

INSTRUCTIONS for using the ELECTROPHOT MODEL 14-A

The 14-A ELECTROPHOT indicates the proper exposure for all film ratings from 3 to 400. The "f" stop range is from 1.4 to 32 and covers shutter speeds from 1/1000 second to 2 seconds.

The ELECTROPHOT, when pointed at the scene, gives the correct reading on the needle dial for taking still pictures (snap shots), on film with 12 Weston rating. The figures under the needle are lens stops. To convert these figures to any type film with a different rating or to a different length of exposure or for movies, it is only necessary to refer to the figures on the revolving chart.

EXAMPLE: You are using a film with a rating of 50 and get a light reading of f-8. Turn revolving ring until "8" in black figures is in line with "50" in Film Speeds. Now take your readings from the aligned figures in "Shutter Speeds" and red stop openings. In this example you have f-8 at 1-100, f-11 at 1-50, f-16 at 1-25, etc.

In another example your film is rated at 100 and your light reading is f-11, you get another series of shutter speed and "f" stop openings as f-16 at 1-100, f-22 at 1-50 and f-32 at 1-25, etc.

The best combination to use depends of course on the combinations available on your camera as well as other circumstances not subject to control by the exposure meter.

For Use with Movies

The movie speeds of 8, 16 and 32 are indicated in their proper positions and the meter is used in the same manner as described for still pictures. These speeds indicate *frames exposed per second*, and have no reference to size of film.

The speed of 16 frames per second, which equals an exposure time of 1/32 second is that most commonly used on amateur movie cameras. However, some cameras do operate normally at other speeds and the speed at which your camera operates should be determined, if not marked, through the dealer or manufacturer of the camera.

Film Ratings

Should the rating of your film not be shown on the scale use the next lower rating shown. The difference will not be enough to be detectable in the results. A list of the most used films and their ratings is given on another sheet.

Practical Applications

In directing ELECTROPHOT at object or scene, remember that the photo cell will be affected by *all* the light or shade that the scene contains. This simple point is the one most important factor in gaining the best photographic results from ELECTROPHOT readings. The reading given is a correct average of the light reflected from and light absorbed by *all* the objects composing the scene. In taking a reading, therefore, bear in mind that the meter will not differentiate between important and unimportant object in this scene. This is for you to do, for you only can designate which are the objects that are important. For example, if you are taking a picture of an individual in sunlight against a large mass of dark foliage, the meter will be influenced by the dark background as well as by the brilliantly lit object. So, if the meter reading is taken from a distant viewpoint, the reading will be an average of the bright and

dark parts of the scene. But what you probably want in such scene is the correct exposure on the principal object of interest which is the person himself, probably his face. Therefore, to get the proper reading for this result, approach the subject *more closely* so that he will appear larger in the field of the meter, and so that the effect of the dark background will not be so greatly felt.

Another example: You are to take a picture through a window from an inside room and are therefore at some distance from this window, which frames a bright view outside. From the inner viewpoint, the meter will combine the exposure needed for the large, dark shadow mass which surrounds the window, with that needed for the bright outside scene. The result will be a correct compromise between the two, but a picture taken at the lens setting indicated would probably show an over-exposure effect on the view outside the window, simply because the meter has estimated for the dark parts of the scene as well as the light. Since the outside view is the important part of the picture, while the rest is just dark "framing," the *correct* practice in this case would be actually to carry the meter to the window and point it out towards the brighter scene outside.

Care of Meter

A zero adjustment screw is provided for minor needle adjustments, which may be made by any user of the instrument. This adjustment screw is the plated screw on the back end of the meter. This is intended for use only in the event the needle does not rest exactly on zero when no light reaches the cell. This condition can be corrected by turning this zero adjustment screw slightly one way or the other. This should be done carefully and very little at a time, until the needle does rest just at zero when the cell is darkened.

The ELECTROPHOT is made from the best of material and with careful workmanship and will stand all the rough handling that can reasonably be expected from an exposure meter. However, should it be damaged or fail to operate properly for any reason, it is not advisable that the user attempt repairs or have them attempted at any repair shop. The instrument rather should be returned to us for this service, either direct or through your dealer. Return shipments should preferably be made by parcel post and the meter well packed in a substantial box.

Manufactured by

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COMPARISON OF FILM RATING SYSTEMS

The following table indicates approximate comparisons of the principal film rating systems used throughout the World. Each of these systems uses a somewhat different method of arriving at the ratings used, for which reason it is not practical to make exact mathematical comparisons. It is believed however the ratings shown will serve all practical purposes when using a system other than that shown on the ELECTROPHOT.

| Weston Numbers | American Scheiner Degrees | General Electric | A S A Exposure Index | European Scheiner | European Din |
|----------------|---------------------------|------------------|----------------------|-------------------|--------------|
| .5 | 6 | 0.6 | 0.6 | 12 | |
| .6 | 7 | | 0.8 | 13 | |
| .7 | 8 | 1.0 | 1.0 | 14 | |
| 1.0 | 9 | 1.5 | 1.2 | 15 | |
| 1.2 | 10 | 2.0 | 1.6 | 16 | |
| 1.5 | 11 | | 2.0 | 17 | |
| 2 | 12 | 3 | 2.5 | 18 | |
| 2.5 | 13 | 4 | 3 | 19 | |
| 3 | 14 | | 4 | 20 | 10/10 |
| 4 | 15 | 6 | 5 | 21 | 11/10 |
| 5 | 16 | 8 | 6 | 22 | 12/10 |
| 6 | 17 | 10 | 8 | 23 | 13/10 |
| 8 | 18 | 12 | 10 | 24 | 14/10 |
| 10 | 19 | 16 | 12 | 25 | 15/10 |
| 12 | 20 | 20 | 16 | 26 | 16/10 |
| 16 | 21 | 24 | 20 | 27 | 17/10 |
| 20 | 22 | 32 | 25 | 28 | 18/10 |
| 24 | 23 | 40 | 32 | 29 | 19/10 |
| 32 | 24 | 48 | 40 | 30 | 20/10 |
| 40 | 25 | 64 | 50 | 31 | 21/10 |
| 50 | 26 | 80 | 64 | 32 | 22/10 |
| 64 | 27 | 100 | 80 | 33 | 23/10 |
| 80 | 28 | 125 | 100 | 34 | 24/10 |
| 100 | 29 | 150 | 125 | 35 | 25/10 |
| 125 | 30 | 200 | 160 | 36 | 26/10 |
| 160 | 31 | 250 | 200 | 37 | 27/10 |
| 200 | 32 | 300 | 250 | 38 | 28/10 |
| 250 | 33 | 400 | 320 | 39 | 29/10 |
| 320 | 34 | 500 | 400 | 40 | 30/10 |
| 400 | 35 | 600 | 500 | 41 | 31/10 |

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