
- Built to individual requirements—
- Furnished with necessary fusing, main and transfer switches, etc.—
- Available in 2, 2.5, 6, 6.6 and 8 KW capacities—
- Speed ranges from 6 to 45 seconds as selected—
- Full loading range from fractional watts to rated capacity—
- No warm-up time required—
- Can be operated remotely—
- Potentiometer type control amenable to scene presetting—
- Safe, economical, efficient—
- Cool, quiet operation



**KLIEGL**

# AUTOTRANSFORMER

## *Manually Operated*

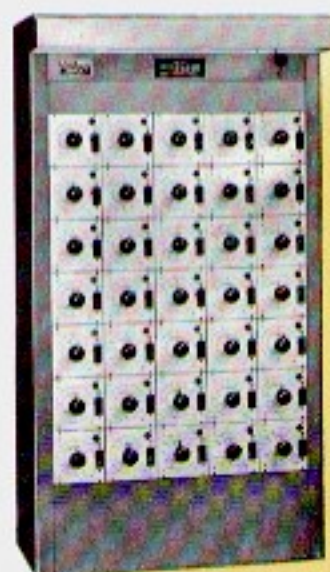
Manually-operated autotransformer dimmer Kliegboards are individually designed to meet specific needs, whatever the size or output requirements. While each autotransformer dimmer is controlled by its own operating handle, all units may be coupled to sub-master and grand master levers if desired. For ease of operation, control levers are color coded, labelled and grouped for quick identification and use.

Each dimmer is protected by a magnetic-type circuit breaker that can also serve as an "on-off" switch. Additional breakers are provided to protect and control secondary circuits. The board can also include circuit breaker switches for control of non-dim circuits, as well as remote control switches and transfer switches.

Kliegl autotransformer dimmer boards can be furnished as console or upright models. They can also be made as combination units incorporating SAFPATCH or ROTOLECTOR cross-connect systems. They are available in capacities from 2.5 KW to 8 KW per dimmer unit.

### OUTSTANDING FEATURES

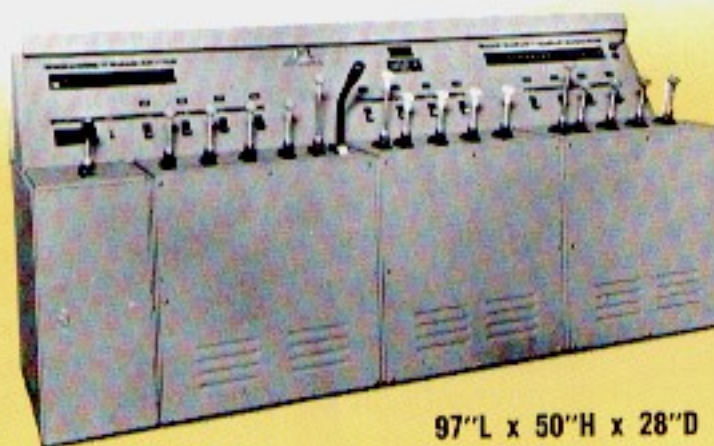
- U/L Approved—
- Suited for general use on smaller applications—
- Low electrical losses—
- Heating effect negligible—
- Full loading range—from fractional watts to rated capacity—
- Virtually maintenance free—
- Available in 2.5, 6, 6.6 and 8 KW capacities—
- Interlocking to masters—
- Completely protected with magnetic-type circuit breakers on primary and secondary



36"L x 72"H x 18"D



33"L x 42"H x 28"D



97"L x 50"H x 28"D



52"L x 60"H x 30"D

Above: Type ATC-1 dimming board and Type SPC-1 Safpatch panel. Set contains 12 dimmers, three sub-masters, one grand master, necessary houselights, 72 female receptacles and 80 male cross-connecting plugs.

At left: Type ATC-1 dimming board and Type RLU-1 Rotolector panel. Set contains five dimmers, one master, seven non-dim circuits and 35 twelve-point Rotolectors.



# KLIEGL COLOR MEDIUMS

## Cinemoid®

Extra strength heat resisting, waterproof color filters. Average length of service life is several times regular gelatine filters. For spotlights or floodlights of all wattages. Clean, even coloring throughout entire sheet. Standard size 20" x 24". When ordering, specify word "Cinemoid" as well as appropriate catalog number.

COLOR	NO.	COLOR	NO.
Pale Yellow	50	Pale Violet	42
Canary	49	Mauve	26
Yellow	1	Purple	25
Straw	3		
Light Amber	2	Steel Blue	17
Medium Amber	4	Pale Blue	40
Deep Amber	33	Light Blue	18
Golden Amber	34	Light Navy Blue	43
Deep Golden Amber	35	Bright Blue	41
		Medium Blue	32
Deep Salmon	8	Dark Blue	19
Orange	5	Primary Blue	20
Deep Orange	5A	Peacock Blue	15
		Blue Green	16
Pale Rose	54	Pale Green	38
Pale Gold	52	Pea Green	21
Gold Tint	51	Moss Green	22
Pale Salmon	53	Light Green	23
Light Salmon	9	Dark Green	24
Light Rose	7	Primary Green	39
Middle Rose	10		
Dark Pink	11	Clear	30
		Light Frost	31
Bright Rose	48	Heavy Frost	29
Primary Red	6		
Magenta	13	Chocolate Tint	55
Deep Rose	12	Pale Chocolate	56
Ruby	14	Pale Gray	60
Pale Lavender	36		

If spectrum curves are needed, send for bulletin No. 58-R.

## Coloring Solution

For coloring incandescent lamps. Easily applied by dipping. Colors will not crack, peel or chip off.

*Weatherproof coloring:* For use outdoors. Colors: yellow, amber, red, blue, green and white opal. Requires three days to dry properly. Supplied in pints and quarts.

*"Signaloid" coloring:* For use indoors. Colors: yellow, amber, red, pink, purple, blue, green, moonlight blue and frostine. One quart will color five hundred 40 watt lamps. Supplied in pints and quarts.

No. 1945, Colorine Remover: Removes old dipped color coating. Non-inflammable. One carton makes 2½ gallons of solution. Supplied in one pound cartons.

Baked-on Lamp Coloring—Sprayed and baked on permanent colors, furnished to specifications. Prices on application.

## Glass Roundels

Convex, uniformly colored, heat resisting glass roundels. Colors and sizes are uniform and standardized. When ordering, specify catalog number and desired color.

NUMBER	DIAMETER	AVAILABLE COLORS
1974	3¾"	RED, BLUE, GREEN, AMBER, CANARY, SURPRISE PINK* and CLEAR: Diffusing or Non-diffusing at same price * 50% extra in price
1975	4"	
1976	5⅝"	
1978	7⅞"	
1980	11¼"	

## Gelatines

Strong, uniformly colored sheets, stocked in a wide range of plain and fancy combinations of color. For spotlights or floodlights. Standard sheets are 20" x 24".

NO.	DESCRIPTION	NO.	DESCRIPTION
G-0	Clear	G-28	Light Violet
G-1	Frosted (see also G-80)	G-29	Very Light Blue
G-2	Straw	G-30	Light Blue
G-3	Light Lemon	G-31	Medium Blue
G-6	Medium Lemon	G-32	Medium Dark Blue
G-9	Dark Lemon	G-35	Dark Blue
G-10	Light Amber	G-36	Green Blue
G-12	Medium Amber	G-37	Light Green
G-13	Dark Amber	G-38	Medium Green
G-14	Orange	G-39	Dark Green
G-15	Light Red	G-41	Very Dark Green
G-16	Medium Red	G-42	Moonlight Blue (blue-green)
G-17	Dark Red	G-43	Light Sky Blue
G-18	Chocolate	G-44	Surprise Pink
G-19	Rose Pink	G-69	Surprise Purple
G-20	Dubarry Pink	G-77	Surprise Violet
G-21	Magenta	G-45	Rainbow Color Combination
G-22	Rose Purple	G-55	Spotted Fancy Color Combination
G-23	Dark Purple	G-80	Frosted only, size 24"x24"
G-27	Dark Violet		

## No. 49—Carrying Case for Cinemoid & Gelatine

Used to store an extra supply of gelatines, and to protect the mediums from damage when being transported. Sturdily constructed of light weight galvanized sheet steel. Dimensions 21½" x 24½" x 1".

## Natural Colored Glass for Color Frames Etc.

Uniformly colored, heat resisting glass for color frame use can be furnished cut and stripped to size. A wide variety of colors are available. Details and prices on application.



all new

# Klieglights for Quartz

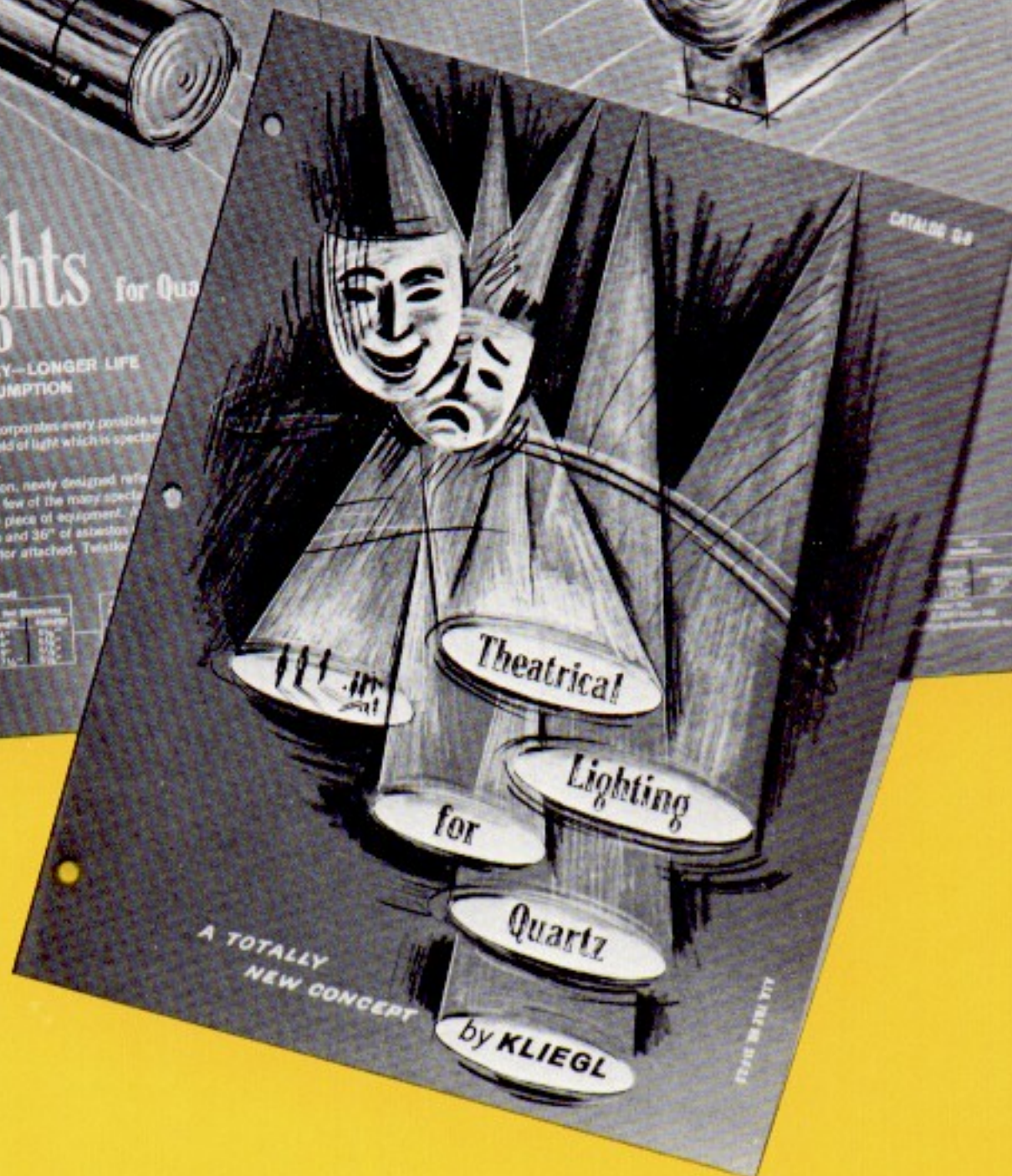
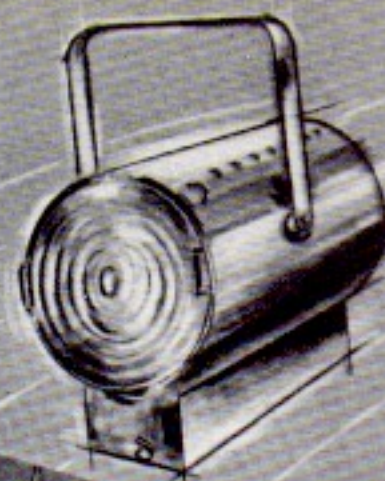
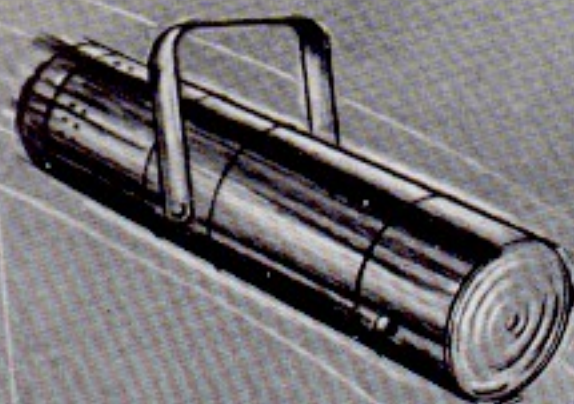
GREATER EFFICIENCY—LONGER LIFE  
LOW POWER CONSUMPTION

The Klieglight for Quartz incorporates every possible refinement and delivers a field of light which is spectrally uniform and high in output.

Unrestricted burning position, newly designed refractive lens systems are only a few of the many special features of this new piece of equipment. A grounded pin plug connector attached. Teletest is also available.

Model	Power (Watt)	Life (hrs)	Temp (°C)	Weight (lb)
Q-100	100	10,000	100	1.0
Q-200	200	10,000	100	2.0
Q-300	300	10,000	100	3.0
Q-400	400	10,000	100	4.0
Q-500	500	10,000	100	5.0
Q-600	600	10,000	100	6.0
Q-700	700	10,000	100	7.0
Q-800	800	10,000	100	8.0
Q-900	900	10,000	100	9.0
Q-1000	1000	10,000	100	10.0

Manufactured in U.S.A.  
Q-1000 1000 10,000 100 10.0



FOR DETAILED INFORMATION CONCERNING THE TRULY DISTINCTIVE LINE OF KIEGL ARCHITECTURAL LIGHTING FIXTURES, WE SUGGEST YOU SEND FOR OUR ARCHITECTURAL CATALOG.

This instructive catalog details dozens of lighting units which were designed to fully meet all the exacting requirements of today's architectural era. Contained are exit lights, aisle lights, angular and vertical downlights, picture lights as well as units for theatre lobbies, homes, hotels, casinos, institutions, schools, churches, etc. Illustrations, charts, engineering data as well as information concerning better lighting are but a part of this inclusive catalog.

For requests for catalogs or further information,  
write to:

## KIEGL BROS.

32-32 48th Ave., Long Island City, N. Y. 11101 Phone: (212) 786-7474

## Subsidiary:

## KIEGL BROS. WESTERN CORP.

4726 Melrose Ave., Los Angeles, Calif. 90029 Phone: (213) 663-8124

For TV Quartz Lights and TV  
Lighting Equipment, write for  
Bulletins TV-6 and Q-9.

KIEGL BROS., NEW YORK



# GENERAL INFORMATION

## PRICE QUOTATIONS

Prices shown on all price lists are subject to change without notice. Prices include domestic packing and orders are shipped F.O.B. our factory in New York City. Minimum billing \$3.00. List prices do not include transportation charges.

## ORDERING

All orders must be in writing. To avoid error, give as many details as possible i.e. Catalog numbers, name, type, size, color (if any) etc. If ordering accessories, give unit name and catalog number of unit on which accessories will be used in addition to proper ordering information.

## SPECIAL NOTE

This catalog shows the exact equipment which is included with each particular unit. Additional equipment such as lamps, connectors, ground wire, color frames etc. are not normally included and must be ordered in addition at prices as shown on current price list.

## SHIPPING INSTRUCTIONS

Send shipping instructions with order. In absence of shipping instructions, our shipping department will use their own best judgment.

## CLAIMS

All claims must be made within 10 days of receipt of goods. Experienced packers are employed, therefore, our responsibility ceases when material is receipted for in good condition by transportation company. Consignees must hold carrier responsible for breakage, damage, loss or delay in transit.

## RETURNS

Do not return goods before receiving our approval. When writing, mention date and number of original invoice. Goods returned must be properly marked, sent prepaid and are subject to a charge for handling.

## RENTALS

A selected stock of equipment is kept on hand for rental at contract rates. Lessee must pay all transportation charges and is responsible for all damage to materials, ordinary wear and tear excepted, from time materials leave factory until returned. Rental period extends from the day the material leaves the factory until the day it is returned to the factory.

## GUARANTEE

All Kliegl products are sold with full guarantee. Any defects in material or workmanship will be promptly rectified, provided claims are made within 10 days of receipt of goods and defective parts returned to us for examination, charges prepaid. No other claims for damages, labor or material will be allowed.

## TERMS

Terms for domestic shipments are: Net 30 days to parties of established credit. Goods will be sent C.O.D. if a deposit of not less than 25% of the purchase is remitted with an order.

Terms for foreign shipments are: Irrevocable letter of credit established with a bank designated by Kliegl Bros. for payment (cash against shipping documents) in New York in New York funds.



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# KLIEGL CABLE AND WIRE

Listed below are some of the more popular types of cable and wire carried in stock by Kliegl Bros. at all times. In addition to the listed conductors, a large stock of special types and styles is maintained to meet individual requirements. Full particulars concerning any cable or wire specification sent upon request.

## BORDERLIGHT CABLE

Multiple conductor, color coded, flexible cable (types K and S) of approved N.E.C. Standard. Borderlight cable is made up in sizes with from 6 to 28 conductors of No. 12 gauge stranded flexible cable — as shown in listing, carried in stock. Single conductor cables also carried in stock so that other sizes and combinations can readily be made to order.

Number of Conductors	Size of Cable B&S No.	Carrying Capacity Amperes
6	12	N.E.C. STANDARD
8	12	" "
12	12	" "
18	12	" "
20	12	" "
24	12	" "
28	12	" "

## STAGE CABLE

Exceptionally flexible, stage cable (type K) is made up of a large number of fine copper strands bound together; insulated with rubber and a tough braided covering without stiffening compounds of any kinds. National Electric Code Standard. Carried in following stock sizes — other sizes made to order.

Size of Cable B&S No.	Description	Carrying Capacity Amperes
14	2-CONDUCTOR	15
12	2- "	20
10	2- "	25
8	2- "	35
6	2- "	45
4	2- "	60
2	2- "	80
1	2- "	91
0	2- "	105
00	2- "	120
0000	2- "	160
8	3- "	70
6	3- "	100
4	3- "	140
2	3- "	180

## HEATER CORD

Two conductor, heat resistant, flexible cord, with asbestos wrap and black cotton braid, suitable for relatively low wattage lighting apparatus.

## ALL-RUBBER COVERED CABLE

2 and 3 conductor flexible stranded cable (type S) with a very durable all-rubber covering made to withstand harsh treatment.

Size of Cable B&S No.	Description	Carrying Capacity Amperes
16	2-CONDUCTOR	10
14	2- "	15
12	2- "	20
10	2- "	25
8	2- "	35
6	2- "	45
4	2- "	60
14	3- "	15
12	3- "	20
10	3- "	25
8	3- "	35
6	3- "	45
4	3- "	60

## ASBESTOS-COVERED WIRE

Single conductor, extra flexible, asbestos-covered wire (type AA). Should not be confused with ordinary "flexible" wire. This type is made up of a large number of fine strands of copper wire with an inner acetate separator and an outer covering of asbestos wrap, which does not burn or carry flame. Especially well suited for stage and motion picture lighting apparatus.

Size of Cable B&S No.	Description	Carrying Capacity Amperes
16	Single Conductor—extra flexible	10
14	" " " "	30
12	" " " "	45
10	" " " "	60
8	" " " "	80
6	" " " "	105
4	" " " "	140
2	" " " "	185
1	" " " "	220
0	" " " "	255

Size of Cable B&S No.	Description	Carrying Capacity Amperes
16	2-CONDUCTOR	6
14	2- "	15





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