

**THE**

# ***Electro-Bewi***

with a wider electrical measuring range.

**FOR PHOTOGRAPHY  
AND CINEMATOGRAPHY.**

Germany

The **Electro-Bew** is only supplied in two models: —

1. The **Standard** model with table of exposure times and lens openings as shown on "between lens" shutters.
2. The **Leica** model with exposures as shown on the Leica focal-plane shutter and the lens openings of the Leica lens.

Both models are supplied with the particulars required for cinematography.

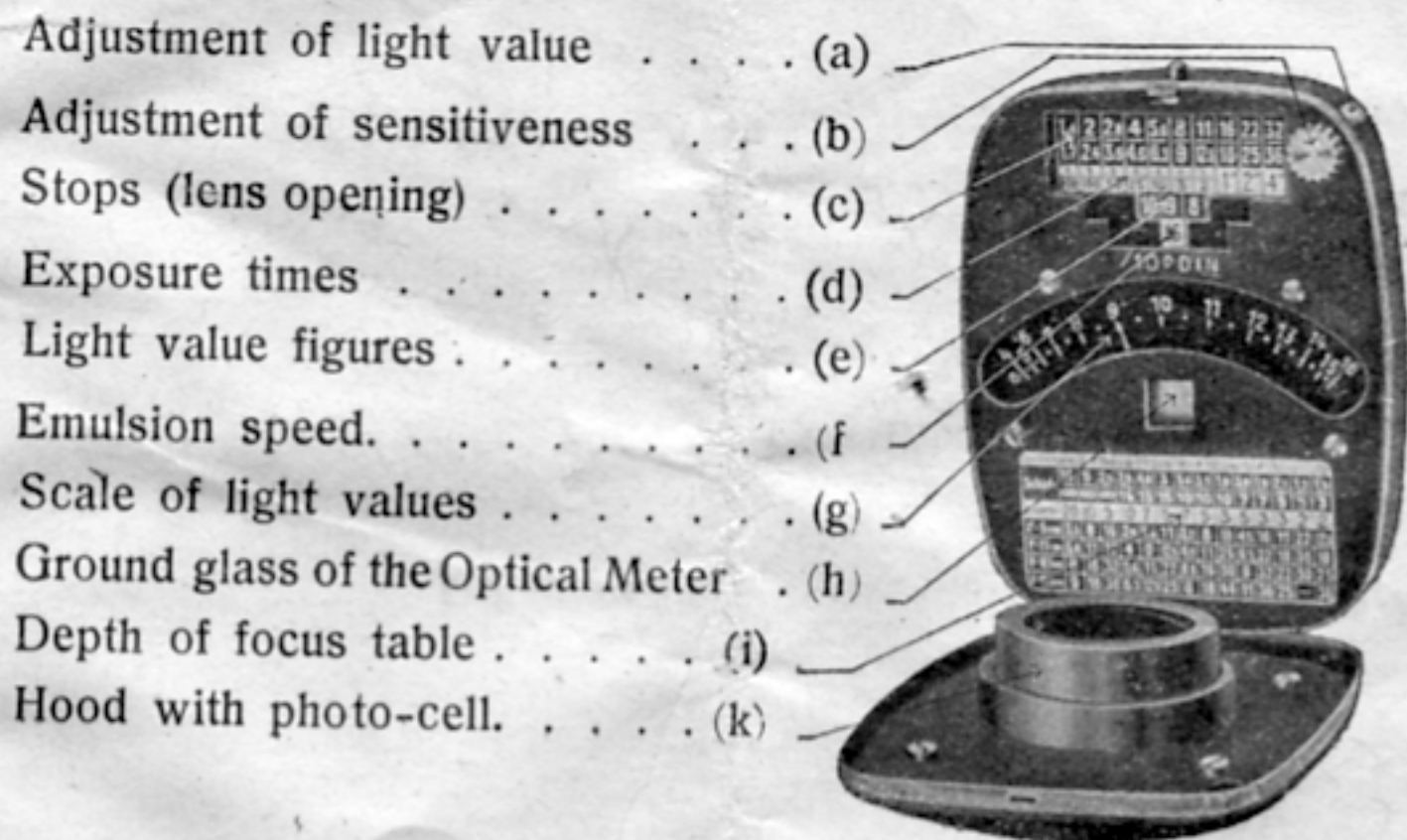


Fig. I

## INSTRUCTIONS FOR USE.

Hold the meter flat on the palm of the left hand, with the cover showing the name upwards. Press the knob, and the cover springs open ready for use, as in Fig. 1.

Adjust the meter to emulsion speed of the film used. This is done by turning knob (b) until your degree of sensitiveness appears in the space (f). (There is no need to repeat this procedure so long as the same negative material is used.)

NOTE. — If your sensitized material is 25° or 27° Scheiner, both films and plates are adjusted to 26° Scheiner.

The photo cell (k) should now be held - like the camera lens - in the direction of the object to be photographed. When taking open air pictures, be careful not to include too much sky. The actinic power, or degree of light, which enters the photo-cell, corresponds to that which enters the lens, so that the light which falls on the object to be photographed is accurately measured.

The pointer (g) indicates automatically the requisite light value.

When it does not point exactly to any one figure, choose the figure which is nearest. If it stops mid-way between two figures, either of those light values will do.

By turning the wheel (a) the light values scale (e) is brought forward so that the light value figure appears on the scale exactly above the figure for emulsion speed (f).

When the light value is found, the row of "stop" figures and the row of exposure times automatically come together, so that



Fig. 2. This is how the meter should be held in use

for each "stop" there is the exact exposure; conversely, for each exposure time there is the correct "stop".

**NB.** Lens openings = white figures on black. Exposures = black figures on yellow. (Fig. 2).

When the light is very poor, e.g. for pictures taken indoors, in churches, in woods, by night, at moonlight, etc., when the electric light photo element does not function, the **optical** exposure meter is used.

The open instrument is simply tilted forwards, and the lens which is

Lens tube of  
the optical  
meter (m)



Back View.



Fig. 3.

fixed in the base is placed close to the eye, as in Fig. 3.

(Spectacles should not be removed).

When working with the optical exposure meter, point the instrument towards the object to be photographed. (Use right hand to prevent light entering at the side). After 5 seconds, the highest number which is readable without eyestrain is the light value for this exposure.

---

How to hold the instrument when working with the optical meter.



Now adjust the row of light value figures (e) in exactly the same way as for the electric meter, placing the aforesaid figure against the emulsion speed, then read off the exposure and stop, as already explained.

The optical meter is not used very often. When once it is realised, however, that a success can be made of difficult subjects, its value will be greatly appreciated.

## **IMPORTANT OBSERVATIONS**

for electrical and optical measurements.

- (1) In artificial light, use one light value less than the figure read.
- (2) When using a double extension in connection with back or front lenses, adjust to TWO figures LESS than the figure read.
- (3) When using Filters, adjust as follows: —  
2—3 times, one light value less.  
4—5 times, two less.                      6—8 times, three less.

## **THE OPERATION IN A NUTSHELL.**

- (1) Press the button — all ready.
- (2) Adjust to emulsion speed.
- (3) Read light value, and adjust accordingly.
- (4) Read the aperture and exposure.



## FOR THE OPTICAL METER:

- (1) After 5 seconds, read the light value.
- (2) Adjust to this figure.
- (3) Read the aperture and exposure.

	Degrees of Sensitiveness according to				
Scheiner	17	20	23	26	29
Hurter & Driffield	310	650	1300	2700	5500
DIN°	10/10	13/10	16/10	19/10	22/10

In order to still further simplify the instrument, a Depth-of-focus table (i) for the most important "stops" has been inserted below the light value scale (g). This enables the user to tell at once the correct aperture (or stop) to be used in conjunction with the focus desired.

### Example of the use of the Depth-of-focus table.

A group to be photographed, the first row 12 feet from the camera and the last row 22 feet. To get a clear picture extending over the entire group, a certain distance focussing as well as adjustment of the lens opening is essential.

The reading off of the focal distance, as well as the correct aperture, is found in the following manner:

Looking down the column "sharp" in the region of 12—30 for the above-mentioned photograph, we read in the column "focussing" the focal distance of the camera (15 feet). Now turn from the aperture observed in the first upright column, horizontally as far as the stopping-point. The reading is  
 for 5 cm = 2" . . . f/4.5;      for 7.5 cm = 3" . . . f/6.3; etc.

## INSTRUCTIONS FOR USE OF THE ELECTRO-BEWI FOR CINEMATOGRAPHY.

The manipulation of the ELECTRO-BEWI for cinematography is the same as for ordinary photography. The only difference being that after the light-value figure has been ascertained, it is the number of "frames" and not the exposure time, which appears against the aperture scale; and the corresponding aperture for each "frame" is easily readable.

With the standard model, the two inner scales of frames and aperture apply to each other and the two outer scales similarly correspond.

In the LEICA model, red applies to red and black to black.

The cine scales are calculated on the almost universal shutter opening of  $180^\circ$ .

Owing to the frequent innovations in the film trade, it is impossible to show scales of sensitiveness for the various new color films and reversible films; in this connection it is advisable to ask your photo dealer regarding the "speed" of such film.

## **COLOR FILMS**

It is imperative to read the maker's instructions very carefully, as issued with the films.

The very slight "exposure margin" of color film necessitates exact calculation for the exposure. With black-and-white pictures the correct exposure can be measured directly with the meter, but with color pictures is it somewhat different. The brightness of color must be taken into consideration, as well as the light-power inherent in such color. For this reason, the light value shown by the meter must not be taken as the same for every color.

The following notes will be helpful in making calculations with the Electro-Bewi Meter of the brightness of various objects

for color photography:

AGFACOLOR:

adjust to  $7\frac{1}{10}$  DIN

KODACHROM K 135 and K 135 A

$13\frac{1}{10}$  DIN

AGFA New  $15\frac{1}{10}$  DIN COLOR FILM; adjust the meter to  $16\frac{1}{10}$  DIN

It is more than essential that the photo cell should be protected against light entering from above or from the sides.

## 1. DAYLIGHT PHOTOGRAPHY.

As a general rule, best results are obtained on clear objects of differing color, free from shadows. In these conditions, work directly from the light-value given by the Electro-Bewi meter.

For dark-colored objects (in sunshine) where blue, brown and green predominate, adjust to 1 or  $1\frac{1}{2}$  values less than recorded by the meter. If the sunlight is not very clear, reckon

a further half-value less. In cloudy weather (or in the shade on sunny day) reckon 2 light values less than shown by the Electro-Bewi.

## 2. ARTIFICIAL LIGHTING (Nitrophot strength)

For Agfacolor Film, use Agfafilter No. 69.

With bright colors, calculate 3 values less than the meter shows. With dark colors, 4 values less.

Kodachrom Film K 135 requires the special artificial light filter sold for use with the film. With bright objects,  $1\frac{1}{2}$  values less; with dark-colored objects, 2 values less than shown by the Electro-Bewi.

Kodachrom Film K 135 A is intended to be used without a filter. Objects with predominantly bright colors are to be valued at half a degree **more** than recorded on the meter, but medium to darkcolored objects should be valued exactly as indicated by the Electro-Bewi.

It is advisable to take several photographs of the same object from the same standpoint, giving different exposures each time. You will then be able to compare results, and you will be in a position to classify the manner in which different colors "photograph" under varying conditions of weather, light, time of day, exposure time, apertures used, etc.



## Rations

## POST EXCHANGE

Sales No.

HQ U.S. FORCES  
EUROPEAN THEATER

SEP 10 1946

ITEM	AMOUNT
TOBACCO	
CANDY. (BAR, ROLL, GUM)	
SOAP	
1 Light - Meter	\$29.50
	th
	pd w mfl
TOTAL	

Druckerei Otto Lembeck / Ernst & M. Butzbach