





# THEATRICAL LIGHTING

1953



## **THE STRAND ELECTRIC & ENGINEERING CO., LTD.**

*Head Office and Showrooms* **29 KING STREET COVENT GARDEN LONDON W.C.2**

*Sales Counter and Goods Entrance* 24 Floral Street Covent Garden London W.C.2

*Telegraphic Address:* SPOTLITE RAND LONDON

*Telephone:* TEMPLE BAR 4444 (16 lines)

*and branches (see over)*

## TERMS OF BUSINESS.

All goods in this catalogue are only offered for sale subject to our Terms of Business of which the following is an extract :

“ All descriptive and forwarding specifications, drawings and any particulars of weights, dimensions and performance are approximate only and the descriptions and illustrations contained in our catalogues, price lists and other advertisement matter are intended merely to present a general idea of the goods described therein, and none shall form part of any contract ”.

**Prices are ExWorks, apply to England, Scotland and Northern Ireland only, and are subject to alteration without notice.**

## CATALOGUE ARRANGEMENT.

The apparatus listed in this catalogue falls readily into sections as follows :

- A. Footlights, Battens and Lengths.**
- B. Stage Floods.**
- C. Spotlights and Accessories.**
- D. Arc Spotlights and Resistances.**
- E. Cyclorama Lighting.**
- F. Effects, Optical and Sound.**
- H. Dimmers and Control.**
- J. Outdoor Flood Lighting.**
- L. Accessories (Stands, Colour Mediums, Lenses, Lamps, etc.).**

Leaflets are correspondingly lettered in the top right-hand corners, and numbered to enable them to be inserted in the correct place in their section.

The numbering will not however necessarily be consecutive in the first place, so that leaflets issued at a future date can be inserted in correct sequence.

### *Branches*

**MANCHESTER** : 313-317 Oldham Road, Manchester, 10

*Telephone* : Collyhurst 2736

**AUSTRALIA** : 481 Malvern Road, Melbourne, S.E.1 *Telephone* : BJ 4503

**EIRE** : 62 Dawson Street, Dublin *Telephone* : Dublin 74030

### *Scottish Distributors*

Stage Furnishings Ltd., 346 Sauchiehall Street, Glasgow, C.2

*Telephone* : Glasgow Douglas 6431

*Agencies in the principal countries throughout the world.*



**CONSUMABLE GOODS TO BE PURCHASED OUTRIGHT**

(i.e. not available on hire)

**CARBONS**

Note.—Combinations of Carbons should be selected according to Electric Supply (D.C. or A.C.) and Amperage of Resistance:

| Amps.  | Diam. (mm.) | Length (ins.) | Type* (see below) | Use in Strand Lanterns | Price per 100 and pro rata |
|--|-------------|---------------|-------------------|------------------------|----------------------------|
| <b>For D.C.</b> (Top Carbon Positive, Bottom Carbon Negative). |             |               |                   |                        |                            |
| 30   | Positive 16 | 6             | 1                 | Patterns 22, 42        | £ s. d.<br>2 17 0          |
|  | Negative 11 | 6             | 2                 |                        | 1 19 0                     |
| 40   | Positive 18 | 6             | 1                 | Patterns 22, 42        | 3 15 0                     |
|  | Negative 12 | 6             | 2                 |                        | 2 4 0                      |
| 50   | Positive 20 | 6             | 1                 | Patterns 70, 75, (505) | 4 9 0                      |
|  | Negative 8  | 6             | 3                 |                        | 2 8 0                      |
| 60   | Positive 20 | 6             | 1                 | Patterns 70, 75, (505) | 4 9 0                      |
|  | Negative 10 | 6             | 3                 |                        | 3 1 0                      |
| 80   | Positive 22 | 6             | 1                 | Patterns 70, 75, (505) | 5 5 0                      |
|  | Negative 11 | 6             | 3                 |                        | 3 8 0                      |
| 60   | Positive 10 | 12            | 4                 | Pattern 501 (Sunspot)  | 7 10 0                     |
|  | Negative 7  | 12            | 5                 |                        | 4 15 0                     |
| <b>For A.C.</b> (Positive and Negative Carbons are identical). |             |               |                   |                        |                            |
| 30/35  | 13          | 6             | 6                 | Patterns 22, 42        | £ s. d.<br>3 1 0           |
| 35/40  | 14          | 6             | 6                 |                        | 3 9 0                      |
| 40/60  | 16          | 6             | 6                 | Patterns 70, 75, (505) | 4 8 0                      |
| 80   | 22          | 6             | 6                 |                        | 7 17 0                     |
| 100  | 9           | 12            | 7                 | Pattern 501 (Sunspot)  | 8 4 0                      |

\* CARBON TYPES (see column 4 above)

1. Stage Arc Cored Positive.
2. Stage Arc Copper Cored Negative.
3. Stage Arc Cored and Copper Coated Negative.
4. High Intensity Copper Coated Positive.
5. High Intensity Copper Coated Negative.
6. Cored White Flame.
7. High Intensity Alternalex.

**PYROTECHNICS**

|  |           |                |
|--|-----------|----------------|
| Slow Burning Smoke Powder (for use with Smoke Element Box)                     | per lb.   | £ s. d.<br>6 8 |
| Naked Ignition Smoke Powder (for use with Flash Box)                           | per lb.   | 8 10           |
| Flash Powder (for use with Flash Box)  | per lb.   | 1 0 0          |
| Flash Paper (for Naked Ignition)   | per sheet | 11             |
| Red or Green Transformation Fire Powder (for Naked Ignition)                   | per lb.   | 6 0            |
| *Small Electrically-detonated Maroons, for any mains voltage or 4-volt battery | each      | 1 10           |
| *Medium ditto  | each      | 2 9            |

\*To be placed in metal tank and covered with wire gauze, netting, etc., to prevent damage from flying pieces.

Pyrotechnics can only be sent per Goods Train or per Carrier licensed for such traffic, and

14 days notice must therefore be given to ensure arrival by required date.

|  |   |   |
|--|---|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>                 COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN</b> - DUB 74030</p> |
|--|---|---|

Goods are only offered subject to our Terms of Business

All prices exclusive of Carriage. Packing cases charged at cost, but credited in full on return, from U.K. address. No cases or packing returnable from overseas.



## COLOUR MEDIUM RANGE

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

†AVAILABLE IN GELATINE ONLY

## COLOUR MEDIUMS — SHEETS

|   | Sheet size (ins.) | Price          | Postage and packing (U.K. only)  |
|---|-------------------|----------------|--|
| <b>GELATINE</b><br>Colours ... ..<br>Frost ... .. | 22 × 17½          | 2/- per sheet  | Under 12 sheets ... <b>1/3</b><br>12 sheets and over ... <b>Free</b>                   |
|   | 22 × 17½          | 2/9 per sheet  |  |
| <b>CINEMOID</b><br>Colours or Frost ...           | 48 × 20           | 10/- per sheet | Under 6 large, or 12 small sheets <b>1/4</b><br>Above these quantities ... <b>Free</b> |
|   | 24 × 20           | 5/- per sheet  |  |

## COLOUR MEDIUMS — CUT PIECES

|   | GELATINE<br>(Price per doz. pieces) |                | "CINEMOID"<br>(Price per doz. pieces) |
|---|-------------------------------------|----------------|---------------------------------------|
|   | Coloured                            | Frost          | Coloured or Frost                     |
| A and B Type Float ... ..                         | £ s. d.<br>4 2                      | £ s. d.<br>5 9 | £ s. d.<br>7 4                        |
| C Type Float, B and C Type Batten, Pattern 53 ... | 6 2                                 | 8 6            | 11 0                                  |
| S Type Float and Batten ... ..                    | 7 2                                 | 9 10           | 12 2                                  |
| Pattern 30, 50a, 58, 60, 70, 75, 102 ... ..       | 13 9                                | 18 11          | 1 13 2                                |
| Pattern 35, 49a, 49, 55, 56, 59, 66 ... ..        | 1 4 0                               | 1 13 0         | 2 6 3                                 |
| Pattern 76 ... ..                                 | 16 6                                | 1 2 8          | 1 16 3                                |
| Pattern 237 ... ..                                | 7 2                                 | 9 10           | 12 2                                  |
| Pattern 27, 41 ... ..                             | 2 2                                 | 3 0            | 4 6                                   |
| Pattern 45 and L Type Hanging Lengths ... ..      | 2 6                                 | 3 5            | 5 6                                   |
| Pattern 44 ... ..                                 | 3 4                                 | 4 7            | 6 7                                   |
| Pattern 22, 32, 42, 43, 63, 73, 81a, 501 ... ..   | 4 6                                 | 6 2            | 11 0                                  |
| Pattern 53, 73 and 83 Auto Colour Changers ... .. | 6 4                                 | 8 8            | 13 2                                  |
| Pattern 58, 76 Auto Colour Changers ... ..        | 16 6                                | 1 2 8          | 1 16 3                                |
| Pattern 47 ... ..                                 | —                                   | —              | 2 14 0                                |
| Pattern 502 ... ..                                | —                                   | —              | 2 6 3                                 |
| Pattern 537 ... ..                                | —                                   | —              | 15 0                                  |
| Pattern 558, 560 ... ..                           | —                                   | —              | 1 13 2                                |

## FLUORESCENT PAINTS (for U.V. or Black Light Effects)

This new range of paints are more brilliant, can be intermixed, and can be sent by post or passenger train. Apply on a white background, preferably treated with special undercoat for maximum effect.

| Ref. No.   | Colour  |  | Prices<br>Packing, post or carriage, extra at cost  |
|--|---|--|---|
|  | Under ordinary light  | Under Ultra Violet only                                  |   |
| U.V.11<br>U.V.12<br>U.V.14<br>U.V.15<br>U.V.16<br>U.V.17<br>U.V.18<br>U.V.19 | Blue<br>White<br>Green<br>Yellow<br>Orange<br>Cream<br>Pink<br>Flame                  | Blue<br>Green<br>Yellow<br>Amber<br>White<br>Pink<br>Red | 25/- per 1 lb. tin.<br>12/6 per ½ lb. tin.<br>Orders of 14 lb. 24/- per lb.<br>Orders of 28 lb. 23/- per lb.<br>Orders of 56 lb. 22/- per lb.<br>(Individual or mixed colours.) |
| U.V.10   | Special undercoat   |  |   |
|  | Paper sheets (25 ins. × 20 ins. less small margin) treated with any of above colours. |  | 10/6 per lb. tin, 5/3 per ½ lb. tin.<br>Orders of 14 lb., 10/- per lb.; 28 lb., 9/6 per lb.; 56 lb., 9/- per lb.  |
|  |   |  | 3/- per sheet. Postage and packing to U.K. address (non-returnable); 1-11 sheets 1/3; 12 sheets and over Free.  |

Postage and packing figures in this leaflet apply to United Kingdom only. To overseas territories, packing, postage or other form of delivery extra at cost.



# STRAND FOOTLIGHTS

PATTERN "S" FOR 60, 100 or 150 WATT LAMPS



This Footlight has compartments spaced at 9-inch centres and gives more light from fewer lamps than the old 6, 7 and 8-inch centre types which it supersedes. The "Sunray" silvered glass reflectors give wide-angle beams free of hot spots, and light well up the house tabs, even when placed as close as 3 feet.

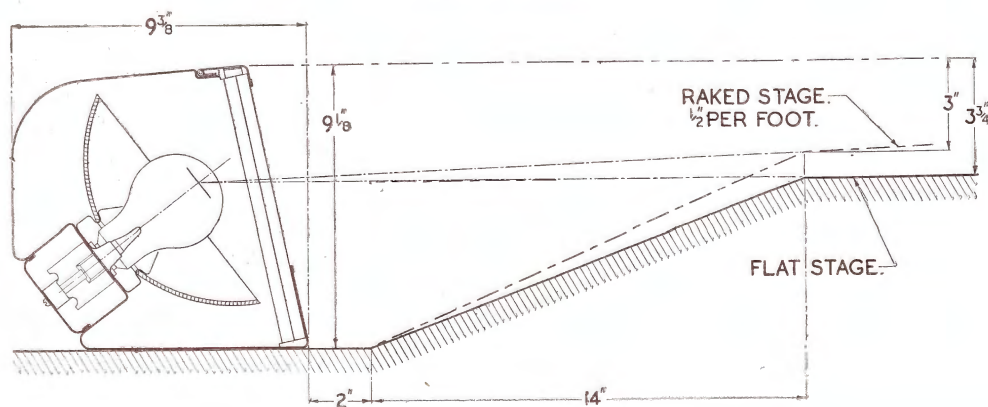
## SPECIFICATION

**Housing** is strongly constructed in sheet steel, efficiently ventilated, with pressed steel compartment divisions welded in place at 9-inch centres, and the whole is finished in black crystalline outside and matt black inside. Each compartment is fitted with a metal frame with guard wires to take the colour medium and a type A235 "Sunray" glass reflector mounted in a spring-steel spider and Edison Screw lampholder. Footlight is manufactured in 3 foot and 6-foot lengths and multiples thereof.

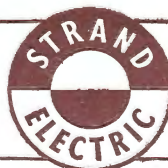
**Wiring**, which is housed in a sheet-metal trough with removable lid, is carried out in fireproof cable for colours and circuits to suit requirements, and is terminated in tails, or in certain circumstances a connector box (extra) on actors' right or left as required.

**Fixing.**—Rests flat on the floor of the footlight trough, for dimensions of which see diagram. For preference electrical connections should be made through flexible metallic tubing to permit easy removal for cleaning, access to wiring, etc. (continued overleaf)

## DIMENSIONS



HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444      GRAMS: SPOTLITE RAND LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

**SPECIFICATION (cont'd)**

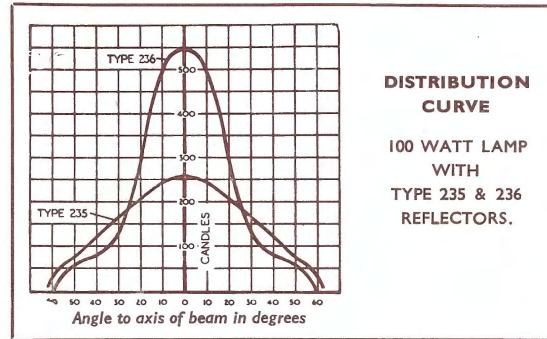
**Lamps.**— 60-watt General Service type with E.S.Cap.

- 100- " " " " " "
- 150- " Theatre Batten " " "

**N.B.**—Lamps should be clear NOT pearl.

**Beam Angle.**—Cut off 125°, Beam Angle 120°.

**Weight.**—Complete with colour frames and reflectors  
 per 3-foot length 25 lbs.  
 „ 6-foot „ 49 lbs.



**PRICES**

(Exclusive of lamps, connector box, and colour mediums, but including colour frames)

| Length | Compartmentments | £ s. d. | Length | Compartmentments | £ s. d. | Length | Compartmentments | £ s. d. |
|--------|------------------|---------|--------|------------------|---------|--------|------------------|---------|
| 3 ft.  | 4                |         | 18 ft. | 24               |         | 33 ft. | 44               |         |
| 6 ft.  | 8                |         | 21 ft. | 28               |         | 36 ft. | 48               |         |
| 9 ft.  | 12               |         | 24 ft. | 32               |         | 39 ft. | 52               |         |
| 12 ft. | 16               |         | 27 ft. | 36               |         | 42 ft. | 56               |         |
| 15 ft. | 20               |         | 30 ft. | 40               |         | 45 ft. | 60               |         |

Curves, non-standard lengths and special lengths with inter-connecting plugs .. Prices on application

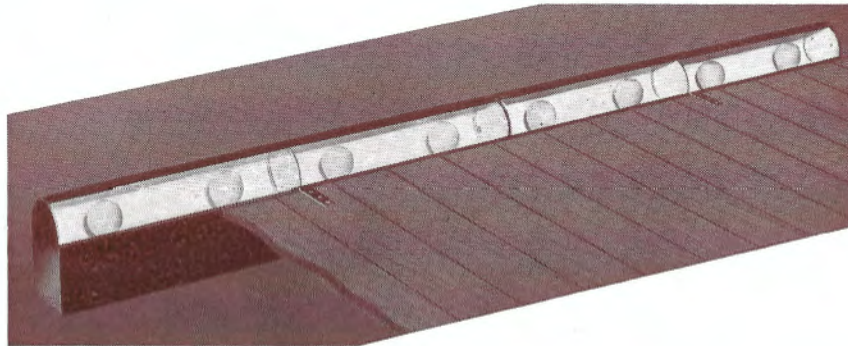
- A.235—Extra wide-angle glass reflectors .. .. . each
- A.270—Wide-angle anodised aluminium reflectors .. .. . „
- A.240—Extra metal colour frames (8 inch × 9¼ inch) .. .. . „
- A.241—Gelatine, any colour, except frost (8 inch × 9¼ inch) .. .. . per doz.
- A.242—Gelatine frost (8 inch × 9¼ inch) .. .. . „
- A.243—“ Cinemoid ” in any colour or frost (8 inch × 9¼ inch) .. .. . „
- Footlight Connector Box .. .. . each

|  |  |   |
|--|--|---|
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|--|--|---|



# STRAND FOOTLIGHTS

JUNIOR TYPE FOR 40 or 60 WATT SILICA SPRAYED LAMPS

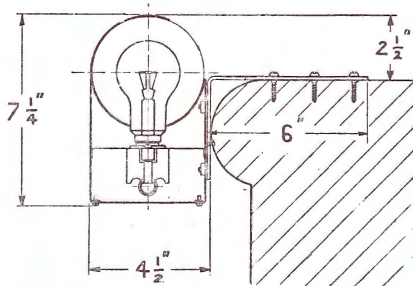


This footlight has been designed for the village hall, or school stage where finances would only permit the purchase of a standard compartmented footlight at the sacrifice of some more important equipment. The Junior footlight provides a single circuit of white or tinted light, preferably controlled on a dimmer, to counter heavy facial shadows caused by the usual preponderance of overhead lighting.

The footlight is made especially compact and is arranged to project only  $2\frac{1}{2}$  in. above the stage in order to provide the minimum obstruction to sight lines. Fixing is direct by brackets over the front edge of stage.

### SPECIFICATION

The housing is constructed in sheet steel, suitably reinforced, in 6 ft. lengths. A 3 ft. extension piece is also available (but not sold separately), so that a footlight can be made up into multiples of 3 ft. in length overall. B.C. lampholders are fitted at 9 in. centres and wired in fireproof cable for one colour circuit. The wiring which is carried in a separate trough terminates at the end of each length in porcelain connectors so that adjacent sections may be easily interconnected, and the electric supply brought with equal convenience to either end of the footlight. Each 6 ft. length has two (and the 3 ft. extension one) fixing brackets for securing to the platform or stage floor. Finished black crystalline enamel outside and white inside.



#### Note 1.

In the interests of economy no provision is made for colour medium frames or runners therefor. Unframed colours CAN, however, be used with this footlight by inserting them inside the mouth of the reflector, when the natural springiness of the material will retain them in position.

#### Note 2.

Fixing brackets are drilled for three No. 10 wood screws for use when the footlight is permanently installed.

When the footlight is frequently installed and removed, a metal floor plate should be let into the stage floor under the centre hole of each fixing bracket, and the footlight then secured by means of  $\frac{5}{16}$  in. wing screws.

*Floor plates, wing screws, etc., are NOT provided by us.*

#### Weight

per 6 ft. length approx. 26 lb.

per 3 ft. extension approx. 13 lb.

**Lamps** 40 or 60 watt internally silica sprayed with B.C. caps.

|              |  |      |
|--------------|--|------|
| <b>PRICE</b> | per 6 ft. length .. .. .   | each |
|              | of 3 ft. extension .. .. .   | "    |
| <b>A.250</b> | " Cinemoid " colours (8 in. by $17\frac{3}{4}$ in. Two required per 3 ft. of footlight) .. | "    |

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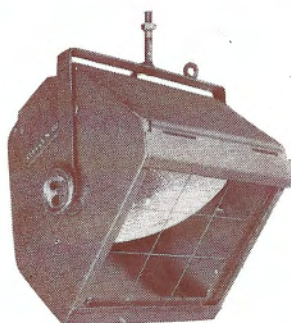




# STRAND STAGE FLOODS

## PATTERN 237 MEDIUM OR WIDE-ANGLE FLOOD, 60, 100 OR 150 WATT

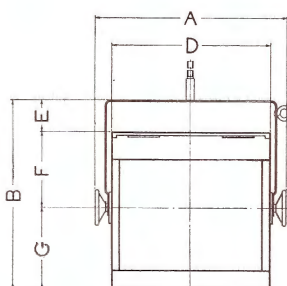
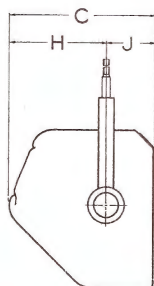
Although this flood finds many uses in the professional theatre it has been designed particularly with the very small stage in view. It is normally fitted with a medium-angle "Sunray" glass reflector, which is very suitable for lighting over a distance, for example, from No. 1 Batten position to the Acting Area, while sufficient direct light is available for lighting the adjacent border. If, however, a controlled beam is required, a cut-off attachment can be fitted to the front colour runners, when the lantern becomes in effect a miniature Acting Area Flood.



A wide-angle reflector can be fitted as an alternative, where the lantern is required to provide an even spread of light, free of hot spot, for lighting backcloths, or for use as a footlight.

### SPECIFICATION

The housing is strongly constructed in sheet steel, fitted with runners with a light-tight hinged flap at top to take metal colour frames, and a Type B.236 (medium angle) or B.235 (wide angle) circular "Sunray" glass reflector. An adequate airflow over both sides of the colour medium is arranged without the necessity of louvres in the top of the housing, thus keeping the interior cleaner. The Tilting Fork has a  $\frac{3}{8}$ -inch Whitworth stem (for suspension or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels. Wired with 3-foot heat-resisting tails. Finish: black crystalline enamel outside, matt black inside. Supplied complete with one 8-inch  $\times$  9 $\frac{1}{4}$ -inch metal colour frame.



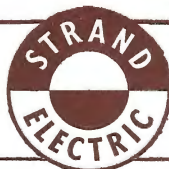
### DIMENSIONS

|   | Ft. | In.                |   | Ft. | In.               |
|---|-----|--------------------|---|-----|-------------------|
| A | ... | 0 12               | F | ... | 0 4 $\frac{3}{4}$ |
| B | ... | 0 11 $\frac{1}{2}$ | G | ... | 0 5               |
| C | ... | 0 9                | H | ... | 0 6               |
| D | ... | 0 9 $\frac{3}{4}$  | J | ... | 0 3               |
| E | ... | 0 1 $\frac{3}{4}$  |   |     |                   |

Weight.—Nett weight 10 $\frac{1}{4}$  lbs.

(continued overleaf)

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TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



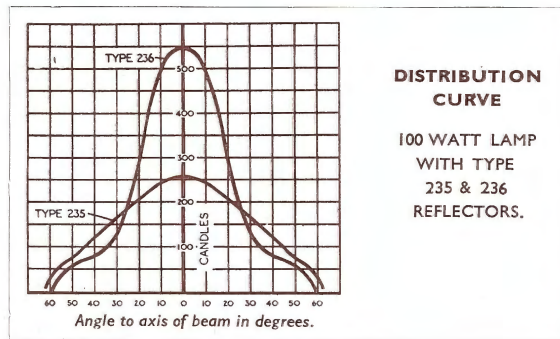
BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

**SPECIFICATION—(cont'd)**

**Lamps.**—60-watt General Service type with E.S. Cap.  
 100-watt General Service type with E.S. Cap.  
 150-watt Theatre Batten type with E.S. Cap.

**N.B.**—Lamps should be clear NOT pearl.

**Beam Angles.**—With B.236 medium-angle reflector. Beam Angle 95°, cut-off angle 120°. With medium-angle reflector and cut-off attachment. Beam angle 50°, cut-off angle 80°. With B.235 wide-angle reflector. Beam angle 120°, cut-off angle 125°.



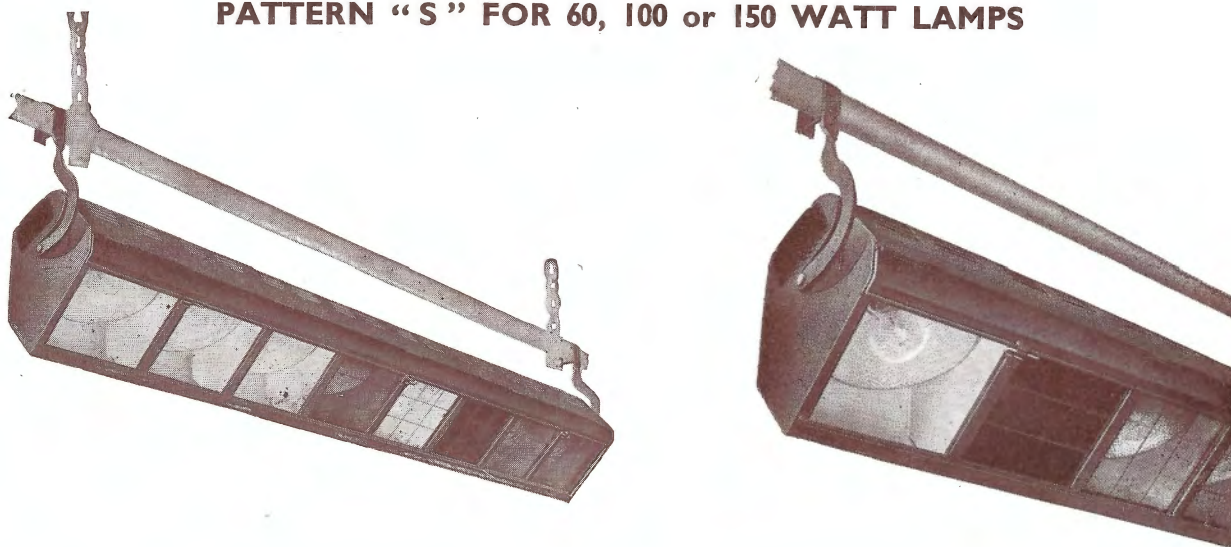
|   |         |          |
|---|---------|----------|
| <b>PRICE</b> (excluding lamp) .. .. .   | .. .. . | each     |
| B.235.—Extra wide-angle glass reflectors .. .. .  | .. .. . | ”        |
| B.270.—Wide-angle anodised aluminium reflector.. .. .   | .. .. . | ”        |
| B.236.—Extra medium-angle glass reflectors .. .. .  | .. .. . | ”        |
| B.271.—Medium-angle anodised aluminium reflector .. .. .  | .. .. . | ”        |
| B.239.—Hood attachment .. .. .  | .. .. . | ”        |
| B.240.—Extra metal colour frames (8-inch × 9¼-inch) .. .. .   | .. .. . | ”        |
| B.241.—Assorted gelatine colours (8-inch × 9¼-inch) .. .. .   | .. .. . | per doz. |
| B.243.—“ Cinemoid ” colours (8-inch × 9¼-inch) .. .. .  | .. .. . | ”        |
| B.185.—15-amp. 3-pin moulded connectors .. .. .   | .. .. . | per pair |
| B. 64.—Safety chain with snap hook (for use when lantern is suspended) .. .. .  | .. .. . | each     |
| B. 65.—“ L ” clamp for suspension from 2-inch diameter barrel .. .. .   | .. .. . | ”        |
| B. 84.—Adjustable barrel clamp (from 1½ inches to 2½ inches diam.) .. .. .  | .. .. . | ”        |
| B.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | .. .. . | ”        |
| B.248.—Ditto with swivelling extension arm (max. reach 19 inches) .. .. .   | .. .. . | ”        |
| B.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. .. .   | .. .. . | ”        |
| B.252.—Ditto with extension arm (max. reach 19 inches) .. .. .  | .. .. . | ”        |
| B.253.—Adjustable boomerang arm bracket for 1-inch diam. barrel (reach 10 inches) .. .. .   | .. .. . | ”        |
| B.254.—Ditto with extension arm (max. reach 19 inches) .. .. .  | .. .. . | ”        |
| B.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. .. .  | .. .. . | ”        |
| B.257.—Miniature telescopic stand with cable hook and swivelling collar. Min. height<br>3 ft. 7 ins. Max. height 5 ft. 9 ins. .. .. . | .. .. . | ”        |

|   |  |   |
|---|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/>                 29, KING STREET, LONDON, W.C.2<br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/>                 313, OLDHAM ROAD, MANCHESTER 10<br/>                 COLLYHURST 2736<br/>                 62, DAWSON ST., DUBLIN - DUB 74030</p> |
|---|--|---|



# STRAND BATTENS

PATTERN "S" FOR 60, 100 or 150 WATT LAMPS



This Batten has compartments spaced at 9 inch centres and gives much more light from fewer lamps than the old 6, 7 and 8-inch centre types which it supersedes. The "Sunray" silvered glass reflectors give medium-angle beams free of hot spots, the main beams being directed down to the Acting Area while direct light from the lamps provides adequate illumination for adjacent borders.

The external surfaces of the Batten are designed to permit hanging scenery to slide off without causing any damage to either.

For use on small stages and for close range work with cycloramas, skycloths, etc., wide-angle reflectors can be fitted in place of the medium-angle type referred to above.

## SPECIFICATION

**Housing** is constructed in 20-gauge sheet steel efficiently ventilated with pressed steel compartment divisions welded in place at 9-inch centres, and the whole is finished in black crystalline outside and stove white enamel inside. Each compartment is fitted with a metal frame with guard wires to take colour medium, E.S. lampholder, and spring steel spider carrying type A236 circular medium-angle Sunray silvered glass reflector. (For close range work the latter is replaced by wide angle type A235 reflector.) Batten is manufactured in 3-foot or 6-foot lengths or multiples thereof.

**Wiring**, which is housed in a sheet-metal trough with removable lid, is carried out in fireproof cable for colours and circuits to suit requirements, and is terminated in short tails (or in certain circumstances a connector box) on actors' right or left as required.

**Suspension**.—Arms pivoted to the batten at the centre of gravity are fitted every 6 feet. The standard termination is a clamp to fit 1½-inch gas barrel (see dimension C on sketch overleaf). A bolt positively locates and locks the batten at any desired angle. An alternative arrangement (D) carries a shackle (shown dotted) for use when hanging direct from hooks in the ceiling. Extension arms (B) are available where lanterns are interposed between sections of batten, to bring the lower edges in one line.

(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING ST., COVENT GARDEN, LONDON, W.C.2  
SALES & GOODS · 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444 · GRAMS: SPOTLIGHT, RAND, LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN · DUB 74030



**SPECIFICATION (cont'd)**

**Lamps.**— 60-watt General Service with E.S. Cap.

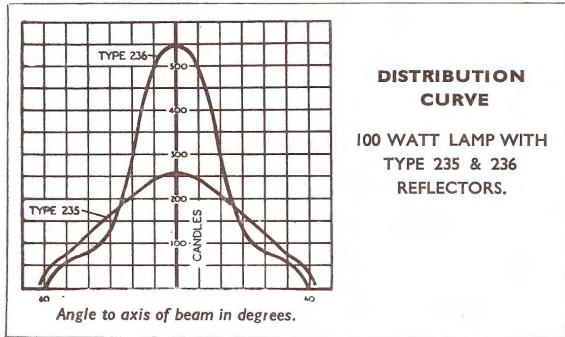
100- " " " " "

150- " Theatre Batten type "

**N.B.**—Lamps should be clear NOT pearl.

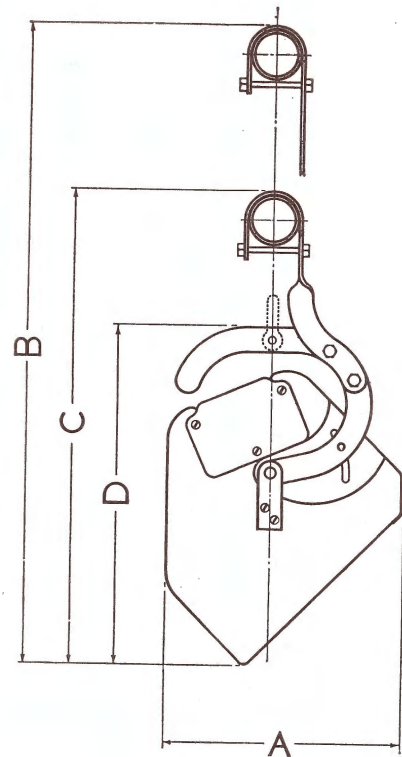
**Beam Angle** (with standard A236 reflector).—Cut off 120°, Beam Angle 95° ; or with A235 wide-angle reflector—Cut off 125°, Beam Angle 120°.

**Weight.**—Complete with colour frames and reflectors per 3-foot length 30 lbs., per 6-foot length 58 lbs.



**DIMENSIONS**

|   | Ft. | In. |
|---|-----|-----|
| A | 0   | 9   |
| B | 2   | 9   |
| C | 1   | 6   |
| D | 1   | 1   |



**PRICES**

(Exclusive of lamps, connector box and colour mediums, but including colour frames)

| Length | Compartmentments | £ | s. | d. | Length | Compartmentments | £ | s. | d. | Length | Compartmentments | £ | s. | d. |
|--------|------------------|---|----|----|--------|------------------|---|----|----|--------|------------------|---|----|----|
| 3 ft.  | 4                |   |    |    | 18 ft. | 24               |   |    |    | 33 ft. | 44               |   |    |    |
| 6 ft.  | 8                |   |    |    | 21 ft. | 28               |   |    |    | 36 ft. | 48               |   |    |    |
| 9 ft.  | 12               |   |    |    | 24 ft. | 32               |   |    |    | 39 ft. | 52               |   |    |    |
| 12 ft. | 16               |   |    |    | 27 ft. | 36               |   |    |    | 42 ft. | 56               |   |    |    |
| 15 ft. | 20               |   |    |    | 30 ft. | 40               |   |    |    | 45 ft. | 60               |   |    |    |

|   |                       |
|---|-----------------------|
| Broken and special lengths with interconnecting plugs .. .. .           | Prices on application |
| Batten Pilots.—Fitted to existing compartments on white circuit .. .. . | each                  |
| Fitted as additional compartments .. .. .                               | "                     |
| A.236.—Extra medium-angle glass reflectors .. .. .                      | "                     |
| A.271.—Medium-angle anodised aluminium reflector .. .. .                | "                     |
| A.235.—Wide-angle glass reflectors .. .. .                              | "                     |
| A.270.—Wide-angle anodised aluminium reflector .. .. .                  | "                     |
| A.240.—Extra metal colour frames (8 inch × 9¼ inch) .. .. .             | "                     |
| A.241.—Gelatine any colour except frost (8 inch × 9¼ inch) .. .. .      | per doz.              |
| A.242.—Gelatine frost (8 inch × 9¼ inch) .. .. .                        | "                     |
| A.243.—Cinemoid colours or frost (8 inch × 9¼ inch) .. .. .             | "                     |
| Batten connector box .. .. .  | each                  |

HEAD OFFICE AND SHOWROOMS

29, KING ST., COVENT GARDEN, LONDON, W.C.2

SALES & GOODS · 24, FLORAL ST., W.C.2

TEMPLE BAR 4444 · GRAMS: SPOTLIGHT, RAND, LONDON

BRANCHES

313, OLDHAM ROAD, MANCHESTER 10

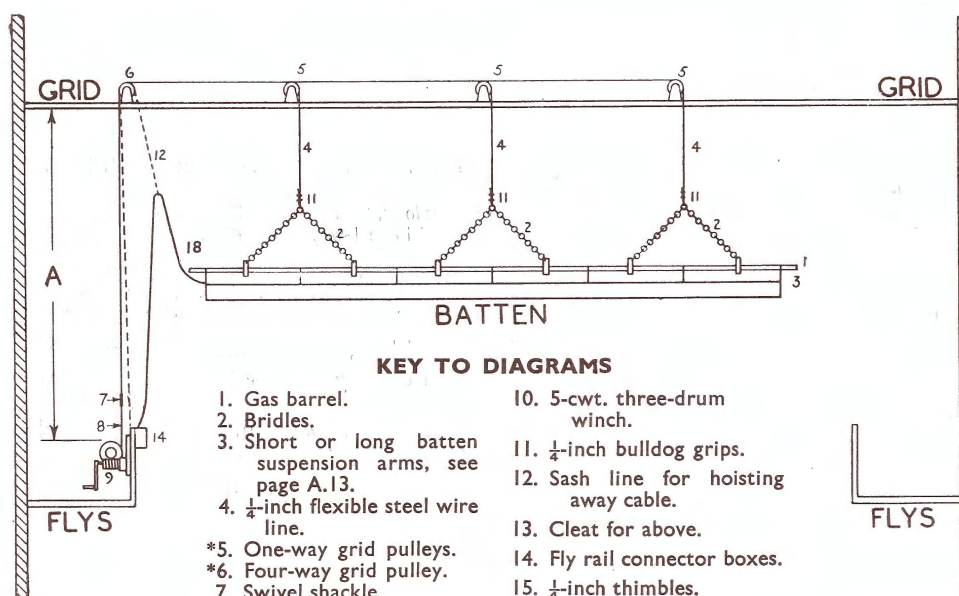
COLLYHURST 2736

62, DAWSON ST., DUBLIN · DUB 74030

# STRAND BATTEN SUSPENSIONS

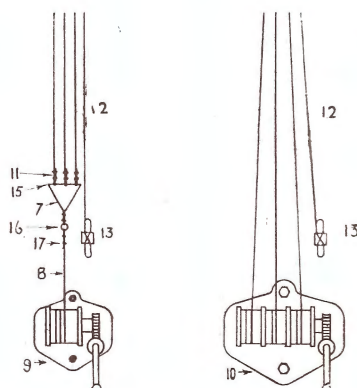
While 3-line suspension is adequate for compartment battens up to 36 feet long, greater lengths should be hung from 4 lines. Either single-drum or multi-drum winches may be used, but the former are only suitable where the dimension from grid to winch ("A" on sketch below) is greater than the distance through which the batten must be raised and lowered.

The table overleaf gives the materials and quantities required according to length of batten and type of winch to be used. The tables also apply for spot and flood battens, but see Note 2 overleaf. Where circumstances preclude raising and lowering battens, these may be fixed to wall or ceiling by means of a special saddle, for details of which see overleaf at foot.

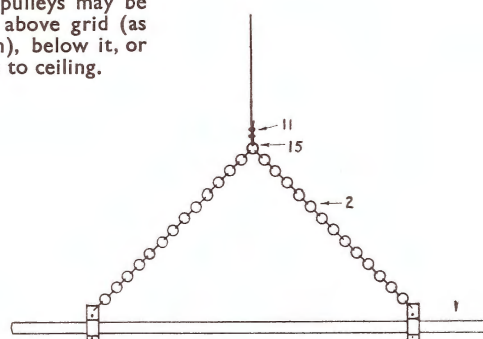


## KEY TO DIAGRAMS

- |   |   |
|---|---|
| 1. Gas barrel.  | 10. 5-cwt. three-drum winch.            |
| 2. Bridles.   | 11. $\frac{1}{4}$ -inch bulldog grips.  |
| 3. Short or long batten suspension arms, see page A.13. | 12. Sash line for hoisting away cable.  |
| 4. $\frac{1}{4}$ -inch flexible steel wire line.        | 13. Cleat for above.                    |
| *5. One-way grid pulleys.                               | 14. Fly rail connector boxes.           |
| *6. Four-way grid pulley.                               | 15. $\frac{1}{4}$ -inch thimbles.       |
| 7. Swivel shackle.                                      | 16. $\frac{5}{16}$ -inch thimbles.      |
| 8. $\frac{5}{16}$ -inch flexible steel wire line.       | 17. $\frac{5}{16}$ -inch bulldog grips. |
| 9. 5-cwt. single-drum winch.                            | 18. Batten connecting cables.           |

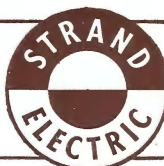


\* Grid pulleys may be fixed above grid (as shown), below it, or direct to ceiling.



(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030



| PARTS   | Battens up to 36 feet |         | Battens over 36 feet |         | Spot/Flood Battens (see note 2) | PRICES            |
|---|-----------------------|---------|----------------------|---------|---------------------------------|-------------------|
|   | 5-cwt. winch          |         | 10-cwt. winch        |         | 10-cwt. winch                   |                   |
|   | 1 drum                | 3 drums | 1 drum               | 4 drums | 3 drums                         |                   |
| A. 25. 1½-inch Gas barrel (see Note 1)                        | 1                     | 1       | 1                    | 1       | 1                               | per foot each     |
| A. 26. Bridles ... ..   | 3                     | 3       | 4                    | 4       | 3                               |                   |
| A. 27. One-way Grid pulleys ...                               | 3                     | 3       | 4                    | 4       | 3                               |                   |
| A. 28. Three-way Grid pulleys ...                             | 1                     | 1       | —                    | —       | 1                               |                   |
| A. 38. Four-way Grid pulleys ...                              | —                     | —       | 1                    | 1       | —                               |                   |
| A. 29. 5-cwt. single-drum winch ...                           | 1                     | —       | —                    | —       | —                               |                   |
| A. 30. 5-cwt. three-drum winch ...                            | —                     | 1       | —                    | —       | —                               |                   |
| A. 39. 10-cwt. single-drum winch ...                          | —                     | —       | 1                    | —       | —                               |                   |
| A.244. 10-cwt. three-drum winch (see Note 2) ... ..           | —                     | —       | —                    | —       | 1                               |                   |
| A. 40. 10-cwt. four-drum winch ...                            | —                     | —       | —                    | 1       | —                               |                   |
| A. 31. ¼-inch flexible steel wire lines                       | 3                     | 3       | 4                    | 4       | —                               | per 100 feet      |
| A. 32. ⅝-inch flexible steel wire lines                       | 1                     | —       | 1                    | —       | 1                               |                   |
| A. 33. ¼-inch bulldog grips ... ..                            | 12                    | 6       | 16                   | 8       | —                               | each              |
| A. 34. ⅝-inch bulldog grips ... ..                            | 2                     | —       | 2                    | —       | 6                               |                   |
| A. 35. ¼-inch thimbles ... ..                                 | 6                     | 3       | 8                    | 4       | —                               | "                 |
| A. 36. ⅝-inch thimbles ... ..                                 | 1                     | —       | 1                    | —       | 3                               |                   |
| A. 37. Swivel shackles ... ..                                 | 1                     | —       | 1                    | —       | —                               | "                 |
| <b>Optional</b>   |                       |         |                      |         |                                 |                   |
| A.320.—Sash line for hoisting away cables (see Note 3) ... .. | 1                     | 1       | 1                    | 1       | 1                               | per 100 feet each |
| A.321.—Cleat for above (see Note 3)                           | 1                     | 1       | 1                    | 1       | 1                               |                   |

**NOTES**

- 1.—Barrel should be 2 feet longer than battens.
- 2.—The 10-cwt. 3-drum winch should be used on spot and flood battens where the weight exceeds 5-cwt. but the length does not justify 4-line suspension.
- 3.—If electric cables are hoisted away, for battens up to 36 feet long, substitute one 4-way grid pulley in place of one 3-way shown in table; for battens over 36 feet, add one 1-way grid pulley.

A 41.—Counterweight clips to suspend A. 25 barrels from counterweight bars, when this system of hanging is used. (one per 6-ft. length of barrel + 1) .. each

A. 20.—Fly Rail Connector boxes, consisting of sheet-steel box, with terminals for up to 12 double pole ways and earth, complete with cable gland for batten tails .. "

**Batten connecting cables.**—Tinned copper wires 70/.0076 insulated with a double jacket of vulcanized india-rubber, taped with numbered tapes, cores twisted together, taped, asbestos braided, asbestos painted overall:—

|       | No. of Cores | Amps. |    |    |    |    |    |    |          |
|-------|--------------|-------|----|----|----|----|----|----|----------|
| A.51. | 9            | 8     | .. | .. | .. | .. | .. | .. | per foot |
| A.53. | 15           | 6     | .. | .. | .. | .. | .. | .. | "        |
| A.55. | 25           | 5     | .. | .. | .. | .. | .. | .. | "        |

**Asbestos safety borders** (with tapes for tying to barrels behind spotlights), to comply with L.C.C. regulations.

A. 42.—12-feet long × 2-feet deep .. .. . each

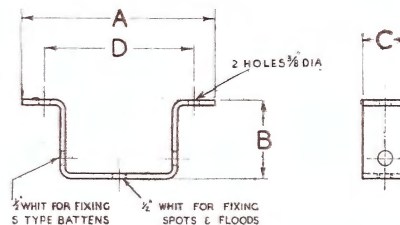
A. 43.— 6-feet long × 2-feet deep .. .. . "

A.259.—**Wall or Ceiling fixing saddles**, for use when battens are not to be raised and lowered (illustrated on page L.31.)  
 Quantity required : 1 per length of batten (6-feet or 3-feet) plus one. Thus a 33-foot batten consisting of five 6-ft. lengths and one 3-ft length will require 6 (number of lengths) + 1 = 7.

Price .. .. . each

**DIMENSIONS**

- A = 6⅝
- B = 2⅝
- C = 1½
- D = 5⅛



|  |   |   |
|--|---|---|
| <p>HEAD OFFICE AND SHOWROOMS</p> <p>29, KING STREET, LONDON, W.C.2</p> <p>SALES AND GOODS - 24, FLORAL ST., W.C.2</p> <p>TEMPLE BAR 4444    GRAMS : SPOTLITE RAND LONDON</p> |  | <p>BRANCHES</p> <p>313, OLDHAM ROAD, MANCHESTER 10</p> <p>COLLYHURST 2736</p> <p>62, DAWSON ST., DUBLIN - DUB 74030</p> |
|--|---|---|



# STRAND MAGAZINE LENGTHS

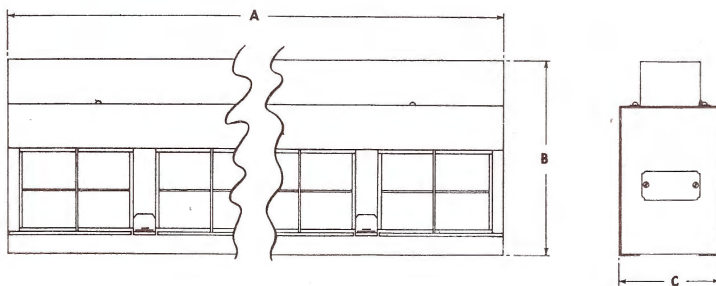
PATTERN "L" FOR 25, 40, 60 OR 100 WATT LAMPS



This magazine equipment is designed to be as compact and light in weight as possible in order that it may hang vertically or horizontally on framed scenery. The light dispersion is wide, particularly in the double sided model, free from hot spot, making it particularly suitable for lighting window and door backings. In small stages it will also be useful as footlight or as groundrow to light the bottom of cycloramas and backcloths at close range.

### SPECIFICATION

The housing is constructed in sheet steel, efficiently ventilated, with compartments at 6 inch centres and the whole is finished white reflection surface inside and black crystalline enamel outside. Each compartment is fitted with a B.C. lampholder and on one or two sides with runners each carrying one metal colour filter frame with guard wires. A hinged flap retains colour frames in position. Sets of vertical and horizontal keyhole slots are provided for wood fixing screws. Wiring is in heat resisting cable and terminates in 1 ft. tails.



### DIMENSIONS

of one- and two-sided lengths

|           | ft. | ins. |
|-----------|-----|------|
| A .. .. . | 3   | 0    |
| B .. .. . | 8   | 1/2  |
| C .. .. . | 4   | 1/2  |

Lamps: 25, 40, 60 or 100 watt  
Pearl BC General Service.

Weight: Complete, but without lamps, 23 lbs. approx.

### PRICES (exclusive of lamps)

|  | each |
|--|------|
| Double sided, wired 1 circuit, per length .. .. .  | "    |
| Double sided, wired 2 circuits, per length .. .. . | "    |
| Single sided, wired 1 circuit, per length .. .. .  | "    |
| Single sided, wired 2 circuits, per length .. .. . | "    |

(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON

BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

**PRICES** (continued)

|  |          |
|--|----------|
| Extra for fitting metal hook to pass over scenery rail   | each     |
| *A.312—Extra metal colour frames $5\frac{3}{4}$ ins. x $5\frac{3}{4}$ ins. (for single-sided lengths and for one side of double-sided lengths) .. .. . | "        |
| A.313—Gelatine, any colour except frost, $5\frac{3}{4}$ ins. x $5\frac{3}{4}$ ins. .. .. .   | per doz. |
| A.314—Gelatine, frost, $5\frac{3}{4}$ ins. x $5\frac{3}{4}$ ins. .. .. .   | " "      |
| A.315—" Cinemoid ", any colour or frost, $5\frac{3}{4}$ ins. x $5\frac{3}{4}$ ins. .. .. .   | " "      |
| *A.295—Extra metal colour frames, $5\frac{3}{4}$ ins. x $4\frac{3}{8}$ ins. (for one side of two-sided length)   | each     |
| A.296—Gelatine, any colour except frost, $5\frac{3}{4}$ ins. x $4\frac{3}{8}$ ins. .. .. .   | per doz. |
| A.297—Gelatine, frost, $5\frac{3}{4}$ ins. x $4\frac{3}{8}$ ins. .. .. .   | " "      |
| A.298—" Cinemoid," any colour or frost, $5\frac{3}{4}$ ins. x $4\frac{3}{8}$ ins. .. .. .  | " "      |
| A.185—15 amp. 3-pin moulded connector plugs .. .. .  | per pair |

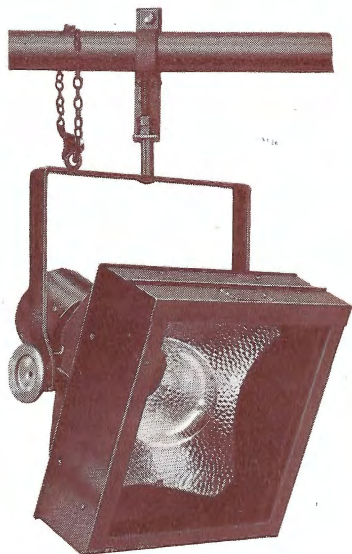
\*Note.—Each single-sided length has six type A.312 colour frames. Each two-sided length has six type A.312 and six type A.295 colour frames.

|  |   |   |
|--|---|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>         SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>         TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>         COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN</b> - DUB 74030</p> |
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# STRAND STAGE FLOODS

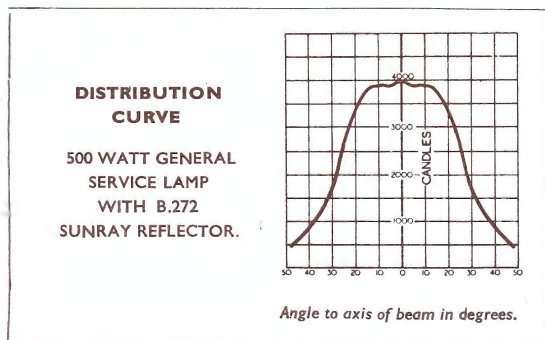
## PATTERN 30 MEDIUM-ANGLE BATTEN FLOOD 500 WATT



This lantern is suitable for use as a Batten Flood or for any purpose which necessitates the illuminating of objects situated some distance from it.

### SPECIFICATION

The housing is strongly constructed in sheet steel, efficiently ventilated, fitted with runners to take two metal colour frames with a light, tight hinged flap at top and a one-piece B.272 silvered glass "Sunray" reflector. The tilting fork has a 1/2-inch Whitworth stem (for suspension by barrel clamp or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels, and is wired with 3 ft. H.R. flexible tails. Finish: black crystalline enamel outside, matt black inside. Complete with one metal colour frame.



### Lamp.

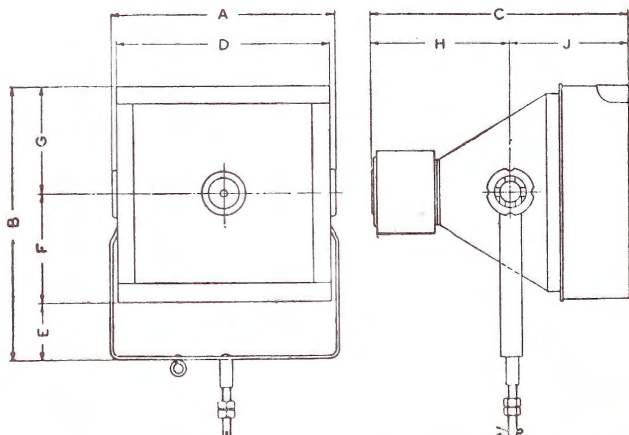
500-watt. General Service Type with G.E.S. Cap.

### Beam Angles.

Cut-off 90°, Beam Angle 56°.

### Weight

Nett weight 14 lbs.



### DIMENSIONS

|   | Ft. | In. |       | Ft. | In. |   |       |
|---|-----|-----|-------|-----|-----|---|-------|
| A | ... | 1   | 2 1/2 | F   | ... | 0 | 6 1/4 |
| B | ... | 1   | 4     | G   | ... | 0 | 6 1/4 |
| C | ... | 1   | 2 3/4 | H   | ... | 0 | 8 1/2 |
| D | ... | 1   | 0 1/2 | J   | ... | 0 | 6 1/4 |
| E | ... | 0   | 3 1/2 |     |     |   |       |

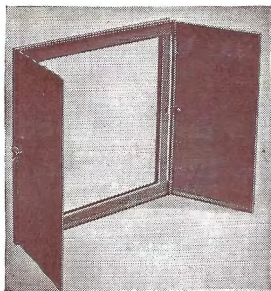
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HEAD OFFICE AND SHOWROOMS  
 29, KING STREET, LONDON, W.C.2  
 SALES AND GOODS - 24, FLORAL ST., W.C.2  
 TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



BRANCHES  
 313, OLDHAM ROAD, MANCHESTER 10  
 COLLYHURST 2736  
 62, DAWSON ST., DUBLIN - DUB 74030

**PRICE OF LANTERN** (exclusive of lamp and barrel clamp shown overleaf) .. .. each



B. 91.—2-door masking shutters (as illustrated).  
May be used for confining the beam either  
horizontally or vertically .. .. each

B.273 [REDACTED]—Extra anodised aluminium reflectors .. .. each

B.272 [REDACTED]—Alternative glass “Sunray” reflectors .. ..

B. 61.—Extra metal colour frames with guard wires (11 $\frac{3}{4}$ -inch  $\times$  11 $\frac{3}{4}$ -inch) .. .. per doz.

B. 62.—Ditto with assorted gelatine colours .. ..

B. 63.—Ditto with “Cinemoid” colours .. ..

B. 64.—Safety chain with snap hook (for use when lantern is suspended as shown overleaf) .. .. each

B. 65.—“L” clamp for suspension from 2-inch diameter barrel as shown overleaf .. ..

B. 84.—Adjustable barrel clamp (from 1 $\frac{1}{2}$ -inch to 2 $\frac{1}{2}$ -inch diam.) .. ..

B. 66.—Telescopic stand with cable hook and swivelling collar (min. height 4 feet 3 inches,  
max. height 7 feet) .. ..

B.247.—Swivel arm wall bracket (reach 10 inches) .. ..

B.248.—Ditto with swivelling extension arm (max. reach 19 inches) .. ..

B.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. ..

B.252.—Ditto with extension arm (max. reach 19 inches) .. ..

B.253.—Adjustable boomerang arm bracket for 1-inch diam. barrel (reach 10 inches) .. ..

B.254.—Ditto with extension arm (max. reach 19 inches) .. ..

B.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. ..

|  |  |   |
|--|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>         SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>         TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>         COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN - DUB 74030</b></p> |
|--|--|---|



# STRAND STAGE FLOODS

## PATTERN 60 WIDE-ANGLE WING FLOOD 500 WATT

This lantern is particularly suitable for use as a wing flood or for any close range work such as illuminating small back cloths and cycloramas. The beam is free from "hot spot".

### SPECIFICATION

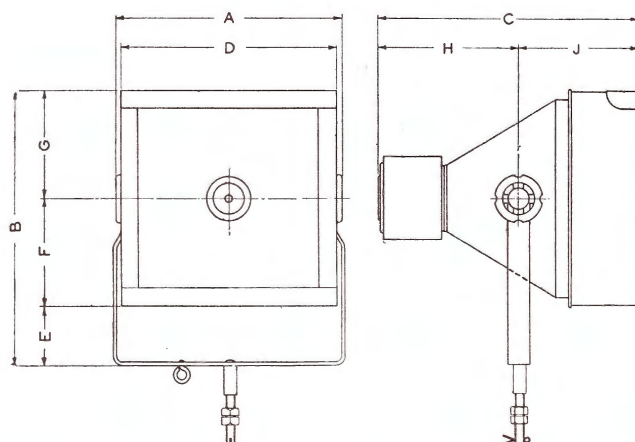
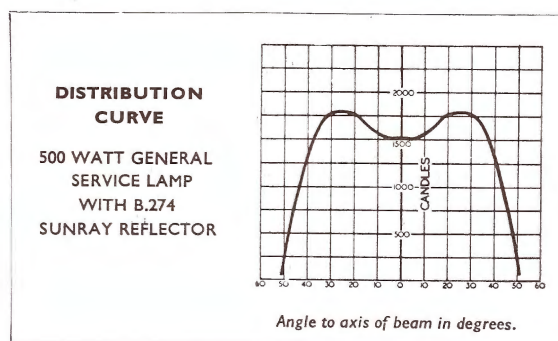
The housing is strongly constructed in sheet steel efficiently ventilated, fitted with runners with a light-tight hinged flap at top to take two metal colour frames, and a one-piece type B.275 anodised aluminium reflector. The tilting fork has a 1/2-inch Whitworth stem (for suspension by barrel clamp or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels, and is wired with 3 ft. H.R. flexible tails. Finish: black crystalline enamel outside, matt black inside. Complete with one metal colour frame.



**Lamp.**  
500-watt. General service type with G.E.S. cap.

**Beam Angle.**  
Cut off angle 105°, Beam Angle 100°.

**Weight.**  
Nett weight 14 lbs.



**DIMENSIONS**

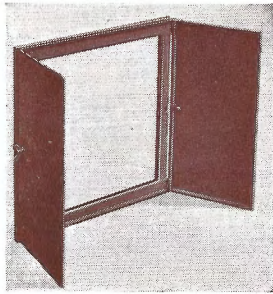
|   | Ft. | In.     |   | Ft. | In.     |   | Ft. | In.     |
|---|-----|---------|---|-----|---------|---|-----|---------|
| A | ... | 1 2 1/2 | D | ... | 1 0 1/2 | G | ... | 0 6 1/2 |
| B | ... | 1 4     | E | ... | 0 3 1/2 | H | ... | 0 8 1/2 |
| C | ... | 1 2 3/4 | F | ... | 0 6 1/4 | J | ... | 0 6 1/4 |

(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON

BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

**PRICE OF LANTERN** (exclusive of lamp or stand shown overleaf) .. .. . each



B. 91.—2-door masking shutters (as illustrated).  
 May be used for confining the beam  
 either horizontally or vertically .. .. . each

- B.275.—Extra anodised aluminium reflectors .. .. . each
- B.274.—Alternative glass “Sunray” reflectors .. .. . ”
- B. 61.—Extra metal colour frames with guard wires (11 $\frac{3}{4}$ -inch  $\times$  11 $\frac{3}{4}$ -inch) .. .. . per doz.
- B. 62.—Ditto with assorted gelatine colours .. .. . ”
- B. 63.—Ditto with “Cinemoid” colours .. .. . ”
- B. 64.—Safety chain with snap hook (for use when lantern is suspended) .. .. . each
- B. 65.—“L” clamp for suspension from 2-inch diameter barrel .. .. . ”
- B. 84.—Adjustable barrel clamp (from 1 $\frac{1}{2}$ -inch to 2 $\frac{1}{2}$ -inch diam.) .. .. . ”
- B. 66.—Telescopic stand with cable hook and swivelling collar (min. height 4 feet 3 inches,  
 max. height 7 feet) as shown overleaf .. .. . ”
- B.247.—Swivel arm wall bracket (reach 10 inches) .. .. . ”
- B.248.—Ditto with swivelling extension arm (max. reach 19 inches) .. .. . ”
- B.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. .. . ”
- B.252.—Ditto with extension arm (max. reach 19 inches) .. .. . ”
- B.253.—Adjustable boomerang arm bracket for 1-inch diam. barrel (reach 10 inches) .. .. . ”
- B.254.—Ditto with extension arm (max. reach 19 inches) .. .. . ”
- B.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. .. . ”

|  |  |   |
|--|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>         SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>         TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>         COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN - DUB 74030</b></p> |
|--|--|---|



# STRAND STAGE FLOODS

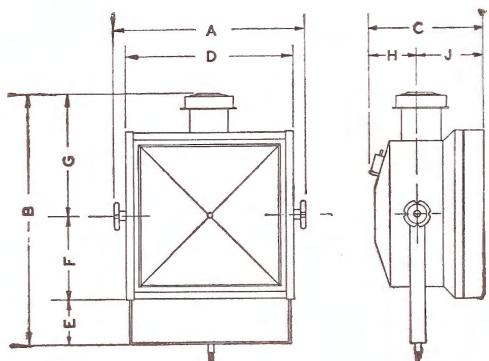
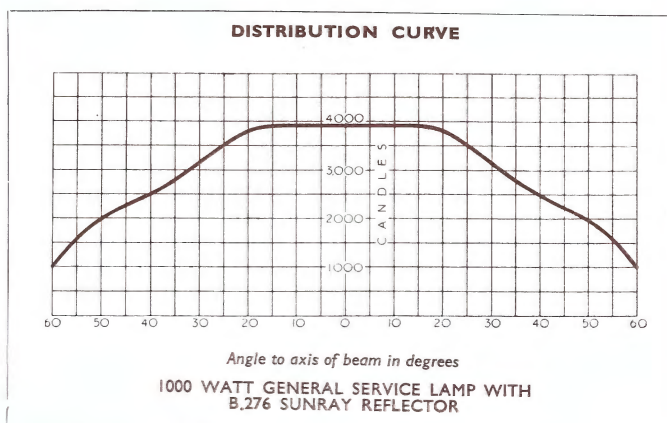
## PATTERN 49A WING FLOOD 1,000 WATT



This lantern gives a wide angle beam of light, free from "hot spot." Suitable for illuminating back-cloths, large cycloramas, etc., at close range, and for use in the wings.

### SPECIFICATION

Lantern constructed in sheet steel, efficiently ventilated. Fitted with runners to take two metal colour frames, hinged sprung light-tight flaps each side. Four-piece Type B.276 silvered glass "SUNRAY" reflector. The tilting fork has a 1/2-inch Whitworth stem (for suspension by barrel clamp or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels, and is wired with 3 ft. H.R. flexible tails. Finish: black crystalline enamel outside, matt black inside. Complete with one metal colour frame.



**Lamp.**—1,000-watt General Service type with G.E.S. Cap.

**Weight.**—Nett weight of Lantern 27 lbs.

**Beam Angle** 100°.

**Cut Off Angle** 105°

### DIMENSIONS

|   | Ft. | In.  |   | Ft. | In. |   | Ft. | In. |
|---|-----|------|---|-----|-----|---|-----|-----|
| A | ... | 1 6  | D | ... | 1 5 | G | ... | 1 1 |
| B | ... | 2 2½ | E | ... | 5   | H | ... | 6   |
| C | ... | 1 1  | F | ... | 8½  | J | ... | 7   |

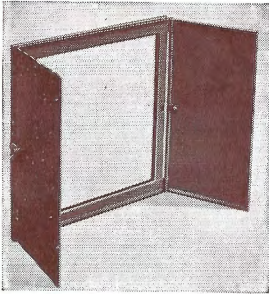
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**HEAD OFFICE AND SHOWROOMS**  
**29, KING STREET, LONDON, W.C.2**  
 SALES AND GOODS - 24, FLORAL ST., W.C.2  
 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON

**BRANCHES**  
**313, OLDHAM ROAD, MANCHESTER 10**  
 COLLYHURST 2736  
**62, DAWSON ST., DUBLIN - DUB 74030**

# STRAND STAGE FLOODS

PRICE OF LANTERN (exclusive of lamp or stand shown overleaf) .. .. . each



B.114.—2-door masking shutters (as illustrated),  
for confining the beam either horizontally  
or vertically .. .. . each

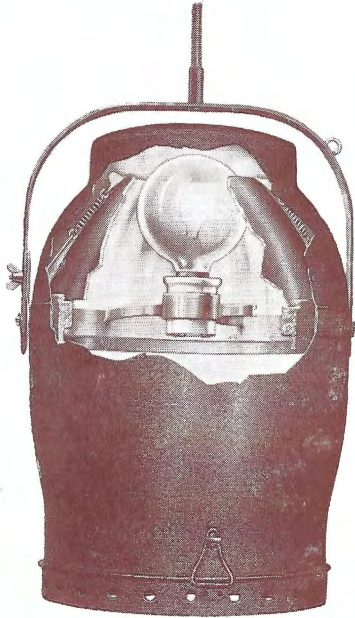
- B.276.—Extra 4-piece silvered glass reflectors .. .. . "
- B. 67.—Extra metal colour frames ( $16\frac{3}{4}$ -inches  $\times$   $16\frac{3}{4}$ -inches) .. .. . per doz.
- B. 68.—Ditto, with assorted gelatine colours .. .. . "
- B. 69.—Ditto, with assorted "Cinemoid" colours .. .. . "
- B. 66.—Telescopic stand (min. height 4 feet 3 inches, max. height 7 feet). (Illustrated overleaf) each
- B. 64.—Safety chain with snap hook (for use when lantern is suspended) .. .. . "
- B. 65.—" L " clamp for 2-inch diameter barrel .. .. . "
- B. 84.—Adjustable barrel clamp (from  $1\frac{1}{2}$ -inches to  $2\frac{1}{2}$ -inches diam.) .. .. . "
- B.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. .. . "
- B.252.—Ditto, with extension arm (max. reach 19 inches) .. .. . "
- B.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. .. . "

|   |  |   |
|---|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/>                 29, KING STREET, LONDON, W.C.2<br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/>                 313, OLDHAM ROAD, MANCHESTER 10<br/>                 COLLYHURST 2736<br/>                 62, DAWSON ST., DUBLIN - DUB 74030</p> |
|---|--|---|



# STRAND STAGE FLOODS

## PATTERN 76 ACTING AREA FLOOD, 1,000 WATT



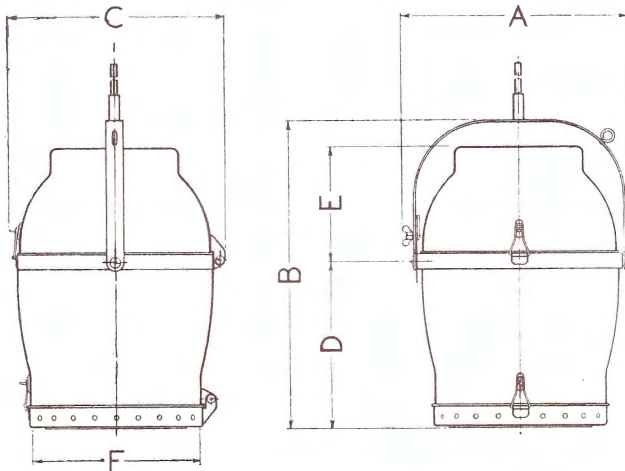
This lantern, of completely new design, gives a controlled but adjustable narrow-angle vertical beam, and is therefore suitable for lighting Acting Areas, particularly in close proximity to Cycloramas, Sky Cloths, etc., where spill light is not permissible. The design of the lantern is such that spill rings and their consequent loss of light are unnecessary.

### SPECIFICATION

The housing consists of aluminium spinnings attached to a central aluminium casting which carries the super pure anodised aluminium reflector and G.E.S. lampholder, the position of which is adjustable to give beam angles between 25° and 50°.

Affixed to the central casting are the swivel pins and locking plate for the tilting fork, which is fitted with a 1/2-inch Whitworth stem (for suspension) and eyelet for safety chain (not included). At the bottom of the lantern is a hinged door which carries the colour frame. Wired with 3-foot heat-resisting flexible tails. Finished black crystalline enamel outside, matt black inside. Supplied complete with one 1 1/2-inch diameter metal colour frame.

### DIMENSIONS

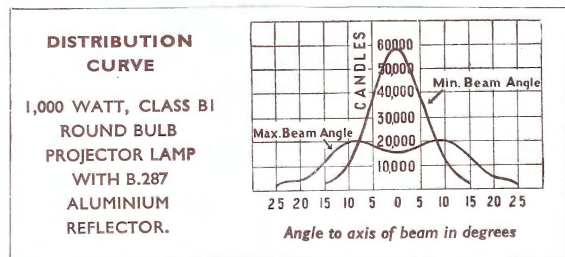


|   | Ft. | In.                       |
|---|-----|---------------------------|
| A | 1   | 3 1/2                     |
| B | 1   | 9 1/4                     |
| C | 1   | 2 3/4                     |
| D | 0   | 11 1/2                    |
| E | 0   | 8                         |
| F | 0   | 1 1/2 dia. (Colour Frame) |

**Lamp.**—500-watt Class B.1 Round Bulb Projector Lamp with G.E.S. Cap, or 1,000-watt Class B.1 Round Bulb Projector Lamp with G.E.S. Cap.

**Beam Angles.**—Cut off 25°, Beam Angle 25°, variable (by adjusting lampholder position) up to Cut off 50°, Beam angle 50°.

**Weight.**—Nett weight 16 lbs.



(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
**29, KING STREET, LONDON, W.C.2**  
 SALES AND GOODS - 24, FLORAL ST., W.C.2  
 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON

BRANCHES  
**313, OLDHAM ROAD, MANCHESTER 10**  
 COLLYHURST 2736  
**62, DAWSON ST., DUBLIN - DUB 74030**

|   |      |
|---|------|
| <b>PRICE</b> (exclusive of lamp) .. .. .                                    | each |
| B.287.—Extra anodised aluminium reflectors .. .. .                          | ”    |
| B.226.—Extra 1 1/2-inch diameter metal colour frames .. .. .                | ”    |
| B.227.—Ditto with gelatine colour .. .. .                                   | ”    |
| B.228.—Ditto with Cinemoid colour .. .. .                                   | ”    |
| B. 64.—Safety chain with snap hook .. .. .                                  | ”    |
| B. 65.—“ L ” clamp for suspension from 2-inch barrel .. .. .                | ”    |
| B. 84.—Adjustable barrel clamp (from 1 1/2 ins. to 2 1/2 ins. diam.).. .. . | ”    |

**Colour Change.**—This lantern can be fitted with a remotely operated colour-change mechanism. See Leaflet C.85.

**NOTE.**—By altering the lampholder position this lantern can be adjusted to give beam angles of from 25° to 50°. It is normally dispatched from our works with the lampholder in the narrow beam position.

|  |   |   |
|--|---|---|
| <p style="text-align: center;">HEAD OFFICE AND SHOWROOMS</p> <p>29, KING STREET, LONDON, W.C.2</p> <p>SALES AND GOODS - 24, FLORAL ST., W.C.2</p> <p>TEMPLE BAR 4444      GRAMS : SPOTLITE RAND LONDON</p> |  | <p style="text-align: center;">BRANCHES</p> <p>313, OLDHAM ROAD, MANCHESTER 10</p> <p style="text-align: center;">COLLYHURST 2736</p> <p>62, DAWSON ST., DUBLIN - DUB 74030</p> |
|--|---|---|





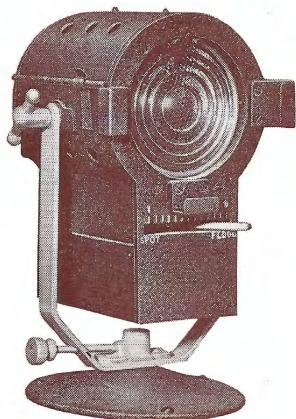




# STRAND SPOTLIGHTS

## PATTERN 41 SOFT EDGE SPOTLIGHT 200/240 VOLT, 100-WATT LAMP

This is a very small compact lantern particularly suited to stages, exhibitions and shop window displays where space is at a premium. Its low price makes it a valuable addition to the equipment of small halls where cost is all-important.



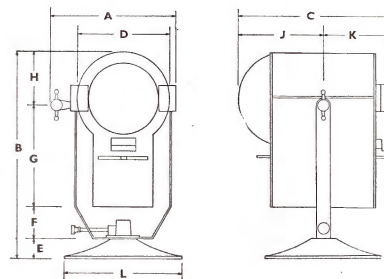
### SPECIFICATION

The housing is constructed in sheet steel with cast aluminium ends. Access to lamp by hinged door at top. 3-in. diameter, 2 $\frac{3}{4}$ -in. focus heat-resisting Fresnel lens with diffusing back. Tray with SBC lampholder and fixed 2 $\frac{1}{2}$ -in. diameter anodised aluminium reflector. Focussing by pivoted lever extended to front and back. Front runners to take C73 millboard colour frame. Built-in resistance under housing allows the 115-volt lamp to be used on 200/240 volts. Total consumption from the mains is 200 watts. Tilting fork is provided with cast circular base-plate which can also be used as fixing plate for suspension. Wired 1 ft. heat-resisting tails without plug. Finished black crystalline enamel outside, matt black inside.  
**Lamp.** 100-watt Class A.1 Tubular Projector with SBC cap. **115 volt** (used on 200/240 volt due to built-in resistance).  
**Beam Angles.** Maximum 42°; Minimum 14°.  
**Maximum throw.** Normally used up to 25 ft.

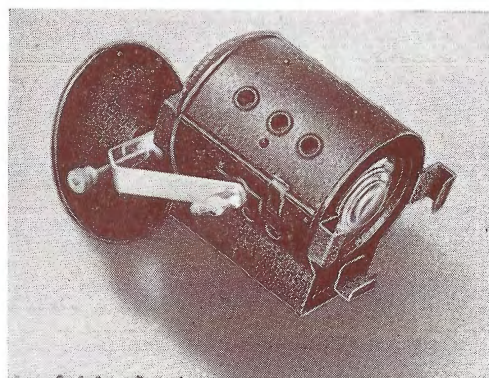
### DIMENSIONS

- |                       |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|-----------------------|
| A 5 $\frac{3}{4}$ in. | D 4 in.               | G 4 $\frac{1}{4}$ in. | K 3 $\frac{1}{4}$ in. |
| B 9 in.               | E $\frac{3}{4}$ in.   | H 2 $\frac{1}{2}$ in. | L 5 $\frac{1}{8}$ in. |
| C 6 $\frac{1}{4}$ in. | F 1 $\frac{1}{2}$ in. | J 3 in.               |                       |

**Weight.** Nett weight 3 $\frac{1}{2}$  lb.



**PRICE** (exclusive of lamp) .. .. . each




## PATTERN 41T SOFT EDGE SPOTLIGHT 115 VOLT, 100 WATT

For shop window lighting and similar situations where several of these spotlights are used together and/or for prolonged periods, the Pattern 41T spot, without resistance, can be supplied. Dimensions B and G are then 5 in. and 2 $\frac{1}{2}$  in. respectively making a less deep lantern which must be supplied from a transformer with an output of 115 volts.

**PRICE** (exclusive of lamp) .. .. . each  
 (Transformer prices on receipt of details, number of lanterns and layout)

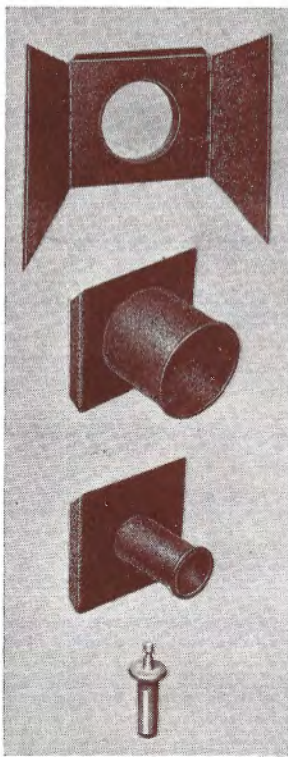
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|--|---|--|
| HEAD OFFICE AND SHOWROOMS<br>29, KING STREET, LONDON, W.C.2<br>SALES AND GOODS - 24, FLORAL ST., W.C.2<br>TEMPLE BAR 4444      GRAMS: SPOTLITE RAND LONDON |  | BRANCHES<br>313, OLDHAM ROAD, MANCHESTER 10<br>COLLYHURST 2736<br>62, DAWSON ST., DUBLIN - DUB 74030 |
|--|---|--|

# STRAND SPOTLIGHTS

## ACCESSORIES FOR PATTERNS 41 AND 41T

|  |          |
|--|----------|
| C.73—Linen bound millboard colour frames ( $4\frac{1}{4}$ in. by $4\frac{1}{4}$ in.) .. .. . | per doz. |
| C.74—Ditto with gelatine colours .. .. .   | ”        |
| C.97—Ditto with “ Cinemoid ” colours .. .. .   | ”        |
| C.309—Extra 3 in. dia. $2\frac{3}{4}$ in. focus H.R. Fresnel lenses .. .. .                  | each     |



C.316—Two-door masking shutters .. .. . each

C.318—Large diameter cylindrical funnel .. .. . each

C.317—Small diameter cylindrical funnel .. .. . each

C.319— $\frac{5}{16}$  in. Removable fork pin (to fit standard brackets and telescopic stands) .. .. . each

|   |  |   |
|---|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/>                 29, KING STREET, LONDON, W.C.2<br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/>                 313, OLDHAM ROAD, MANCHESTER 10<br/>                 COLLYHURST 2736<br/>                 62, DAWSON ST., DUBLIN - DUB 74030</p> |
|---|--|---|



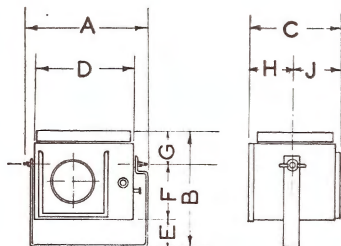
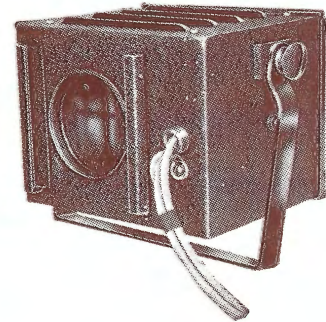
# STRAND SPOTLIGHTS

## PATTERN 27 FLOAT SPOTLIGHT 100 or 250 WATT

This is a small compact spotlight which may, owing to its size, be concealed in footlights, stage furniture, property fires, etc.

### SPECIFICATION

The housing is constructed in sheet steel, efficiently ventilated. Access to lamp by hinged door at rear. 3-inch diameter, 6-inch focus plano-convex lens. Type 27 tray giving variation in size of spot, axial adjustment for filament. Fitted with runners to take millboard colour frame on front. Wired with 3-foot heat-resisting tails without plugs. Finish black crystalline enamel outside, matt black inside.



### DIMENSIONS

|   | Ft. | In.             |
|---|-----|-----------------|
| A | ... | 9 $\frac{1}{4}$ |
| B | ... | 7               |
| C | ... | 6 $\frac{1}{2}$ |
| D | ... | 7               |
| E | ... | 1               |
| F | ... | 4               |
| G | ... | 2               |
| H | ... | 3               |
| J | ... | 3 $\frac{1}{2}$ |

**Lamps.**—100-watt Class B.1 Round Bulb Projector with E.S. Cap, or 250-watt Class B.1 Round Bulb Projector with E.S. Cap.

**Beam Angles.**—Maximum 49°. Minimum 22°.

**Maximum Throw.**—Normally used up to 15 feet.

**Weight.**—Nett weight 5 lbs.

**PRICE** (exclusive of lamp) .. .. .

|   |    |    |    |          |
|---|----|----|----|----------|
| C. 73.—Linen-bound millboard colour frames (4 $\frac{3}{8}$ inches $\times$ 4 $\frac{3}{8}$ inches) | .. | .. | .. | per doz. |
| C. 74.—Ditto, with gelatine colours   | .. | .. | .. | ..       |
| C. 97.—Ditto, with "Cinemoid" colours   | .. | .. | .. | ..       |
| C.300.—Extra 3-inch diam. 6-inch focus plano-convex lenses  | .. | .. | .. | each     |
| C.185.—15-amp. 3-pin moulded connectors   | .. | .. | .. | per pair |

If required, this Spotlight can be adapted for hanging or for use with a telescopic stand.

|   |  |   |
|---|--|---|
| <p>HEAD OFFICE AND SHOWROOMS</p> <p>29, KING STREET, LONDON, W.C.2</p> <p>SALES AND GOODS - 24, FLORAL ST., W.C.2</p> <p>TEMPLE BAR 4444      GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES</p> <p>313, OLDHAM ROAD, MANCHESTER 10</p> <p>COLLYHURST 2736</p> <p>62, DAWSON ST., DUBLIN - DUB 74030</p> |
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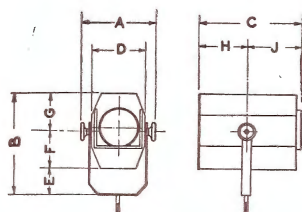
# STRAND SPOTLIGHTS

## PATTERN 45 MINIATURE SPOTLIGHT 250 WATT

This is a small spotlight which, being larger than the Pattern 27, gives a more efficient light, and greater range of focussing. Suitable for small stages, exhibitions and shop windows.

### SPECIFICATION

The housing is constructed in sheet steel, efficiently ventilated. Access to lamp by hinged door at rear.  $4\frac{1}{2}$ -inch diameter  $6\frac{1}{2}$ -inch focus plano-convex lens. Type 45 tray, giving axial adjustment for lamp, complete with chromium plated reflector. Focussing by knob under lantern. Fitted with runner to take millboard colour frame on front. The Tilting Fork has a  $\frac{3}{8}$ -inch Whitworth stem (for suspension or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels. Wired with 3-foot heat-resisting tails without plugs. Finish: black crystalline enamel outside, matt black inside.



### DIMENSIONS

|       | Ft. | In.              | Ft.   | In.             |
|-------|-----|------------------|-------|-----------------|
| A ... |     | 8 $\frac{1}{2}$  | F ... | 4 $\frac{1}{4}$ |
| B ... | 1   | 0                | G ... | 4 $\frac{1}{4}$ |
| C ... |     | 11 $\frac{3}{4}$ | H ... | 5 $\frac{3}{4}$ |
| D ... |     | 6                | J ... | 6               |
| E ... |     | 3 $\frac{1}{2}$  |       |                 |

### Weight.

Nett weight 9 $\frac{1}{2}$  lbs.

### Lamps.

250-watt Class B.1 Round Bulb Projector with E.S. Cap.

### Beam Angles.

Maximum 39°, minimum 11°.

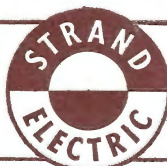
### Maximum Throw.

Normally used up to 25 feet.

|   |    |    |    |    |    |    |    |    |    |          |
|---|----|----|----|----|----|----|----|----|----|----------|
| PRICE (exclusive of lamp)   | .. | .. | .. | .. | .. | .. | .. | .. | .. | ..       |
| C. 76.—Linen-bound millboard colour frames (5 $\frac{5}{8}$ -inches $\times$ 5 $\frac{1}{4}$ -inches) | .. | .. | .. | .. | .. | .. | .. | .. | .. | per doz. |
| C. 77.—Ditto, with gelatine colours   | .. | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C. 78.—Ditto, with "Cinemoid" colours   | .. | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C.301.—Extra 4 $\frac{1}{2}$ -inch diam. 6 $\frac{1}{2}$ -inch focus plano-convex lenses              | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| C.233.—Extra chromium plated reflectors   | .. | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C.185.—15-amp. 3-pin moulded connectors   | .. | .. | .. | .. | .. | .. | .. | .. | .. | per pair |

(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

**PRICES** (cont'd)

|  |          |      |
|--|----------|------|
| C.113.—Flange plate stand with locking handle (height 6 inches, weight 1 $\frac{3}{4}$ lbs.)                                       | .. ..    | each |
| C.257.—Miniature telescopic stand with cable hook and swivelling collar (min. height 3 feet 7 inches, max. height 5 feet 9 inches) | .. .. .. | ..   |
| C. 64.—Safety chain with snap hook   | .. .. .. | ..   |
| C. 65.—“ L ” clamp for 2-inch diam. barrel (as illustrated)  | .. .. .. | ..   |
| C.247.—Swivel arm wall bracket (reach 10 inches)   | .. .. .. | ..   |
| C.248.—Ditto, with swivelling extension arm (max. reach 19 inches)   | .. .. .. | ..   |
| C.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches)  | .. ..    | ..   |
| C.252.—Ditto, with extension arm (max. reach 19 inches)  | .. .. .. | ..   |
| C.253.—Adjustable boomerang bracket for 1-inch diam. barrel (reach 10 inches)  | .. ..    | ..   |
| C.254.—Ditto, with extension arm (max. reach 19 inches)  | .. .. .. | ..   |
| C.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches)   | .. .. .. | ..   |

|  |   |   |
|--|---|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>                 COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN - DUB 74030</b></p> |
|--|---|---|





**PRICES** (cont'd)

|   |      |
|---|------|
| C. 64.—Safety chain with snap hook .. .. .  | each |
| C. 84.—Adjustable barrel clamp .. .. .  | "    |
| C. 65.—“ L ” clamp for 1½-inch diam. barrel (as illustrated) .. .. .  | "    |
| C. 66.—Telescopic stand with cable hook and swivelling collar (min. height 4 feet 3 inches, max. height 7 feet) .. .. . | "    |
| C.113.—Flange plate stand with locking handle (height 6 inches, weight 1¾ lbs.) .. .. .                                 | "    |
| C.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | "    |
| C.248.—Ditto, with swivelling extension arm (max. reach 19 inches) .. .. .  | "    |
| C.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. .. .                                   | "    |
| C.252.—Ditto, with extension arm (max. reach 19 inches) .. .. .   | "    |
| C.253.—Adjustable boomerang bracket for 1-inch diam. barrel (reach 10 inches) .. .. .                                   | "    |
| C.254.—Ditto, with extension arm (max. reach 19 inches) .. .. .   | "    |
| C.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. .. .  | "    |

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TELEPHONE: TEMPLE BAR 4444 TELEGRAMS: SPOTLITE, RAND LONDON

**BRANCH**  
62, DAWSON ST.  
DUBLIN  
DUB. 74030



# STRAND SPOTLIGHTS

## PATTERN 43 STAGE SPOTLIGHT 1,000 WATT

This Spotlight is suitable for all general stage purposes, including lighting the forestage from Front of House in small theatres. Also suitable for Cabaret work, etc.

### SPECIFICATION

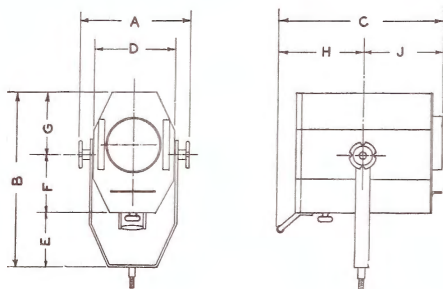
Lantern constructed in sheet steel, efficiently ventilated. Access to lamp by hinged door at rear. 6-inch diameter, 10-inch focus heat resisting plano-convex lens. Type 43 tray, giving vertical and axial adjustment for lamp, complete with special anodised aluminium reflector. Focussing by knob under lantern. Fitted with runners to take two millboard colour frames on front. The Tilting Fork has a ½-inch Whitworth Stem (for suspension or insertion in stand) and eyelet for safety chain (not included). The lantern is locked in position by two hand wheels, and a handle is provided at the rear. Wired with 3-foot heat-resisting tails without plugs. Finish: black crystalline enamel outside, matt black inside.

**Lamps.**—1,000-watt Class B.1 Round Bulb Projector with G.E.S. Cap, or 1,000-watt Class A.1 Tubular with G.E.S. Cap (max. permissible angle of tilt 22½°).

**Beam Angles.**—Maximum 42°, minimum 13°.

**Maximum Throw.**—Normally used up to 45 feet.

**Weight.**—Nett weight 25 lbs.



### DIMENSIONS

|   | Ft. | In. |   | Ft. | In. |
|---|-----|-----|---|-----|-----|
| A | ... | 1   | F | ... | 6 ¾ |
| B | ... | 8   | G | ... | 6 ¾ |
| C | ... | 5 ½ | H | ... | 8 ¾ |
| D | ... | 9   | J | ... | 8 ¾ |
| E | ... | 6 ½ |   |     |     |

|  |    |    |    |    |    |    |    |    |          |
|--|----|----|----|----|----|----|----|----|----------|
| <b>PRICE</b> (exclusive of lamp)   | .. | .. | .. | .. | .. | .. | .. | .. | ..       |
| C. 85.—Linen-bound millboard colour frames (10¾-inches × 7½-inches)                      | .. | .. | .. | .. | .. | .. | .. | .. | per doz  |
| C. 86.—Ditto, with gelatine colours  | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C. 87.—Ditto, with "Cinemoid" colours  | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C.335.—Extra 6-inch diameter 10-inch focus heat resisting plano-convex lenses            | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| C.290.—Extra anodised aluminium reflectors   | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C. 88.—Spotting attachment with three masks, giving four sizes of spots (weight 5½ lbs.) | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C.104.—Iris diaphragm  | .. | .. | .. | .. | .. | .. | .. | .. | "        |
| C.185.—15-amp. 3-pin moulded connectors  | .. | .. | .. | .. | .. | .. | .. | .. | per pair |

(continued overleaf)

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**PRICES** (cont'd)

|   |      |
|---|------|
| C. 64.—Safety chain with snap hook .. .. .  | each |
| C. 65.—“ L ” clamp for 2-inch diameter barrel .. .. .   | ”    |
| C. 84.—Adjustable barrel clamp .. .. .  | ”    |
| C. 66.—Telescopic stand with cable hook and swivelling collar (min. height 4 feet 3 inches, max. height 7 feet) .. .. . | ”    |
| C.112.—Heavy cast iron bench base with locking handle (height 6½ inches, weight 5¼ lbs.) .. .. .                        | ”    |
| C.113.—Flange plate stand with locking wheel (height 6 inches, weight 1¾ lbs.) .. .. .                                  | ”    |
| C.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | ”    |
| C.248.—Ditto, with swivelling extension arm (max. reach 19 inches) .. .. .  | ”    |
| C.251.—Adjustable boomerang bracket for 2-inch diam. barrel (reach 10 inches) .. .. .                                   | ”    |
| C.252.—Ditto, with extension arm (max. reach 19 inches) .. .. .   | ”    |
| C.253.—Adjustable boomerang bracket for 1-inch diam. barrel (reach 10 inches) .. .. .                                   | ”    |
| C.254.—Ditto, with extension arm (max. reach 19 inches) .. .. .   | ”    |
| C.255.—Fixed boomerang bracket for 2-inch diam. barrel (reach 11 inches) .. .. .  | ”    |

|  |   |   |
|--|---|---|
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|--|---|---|



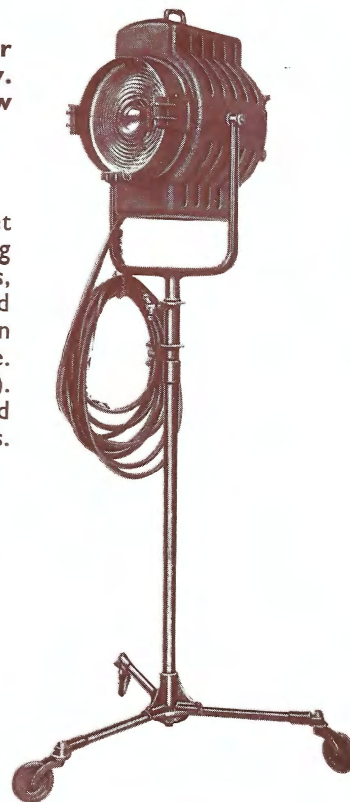
# STRAND SPOTLIGHTS

## PATTERN 102 SOFT EDGE SPOTLIGHT, 2,000 WATTS

This lantern is designed for use on the stage where a spotlight of lesser wattage would not produce a soft edged beam of the required intensity. As the edges of the beam are not sharp, it is not intended for long throw work from the back of the Auditorium.

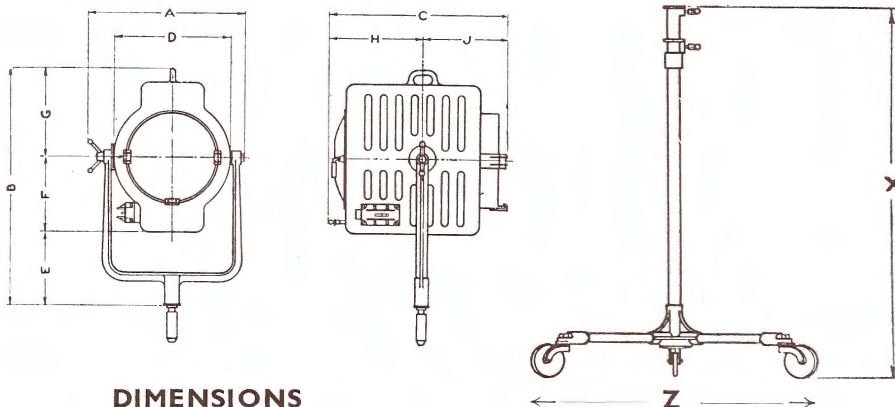
### SPECIFICATION

The housing consists of a well ventilated one-piece aluminium casting with sheet steel light baffles, access to lamp being by a hinged door at rear, and focussing being by means of a worm drive from the rear. Fitted with 10-inch diameter, 8-inch focus, prismatic heat resisting lens, lamp tray with bi-post pre-set lamp holder wired to a terminal block, and pre-set 7-inch diameter reflector of polished rhodium on copper. The front of the housing carries a runner to take metal colour frame. The gunmetal tilting fork has a  $1\frac{1}{8}$ -inch stem (for suspension or insertion in stand). The lantern is locked in position by a handle on the right hand side. Finished black crystalline enamel outside, matt black inside, with bright nickel handles.



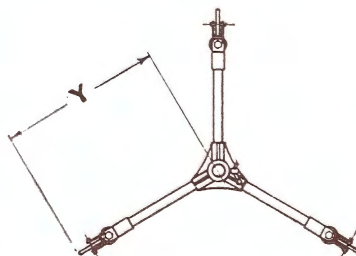
### LAMPS

2,000-watt Studio type bi-post lamp.



### DIMENSIONS

|   | Ft. | In.            |   | Ft. | In.            |
|---|-----|----------------|---|-----|----------------|
| A | 1   | 5              | G | 3   | 10             |
| B | 2   | 2              | H | 10  | $1\frac{1}{2}$ |
| C | 1   | 8              | J | 9   | $\frac{1}{2}$  |
| D | 1   | 1              | X | 3   | 10 (Min.)      |
| E |     | $7\frac{1}{2}$ |   | 6   | 3 (Max.)       |
| F |     | $8\frac{1}{2}$ | Y | 1   | 8              |
|   |     |                | Z | 2   | 9              |



### BEAM ANGLES

Maximum 45°.  
Minimum 8°.

### WEIGHT

Nett weight of Lantern  
42 lbs.

### MAXIMUM THROW

Normally used up to 45 feet.

| PRICE (exclusive of lamp)   | each    |
|---|---------|
| C. 95.—Metal colour frames ( $11\frac{1}{2}$ inches $\times$ $10\frac{1}{4}$ inches)  | .. .. . |
| C. 96.—Cinemoid colours for above   | .. .. . |
| C.258.—Heavy tubular steel telescopic stand on 4-inch rubber tyred castors, with 3 removable legs. Height : Minimum 3 ft. 10 ins., maximum 6 ft. 3 ins. Nett weight 21 lbs. | .. .. . |
| C.256.—Barrel clamp for suspension from 2-inch to $2\frac{1}{2}$ -inch barrel (illustrated on Page L.31)  | .. .. . |
| C.307.—Extra 10-inch diameter, 8-inch focus, heat resisting prismatic condenser lens  | .. .. . |
| C.308.—Extra 7-inch rhodium plated reflectors   | .. .. . |

**NOTE.** Remote colour changing mechanism can be fitted to this lantern. For details see page C.85. A double-pole switch can be fitted to the side of the lantern. Price on application.

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# STRAND SPOTLIGHTS

## PATTERN 73 MIRROR SPOTLIGHT, 1,000 WATT



This lantern employs a precision optical system which not only gives a greater control of the beam shape and spread than is obtainable from the Standard Spotlights described in the preceding pages but gives more than twice the light output (depending on beam spread) for the same wattage. The light is collected by an 8-inch dia. reflector and directed on to a gate framed by four independently adjustable shutter or an Iris diaphragm. The gate is hard or soft focussed by an objective lens.

Masking to pick out irregularly shaped objects, or to give a hard cut-off clear of backcloth upstage and orchestra pit downstage is easily accomplished.

The lantern is therefore particularly suitable for Front-of-House work (see also Patt. 83) but can be used anywhere on the stage.

### SPECIFICATION

The body is constructed in sheet steel, efficiently ventilated, with a cast aluminium front and back, the latter containing an access door. The lamp tray which is worm driven by a handle at the rear is fitted with an 8-in. diameter silvered glass reflector. Complete with 6-in. diameter, 9-in. focus heat-resisting step lens, four independently operated horizontal and vertical shutters with heat insulated handles, provision for additional internal mask or Iris diaphragm if required, and fitted with a front runner to take a colour frame. The tilting fork has a  $\frac{1}{2}$ -in. Whitworth stem (for suspension or insertion in stand) and eyelet for a safety chain (not included). The prefocus lampholder is wired with 3 ft. heat-resisting tails without plugs, and is finished black Crystalline enamel outside, matt black inside.

**Lamps.**—1,000-watt Class A.1 Tubular Projector type with prefocus cap (max. angle of tilt  $22\frac{1}{2}^\circ$ ) or 1,000-watt Class B.1 Round Bulb Projector type with prefocus cap.

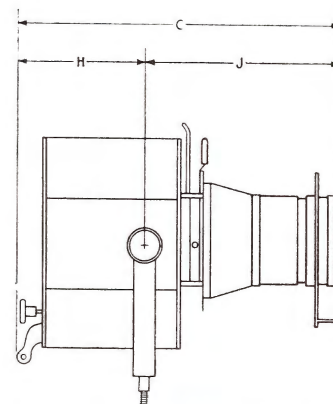
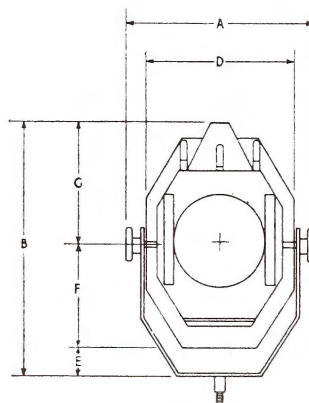
**Beam Angles.**—Maximum  $19^\circ$ , Minimum  $3^\circ$ .

**Maximum Throw.**—Normally used up to 60 ft.

**Weight.**—Nett Weight 30 lbs.

### DIMENSIONS

|         | Ft. | Ins.           |
|---------|-----|----------------|
| A ..... | 1   | $1\frac{1}{4}$ |
| B ..... | 1   | $8\frac{1}{2}$ |
| C ..... | 1   | 10 (min.)      |
|         | 1   | 11 (max.)      |
| D ..... | 0   | 10             |
| E ..... | 0   | $5\frac{1}{2}$ |
| F ..... | 0   | 7              |
| G ..... | 0   | 8              |
| H ..... | 0   | 9              |
| J ..... | 1   | 1 (min.)       |
|         | 1   | 2 (max.)       |



(continued overleaf)

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# STRAND SPOTLIGHTS

PATTERN 23 BABY MIRROR SPOT 250 OR 500 WATTS

(ALSO NARROW BEAM PATT. 23/N AND WIDE ANGLE PATT. 23/W)



This is a small, compact lantern with a multitude of applications in stage lighting, picture lighting, shop window display, exhibition work and the like. It gives a clear-cut beam of any required shape and free of stray or ghost light. The lantern has been completely tooled for mass production with die-castings and consequently represents exceptional value for the price.

## LIGHT DISTRIBUTION

The standard lantern is fitted with a single  $3\frac{1}{2}$ -in. diameter, 5-in. focus, p.c. lens and this gives beam angles with sharp cut-off up to 22 degrees. The shape and size of beam are varied by using in the gate one of the four standard diaphragms, a special mask cut for the job, an adjustable type mask, or iris diaphragm.

The beam angle may be increased to 37 degrees (but the intensity halved) by fitting an extra C.310 lens in the rear of the standard lens tube which carries a retaining ring for the purpose.

Alternatively, the beam angle may be decreased to 11 degrees max., and intensity increased over three times the standard, by fitting a C.355 funnel front with a 6-in. by 9-in. focus p.c. lens, instead of the standard lens tube. The lantern is then suitable for long throws.

## SPECIFICATION (Standard Pattern 23)

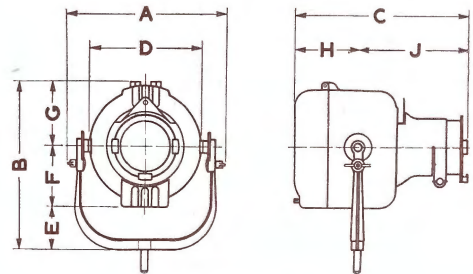
Ventilated die-cast aluminium body and lens tube assembly designed to take a medium prefocus lampholder for 250-watt B.1 round-bulb lamp, to burn in any position, 500-watt A.1 tubular lamp to burn within  $22\frac{1}{2}$  degrees of vertical, or 500-watt Class T lamp to burn from vertical, cap down, to horizontal. Body is hinged at the middle to give access for lamping and cleaning. Rear half carries a 7-in. diameter super pure anodised reflector and the front half a 7-in. diameter annular spherical reflector to collect light which would otherwise be masked off and wasted. The light is directed on to a gate for diaphragm masks which are focussed hard or soft by an adjustable  $3\frac{1}{2}$ -in. diameter, 5-in. focus p.c. lens in tube retained by safety chain. Four diaphragm masks with circular holes supplied as standard. Front of lens tube has runners for and is supplied with one metal colour frame. The cast fork with clamping disc and  $\frac{3}{8}$ -in. Whitworth threaded hole is fitted with a  $\frac{1}{2}$ -in. diameter plain stem, allowing lantern to be mounted on a stand. Stem can be unscrewed and replaced by any  $\frac{3}{8}$ -in. Whitworth bolt for fixing to standard L clamps and other suspensions. Wired with 3 ft. heat-resisting tails and stoved crystalline black outside, matt black inside.

**Lamps.** 250-watt Class B.1 round-bulb projector with medium prefocus cap, 500-watt Class A.1 tubular projector ditto, 500-watt Class T round-bulb projector when available.

## Maximum Beam Angles

(see Light Distribution above)

|            |         |                            |
|------------|---------|----------------------------|
| Patt. 23   | 22 deg. | Normally used up to 45 ft. |
| Patt. 23/W | 37 deg. | Normally used up to 30 ft. |
| Patt. 23/N | 11 deg. | Normally used up to 65 ft. |



## DIMENSIONS

|        | Ft. | in. |       | in.            |        | in.            |
|--------|-----|-----|-------|----------------|--------|----------------|
| A ...  | 11  |     | D ... | 8              | G ...  | $4\frac{1}{2}$ |
| B ...  | 1   | 0   | E ... | 3              | H ...  | $4\frac{3}{4}$ |
| *C ... | 1   | 1   | F ... | $4\frac{1}{2}$ | *J ... | $8\frac{1}{4}$ |

## WEIGHTS:

Patt. 23:  $6\frac{3}{4}$  lb. Patt. 23/W: 7 lb. Patt. 23/N:  $8\frac{1}{2}$  lb.

\*For patt. 23/N these dimensions are increased by  $6\frac{1}{2}$  ins.

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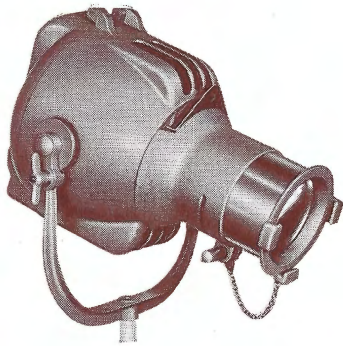


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**PATTERN 23 BABY MIRROR SPOT**  
**250 OR 500 WATTS ALSO**  
**NARROW BEAM PATT. 23/N AND**  
**WIDE ANGLE PATT. 23/W**

**PRICES**

|   | £  | s. | d. |          |
|---|----|----|----|----------|
| Pattern 23—Spotlight as specification overleaf .. .. .  | 9  | 9  | 0  | each     |
| Pattern 23/W—Spotlight as above but with wide-angle lens combination .. ..  | 10 | 10 | 0  | each     |
| Pattern 23/N—Spotlight as above but with narrow angle long throw front with colour frame, instead of standard front .. .. .   | 13 | 13 | 0  | each     |
| The following accessories except those marked † apply equally to Patterns 23, 23/N and 23/W.  |    |    |    |          |
| †C.310—Spare standard 3½-in. by 5-in. focus H.R. lens .. .. .   | 1  | 1  | 0  | each     |
| C.357—Spare rear reflector (metal) .. .. .  | 1  | 4  | 0  | each     |
| C.358—Spare front reflector (metal) .. .. .   | 1  | 1  | 6  | each     |
| †C.359—Metal colour frame 4-in. square for Pattern 23 and 23/W .. .. .  | 2  | 0  |    | each     |
| †C.360—Gelatine colours assorted, cut to size for C. 359 frames (for intermittent use)  | 2  | 2  |    | per doz. |
| †C.361—“ Cinemoid ” colours, assorted cut to size for C.359 frames (for longer use)   | 4  | 6  |    | per doz. |
| †C.284—Metal colour frames, 7¾-in. by 7¾-in., for Pattern 23/N only, with C.355 front .. .. .   | 2  | 4  |    | each     |
| †C.285—Gelatine colours assorted, cut to size for C.284 frames (for intermittent use)   | 6  | 2  |    | per doz. |
| †C.286—“ Cinemoid ” colours assorted, cut to size for C.284 frames (for longer use)   | 11 | 0  |    | per doz. |
| C.362—Spare set of 4 diaphragms of different but fixed diameters .. .. .  | 3  | 6  |    | each     |
| C.363—Iris diaphragm .. .. .  |    |    |    | each     |
| C.364—Adjustable straight-edged mask .. .. .  |    |    |    | each     |
| C.185—15-Amp. moulded connectors .. .. .  | 9  | 4  |    | per pair |
| C.365—4-Pin, 5-amp. miniature connectors .. .. .  |    |    |    | ” ”      |
| C.64— Safety chain with snap hook .. .. .   | 3  | 6  |    | each     |
| C.65— “ L ” clamp for 2-in. exterior diameter (1½-in. gas) barrel .. .. .   | 3  | 6  |    | each     |
| C.257—Miniature telescopic stage stand with cable hook and swivelling collar (min. height 4 ft. 3 in., max. 7 ft.) .. .. .  | 1  | 16 | 3  | each     |
| C.366—Light pattern adjustable telescopic stand with plated fittings for studio or display work where appearance is important. Stand can be wired internally with flex (23/.0076 TRS) and the lantern tails shortened and fitted with C.365 connector by customer or to special order .. .. . |    |    |    | each     |

**CONVERSIONS (see LIGHT DISTRIBUTION overleaf)**

*To convert standard Pattern 23 to Pattern 23/N.*

Discard front draw tube and use instead:

|   |   |    |   |      |
|---|---|----|---|------|
| C.355—Long throw lens tube .. .. .                                | 3 | 12 | 0 | each |
| C.304—Spare 6-in. diameter by 9 -in. focus lens for C 355 .. .. . | 2 | 6  | 9 | each |

*To convert standard Pattern 23 to Pattern 23/W.*

Insert into existing draw tube additional:

|   |   |   |   |      |
|---|---|---|---|------|
| C.310—Lens 3½-in. diameter by 5-in. focus HR (Turn both lenses ball to ball) .. | 1 | 1 | 0 | each |
|---|---|---|---|------|

*To convert Pattern 23/N to standard Pattern 23.*

Discard front draw tube and use instead:

|   |   |    |   |      |
|---|---|----|---|------|
| C.356—Standard lens draw tube with lens (Ball outwards) .. .. . | 1 | 15 | 6 | each |
| C.310—Spare lens 3½-in. diameter by 5-in. focus HR .. .. .      | 1 | 1  | 0 | each |

*To convert Pattern 23/W to standard Pattern 23.*

Discard lens nearest lamp from draw tube and turn front lens ball outward.



# STRAND SPOTLIGHTS

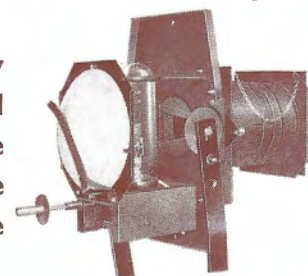
## PATTERN 53 PREFOCUS MIRROR SPOTLIGHT, 1000 WATT

(Being a simplified and improved version of patterns 73 and 83 which it supersedes)



This lantern employs a precision optical system which not only gives a greater control of the beam shape and spread than is obtainable from standard spotlights described in the preceding pages but gives more than three times the light output (depending on beam spread) for the same wattage. The light is collected by an 8-inch diameter reflector and directed on to a gate framed by four independently adjustable shutters or an iris diaphragm. The gate is hard or soft focussed by an objective lens.

Masking to pick out irregularly shaped objects, or to give a hard cut-off clear of backcloth upstage and orchestra pit downstage is easily accomplished. The lantern is therefore particularly suitable for Front-of-House work, but can be used anywhere on the stage.



Housing removed

### SPECIFICATION

The housing is constructed in sheet steel, all joints being welded, and is efficiently ventilated. Access to the lamp and reflector is by a completely removable top cover which is anchored to the housing by a safety chain. The securing screw is made captive and therefore cannot be lost.

The housing has been arranged in such a way that by removing three screws at the front, it can be removed from the lantern, which is then still supported in its fork. By this means the optical system is exposed for examination.

The lamp is carried in a large Prefocus Lampholder which is tilted back at an angle of  $7\frac{1}{2}^{\circ}$ . This helps to compensate for forward tilt of the lantern when using Class A.1 lamps. For general purposes the Class T projector lamp is recommended.

Concentration of the beam upon the gate area is achieved by a screw adjustment which projects through the rear of the housing and is easily accessible, both when the lantern is hanging and when it is used in a circle front housing. This screw tilts the lamp through a small angle in relation to the fixed 8-inch diameter super-pure electro brightened and anodised aluminium reflector, and provides the simplest possible method of concentrating the beam.

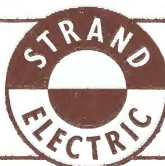
Four shutters are provided at the gate position so that the beam shape may be arranged to suit requirements. These shutters are fitted with heat insulated handles and the controls for the bottom vertical shutter are brought to the top in order to facilitate setting when the lantern is used in a circle front housing. As an alternative to these shutters an iris diaphragm (extra) may be used to control beam shape and size.

The beam may be focussed to give a hard or soft edge by adjusting a 6-in. diameter by 8-in. focus plan-convex heat-resisting objective lens at the front of the lantern. A colour runner is fitted to the front. This carries a lens guard and has accommodation for two metal colour frames (one provided).

The lantern is finished in stoved black crystalline paint and is supplied fitted with the usual type of fork with disc and clamp locking. It may also be had mounted on a fork with feet, or on an adjustable rise and fall stand, with or without remote colour change mechanism for use in a circle front housing. If necessary it can also be supplied for hanging, fitted with an enclosed remote colour change. (See Leaflet C.85.)

(Continued overleaf)

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TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON

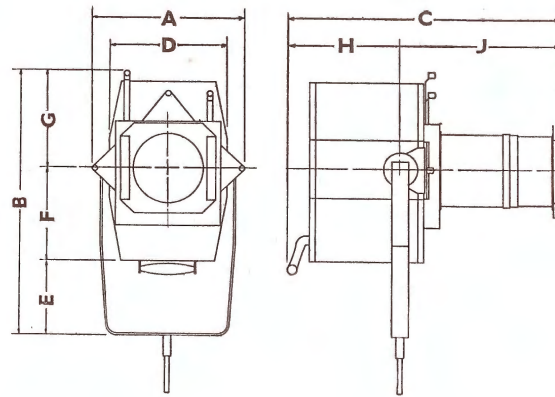


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313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

## DIMENSIONS

|    | Ft. | Ins.   |        |
|----|-----|--------|--------|
| A  | 1   | 1 1/2  |        |
| *B | 1   | 8 1/2  | (Min.) |
|    | 1   | 11 1/2 | (Max.) |
| C  | 1   | 9 1/2  | (Min.) |
|    | 2   | 0 1/4  | (Max.) |
| D  | 0   | 10     |        |
| E  | 0   | 3      | (Min.) |
|    | 0   | 6 1/4  | (Max.) |
| F  | 0   | 8      |        |
| G  | 0   | 9 1/2  |        |
| H  | 0   | 10     |        |
| J  | 0   | 11 1/2 | (Min.) |
|    | 1   | 2 1/4  | (Max.) |

*\*This dimension is over shutter operating handles. If the required tilt is not acute the lantern may be dropped lower into the fork and the overall height reduced to 1ft. 7 1/4 ins.*



**Lamp**—1,000 watt Class A.1 Tubular Projector with large prefocus cap (maximum angle of lantern tilt=15° upwards, 30° downwards). 1,000 watt class B.1 Round Bulb Projector with large prefocus cap. 1,000 watt Class T with large prefocus cap. The latter is recommended. (Tilt in both the last two cases is up to 90° of cap vertically down.)

**Beam Angles**—19° or 38° max. with C.354 attachment (see below). Min. 3°.

**Maximum Throw**—Normally used up to 70 feet.

**Weight**—Nett weight 37 lbs. approx.

### PRICES—

|   |    |    |    |      |
|---|----|----|----|------|
| <b>Pattern 53 Lantern with standard fork and suspension pin</b> .. .. . | £  | s. | d. |      |
| (unless otherwise specified, this form of mounting will be supplied)    | 22 | 18 | 6  | each |

Alternatively :—

|   |    |    |    |    |
|---|----|----|----|----|
| Pattern 53 lantern with fork fitted with feet .. .. . | £  | s. | d. |    |
|   | 22 | 18 | 6  | ,, |

|   |    |    |   |          |
|---|----|----|---|----------|
| C.306.—Spare 6-inch dia. 8-inch focus, heat-resisting plano convex lens .. .. .   | 2  | 15 | 0 | each     |
| C.282.—Spare 8-inch dia. silvered glass reflector .. .. .   | 2  | 15 | 0 | ,,       |
| C.283.—Spare 8-inch dia. anodized aluminium reflector .. .. .   | 2  | 1  | 6 | ,,       |
| C.284.—Metal colour frames (7 3/4 ins. x 7 3/4 ins.) † .. .. .  | 2  | 4  |   | ,,       |
| C.285.—Assorted gelatine colours (cut to size) .. .. .  | 6  | 2  |   | per doz. |
| C.286.—“Cinemoid” colours (cut to size) .. .. .   | 11 | 0  |   | ,,       |
| C.105.—Iris diaphragm .. .. .   |    |    |   | each     |
| C.354.—Wide Angle lens unit increasing beam angle to 38° .. .. .  |    |    |   | ,,       |
| C.185.—15-amp. 3-pin moulded connectors .. .. .   | 9  | 4  |   | per pair |
| C. 64.—Safety chain with snap hook .. .. .  | 3  | 6  |   | each     |
| C. 65.—“L” clamp for 2-inch diameter barrel .. .. .   | 3  | 6  |   | ,,       |
| C. 84.—Adjustable barrel clamp .. .. .  | 11 | 6  |   | ,,       |
| C. 66.—Telescopic stand with cable hook and swivelling collar (min. height 4 feet 3 inches, max. height 7 feet) .. .. . | 3  | 10 | 0 | ,,       |
| C.112.—Heavy cast iron bench base with locking handle (height 6 1/2 inches, weight 5 1/4 lbs.) .. .. .                  | 13 | 9  |   | ,,       |
| C.113.—Flange plate stand with locking wheel (height 6 inches, weight 1 3/4 lbs.) .. .. .                               | 14 | 0  |   | ,,       |
| C.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | 1  | 8  | 6 | ,,       |
| C.248.—Ditto, with swivelling extension arm (max. reach 19 inches) .. .. .  | 2  | 2  | 0 | ,,       |
| C.251.—Adjustable boomerang bracket for 2-inch dia. barrel (reach 10 inches) .. .. .                                    | 2  | 6  | 6 | ,,       |
| C.252.—Ditto, with extension arm (max. reach 19 inches) .. .. .   | 3  | 0  | 0 | ,,       |
| C.255.—Fixed boomerang bracket for 2-inch dia. barrel (reach 11 inches) .. .. .   | 13 | 3  |   | ,,       |

†These frames are not suitable for use with the colour change mechanism which can be fitted to this lantern, for details of which see leaflet C.85. For rainbow, flicker and colour wheels see leaflet C.81.

HEAD OFFICE AND SHOWROOMS

**29, KING STREET, LONDON, W.C.2**

SALES AND GOODS - 24, FLORAL ST., W.C.2

TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON

BRANCHES

**313, OLDHAM ROAD, MANCHESTER 10**

COLLYHURST 2736

**62, DAWSON ST., DUBLIN - DUB 74030**





**PRICES** (continued)

|   |      |
|---|------|
| C. 64.—Safety chain for use when lantern is suspended .. .. .   | each |
| C. 65.—“ L ” clamp for 1½-inch barrel .. .. .   | ”    |
| C. 84.—Adjustable barrel clamp for 1½-inch-2½-inch barrels .. .. .  | ”    |
| C. 66.—Telescopic stand with cable hook and swivelling collar (minimum height 4 feet 3 inches, maximum height 7 feet) .. .. . | ”    |
| C.112.—Heavy cast iron bench base with locking handle (height 6¼ inches, weight 5¼ lbs.) ..                                   | ”    |
| C.113.—Flange plate stand with locking wheel (height 6 inches, weight 1¾ lbs.) .. ..  | ”    |
| C.259.—Ceiling fixing saddle .. .. .  | ”    |
| L.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | ”    |
| L.248.—Ditto, with swivelling extension arm (maximum reach 19 inches) .. .. .   | ”    |
| C.251.—Adjustable boomerang bracket for 2-inch diameter barrel (reach 10 inches) ..   | ”    |
| C.252.—Ditto, with extension arm (maximum reach 19 inches).. .. .   | ”    |
| C.253.—Adjustable boomerang arm bracket for 1-inch diameter barrel (reach 10 inches) ..                                       | ”    |
| C.254.—Ditto, with extension arm (maximum reach 19 inches).. .. .   | ”    |
| C.255.—Fixed boomerang bracket for 2-inch diameter barrel (reach 11 inches) .. .. .   | ”    |

**NOTE:** Remotely operated colour change mechanism can be fitted to this lantern. For details see leaflet C.85.

|  |   |   |
|--|---|---|
| <p>HEAD OFFICE AND SHOWROOMS</p> <p><b>29, KING ST., COVENT GARDEN, LONDON, W.C.2</b></p> <p>SALES &amp; GOODS · 24, FLORAL ST., W.C.2</p> <p>TEMPLE BAR 4444 · GRAMS: SPOTLIGHT, RAND. LONDON</p> |  | <p>BRANCHES</p> <p><b>313, OLDHAM ROAD, MANCHESTER 10</b></p> <p>COLLYHURST 2736</p> <p><b>62, DAWSON ST., DUBLIN · DUB 74030</b></p> |
|--|---|---|



# STRAND PAGEANT LANTERN

**PATTERN 58 1,000/1,500 WATTS** (superseding Patt. 50A)

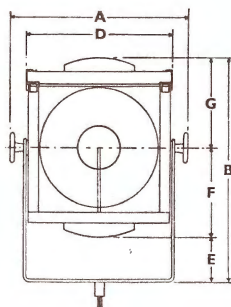
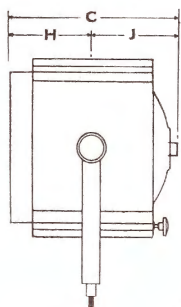
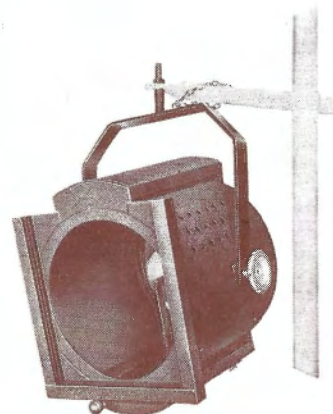
This lantern provides a very intense soft edged narrow beam of light, the size of which can be varied slightly. It is particularly suitable for simulating sunlight on the stage, and for photography and other cases where a really intense beam is required.

## SPECIFICATION

The lantern is constructed in sheet steel and suitably ventilated. Rear of lantern is formed by a spinning which carries a 10-in. diameter polished super pure anodised aluminium reflector. (Glass is available as alternative.) The lamp tray carries a large prefocus lampholder with a chemically blacked masking disc in front of the lamp to cut out direct light spill from filament. Focussing is by worm drive with knob at front and rear. Access to interior is from the front by dropping the masking disc which is hinged for the purpose. Front runners carry two colour frames or one colour and a diffuser. Tilting fork with 3-in. diameter locking wheels terminates in a  $\frac{1}{2}$ -in. Whitworth stem for suspension by barrel clamps or insertion in a stand. Wired with 3-ft. heat resisting tails. Finished: stove black crystalline enamel outside, matt black inside.

**Lamps**—1,000 or 1,500-watt Class A.1 Tubular Projectors with large prefocus cap. (Maximum angle of tilt up or down  $22\frac{1}{2}^\circ$ ). 1,000-watt Class T Projector (flat grid in round bulb) with large prefocus cap. 1,000-watt Class B.1 Round Bulb with large prefocus cap.

**Beam Angles**—Maximum  $17^\circ$ , minimum  $11^\circ$ . **Maximum Throw**—Normally used up to 100 feet.



## DIMENSIONS

|          | In.             |          | In.            |
|----------|-----------------|----------|----------------|
| A ... .. | $15\frac{1}{4}$ | F ... .. | $7\frac{1}{2}$ |
| B ... .. | $18\frac{3}{4}$ | G ... .. | $7\frac{1}{2}$ |
| C ... .. | $14\frac{1}{2}$ | H ... .. | $6\frac{3}{8}$ |
| D ... .. | $12\frac{1}{4}$ | J ... .. | 8              |
| E ... .. | $3\frac{3}{4}$  |          |                |

Weight: 22 lb.

**PRICE** (exclusive of lamp) with fork and pin as shown or fork with feet .. .. **£ s. d.**  
**14 10 0** each

**NOTE:** Remotely operated colour change mechanism can be fitted to this lantern. For details see leaflet C.85.

(continued overleaf)

HEAD OFFICE AND SHOWROOMS  
29, KING STREET, LONDON, W.C.2  
SALES AND GOODS - 24, FLORAL ST., W.C.2  
TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

PRICES (continued)

|   | £  | s. | d.         |
|---|----|----|------------|
| †C. 61.—Metal colour frames (11 $\frac{3}{4}$ -inches × 11 $\frac{3}{4}$ -inches) .. .. .                                     | 1  | 19 | 0 per doz. |
| C. 62.—Ditto with assorted gelatine colours .. .. .   | 2  | 12 | 9 „        |
| C. 63.—Ditto with Cinemoid colours .. .. .  | 3  | 12 | 2 „        |
| C. 94.—Glass diffuser in frame (11 $\frac{3}{4}$ -inches × 11 $\frac{3}{4}$ -inches) .. .. .                                  | 7  | 6  | each       |
| C.280.—Spare 10 inch silvered glass reflector .. .. .   | 3  | 6  | 0 „        |
| C.281.—Spare anodised aluminium reflector .. .. .   | 2  | 9  | 6 „        |
| C.185.—15 amp., 3-pin moulded connectors .. .. .  | 9  | 4  | per pair   |
| C. 64.—Safety chain for use when lantern is suspended .. .. .   | 3  | 6  | each       |
| C. 65.—“ L ” clamp for 1 $\frac{1}{2}$ -inch gas barrel (ext. diam. 2 inches) .. .. .   | 3  | 6  | „          |
| C. 84.—Adjustable barrel clamp for 1 $\frac{1}{4}$ × 2-inch gas barrels (1 $\frac{3}{4}$ -2 $\frac{3}{8}$ ext. diam.) .. .. . | 11 | 6  | „          |
| C. 66.—Telescopic stand with cable hook and swivelling collar (minimum height 4 feet 3 inches, maximum height 7 feet) .. .. . | 3  | 10 | 0 „        |
| C.112.—Heavy cast iron bench base with locking handle (height 6 $\frac{1}{4}$ inches, weight 5 $\frac{1}{4}$ lbs.) .. .. .    | 13 | 9  | „          |
| C.113.—Flange plate stand with locking wheel (height 6 inches, weight 1 $\frac{3}{4}$ lbs.) .. .. .                           | 14 | 0  | „          |
| C.259.—Ceiling fixing saddle .. .. .  | 7  | 2  | „          |
| C.247.—Swivel arm wall bracket (reach 10 inches) .. .. .  | 1  | 8  | 6 „        |
| C.248.—Ditto, with swivelling extension arm (maximum reach 19 inches) .. .. .   | 2  | 2  | 0 „        |
| C.251.—Adjustable boomerang bracket for 1 $\frac{1}{2}$ gas or 2-inch ext. diam. barrel (reach 10 inches) .. .. .             | 2  | 6  | 6 „        |
| C.252.—Ditto, with extension arm (maximum reach 19 inches) .. .. .  | 3  | 0  | 0 „        |
| C.253.—Adjustable boomerang arm bracket for 1-inch ext. diameter barrel (reach 10 inches) .. .. .                             | 2  | 6  | 6 „        |
| C.254.—Ditto, with extension arm (maximum reach 19 inches) .. .. .  | 3  | 0  | 0 „        |
| C.255.—Fixed boomerang bracket for 1 $\frac{1}{2}$ gas (2-inch ext. diam.) barrel (reach 11 inches) .. .. .                   | 13 | 3  | „          |

† Not suitable when lantern fitted with remote colour change. See leaflet C. 85.

|   |   |   |
|---|---|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/>                 29, KING STREET, LONDON, W.C.2<br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/>                 313, OLDHAM ROAD, MANCHESTER 10<br/>                 COLLYHURST 2736<br/>                 62, DAWSON ST., DUBLIN - DUB 74030</p> |
|---|---|---|



# STRAND SPOTLIGHT ACCESSORIES



C.101



C.102



C.103

## RAINBOW, FLICKER & COLOUR WHEELS

Constructed of sheet steel and aluminium with wired rims, pivoted on cast brass plate to fit front runners of Patterns 42, 43, 53, 73 & 501. Colours are replaceable by removing a few screws. Diameter, 20 in. Weight 3¼ lbs.

### PRICES

|   |   |       |         |
|---|---|-------|---------|
| C.101   | No. 1.—Rainbow Wheel (without colours)  | .. .. | each    |
| C.102   | No. 2.—Flicker Wheel  | .. .. | ..      |
| C.103   | No. 3.—Colour Wheel (without colours)   | .. .. | ..      |
| Smaller colour wheels to fit Pattern 44, prices as above. |   |       |         |
| C.336   | "Cinemoid" colours for C.101 above  | .. .. | per set |
| C.337   | " " " C.103   | .. .. | "       |
| C.338   | Motor Driven Colour Wheel similar to C.103, but with 6 apertures instead of 5 and with an AC/DC motor (200/240 volt range) and speed controller bracketed off the colour runner casting | .. .. | each    |

## IRIS DIAPHRAGMS

C.104. To fit Pattern 42, 43 and 83 spotlights, consisting of aluminium cast back plate, with brass leaves closing from 5 in. diameter aperture to blackout. Weight 3 lbs.

[When used with Pattern 43, iris has the effect of dimming the beam in addition to reducing its size.]

PRICE.. .. . each

C.105 To fit Pattern 53 spotlights, consisting of steel backplate with brass leaves closing from 3 in. diameter aperture. Weight 3 lbs.

PRICE.. .. . each

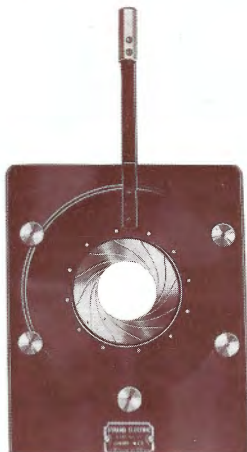
C.98. As C.105 above but for Pattern 73 Spotlight.

PRICE.. .. . each

(continued overleaf)



C.104

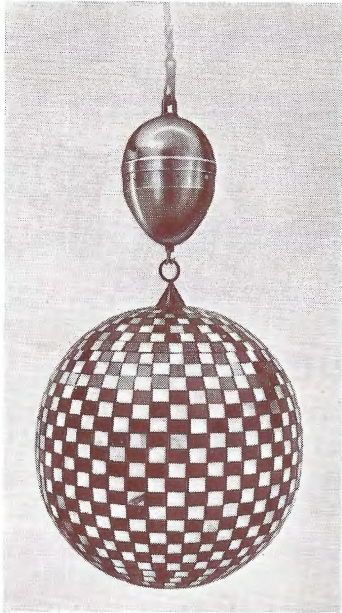


C.98 and C.105

|  |  |   |
|--|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>                 SALES AND GOODS - 24, FLORAL ST., W.C.2<br/>                 TEMPLE BAR 4444    GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>                 COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN . DUB 74030</b></p> |
|--|--|---|

Goods are only offered subject to our Terms of Business.

# STRAND SPOTLIGHT ACCESSORIES



## ELECTRIC ROTATOR (only)

Height 10 in.      Diameter  $5\frac{3}{4}$  in.  
 Weight 3 lb.  
 Capacity, to carry and rotate 20 lb. maximum.  
 Speed  $2\frac{1}{2}$  revs. per min. complete with both halves of electric connector for driving motor.

### PRICES

C.110.—Rotator for 200/250 volts A.C. supply .. .. . each  
 C.111.—Rotator for 110 volts A.C. supply .. .. . ”  
 For other electric supplies, prices on application.

## MIRROR BALL

Complete ball with alternate blue and white mirror glass mosaic surface, exclusive of rotator, chain or other suspensions.

### PRICES

C.107. Diameter 12 in. Weight 9 lbs. .. .. . each  
 C.108. Diameter 16 in. Weight 13 lbs. .. .. . ”

|   |  |   |
|---|--|---|
| <p>HEAD OFFICE AND SHOWROOMS<br/> <b>29, KING STREET, LONDON, W.C.2</b><br/>                 SALES AND GOODS - <b>24, FLORAL ST., W.C.2</b><br/>                 TEMPLE BAR 4444      GRAMS: SPOTLITE RAND LONDON</p> |  | <p>BRANCHES<br/> <b>313, OLDHAM ROAD, MANCHESTER 10</b><br/>                 COLLYHURST 2736<br/> <b>62, DAWSON ST., DUBLIN - DUB 74030</b></p> |
|---|--|---|



# STRAND COLOUR-FILTER REMOTE CONTROL

Remote colour change control is for use in those situations where space does not allow duplication of lanterns for change of colour, or where duplication would not provide sufficient variety of colour.

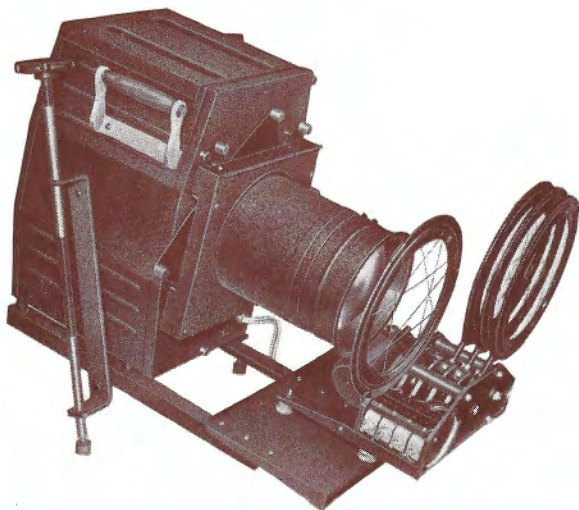


Fig. 1. Pattern 53 with colour change.

## REMOTE COLOUR CHANGE MECHANISM

Strand Electric have devised a specially compact mechanism capable of moving colour frames of up to 12 in. diameter independently of gravity. The colour change unit can be fitted by standard methods to lantern Pattern Nos. 53, 58, 76; two methods being illustrated in Figs. 1 and 2. The unit gives four colours and white, singly or in combination, selected in any order and offers advantages in reduction of weight, size and price over direct acting solenoid types.

## SPECIFICATION

Robust mechanism formed as self-contained unit between cast aluminium end plates. Solenoid operated gears select colour frames to travel "in" beam and are spring-loaded to select colours to travel "out" when not energised. Gears have a safety section free of teeth to act as travel limit. Frames travel between rubber-covered stops and are locked "in" or "out". Frames are driven "in" or "out" by a uni-directional shaded pole motor of adequate torque carried on end plate; frame travel time 1.8 secs. Motor is for 220-250 A.C. 50 cycles only and solenoid coils are for 165 volts approx. D.C. (i.e. full-wave metal rectifier output when used on 220-250 volts single phase A.C.). Colour frames are of a diameter to suit lantern concerned. They are removable and are provided with location stems to ensure that they are parallel to one another. Standard travel into beam is from right to left facing lantern, i.e. the colour magazine is right handed. Left handed magazines can be arranged to order. All mechanisms are supplied with 3 ft. P.V.C. tails terminating in a multi-way plug together with a female socket in a sheet metal box  $5\frac{1}{4}$  in. by  $2\frac{1}{8}$  in. by  $2\frac{1}{8}$  in. Weight of unit without lantern or colour frames is 10 lb.

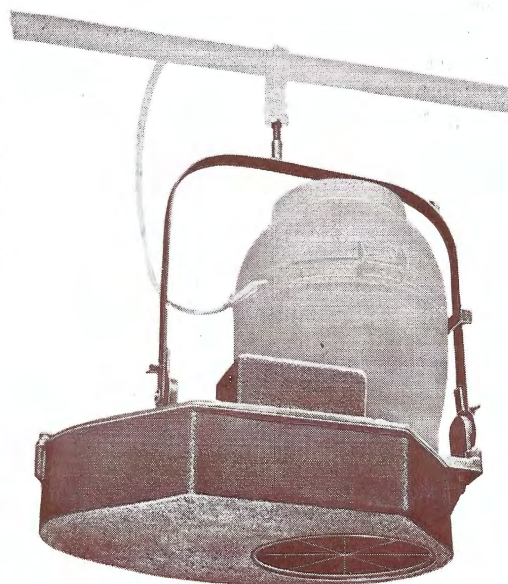


Fig. 2. Pattern 76 with colour change.

HEAD OFFICE AND SHOWROOMS  
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TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

Goods are only offered subject to our Terms of Business



## CONTROL METHOD

The control method is the same whether supplied as a part of a new dimmer switchboard (of the various direct operated mechanical types or of the electronic type), or supplied as a self-contained switching unit for addition to an already completed installation. The control panel appears as the centre part of the board on page 1 of leaflet H.61. The sole exception is the Strand Light Console which operates through a relay selector from the sets of five black keys shown on leaflet H.81.

The colour selector solenoids to each lantern are fed by a 165 volt D.C. supply through a set of four double-pole switches and one single-pole (Fig. 3). The former feed a solenoid coil and the motor for

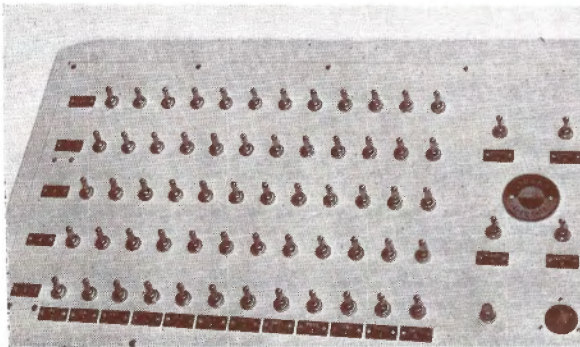


Fig. 4. Control panel.

P.V.C. insulated and sheathed cable (which we stock) is recommended for this purpose though the common returns shown on the right may have to be heavier as each mechanism should be allocated 0.3 amp. for the solenoids and 0.5 amp. for the motor. Alternatively, the motor and coil returns can be run back separately for each unit using ways 6 and 7 on each 7-core, the "commoning" of them being done at the control end. Up to six sets of mechanisms can be paralleled to one set of switches; however, to make the best use of the device it is recommended that the number of sets of colour change switches should match the number of dimmer ways controlling the particular group of lanterns. Thus a circle front of 12 lanterns on 12 separate dimmers will require 12 mechanisms and 12 sets of five colour change switches (60 in all); on the other hand 12 lanterns paired on six dimmers will require 12 mechanisms but six sets of five colour change switches (30 in all).

## REMOTE COLOUR CHANGE CONTROL BOXES

**SPECIFICATION.** Box constructed of sheet metal with switch panel formed as hinged front to allow access. Box contains full-wave metal rectifier of ample capacity having an output of approximately 165 volts D.C. for solenoid coils. Rectifier is fed with 50 cycle A.C. of 220-250 volts which is also used for the colour change motors. In series with the main A.C. supply is a sprung-open push switch used to energise coils and motors for a change as these are not constantly rated for continuous use. Box is complete with all internal connections, wiring being brought by flexible lead from hinged switch panel to a terminal block on fixed part of the box. Finish: black crystalline enamel outside with coloured and engraved ivorine labels where appropriate.

### STANDARD CONTROL BOXES

| Ways   | Wide        | High        | Deep   | Weight | Price |
|--|-------------|-------------|--------|--------|-------|
| 1 }<br>2 }<br>3 }<br>4 }<br>5 }<br>*6 }<br>*7 }<br>*8 }<br>*9 }<br>*10 }<br>*11 }<br>*12 } | 1 ft. 1 in. | 10 in.      | 8 in.  | 17 lb. |       |
|  | 1 ft. 6 in. | 1 ft. 0 in. | 8 in.  | 20 lb. |       |
|  | 1 ft. 8 in. | 1 ft. 0 in. | 10 in. | 40 lb. |       |
|  | 2 ft. 4 in. | 1 ft. 2 in. | 10 in. | 54 lb. |       |

\* For seven ways and over, master switches are fitted to each of the five colour groups.  
Control panels for over 12 ways, price on application.

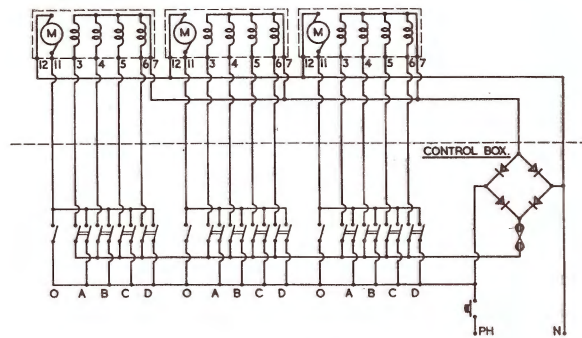


Fig. 3. Circuit diagram.

each colour; the latter feed only the motor for white (all colours out). The method of operation is to select the switches for the combination of colours (A, B, C or D) or white (O) required and press the master push for the change. The switches can then be set for the next change; lanterns not required to "change" have their switches put in the "off" position to cut out unnecessary mechanism noise.

### WIRING (see diagram Fig. 3)

The dotted rectangles at the top represent each colour change mechanism and the numbers identify the terminals on the lantern multi-way plug sockets. The wiring between the plug sockets and the dotted line marked "Control Box" is external and not supplied by us. 14/0076 7-core



## REMOTE COLOUR CHANGE LANTERNS

The remote colour change mechanism described above can be supplied as an integral part fitted to patterns of lantern set out below. Lanterns supplied separately are unsuitable for conversion though there may be rare instances where the mechanism can be applied to the aperture through which the lantern shines or some special modification made locally on site. Most colour change lanterns are supplied in two forms, enclosed and unenclosed. Type C/C.U. unenclosed with tilting by screw handle (Fig. 1) is intended for use on a floor in circle front housing or on a shelf behind auditorium apertures, etc., where stray light can be masked out. Type C/C.E. enclosed (Fig. 2) has a fork with  $\frac{1}{2}$ -in. bolt and safety chain suspension; and is for use hanging openly in auditorium or over the stage where the unit must be light tight and the mechanism and fragile colour frames protected from mechanical damage.

### DIMENSIONS

| Lantern Pattern | Colour Change Type | Dimensions in Inches |                          |     |     |    |      | See Fig. No. | Weight in lbs. |
|-----------------|--------------------|----------------------|--------------------------|-----|-----|----|------|--------------|----------------|
|                 |                    | A                    | B                        | C   | D   | E  | F    |              |                |
| 53              | C/C.U.             | 24                   | 25 (max.)<br>20½ (min.)  | 24  | 20  | —  | —    | 5            | 56             |
| 53              | C/C.E.             | 22½                  | 20½                      | 24½ | 20  | —  | —    | 5            | 68             |
| 58              | C/C.U.             | 27½                  | 24½ (max.)<br>21½ (min.) | 23½ | 21½ | —  | —    | 6            | 44             |
| 58              | C/C.E.             | 26½                  | 25                       | 18  | 15  | 8* | 15½* | 6            | 60             |
| 76              | C/C.E.             | 26½                  | 25½                      | 18  | 13½ | 7½ | 15½  | 7            | 44             |

\* For these Dimensions see Fig. 7

Colour change lanterns are supplied complete as specified on the appropriate lantern leaflet except for such modifications as the colour change mechanism may make necessary. Four removable metal colour frames are supplied with each colour change lantern.

### PRICES

|                                      | £  | s. | d. |
|--------------------------------------|----|----|----|
| Mirror Spot, Pattern 53, Type C/C.U. | .. | .. | .. |
| Mirror Spot, Pattern 53, Type C/C.E. | .. | .. | .. |
| Pageant, Pattern 58, Type C/C.U.     | .. | .. | .. |
| Pageant, Pattern 58, Type C/C.E.     | .. | .. | .. |
| Acting Area, Pattern 76, Type C/C.E. | .. | .. | .. |

### ACCESSORIES

|   |    |    |    |          |
|---|----|----|----|----------|
| C.325—Extra 9¼ in. dia. metal colour frames with stem for Pattern 53 C/C.U. or E.                 | .. | .. | .. | each     |
| C.326—Gelatine colours, other than frost, cut to size for above                                   | .. | .. | .. | per doz. |
| C.327—Gelatine frost, cut to size for above   | .. | .. | .. | "        |
| C.334—Cinemoid colours or frost, cut to size for above  | .. | .. | .. | "        |
| C. 99—Extra 11½ in. dia. metal colour frames with stem for Pattern 58 C/C.U.                      | .. | .. | .. | each     |
| C.100—Extra 11½ in. dia. metal colour frames with stem for Pattern 76 C/C.E. or Pattern 58 C/C.E. | .. | .. | .. | "        |
| C.119—Gelatine colours, other than frost, for 11½ in. dia. frames cut to size                     | .. | .. | .. | per doz. |
| C.120—Gelatine frost for 11½ in. dia. frames cut to size  | .. | .. | .. | "        |
| C.121—Cinemoid colour or frost, for 11½ in. dia. frames cut to size                               | .. | .. | .. | "        |

For other accessories, see lantern leaflets C.53 for Pattern 53; C.72 for Pattern 58; B.31 for Pattern 76.

### SOLENOID COLOUR CHANGE

The direct acting solenoid type of change mechanism generally superseded by the motor drive type described above, can still be supplied. Where very fast changeover of colour on circle spots is required it is still unsurpassed. When some lanterns in use are already of the solenoid type, conversion of the remainder should therefore be to the same mechanism to ensure a uniform speed of colour change. Frames up to 6 in. diameter only can be moved, and return is by gravity. **Price on application.**

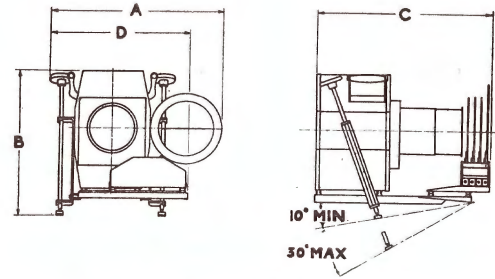


Fig. 5.—Pattern 53, type C/C.U.

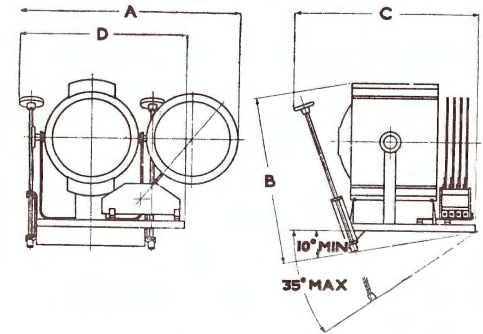


Fig. 6.—Pattern 58, type C/C.U.

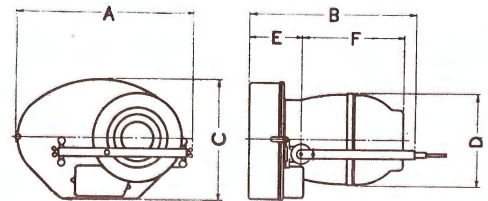


Fig. 7.—Pattern 76, type C/C.E.



## CIRCLE FRONT HOUSINGS

It is recommended that lanterns fixed in the auditorium should be concealed in plaster housings designed by the architect to match the theatre's decorative scheme. Where something of a more temporary nature is required, we can supply sheet metal housings, though advice of the architect will be necessary to ensure that the circle front will bear the extra weight of housings and lanterns.

### PLASTER HOUSINGS

1. The Pattern 53 Mirror Spot (leaflet C.53) is most commonly used for front lighting of the stage from the circle front. According to circumstances, however, other lanterns may also be used for the same purpose. The line drawing shows the minimum dimensions for housing Pattern 53 lanterns with colour change on a circle front. These are minimum dimensions and should be adopted whether colour change lanterns are intended at the time or not. Experience has shown that colour change types (which occupy more space) often supplant the ordinary spotlights used initially.

2. Lanterns are best placed on the second tier of a two- or three-tier house. Where there is only a single circle it may be necessary to consider a ceiling position.

3. All the lanterns must be able to be angled to cover anywhere on stage and in orchestra pit (or forestage). The minimum dimensions for a housing on an average Upper Circle are shown in Fig. 9. These figures are intended as a guide only and each site examined carefully to avoid fouling of sight lines. A minimum horizontal centre between lanterns is 2 ft. 3 in. but this should be increased to 2 ft. 6 in. where space allows. To allow the most movement in the confined space colour change lanterns in a housing on a curved circle front should be half right-handed standard and half left-handed in respect of their colour semaphores. The right-handed lanterns to be used on the "actors' right" of the circle. This arrangement prevents

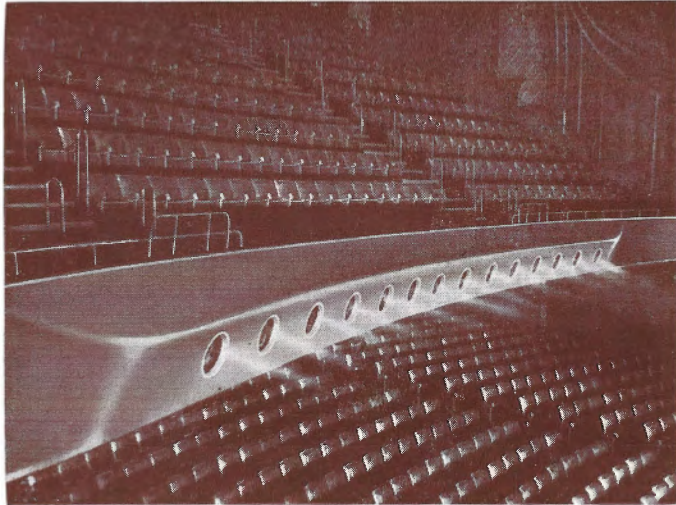


Fig. 8.—Built-in type Circle Front Spotlight Housing.

fouling of the semaphores when a lantern is required pointed directly at the stage instead of as is normally used, crossed to light the side of the stage furthest from it.

4. The floor of the housing must be flat of hardwood or sheet metal to allow the lantern to rest thereon. Housing to be finished matt black inside.

5. Access to the lanterns should be by metal doors at the top. These doors to be louvred for ventilation and hinged to open sideways. They *must not* be hinged to the front of the housing as they then obstruct the stage view of the man adjusting and setting the lanterns.

### SHEET METAL HOUSINGS

1. Sectional line drawing shows sheet metal housing for the Pattern 53 Mirror Spot with colour change normally used for circle front work.

2. Sheet metal housing prices will be quoted on receipt of details. The standard housing is made to the dimensions shown, in units each accommodating two lanterns and measuring 4 ft. 6 in. long and weighing 140 lb. (exclusive of lanterns).

3. In the case of a curved front, any gaps between adjacent housings can be made good so that the top and bottom of the housing appear continuous.

4. It should be understood that the dimensions given in the sectional drawings are the minimum

requirements to house Pattern 53 lanterns. That is not to say that such a housing can necessarily be installed on any circle front without interfering with audience's sight lines, nor that a larger one must inevitably cause obstruction.

5. While we are prepared to fix our housings to steel brackets, etc., provided by others, we ourselves do not undertake the supply or fixing of such brackets.

6. These metal housings are supplied finished with an undercoat of paint ready for finishing to match the existing decorations in the theatre.

### DIMENSIONS

|   |             |   |             |   |        |
|---|-------------|---|-------------|---|--------|
| A | 2 ft. 8 in. | D | 2 ft. 3 in. | G | 10 in. |
| B | 6 in.       | E | 1 ft. 4 in. | H | 11 in. |
| C | 2 ft. 4 in. | F | 4 ft. 6 in. | J | 11 in. |

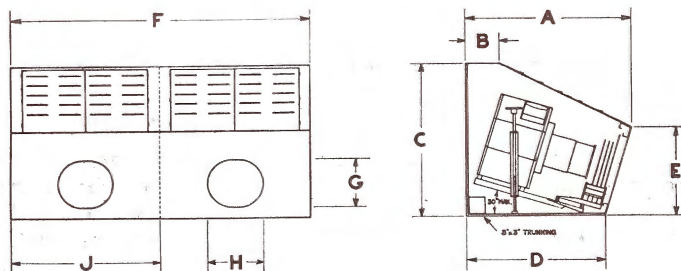
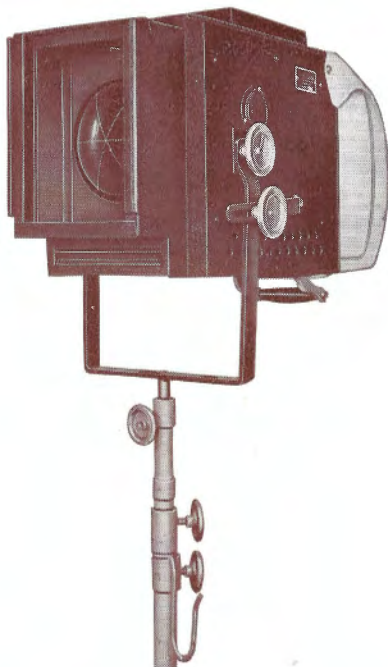


Fig. 9.—Metal housings for Pattern 53.



# STRAND ARC SPOTLIGHTS

## PATTERN 42 COMBINED SPOTTING AND OPTICAL EFFECTS ARC LANTERN 30-40 AMPS.

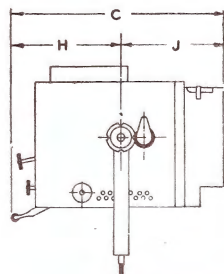
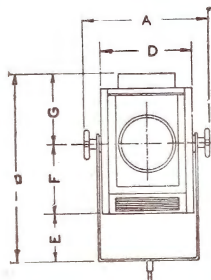
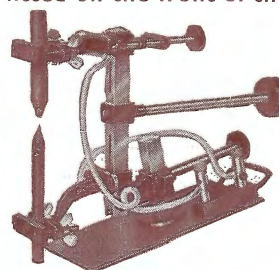


This lantern is a good general purpose arc, suitable for spotting and following artists on throws up to 70 ft. It is fitted with runners suitable for effects and slide attachments listed on page F.21, for which purpose an auxiliary lens can be supplied as an extra.

### SPECIFICATION

**Lantern.** Double cased, asbestos lined, constructed in heavy-gauge sheet steel, efficiently ventilated with asbestos cloth screen at rear. Fitted with 6 in. dia. 9 in. focus heat-resisting lens, a similar lens in sheet steel mount being available as an extra for optical effect work. Mounted on a tilting fork and quadrant with 3 in. diam. locking wheels. Runners are fitted on the front of the housing to take colour frames, and effects and slide attachments. Finish: Black crystalline enamel outside, matt black inside.

**Arc Lamp.** Three movement hand feed carried on sliding tray with rack and pinion focusing which can be locked at will. Wired in asbestos covered cable to a terminal block.



### DIMENSIONS

|           | Ft. | Ins.             |           | Ft. | Ins.          |
|-----------|-----|------------------|-----------|-----|---------------|
| A .. .. . | 1   | 0 $\frac{3}{8}$  | F .. .. . | 6   | $\frac{1}{2}$ |
| B .. .. . | 1   | 8                | G .. .. . | 8   |               |
| C .. .. . | 1   | 10 $\frac{1}{2}$ | H .. .. . | 8   | $\frac{1}{2}$ |
| D .. .. . | 9   |                  | J .. .. . | 2   | $\frac{1}{2}$ |
| E .. .. . | 5   | $\frac{1}{2}$    |           |     |               |

**Weight.**—Nett weight of Lantern 38 lbs.

**Maximum throw.**—Normally used up to 70 ft.

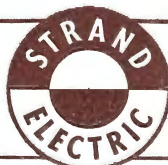
### OPERATING DATA

| Supply | Amps. | Arc Volts | Carbon Size and Type  | Approx. Burning Time without retrimming |
|--------|-------|-----------|---|---|
| D.C.   | 25/30 | 50        | 16mm. Diam. Positive<br>11 mm. Diam. Negative cored<br>(No. 19) | 1 $\frac{1}{2}$ hours                   |
|        | 35/40 | 50        | 18 mm. Dia. Positive (cored)<br>12 mm. Dia. Negative (No. 19)   | 1 $\frac{1}{4}$ hours                   |
| A.C.   | 30/35 | 25/28     | 13 mm. White Flame  | 1 $\frac{1}{4}$ hours                   |
|        | 35/40 | 25/28     | 14 mm. White Flame  | 1 hour                                  |

Resistances and Inductors, see page D.41 and D.51.

(See overleaf for Prices, Accessories, etc.)

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62, DAWSON ST., DUBLIN - DUB 74030

|   |  |    |    |    |    |    |    |    |          |
|---|--|----|----|----|----|----|----|----|----------|
| <b>PRICE of Pattern 42 lantern as specified</b> |  | .. | .. | .. | .. | .. | .. | .. | ..       |
| D.85  | Linen bound colour frames (10 $\frac{3}{4}$ " x 7 $\frac{1}{2}$ ")                                   | .. | .. | .. | .. | .. | .. | .. | per doz. |
| D.86  | Ditto with assorted gelatines  | .. | .. | .. | .. | .. | .. | .. | " "      |
| D.87  | Ditto with assorted "Cinemoid" colours   | .. | .. | .. | .. | .. | .. | .. | " "      |
| D.66  | Telescopic stand with cable hook and swivelling collar (min. height 4 ft. 3 ins., max. height 7 ft.) | .. | .. | .. | .. | .. | .. | .. | each     |
| D.112   | Heavy cast iron bench base (height 6 $\frac{1}{4}$ ins., weight 5 $\frac{1}{4}$ lbs.)                | .. | .. | .. | .. | .. | .. | .. | ..       |
| D.113   | Flange-plate stand (height 6 in., weight 1 $\frac{3}{4}$ lb.)  | .. | .. | .. | .. | .. | .. | .. | ..       |
| D.323   | Black out shutter  | .. | .. | .. | .. | .. | .. | .. | ..       |
| D.104   | Iris diaphragm   | .. | .. | .. | .. | .. | .. | .. | ..       |
| D.304   | Replacement 6 in. diam. 9 in. focus heat resisting p.c. lens only                                    | .. | .. | .. | .. | .. | .. | .. | ..       |

**FOR EFFECTS WORK ONLY**

|       |   |    |    |    |    |    |    |    |    |      |
|-------|---|----|----|----|----|----|----|----|----|------|
| D.324 | Additional lens as D.304 above but in metal mount for converting lantern for effects purposes | .. | .. | .. | .. | .. | .. | .. | .. | each |
|-------|---|----|----|----|----|----|----|----|----|------|

For optical effects and slide carrier see Page F.21

For objective lenses see Page F.21

|   |   |   |
|---|---|---|
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|---|---|---|









# STRAND "SUNSPOT" MIRROR ARC LANTERN

## PATTERN 50I

This Spotlight is designed primarily for use on A.C. with a special Inductor Unit, whereby its efficiency is considerably increased beyond that of an ordinary D.C. Arc lamp. Consequently the new Lantern, whilst consuming less than 20-amps. A.C. from the supply mains, will produce as much light as an ordinary D.C. arc using over 90-amps.

The Sunspot can be readily adapted for use on D.C., in which case current must be supplied from the mains through suitable resistances or rectifiers, or both. Owing to the improved optical system, this lantern, at its maximum of 60-amps. D.C., will give as much light as an ordinary 90-amp. D.C. arc.

This latest model has been further improved to make the controls more convenient. The Iris is now fitted with a lock so that it can operate the mirror focus. The most efficient light output for each Iris position is automatically obtained by using one lever only. The barn door assembly can now be swivelled to compensate when throwing at an angle.

### SPECIFICATION

**Lamp House.**—Constructed in sheet metal, finished black crystalline outside and dull black inside. Doors of ample dimensions are provided on each side which, when open, swing completely clear, allowing free access to all parts of the Arc mechanism.

Spy holes, with coloured glasses, are provided on each door, a suitable quadrant plate and lever being fitted on the upper part of the Housing operating the Douser. An "Imager" screen (O) is fitted in a suitable position on the working side door to receive the Arc Image. This is projected by means of a lens, prism and reflector mounted on the door,

suitably spaced lines being marked on the screen to indicate the correct arc gap.

The interior of the Housing is illuminated by a small lamp, separately controlled. A suitable handle is provided at the rear for controlling the Lantern when "following" artists. The Lantern is so counter-balanced in the Trunnion, that it will remain at any angle in which placed, and will respond to a very light touch in horizontal or vertical planes.

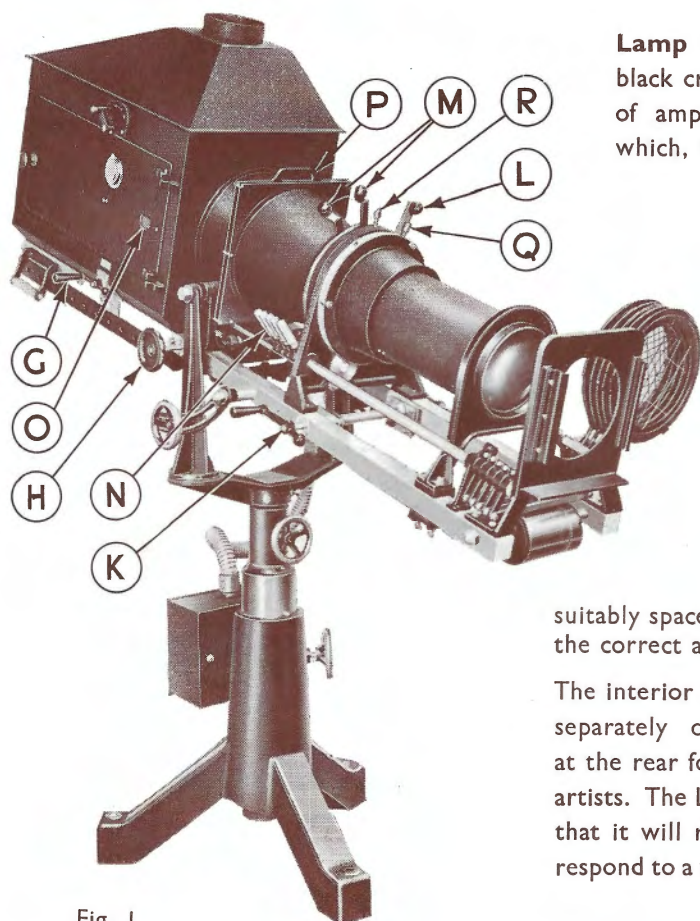


Fig. 1

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## SPECIFICATION (continued)

**Pedestal Stand.**—This comprises a heavy casting with tripod legs, the centre column being telescopic. Height adjustment is provided by a series of holes in the centre column, locking being possible by means of a handwheel clamping screw. The Trunnion Fork also consists of heavy castings, with large diameter spigot revolving in the top portion of the centre column, locking in this case also being by means of clamping screw and hand wheel.

Sufficient clearance is provided between lamp housing and Trunnion to give a maximum downward tilt of 40° from the horizontal, the required angle being maintained by quadrant and clamping hand wheel. A box is mounted in a suitable position on the base of the pedestal, containing terminals for the Arc and subsidiary terminals for the pilot lamp.

**Iris Diaphragm.**—The diaphragm is of the 24 leaf type, giving a good circle reasonably free from "flats" in all positions. A lock **Q** (fig. 1) can be used to cause the Iris diaphragm lever to operate the mirror focussing without the need to use handle **G** at the same time. The lock will ensure that the maximum amount of light is passed by the Iris for all positions.

**Barn doors.**—The barn door shutters are of the normal horizontal and vertical type, the lever control, for these and the Iris being placed close together for ease of operation. The barn door shutter assembly may be rotated and locked at any angle using lock **R**.

**Lens Focussing.**—This is rack and pinion actuated, the drive being by ball crank handles fitted on both sides of the Lantern, allowing rapid adjustment between the Iris and barn door shutter focus positions.

**Colour Media.**—A magazine of five colour medium frames is mounted at the front end of the Lantern, being directly controlled by means of lever handles, these being fitted close to the Iris and Barn Door Shutters, and at the right or left of the Lantern as desired. The colour frames not in use are situated on the side of the Lantern remote from the operator. Colour runners are also provided at the front of the lantern for additional colour frames (10 $\frac{3}{4}$  inches x 7 $\frac{1}{2}$  inches) if required.

**Heat Absorbing heat resisting glass.**—**P** (Fig. 1.) This is fitted to the lamphouse to protect the shutters and colours from excessive heat in place of the old arrangement of an electrically operated blower.

**Arc Movement.**—Constructed to carry 100-amps. A.C. and 60-amps. D.C., the carbons being mounted horizontally. The rear carbon is carried in interchangeable collets of suitable size for A.C. or D.C. Carbons as required, adequate contact being provided for. The front carbon is held in position by a screwed clamp.

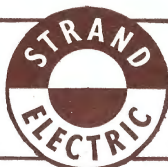
Simultaneous drive to both carbon heads along the horizontal Centre Line of the lamp is by means of worm shafts situated behind the mirror.

A clutch device is fitted to enable either carbon to be moved independently. The rear carbon head is provided with vertical and horizontal adjustment, the mirror having axial adjustment in the vertical and horizontal planes. The latter can also be traversed horizontally for focussing purposes. Economizers are provided for using up short ends of carbons.

By means of a "Positioner" the arc gap can be set at the correct focal distance from the mirror before "striking."

**Motor Arc Feed.** The arc mechanism can be supplied with a motorised automatic feed as an optional extra. This feed leaves the operator completely free to concentrate on the show i.e., following artists, focussing, colour change, etc.

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## THE CONTROLS

The various controls are as follows:—

**A. Carbon Feed.**—This consists of a handwheel (H) on each side at the front of the lamphouse (Fig. 1) and a handwheel (A) at the back (Fig. 3) which may be pulled out to disengage the drive between front and rear carbons, so that they may be adjusted independently. When the drive between carbons is disconnected, the front carbon is controlled by the front handwheels, and the rear carbon by the rear handwheel.

**B. and C. Rear Carbon Adjustments.**

**B.** Provides for adjustment of the rear carbon from left to right. Operation is also by sprung screw motion.

**C.** This is a screw motion operated by a knurled moulded handwheel (Fig. 3) and permits raising and lowering of the rear carbon. A return spring prevents any shake or backlash.

**D. and E. Mirror Adjustment (Fig. 3).**—**D.** Horizontal axial motion is transmitted by means of hand wheel operated screwed shaft.

**E.** This control provides vertical axial motion in a similar manner to that described for **D.**

**F. Inspection Lamp Control (Fig. 3).**—Consisting of 5-amp. tumbler switch.

**G. Mirror Focussing (Fig. 1).**—A Ball Crank Handle on each side of the lamphouse, operating a bevel drive to a screwed shaft, traverses the complete mirror assembly along the horizontal centre line of the lantern. **Q** is a lock to operate the mirror from **L** below.

**H. Duplicate Carbon Feed (see paragraph A above).**

**I. Carbon Positioner (Fig. 2).**—Comprises moveable arm, with heat resisting insulated end, location of the "in" and "out" positions being by means of a spring. The arm is set at 5 ins. from back of mirror in the "spot" position.

**J. Douser (Fig. 2).**—This comprises a heat resisting shield, operated by lever having spring loaded locating device which secures same in the "Up" or "Down" positions.

**K. Lens Focussing (Fig. 1).**—Ball Crank Handles are provided on each side of the lantern operating rack and pinion motions, these providing rapid movement of the complete lens assembly between Iris and barn door shutter focus positions.

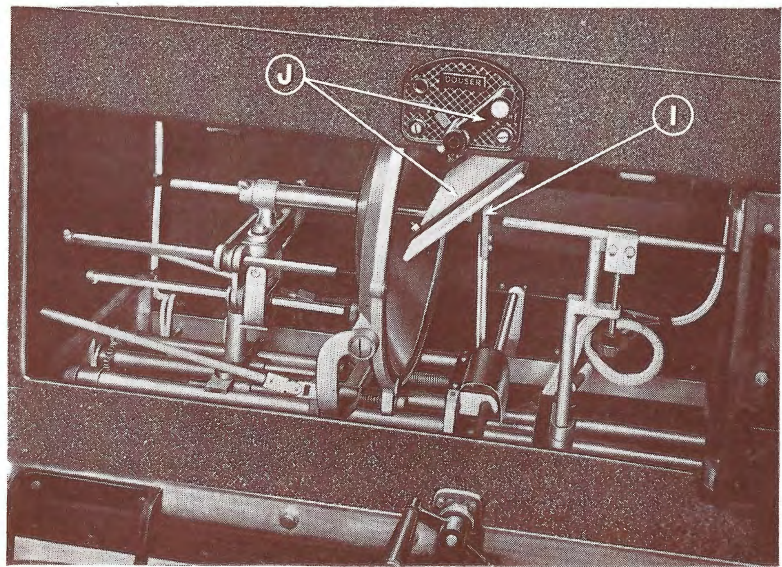


Fig. 2

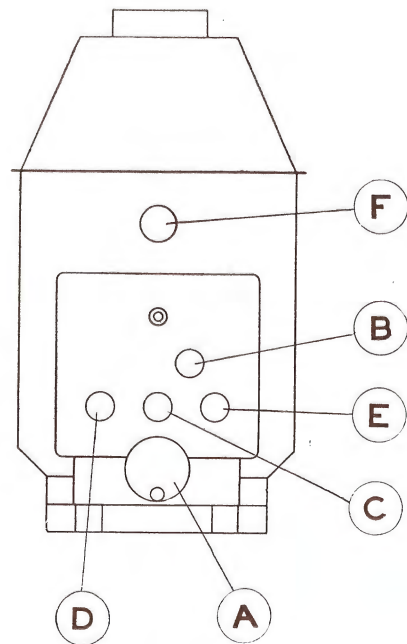


Fig. 3

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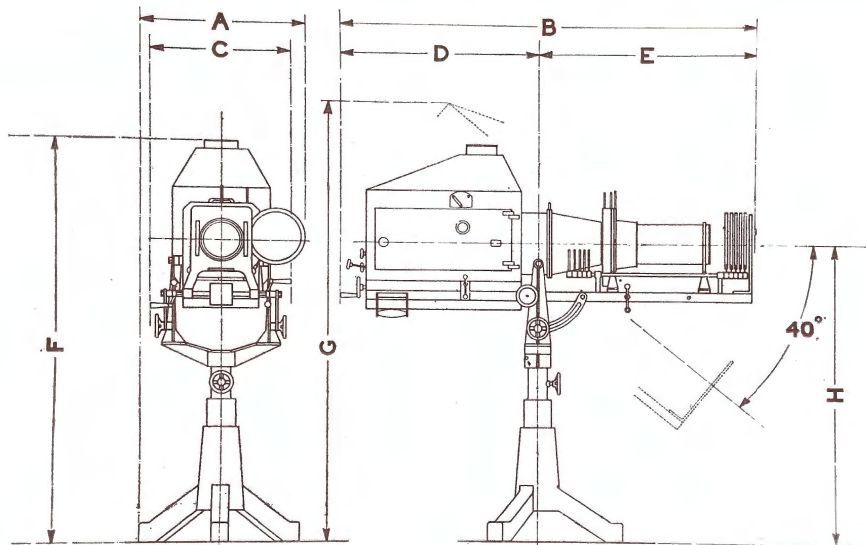
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**L. Iris Diaphragms** (Fig. 1).—A lever is provided to operate from the smallest spot to full aperture, and the whole diaphragm assembly swivels or can be locked by **R**.

**M. Barn Door Shutters** (Fig. 1).—Two levers are fitted in close proximity to the Iris Diaphragm control, one operating vertical and the other horizontal shutters, it being possible to effect a complete "black-out."

**N. Colour Media Control** (Fig. 1).—This consists of a group of five levers which can be fitted at the right or left of the lantern and operate the colour frames through telescopic tubes.

**NOTE.**—It will be understood that all reference to "Right" or "Left" hand is taken with the operator standing at the rear of the lantern, facing the direction of projection. The operating side must be stated at the time of ordering.



**DIMENSIONS**

- A.—2-feet 2-inches.
- B.—5-feet 6½-inches.
- C.—1-foot 9½-inches.
- D.—2-feet 8-inches.
- E.—2-feet 10½-inches.
- F.—Maximum height when in horizontal position, 6-feet. 5-feet 5-inches minimum when horizontal.
- G.—Maximum height when tilted, 6-feet 8-inches. Minimum height when tilted, 6-feet 1-inch.
- H.—Maximum height of beam centre when horizontal, 4-feet 8-inches. Minimum height of beam centre when horizontal, 4-feet 1-inch.

**WEIGHT**

Lantern only, 1 cwt. 2 qrs. 23 lbs. ; Stand and trunnion, 1 cwt. 13 lbs.

**PRICES**

|   | £   | s. | d. |                |
|---|-----|----|----|----------------|
| Pattern 501 Sunspot Arc and Stand .. .. .   | 308 | 0  | 0  | each           |
| Extra for supplying motor feed at time of order .. .. .                                 |     |    |    | on application |
| D. 85 —Linen bound millboard colour frames (10¾-inches x 7½-inches) .. .. .             |     | 11 | 6  | per doz.       |
| D. 87.—Ditto, with "Cinemoid" colours .. .. .   |     | 1  | 2  | 6 "            |
| D.293.—Spare 12-inch diameter glass mirrors .. .. .                                     |     | 7  | 11 | 6 each         |
| D.294.—Spare 6-inch diameter, 16-inch focus, heat-resisting plano-convex lenses .. .. . |     | 1  | 13 | 6 "            |

**Resistances**  
See page D.41

**Inductors**  
Details on application

| Supply      | Max. Arc Amps. | Arc Volts | Carbon Size and Type  | Burning rate per Hour    | Total burning time         |
|-------------|----------------|-----------|---|--------------------------|----------------------------|
| <b>A.C.</b> | 100            | 26        | 9 m/m x 12-in. long<br>H. I. Alternalux   | 4.5 inches               | 1¾-2 hours                 |
| <b>D.C.</b> | 60             | 33        | Positive, 10 m/m x 12-in. long<br>Negative, 7 m/m x 12-in. long<br>Both H. I. Copper Coated | 3.5 inches<br>3.4 inches | 2½-2¾ hours<br>2½-2¾ hours |

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# STRAND ARC CONTROLS

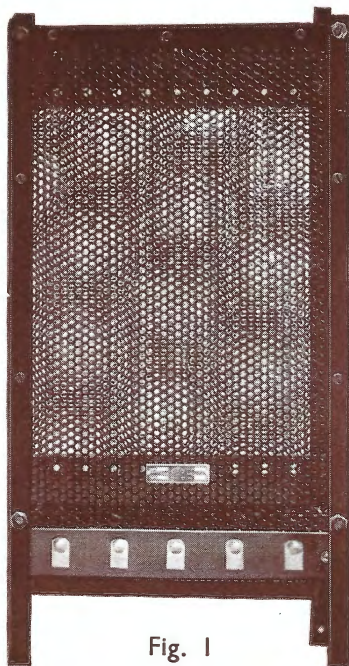


Fig. 1

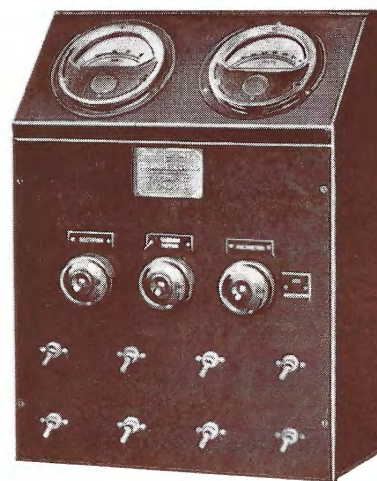


Fig. 2

In order to maintain a steady arc on Direct Current, a resistance (the value of which is dependent upon the supply voltage, and the arc voltage and current) is normally connected in series with the arc. (The supply voltage should be at least 50 volts higher than the arc voltage.) When using Alternating Current an inductor is to be preferred in view of the economies made in running costs and the reduction in noise normally associated with an A.C. arc.

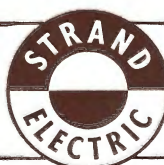
## (I) RESISTANCES

In theatres, a resistance may be installed in any convenient place in the circuit approved by the licensing authority. It is not generally permissible to install resistances, whose total dissipation of electrical energy (see note overleaf at foot) exceeds 2 kilowatts, in the projection room of a cinema or of a theatre equipped for cinema projection. To comply with this regulation, it is usually necessary to install the arc resistances outside the projection room.

There are several ways of doing this. A series resistance may be used with the switch spindle extended to work through a wall. The resistance is then fixed in a room adjacent to the projection room. A better method is to use a parallel type resistance (Fig. 1), with step switches mounted on a control panel in the projection room, adjacent to the projector or arc lantern (Fig. 2). The switches are either heater (tumbler) switches for steps up to 15 amps., heater (rotary) switches for steps up to 30 amps., or knife switches for larger steps than 30 amps. Another method is to use parallel type resistances with contactors for step selection. This method is recommended when the resistances are situated some distances from the arc, since only two wires capable of carrying the full load are run to the arc, and smaller wires only need be run to the control switches (operating the contactors), which can be grouped on a very small panel mounted on or near the projector lamphouse.

The current taken by the arc will depend upon the type of lantern, the length of throw, and the purpose for which it is being used. Having decided upon the type of lantern and the maximum current to be taken by the arc, suitable carbons and their recommended working voltage can be determined.

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# STRAND ARC CONTROLS

A parallel type resistance is generally recommended. The series type is in any case unsuitable for arcs taking more than 40 amps.

A series type resistance has its steps connected in series with each other. The current is increased by reducing the number of sections connected in series.

A parallel type resistance has its steps connected in parallel with each other. The current is increased by increasing the number of sections connected in parallel.

Both types of resistance are connected in series with the arc.

It is desirable to fit a voltmeter to indicate arc voltage, since the satisfactory burning of the carbons is very dependent upon this.

When ordering, the following information should be given :—

- (a) The supply voltage.
- (b) The arc voltage.
- (c) The type of resistance (whether series or parallel type).
- (d) The number and size of the steps (in amps.) required to increase or decrease the current in the arc.
- (e) The type of controls required for step selection (e.g. switches, contactors).
- (f) The position of the resistance in relation to its controls.
- (g) Whether a voltmeter, ammeter or both are required.

#### NOTE.

The electrical energy dissipated is calculated as follows :—

Supply (or generator) voltage less arc voltage = voltage drop.

$$\text{Resistance required (in ohms)} = \frac{\text{voltage drop}}{\text{arc current (in amperes)}}$$

$$\text{Electrical energy dissipated in the resistance (in watts)} = \text{current (in amperes) squared} \times \text{resistance (in ohms)}.$$

**Example.**—For a 30-amp. 50-volt arc operating on a 110-volt supply :

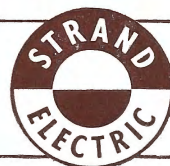
Supply voltage (110) less arc voltage (50) = 60 volts drop.

$$\text{Resistance required} = \frac{\text{voltage drop}}{\text{arc amps.}} = \frac{60}{30} = 2 \text{ ohms.}$$

Energy dissipated = current squared (30 x 30) X resistance (2) = 1,800 watts.

*PRICES and SPECIFICATIONS of RESISTANCES and CONTROL PANELS will be sent on receipt of detailed requirements.*

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# STRAND CYCLORAMA LIGHTING

CYCLORAMA GROUNDROWS—SINGLE OR DOUBLE ROW  
PATTERN "S" FOR 60, 100 OR 150 WATT LAMPS



These groundrows are designed for illumination of cycloramas or backcloths, from below, as an auxiliary effect to the top lighting. They have compartments spaced at 9-inch centres, and give more light from fewer lamps than the old 6-inch centre types which they supersede. The "Sunray" silvered glass reflectors give wide angle beams free from hot spots, and light well up the cyclorama or backcloth, even when placed as close as 3 feet. They are made in single and double row types, the latter being used when it is necessary to double the number of compartments allocated to blue, e.g. for large cycloramas.

## SPECIFICATION

**Housing** is strongly constructed in sheet steel, efficiently ventilated, with pressed steel compartment divisions welded in place at 9-inch centres, and the whole is finished in black crystalline outside and matt black inside. Each compartment is fitted with a metal frame with guard wires to take the colour medium and a type A.235 "Sunray" glass reflector mounted in a spring-steel spider and Edison Screw lampholder. Groundrow is manufactured in 3-foot and 6-foot lengths.

**Mounting.**—Substantial steel brackets are fitted at the ends of each length, giving variable tilt. Sections in the double row type may be tilted individually. Locking handwheels are fitted at each end. Swivel castors (as illustrated) are supplied as an extra on the single row type. They are supplied as a standard part of the double row type. Connectors are not included.

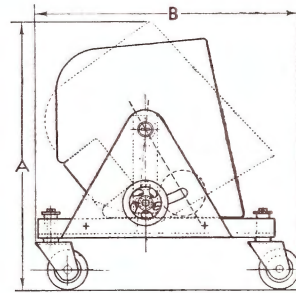
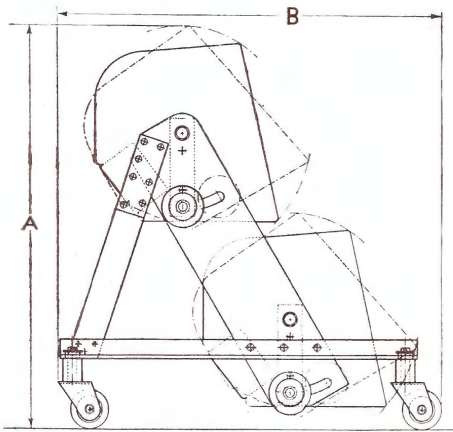
**Wiring**, which is housed in a sheet-metal trough with removable lid, is carried out in fireproof cable for colours and circuits to suit requirements.

(continued overleaf)

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### DIMENSIONS

| Double row type  |         | Ft. | Ins.               |
|------------------|---------|-----|--------------------|
| A                | .. .. . | 1   | 8½ (Max.)          |
|                  |         | 1   | 7½ (Min.)          |
| B                | .. .. . | 1   | 8                  |
| Overall length.. | ..      | 6   | 3 (6-foot section) |
| " "              | ..      | 3   | 3 (3-foot section) |

| Single row type  |         | Ft. | Ins.               |
|------------------|---------|-----|--------------------|
| A                | .. .. . | 1   | 1¾ (Max.)          |
|                  |         | 1   | 0¾ (Min.)          |
| B                | .. .. . | 1   | 1½                 |
| Overall length.. | ..      | 6   | 3 (6-foot section) |
| " "              | ..      | 3   | 3 (3-foot section) |

### WEIGHTS

| Double row type   |                             |
|-------------------|-----------------------------|
| Per 6-foot length | .. 4 qrs. 16 lbs. (approx.) |
| .. 3-foot length  | .. 2 qrs. 14 lbs. (approx.) |

| Single row type   |                            |
|-------------------|----------------------------|
| Per 6-foot length | .. 2 qrs. 8 lbs. (approx.) |
| .. 3-foot length  | .. 1 qr. 12 lbs. (approx.) |

Lamps.— 60-watt General Service type with E.S. Cap or  
 100-watt " " " " " " or  
 150-watt Theatre Batten " " " " " " } **N.B.**  
 Lamps should be  
 clear NOT pearl.

### PRICES

| Double row type (including castors)  |              | Single row type (excluding castors) |              |
|--|--------------|-------------------------------------|--------------|
| 6-foot lengths   | .. .. . each | 6-foot lengths                      | .. .. . each |
| 3-foot lengths   | .. .. . "    | 3-foot lengths                      | .. .. . "    |
| Extra for mounting single row type on 2-inch rubber tyred castors (i.e. per set of 4), per length (6-foot or 3-foot) | .. .. . "    |                                     | .. .. . "    |

**NOTE.** The usual length of groundrow is 6 ft. 3 ft. lengths are normally only required to make up a total length or when short radius of curvature over part of a cyclorama precludes the use of 6 ft. lengths throughout.

|   |         |          |
|---|---------|----------|
| A.185—3-pin 15 amp. moulded slip connectors                 | .. .. . | per pair |
| A.235—Extra wide-angle glass reflectors                     | .. .. . | each     |
| A.270—Wide-angle anodised aluminium reflectors              | .. .. . | "        |
| A.240—Extra metal colour frames (8-inch × 9¼-inch)          | .. .. . | "        |
| A.241—Gelatine, any colour, except frost (8-inch × 9¼-inch) | .. .. . | per doz. |
| A.242—Gelatine frost (8-inch × 9¼-inch)                     | .. .. . | "        |
| A.243—"Cinemoid" in any colour or frost (8-inch × 9¼-inch)  | .. .. . | "        |

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# STRAND EFFECTS LIGHTING

**PATTERN 52. 1,000 Watt OPTICAL EFFECTS and SLIDE PROJECTOR**  
~~**PATTERN 51. 1000 Watt OPTICAL EFFECTS PROJECTOR**~~

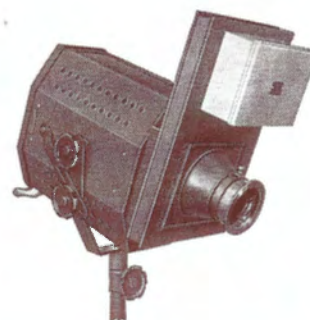


This is a compact lantern, designed for stages, auditorium, and exhibition work. It will project satisfactorily all the STRAND Optical Effects attachments listed on page F21.

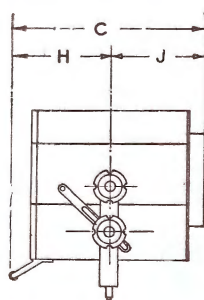
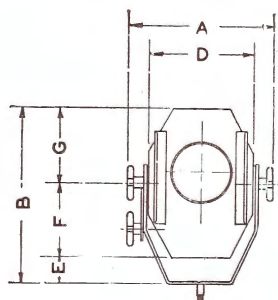
## SPECIFICATION

Lantern constructed in sheet steel, efficiently ventilated. Access to lamp by hinged door at rear. 5 in. diameter double plano-convex condenser is fitted, with 3½ in. diameter intensifying lens and O.N. 20 heat absorbing glass filter. Lamp tray fitted with LARGE PREFOCUS lamp-holder and 5 in. diameter spherical super

pure anodised aluminium reflector. Both are rigidly fixed in correct focal relationship to each other, adjustments are not necessary and are, therefore, not provided. The tray can be moved by knob under lantern in order that the beam may cover the size of slide or effect required. Complete with runner to take all standard optical effects attachments. Rockbestos tails, tilting fork and quadrant with 3 in. diameter locking wheels. Removable handle at rear. Finish: black crystalline enamel outside, matt black inside.



Pattern 51 with Wave effects



## DIMENSIONS

|   | Ft. | In. |   | Ft. | In. |
|---|-----|-----|---|-----|-----|
| A | ... | 1   | 0 | F   | ... |
| B | ... | 7   | ½ | G   | ... |
| C | ... | 5   | ½ | H   | ... |
| D | ... | 9   | ½ | J   | ... |
| E | ... | 6   |   |     |     |

**Lamp:** 1000 watt Class A.1 Tubular with PREFOCUS cap.

**Maximum throw:** Normally used up to 60 ft.  
**Weight:** Nett 26 lbs.

|  | each           |
|--|----------------|
|  | £ s. d.        |
| <b>PRICE (exclusive of lamp)</b>   | <b>23 10 0</b> |
| F.66—Telescopic stand (minimum height, 4 ft. 3 in.; maximum, 7 ft. 0 in.)      | 3 10 0         |
| F.64—Safety chain with snap hook   | 3 6            |
| F.65—"L" clamp for suspending from 2 in. diam. barrel                          | 3 6            |
| F.84—Adjustable barrel clamp   | 11 6           |
| F.302—5 in. x 9 in. plano-convex heat-resisting lens                           | 1 11 6         |
| F.310—Extra 3½ in. diam. heat resisting intensifying lens (for Patt. 52, only) | 1 1 0          |
| F.311—Extra O.N. 20 heat resisting glass filters (for Patt. 52, only)          | 4 0 0          |
| F.290—Extra anodised aluminium reflector                                       | 17 0           |

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# STRAND EFFECTS LIGHTING

## PATTERN 51. 1,000 watt OPTICAL EFFECTS PROJECTOR

This Lantern (from which the Patt. 52 described overleaf was developed) is intended for the projection of moving optical effects with the longer life Class B.1 and Class T Round Bulb Projector Lamps. It is only suitable for projecting stationary slides if 500 watt lamps are used.

### SPECIFICATION

As for Pattern 52 overleaf except that an intensifying lens and heat absorbing O.N.20 glass filter are not fitted.

**DIMENSIONS AND WEIGHT.** As for Pattern 52 overleaf.

### LAMPS

**For Moving Effects.**—1,000 watt Class T or 1,000 watt Class B.1 Round Bulb Projector Lamps with LARGE PREFOCUS CAP in each case.

**For Stationary Slides.**—500 watt Class T or 500 watt Class B.1 Round Bulb Projector Lamps with LARGE PREFOCUS CAP in each case.

### PRICE

Pattern 51 (excluding lamp) .. .. . £12 13s. 0d. each

*For prices of accessories see overleaf.*

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# STRAND EFFECTS LIGHTING



Cloud Effect with Wide Angle Lens

## EFFECT ATTACHMENTS

It is not possible to list all the many effects that are available but the principal ones will be found below. Quotations for painting of special discs or the design of special apparatus will be furnished on receipt of requirements. Alterations to standard designs or construction of new effects to the customers' ideas can be carried out and demonstrated under working conditions.

Effects are supplied with a variable speed electric motor drive.

The effects are mounted in circular aluminium cases 19½ in. diameter (approx. weight, 9 lbs.), or rectangular wooden boxes, 17½ in. x 19½ in. (approx. weight, 9½ lbs.). The latter are marked \*.

In either case they are fitted with a turntable enabling the projected effect to run in any desired direction. The front of the cases carry runners to take mask, tinting gelatine if required, and objective lens (not included on prices below).

## PRICES (Effects only)

|  | £ | s. | d. |      |
|--|---|----|----|------|
| F.134—Fleecy Clouds (white) .. .. .  |   |    |    | each |
| F.135—Storm Clouds (dark) .. .. .  |   |    |    | "    |
| F.136—Rain .. .. .   |   |    |    | "    |
| F.137—Snow .. .. .   |   |    |    | "    |
| F.138—Waterfall .. .. .  |   |    |    | "    |
| F.139—Running Water .. .. .  |   |    |    | "    |
| F.140—Smoke .. .. .  |   |    |    | "    |
| F.141—Flames .. .. .   |   |    |    | "    |
| *F.143—Rough Sea Wave .. .. .  |   |    |    | "    |
| *F.144—Water Ripple .. .. .  |   |    |    | "    |
| F.147—Dissolving Colours .. .. .   |   |    |    | "    |
| F.148—Forked Lightning Effect (hand operated) (with two interchangeable copper slides) |   |    |    | "    |
| F.342—Ripple Effect, self-contained and requiring no projection lantern or objectives. |   |    |    | "    |
| For close range work behind ground rows only. Uses 1000 w. Horizon type lamp           |   |    |    |      |

## Accessories

|   |  |  |  |   |
|---|--|--|--|---|
| F.150—Turntable Front and Slide Carrier (weight, 5½ lbs.) .. .. .               |  |  |  | " |
| F.343—Adjustable metal mask for limiting beam shape to proscenium, etc. .. .. . |  |  |  | " |

## SHORT FOCUS OBJECTIVE LENS ASSEMBLIES

Consisting of aluminium cast case with sliding brass lens jacket, fitted with securing thumbscrew, best-quality 3½ in. diam. British lenses, and backplate to fit standard effect attachment runner.



## PRICES

|  |   |    |   |      |
|--|---|----|---|------|
| F.151—2½-in. focus, extra wide angle, 14 ft. 0 in. square (3¼ in. x 3¼ in. slide) at 10 ft. .. | 6 | 10 | 0 | each |
| F.152—3-in. focus, wide angle, 10 ft. 0 in. " " " " " " ..                                     | 6 | 10 | 0 | "    |
| F.153—4-in. focus, narrow angle, 6 ft. 6 in. " " " " " " ..                                    | 6 | 10 | 0 | "    |

Weights: F.151 3¼ lbs.; F.152 3½ lbs.; F.153 3¼ lbs.

(continued overleaf)

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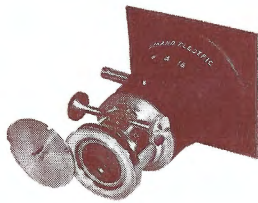
BRANCHES

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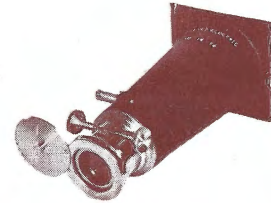
**62, DAWSON ST., DUBLIN - DUB 74030**

# STRAND EFFECTS LIGHTING



## LONG FOCUS OBJECTIVE ASSEMBLIES

Consisting of cast aluminium case with rack and pinion operated sliding brass front carrying best quality  $2\frac{1}{4}$  in. diam. British lenses.



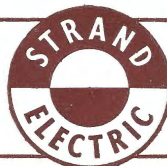
### PRICES

|                                    |                                  | Weight              | £  | s. | d.     |
|------------------------------------|----------------------------------|---------------------|----|----|--------|
| F.344—Long Focus (6, 8 or 10-inch) | objective assembly without lens. | $5\frac{1}{2}$ lbs. | 19 | 4  | 0 each |
| F.345— " " (12, 14 or 16 " )       | " " " " " "                      | $8\frac{3}{4}$ lbs. | 20 | 13 | 0 "    |
| F.328— 6-in. focus lens for F.344  | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |
| F.329— 8-in. " " " "               | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |
| F.330—10-in. " " " "               | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |
| F.331—12-in. " " " F.345           | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |
| F.332—14-in. " " " "               | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |
| F.333—16-in. " " " "               | .. .. .                          | .. .. .             | 5  | 15 | 6 "    |

(Weight of lenses 1 lb. each.)

| Distance between Lantern and Screen | TABLE GIVING FOCUS OF LENS FOR VARIOUS LENGTHS OF THROW         |         |         |         |         |         |         |         |         | Distance between Lantern and Screen |
|-------------------------------------|---|---------|---------|---------|---------|---------|---------|---------|---------|-------------------------------------|
|                                     | 6 in.   | 8 in.   | 10 in.  | 12 in.  | 14 in.  | 16 in.  | 18 in.  | 20 in.  | 24 in.  |                                     |
|                                     | (Square Picture from $3\frac{1}{4}$ " x $3\frac{1}{4}$ " Slide) |         |         |         |         |         |         |         |         |                                     |
| Ft.                                 | Ft. In.   | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft.                                 |
| 10                                  | 5 0   | 3 9     | 3 0     | 2 6     | 2 2     | 1 9     | 1 6     | 1 3     | 1 0     | 10                                  |
| 11                                  | 5 6   | 4 2     | 3 4     | 2 9     | 2 4     | 1 11    | 1 8     | 1 4     | 1 1     | 11                                  |
| 12                                  | 6 0   | 4 6     | 3 7     | 3 0     | 2 7     | 2 1     | 1 10    | 1 6     | 1 2     | 12                                  |
| 13                                  | 6 6   | 4 11    | 3 11    | 3 3     | 2 9     | 2 3     | 1 11    | 1 8     | 1 4     | 13                                  |
| 14                                  | 7 0   | 5 3     | 4 2     | 3 7     | 3 0     | 2 5     | 2 1     | 1 9     | 1 5     | 14                                  |
| 15                                  | 7 6   | 5 8     | 4 6     | 3 9     | 3 3     | 2 7     | 2 3     | 1 10    | 1 6     | 15                                  |
| 20                                  | 10 0  | 7 6     | 6 0     | 5 0     | 4 3     | 3 6     | 3 0     | 2 6     | 2 0     | 20                                  |
| 25                                  | 12 6  | 9 4     | 7 6     | 6 3     | 5 4     | 4 4     | 3 9     | 3 1     | 2 6     | 25                                  |
| 30                                  | 15 0  | 11 3    | 9 0     | 7 6     | 6 5     | 5 3     | 4 6     | 3 9     | 3 0     | 30                                  |
| 35                                  | 17 6  | 13 1    | 10 6    | 8 9     | 7 6     | 6 1     | 5 3     | 4 4     | 3 6     | 35                                  |
| 40                                  | 20 0  | 15 0    | 12 0    | 10 0    | 8 6     | 7 0     | 6 0     | 5 0     | 4 0     | 40                                  |
| 45                                  | 22 6  | 16 10   | 13 6    | 11 3    | 9 8     | 7 10    | 6 9     | 5 7     | 4 6     | 45                                  |
| 50                                  | 25 0  | 18 9    | 15 0    | 12 6    | 10 9    | 8 9     | 7 6     | 6 3     | 5 0     | 50                                  |

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# STAGESOUND

## AUDIO REPRODUCTION EQUIPMENT

### TYPE C.2 SOUND CONSOLE

This is a standard record replay console designed for theatre use, equipped with two 12-in. turntables, two lightweight pickups with provision for accurate groove location, monitor loudspeaker and 30-watt twin audio channels. Provision is made to feed one turntable into one set of speakers and the other turntable into a second set of speakers—this system being particularly useful when it is required to have two effects in operation on different parts of the stage. Also in the event of a breakdown in one of the amplifiers, instantaneous changeover is available into the second amplifier.



### SPECIFICATION

**TURNTABLES**—Accurate aluminium cast turntables running in impregnated sleeve bearings, rim driven by a special belt system ensuring freedom from slip and "wow". Powered by 1/50th h.p. motors which are synchronous and fitted with a special filter unit mounting ensuring a minimum of transmitted vibration.

**PICKUPS**—Lightweight microcell crystal type employing a plug-on type head assembly for ease of replacement. The heads are fitted with a permanent sapphire stylus which can only be removed by the use of special jigs, and therefore when the sapphire requires replacement the head must be returned to our service department. Two spare heads are normally supplied and contained in special clips on the motor plates for instant changeover.

The response of these pickups is level within  $\pm 2$  db from 50-11,000 c.p.s.

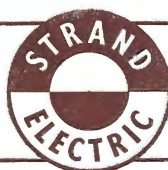
**LOCATORS**—Locating and lowering mechanisms for each pickup are fitted which in addition to locating, incorporate a safety lowering mechanism. The final lowering of the pickup is automatically decelerated, preventing damage to records and styli. Location of pickups may be controlled with direct calibration to within 1/100 in.

**AUDIO CHANNELS**—Two channels are provided, each consisting of a feedback amplifier with a rated audio output of 30 watts, the general specification of the amplifiers is as follows:

|                         |   |
|-------------------------|---|
| <b>Response</b>         | Level within 2 db from 50 c/s to 20 k/cs.   |
| <b>Output</b>           | 30 watts.   |
| <b>Output Impedance</b> | Internally adjustable for 4, 7.5, and 15 ohms.  |
| <b>Input Impedance</b>  | High impedance for extra external pickups. 15 ohms for Microphone.  |
| <b>Tone Control</b>     | Variable treble attenuation. Switchable bass boost circuit for pickups to lift response 10 db at 50 c/s relative to the level of 1 k/c. |

**MONITOR**—A built-in 8-in. monitor speaker is fitted in front of the console with the volume control and muting selector switch for audio channel A or B.

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# STAGESOUND

## AUDIO REPRODUCTION EQUIPMENT

### TYPE C.2 SOUND CONSOLE



**CONTROL PANEL**—This is situated in the front of the console, illuminated from each side, and contains the following controls:

- A Volume control for each pickup.
- B Key for each pickup allowing them to be fed into either audio channel.
- C Volume control for microphone.
- D Key for microphone allowing it to be fed into either audio channel.
- E Four speaker keys allowing four speakers to be fed from either audio channel.
- F Volume control for monitor speaker.
- G Key for monitor allowing either audio channel to be monitored.
- H Main switches for each audio channel with illuminated indicators to show when the amplifiers are on.
- J Switches for panel lights and motor plate lights.

All the changeover keys are of the silent type and have a centre "Off" position.

**CONSOLE**—Strongly constructed wooden console finished in grey gloss cellulose mounted with black and chrome fittings. All panels are finished in royal blue stoved enamel.

The console is mounted on four rubber-tyred castors. A drawer is fitted in front of the console for records. Both drawer and main lid are fitted with locks.

The amplifier units are mounted on rubber mountings to eliminate vibration in transit.

A clip-on back is fitted for ease of servicing and the inside is illuminated.

All outputs and inputs are situated in the rear of the console at the bottom, and are mounted on a sunk metal panel. All plugs and sockets have a lock which eliminates any plug being accidentally pulled out. Also fitted on the rear panel is a 5-amp. 3-pin socket for soldering iron, inspection lamp, or other mains voltage fitting.

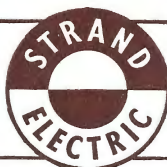
**MAINS INPUT**—200-250 volts A.C., 50 cycles per second. Special voltages and frequencies to order.

**DIMENSIONS**—40 in. wide by 45 in. high by 26 in. deep.

**WEIGHT**—Approximately 175 lb.

**PRICE** (of Console complete as specified but excluding microphones or external loudspeakers) each

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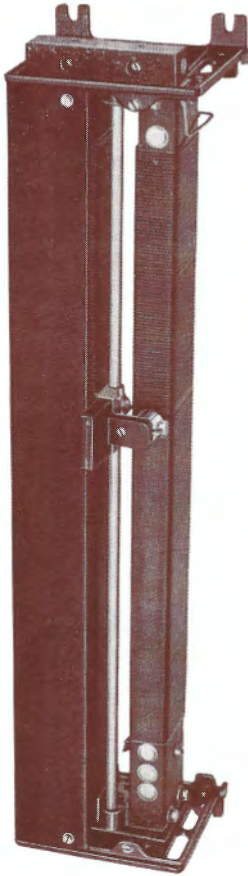


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# STRAND DIMMERS

## SLIDER TYPE



**General Construction.**—Resistance elements are fitted between cast end-plates and enclosed with substantial sheet metal louvered guards, so arranged that they form a narrow slot through which the operating knob projects. A scale, graduated from 0 to 10, is fitted to the cover. Terminals are fitted at one end and slotted lugs are provided for fixing.

**Resistance Elements.**—These consist of best quality slate formers with carefully graduated windings of nickel copper alloy wire. Brass studs of ample size are provided for “full on” and “off” positions.

Great care is taken in calculating windings to ensure that an even and progressive variation in light is achieved throughout the whole of the brush travel.

**Brushgear.**—A pair of self-lubricating copper graphitic brushes are fitted as standard, these being carried in an aluminium die cast carriage with a moulded bakelite operating knob, the whole sliding on a substantial brass rod.

The use of copper graphitic brushes and the design of brush carriage ensure a smooth, effortless movement over the whole travel.

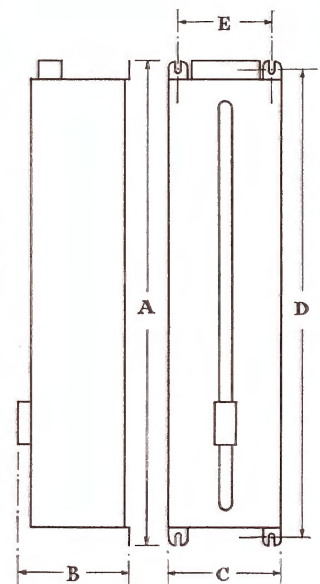
**Terminals.**—A terminal block consisting of an ebonite former with brass inserts is fitted to end plate.

**Off Position.**—A quick break switch is fitted at “Dim” end of travel to switch off the dimmer. This is operated by a flicker fitted to the brush carriage and is so arranged that it is impossible to break circuit accidentally.

**Finish.**—End plates are stove enamelled glossy black, and guards are finished black crystalline.

*Slider Dimmer with one guard plate removed to show internal detail.*

| Lamp Watts                               | Pattern No. | Overall Dimensions inches |    |     | Fixing Centres inches |    | Weight lbs. | Prices |
|--|-------------|---------------------------|----|-----|-----------------------|----|-------------|--------|
|  |             | A                         | B  | C   | D                     | E  |             |        |
| 60, 100, 150, 200 ... ..                 | S.S.12      | 14½                       | 4  | 4½  | 13½                   | 3½ | 7           |        |
| 250, 300, 350, 400, 450, 500             | S.S.15      | 17½                       | 4  | 4½  | 16½                   | 3½ | 8           |        |
| 550, 600, 650, 700 ... ..                | S.S.18      | 20½                       | 4  | 4½  | 19½                   | 3½ | 9           |        |
| 750, 800, 900 ... ..                     | L.S.15      | 17½                       | 4½ | 5½  | 16½                   | 4  | 13          |        |
| 950, 1,000, 1,050 ... ..                 | L.S.18      | 20½                       | 4½ | 5½  | 19½                   | 4  | 14          |        |
| 1,100, 1,200, 1,300, 1,400, 1,500 ... .. | L.S.21      | 23½                       | 4½ | 5½  | 22½                   | 4  | 15          |        |
| 1,600, 1,700, 1,800 ... ..               | 2 L.S.15    | 16½                       | 5  | 10½ | 16½                   | 9  | 26          |        |
| 1,900, 2,000, 2,100 ... ..               | 2 L.S.18    | 19½                       | 5  | 10½ | 19½                   | 9  | 28          |        |
| 2,200, 2,400, 2,600, 2,800, 3,000 ... .. | 2 L.S.21    | 22½                       | 5  | 10½ | 22½                   | 9  | 30          |        |



**Note** (1) Both Pattern No. and lamp wattage must be stated when ordering.  
 (2) If specially ordered, slider dimmers can be constructed to handle loads plus or minus one third of their rating, e.g., a 1,500 watt ± 1/3 rated dimmer will satisfactorily handle loads between 1,000 watts and 2,000 watts. Prices On Application.

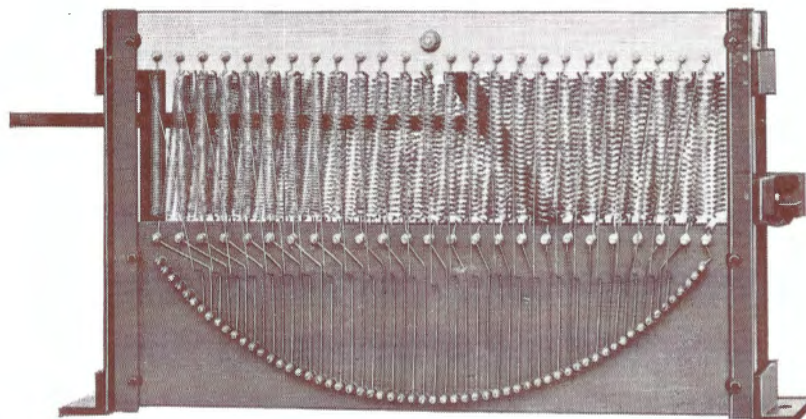
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# STRAND DIMMERS

## “SUNSET” DIMMERS TYPE D (COIL PATTERN)



Type D “Sunset” dimmer.

**These dimmers have been developed for use on “STRAND” switchboards, etc., when the majority of the loads are in excess of the maximum for Type A.1 dimmer.**

They consist of a substantial frame fitted with resistance coils arranged in two halves, these being connected in series through a moveable brush of anti-friction material. These dimmers are capable of handling a maximum load of 5,000 watts at 100/110v. or 200/250v. When used on 100/110v. for loads above 2,500 watts, and up to the maximum of 5,000 watts, it is necessary for the two halves to be connected in parallel. This is effected by fitting collector segments and using a double brush.

A wide range of variable loads can be handled on these dimmers, the maximum variation being plus or minus  $33\frac{1}{3}\%$  of the rated load. The maximum carrying capacity of dimmer is reduced to 80% of figures stated above when wound for a variable load.

For loads greater than those specified above a number of dimmers can be coupled for operation by a single control.

**Frame.**—Wrought iron of robust design suitably arranged with interchangeable mounting for front or rear of switchboard entry, and for banking for motor drive.

**Panels.**—Main and top panels of Pierrite C.O. grade heat-resisting insulating material of ample size to prevent warping.

**Terminals and Studs.**—Studs, screws, etc., are of brass throughout. Studs of ample size are fitted with special collets for connecting coil. Resistance coils are secured with brass screws and nuts, with washers on each side of loop to ensure good contacts.

**Resistance Coils.**—Graduated winding of nickel-copper alloy wire, non-corrosive, unaffected by atmospheric conditions, and with a negligible temperature co-efficient.

**Brush.**—Anti-friction “Copper Morganite” of ample section to carry current required without voltage drop.

**Insulation.**—Panels, coils, brush and other live parts are insulated from the frame with bushings and washers, care being taken to prevent damp creeping in at these points. The insulation resistance of an individual dimmer is not less than 20 megohms measured with a 500-volt testing set.

**General.**—All dimmers have a definite “off” position. Dimmers are made with 100 steps of resistance and windings are calculated to give flickerless dimming from “full on” to “off” when used with the rated load.

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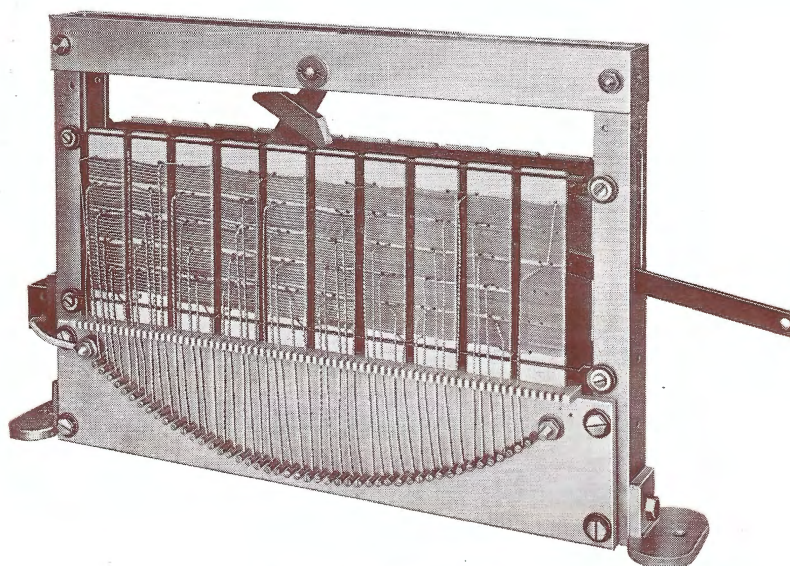
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# STRAND DIMMERS

## “SUNSET” DIMMERS TYPES A AND A.1 (ELEMENT PATTERN)

These dimmers have been specially designed for use on “STRAND” switchboards, etc., in a compact form, dimensions being reduced to a bare minimum. They consist of a substantial frame with replaceable elements arranged in two halves, these being connected in series through a movable brush of anti-friction material.



Type A “Sunset” dimmer.

The Type A dimmer is capable of handling a maximum load of 2,500 watts at 200/250v. or 2,000 watts at 100/110v. The Type A.1 dimmer will handle a maximum load of 3,500 watts at 200/250v. For loads up to a maximum of 3,500 watts at 100/110v. the two halves of a Type A.1 dimmer are connected in parallel. This is effected by fitting collector segments and using a double brush.

A wide range of variable loads can be handled on these dimmers, the maximum variation being plus or minus 33 $\frac{1}{3}$ % of the rated load. The maximum carrying capacity of a dimmer is reduced to 80% of the figures stated above when wound for a variable load.

For loads greater than those specified above a number of dimmers can be coupled for operation by a single control.

**Frame.**—Die castings of robust design with interchangeable mountings; these can be suitably arranged for front or rear of switchboard entry, and for banking for motor drive.

**Panels.**—Pierrite C.O. grade heat-resisting insulating material, of ample size to prevent warping.

**Terminals and Studs.**—Brass studs of ample size are fitted with special collets for connecting elements.

**Elements.**—Pierrite C.O. grade heat-resisting insulating material wound with graduated winding of nickel-copper alloy wire. Wire is non-corrosive and is unaffected by atmospheric conditions and also has a negligible temperature co-efficient.

**Brush.**—Anti-friction “Copper Morganite” of ample section to carry current required without voltage drop.

**Insulation.**—Panels, elements, brush and other live parts are completely insulated from the frame with bushings and washers, care being taken to prevent damp creeping in at these points. The insulation resistance of an individual dimmer is not less than 20 megohms measured with a 500-volt testing set.

**General.**—All dimmers have a definite “off” position. Dimmers are made with 100 steps of resistance and windings are calculated to give flickerless dimming from “full on” to “off” when used with the rated load.

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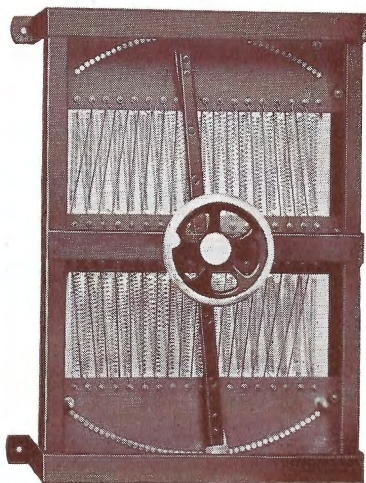
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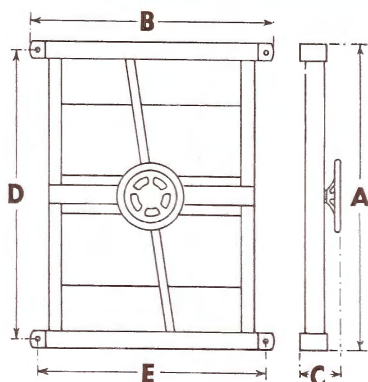
# STRAND DIMMERS

## WALL MOUNTING "SUNSET" TYPE

This is a self-contained dimmer unit suitable for use on Theatre auditorium or decorative lighting in lecture halls, churches, etc., or for master dimming on small stages.



Wall mounting Sunset Dimmer with case removed



**FRAME.**—Wrought iron, wall mounting, with perforated iron case.

**PANELS.**—Pierrite C.O. grade, heat-resisting, non-warping.

**TERMINALS AND STUDS.**—Brass studs, screws, etc., used throughout. Studs of ample size fitted with special collets for connecting coils. Resistance coils are secured with brass screws and nuts, with washers on each side of loop to ensure good contact.

**RESISTANCE COILS.**—All nickel-copper alloy wire, non-corrosive, unaffected by atmospheric conditions, and with a negligible temperature co-efficient.

**BRUSH.**—Anti-friction carbon of ample section to carry current required without voltage drop.

**INSULATION.**—Panels, coils, brush, and other live parts are insulated from frame with bakelite bushings and washers. All insulation is impregnated with bakelite varnish to prevent damp creeping in at these points. The insulation resistance of an individual dimmer is not less than 20 megohms, measured with a 500-volt testing set.

**OPERATION.**—This is either by means of a hand wheel as illustrated or lever as desired. The actuating spindle can be extended to allow operation from the next room.

**GENERAL.**—All dimmers have a definite "off" position and are made with 100 steps of resistance. Windings are graded to give flickerless dimming from "full on" to "off" when used with a load of its rated capacity. Dimmers are rated for use "full on" or at any intermediate position under conditions normal to theatre and stage work. The load applied to the dimmer in the "full on" position (i.e. resistance shorted out) should not exceed the wattage for which the dimmer is wound.

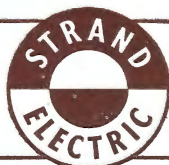
**CONSTANT RATING.**—For special applications when the normal theatre rating may be unsuitable, i.e. for indefinitely prolonged use at intermediate positions, the wattages shown in the column headed "constant" below should not be exceeded.

| Type | Maximum Rating in watts* |          | Dimensions |                    |                    |                    |                    | Weight | List price each<br>£ s. d. |
|------|--------------------------|----------|------------|--------------------|--------------------|--------------------|--------------------|--------|----------------------------|
|      | Theatre                  | Constant | A          | B                  | C                  | D                  | E                  |        |                            |
| O    | 2,500                    | 2,000    | 13"        | 20 $\frac{1}{2}$ " | 7"                 | 10 $\frac{1}{2}$ " | 18 $\frac{3}{8}$ " | 20 lb. | 12 0 0                     |
| P    | 3,500                    | 3,000    | 13"        | 20 $\frac{1}{2}$ " | 7"                 | 10 $\frac{1}{2}$ " | 18 $\frac{3}{8}$ " | 24 lb. | 13 10 0                    |
| G    | 5,000                    | 4,000    | 25"        | 24 $\frac{1}{2}$ " | 9"                 | 22 $\frac{1}{2}$ " | 22 $\frac{3}{8}$ " | 43 lb. | 21 17 6                    |
| J    | 10,000                   | 8,000    | 25"        | 24 $\frac{1}{2}$ " | 12"                | 22 $\frac{1}{2}$ " | 22 $\frac{3}{8}$ " | 67 lb. | 35 10 0                    |
| K    | 15,000                   | 12,000   | 25"        | 24 $\frac{1}{2}$ " | 15 $\frac{1}{2}$ " | 22 $\frac{1}{2}$ " | 22 $\frac{3}{8}$ " | 89 lb. | 59 0 0                     |

\* 1. The figures given above are maximum loadings for the 200/250 volt A.C. range. Prices and details for 100/110 volt A.C. and all D.C. voltages on application.

\* 2. For loadings in excess of those given the next larger size of dimmer must be used. Thus for theatre use a wattage of 3,600 requires a type G dimmer; for very prolonged (constant) use, a wattage of 8,100 requires a K type dimmer.

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# STRAND PORTABLE SWITCHBOARDS

## NON-INTERLOCKING SLIDER DIMMER TYPE (6-WAY)

### SPECIFICATION

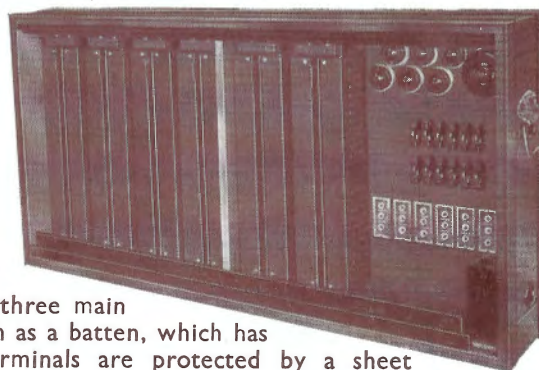
**Case.**—Constructed in sheet aluminium, with flat iron corner runners to prevent damage by rough usage under touring conditions. Aluminium covers fitted front and back. The former, which serves as a protection for the dimmers in transit, is easily removable. A chest type of handle is fitted at each end for general handling.

**Panel.**—This is of bakelite or similar material and is mounted with six double-pole fuses, six tumbler switches, a double-pole master switch, six 15-amp. 3-pin sockets, three main terminals and an extra earth terminal for equipment, such as a batten, which has a single earth wire for a multiplicity of circuits. The terminals are protected by a sheet aluminium cover with a sprung hinged lid. 2-inch bushed holes are provided in the case for main cable entry. A blackout switch is provided.

**Dimmers.**—Aluminium runners are provided for mounting the dimmers. The runners are fitted with hank bushes and screws spaced to take six slider type dimmers of any specified loading between 300 and 1,000 watts. For detailed Dimmer specification, see page H.11

**Dimensions.**—Height: 2 ft.      Width: 4 ft. 1 in.      Depth: 8 ins.      **Weight:** 1½ cwts., (approx.)

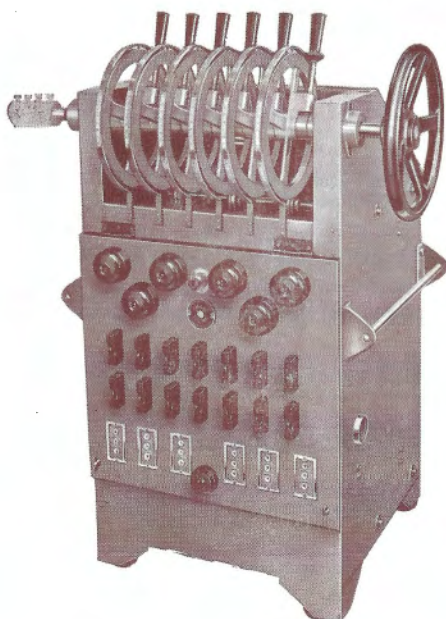
**PRICE** .. .. . each



## INTERLOCKING SLIDER DIMMER TYPE (6-WAY)

### SPECIFICATION

**Case.**—Constructed entirely in sheet steel of suitable gauge, to withstand rough usage under touring conditions without excessive weight.



The entire unit is mounted on rubber-tyred castors protected from damage by metal guards, lifting bars being fitted at each end to facilitate general handling. Hinged and louvred inspection doors are provided at the top and back of the case to allow access to the interior and ventilation to the dimmers, these doors being secured by wing screws.

2-inch brass bushes are fitted at each end of the case for entry of incoming cables, suitable brackets carrying earth terminals of the "tommy-bar" type being fitted adjacent to the bushes.

**Panel.**—This is of bakelite or similar material, each dimmer way being provided with a 10-amp. tumbler switch, double-pole locking type fuses and suitable socket to accommodate a 15-amp. 3-pin connector plug. A blackout switch is provided. A lampholder is mounted at the top to take a suitable lamp for illumination.

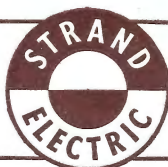
The panel is hinged at the top to permit access to wiring, tracker wires, dimmers, etc.

Main terminals are of the pillar type with "tommy-bar" cable clamping screws, these being duplicated to permit the bus-bars being fed from either end, and also to allow easy connection to an adjacent board.

The terminals are suitably placed to avoid short or awkward bends in the incoming cable.

(continued overleaf see also notes at foot thereof)

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**Dimmers.**—These are of the sliding brush type of standard construction, with the exception that a special block is fitted on the brush carriage to which the tracker wire is secured. As the board is otherwise totally enclosed, the dimmers are not provided with covers, the end plates being fabricated in sheet steel as an added precaution against breakage. In other respects the specification on page H.11 applies, each dimmer having a specified loading between 300 and 1,000 watts.

**Operation.**—A shaft supported in ball bearings, runs the entire width of the case. "V" grooved pulleys are carried on the shaft to which the tracker wires are secured, the drive to the dimmers being conveyed over suitable guide pulleys.

Handles with extended spindles are screwed into the driving wheels for operating the dimmers individually. Master control is obtained by screwing the handles down on to the shaft and operating a large diameter hand-wheel located at one end of the shaft.

Graduated scales surrounding the driving wheels indicate the dimmer position.

Suitable couplings are provided on the shaft at the end opposite to the master handwheel, to permit mechanical attachment to an adjacent board if required.

**Dimensions.**—Height: 3 ft. 10 ins. Width: 2 ft. 9 ins. Depth: 2 ft. 1 in. **Weight:** 2 cwts. (approx.)

**PRICE** .. .. . each

**INTERLOCKING "SUNSET" DIMMER BOARD (6-WAY)  
SPECIFICATION**

**Case.**—Constructed entirely in sheet steel, ensuring adequate strength without excessive weight, two "chest" type handles being provided on each side for general handling.

A large louvred inspection door is fitted at the back of the board to provide access and ventilation to the dimmers, the door being secured by lever handles. Arranged in line below the door are suitable sockets to accommodate 15-amp., 3-pin, connector plugs, the whole unit being mounted on 4-inch diameter rubber-tyred castors protected by steel guards.

**Panel.**—This is of bakelite or similar material, mounted with double-pole fuses and back of board switches, the "dollies" or knobs only projecting. Raised shoulders are formed in the case at each end of the panel to protect fuses and switch dollies from accidental damage. The panel is hinged at the top to facilitate inspection of the wiring at the back of the panel and to permit additional access to the dimmers, the panel being secured at bottom by wing screws. A blackout switch is provided.

**Terminals and Incoming Cables.**—2-inch brass bushes are provided at each end of the board to accommodate incoming cables, thus permitting bus-bars being fed from either end, and also electrical connection being made to an adjacent board if required. Earth terminals are provided, carried on brackets riveted direct to the metal case, and in close proximity to the entry bushes. Both Main and Earth terminals are of generous dimensions, having "tommy-bar" clamping screws and being suitably positioned to avoid as far as possible the incoming cables making sharp bends.

**Dimmers—Maximum Load—2 kw. at 240 v.**—These are of our standard "Sunset" pattern, the windings being carried on "Sindanyo" formers connected to suitable contact studs. By the provision of an adequate number of these studs, a staggered arrangement of same and careful calculation of the resistance windings, finely graduated dimming is assured.

**Operation.**—A 1-inch diameter shaft carried in ball bearings, is mounted within the case, immediately above the dimmers. Suitable crank castings are mounted on this shaft, one arm of the crank being connected by a flat steel link to the dimmer brush arm, the other side of the crank being provided with a threaded boss which accommodates the stem of the dimmer operating handle.

These handles pass through slots in the top of the case, and immediately in front of the panel a graduated scale is fitted at the side of the slot for indicating the degree of dim.

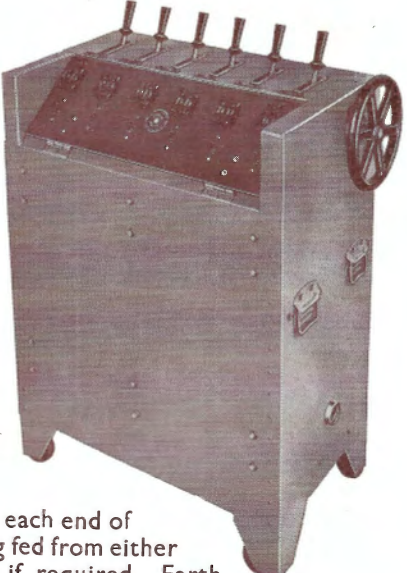
By unscrewing the dimmer handles a quarter turn they are released from the shaft and the dimmers operate individually. When the handles are screwed down the dimmers are locked to the shaft and can be operated collectively by means of a large diameter handwheel at one end of the shaft. A sleeve coupling is fitted at the opposite end for the mechanical attachment of an adjacent board if required.

**Dimensions.**—Height: 3 ft. 10 ins. Width: 3 ft. Depth: 1 ft. 10 ins. **Weight:** 2½ cwts., (approx.).

**PRICE** .. .. . each

**NOTE (1)** Electric Supply details should be stated, together with the dimmer loadings required (within the limits given in the specifications above) at the time of ordering.

**NOTE (2)** Portable switchboards are normally only constructed for 6 dimmer-ways. Larger or smaller sizes can be supplied to order but in the interests of portability, full use should be made of the sleeve couplings provided for ganging up the interlocking types.



|   |  |  |
|---|--|--|
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|---|--|--|



# STRAND CONTROL

## GENERAL SPECIFICATION OF STAGE SWITCHBOARDS

**Panels.**—Ebony Grade Sindanyo or similar material.

**Fuses.**—Porcelain Home Office or locking pattern. On D.C. boards, double-pole fuses are fitted but on A.C. Boards, single-pole with neutral links at the back of the Board are used.

**Circuit Switches.**—Either 15-amp. Back of Board knife pattern or 15-amp. Tumbler one-way or two-way-and-off pattern, as required, with bakelite covers.

**Master Switches.**—Back of Board knife pattern, single-, double- or triple-pole according to electric supply. Where contactors are used, 15-amp. one-way or two-way-and-off tumbler switches are used.

**Labels.**—All switches are clearly labelled to denote the circuits they control. All dimmer handles are labelled to denote both the circuit and wattage thereof. Where fuses or neutral links are mounted on the rear of switchboards they are also fully labelled. All labels are suitably coloured.

**Dimmer Operating Handles.**—On the simpler Switchboards the screw down bracket type is used, but on more elaborate boards, the self release pattern is fitted. The advantage of the latter is that the handle automatically releases itself from the shaft at the top or bottom of travel but relocks itself when the direction of rotation of the shaft is reversed.

**Dimmer Shafts.**—On large switchboards these are carried on self-aligning ball bearings, but on smaller boards ordinary cast iron bearings are fitted. Operation of shafts is effected either by capstan wheel or worm drive (as required). In the case of self-release Grand Master boards, direct operation of shafts is obtained by 10-inch diameter handwheels on each shaft.

**Dimmers.**—See page H.11 for Slider and page H.16 for Sunset dimmer specifications.

**Chain Interlocks or Couplings.**—These consist of chains between shafts enabling all shafts to be revolved by the operation of one wheel. Chain interlocks can be locked or unlocked at will. Chain couplings are permanently connected and one wheel only is supplied to operate all shafts together. *Alternatively* :—

**Grand Master Control.**—Consists of a bevel on each shaft, permanently in mesh with two further bevels which normally idle on the master control shaft and to which they may be selectively locked by means of fine splines, so providing a reverse action in order to be able to rotate any shaft in a like or opposite direction to any other, whilst rotating the master control handwheel in one direction only. The master control is worm operated to give a fine and steady operation. On very large switchboards the above arrangement is replaced by an electro-magnetic operation, actuated by tumbler switch.

**Scale Lighting.**—This consists of a trough running the full length of the shafts with a 15-watt B.C. Pygmy Sign type Lamp above each Dimmer scale. This refinement can only be fitted to Boards with self release handles and is generally confined to the larger type of Grand Master Boards.

**Wiring Troughs.**—Provided at the top of all boards to which all incoming conduits can be bonded, bushed holes being provided for external cables.

**Wiring.**—Carried out in fire resisting cable. Busbars are coloured to indicate phasing or polarity.

**Board Lights.**—Fitted on the front of wiring troughs either shell type reflectors on small boards or stencilled two-light type on large boards (one white lamp and one blue for use in blackouts).

**Signals.**—On larger boards “Warning” and “Go” signals with Red and Green glass apertures can be fitted to Master panels.

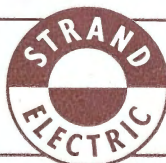
**General.**—All switchboards are totally enclosed by sheet metal or perforated sheet metal panels. With SUNSET Dimmer Boards, the dimmers are made to take out from the back and it is therefore necessary to allow a minimum space of 18 inches between the back of the board and the wall. Boards fitted with Slider dimmers can be fitted flat against a wall. All boards are constructed on substantial angle iron framework.

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# STRAND CONTROL

## SWITCHBOARD PLATFORM DIMENSIONS

The diagrams on this page are provided to give an indication of space required to accommodate a stage switchboard, and at the same time allow adequate room for operation and maintenance.

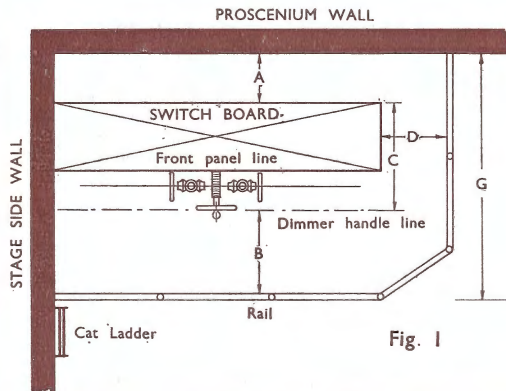


Fig. 1

### Minimum dimensions required for Switchboard Platform

| Sunset Type |          | Slider Type |          |  |
|-------------|----------|-------------|----------|--|
| Ft.         | Ins.     | Ft.         | Ins.     |  |
| A           | 1 6      | A           | Nil      | (For removal and servicing of dimmers) |
| B           | 2 6 Min. | B           | 2 6      | (For switchboard operation.)           |
| C           | 3 3      | C           | 9½-12    |  |
| D           | 2 0 Min. | D           | Nil      | (For access to back of board.)         |
| E           | 8 0 Min. | E           | 8 0 Min. |  |
| F           | 7 6      | F           | 7 6      | (An average figure only.)              |
| G           | 7 3      | G           | 3 ½ Min. |  |

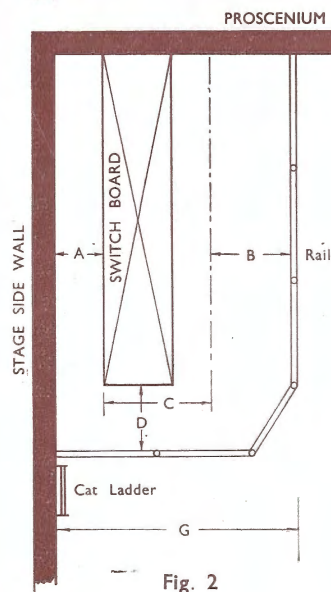


Fig. 2

Fig. 1 shows a typical switchboard installation in plan with the board parallel to the proscenium arch.

Fig. 2 gives an alternative arrangement wherein the switchboard is parallel to the side wall of the stage. Where local conditions permit, the former arrangement is much to be preferred as it allows the operator a better view of the stage, at the same time keeping the side walls clear for counterweight systems, scenery packs, etc.

Fig. 3 shows a side view of either of the foregoing arrangements.

Although the switchboard is shown on a perch or platform, the dimensions given will apply equally if it is situated at stage level.

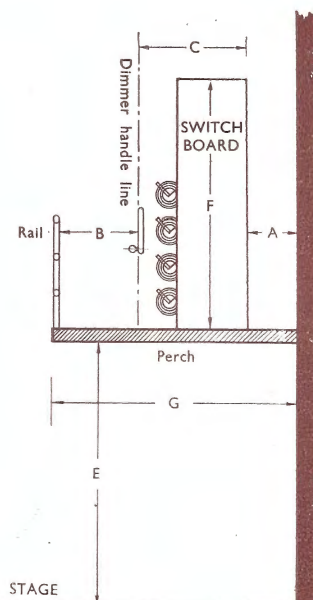


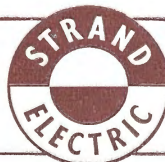
Fig. 3

No indication of switchboard length can be given as this is directly dependent on the number of dimmer ways, and height is given as an average only as this varies according to the design of each board.

The height of the platform above the stage is required for actors with tall head-dresses, period wigs, etc. If it is not possible to cantilever the platform from the adjacent walls, it should be suspended from the flies. No pillar should be installed to support the platform from the stage, as it will inevitably be found a serious obstruction and liable to cause accidents.

Although a cat-ladder is shown as the means of access to the perch, some licensing authorities require the provision of a sloping iron stairway.

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# STRAND CONTROL

## "JUNIOR" TYPE STAGE SWITCHBOARDS

This switchboard is intended for very small installations in schools, village halls and the like where so little money is available that hitherto it has been impossible to purchase a board on which normal stage lighting cues could be carried out.

As the dimmers are the most expensive part of a stage switchboard, an arrangement has been devised whereby lighting circuits can be switched on and off individually, or grouped as required by the lighting plot, without their use.

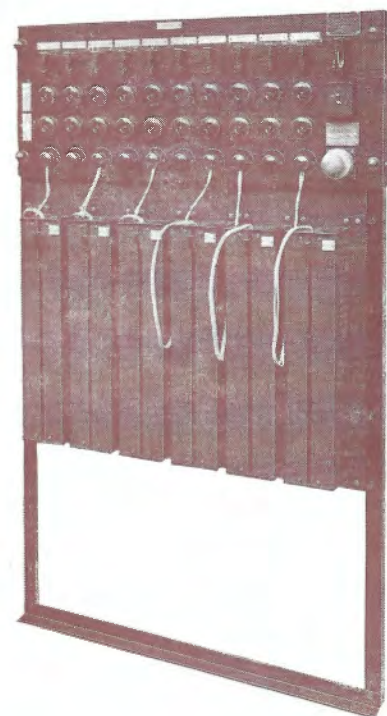
Dimmers can be purchased or hired when required, just bolted on and plugged in.



Type H.A. 20 with 12 circuit dimmers fitted.



Type H.A. 10 without dimmers.



Type H.A. 10 with 6 circuit dimmers fitted.

The plugs and their short circuiting switches permit a few dimmers to be shared out among the lighting circuits which need to be checked or dimmed. Circuits which are without dimmers at any time can be switched full on or blacked out normally, and dimmers can be replugged without flicker during the progress of a scene.

The plugs on the board are for dimmer connection and it is recommended for maximum flexibility that all lighting circuits terminate at the stage end in 5-amp. British Standard 3-pin plug sockets.

Full instructions are issued with each board so that the system may be used to best advantage.

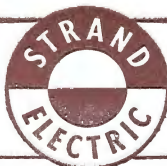
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# STRAND CONTROL

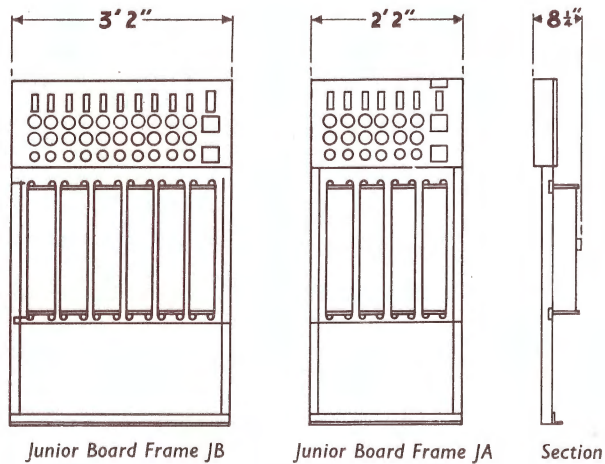
## "JUNIOR" TYPE STAGE SWITCHBOARDS

**SPECIFICATION.**—The JUNIOR Switchboard consists of an angle iron frame on which is carried a black sandanyo switch panel. Each circuit has one 5-amp. locking type fuse, a silent action circuit switch, a flush socket with 2-pin plug for a dimmer, a two-way switch to connect to master blackout or independent, and an engraved circuit identification label. A 60-amp. slow break A.C. master blackout switch is fitted and also a 30-amp. 3-pin plug and socket with 30-amp. fuse for a master dimmer.

The wiring ends in terminal blocks to which outgoing live and neutral wiring may be connected and a pair of heavy terminals is provided for incoming mains. Metal guards finished in black crystalline cover the rear of the panel and the dimmer space.

The JUNIOR board is made in two standard frame sizes shown below. The smaller frame (JA) accommodates six lighting circuits and four slider dimmers. The larger frame (JB) takes ten or twelve circuits and six slider dimmers. The dimmers **must** be of the types specified on the back of next page.

Using the two frame sizes standard JUNIOR boards can be supplied as under. Boards are normally right handed, i.e. with masters on the right but where two are supplied to make up the required number of circuits, one unit will be right handed and the other left handed to bring the masters in the centre. A double frame board has only one blackout switch but two master dimmer plugs and sockets, one to each frame.



Junior Board Frame JB

Junior Board Frame JA

Section

### DIMENSIONS

| Type  | Width       | Height | Depth over dimmer handles | Weight without dimmers |
|-------|-------------|--------|---------------------------|------------------------|
| HA 6  | 2 ft. 2 in. | 5 ft.  | 8 1/2 in.                 | 84 lbs.                |
| HA 10 | 3 ft. 2 in. |        |                           | 1 cwt.                 |
| HA 12 | 3 ft. 2 in. |        |                           | 1 cwt.                 |
| HA 16 | 5 ft. 4 in. |        |                           | 1cwt.84lbs.            |
| HA 18 | 5 ft. 4 in. |        |                           | 1cwt.84lbs.            |
| HA 20 | 6 ft. 4 in. |        |                           | 2 cwt.                 |
| HA 22 | 6 ft. 4 in. | 2 cwt. |                           |                        |
| HA 24 | 6 ft. 4 in. | 2 cwt. |                           |                        |

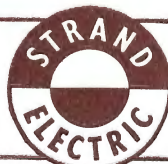
### EASEL TYPE JUNIOR BOARDS

Single frame JUNIOR boards can be supplied as portable units. The framework has a second set of folding legs so that the board can stand by itself free of wall support. In addition to the normal JUNIOR arrangement of dimmer plugs and sockets there is an additional row of plugs and sockets (5-amp. British Standard 3-pin) mounted along the top of the board to which the lighting circuits can be connected and a pair of quick connection terminals for the mains are fitted at the back of the panel.

Available for 6-way (HA6/Easel, weight 1 cwt.) and 10- or 12-way (HA10/or HA12/Easel, weight 1 cwt. 28 lbs.).



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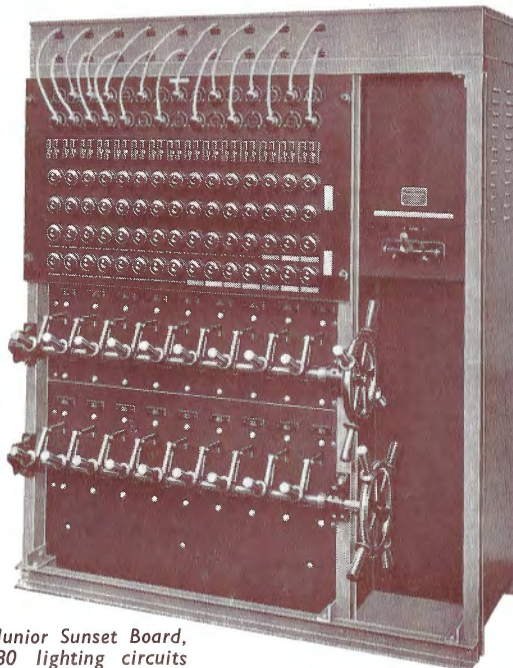


# STRAND CONTROL

## "JUNIOR" TYPE STAGE SWITCHBOARDS

### JUNIOR SUNSET BOARD

The "Junior" board circuit for sharing a few dimmers among a larger number of lighting circuits can be combined with Sunset contact dimmers instead of sliders. Such an arrangement is more expensive but permits mechanical interlocking of the dimmer handles, and control of somewhat larger circuits; for example, 30 lighting circuits and 18 (500/1,000-watt) dimmers as in photograph. The dimmer leads and plugs are brought out of the wiring trough at the top just above the dimmer plug sockets, and are therefore kept clear of the moving levers. These boards are specially designed on receipt of customer's requirements but no individual circuit can exceed 5-amp. unless permanently connected to its dimmer. For example, the board might consist of 28 (5-amp.) lighting circuits and 16 (500/1,000-watt) dimmers to share among them, plus two permanent circuits of 3,000-watt (without plugs but with 15-amp. 2-way and off switches) for the Cyclorama top.



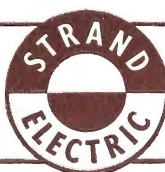
Junior Sunset Board,  
30 lighting circuits  
and 18 dimmers.

### PRICES

|             |          |                                    |    |    |    |
|-------------|----------|------------------------------------|----|----|----|
| HA 6        | Frame JA | 6 circuits and space for 4 dimmers | .. | .. | .. |
| HA 10       | .. JB    | 10 .. .. . 6                       | .. | .. | .. |
| HA 12       | .. JB    | 12 .. .. . 6                       | .. | .. | .. |
| HA 16       | .. JB+JA | 16 .. .. . 10                      | .. | .. | .. |
| HA 18       | .. JB+JA | 18 .. .. . 10                      | .. | .. | .. |
| HA 20       | .. JB+JB | 20 .. .. . 12                      | .. | .. | .. |
| HA 22       | .. JB+JB | 22 .. .. . 12                      | .. | .. | .. |
| HA 24       | .. JB+JB | 24 .. .. . 12                      | .. | .. | .. |
| HA 6/Easel  | Frame JA | 6 .. .. . 4                        | .. | .. | .. |
| HA 10/Easel | .. JB    | 10 .. .. . 6                       | .. | .. | .. |
| HA 12/Easel | .. JB    | 12 .. .. . 6                       | .. | .. | .. |

No switchboard circuit must exceed 1,000 watts and standard JUNIOR boards are available for 200-250-volt A.C. single-phase 2-wire supplies only.

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# STRAND CONTROL

## "JUNIOR" TYPE STAGE SWITCHBOARDS

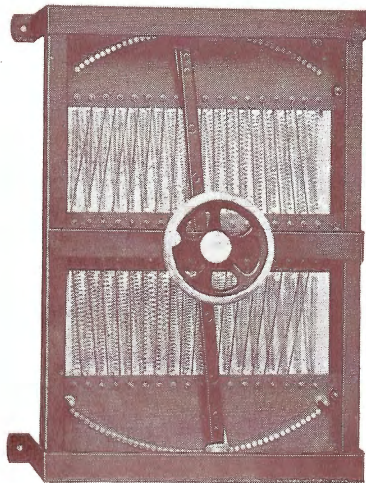
### DIMMERS

Standard JUNIOR boards are arranged with fixing irons and holes to take either STRAND slider dimmers JLS 21 or JLS 15. The former dims any load from 500 to 1,000 watts, the latter from 250 to 500. Whenever possible one size of dimmer should be used as this will prevent the risk of plugging a 250/500 dimmer in a 1,000-watt circuit. If two sizes must be used, then each size should be grouped together. For example, the heavy loads and their dimmers to the left of the board, light loads and their dimmers to the right. *Catalogue numbers must be quoted when ordering dimmers for hire or purchase as other sizes cannot be bolted to the frame.*

- |        |  |      |
|--------|--|------|
| JLS 21 | Slider dimmer 500/1,000-watt variable load with graduated scale and 2-feet flexible heat-resisting rockbestos lead .. .. . | each |
| JLS 15 | Slider dimmer 250/500-watt variable load with graduated scale and 2-feet flexible heat-resisting rockbestos lead .. .. .   | "    |

### MASTER DIMMERS

A 30-amp. 3-pin flush socket and plug is fitted to all JUNIOR boards so that a master dimmer can be easily connected in circuit. Except for small loads not exceeding 2,400 watts maximum it is *not* intended that a master dimmer shall be mounted on the board frame. When a dimmer is mounted on a JA or JB frame the number of circuit dimmers is reduced to 2 or 4 respectively.



The recommended type of master dimmer is the 100-contact wall mounting SUNSET to be fixed adjacent to but not on the board and connected by a three core lead (the third core ensures that the dimmer frame and cover is earthed). Each dimmer gives full dimming control for any load variation between the figures specified below.

- |          |  |      |
|----------|--|------|
| J2L.S.21 | Slider dimmer 1,200/2,400 <b>variable</b> load with terminals, graduated scale and cover but <b>no lead</b> (Price for leads upon application) .. .. .               | each |
| Type G*  | Sunset dimmer 2,000/4,000 <b>variable</b> load with terminals and cover but <b>no lead</b> (See leaflet H.21 for dimensions and details) .. .. .                     | each |
| Type J*  | Sunset dimmer 4,000/8,000 <b>variable</b> load with terminals and cover but <b>no lead</b> (See leaflet H.21 for dimensions and details) .. .. .                     | each |
|          | * Extra for 6ft. long 3-core 30-amp lead in flexible metallic hose, fixed permanently at one end to master dimmer, and to 3-pin 25-amp plug at the other end .. .. . | each |

|   |  |   |
|---|--|---|
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|---|--|---|

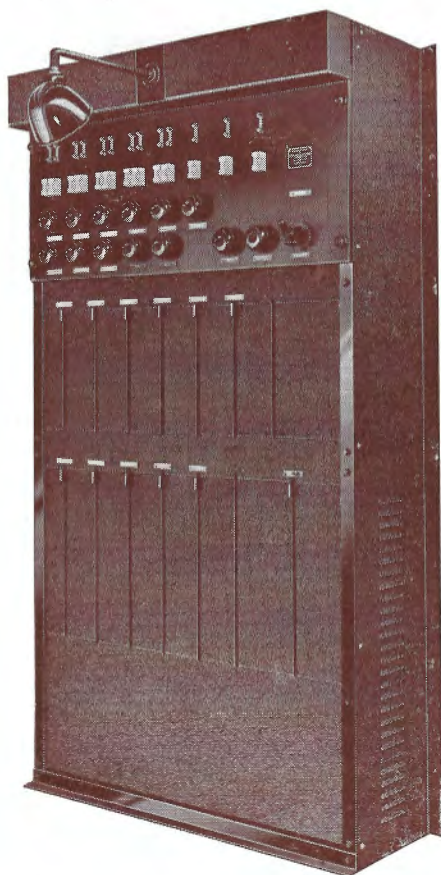


# STRAND CONTROL

## COMBINED SWITCH & DIMMER BOARDS

### NON-INTERLOCKING SLIDER TYPE (left)

A simple and inexpensive Switchboard & Dimmer Bank suitable for use in a small school or small public hall. The switches are "two way and off" so that any particular circuit can be left alight independent of the blackout switch provided. Dimmers are of the slider type capable of individual control only. For collective operation a master dimmer is sometimes incorporated in the board.

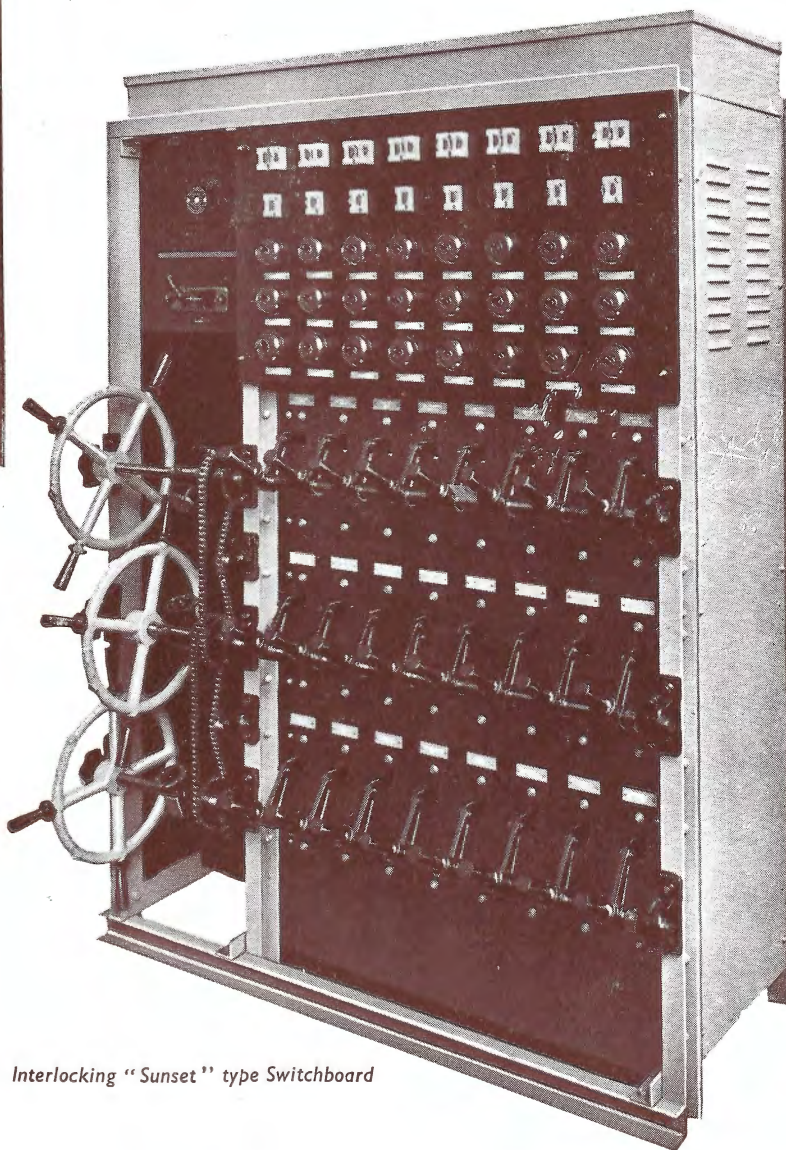


Non-interlocking Slider type Switchboard

individual circuits is by "two way and off" switches which allow any circuit to be left alight independent of the blackout switch provided. Individual dimmer control is by the bracket type of handle carried on shafts so that by "screwing down" on to the shaft collective control can be obtained. Dimmers are grouped in banks, each with its own master wheel. An inexpensive chain interlock can be provided between the three shafts so designed that they can be connected to operate from any one of the three master wheels.

### INTERLOCKING "SUNSET" TYPE (below)

This type of switchboard and dimmer bank has been designed for the Repertory type of Theatre. Switch control of the



Interlocking "Sunset" type Switchboard

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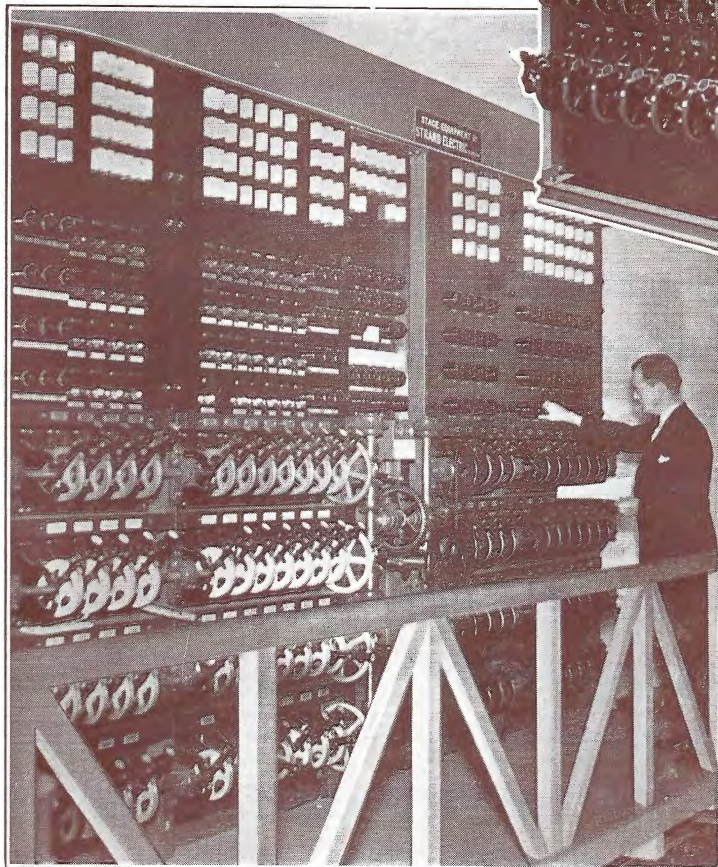
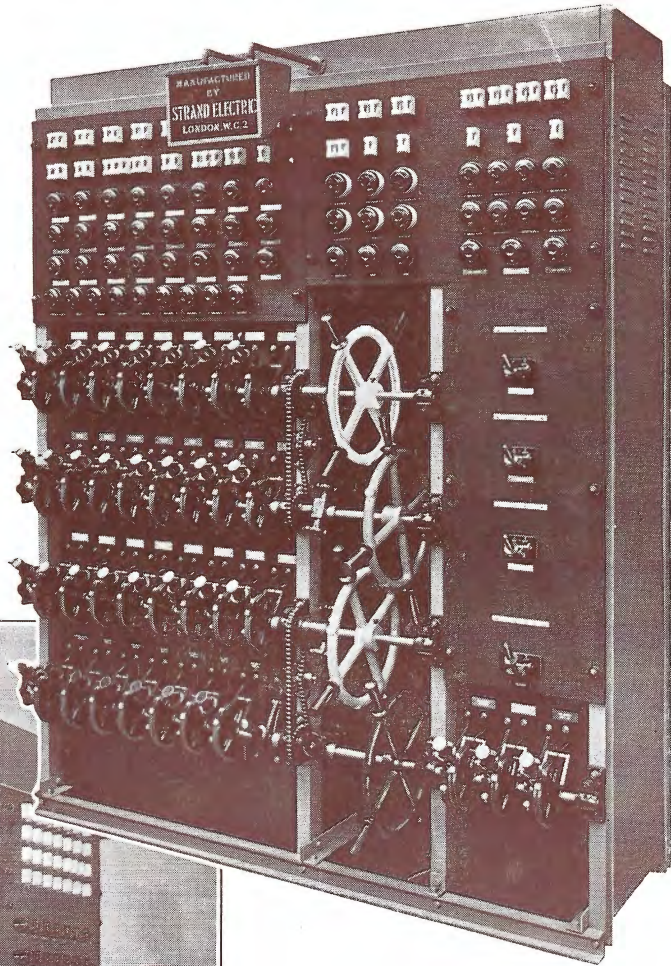


## COMBINED SWITCH & DIMMER BOARDS

### SELF RELEASE "SUNSET" TYPE

(right)

In this instance a more flexible method of collective dimming is employed in that the individual handles are arranged to release themselves from the shafting at the top and bottom of the travel. The Board illustrated is arranged with three colour shafts and an independent shaft to take all those circuits which are not allied to any colour bank such as Spots, etc. There are master switches for each colour (3-pole if the board is balanced over the three phases). Circuit switches can be "on and off" or "2-way and off" as required.



### SELF RELEASE "SUNSET" TYPE with GRAND MASTER CROSS CONTROL (left)

This represents modern practice for manually operated Theatre switchboards. Colour and independent master switches are remotely controlled, being contactors (installed in the basement to obviate noise) operated from the switchboard direct by "two way and off" switches so that any master can be left independent of the Blackout. Individual dimmer handles are of self release type and each shaft is connected to the grand master wheel by means of constant mesh bevels (actuated by fine splines) which provide reverse action so that any shaft can revolve in the same or opposite direction to its neighbour.

Each handle can be fitted with an illuminated scale if required. The illustration shows a four-colour bank on the left with the independent circuits on the right. The master wheel is worm operated and thus gives a very steady and fine operation. For quick operation of the shafts, each is fitted with a direct operated hand wheel.

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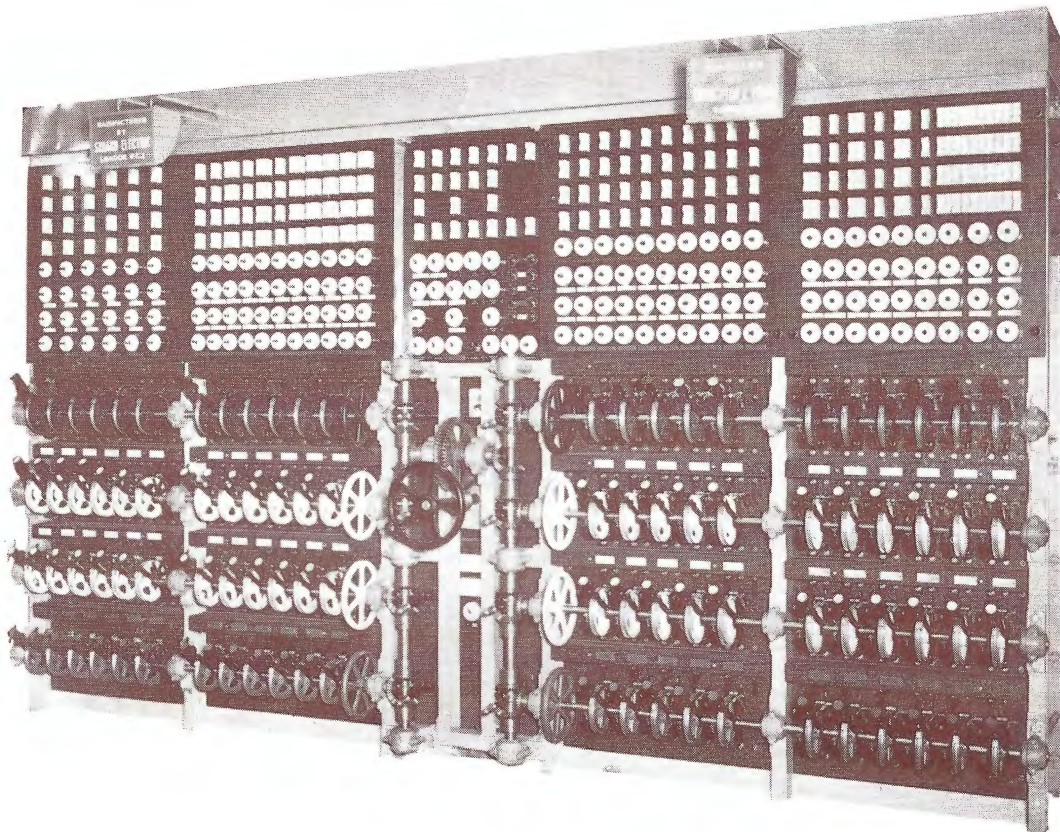


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# STRAND CONTROL

## SOME TYPICAL DIMMER BOARD INSTALLATIONS



### GRAND MASTER TYPE

|              |                  |               |                   |             |                  |
|--------------|------------------|---------------|-------------------|-------------|------------------|
| Aberdeen     | H.M. Opera House | Finsbury Park | Empire            | London      | St. James        |
| Aberdeen     | Tivoli           | Glasgow       | Alhambra          | London      | Vaudeville       |
| Belfast      | Empire           | Glasgow       | Royal             | London      | Victoria Palace  |
| Belfast      | H.M. Opera House | Greenwich     | S.E. Gas Board    | London      | Wimbledon        |
| Birmingham   | Alexandra        | Hackney       | Empire            | London      | Winter Garden    |
| Birmingham   | Hippodrome       | Johannesburg  | H.M. Theatre      | London      | Wyndhams         |
| Birmingham   | Repertory        | Kilburn       | State             | Manchester  | Hippodrome       |
| Birmingham   | Theatre Royal    | Leeds         | Grand             | Morecambe   | Winter Gardens   |
| Blackpool    | North Pier       | Leicester     | Opera House       | Newcastle   | Empire           |
| Blackpool    | South Pier       | Lewisham      | Gaumont           | Newcastle   | Royal            |
| Blackpool    | Opera House      | Liverpool     | Empire            | Northampton | New              |
| Bloemfontein | Witwatersrand    | Liverpool     | Royal Court       | Oldham      | Repertory        |
|              | University       | London        | Ambassadors       | Oxford      | New              |
| Bradford     | Alhambra         | London        | B.B.C. Television | Portsmouth  | Royal            |
| Brisbane     | H.M. Theatre     | London        | Studios (2)       | Preston     | Royal Hippodrome |
| Bristol      | Hippodrome       | London        | Duchess           | Pretoria    | Town Hall        |
| Camden Town  | Gaumont          | London        | Duke of York's    | Shepherds   | Empire           |
| Cape Town    | Alhambra         | London        | Fortune           | Bush        | King's           |
| Cardiff      | Prince of Wales  | London        | Haymarket         | Southsea    | King's           |
| Carlisle     | Her Majesty's    | London        | Palace            | Tooting     | Granada          |
| Chelsea      | Gaumont          | London        | Phoenix           | Turin       | Rex              |
| Dublin       | Royal            | London        | Royal Academy of  | Wood Green  | Gaumont          |
| Edmonton     | Regal            |               | Dramatic Art      |             |                  |

# STRAND CONTROL

## BRACKET HANDLE AND OTHER TYPES

### THEATRES, CINEMAS AND DRAMATIC CLUBS

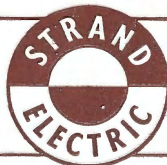
|              |                      |               |                       |               |                         |
|--------------|----------------------|---------------|-----------------------|---------------|-------------------------|
| Abadan       | Gymkhana Club        | Cyrenaica     | Army Welfare Centre   | Limerick      | Savoy                   |
| Aberdare     | Coliseum             |               |                       | Lincoln       | Lawn Hospital           |
| Aberdeen     | Astoria              | Denbigh       | Mental Hospital       | Liverpool     | Mayfair                 |
| Accrington   | Wood Nook Mills      | Denmark Hill  | King's College        | Llandudno     | Arcadia                 |
| Acton        | Odeon                |               | Hospital              | Llandudno     | Pier Pavilion           |
| Aldershot    | Ritz                 | Derby         | Hippodrome            | Llanelly      | Astoria                 |
| Altrincham   | Garrick Playhouse    | Derby         | Little Theatre        | London        | Aldford House Club      |
| Amersham     | Playhouse            | Dorking       | Gaumont               | London        | Casino                  |
| Armadae      | Regal                | Dublin        | Cabra Grand           | London        | Charing Cross Tatler    |
| Ashton       | Hippodrome           | Dublin        | Capitol               | London        | Criterion               |
| Ashford      | Odeon                | Dublin        | Gaiety                | London        | Everymans               |
| Aylesbury    | Pavilion             | Dublin        | Olympia               | London        | Royal Academy of        |
| Aylesbury    | County Theatre       | Dublin        | Queens                |               | Dramatic Art            |
|              |                      | Dublin        | Theatre de Luxe       | London        | Peoples Palace          |
| Ballymena    | Academy              | Dudley        | Hippodrome            | London        | Princes                 |
| Barnstaple   | Regal                |               |                       | London        | Rudolph Steiner Hall    |
| Battersea    | Open Air Theatre     | Eastbourne    | Music Pavilion        | London        | Savoy                   |
| Bawarda      | Taj                  | Eastbourne    | Pier                  | London        | Strand                  |
| Bearwood     | Windsor              | Edinburgh     | Lyceum                | London        | S.T.A.R. Centre         |
| Birmingham   | Queen Elizabeth      | Egypt         | Army Welfare Centre   | London        | Westminster             |
|              | Hospital             | Eltham        | Little                | Lyme Regis    | Marine                  |
| Blackpool    | Casino               | Exeter        | Odeon                 |               |                         |
| Blackpool    | Central Pier         |               |                       | Malta         | Army Welfare Centre     |
| Blackpool    | Pavilion             | Glasgow       | Pavilion              | Manchester    | Turners Asbestos Co.    |
| Blythe       | Essoldo              | Great         | Britannia Pier        | Margate       | Winter Garden           |
| Bolton       | Hippodrome           | Yarmouth      |                       | Mobile        | Caryl Jenner Theatre    |
| Bolton       | Little               |               |                       | Morecambe     | Odeon                   |
| Bolton       | New                  | Halifax       | Grand                 | Mountain Ash  | New Theatre             |
| Bolton       | Tivoli               | Harwell       | Atomic Energy Re-     |               |                         |
| Bournemouth  | New Royal            |               | search Establishment  | Nairobi       | National                |
| Bournemouth  | Palace Court         | H.M.S.        | Ganges                | Nelson        | Repertory               |
| Bradford     | Civic Theatre        | Herne Bay     | Pier Pavilion         | Newcastle     | Embassy                 |
| Bradford     | Princes              | Hollingwood   | Regal                 | Newcastle     | Essoldo                 |
| Brighton     | Hippodrome           | Huddersfield  | Ritz                  | Newport       | Lyceum                  |
| Bristol      | Orpheus              | Hull          | New Theatre           | Newtown       | Pavilion                |
| Bury St.     | R.A.F. Station,      | Hull          | Savoy                 |               |                         |
| Edmunds      | Shepherds Grove      | Hulme         | Playhouse             | Paris         | Alhambra                |
|              |                      |               |                       | Peterborough  | Embassy                 |
| Cambridge    | University A.D. Club | Ipswich       | Arts Theatre          | Pitlochry     | Festival Theatre        |
| Cambridge    | Arts Theatre         | Iran          | Iran Club             | Plymouth      | Palace                  |
| Canterbury   | Marlowe              |               |                       | Porthcawl     | Grand Pavilion          |
| Cape Town    | Muizenberg Pavilion  | Johannesburg  | Groot Kerk            | Port Sunlight | Gladstone Hall          |
| Cardiff      | New Theatre          |               |                       |               |                         |
| Chesterfield | Civic Theatre        | Keighley      | Hippodrome            | Ramsgate      | Granville               |
| Chiswick     | Empire               | Keighley      | Ritz                  | Reykjavik     | National (lesser stage) |
| Cleethorpes  | Ritz                 | Kent          | Benenden Sanatorium   | R.M.S.        | Alcantara               |
| Cliftonville | Lido                 | Keswick       | Alhambra              | R.M.S.        | Caronia                 |
| Colchester   | Repertory Theatre    | Kidderminster | Playhouse             | R.M.S.        | Queen Mary              |
| Cork         | Opera House          | Kilmarnock    | Palace                | Rochdale      | Theatre Royal           |
| Coventry     | Hippodrome           | Kingston      | Regal                 | Ryde          | East Pavilion           |
| Coventry     | Opera House          | Kirkburton    | Storths Hall Hospital |               |                         |
| Cromer       | Pier Pavilion        |               |                       | Salcoats      | Regal                   |
| Croydon      | Grand                | Leicester     | Palace                | Sale          | Pyramid                 |

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# STRAND CONTROL

## BRACKET HANDLE AND OTHER TYPES

### THEATRES, CINEMAS AND DRAMATIC CLUBS (Continued)

|              |                |                  |                           |                |                 |
|--------------|----------------|------------------|---------------------------|----------------|-----------------|
| Salford      | Carlton        | Stafford         | Odeon                     | Walmer         | Globe           |
| Scarborough  | Odeon          | Stamford Hill    | New Roxy                  | Waterford      | Little Theatre  |
| Scarborough  | Theatre Royal  | Stockport        | Carlton                   | Watford        | Palace          |
| Sevenoaks    | Majestic       | Stockton on Tees | Globe                     | Wellington     | Repertory       |
| Sheffield    | Empire         | Stockton on Tees | Hippodrome                | Wembley        | Hurst Hall      |
| Sheffield    | Lyceum         | Stratford        | Empire                    | Westcliff      | Palace          |
| Sheffield    | Repertory      | Sunderland       | Empire                    | Whitby         | Spa Theatre     |
| Singapore    | Odeon          | Sunderland       | Plaza                     | Whitechapel    | London Hospital |
| Singapore    | Rex            | Swanley          | Corona                    | Widnes         | New             |
| Slough       | Aspro Ltd.     | Swinton          | Ellesmere                 | Wigan          | Little Theatre  |
| Southampton  | Regal          | Swiss Cottage    | Odeon                     | Wigan          | Ritz            |
| Southend     | Pier Pavilion  | Teignmouth       | Den Pavilion              | Winchmore Hill | Capitol         |
| Southend     | Regal          | Tottenham        | Pavilion                  | Wimbledon      | Regal           |
| Southgate    | Incognito      | Tripoli          | Army Welfare Centre       | Windsor        | Royal           |
| Southport    | Little         | Truro            | Regent                    | Wolverhampton  | Odeon           |
| Southport    | Palladium      | Uitenhage        | Twentieth Century Theatre | Wood Green     | Empire          |
| Spalding     | Odeon          |                  |                           | Worthing       | Pier Pavilion   |
| Spalding     | Savoy          |                  |                           |                |                 |
| St. Austell  | Odeon          |                  |                           |                |                 |
| St. Athans   | R.A.F. Station |                  |                           |                |                 |
| St. Leonards | Regal          |                  |                           |                |                 |

### CIVIC AND PUBLIC HALLS

|                    |                               |                 |                          |              |                      |
|--------------------|-------------------------------|-----------------|--------------------------|--------------|----------------------|
| Ashton-under-Lynne | Town Hall                     | Fraserburgh     | Dalrymple Hall           | Norrkoping   | Godtemples Hall      |
| Bacup              | Embassy Ballroom              | Fulham          | Town Hall                | Orpington    | Civic Hall           |
| Becton             | Community Centre              | Iford           | Town Hall                | Paignton     | Public Hall          |
| Blaenavon          | Workmens Hall                 | Ifracombe       | Victoria Hall            | Pirbright    | Village Hall         |
| Bridgwater         | Town Hall                     | Killarney       | Town Hall                | Pretoria     | Pretorius Hall       |
| Cadbury            | Village Hall                  | Krugersdorp     | Town Hall                | Scarborough  | Floral Hall          |
| Carshalton         | Public Hall                   | Leyton          | Cathall Road Baths       | Slough       | Social Centre        |
| Cavendish          | Memorial Hall                 | Llanelly        | Lesser Market Hall       | Southport    | Floral Hall          |
| Cork               | City Hall                     | London          | Pigalle Restaurant       | Southwold    | St. Edmund's Hall    |
| Cork               | Father Matthew Hall           | London          | Regent Palace Hotel      | Thornccliffe | Newton Memorial Hall |
| Dublin             | Rupert Guinness Memorial Hall | London          | Savoy Hotel              | Tonbridge    | Social Centre        |
| Dunlaoghaire       | Town Hall                     | London          | Toynbee Hall             | Tottenham    | Town Hall            |
| Durham County      | Mainforth Welfare Hall        | Loughton        | Community Centre         | Wallasey     | Town Hall            |
| East Dereham       | War Memorial Hall             | Maesteg         | Town Hall                | West         | Village Hall         |
| Ferndale           | Workmens Hall                 | Manchester      | Free Trade Hall (Lesser) | Wittering    |                      |
|                    |                               | Merton & Morden | Morden Town Hall         | Whitley Bay  | Priory Assembly Hall |
|                    |                               | Newry           | Town Hall                | Wigan        | Queen's Hall         |
|                    |                               |                 |                          | Wimbledon    | Public Hall          |

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# STRAND CONTROL

## BRACKET HANDLE AND OTHER TYPES

### COLLEGES AND SCHOOLS

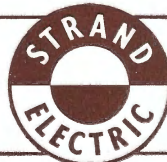
|                  |   |               |                                    |                  |                                     |
|------------------|---|---------------|------------------------------------|------------------|-------------------------------------|
| Aberdeen         | Training College                                | Emesettle     | No. 1 Primary School               | New              | Fairchild's Secondary               |
| Ampleforth       | Ampleforth College                              | Exeter        | University College                 | Addington        | Modern School (2)                   |
| Atherstone       | Queen Elizabeth Grammar School for Boys         | Flint         | Kelsterton Technical College       | New Cross        | Goldsmiths College                  |
| Balinasloe       | Joseph's College                                | Hampton       | Lady Eleanor Hollis School         | Norwich          | Lakenham Secondary Modern School    |
| Barnet           | Queen Elizabeth Grammar School for Boys         | Hampton       | Grammar School for Boys            | Norwich          | Technical College                   |
| Barnet           | Queen Elizabeth Grammar School for Girls        | Harrow        | High School for Boys               | Nuneaton         | Nuneaton Park School                |
| Bedford          | Training College                                | Haslemere     | Royal Naval College                | Oxford           | Bayswater County Secondary School   |
| Birkenhead       | Training School                                 | Hatfield      | Technical College                  | Oxhey            | County Secondary School             |
| Bury St. Edmunds | Beyton Secondary Modern School                  | Hendon        | Technical College                  | Plymouth         | Efford Modern Secondary School      |
| Bushey           | Grammar School                                  | Hinchley Wood | County Secondary School            | Plymouth         | Honicknowle Secondary School        |
| Camberwell       | Mary Dachelor Girls School                      | Hitchin       | Princess Helena College            | Plymouth         | No. 1 Secondary School              |
| Cambridge        | Homerton College                                | Hoddesdon     | Secondary Modern School            | Redcar           | East Cleveland Girls Grammar School |
| Canterbury       | King's School                                   | Horwich       | Mechanic's Institute               | Redcliffe        | Technical College                   |
| Charminster      | Secondary Modern School                         | Ilford        | County Boys' School                | Redditch         | New Modern Secondary School         |
| Chelsea          | St. Michael's and St. Joseph's Training College | Ilford        | Ursuline Convent                   | Rugby            | Dunsford Secondary School           |
| Chichester       | Bishop Otter Training College                   | Ipswich       | Northgate Grammar School for Girls | Sherbourne       | Sherbourne School for Girls         |
| Chingford        | Whitehall Road School                           | Kingsbury     | Bacon Lane Secondary School        | Smethwick        | Holly Lodge School                  |
| Clacton-on-Sea   | Pathfields Secondary School                     | Limerick      | Jesuit College                     | Southfields      | Whitelands College                  |
| Coventry         | King Henry VIII Grammar School                  | London        | Birkbeck College                   | Stanford le Hope | Secondary School                    |
| Coventry         | Technical College                               | London        | Guildhall School of Music          | Swindon          | Headlands Secondary Modern School   |
| Crawley          | Hilton Mount College                            | London        | Imperial College Union             | Tottenham        | Rowland Hill School                 |
| Croydon          | Ashburton Secondary Modern School (2)           | London        | London University                  | Tralee           | St. John's                          |
| Croydon          | High School for Girls                           | London        | Northern Polytechnic               | Twickenham       | St. Mary's Training College         |
| Croydon          | John Newham School                              | London        | Royal Veterinary College           | Walthamstow      | William Morris School               |
| Crowthorne       | Wellington College                              | London        | University                         | Watford          | Technical College                   |
| Dagenham         | S.E. Essex Technical College                    | Lowestoft     | St. Mary's Convent                 | Weymouth         | Broadway Secondary Modern School    |
| Derry            | St. Columb's College                            | Luton         | Riddy Lane Secondary School        | Weymouth         | Training College                    |
| Devon            | King's Tamerton Modern School                   | Manchester    | Baguley Hall Secondary School      | Wicklow          | Dominican Convent                   |
| Dublin           | Holy Cross College                              | Manchester    | City Training College              | Windsor          | Beaumont College                    |
| Dublin           | National University                             | Manchester    | Grammar School                     | Woolwich         | Shooters Hill School                |
| Dundalk          | St. Mary's College                              | Manchester    | Old Hall Drive Secondary School    | Worcester        | Worcester College                   |
| Ealing           | High School for Girls                           | Manchester    | Urmston Grammar School             | Wythenshawe      | Crossacres Junior School            |
| East Ham         | Langdon Crescent Schools (3)                    | Maynooth      | St. Patrick's College              | Wythenshawe      | St. Columba's R.C. School           |
| East Retford     | Carr Hill Junior School                         |               | Aula Maxima                        |                  |                                     |

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# STRAND REMOTE CONTROL

## SATURABLE REACTOR (CHOKE) SYSTEM SR/PRESET

This all-electric system has been introduced to cover the gap between the simple Saturable-Reactor on leaflet *H.51* and the Console-Preset (leaflet *H.84*) with its magnificent facilities for the larger theatre or television studio.

On installations of 54 control channels or over dimmer presetting is essential. That is to say it must be possible to set up next complete lighting change however complicated, while the previous lighting is actually in use. On an all-electric system this can only be done by fitting a second dimmer lever to each circuit. Either or both lighting effects on the levers can then be brought into play by operating the master dimmers.

(1) Moulded dimmer units with finger tip operation twin Red and Green Preset levers sharing the same scale and fitted with continuous extra low current dimmer windings. Scales are curved to follow exactly track of lever knobs and are marked 0 to 10 with half divisions shown in black on white ground.

(2) Amber tablet type switches engraved with large circuit reference number and giving choice of 'Left Master Dimmer' 'Independent Live' or 'Right Master Dimmer'.

(3) Twin Red and Green Preset Master dimmers to circuits grouped to Left and Right. Extra Master dimmer can be fitted to the Independent group, which can also act as a Grand Master. Master dimmers have 330° motion to assist in very slow fades. Scale is, however, engraved 0 to 100. Fade switches are provided to each master and the independent live group to enable rapid 1 second dimmer movement to be easily accomplished.

● Controls (1) (2) and (3) above allow each circuit to be dimmed individually and held at any level from full-on to out. Circuits can be formed at will into three separate groups, thus a cross-face of two entirely separate sets of lighting can be carried out while a third set, for example the sky, remains unchanged on independent.

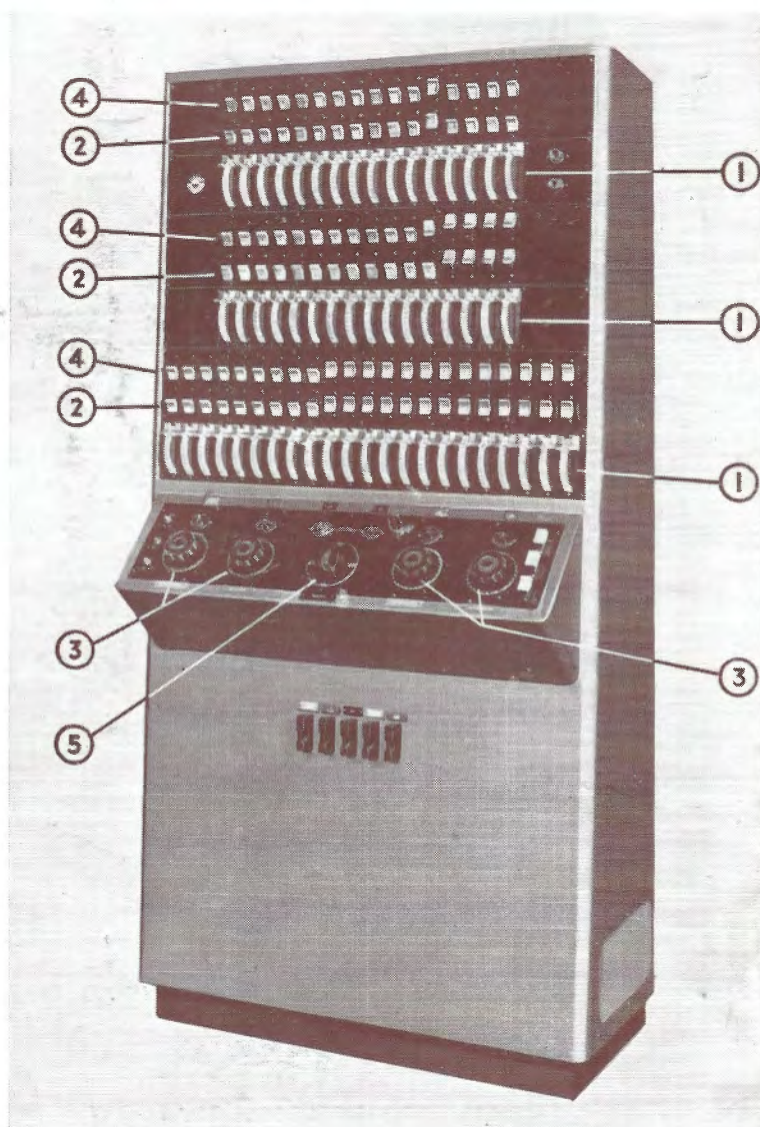
● The twin levers in each group can be set to differing dimmer levels thus allowing a new lighting effect to be preset in advance while the first lighting effect is in use. Using the master dimmers or fade switches a changeover can be made fast or slow from one lighting effect to another with or without a dark period in between. Alternatively, the two lighting effects can be added together.

(4) 3 position circuit switches with black, white or coloured tablets engraved with circuit name. Top and bottom positions of the switches connect to the top master and bottom master blackout respectively. Centre position gives 'Circuit Dead' (switched off by relay).

(5) Master 'top' and 'bottom' blackout switches. Also fade left, right and independent switches as described in (3) above. All these controls are placed conveniently on the sloping panel.

● Controls in (4) and (5) above, allow circuits to be switched individually or grouped up for switching from either of two master blackouts quite independently of the way they are grouped for master dimming or dimmer presetting. This greatly increases the control possibilities and facilitates quick working when, as is often the case, several cues come one on top of the other.

It is not possible to do this effectively with simple reactor systems because the control currents are relatively heavy. On the other hand, it is not desirable to introduce electronics or other devices requiring some degree of expert attention for this class of installation. In consequence a robust system without any moving parts and requiring a minimum of components in a simple circuit has been produced. Strand Electric are confident that this system fulfils a real need by providing a control with excellent facilities for up to 100 dimmer channels which will nevertheless give trouble free service in most countries of the world and which will require minimal maintenance of an elementary order.



(Fig. 1) Strand SR/Preset in the Whitehall Theatre, London.



## DIMMER BANK

The saturable reactor dimmers can be installed in various ways to suit the job in question. Either a number of 18 or 24 way racks resembling, but rather larger than, those supplied for the standard reactor control (leaflet H.51) may be used or the dimmers can be collected together as one bank (shown in photograph) completely wired with busbar chamber and distribution panels at one end.

Racks are not essential and there may be circumstances where the reactors could with advantage be scattered and be used individually near the distribution points of the various circuits concerned. All control supplies would then come from the only common item to the system—the control panel.

System SR/Preset is for A.C. only 220 to 250 or 110 to 120 volts.



(Fig. 2) Part of all-electric dimmer bank for Strand SR/Preset, with, inset, close-up of dimmer unit with blackout relay.

LONDON, MANCHESTER, GLASGOW



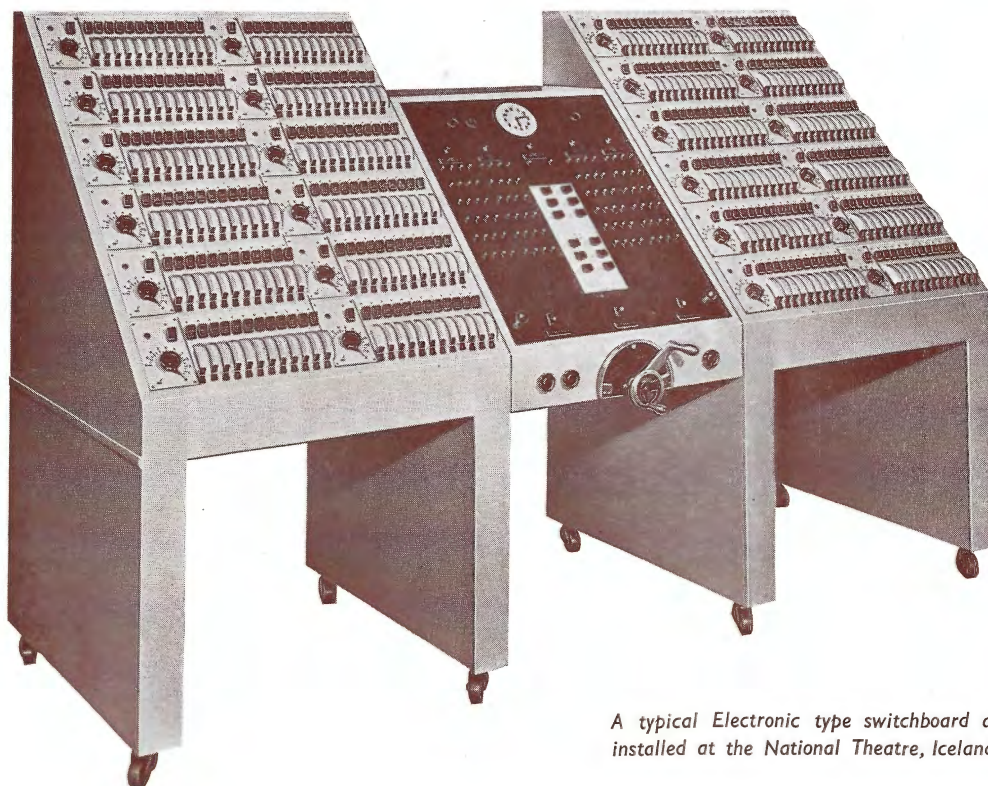
DARLINGTON, DUBLIN, MELBOURNE



# STRAND REMOTE CONTROL

## ELECTRONIC TYPE

(PATENTS PENDING)



*A typical Electronic type switchboard as installed at the National Theatre, Iceland.*

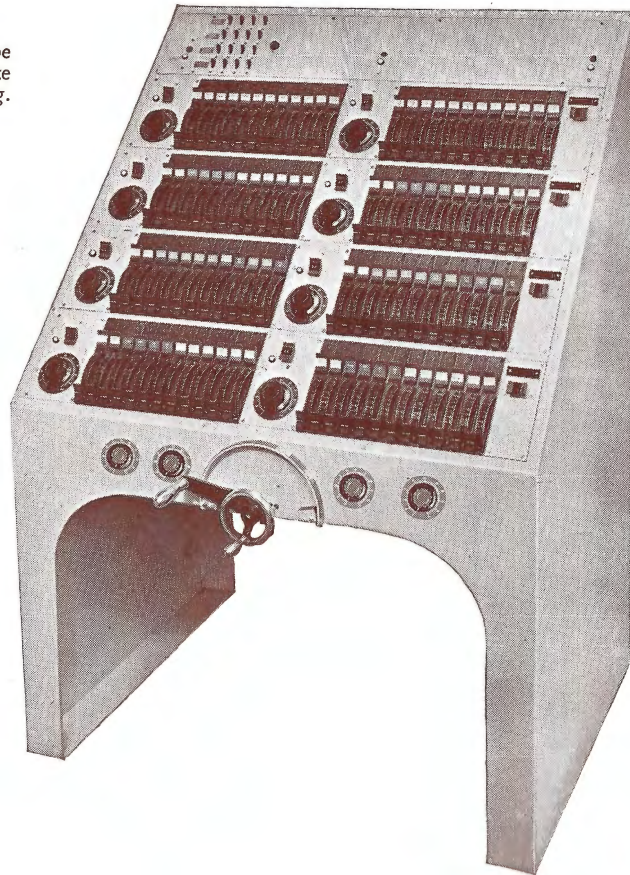
The widespread use of electronic circuits during the war has proved their reliability over prolonged periods and has led to their adoption for more peaceful purposes.

Now Strand Electric have utilised these principles for the control of stage lighting. The result, as the following pages show, is a switchboard which, while embodying a large number of new facilities, preserves the standard layout and method of operation familiar in so many theatres all over the world to-day.

# STRAND REMOTE CONTROL

## ELECTRONIC TYPE

Fig. 1  
A 48-way desk type control with duplicate panel for pre-setting.



This new form of switchboard differs from manually operated types in that thyatron valves regulating voltage are used to vary the intensity of the lighting circuits, instead of wire wound resistances controlling current. Figures 1 and 2 show examples of the control panel and valve bank which are used. Inter alia the following major advantages are achieved:

(1) The loads on the lighting circuits can be anything from zero to maximum capacity of the control without affecting the voltage/dimmer-travel ratio, i.e., **smoothness of dim is unaffected by variation in the size of the load.**

(2) The size of the control panel is very much

smaller than the standard board as the components only handle the control and not the lighting load. Not only does this permit the **installation of a control panel in small spaces** which could not accommodate the ordinary type of switchboard, but also **the manipulation of many more circuits per operator.**

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# STRAND REMOTE CONTROL

## ELECTRONIC TYPE

(3) The nature of the electrical circuit enables the control panel to be duplicated, changeover between the two halves of the board being effected by a grand master control. This means that the intensity of any or all circuits can be varied to any other required intensity by the operation of a single handle. The degree and direction of change of intensity can be selected at leisure in advance. **Pre-selected dimming and switching is an accomplished fact.**

(4) For collective operation dimmers may be interlocked electrically. **Proportional voltage regulation is therefore assured** no matter how many circuits are controlled at once, and no matter what may be their dimmer settings.

(5) Master dimmers are provided whereby **any circuits may be dimmed whilst any others are simultaneously brightened at the same or any speed**, whether such circuits are on the same or different rows. The dimming and brightening are achieved by the operation of only two controls and **without disturbing any pre-selections** which may have been made on the duplicate panel.

(6) Intensity of the lighting is controlled by varying the voltage instead of the current as with wire wound resistances. **A considerable financial saving is thus effected in the general use of the board.**

(7) Each circuit incorporates three valves arranged to supply uni-directional current to the stage equipment. Each stage lighting circuit and consequently the stage load as a whole is fed equally from the three phases. **No question arises therefore of balancing the load nor of arranging equipment on the stage to avoid the proximity of diverse phases for reasons of personal safety.**

(8) **The control is silent in operation under all circumstances.**

(9) Apart from the switch there is only one moving part per circuit. **If necessary a complete circuit control unit may be replaced on the panel in less than five seconds.**

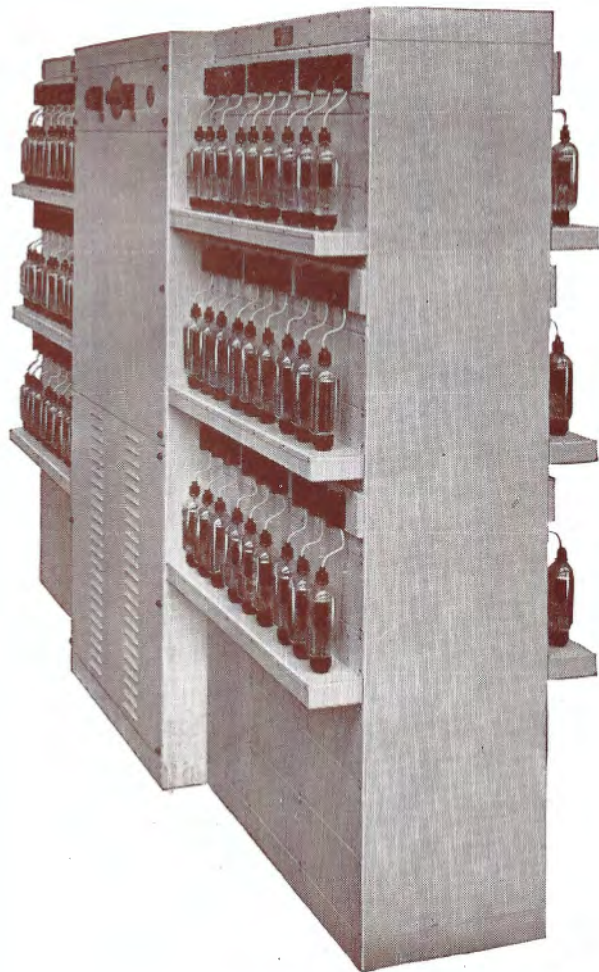


Fig. 2 A 36-way valve bank with space to increase up to 48-ways.

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## ELECTRONIC TYPE

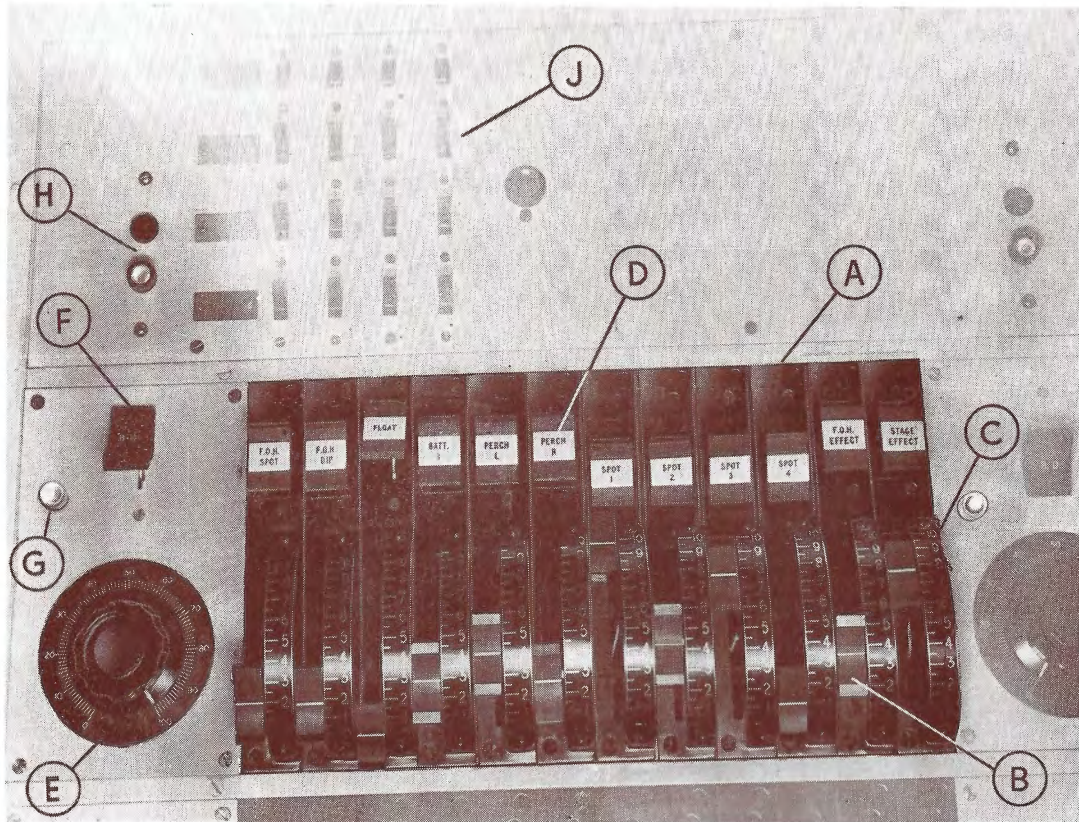


Fig. 3 Close up view of part of control panel.

## THE CONTROL PANEL

**Layout.**—As on a hand operated board each circuit on the control panel has a two-way-and-off switch and a “dimmer” handle. These circuit control units are grouped in horizontal rows of 12, each row having a master switch and master dimmer control. Each panel or set of rows has its own panel master switch and panel master dimmer controls. Signal lights, remote colour change controls, etc., may be fitted as desired. (One arrangement is shown at J Fig. 3.)

The size of each installation will decide the number of rows, and the local conditions will determine whether these should be arranged vertically above one another in, for example, two banks of six rows each, or whether width is preferable to height, and a better arrangement would be three banks of four rows each, side by side.

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# STRAND REMOTE CONTROL

There are no technical limitations to the number of circuits or rows which may constitute a complete panel and the latter may be mounted as a desk as in Figure 1, or in the form of a shallow box for flush or surface wall mounting.

**Individual Circuit Control Unit.**—This consists of a plastic moulding (A) measuring only  $6\frac{1}{2}$  inches by 1 inch wide, carrying the miniature "dimmer" with its operating handle (B) and graduated scale (C), together with a two-way-and-off switch (D). The handle of the latter is suitably labelled to denote the stage lighting circuit controlled. The complete unit plugs into position (there are only two fixing screws), and may be replaced or interchanged in a matter of seconds, the winding of the dimmers being standard and without relation to the size of the lighting load being controlled.

**Row Master Controls.**—These consist of a row master dimmer (E), a row master switch (two-way-and-off) (F) and a small pilot lamp (G) indicating when the row in question is in use. These are situated at the end of the row they control.

**Panel Master Controls.**—The complete set of rows constituting a panel are provided with a panel master switch (H) and two panel master dimmers (shown below each panel in Fig. 1). As will be seen later these two dimmers are allied to the two "on" positions of the switches mentioned in the two previous paragraphs.

**Duplicate Panel and Grand Master Controls.**—The whole of the above controls are duplicated on a second panel so that, while either is in use, the switches and dimmers of the other may be set up to meet future requirements without interfering with the lighting in use until a changeover is made. The changeover from one panel to another is by means of a simple lever for rapid operation, or by means of a hand wheel for slow work (shown centrally below panels in Fig. 1). As it may on occasions be desired only to change over some but not all circuits to new settings on the other panel, each horizontal row of circuit controls is fitted with a special switch (extreme right of Fig. 1) whereby that row may be released from the grand master cross control. Thus rows of controls on both panels may be in use simultaneously (the pilot lamp at the end of each row indicating which these are) and a dead blackout switch is provided to control the whole of both panels simultaneously by a single operation. (*Top right, Fig. 1.*)

## OPERATION

Any incandescent stage lighting load between rated maximum and zero may be smoothly regulated by its circuit dimmer, or may be left in an intermediate position of check indefinitely without heating or deterioration of parts. The two-way-and-off circuit switch embodies one "off" position and two "on" positions. One of these "on" positions connects that individual circuit to the main supply through the row master switch. In the other "on" position the switch feeds the circuit independently of the row master switch. In addition, the same switch gives the operator the choice of placing the individual circuit under the control of its row master dimmer or not.

Row master controls consist of a row master dimmer and row master switch. The former will dim any circuits in that row which have been connected to it by their individual circuit switches. As this control functions electrically rather than mechanically, individual circuits are dimmed or brightened proportionately and the individual dimmer handles do not move. Consequently it is always possible to return to any previous

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# STRAND REMOTE CONTROL

dimmer settings or intensities. The row master switch has an " off " position whereby a complete row may be blacked out, and two " on " positions. With the switch in **one** of these, such circuits as have been individually **selected** may be blacked out by the panel master switch. In the **other** " on " position of the row master, **all** circuits on that row will be blacked out by the panel master switch.

From the foregoing it will be understood that by selecting the appropriate position of individual circuit switches and row master switches, as many circuits as required on as many different rows as desired may be controlled from the panel master switch. Equally it is at the choice of the operator whether any circuit shall be under the control of its row master dimmer.

In order to provide for the collective operation of row master dimmers, two panel master dimmers are fitted. One collectively controls all those circuits which are fed through their row master dimmers, while the other performs a similar function for those which are fed independently of the same. Thus it is possible for one operator to brighten any number of circuits on a panel, while as many other circuits as may be desired are being dimmed simultaneously at the same or any other speed, regardless of the number of rows involved. The whole operation is electrical and there are no gears to insert or withdraw.

The changeover from the lighting set up on one panel to the preselection made on the other panel is effected either by a lever for instantaneous or rapid changes, or by means of a hand wheel for slow working. Both of these alternative drives are permanently in mesh but through the use of a suitable friction clutch it is never necessary to disengage one form of drive when using the other. A scale is provided for the lever drive for the purposes of checking progress and repetition. When the hand wheel is used the lever again passes over the scale acting as a pointer. The speed of changeover from one panel on to another is at all times at the discretion of the operator and the changeover can actually be stopped at any time. Any desired additions or alterations to the lighting may be made while a changeover is in progress. The addition of a variable speed motor drive for very slow changes is a simple matter.

It may be found that certain circuits are not required to alter intensity when changing over from one panel to the other. If the controls are set up on the second panel in like manner to the panel in use, the circuits will remain in status quo throughout. In order, however, to relieve the operator of the necessity of duplicating a number of settings for such a purpose, a two-way-and-off switch is provided at the end of each horizontal row of circuit controls whereby any row of either of the two panels may be " held " or released from the grand master cross control. The pilot lamp at the end of each row indicates always which rows are alive as, with the use of the last-mentioned switches, circuits on both panels may be alive simultaneously and the lever pointer will not by itself indicate the true state of affairs. As a changeover proceeds the pilots on one panel (excepting those released as above) dim to out while the others brighten to full by the end of the operation. The two panels may be used alternately as often as desired, but it will be found that the majority of simple changes can be effected on one panel, leaving the second free for the more complicated manoeuvres. It is of course always possible to revert to the lighting set up on the panel previously in use. This has its advantages at rehearsal when a producer either wishes the actors to start a scene again, or to check what changes he has already proposed from the lighting at the commencement of the scene.

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# STRAND REMOTE CONTROL

**Siting and Wiring.**—The control desk, which operates on 230 v D.C. provided by the valve bank, is completely internally wired to numbered terminal blocks. Apart from accessories such as signal lights, remote colour change switches, etc., this control only requires one wire per dimmer-way plus three feed wires. (Ninety-three wires for a ninety-way control, one hundred and seventy-five for a one hundred and seventy-two-way control, and so on.)

**Inter-connection.**—Control wires between panel and valve bank should be small gauge high insulation, e.g., 7/.0076 P.V.C., and the remaining three feed wires not less than 3/.036 gauge. The small size of the control and its wires make it eminently suitable for remote operation, e.g., Front of House position where an unobstructed view of the stage may be obtained. The control point may be placed up to 400 feet from the valve bank.

**Dimensions.**—As alternative arrangements are possible for any given number of circuits, the following figures—which include the duplicate panel—are examples only. They assume that the two panels are placed side by side, whereas it may be found more convenient to place them at an angle or parallel to one another with the operator between them.

| Number of Ways | Approx. Dimensions of Panel Face |
|----------------|----------------------------------|
| 48             | 36 inches × 36 inches            |
| 60             | 36 inches × 42 inches            |
| 72             | 36 inches × 50 inches            |
| 96             | 36 inches × 72 inches            |
| 144            | 36 inches × 100 inches           |

When panels are mounted in desk form the depth is about 26 inches. When panels are wall mounted the depth is 7 inches and the grand master cross control is supplied as a separate unit mounted vertically or horizontally as required.

## THE VALVE BANK

**Electric Supply.**—The apparatus requires a 3-phase 4-wire 50-cycle A.C. supply and is designed to operate on a line voltage of from 200 to 250 v. A.C.

**Layout.**—The size of valve bank will depend on the size of the installation. To assist economic production certain standardisation has been adopted, whereby a complete valve bank will consist of the necessary number of valve racks (each accommodating up to 24 "dimmer" ways) plus a main section for every two such racks. Thus an installation of 96 ways will require 4 valve racks and 2 main sections. These may be placed in line, at an angle, or parallel to one another as the situation requires.

**Main Sections.**—Main sections which are totally enclosed and ventilated, contain transformers, rectifier, main control switches and fuses, etc. They also act as distribution centres for both control and lighting circuits.

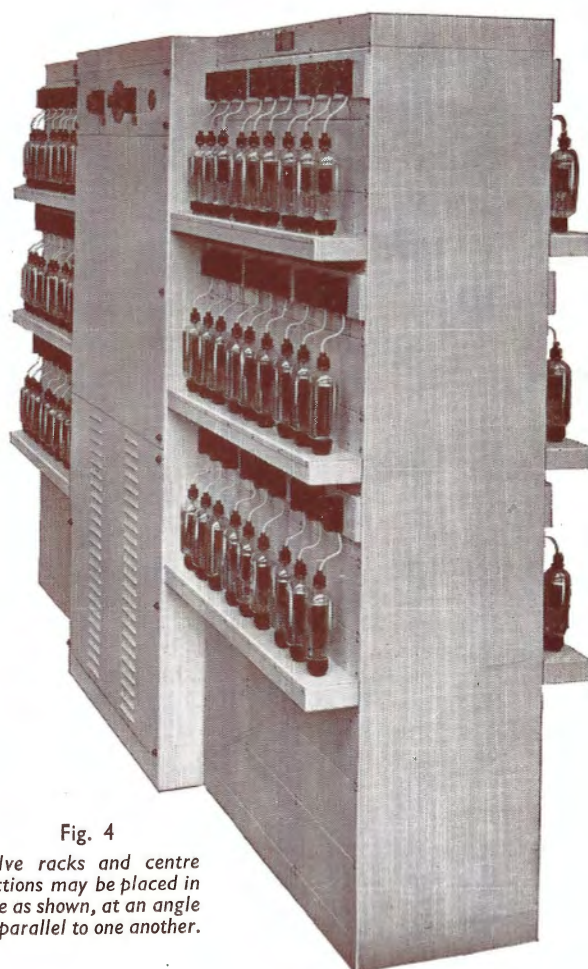


Fig. 4

*Valve racks and centre sections may be placed in line as shown, at an angle or parallel to one another.*

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# STRAND REMOTE CONTROL

**Valve Racks.**—In addition to accommodating the valves, these carry all necessary lighting circuit fuses, the only further protection of the entire bank required being the usual isolating switch and fuse, which should be situated nearby.

**Valves.**—The maximum "dimmer loss" with valves is 80 watts per 2 kw. circuit against 600 w. when the same load is dimmed through resistances. For the present, the maximum load per lighting circuit is restricted to 2 kws. This is not to say however that the maximum load controlled by one circuit of the control panel need be so limited, since a multiplicity of valves may be connected together on the control side so as to be operated from a single switch or dimmer. Thus a blue cyclorama flood bank of say 8 kws. could be operated from a single circuit control on the panel but would require the space equivalent to four circuits (each of 2 kws.) on the valve bank. As soon as valves of larger capacity have passed satisfactory tests they will be made available, and the valve racks have been designed and constructed to accommodate them at any time. It has however been found in practice that theatrically it is often extremely useful to break down the larger loads such as flood banks, footlights and battens into sections, e.g., right, centre and left, to allow gradation of light across the stage. It is not felt therefore that this temporary limitation is of a serious nature.

Tests which we have conducted to date—independently of the manufacturers—show that a valve life equivalent to three years working may be expected as a **minimum**, and it is confidently anticipated that completion of these tests will raise this figure very considerably. In our own experience the only valve failures to occur have taken place within the first month of use. This point has been completely covered by the manufacturer's guarantee. Owing to the impracticability of assessing or recording the actual number of hours of use of any valve, the manufacturers have agreed to guarantee the valves during the year following their **installation** as follows. Any failures during the first month are replaced free of charge. Any failures during the second month are replaced on payment of 1/11th of the value, during the third month by payment of 2/11ths and so on. Thus during the guarantee period the user is only required to pay for the period of actual installation less the first month, which is in any event a period of free replacement.

It should always be appreciated that the failure of a valve does not mean the extinction of the circuit concerned, but only a voltage reduction of 33 $\frac{1}{3}$  per cent. The circuit will continue to be fed from the other two phases and may still be switched and dimmed.

**Siting and Wiring.**—In order to reduce the lighting circuit wiring to a minimum the valve bank should be situated near (but not necessarily on) the stage. No special ventilation is required but cold draughts should be avoided. All internal wiring is carried out to terminal blocks numbered to correspond with those in the control panel.

**Dimensions.**—The necessary number of valve racks and main sections can be arranged to suit local conditions, e.g., in line, at an angle or parallel. Each valve rack and each main section measures 3 feet long by 2 feet deep by 5 feet 11 inches high. Not less than 2 feet must be allowed at back and front and at one end for access.

Thus, assuming they were all placed in line, the lengths shown in the table would be required, the depth and the height remaining constant.

| No. of 2 kw. Ways | No. of Rack | Sections Main | Total Length of Bank |
|-------------------|-------------|---------------|----------------------|
| Up to 24          | 1           | 1             | 6 feet               |
| 25 to 48          | 2           | 1             | 9 feet               |
| 49 to 72          | 3           | 2             | 15 feet              |
| 73 to 96          | 4           | 2             | 18 feet              |
| 97 to 120         | 5           | 3             | 24 feet              |
| 121 to 144        | 6           | 3             | 27 feet              |

*Access must be added to the above lengths.*

*The small dimensions of each part (3 feet by 2 feet by 5 feet 11 inches) should ensure easy installation in the most awkward location.*

**Further details and demonstrations on application.**

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# STRAND REMOTE CONTROL

## ELECTRO-MAGNETIC MECHANICAL TYPE

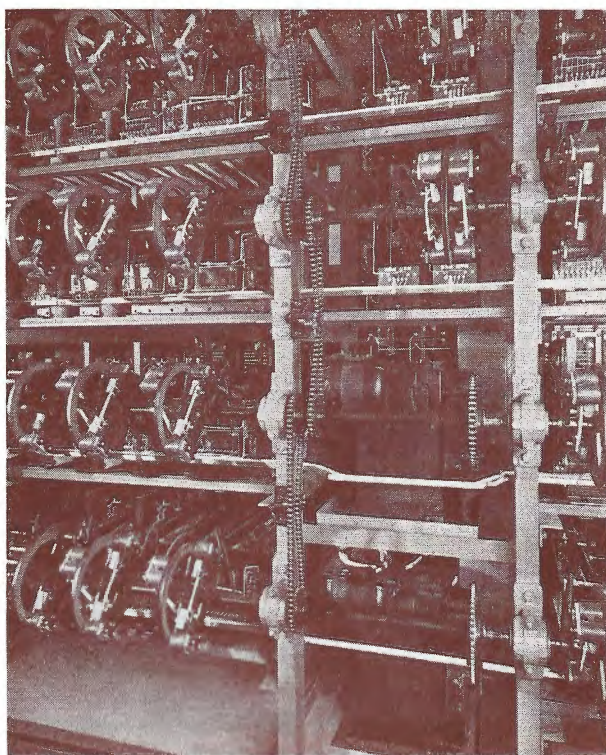


Fig. 1. A bank of resistance dimmers, motor operated through electro-magnetic clutches.

### Remote Dimmer Control

The Strand Electric are pioneers in all-electric remote dimmer control. Thanks to the invention of the Strand patent electro-magnetic clutch (Fig. 1) the mechanical tracker wire, common on the Continent, has been replaced in this country by the more adaptable multi-core flexible electric cable. By means of the electro-magnetic clutch, dimmers can be mechanically linked to a constantly revolving uni-directional shaft so that they will move up or down or remain stationary by simply energising the appropriate coils of the clutch. The shaft or shafts are driven by variable speed motors, and the clutches are cut out automatically at each end of dimmer travel by micro limit switches.

The dimmer units can be resistance (Fig. 1) or auto-transformer type (Fig. 2). Units are used singly for loads up to 4 or 5 kw. or ganged for greater loads. This type of dimmer bank can be controlled by automatic drum mechanisms and other timing devices (see leaflet H.91) or from a miniature switchboard, of which Covent Garden Opera House provides an early example and various Light Console installations at the Theatre Royal, Drury Lane and London Palladium and elsewhere the latest examples. (See leaflet H.81 for a list of these.)

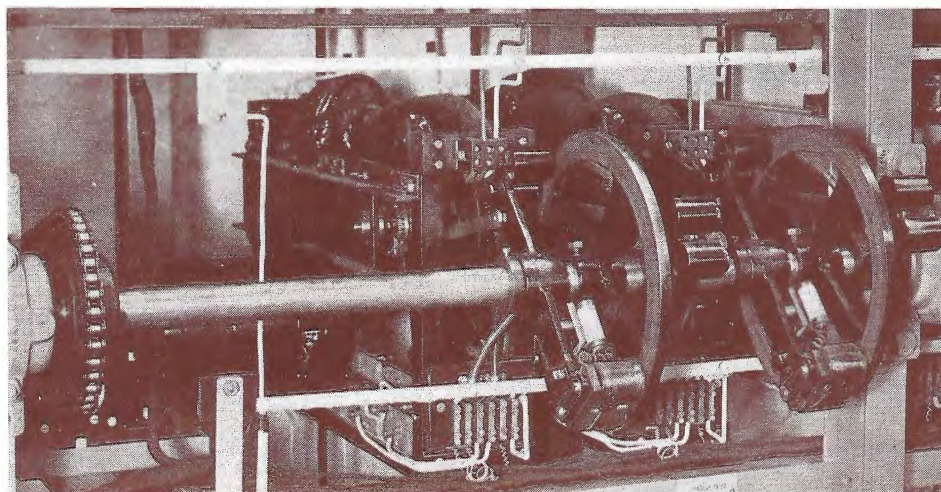
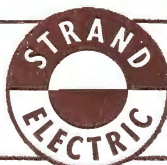


Fig. 2.  
Transformer dimmers, motor operated through electro-magnetic clutches.

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# STRAND REMOTE CONTROL

## ELECTRO-MAGNETIC MECHANICAL TYPE

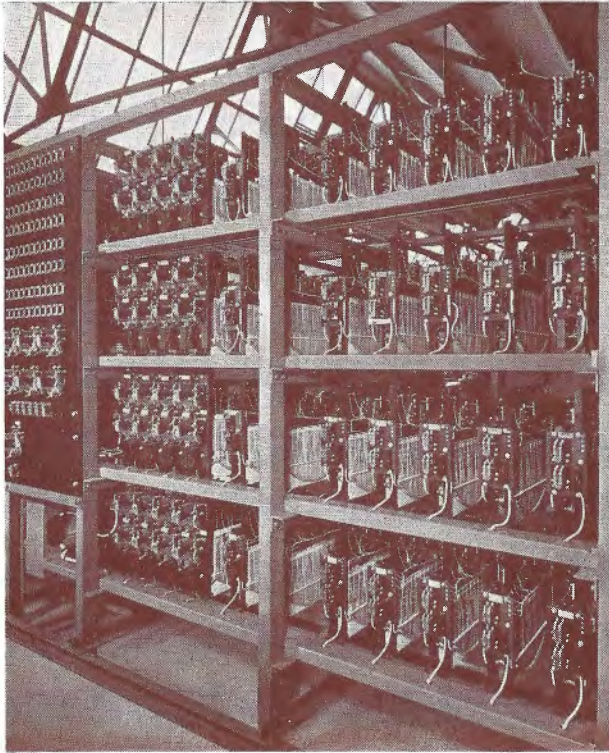


Fig. 3. Rear view of dimmer bank in Fig. 1, showing blackout and full-on contactors mounted on dimmers.

### Remote Switching Control

For quick action electro-magnetic contactor switches may be mounted on each dimmer unit, one being connected across the dimmer and the other in series with it (Fig. 3). Any circuit can be brought full up or blacked out irrespective of dimmer position at the time. The dimmer can also carry the circuit fuses and an indicator device by means of which the dimmer position may be observed from the remote control point.

Not all lighting schemes require dimmers, and an installation may consist only of contactor switches controlled from a remote panel, as for example at the Tower Circus, Blackpool, where the bank consists of ninety-four 20 amp. mercury type contactors. Remote panels with sets of triple pole 75-amp., 150 amp., or 300 amp. contactors and fuses are also commonly supplied.

An example of Strand miniature relay work is shown in Fig. 5. By this system a bank of one hundred and four 5 amp. relays and one hundred and twenty-eight 15 volt wire contact relays allows the operator of the Drury Lane Light Console, for example, to control individually (with one preset) the four solenoid filters on each of twenty-six spotlights, using only 31 on-off keys instead of the 208 switches his panel would normally require.

Almost invariably Strand electro-magnetic control employs 15 volt D.C. from metal rectifiers

in order to obtain the silent action essential in the theatre. The 15 volt D.C. supply allows very compact organ type relays and wiring to be used for the more complicated schemes.

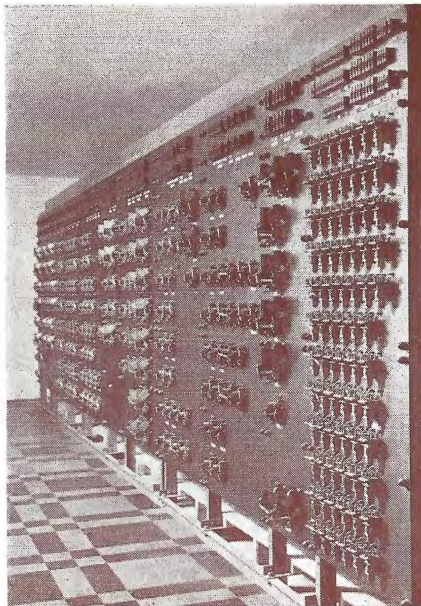


Fig. 4.  
Contactor panel. A total of 305 230-volt, 30-amp and 15-amp contactors remotely operated on 15-volt control are mounted on this panel.

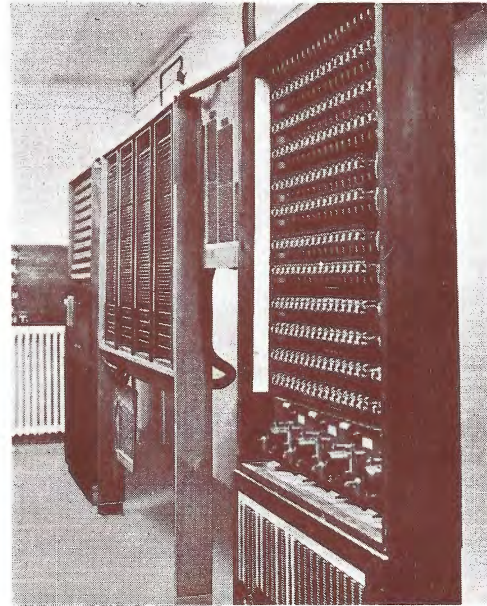
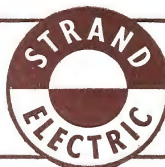


Fig. 5.  
Low voltage relay bank. Photograph shows control relay for a Strand Light Console installation. This system and type of wiring are also available for other multi-switching applications.

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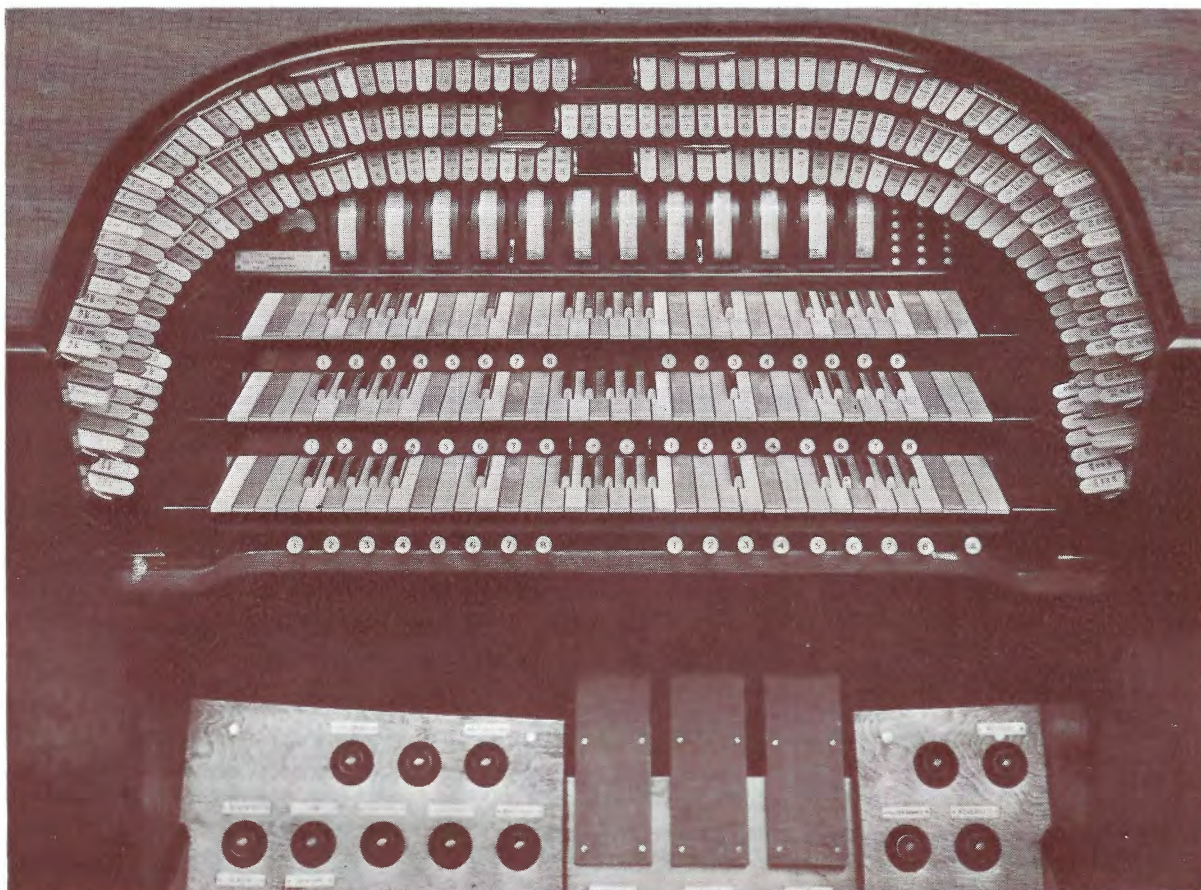
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# STRAND REMOTE CONTROL

## LIGHT CONSOLE TYPE

The Strand Light Console is designed to give to an operator, seated in full view of the stage, absolute control of all the lighting circuits that make up a modern stage installation, whatever the size of the theatre.



STRAND LIGHT CONSOLE DESK AT DRURY LANE THEATRE

For 216 dimmers including 72 individually operated lantern circuits, 26 of which have 4 colour remote filter change.

It is claimed that the Light Console system has special advantages over other lighting controls for ballet, opera, spectacular revue and musical productions in which many elaborate lighting changes are required. Using the console, slow or rapid changes can constantly follow one upon the other without pause, and furthermore, as the whole installation is under the fingers of one man, the usual delays for trial and co-ordination of plotting during rehearsal are not experienced. *The producer gives his instructions to one man: a man who can be sitting by his side at the console placed, for rehearsal, in the stalls.*

The Strand Light Console operator is seated within arm's reach of 100, 200 or more dimmer controls, circuit switches, colour filter change switches, etc. What is more, he can operate one lighting circuit or a group in immediate response to his thoughts or his instructions, written or verbal, expected or unexpected.

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STRAND LIGHT CONSOLE DESK AT ROYAL FESTIVAL HALL, LONDON

This desk which measures only 42 inches wide by 18 inches deep controls 84 stage lighting circuits and 35 four colour remote change mechanisms. Not only the lighting of the stage (whether used for concert, ballet or other spectacular purposes) is controlled but also the cold cathode lighting of the auditorium.

This is achieved by giving the operator a single on or off selector switch to each stage lighting circuit, the name of the circuit being clearly engraved on each switch operating lever or tablet. The dimmer levers, position indicators, full-on switches, blackout switches, master locking devices and colour filter switches instead of being repeated for each lighting circuit are repeated only a few times as group and colour masters.

For every lighting change, great or small, the required lighting circuits, be they one or many, are locked to the master controls—operated and then unlocked to remain as they are until locked on for further change. The circuit selector switches are easy to put on or off—a sweep of the hand and all are on, for example. Devices are fitted to move preset combinations of these switches, cancel them, etc.

As there is only one switch (simply On or Off) per lighting circuit, plus a set of masters used all the time, the console desk is very compact and the state of the controls clearly shown to the operator. With other systems he has to take in at a glance the state of affairs by looking at a hundred or more dimmer levers, circuit switches, etc., plus the master controls which are necessary for simultaneous dimmer movement and to which the individual controls may, or may not, be locked at that time.

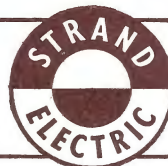
An experienced console operator quickly learns to think of his lighting instinctively in terms of the console controls, and consequently operation becomes second nature

like driving a car. Lighting is no sooner thought of than it is translated into fact upon the stage, and the operator can see it.

### SOME TYPICAL INSTALLATIONS—

|  |  |
|--|--|
| Theatre Royal, Drury Lane, 216 ways. 1950    | Palace Theatre, Manchester, 108 ways. 1949     |
| London Palladium, 152 ways. 1949             | South Shore Icedrome, Blackpool, 64 ways. 1946 |
| Stoll Theatre, Kingsway, 176 ways. 1950      | Theatre Royal, Bristol, 60 ways. 1946          |
| Empress Hall, Earls Court, 90 ways. 1950     | National Opera House, Ankara, 136 ways. 1949   |
| Festival Concert Hall, London, 84 ways. 1951 | National Opera House, Lisbon, 108 ways. 1940   |
| London Coliseum 216 ways. 1952               |  |

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# STRAND AUTOMATIC CONTROL

Strand Electric can devise automatic or semi-automatic dimmers to fulfil any requirement. The dimmer units employed can be resistance, auto-transformer or direct valve electronic.

## STANDARD AUTOMATIC DIMMERS

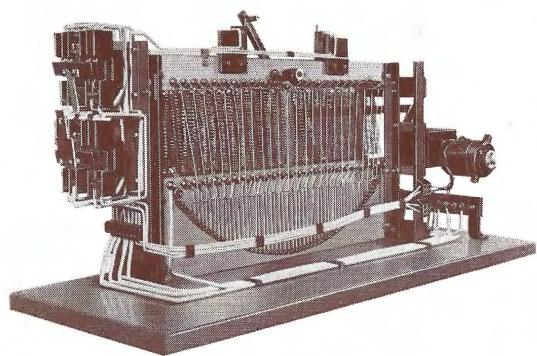


Fig. 1.—Up-Down-Stop automatic dimmer for 5 kw. with cover removed.

buttons can be connected to give control from any number of positions. Type D Sunset open coil 100 contact resistance dimmer plate with extra dead contacts at the dim end and limit switches to cut out motor at either end of travel. Heavier loads are obtained by ganging as a double or triple plate. Geared motor drives through a friction clutch to give a standard dimmer travel of 10 seconds. If desired the gearing can be arranged at time of manufacture to give a slower or faster speed.

Motor circuit includes S.P. fuse, but no lighting fuses are fitted as the dimmer is intended to be wired in the live feed to a standard lighting dis-board. All internal connections are brought to terminal panel. Unit is supplied complete with removable ventilated sheet metal cover (not shown in Figs. 1 and 2). Dimmer wired for a single specified wattage as limits shown below.

Although for even the simplest automatic dimmers the wattage, and therefore the size of the machine can vary enormously, a number of standard circuits have been devised to make the most economical use of apparatus. These are therefore to be preferred whenever possible on the grounds of cost and delivery time. These types are identified by the prefix "Auto" e.g. Auto-6.

### UP-DOWN-STOP BY PUSH BUTTON

Automatic dimmer to raise, lower or stop at intermediate positions the house lighting of theatre, cinema, lecture hall, etc.

### SPECIFICATION

Remote control by set of three push buttons in box 5½ in. by 2 in. by 2 in. deep: additional sets of push

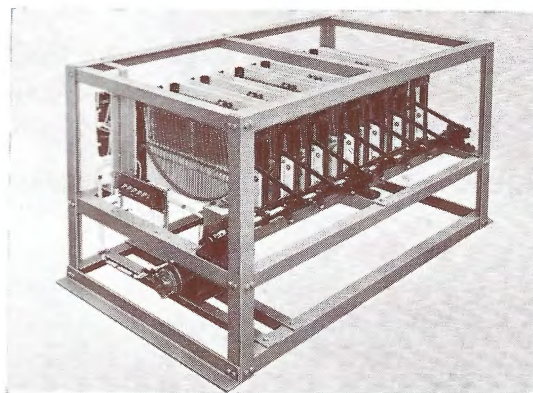


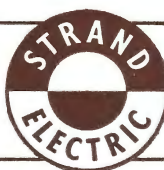
Fig. 2.—Up-Down-Stop automatic dimmer for 35 kw. with cover removed.

| Type   | Watts per phase*     | Phases | Length | Depth | Height | Weight  | Price† |    |    |
|--------|----------------------|--------|--------|-------|--------|---------|--------|----|----|
|        |                      |        |        |       |        |         | £      | s. | d. |
| Auto 6 | Up to 5,000 ...      | 1      | 2' 9"  | 1' 2" | 1' 9"  | ¾ cwt.  | 58     | 0  | 0  |
| Auto 7 | 5,000 to 10,000 ...  | 1      | 2' 9"  | 1' 6" | 1' 9"  | 1 cwt.  | 84     | 0  | 0  |
|        | Up to 5,000 ...      | 2      |        |       |        |         |        |    |    |
| Auto 8 | 10,000 to 15,000 ... | 1      | 2' 9"  | 2' 0" | 1' 9"  | 1½ cwt. | 112    | 0  | 0  |
|        | Up to 5,000 ...      | 3      |        |       |        |         |        |    |    |

\* Variable load plus or minus ½ windings can be supplied provided top wattage does not exceed 80 per cent. of those shown in schedule above. Larger loads subject to special enquiry.

† Including one set of push-switches. Extra push-switches £1 10 0 per set.

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Goods are only offered subject to our terms of business.



## DRUM COLOUR CHANGE (Simple cycle)

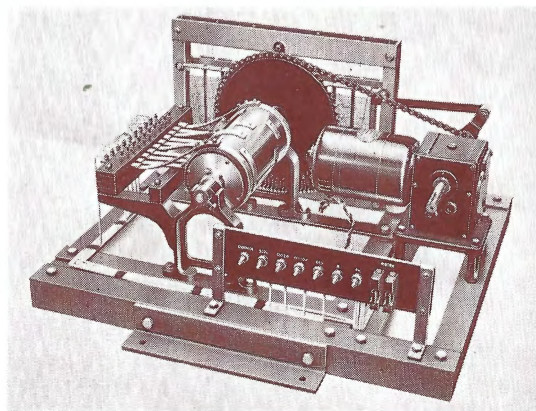


Fig. 3.—Colour change drum dimmer.

Automatic dimmer controlling the three or four colours of a multi-colour lighting equipment so as to give a cycle of change and then repeat until switched off. Suitable principally for shop window, ballroom, exhibition display and fountain work.

One dimmer circuit only is used, the lighting circuits being switched on to the dimmer, held on the mains and switched off by Strand drum unit (Fig. 3). Cycle of colour change is gradual with all intermediate mixtures, the only apparent switching being when the main switch feeding the dimmer and lighting is closed or opened to begin or shut down. Figs. 4 and 5 show cycles. Full width white sections show lights full up. Angled sections denote increase or decrease of light. If circuits use Red, Green and Blue filters or Orange, Blue-green and Blue, results will be as left-hand side of leaflet L.11, page 2.

### SPECIFICATION

Type A 100 contact element Sunset Resistance dimmer (up to 2,500 watts) or type D 100 contact open coil Sunset Resistance dimmer (2,500 to 5,000 watts) driven in conjunction with selector switching drum by geared motor unit. Three- or four-colour drum supplied.

- Fast. Cycle period: 3-colour, 1 min.; 4-colour  $1\frac{1}{3}$  min.
- Medium. Cycle period: 3-colour,  $1\frac{1}{2}$  min.; 4-colour 2 min.
- Slow. Cycle period: 3-colour, 3 min.; 4-colour, 4 min.

Fast cycles are supplied unless otherwise specified at time of ordering. Motor circuit includes SP fuse but no lighting fuses unless ordered as an extra. All internal connections are brought to a terminal panel. Unit is supplied complete with removable ventilated sheet metal cover (not shown in Fig. 3). All 3- or 4-colour circuits should be as near as possible equal in wattage. The dimmer to be wound to take the load of one circuit at a time, within the ranges set out below (for 200/250 volts AC).

| Type    | Colour circuits | Watts per colour circuit per phase | Total kw.* | Max. demand kw.* | Phases | Length | Depth | Height | Weight cwt. | Price<br>£ s. d. |
|---------|-----------------|------------------------------------|------------|------------------|--------|--------|-------|--------|-------------|------------------|
| Auto 12 | 3 }<br>4 }      | Up to 2,500 each ...               | 7.5        | 5                | 1      | 2' 1"  | 2' 3" | 1' 7"  | } 1½ cwt.   | 75 0 0           |
| Auto 13 |                 |                                    | 10         | 5                |        | 2' 3"  | 2' 3" | 1' 7"  |             | 82 0 0           |
| Auto 14 | 3 }<br>4 }      | 2,500 to 5,000 each                | 15         | 10               | 1      | 2' 9"  | 2' 6" | 1' 7"  | } 1¾ cwt.   | 100 0 0          |
| Auto 15 |                 |                                    | 20         | 10               |        | 3' 0"  | 2' 6" | 1' 7"  |             | 109 0 0          |
| Auto 22 | 3 }<br>4 }      | Up to 2,500 each ...               | 22.5       | 15               | 3      | 3' 11" | 2' 6" | 1' 7"  | } 2 cwt.    | 151 0 0          |
| Auto 23 |                 |                                    | 30         | 15               |        | 4' 4"  | 2' 6" | 1' 7"  |             | 166 0 0          |
| Auto 24 | 3 }<br>4 }      | 2,500 to 5,000 each                | 45         | 30               | 3      | 6' 3"  | 2' 6" | 1' 7"  | } 3 cwt.    | 202 0 0          |
| Auto 25 |                 |                                    | 60         | 30               |        | 6' 9"  | 2' 6" | 1' 7"  |             | 220 0 0          |

\*Maximum demand.—Using a drum-type dimmer the maximum load is 2-colour circuits only: therefore the main supply need only equal the total  $\frac{2}{3}$  watts on a 3-colour dimmer and  $\frac{1}{2}$  the total on a 4-colour.

Automatic dimmer controlling the three or four colours of a multi-colour lighting equipment so as to give a cycle of change and then repeat until switched off. Suitable principally for shop window, ballroom, exhibition display and fountain work.

One dimmer circuit only is used, the lighting circuits being switched on to the dimmer, held on the mains and switched off by Strand drum unit (Fig. 3). Cycle of colour change is gradual with all intermediate mixtures, the only apparent switching being when the main switch feeding the dimmer and lighting is closed or

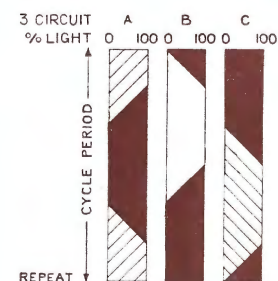


Fig. 4.—3-colour cycle.

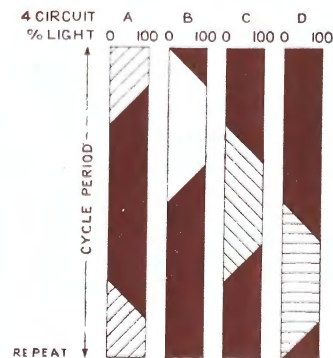


Fig. 5.—4-colour cycle.

Note.—The three-phase models can be used for single-phase loads so long as the output terminals are not paralleled. Thus Auto 24 above can control 5,000 watts per colour on each of three separate circuits making a total of 15,000 per colour, single phase.



## DRUM COLOUR CHANGE (Extended cycle)

Automatic dimmer controlling three or four colours in two groups of lighting and arranged to give a colour cycle in unison followed by a cycle in contrast and then repeat until switched off.

This equipment is similar in construction and application to the simple cycle drum above except that the drum is arranged to give double the number of changes. Used on two groups of 3-colour lighting the first half cycle is the same as Fig. 4 for both sets. The second half repeats but in the first group circuits B and C change places providing a set of colour mixtures to contrast with the second group. On a 4-colour job the cycle is as Fig. 5 until the second half when in the first group A and B change places and C and D likewise.

| Type    | Colour circuits | Watts per colour circuit | Total kw. | Max. demand kw. | Phases | Length | Depth | Height | Weight cwt. | Price |    |    |
|---------|-----------------|--------------------------|-----------|-----------------|--------|--------|-------|--------|-------------|-------|----|----|
|         |                 |                          |           |                 |        |        |       |        |             | £     | s. | d. |
| Auto 34 | 6               | Up to 2,500              | 15        | 10              | 1      | 2' 9"  | 2' 6" | 1' 7"  | } 1½ cwt.   | 122   | 0  | 0  |
| Auto 35 | 8               | Up to 2,500              | 20        | 10              | 1      | 3' 0"  | 2' 6" | 1' 7"  |             | 134   | 0  | 0  |
| Auto 38 | 6               | Up to 5,000              | 30        | 20              | 1 or 2 | 4' 6"  | 2' 6" | 1' 7"  | } 2 cwt.    | 163   | 0  | 0  |
| Auto 39 | 8               | Up to 5,000              | 40        | 20              | 1 or 2 | 5' 0"  | 2' 6" | 1' 7"  |             | 178   | 0  | 0  |

Other arrangements to special order.

## DRUM COLOUR CHANGE WITH REMOTE ON AND OFF CONTROL

These dimmers are exactly as the Drum types in schedules above except that the lighting and colour cycle can be switched on or off by push-button. Additional sets of push-buttons can be connected to give control from any number of positions. This refinement, though not normally necessary, may be desirable in a ballroom to bring the colour lighting under control of the band leader or the M.C. In such an installation the ballroom white lighting would be on an Up-down-stop dimmer (such as Auto 6) and the colour lighting on a Drum colour change (such as Auto 13), the push-buttons being mounted on a common panel. The procedure for a colour dance would then be:—Press the colour drum dimmer "On" button and the white lighting "Dim" push. At the end of cycle, press white lighting "Raise" push, wait for the light to come to full, then press the colour drum "Off" push.

When enquiring or ordering quote the appropriate Auto type number above and specify "Remote Control". Prices on application.

## DRUM COLOUR CHANGE WITH FADE

Similar to Drum dimmers above but arranged to fade out cycle when dim button is pressed instead of switching off sharply. Similarly the "Raise" button fades the cycle in. A third push, "Stop", stops the colour cycle motor and allows a particular colour combination to be held.

These units are a combination of the Drum and Up-down-stop types, the latter dimmer unit being wired in series with drum and dimmer. Such an arrangement may still represent an economy in apparatus since, for example, a 4-colour mixing unit with fade employs only two dimmers. Supplied only for remote push-button operation. Specify as appropriate Drum Auto number plus "Fade". Prices on application.

## RECIPROCATING ACTION DIMMERS

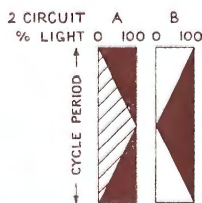


Fig. 6.—Reciprocating cycle.

There are two main types: one UD/R to raise, dim, raise, dim the same circuit automatically until stopped; the other CO/R to cross fade two circuits to and fro until stopped (Fig. 6). Both are suitable for small displays in shop windows, exhibitions, etc.

These dimmers are somewhat similar to that shown in Fig. 1 except that there is no contactor control. The main switch for the lighting also feeds the motor and starts or stops the dimmer. Motor circuit includes a single-pole fuse but no lighting fuses are included. Type UD/R has a 100-contact Sunset element resistance dimmer and type CO/R a slider type resistance element. Both are complete with ventilated sheet metal cover.

| Type | Circuits | Watts per circuit       | Length | Depth | Height | Weight | Price |    |    |
|------|----------|-------------------------|--------|-------|--------|--------|-------|----|----|
|      |          |                         |        |       |        |        | £     | s. | d. |
| UD/R | 1        | Up to 3,000 ... ..      | 2' 0"  | 1' 1" | 1' 4"  | ½ cwt. | 36    | 0  | 0  |
| CO/R | 2        | Each up to 300 only ... | 2' 0"  | 1' 1" | 1' 4"  | ½ cwt. | 32    | 0  | 0  |



## STRAND CHROMOLUX

The Strand Chromolux is designed to provide a range of preset colours by mixing either the three primary or secondary colours (see Leaflet L.11).

This device enables an operator unskilled in the technique of colour mixing to obtain, by moving a simple selector switch, any one of 23 attractive colours, previously set at the Strand factory. Two automatic mixing cycles, one giving pale colours and the other strong colours, are also provided. The Chromolux is ideally suited for ballrooms, cinema and display work.

The Strand Chromolux consists of a motor-driven magnetic clutch-operated dimmer bank situated in some position convenient to feed the lighting. Connected thereto by a low-voltage cable is a small panel with a rotary selector switch for each set of 3-colour lighting equipment to be separately controlled. The selector switch has the names of 23 hues and tints against it. On turning the selector to any colour, the dimmers will automatically travel to the appropriate positions to give that colour (for example sky blue). Turn the switch to Rose and the Sky Blue will dissolve into Rose Pink. Colours can be selected in any order and the result directly achieved without passing through the other colours on the dial between those in question.

The colours obtained from the Chromolux selector are static and remain until the next colour is chosen. The 2-way and off switch shown at bottom right in Fig. 7 provides changing colours. When this is pushed "left" a colour cycle beginning with the colour at that time on the selector (for example Blue) will take place and automatically provide all the rich hues possible by mixing the three primary colours. The cycle continues until it is desired to fade out or return to a static Chromolux colour.

When the cycle switch is placed in the "right" position a cycle of soft tints instead of strong hues is produced, otherwise working is the same. The 2-way and off switch down at bottom left in Fig. 7 gives "DIM" in left position, "STOP" in centre position, and "ON" in right position.

The Strand Chromolux being electro-magnetic in operation, the movement of the selector switch is effortless and there are no complicated mechanical cams to cause trouble; furthermore the small control panel can be any distance from the dimmer bank.

The Strand Chromolux is supplied with both dimmer bank and panel ready to operate, the sole addition required is a multicore low voltage cable to connect the numbered terminals on each. A motor fuse is fitted but circuit fuses and neutral links are to special order only. *Prices on application.*

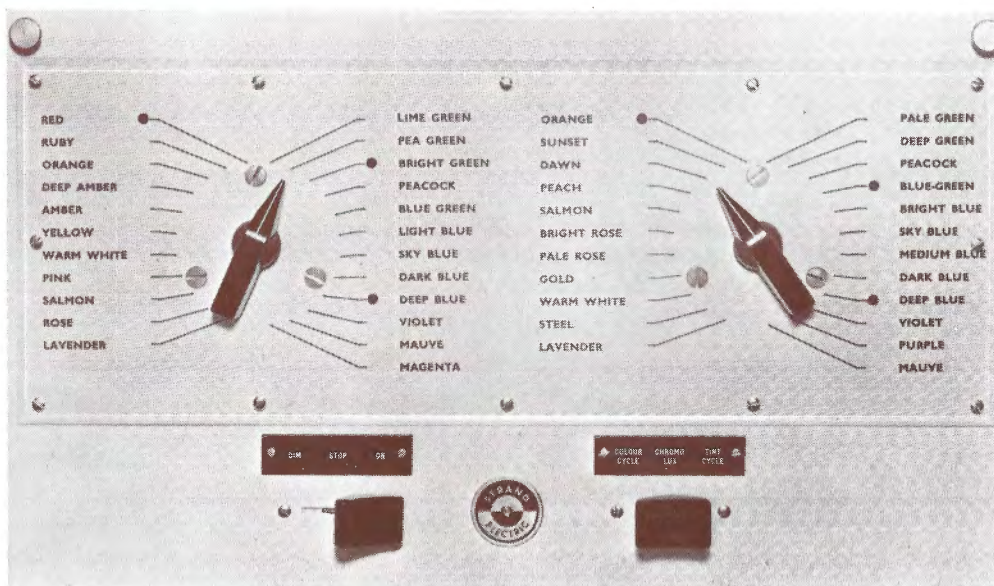
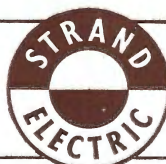


Fig. 7.—Strand Chromolux control panel for two sets of equipment. Dial on left is for primary colour filters, and dial on right for secondary colours.

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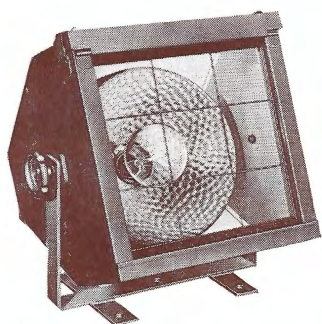


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# STRAND OUTDOOR FLOODS

**PATTERN 537 WIDE OR MEDIUM ANGLE FLOOD 60/100/150 watt**



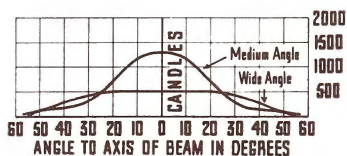
**Lamps**—60 or 100 w. clear General Service ES cap, or 150 w. Theatre batten ES cap.

This is a small compact lantern with a large variety of uses. Lamps of three wattages and reflectors of two beam distributions (wide- or medium-angle beam) can be fitted without physical alteration or adjustment of any kind. The squat shape lends itself to concealment behind parapets and in other places affording little cover.

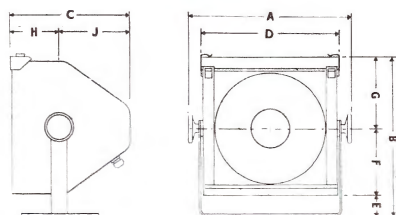
### SPECIFICATION

Body of lantern strongly constructed of sheet steel, all joints being soldered and is ventilated. Drain holes are provided for condensation. Front of lantern is fitted with removable toughened glass and a runner with colour frame for Cinemoid colour filter to be used *outside* glass. Both are covered by hinged flap with clip. Either a J.235 wide-angle silvered glass reflector (standard) or a J.236 medium-angle (alternative) is carried on a spider clamp, ensuring the correct relationship of reflector to E.S. lampholder. Lantern supplied unwired but fitted with  $\frac{3}{4}$ -in. watertight gland to take tough rubber-sheathed cable. Gland can be removed to give a hole as conduit entry if preferred. Lantern clamped with handwheels to a cradle with two supporting feet, the whole stoved Dark Grey outside, White inside.

**Beam Angles :** 90° (wide) or 60° (medium). **Cut-off :** 105°.



### DIMENSIONS



|         | Ft. | in. |         | Ft. | in. |
|---------|-----|-----|---------|-----|-----|
| A ..... | 1   | 0½  | F ..... | 5   | ½   |
| B ..... | 1   | 1   | G ..... | 5   | ¾   |
| C ..... | 9   | ½   | H ..... | 4   |     |
| D ..... | 10  | ¾   | J ..... | 5   | ½   |
| E ..... | 2   |     |         |     |     |



All Strand Floods are available on sale or hire (complete with lamps) for long or short periods. An example of a hire fit-up.

|  |    |    |    |    |    |    |    |    |    |          |
|--|----|----|----|----|----|----|----|----|----|----------|
| <b>PRICE</b> (exclusive of lamp)                 | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| J.347—Extra front glasses (10in. × 9½in.)        | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| J.348—Extra Metal colour frames (10in. × 9½in.)  | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| J.349—“Cinemoid” colours for J.348               | .. | .. | .. | .. | .. | .. | .. | .. | .. | per doz. |
| J.235—Extra wide-angle Sunray glass reflectors.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |
| J.236—Extra medium-angle Sunray glass reflectors | .. | .. | .. | .. | .. | .. | .. | .. | .. | each     |

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BRANCHES

**313, OLDHAM ROAD, MANCHESTER 10**

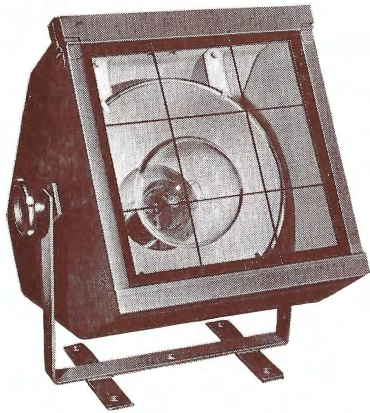
COLLYHURST 2736

**62, DAWSON ST., DUBLIN - DUB 74030**



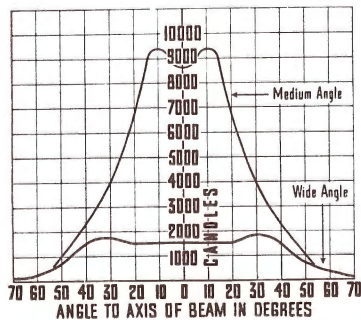
# STRAND OUTDOOR FLOODS

## PATTERN 560 WIDE OR MEDIUM ANGLE FLOOD 300/500 watt



**Lamps**—300 or 500 w. General Service with G.E.S. cap.

**Beam Angles:** 100° (wide) or 60° (medium).  
**Cut-off:** 120°.



This floodlight allows a choice of two lamp wattages and of two reflectors without need of physical alteration or adjustment. The wide-angle J.275 reflector supplied as standard gives a wide even spread without hot spot, the medium-angle J.273 gives a localised beam of higher intensity for more distant objects.

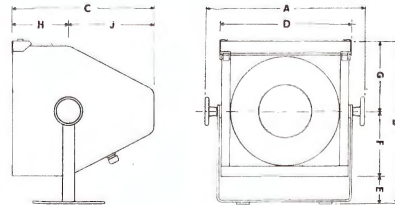
The lantern is strong and rigid in construction and built to last and should not be confused with lanterns in which the reflector, a light spinning, forms its own housing and is therefore without protection.

### SPECIFICATION

Body of lantern strongly constructed of sheet steel, all joints being soldered, and is ventilated. Drain holes provided for condensation. Front of lantern is fitted with removable toughened glass and a runner for "Cinemoid" colour filter to be used *outside*. Both are covered by hinged flap with clip. J.275 wide-angle, satin etched, anodised aluminium reflector is supplied as standard. An alternative J.273 electro-brightened and polished anodised aluminium reflector with wire cradle to bring into correct medium-angle focal position can be supplied. Lantern supplied unwired but fitted with  $\frac{3}{4}$ -in. watertight gland to take tough rubber-sheathed cable. Gland can be removed to give a hole as conduit entry if preferred. Lantern clamped with hand-wheels to cradle with two feet drilled to take fixing screws. Stove enamelled Dark Grey outside, White inside.

### DIMENSIONS

|         | Ft. | in. |         | Ft. | in. |
|---------|-----|-----|---------|-----|-----|
| A ..... | 1   | 3½  | F ..... | 6   | ¼   |
| B ..... | 1   | 4½  | G ..... | 7   |     |
| C ..... | 1   | 2   | H ..... | 5   | ¾   |
| D ..... | 1   | 0½  | J ..... | 8   | ¼   |
| E ..... | ¾   |     |         |     |     |



| Item   | Price   | Unit |
|--|---------|------|
| J.350—Extra front glasses (11¾ in. × 11¾ in.)          | .. .. . | each |
| J.351—Extra metal colour frames (11¾ in. × 11¾ in.)    | .. .. . | each |
| J.352—"Cinemoid" colours for J.351                     | .. .. . | each |
| J.275—Extra wide-angle anodised aluminium reflectors   | .. .. . | each |
| J.273—Extra medium-angle anodised aluminium reflectors | .. .. . | each |

## PATTERN 47 WIDE ANGLE FLOOD 500/1000 w

This lantern gives a wide-angle horizontal beam suitable for even illumination of buildings at short range and may be mounted either on brackets or on canopies, etc.

### SPECIFICATION

The lantern is constructed in lead coated sheet steel, efficiently ventilated. A sectional silvered glass reflector and toughened front glass are fitted together with a frame for "Cinemoid" colour medium. The G.E.S. lampholder is adjustable, giving correct filament position for either 500 w. or 1,000 w. lamps. Stoved Dark Grey.











# STRAND COLOUR MEDIUMS

## A GUIDE TO COLOUR MIXING

When coloured light is mixed, one colour is added to another, whereas when pigments are mixed the colours are subtracted from each other. The more colours of light that are mixed the nearer the result approaches white; the more pigments the nearer to black.

The three primary colours of light are matched by our 6 Red, 39 Green and 20 Blue (double wattage required). Secondary colours are obtained by using dimmers as follows:

**Adding Green to Red — Orange, Amber, Yellow.**

„ **Red to Green — Light Green, Pea Green, Yellow.**

„ **Green to Blue — Medium Blue, Light Blue, Blue-Green.**

„ **Blue to Green — Deep Green, Peacock Green, Blue-Green.**

„ **Red to Blue — Violet, Mauve, Magenta.**

„ **Blue to Red — Scarlet, Claret, Magenta.**

To obtain tints, all three colours must be mixed; thus salmon pink is the same mixture as orange but with some blue added, steel blue is the same as blue-green but with some red added.

By mixing the primaries in various proportions several hundred secondary colours are obtained. However, for much theatre work the primary system is very wasteful—for example in realistic effects on a cyclorama or sky-cloth. Red, Green and some of the more vivid hues are seldom required. An alternative three-colour system using 5A Orange, 16 Blue-Green and 20 Blue is suggested for realism. This system provides all the more usual sky colours at much greater intensity. Thus, Light Blue is two circuits full up, instead of one full, and the other one third dimmed (30 per cent. light). The primary mixture produces only 65 per cent. of the light of the alternative mixture.

The schedules overleaf show diagrammatically the approximate positions to place the dimmer handles to obtain the colours in the first column. The percentages are of handle travel, 0 per cent. being the “off” position; 100 per cent. the “full on.” The hues are names at steps of one third dimmer travel; tints (for which no dimmer is taken below 50 per cent.) are named at steps of one half dimmer travel. This is due to the limitations of useful colour nomenclature, the actual number of recognisable colour steps running into hundreds.

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# STRAND COLOUR MEDIUMS

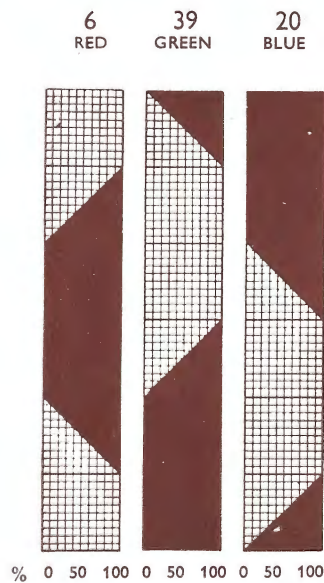
The percentage figures on the charts are approximate guides only since the characteristics of dimmers and circuits vary; slight movement of the dimmer handles either side of the positions given will bring in the required colour. If double wattage is not available for the blue, then No. 19 may be substituted for No. 20. The schedules show diagrammatically the positions in which to place the dimmer handles to obtain the colours in the first column. The percentages are of handle travel, 0 per cent. being the "off" position, 100 per cent. the "full on." For the tints no dimmer is taken below 50 per cent.

## PRIMARY COLOUR MIXING

From which the largest selection of colours may be derived

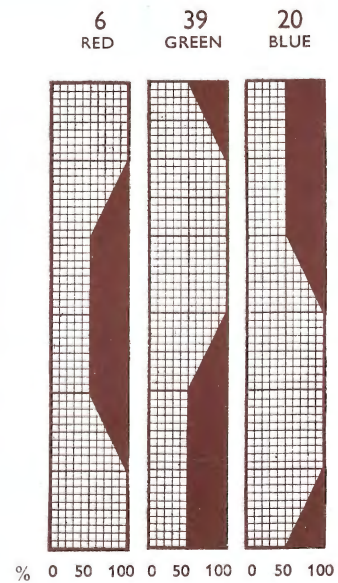
### HUES

**RED**  
Orange  
Amber  
Yellow  
Pea Green  
Light Green  
**GREEN**  
Deep Green  
Peacock Green  
Blue-Green  
Light Blue  
Medium Blue  
**DEEP BLUE**  
Violet  
Mauve  
Magenta  
Claret  
Scarlet  
**RED**



### TINTS

Deep Salmon  
Light Salmon  
Warm Grey  
Green Tint  
Pale Green  
Steel Grey  
Steel Blue  
Cold White  
Lavender  
Pale Rose  
Deep Rose  
Pink (Deep)  
Deep Salmon



## ALTERNATIVE THREE-COLOUR MIXING

For realistic colours at maximum intensity

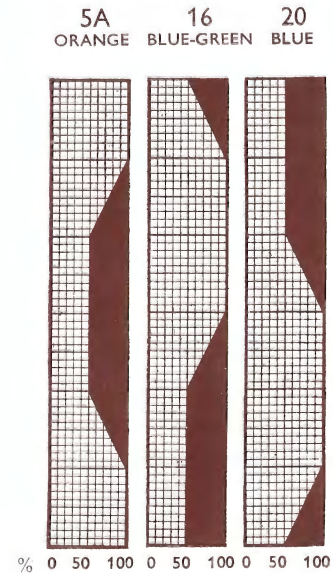
### HUES

**ORANGE**  
Amber  
Straw  
Warm White  
Grey  
Pale Green  
**BLUE-GREEN**  
Peacock Green  
Peacock Blue  
Light Blue  
Medium Blue  
Dark Blue  
**DEEP BLUE**  
Violet  
Mauve  
Rose  
Pink  
Salmon  
**ORANGE**



### TINTS

Deep Salmon  
Light Salmon  
Gold Tint  
Warm Grey  
Green-Grey  
Blue-Grey  
Steel Blue  
Lavender  
Rose Tint  
Pale Rose  
Pink  
Deep Pink  
Deep Salmon





# STRAND COLOUR MEDIUMS

## LIST OF STANDARD STAGE FILTERS

### COLOUR ORDER.

### NUMERICAL ORDER.

| LAVENDER—GOLD—PINK  |    |                     |    |
|---------------------|----|---------------------|----|
| Pale Violet         | 42 | Pale Rose           | 54 |
| Pale Lavender       | 36 | Light Salmon        | 9  |
| Gold Tint           | 51 | Light Rose          | 7  |
| Pale Gold           | 52 | Middle Rose         | 10 |
| Pale Salmon         | 53 | Dark Pink           | 11 |
|                     |    | Deep Salmon         | 8  |
|                     |    | Bright Rose         | 48 |
|                     |    | Deep Rose           | 12 |
|                     |    | Magenta             | 13 |
| YELLOW—AMBER—RED    |    |                     |    |
| Pale Yellow         | 50 | Medium Amber        | 4  |
| Straw               | 3  | Deep Amber          | 33 |
| Yellow              | 1  | Golden Amber        | 34 |
| Canary              | 49 | Deep Salmon         | 8  |
| Light Amber         | 2  | Orange              | 5  |
|                     |    | Deep Orange         | 5A |
|                     |    | Primary Red         | 6  |
|                     |    | Ruby                | 14 |
| BLUE—PURPLE—VIOLET  |    |                     |    |
| Blue-green          | 16 | Light Blue          | 18 |
| Peacock Blue        | 15 | Bright Blue         | 41 |
| Steel Blue          | 17 | Medium Blue         | 32 |
| Pale Blue           | 40 | Dark Blue           | 19 |
|                     |    | Deep Blue (Primary) | 20 |
|                     |    | Purple              | 25 |
|                     |    | Mauve               | 26 |
|                     |    | Pale Violet         | 42 |
| GREEN—NEUTRAL—FROST |    |                     |    |
| Pale Green          | 38 | Primary Green       | 39 |
| Pea Green           | 21 | Blue-green          | 16 |
| Moss Green          | 22 | Peacock Blue        | 15 |
| Light Green         | 23 | Chocolate Tint      | 55 |
| Dark Green          | 24 | Pale Chocolate      | 56 |
|                     |    | Pale Grey           | 60 |
|                     |    | Light Frost         | 31 |
|                     |    | Heavy Frost         | 29 |
|                     |    | Clear               | 30 |

|                         |                    |
|-------------------------|--------------------|
| 1. Yellow               | 25. Purple         |
| 2. Light Amber          | 26. Mauve          |
| 3. Straw                | 29. Heavy Frost    |
| 4. Medium Amber         | 30. Clear          |
| 5. Orange               | 31. Light Frost    |
| 5A. Deep Orange         | 32. Medium Blue    |
| 6. Red (Primary)        | 33. Deep Amber     |
| 7. Light Rose           | 34. Golden Amber   |
| 8. Deep Salmon          | 36. Pale Lavender  |
| 9. Light Salmon         | 38. Pale Green     |
| 10. Middle Rose         | 39. Primary Green  |
| 11. Dark Pink           | 40. Pale Blue      |
| 12. Deep Rose           | 41. Bright Blue    |
| 13. Magenta             | 42. Pale Violet    |
| 14. Ruby                | 48. Bright Rose    |
| 15. Peacock Blue        | 49. Canary         |
| 16. Blue-green          | 50. Pale Yellow    |
| 17. Steel Blue          | 51. Gold Tint      |
| 18. Light Blue          | 52. Pale Gold      |
| 19. Dark Blue           | 53. Pale Salmon    |
| 20. Deep Blue (Primary) | 54. Pale Rose      |
| 21. Pea Green           | 55. Chocolate Tint |
| 22. Moss Green          | 56. Pale Chocolate |
| 23. Light Green         | 60. Pale Grey      |
| 24. Dark Green          |                    |

### GELATINE

L.265. All colours (22 in. by 17½ in.) .. .. . per dozen sheets

L.266. Frosts (22 in. by 17½ in.) .. .. . " " "

Special prices for cut pieces. One dozen sheets and upwards, postage and packing within U.K. free. For lesser quantities and overseas consignments postage and packing (which is not returnable) are charged at cost.

### " CINEMOID "

These mediums are particularly suitable for exterior work in floodlights, decorative features, etc. The colours are practically fast and do not have to be replaced as often as gelatines. They are far stronger mechanically, and, in addition, are impervious to water. They comply with the regulations of the London, Middlesex, Surrey and other County Councils.

L.267. All Colours and Frosts except 55, 56, 60 (24 in. by 20 in.) .. per sheet

L.268. " " " " " " " " (48 in. by 20 in.) .. per double sheet

Special prices for cut pieces. Quantities of 12 small or 6 large sheets and upwards postage and packing within U.K. free. For lesser quantities and overseas consignments postage and packing (which is not returnable) are charged at cost.

### MAKE UP.

L.158. Red make up for Samoiloff effect (used with colour filters No's. 14 & 16) per jar

## LAMP LACQUER

### INCANDESCENT LAMP LACQUER

(Suitable for Vacuum type Lamps only)

### OPAQUE LAMP LACQUER FOR OUTSIDE USE

(Suitable for Vacuum type Lamps only)

### COLOURS

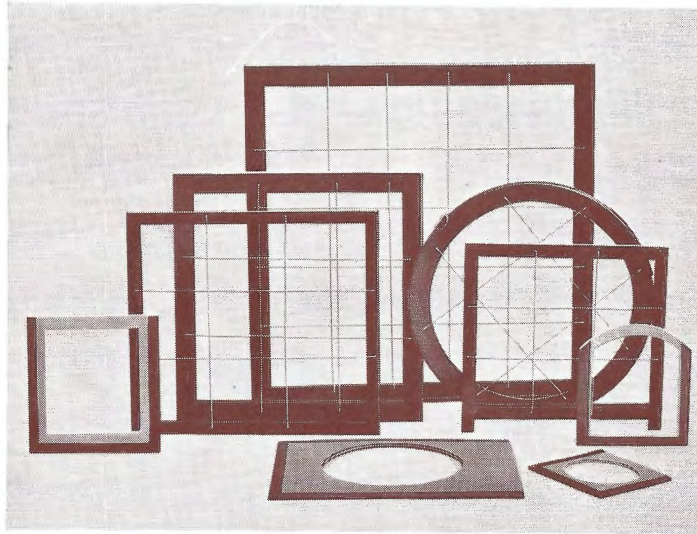
Nos. 1-26 and 32-39 inclusive

1091 Amber 969 Orange 939 Green  
893 Blue 760 Red 1117 Pink 979 White

Price  
per pint

NOTE.—Lamp lacquer is inflammable and can only be sent per goods train or carrier licensed for such traffic. 14 days notice should be given to ensure arrival in British Isles by required date. Special regulations affect overseas consignments, for details of which please apply to us.

# STRAND COLOUR FRAMES



|  | Lantern pattern             | Size   | Materials | Price |
|--|-----------------------------|--|-----------|-------|
| <b>INTERIOR LANTERNS</b>               |                             |  |           |       |
| L.61— 500-watt Flood and Pageant ...   | Nos. 30, 60 and 58          | 11 $\frac{3}{4}$ in. by 11 $\frac{3}{4}$ in. | Metal     |       |
| L.85— 1,000-watt Spot and Arc ...      | Nos. 42, 43, 73, 83 and 501 | 10 $\frac{3}{4}$ in. by 7 $\frac{1}{2}$ in.  | Millboard |       |
| L.284—1,000-watt Mirror Spot ...       | No. 53                      | 7 $\frac{3}{4}$ in. by 7 $\frac{3}{4}$ in.   | Metal     |       |
| L.80— 500-watt Spot ...                | No. 44                      | 6 in. by 6 in.                               | Millboard |       |
| L.76— Miniature Spot ...               | No. 45                      | 5 $\frac{5}{8}$ in. by 5 $\frac{1}{4}$ in.   | Millboard |       |
| L.73— Baby Spot ...                    | Nos. 27, 41                 | 4 $\frac{1}{4}$ in. by 4 $\frac{1}{4}$ in.   | Millboard |       |
| L.67— 1,000-watt Flood ...             | No. 49A                     | 16 $\frac{3}{4}$ in. by 16 $\frac{3}{4}$ in. | Metal     |       |
| L.226—Acting Area ...                  | No. 76                      | 11 $\frac{1}{2}$ in. diam.                   | Metal     |       |
| L.70— Arena Flood ...                  | No. 35                      | 16 in. diam.                                 | Metal     |       |
| L.95— 2 KW. Spot ...                   | No. 102                     | 11 $\frac{1}{2}$ in. by 10 $\frac{1}{2}$ in. | Metal     |       |
| L.240—Float, Batten and Baby Flood ... | Type S and Patt. 237        | 9 $\frac{1}{4}$ in. by 8 in.                 | Metal     |       |
| L.99— Colour change Pageant ...        | No. 58                      | 11 $\frac{1}{2}$ in. diam.                   | Metal     |       |
| L.325—Colour change FOH Spot ...       | Nos. 53, 73, 83             | 9 $\frac{1}{4}$ in. diam.                    | Metal     |       |
| L.100—Colour change Acting Area ...    | No. 76                      | 11 $\frac{1}{2}$ in. diam.                   | Metal     |       |
| <b>EXTERIOR LANTERNS</b>               |                             |  |           |       |
| L.348—150-watt Flood ...               | No. 537                     | 10 in. by 9 $\frac{1}{2}$ in.                | Metal     |       |
| L.351—500-watt Flood and Pageant ...   | Nos. 560 and 558            | 11 $\frac{3}{4}$ in. by 11 $\frac{3}{4}$ in. | Metal     |       |
| L.214—Medium-angle Flood ...           | No. 502                     | 16 in. by 16 in.                             | Metal     |       |
| L.216—Wide-angle Flood ...             | No. 47                      | 17 in. by 17 $\frac{1}{2}$ in.               | Metal     |       |

The above prices are exclusive of colour mediums. When ordering the latter, state Pattern number of lantern or Code number of frame concerned as mediums should be cut slightly smaller than frames containing them.

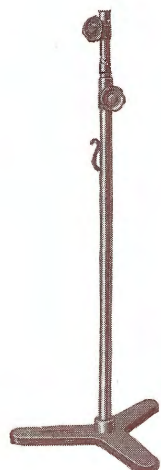
HEAD OFFICE AND SHOWROOMS  
 29, KING STREET, LONDON, W.C.2  
 SALES AND GOODS - 24, FLORAL ST., W.C.2  
 TEMPLE BAR 4444 GRAMS: SPOTLITE RAND LONDON



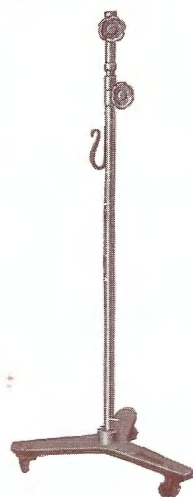
BRANCHES  
 313, OLDHAM ROAD, MANCHESTER 10  
 COLLYHURST 2736  
 62, DAWSON ST., DUBLIN - DUB 74030



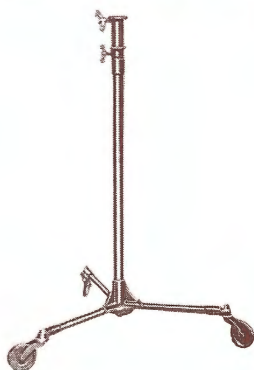
# STRAND SUSPENSIONS and STANDS



L.66



L.260



L.258

**L.66** Standard telescopic stand (as illustrated), consisting of wrought iron barrel screwed into cast iron base, with extending liner, cable hook, swivelling collar and locking handles. Will take all lanterns except Patts. 27, 83 and 102. Minimum height 4 ft. 3 in.; maximum height 7 ft.; radius of feet at base 12 in.; net weight 37 lb. Price each

**L.260** As L.66 but fitted with rubber-tyred castors (as illustrated). Price each

**L.257** Miniature telescopic stand, generally as L.66 but of lighter construction, complete with swivelling collar and cable hook. For use with lanterns, Patts. 45, 81a and 237. Minimum height 3 ft. 7 in.; maximum height 5 ft. 9 in.; radius of feet at base 8 in.; net weight 15 lb. Price each

**L.258** Telescopic stand for Patt.102 2kw. Spotlight (as illustrated). Constructed of tubular steel with removable rubber-tyred castors. Minimum height 3 ft. 10 in.; maximum height 6 ft. 3 in.; radius of legs over castors 20 in.; net weight 21 lb. Price each

**L.112** Heavy cast iron bench base (as illustrated) with locking handle. Not suitable for Patts. 27, 83 and 102. Height 6 $\frac{1}{4}$  in.; diameter 6 $\frac{3}{4}$  in.; net weight 5 $\frac{1}{2}$  lb. Price each

**L.113** Flange plate stand (as illustrated) with locking wheel. Not suitable for Patts. 27, 83 and 102. Height 6 in.; diameter 4 in.; net weight 1 $\frac{3}{4}$  lb. Price each

**L.259** Ceiling fixing saddle (as illustrated). Drilled for two  $\frac{3}{8}$  in. diameter bolts, or coach screws (not supplied), for suspending lanterns (except Patts. 27, 83 and 102) or "S" type battens, where head room is limited. Price each

**L.64** Safety chain, 22 in. long (for use when lanterns are suspended), with ring, on one end and clip hook at the other.

**L. 246** As L.64 but stronger for lanterns with remote colour change. Price each



L.112



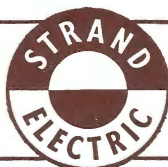
L.113



L.259

(continued overleaf)

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TEMPLE BAR 444 GRAMS: SPOTLITE RAND LONDON

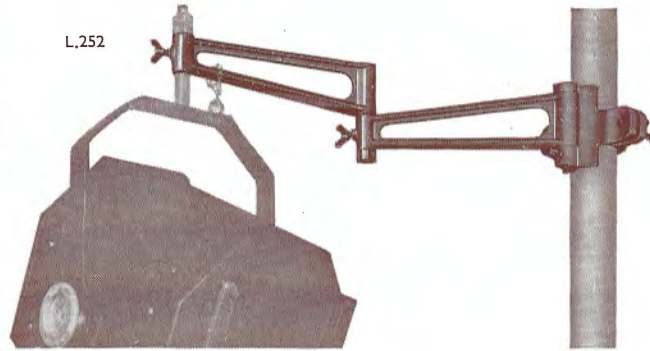


BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

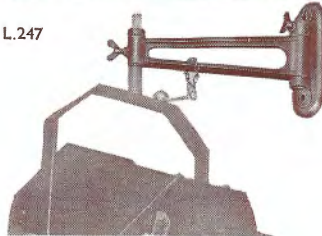
L.255



L.252



L.247



**L.247** Swivel arm wall bracket (as illustrated), reach 10 in. Made in aluminium throughout, the backplate being drilled for two  $\frac{3}{8}$ -in. rag bolts or coach screws (not included). Not suitable for Patts. 27, 83 and 102.

Net weight  $1\frac{1}{2}$  lb.

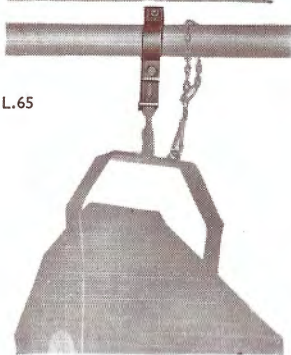
Price each

**L.248** As L. 247 but with double extension arm, increasing maximum reach to 19 in.

Net weight  $2\frac{1}{4}$  lb.

Price each

L.65



**L.251** Adjustable boomerang bracket, consisting of clamp for 2 in. diameter barrel, and adjustable arm giving reach of 10 in. In aluminium with locking wing bolts. Not suitable for Patts. 27, 83 and 102.

Net weight  $1\frac{1}{4}$  lb.

Price each

**L.252** As L.251 but with extension arm giving a maximum reach of 19 in. (as illustrated).

Net weight 2 lb.

Price each

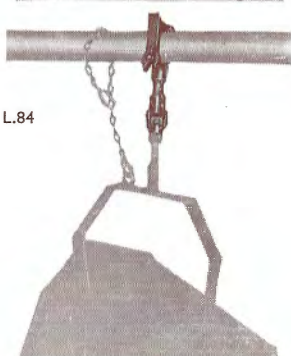
**L.253** Adjustable boomerang bracket as L.251 but for 1 in. diameter barrel. Reach 10 in. Net weight  $1\frac{1}{4}$  lb.

Price each

**L.254** As L.253 but with extension arm, giving maximum reach of 19 in. Net weight 2 lb.

Price each

L.84



**L.255** Fixed boomerang bracket (as illustrated), for 2 in. diameter barrel, giving 11 in. reach. Not suitable for Patts. 27, 83 and 102.

Net weight  $2\frac{3}{4}$  lb.

Price each

**L.65** "L" clamp (as illustrated), for suspending lanterns from 2 in. diameter barrel. Not suitable for Patts. 27, 83 and 102.

Net weight 1 lb.

Price each

**L.249** As L.65 but stronger, for use with Patts. 50A, 73 and 76 when fitted with remote colour change mechanism.

Price each

**L.84** Adjustable barrel clamp (as illustrated), for suspending lanterns from barrel of  $1\frac{1}{2}$ - $2\frac{1}{2}$  in. diameter. Not suitable for Patts. 27, 83 and 102.

Net weight  $1\frac{1}{2}$  lb.

Price each

L.256



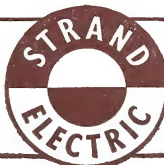
**L.256** Aluminium barrel clamp (as illustrated), for suspending Patt. 102, 2 kw. Spots from  $2-2\frac{1}{2}$  in. diameter barrel.

Net weight  $1\frac{1}{2}$  lb.

Price each

NOTE.—For standard batten suspensions see leaflet A.21.

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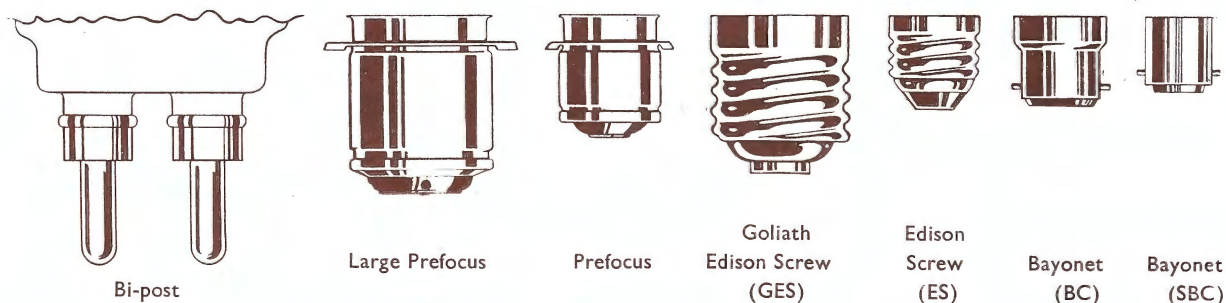


BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030



# ELECTRIC LAMPS

The lamps set out in this leaflet are those in common use in places of entertainment. The types recommended for use in standard Strand Equipment are tabulated for convenience on page 4.



The diagrams above (which are approximately half full size) show the types of cap used and the abbreviations (in brackets) are those used in tables below.



## GENERAL SERVICE TYPE

| Voltage            | Wattage | Cap Contact to Filament Centre | Type of Cap | Price      |
|--------------------|---------|--------------------------------|-------------|------------|
| 210, 230, 240, 250 | 60      | 85 ± 3 mm.                     | ES          | s. d. 1 3* |
|                    | 100     | 100 ± 3 mm.                    | ES          | 1 9*       |
|                    | 300     | 178 ± 6 mm.                    | GES         | 7 6        |
|                    | 500     | 202 ± 7 mm.                    | GES         | 10 0       |
|                    | 1,000   | 225 ± 8 mm.                    | GES         | 17 6       |
| 110                | 60      | 85 ± 3 mm.                     | ES          | 1 5*       |
|                    | 100     | 100 ± 3 mm.                    | ES          | 1 11*      |
|                    | 300     | 178 ± 6 mm.                    | GES         | 8 0        |
|                    | 500     | 202 ± 7 mm.                    | GES         | 10 6       |
|                    | 1,000   | 225 ± 8 mm.                    | GES         | 17 6       |

\* Subject to 18 $\frac{1}{8}$ % Purchase Tax in British Isles.

| Watts | Cap | Pearl—Single Coil                    |            | Clear—Single Coil                    |            | Dimensions                   |                     |                       |                      |                      |                     |
|-------|-----|--------------------------------------|------------|--------------------------------------|------------|------------------------------|---------------------|-----------------------|----------------------|----------------------|---------------------|
|       |     | Standard Voltages and Price per Lamp |            | Standard Voltages and Price per Lamp |            | Length ± 3 $\frac{1}{2}$ mm. |                     | Bulb Diameter ± 1 mm. |                      | Light Centre ± 3 mm. |                     |
|       |     | 200, 210, 220, 230, 240, 250         | 100, 110   | 200, 210, 220, 230, 240, 250         | 100, 110   |                              |                     |                       |                      |                      |                     |
| 15    | BC  | s. d. 1 5*                           | s. d. 1 5* | s. d. 1 5*                           | s. d. 1 5* | mm. 92.5                     | in. 3 $\frac{5}{8}$ | mm. 55                | in. 2 $\frac{3}{16}$ | mm. 65               | in. 2 $\frac{1}{2}$ |
| 25    | BC  | 1 5*                                 | 1 5*       | 1 5*                                 | 1 5*       | 100                          | 3 $\frac{15}{16}$   | 60                    | 2 $\frac{3}{8}$      | 70                   | 2 $\frac{3}{4}$     |
| 40    | BC  | 1 3*                                 | 1 5*       | 1 3*                                 | 1 5*       | 110                          | 4 $\frac{5}{16}$    | 60                    | 2 $\frac{3}{8}$      | 80                   | 3 $\frac{1}{8}$     |
| 60    | BC  | 1 3*                                 | 1 5*       | 1 3*                                 | 1 5*       | 117.5                        | 4 $\frac{5}{8}$     | 65                    | 2 $\frac{9}{16}$     | 85                   | 3 $\frac{5}{16}$    |
| 75    | BC  | 1 8*                                 | 1 10*      | 1 8*                                 | 1 10*      | 125                          | 4 $\frac{7}{8}$     | 70                    | 2 $\frac{1}{2}$      | 90                   | 3 $\frac{1}{2}$     |
| 100   | BC  | 1 9*                                 | 1 11*      | 1 9*                                 | 1 11*      | 137.5                        | 5 $\frac{3}{8}$     | 75                    | 2 $\frac{15}{16}$    | 100                  | 3 $\frac{15}{16}$   |
| 150   | BC  | 2 6*                                 | 2 8*       | 2 6*                                 | 2 8*       | 160 ± .45                    | 6 $\frac{1}{4}$     | 80 ± 1                | 3 $\frac{1}{8}$      | 120 ± 4              | 4 $\frac{1}{4}$     |
| 200   | ES  | 4 3*                                 | 4 9*       | 3 9*                                 | 4 3*       | 178 ± 5.5                    | 7                   | 90 ± 1                | 3 $\frac{1}{2}$      | 133 ± 5              | 5 $\frac{1}{4}$     |

\* All lamps in this table are subject to 18 $\frac{1}{8}$ % Purchase Tax in British Isles.

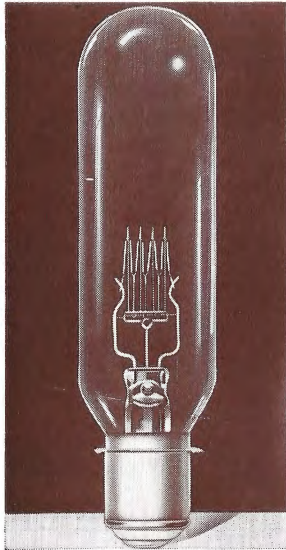
HEAD OFFICE AND SHOWROOMS  
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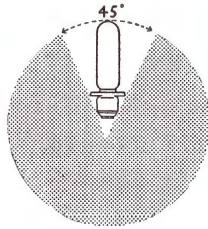
BRANCHES  
313, OLDHAM ROAD, MANCHESTER 10  
COLLYHURST 2736  
62, DAWSON ST., DUBLIN - DUB 74030

# ELECTRIC LAMPS

## PROJECTOR TYPE



CLASS A.1.



Shading shows position in which this lamp must not be used.

### CLASS A.1

**Class A.1.** Objective average life 50 hours. In view of their greater efficiency this class is preferred to B.1 for the projection of effects, long throw work and other cases where maximum light output is the primary consideration. On the other hand they can only be safely tilted within  $22\frac{1}{2}^\circ$  of the vertical (cap down). The life can be considerably increased (with a corresponding drop in light output) by using lamps rated for 10 volts in excess of the supply on which they are to be used.

| Voltage                       | Wattage            | Light Centre Length | Cap                 | Price           |
|-------------------------------|--------------------|---------------------|---------------------|-----------------|
| 115                           | 100                | $34.5 \pm 2$ mm.    | ASBC double contact | £ s. d.<br>12 9 |
| 115, 210,<br>230, 240,<br>250 | 250                | $75 \pm 5$ mm.      | ES                  | 1 2 0           |
|                               | 250                | $55.5 \pm 0.5$ mm.  | Prefocus            | 1 3 0           |
|                               | 500                | $75 \pm 5$ mm.      | ES                  | 1 6 6           |
|                               | 500                | $90 \pm 5$ mm.      | GES                 | 1 6 6           |
|                               | 500                | $55.5 \pm 0.5$ mm.  | Prefocus            | 1 7 6           |
|                               | 1,000              | $120 \pm 5$ mm.     | GES                 | 1 13 0          |
| 1,000                         | $84.0 \pm 0.5$ mm. | Large Prefocus      | 1 15 6              |                 |



CLASS B.1.



Shading shows position in which this lamp must not be used.

### CLASS B.1

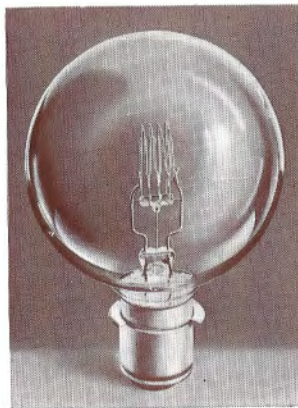
**Class B.1.** Objective average life 800 hours. Where length of life and the ability to tilt to sharp angles are of greater importance than maximum light output, this class of lamp is to be preferred to Class A.1.

| Voltage               | Wattage | Light Centre Length | Cap            | Price            |
|-----------------------|---------|---------------------|----------------|------------------|
| 115, 210,<br>230, 250 | 100     | $75 \pm 5$ mm.      | ES             | £ s. d.<br>10 0* |
|                       | 250     | $75 \pm 5$ mm.      | ES             | 19 3*            |
|                       | 250     | $75 \pm 5$ mm.      | Prefocus       | 1 0 3*           |
|                       | 500     | $115 \pm 5$ mm.     | GES            | 1 5 3            |
|                       | 1,000   | $115 \pm 5$ mm.     | GES            | 1 13 0           |
|                       | 1,000   | $84 \pm 5$ mm.      | Large Prefocus | 1 15 6           |

\* Subject to  $18\frac{3}{8}\%$  Purchase Tax in British Isles.

### CLASS T (Theatre spotlight type)

**Class T.** Objective life 200 hours. The A.1. type grid filament is housed in the B.1. round glass bulb, giving a most useful compromise in concentration, life and tilt.



CLASS T.

| Voltage       | Wattage | Light Centre Length | Cap            | Price            |
|---------------|---------|---------------------|----------------|------------------|
| 230, 240, 250 | 500     | $55.5 \pm 0.5$ mm.  | Prefocus       | £ s. d.<br>1 8 0 |
|               | 1,000   | $84.0 \pm 0.5$ mm.  | Large prefocus | 1 15 6           |

Burning position, between vertical, cap down, and horizontal.

### CLASS S (Cinema Studio type. Not shown)

**Class S.** Objective life 100 hours. Bi-post self-focusing cap.

| Voltage              | Wattage | Light Centre Length | Cap     | Price             |
|----------------------|---------|---------------------|---------|-------------------|
| 115, 230,<br>and 250 | 2,000   | $127 \pm 2$ mm.     | Bi-post | £ s. d.<br>4 13 6 |

Burning position, between vertical, cap down, and horizontal.



# ELECTRIC LAMPS

These lamps were designed for use in our type A, B and C Footlights and Battens manufactured up to 1940. Unlike the general service class of lamp, the distance between centre contact and filament centre is constant for all three wattages so that lamps of different sizes can be used, the filament still remaining at the correct position in the reflector. For "S" type Footlights and Battens manufactured since 1945, see equipment table overleaf for lamp recommendations.

## THEATRE BATTEN TYPE\*

| Voltage            | Wattage | Cap Contact to Filament Centre | Type of Cap | Price         |
|--------------------|---------|--------------------------------|-------------|---------------|
| 110, 210, 230, 250 | 60      | 120 ± 4 mm.                    | ES          | s. d.<br>2 6* |
|                    | 100     | 120 ± 4 mm.                    | ES          | 2 9*          |
|                    | 150     | 120 ± 4 mm.                    | ES          | 5 0*          |

## SILVERLIGHT\*

## COLOUR SPRAYED\*

## ROUGH SERVICE VACUUM\*

| Watts | Cap | 200, 210, 220, 230, 240, 250, etc. | Watts | Cap | 200, 210, 220, 230, 240, 250 | 100 110       | Watts | Cap | 100, 110, 200, 210, 220, 230, 240, 250 |
|-------|-----|------------------------------------|-------|-----|------------------------------|---------------|-------|-----|--|
| 40    | BC  | s. d.<br>1 10*                     | 15    | BC  | s. d.<br>1 7*                | s. d.<br>1 7* | 40    | BC  | s. d.<br>2 0*                          |
| 60    | BC  | 1 10*                              | 25    | BC  | 1 7*                         | 1 7*          | 60    | BC  | 2 0*                                   |
| 100   | BC  | 2 3*                               | 40    | BC  | 1 6*                         | 1 8*          |       |     |  |
| 150   | BC  | 3 0*                               | 60    | BC  | 1 6*                         | 1 8*          |       |     |  |
| 200   | ES  | 4 9*                               | 75    | BC  | 1 11*                        | 2 1*          |       |     |  |
|       |     |                                    | 100   | BC  | 2 1*                         | 2 3*          |       |     |  |

The dimensions of these lamps are the same as Pearl and Clear shown above.

Silverlight Lamps 40, 60 and 100 watts have coiled coil filaments.

For Colour Sprayed Lamps the standard colours are: Red, Blue, Green, Yellow, Flame, Amber, Pink, White.

\* All lamps in above table are subject to 18½% Purchase Tax in British Isles.

## STRIPLITE\* LAMPS

| Watts | Cap | Length ± 1 mm. |                                     | Diameter ± 1 mm. |       | Voltage and Price per Lamp<br>100, 110, 200, 210, 220, 230, 240, 250 |  |
|-------|-----|----------------|-------------------------------------|------------------|-------|--|--|
| 30    | CC  | mm. 221        | in. 8 <sup>11</sup> / <sub>16</sub> | mm. 25           | in. 1 | s. d.<br>5 9*  |  |
| 30    | CC  | 284            | 11 <sup>3</sup> / <sub>16</sub>     | 25               | 1     | 5 9*   |  |
| 60    | CC  | 221            | 8 <sup>11</sup> / <sub>16</sub>     | 25               | 1     | 6 6*   |  |
| 60    | CC  | 284            | 11 <sup>3</sup> / <sub>16</sub>     | 25               | 1     | 6 0*   |  |

## SPOTLIGHT REFLECTOR LAMPS (INTERNALLY SILVERED BULB)\*

| Watts | Cap | Length      |                                   | Diameter      |       | Voltage            | Ring Filament<br>Spotlight | Grid Filament<br>(Concentrated Spotlight) |
|-------|-----|-------------|-----------------------------------|---------------|-------|--------------------|----------------------------|---|
| 150   | ES  | mm. 175 ± 5 | in. 6 <sup>3</sup> / <sub>2</sub> | mm. 126 ± 1.5 | in. 5 | 110, 210, 230, 250 | s. d.<br>15 6*             | s. d.<br>18 6*                            |

\* All lamps listed above are subject to 18½% Purchase Tax in British Isles.

## HEADLIGHT LAMPS Satin etched finish with V filament

| Watts | Voltage | Cap                  | Price  |
|-------|---------|----------------------|--|
| 36    | 12      | SBC (double contact) | s. d.<br>2 7<br>(Purchase Tax 16¼%<br>in British Isles.) |

## ULTRA VIOLET (Black Glass) TYPE, FOR FLUORESCENT EFFECTS

| Voltage                         | Wattage | Light Centre Length | Type of Cap | Price            |
|---------------------------------|---------|---------------------|-------------|------------------|
| 200/210,<br>220/230,<br>240/250 | 125     | 128 ± 5 mm.         | 3-Pin BC    | £ s. d.<br>3 3 0 |

**PYGMY\*  
SIGN  
LAMPS**

| Watts | Cap | Length<br>± 3 mm. |                  | Diameter<br>± 1 mm. |                 | Voltage<br>100, 110, 200, 210, 220, 230, 240, 250   |
|-------|-----|-------------------|------------------|---------------------|-----------------|---|
|       |     | mm.               | in.              | mm.                 | in.             |   |
| 15    | BC  | 56                | 2 $\frac{3}{8}$  | 28                  | 1 $\frac{1}{8}$ | These lamps colour-sprayed 2d. per lamp extra.<br>1s. 10d.* Standard colours: Red, Green, Blue, Yellow, Flame, Pink, White. |
|       | ES  | 58 ± 4            | 2 $\frac{1}{4}$  | 28                  | 1 $\frac{1}{8}$ |   |
|       | SBC | 62                | 2 $\frac{7}{16}$ | 28                  | 1 $\frac{1}{8}$ |   |
|       | SES | 64                | 2 $\frac{1}{2}$  | 28                  | 1 $\frac{1}{8}$ |   |

\* All lamps in above table are subject to 18 $\frac{1}{8}$ % Purchase Tax in British Isles.

**CANDLE LAMPS\***

| Watts | Cap | Shape   | Finish | 100, 110, 200, 210,<br>220, 230, 240, 250 |    | Length  |                  | Diameter |                  |
|-------|-----|---------|--------|---|----|---------|------------------|----------|------------------|
|       |     |         |        | s.  | d. | mm.     | in.              | mm.      | in.              |
| 25    | SBC | Plain   | Clear  | 3   | 9* | 116 ± 5 | 4 $\frac{4}{8}$  | 38 ± 1   | 1 $\frac{1}{2}$  |
| 40    | SBC | Plain   | Clear  | 4   | 3* | 126 ± 9 | 4 $\frac{3}{8}$  | 45 ± 1   | 1 $\frac{3}{8}$  |
| 25    | SBC | Twisted | Clear  | 4   | 3* | 108 ± 3 | 4 $\frac{1}{8}$  | 35 ± 1   | 1 $\frac{3}{8}$  |
| 40    | SBC | Twisted | Clear  | 5   | 0* | 144 ± 5 | 5 $\frac{1}{16}$ | 55 ± 2   | 2 $\frac{3}{16}$ |

Colour Sprayed Lamps 25 watt 2d. each extra; 40 watt 3d. each extra.

Standard colours: Red, Blue, Green, Yellow, Flame, Amber, Pink, White.

\* All lamps in above table are subject to 18 $\frac{1}{8}$ % Purchase Tax in British Isles.

**RECOMMENDED LAMPS FOR STRAND EQUIPMENT**

**BATTENS AND FOOTLIGHTS**

| Pattern  | Cap | Lamps Recommended   |
|--|-----|---|
| Type S as manufactured since 1945.               | ES  | 60 or 100 watt General Service or 150 watt Theatre Batten type. Clear, NOT Pearl. |
| Types A, B and C, as manufactured prior to 1940. | ES  | 60, 100 or 150 watt Theatre Batten type. Clear, NOT Pearl.                        |
| Junior Type foot-light.                          | BC  | 40 or 60 watt Silica Sprayed Silverlight.   |
| Type L hanging length.                           | BC  | 25, 40, 60 or 100 watt Pearl. General Service Type.                               |

**SPOTLIGHTS**

| Pattern     | Cap                             | Lamps Recommended  |
|-------------|---------------------------------|--|
| 81          | SBC                             | 12 volt, 36 watt, Satin headlamp.                                |
| 23          | Prefocus<br>Bi-Post<br>prefocus | 250 w. Class B.1. or T. 500 w. Class A.1. or Class T. projector. |
| 27          | ES                              |  |
| 41          | ASBC<br>(double contact)        | 115 volt, 100 watt, Class A.1 projector.                         |
| 43          | GES                             | 1,000 watt Class A.1 or B.1 projector.                           |
| 44          | GES                             | 500 watt Class B.1 projector.                                    |
| 45          | ES                              | 250 watt Class B.1 projector.                                    |
| 51          | † Large prefocus                | 1,000 watt Class A.1 projector.                                  |
| 53 and 58   | Large prefocus                  | 1,000 watt Class A.1 or B.1 projector.                           |
| 73          | † Large prefocus                | 1,000 watt Class A.1 or B.1 projector.                           |
| 83          | Large prefocus                  | 1,000 watt Class A.1 or B.1 projector.                           |
| 102         | Bi-Post                         | 2,000 watt Class S.  |
| 50A and 558 | GES                             | 1,000 watt Class A.1 or B projector.                             |

**FLOODLIGHTS**

| Pattern        | Cap | Lamps Recommended  |
|----------------|-----|--|
| 237 and 537    | ES  | 60 or 100 watt General Service or 150 Theatre Batten Type. |
| 30, 60 and 560 | GES | 500 watt General Service.                                  |
| 35, 49A and 56 | GES | 1,000 watt General Service.                                |
| 76             | GES | 500 or 1,000 watt Class B.1 projector.                     |
| 47             | GES | 500 or 1,000 watt General Service.                         |
| 502            | GES | 500, 1,000 or 1,500 watt General Service.                  |

† Older types use GES cap. Check lantern before ordering.

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