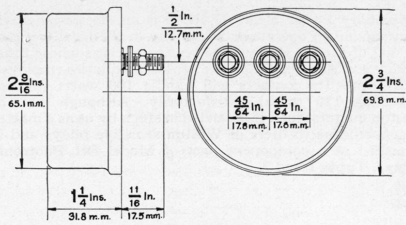
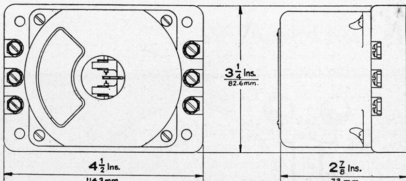


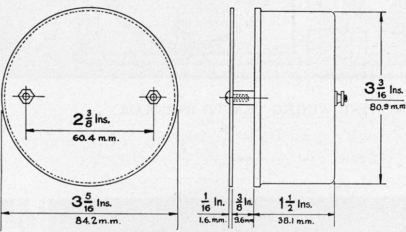
**Dimensional Drawings**



MODEL 634 RELAY



MODEL 534 RELAY



POWER RELAY D-68690

**SALES REPRESENTATIVES**

- |                             |               |                          |
|-----------------------------|---------------|--------------------------|
| Schiefer Electric Co., Inc. | Albany        | 940 City Savings Bank    |
| E. A. Thornwell             | Atlanta       | Candler Bldg.            |
| James O. Murray             | Boston        | 126 Newbury Street       |
| Schiefer Electric Co., Inc. | Buffalo       | 775 Ellcott Square       |
| Westburg Engineering Co.    | Chicago       | 703 Monahan Bldg.        |
| Beedle Equipment Co.        | Cincinnati    | 1310 Union Trust Bldg.   |
| The Walter P. Ambos Co.     | Cleveland     | 983 The Arcade           |
| Paul G. Bentley Co.         | Dallas        | 1018 Allen Bldg.         |
| B. K. Sweeney               | Denver        | 13th Ave. & Broadway     |
| T. F. Mueller               | Detroit       | General Motors Bldg.     |
| Ward Engineering Co.        | Jacksonville  | 657 E. Bay St.           |
| Arthur L. Pollard           | Knoxville     | The New Sprankle Bldg.   |
| A. A. Barbers               | Los Angeles   | 575 Subway Term. Bldg.   |
| Elliott Equipment Co.       | Minneapolis   | 708 6th Ave. So.         |
| W. J. Keller                | New Orleans   | 203 Natchez Bldg.        |
| L. C. Nichols               | New York      | 50 Church Street         |
| L. D. Joralemon             | Philadelphia  | 912 Otis Bldg.           |
| Rutherford & Uptegraff      | Pittsburgh    | 2211 Clark Bldg.         |
| Graybar Electric Co., Inc.  | Portland      | Park & Flanders Sts.     |
| Schiefer Electric Co., Inc. | Rochester     | 89 East Avenue           |
| J. H. Southard              | San Francisco | 682 Mission Street       |
| Graybar Electric Co., Inc.  | Seattle       | King and Occidental Sts. |
| Graybar Electric Co., Inc.  | Spokane       | 152 South Post Street    |
| J. W. Jones                 | St. Louis     | 432 Pennant Bldg.        |
| Schiefer Electric Co., Inc. | Syracuse      | 614 City Bank Bldg.      |
| Graybar Electric Co., Inc.  | Tasoma        | 1115 A Street            |

**CANADA**

- |                             |  |                    |
|-----------------------------|--|--------------------|
| Northern Electric Co., Ltd. | Montreal, Que.   | 637 Craig St. West |
| Offices also in             | Vancouver, Toronto, Calgary, Halifax, Regina, Saskatoon, Edmonton, Saint John, Quebec, Ottawa, Winnipeg. |                    |
| Powerlite Devices, Ltd.     | Toronto, Ont.  | 171 John Street    |
| Powerlite Devices, Ltd.     | Montreal, Que.   | 411 Keefer Bldg.   |

**REPAIR REPRESENTATIVES**

- |                                   |               |                            |
|-----------------------------------|---------------|----------------------------|
| A. S. Mancib                      | Boston        | 26 Wallace St., Somerville |
| Elect'l Instr. Lab'y.             | Buffalo       | 307 Colvin Ave.            |
| Illinois Testing Lab'ys.          | Chicago       | 141 West Austin Ave.       |
| Christie Lab'ys., Inc.            | Cleveland     | 616 St. Clair Ave.         |
| Wm. Ainsworth & Sons, Inc.        | Denver        | 2151 Lawrence St.          |
| Elect'l Inspec. & Serv. Co.       | Detroit       | 328 United Artists Bldg.   |
| Quality Electric Co., Ltd.        | Los Angeles   | 812 South San Pedro St.    |
| M. E. Todd                        | Minneapolis   | 4500 Zenith Ave., So.      |
| Nilesen Electrical Lab'ys.        | New York      | 103 Lafayette St.          |
| Rubicon Co.                       | Philadelphia  | 49 No. 6th St.             |
| Electrical Instrument Service Co. | Pittsburgh    | 107 Meyran Ave.            |
| A. Honeychurch                    | San Francisco | 682 Mission St.            |
| Instrument Service Lab'ys.        | St. Louis     | 3645 McJee Ave.            |

**CANADA**

- |                          |          |                      |
|--------------------------|----------|----------------------|
| Northern Elec. Co., Ltd. | Montreal | 1736 St. Patrick St. |
| Powerlite Devices, Ltd.  | Toronto  | 171 John St.         |
| W. R. McKee              | Toronto  | 25 Glenlake Ave.     |

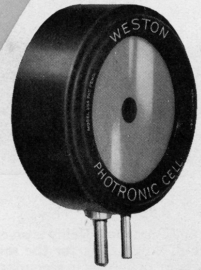
**Home Office**

**Weston Electrical Instrument Corp.**  
 Waverly Park, Newark, N. J., U. S. A.

Circular C-1-35M-1-32

Printed in U. S. A.

**WESTON  
 PHOTRONIC  
 CELL**



**A NEW  
 DRY TYPE PHOTO  
 ELECTRIC CELL**

**A Remarkable New Photoelectric Cell Utterly Simple With Amazing Performance**

For many years photoelectric cells have been serving an extremely useful mission in experimental and industrial work, in controlling the operation of apparatus and equipment, in controlling various processes and in many counting operations. A number of different type cells have been available for experimental, commercial and scientific applications, each type, however had its own inherent limitations in operating performance or had to be used in conjunction with expensive auxiliary equipment.

The discovery of an ideal type of cell has been the subject of continual scientific research. To be of the most practical value the cell sought after should combine all the good

qualities of existing cells with none of their shortcomings or limitations. Such a cell would be truly ideal but its attainment has been a baffling scientific problem.

The development of the Weston Photronic Cell with its amazing characteristics and its utter simplicity of design marks a sensational advance and fulfills the need for an ideal type of photo cell. Notwithstanding the superiority of this Cell it is exceptionally low in cost as is also its auxiliary apparatus. Its discovery now places photo cell equipment within reach of every amateur experimenter.

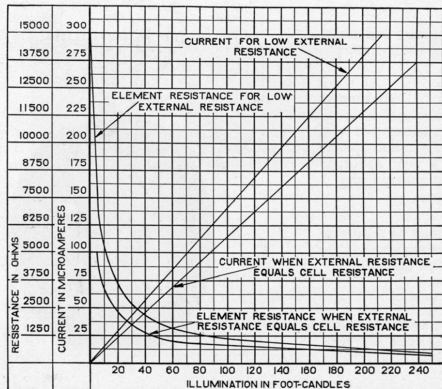
Electronic in its character the Weston Photronic Cell employs a highly light sensitive disk which transforms light energy directly into electrical energy without the use of any auxiliary voltage whatsoever. Its response to light variations is instantaneous and sufficient current is developed to directly operate Weston relays without the use of auxiliary apparatus or any battery.

As far as is known, the life of the cell is practically unlimited. Since it does not contain any liquid nor require vacuum or gas, there is nothing to get out of order. It is

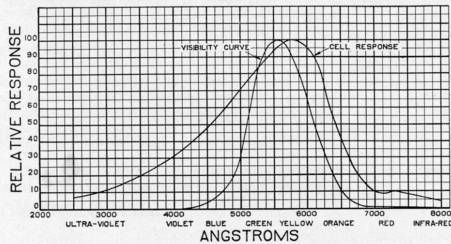
not subject to physical or chemical change and it has a constant output. It can be exposed to direct sunlight without deterioration, has no dark current, and is non-microphonic.

The Photronic Cell is enclosed in a handsome moulded black Bakelite case fitted at the bottom with two prongs which fit into the standard UX radio tube socket.

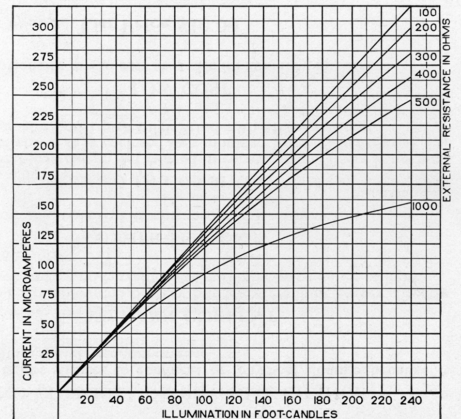
The extremely useful and interesting applications to which the Photronic Cell can be put are altogether too numerous for mention in this folder.



Average Current Output and Cell Resistance for various Intensities of Illumination.

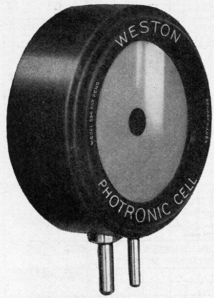


Spectral Response Curve using a quartz window up to 4000 Angstroms and a plain glass window above 4000.



Effect of various values of external resistance on the current output of the photronic cell.

# OUTSTANDING FEATURES OF MODEL 594 PHOTRONIC CELL



MODEL 594  
PHOTRONIC CELL

## UNLIMITED LIFE

As far as is known continuous current flow does not harm the cell in any way and it can be exposed to sunlight without harmful results.

## HIGH SENSITIVITY

It delivers about 1.4 microamperes per foot-candle of light intensity or 120 microamperes per lumen and its resistance varies with light intensity as shown by the curve elsewhere in this folder

## HIGH CURRENT OUTPUT

The current output is relatively high requiring no amplification for ordinary use. This output is practically a straight line function for circuit conditions where the external resistance is low relative to the cell resistance. Sufficient current is developed to directly operate Weston relays without any amplifying tubes, batteries or auxiliary apparatus.

## NO DETERIORATION

Light, even as intense as sunlight, has no permanent deteriorating effect nor does it harm the cell to lie inactive on the shelf.

## NO CHEMICAL OR PHYSICAL CHANGE

The cell is not subject to chemical or physical change because it does not require liquid, vacuum or gas.

## NO DARK CURRENT

Since the cell employs no battery but transfers light energy directly into electrical energy no current flows without the presence of light.

## OTHER FEATURES

It is non-microphonic and instantaneous in its response.

## RUGGED IN CONSTRUCTION

Utterly simple in design yet rugged in construction. There is nothing to get out of order. It is enclosed in a moulded black Bakelite case 2 1/4 inches in diameter and 1 inch thick fitted with contact prongs.

## LOW COST

It is exceptionally low in cost as is also its auxiliary apparatus.

Model 594 Photronic Cell

List Price \$10.00

## MODEL 601 PHOTRONIC RELAYS FOR AMATEUR AND EXPERIMENTER WORK

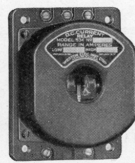
The Model 594 Photronic Cell in combination with relays necessary to its useful application is known as Model 601 Photronic Relay. Three types devised for the use of the amateur or home experimenter are listed below. They are designated as Types 1, 2 and 3, depending upon the intensity of the light source required for their operation and upon the power in the circuit to be controlled.

Types 1 and 3 will operate any signal lamp, motor fan or other device requiring not more than 100 watts (at not over 120 volts).

Type 2 relay is for the simplest signalling requirements. It will operate a neon lamp requiring not more than 1.2 watts at 115 volts or wireless buzzer or other sensitive device requiring not more than 1.2 watts (at or under 6 volts).

Model 601 Photronic Relays are not assembled into a unit, each piece of apparatus being a unit in itself to be located in any convenient position as desired.

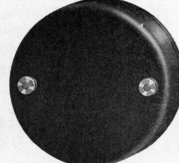
The Model 534 Relay is an adaptation of one of the regular line of Weston precision D.C. relays extensively used in communications work, industrial applications, alarm systems, etc. It is furnished in the standard surface type. It is a high and low contact relay normally adjusted so that its contact will close when the light beam is interrupted. By a simple adjustment of the contact screws, which is readily made with the case removed, and by



MODEL 534  
RELAY



MODEL 634  
RELAY



POWER RELAY  
D-68690

### PRICE LIST

Model 601 Type 1 Photronic Relay Using a Light Intensity of 200 foot-candles. Controls 100 watts\* (consists of 1-594, 1-634 and 1-D-68690) .....\$28.50

Model 601 Type 2 Photronic Relay Using a Light Intensity of 150 foot-candles. Controls 1.2 watts for signaling\* (consists of 1-594 and 1-534) .....\$43.00

Model 601 Type 3 Photronic Relay Using a Light Intensity of 150 foot-candles. Controls 100 watts\* (consists of 1-594, 1-534 and 1-D-68690) .....\$48.00

\*A suitable light source is a small automobile searchlight. A 100 watt lamp with reflector will operate the relays.

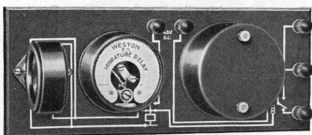
reversing the connections it can be made to open its contact when the light beam is interrupted.

Model 634 is a newly designed miniature relay for amateur or home experimenter use. It is a surface mounted, back-connected type. Three binding posts are employed, the plus terminal being common to both local and main circuits. It has a single contact and can be adjusted by slightly turning the screw mounted in the glass face. It can be adjusted for any condition of light or dark operation.

It should be used exclusively in combination with auxiliary power relay D-68690 and when so used, is fully warranted as a relay of great utility in amateur experimental applications.

Auxiliary Power Relay D-68690 is an electro-magnetic relay wound to operate satisfactorily in the local (contact circuit) of Model 534 and 634 sensitive relays whose functioning is closely related to the type of auxiliaries employed with them. Its contacts will handle 100 watts (at not exceeding 120 volts) satisfactorily. Although not of Weston manufacture, it is carried in stock by us as a matter of convenience to users of Weston sensitive relays and is furnished as a component part of Model 601 Photronic Relays, Types 1 and 3.

## MODEL 607 PHOTRONIC RELAY FOR LECTURE DEMONSTRATION AND AMATEUR EXPERIMENTAL WORK



MODEL 607

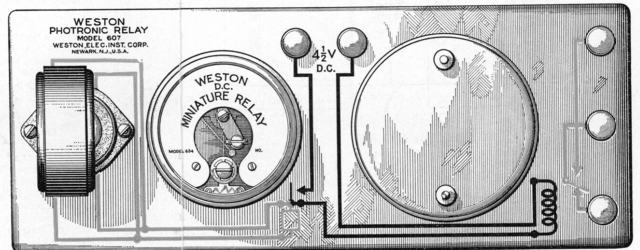
The Model 607 Photronic Relay is an extremely valuable piece of equipment for the science lecture room or laboratory either in secondary schools or colleges. It is designed especially for lecture demonstration, science and amateur club work and laboratory experiments.

The Model 607 consists of a Model 594 Photronic Cell, a Model 634 Sensitive Relay and a D-68690 Power Relay mounted on an attractive

panel and connected as a workable unit. A schematic connection diagram is traced in colors on the panel showing clearly the complete circuit and the principle of operation of the entire unit. It supplies a compact set-up which is preferred by many amateurs in performing experiments and for making up various photo-electric apparatus.

This Photronic Relay is not only useful in demonstrating the application of the photo electric cell but also the actual operation of relays. The Model 634 Relay has a full glass front giving a clear view of all movable parts. The metal cover of the D-68690 Power Relay may be readily removed by means of two thumb screws thus showing the design and internal connections of the relay. Dimensions of panel: 11" x 4 1/4"

Model 607 ..... List Price \$37.50



MODEL 607 SHOWING WIRING TRACED IN COLOR

WESTON ELECTRICAL INSTRUMENT CORP, WAVERLY PARK, NEWARK, N. J. U.S.A.