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*How to use your*

Type PR-30



# **EXPOSURE METER**

INSTRUMENT DEPARTMENT

**GENERAL  ELECTRIC**

WEST LYNN, MASS.



www.orphancameras.com

AND READ  
ENING

GEJ-2153E  
1-55 (25M)

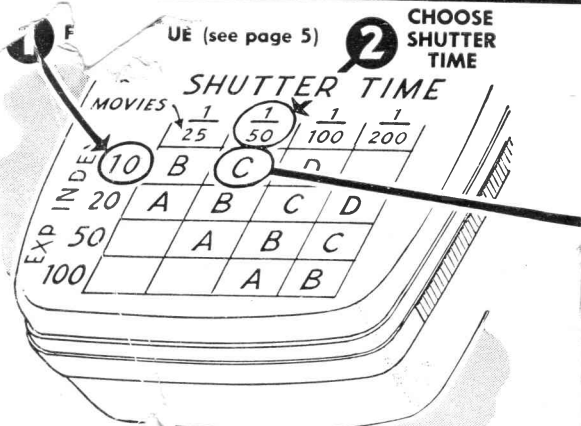
PRINTED  
IN  
U.S.A.

THE  
*Mascot*

Once you have learned the simple operating steps illustrated in the example below, you do not need to carry this book with you. An easy-to-use table showing which scale to use for the more common films and shutter times is folded right on the back of the meter. Just the preliminary step sets the Mascot\* for the film and the shutter time. Then, only aim the meter at the scene and read the

J. S. Pat. Off.

## ... QUICK GUIDE

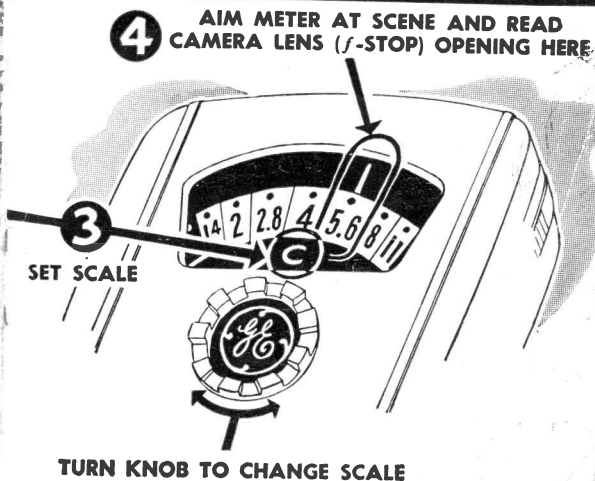


if you are using a film whose exposure index does not appear on the back of the meter, use the exposure index nearest to it. An expanded table is shown on page 7.

correct setting for your camera lens.

You will find the Mascot especially useful if you are a photographer who consistently uses the same film at the same shutter speed (in example 1/50 second). However, should you require more information, an expanded table covering a large range of films and shutter times, and information to assist you in measuring exposure are included in this book.

## TO YOUR MASCOT...



## GENERAL SUBJECTS

The Mascot is designed to measure reflected light. Always point it toward the scene. For the great majority of scenes, whether in color or black-and-white photography, it will give the preferred exposure when aimed directly at the center of the scene from camera position.

## SPECIAL SUBJECTS

### For Portraits:

Take a close-up reading of the subject by holding the Mascot from three to six inches from the face. Use care not to measure the shadow that may be cast by the meter.



### With Back or Side Lighting:

When the principal subject is dark compared to the scene because of shadow, take a close-up reading on that subject. If the reading is taken from camera position, double the exposure (by setting twice the time or by using the next lower *f*-stop—see page 9).

### Indoors:

For indoor pictures, take a close-up reading on the subject.

## THE SUBSTITUTE METHOD

When the subject is inaccessible and a close-up reading is desired, take the reading on a substitute object of similar characteristics. The hand can be used as a substitute in many cases.

Film values for most films are now known as American Standard exposure-index numbers. The numbers for some of the films are given below:

Color Film	Exposure Index	
	Daylight Film	Tungsten Film Type A or Type B
AnSCO Color—35-mm; 828; roll; 8- and 16-mm movie	10	12
Kodachrome 8-, 16-, and 35-mm; Bantam (828)	10	16
Kodacolor Roll Film (negative)	25	20
Ektachrome Roll Film	8	10
Black and White Film	Exposure Index	
	Daylight	Tungsten
AnSCO		
Superpan Press	125	80
Supreme	50	32
Plenachrome Roll	50	25
Triple S Pan	200	160
Dupont—Arrow Pan	160	125
Kodak		
Super-XX	100	80
Plus-X	50	40
Verichrome	64	32
Tri-X Pan	200	160
Panatomic-X	32	25
Super Panchro — Press Type B	125	100

If your film is not listed here, see the instruction sheet packed with the film.

# HOW TO CHOOSE THE SCALE

The choice of the Mascot scale depends on the film exposure index and the shutter time (shutter speed).

1. Film exposure indexes of the more popular films are listed on page 5.
2. Shutter time is the factor that you must decide. The following can be used as a guide:
  - a. Use 1/50 second or faster for hand-held exposures.
  - b. Use 1/100 second or faster for action shots.
  - c. When using speeds of 1/25 second and slower, it is recommended that you use a tripod to steady the camera.

The table opposite shows which scale to set on your Mascot for a wide range of shutter times and exposure indexes. On the line with the exposure index number for your film, find the scale letter in the column for your shutter time.

(Note: For movies, frames per second are shown at the bottom of the table.)

*As convenient the exposure index number of your film is not included in the table below, use the exposure index nearest to it.*

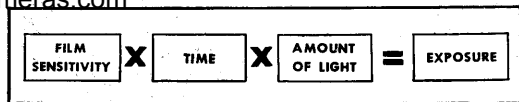
		SHUTTER TIME FOR STILLS (Seconds)							SCALE
		$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$	$\frac{1}{400}$	
FILM EXPOSURE INDEX	2.5	B	C	D					
	4	A	B	C	D				
	5	A	B	C	D				
	6			C	D				
	8	*	A	B	C	D			
	10	*	A	B	C	D			
	12			B	C	D			
	16	†	*	A	B	C	D		
	20	†	*	A	B	C	D		
	25			A	B	C	D		
	32		†	*	A	B	C	D	
	40		†	*	A	B	C	D	
	50			*	A	B	C	D	
	64			†	*	A	B	C	
	80			†	*	A	B	C	
100			†	*	A	B	C		
125				†	*	A	B		
160				†	*	A	B		
200				†	*	A	B		
		8	16	32	64				
		FRAMES PER SECOND FOR MOVIES							

\*Set Scale A but use the next *f*-number to the right of that shown by the instrument pointer.

†Set Scale A but use the 2nd *f*-number to the right of that shown by the instrument pointer.

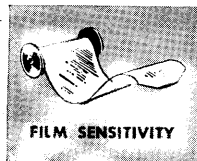
The three main factors which control exposure are:

1. Exposure Index
2. Shutter Time
3. f-Stops



## 1. Exposure Index

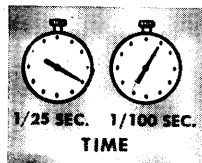
Photographic films are manufactured in many types. The main difference between them affecting your exposure meter is sensitivity to light. The sensitivity of the film is one factor that governs the scale you set on your meter.



The American Standards Association has assigned numbers for rating films according to their sensitivity to light. These numbers are called exposure index numbers, which, numerically, are higher for the more sensitive films and lower for the less sensitive.

## 2. Time (shutter speed)

The length of time the film is exposed to light is controlled by the length of time the camera shutter stays open. This is called shutter speed and is usually expressed in seconds and fractions of a second; for example, 1/25 second, 1/100 second, etc. They are marked on your camera as 25, 100, etc.

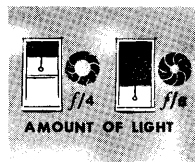


It should be remembered, especially when using speeds in the average range, that more pictures are spoiled by camera movement than in any other way, and it is recommended that speeds of 1/50 second or higher be used for hand-held exposures.

## 3. f-Stops

The amount of light that is allowed to reach the film is controlled by the relative size of the camera lens opening.

The relative lens opening, in most cameras, is adjustable and is set according to a numbering system. These settings (relative openings) are called f-stops and are marked on your exposure meter and camera. f-stops are numerically higher for small relative openings, and lower for larger relative openings; for example, f/2 admits four times as much light as f/4, and f/4 admits four times as much light as f/8.



Thus, the amount of light which reaches the film is controlled by setting the f-stop on your camera. And, since the f-stop system deals with relative openings, different sized lenses admit the same relative amount of light when set at the same f-stop.



## EXPOSURE SETTING

Your meter will measure the exposure and give you the correct f-stop to set on your camera for the shutter speed you have chosen.

The original Mascots did not have the scale selector table on the back, and the scales were identified by numbers.

From the tables below, on the line with the exposure index number for your film, find the scale number in the column for your shutter time (frames per second for movies).

**STILLS****SHUTTER TIME**

	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$
5			5			
8	50		10	5		
10	50		10	5		
12	50		10	5		
16		50	16	10	5	
20		50		10	5	
25				16		
32			50	16	10	5
40			50		10	5
50			50		16	
64				50	16	10
80				50		10
100				50		16
125						16

EXPOSURE INDEX NO.

SCALE NUMBER

**MOVIES****FRAMES PER SECOND**

	8	16	24	32	48	64
5	10	5				
8	16		5			
10	16	10	5	5		
12		10		5		
16		16	10		5	
20	50	16		10	5	5
25	50		16	10		5
32				16	10	
40				16		10
50		50			16	10
64		50				16
80						16
100				50		

EXPOSURE INDEX NO.

SCALE NUMBER

The General Electric Exposure Meter Information Bureau and Sensitometric Laboratory are at your service.

The purpose of this Bureau and Laboratory is to offer assistance in solving your problems dealing with exposure and lighting. Address all correspondence to:

General Electric Company  
Exposure Meter Information Bureau  
40 Federal St., West Lynn 3, Mass.

**SERVICE**

If your PR-30 proves defective, return it to your dealer or, after packing carefully in a well padded box, to:

**For users east of the Rocky Mountains:**

General Electric Company  
40 Federal Street West Lynn 3, Massachusetts

**For users west of the Rocky Mountains:**

General Electric Company  
1090 Harrison Street San Francisco 3, California

**For Canadian users:**

Canadian General Electric Company  
Industrial Center No. 5 Quebec City, P.Q., Canada

**For foreign users:**

Contact your nearest International General Electric Company office for service instructions.

If the condition results from defects in material or workmanship and your PR-30 is mailed or shipped within one year after date of purchase, the meter will be repaired without charge. However, if the condition results from abuse or mishandling, or if more than one year has passed since the date of purchase, a charge at standard rates will be made for service and postage.