WESTON

*Instructions for using your **NEW** ruggedized*

WESTON MASTER IV EXPOSURE METER

WESTON Model 745

Ruggedized MASTER IV

. . . the result of over 25 years' experience in the production of photo-electric type exposure meters by the world's leading manufacturer of precision electrical measuring instruments.

YOUR MASTER IV is the most accurate and versatile exposure meter available to any photographer — amateur or professional. Its superior sensitivity and truly universal design will quickly provide correct camera settings for all your pictures whether in color or black and white, indoors or outdoors, and with all still or movie cameras.

The Master IV is calibrated to ASA specifications, has exposure indexes up to 16,000, and will read reflected or incident light values on the same scales. When desired, the ON-OFF pointer lock can be used to conveniently hold any light reading. The spring-suspended, jeweled movement assures a lifetime of dependability.

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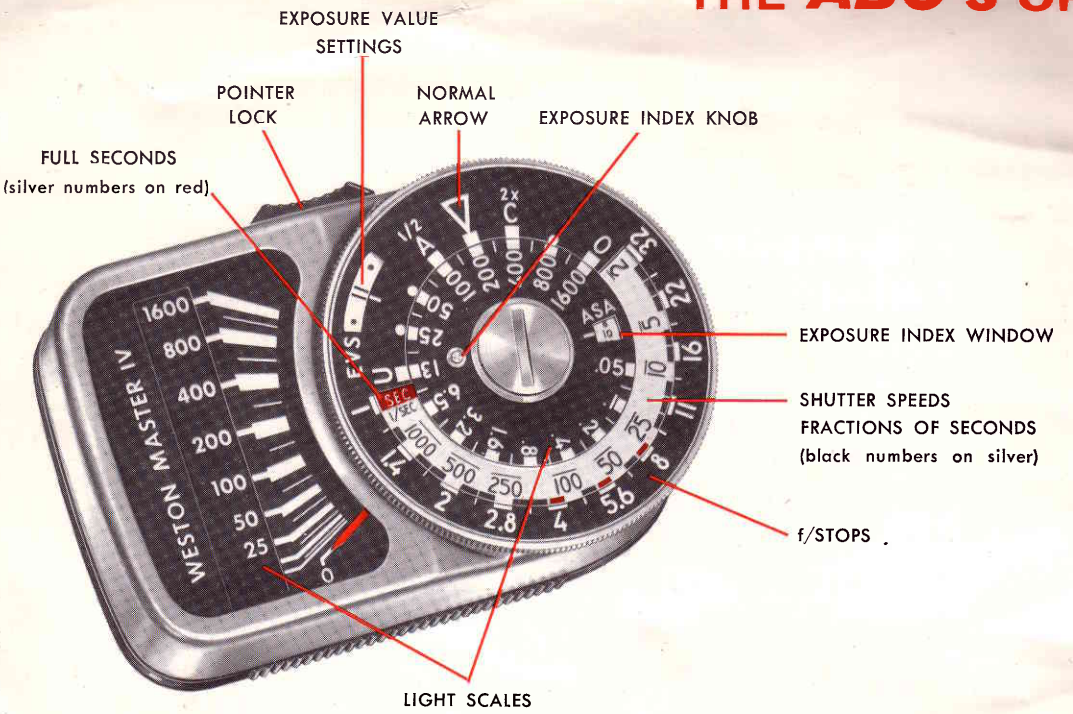
THE ABC'S OF



NOTE: Red blocks adjacent to 1/25, 1/50 and 1/100 second are, respectively, 1/30, 1/60 and 1/125 second.

YOUR MASTER IV

High and Low Light Scales

Your meter has two sliding light value scales to provide correct readings under extremely bright or very dim light conditions. Movement of the hinged baffle automatically changes scales.

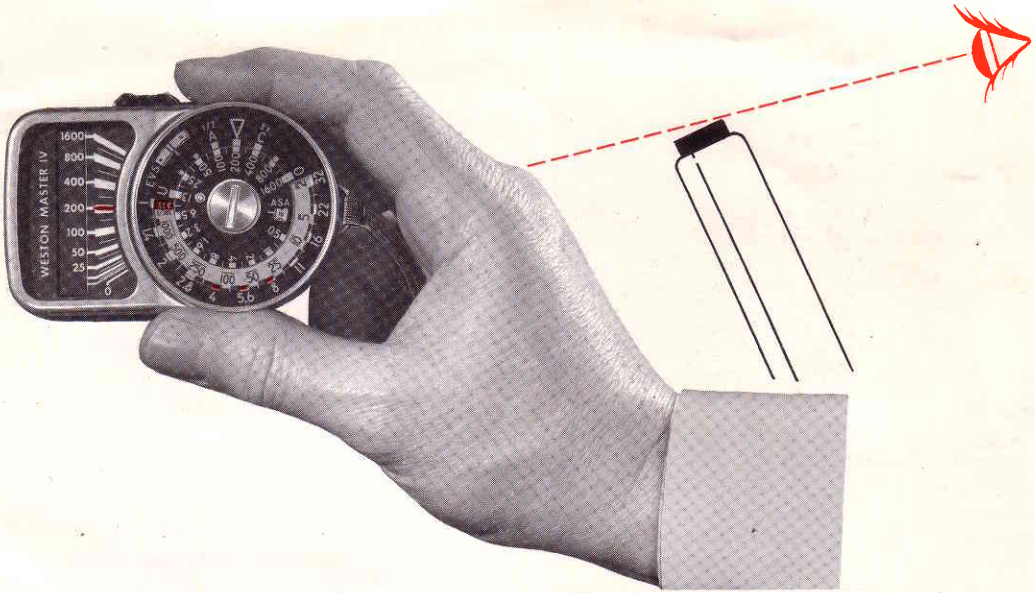
When the baffle is closed the high light scale (0-1600) moves into position. The baffle should be kept closed when the light reads 25 or higher. If the light reading is less than 25 the baffle should be opened for more accurate readings on the extended (0-25) low light scale.

REFLECTED OR INCIDENT LIGHT

Reflected light is light reflected from the subject to the camera. Incident light is the light which falls on the subject. Measurement of either reflected or incident light can be used to determine correct exposure.

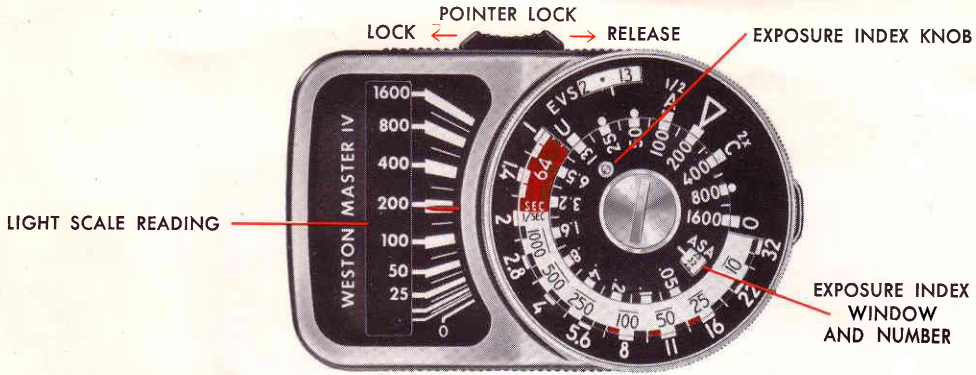
The Master IV is basically a reflected light meter but with the addition of the Weston Invercone it can be used to measure incident light. (See Page 17). For certain types of photography such as portraits or copy work incident light will be found quite convenient but for the majority of pictures reflected light is more suitable. The one you use will depend upon prevailing conditions and your own personal preference.

HOLDING AND AIMING THE METER



The best way to hold the meter is shown in the illustration. Be careful not to obstruct the photocell with your fingers or have the neckcord dangling across the cell opening. In outdoor general scenes, when the reading is taken from the camera position, tilt the meter at an angle slightly downward so that your line of sight passes over the front edge of the pointer lock, as shown in the insert. This will exclude sky areas which would tend to inflate the reading and cause underexposure.

THE *QUICK-EASY* WAY TO



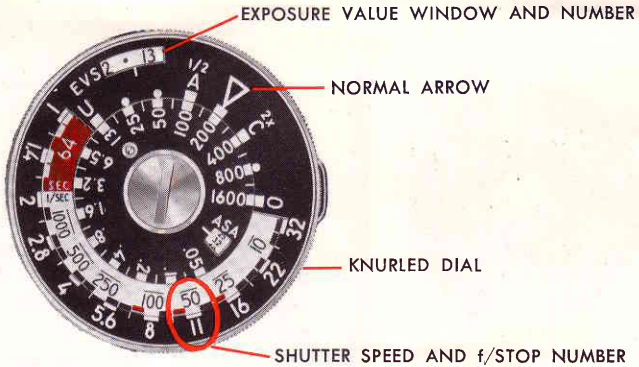
SET THE FILM EXPOSURE INDEX by moving the Exposure Index Knob until the Exposure Index number of your film appears in the Exposure Index Window. The Exposure Index number (commonly called "ASA Index") is given on the film manufacturer's data sheet enclosed with the film. The more popular films are also listed with their Exposure Index numbers on page 29. For example let's assume an Exposure Index number of 32 (See illustration).

AIM THE METER at the subject or scene and note the reading on the light scale (assume 200).

ON-OFF POINTER LOCK

By sliding the pointer lock to the left, the pointer will be locked at the reading. To release the pointer, slide the pointer lock to the right.

TAKE REFLECTED LIGHT READINGS



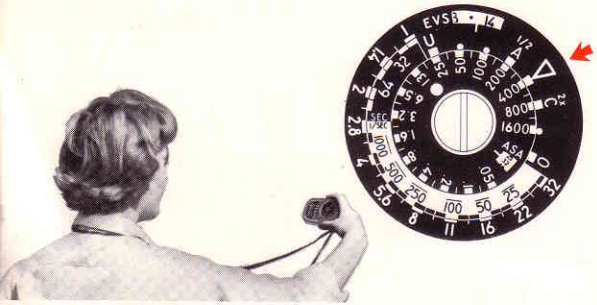
POINT THE NORMAL ARROW at this reading (200) on the LIGHT SCALE of the exposure control dial by turning the large knurled outer dial.

SET YOUR CAMERA with any combination of SHUTTER SPEED and F/STOP indicated, for example 1/50 second at f/11. Any combination of shutter speeds and f/stops opposite each other on the exposure control dial will give the same correct exposure: 1/100 second, f/8; 1/25 second, f/16; etc. The combination you select depends on whether you want a fast shutter speed (with its corresponding lower f/stop number) to stop action occurring in the scene; or depth of field with a higher f/stop number and its slower shutter speed.

EXPOSURE VALUE NUMBERS — Polaroid Land cameras of recent manufacture, and certain other cameras are calibrated in Exposure Values. If you use this system, set your camera with the Exposure Value number appearing in the Exposure Value Window. In this instance, number 13.

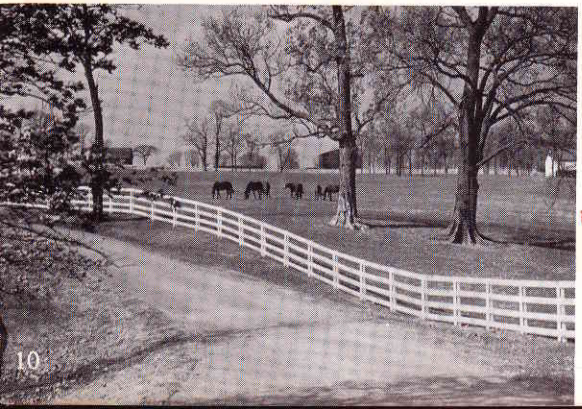
3 Basic Methods for

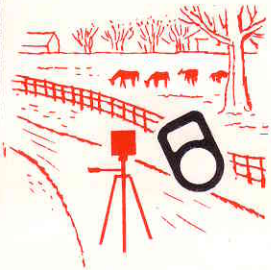
1 The Camera Position Method



This is a simple and quick method of using your meter and is usually used for most outdoor general scenes.

Hold the meter as shown on page 7 aiming toward the scene from the camera position. Point the meter down slightly to avoid reading sky areas which will give inflated values and cause under-exposure. Set the arrow on the exposure control dial to the light reading obtained, for example 400. Select any combination of f/stop and shutter speed opposite each other.





EXAMPLE:

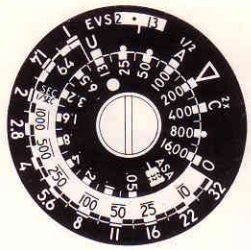
Meter Reading 400
Exposure Index 32
Use Normal Arrow
Exposure 1/100 Sec—f/11

Correct Exposure

2 The Close-Up Method

This method should be used for portraits or any scene where there is but one object of interest and the background is of no importance.

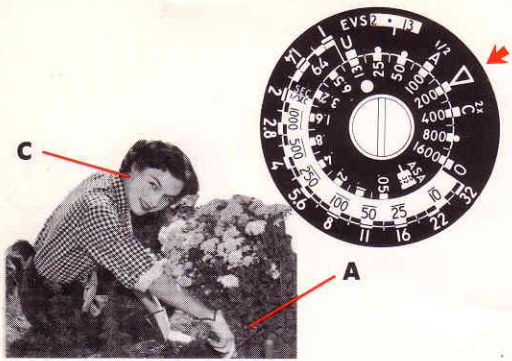
In general, the meter reading should be taken about six inches from the subject, but in no case should the meter be held farther away than the subject's smallest dimension. Set the *normal arrow* on the exposure control dial to this reading and select any combination of f/stop and shutter speed opposite each other. When the meter reading is taken from a person's face set the "C" position on the dial to the reading instead of the normal arrow (assume 400, see illustration). Select the camera settings in the usual manner. If the shadow of the meter or your hand is cast on the subject be sure not to include it in the reading. (Turn page for Method Number 3.)



EXAMPLE:

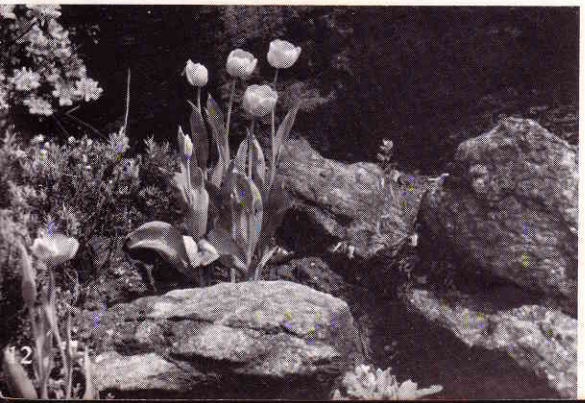
Meter Reading 400
Exposure Index 32
Use "C" Position
Exposure 1/50 Sec.—f/11

3 *The Brightness Range Method*



This is the most accurate method for determining the correct exposure of scenes consisting of a wide range of bright and dark light values.

Take two close-up readings, one for the darkest object and one for the brightest. In color photography, black and white are not considered colors and should not be measured. Set the normal arrow midway between the two values measured. This will give an average exposure. For example, assume the darkest object reads 100 (A) and the brightest 400 (C). The normal arrow is set midway between at 200, as illustrated.



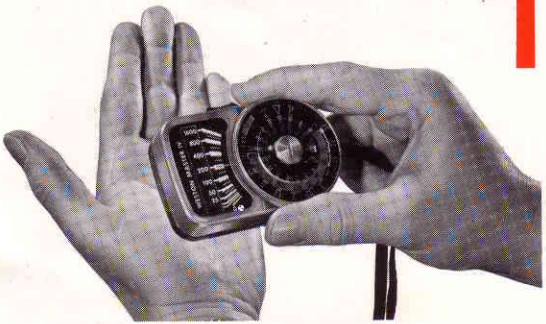
EXAMPLE:

Meter Reading
Dark Area 25
Bright Area 400
Use Normal Arrow
Midway at 100
Exposure Index 64
Exposure
1/50 Sec.—f/11

Substitute Readings

If your subject is inaccessible for a close-up reading, substitute readings of nearby similar objects in the same light. Nearby trees for trees in the scene, rocks for rocks, etc. The palm of your hand is a good substitute for a person's face.

Set the arrow on the exposure control dial to the light reading; use the "C" position when reading flesh tones.

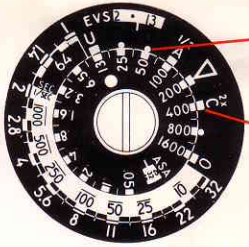


EXAMPLE:

Meter Reading 800
Exposure Index 32
Use "C" Position
Exposure 1/50 Sec.—f/16

The U and O Positions

On the Exposure Control Dial



Black and white photographic film has a range within which it reproduces the brightness of objects in a scene in tones of gray from white to black. Knowing these limits enables you to expose so that the negative has the overall density most desired. The U and O positions on the exposure control dial are the limits of correct exposure for black and white film.

When a meter reading is taken from the camera position the reading is the average brightness of the entire scene. Assume in the illustration this reading is 200. From close-up readings of the hair, the darkest object, and of the blouse which is the brightest object, readings were obtained of 50 and 400 respectively. Setting the normal arrow at 200 you will note that the 50 and 400 values are well within the U and O positions on the dial and therefore both the high and low brightness values will be included on the film.

If the brightness ratio were greater (1.6 to 400) and the normal arrow placed at the midway point (25), it will quickly be seen that objects having a brightness value of 400 or more will be overexposed since they fall outside the O position.

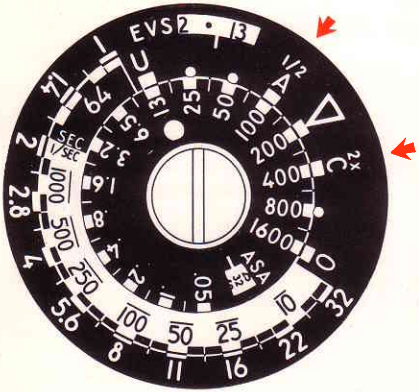
Extreme Low Light Readings

The O position will also prove very useful when black and white pictures are to be taken in extremely low light. By taking a close-up reading of the brightest object in the scene and setting the O position at the corresponding value on the light scale of the exposure control dial correct exposure will be given to all areas in the scene which have brightness values corresponding to the range covered by the U and O positions.

Occasionally a backlighted or very contrasty scene exceeds even the wide acceptance range of black and white film. In this event the exposure can be keyed to that portion of the scene, either the shadows or the highlights whichever are of most importance, by placing the U or O opposite the darkest or brightest reading respectively.

The A and C Positions

On the Exposure Control Dial



The A and C positions which represent a brightness ratio of 4 to 1 can be of great value in exposing for color shots. Attempt to have the primary colors of interest fall between the A-C positions for most faithful rendering of those colors. While most color films now have a range, or latitude, that exceeds this ratio, if the primary colors fall within the A and C position you can then be assured that the balance of the scene will be properly exposed within the limits of the film you are using.

With black and white film the "A" is used to indicate "Absence of Contrast" and "C", "Contrast". The A provides a convenient way of halving normal exposure for "flat" scenes such as landscapes where there is no extreme contrast between highlights and shadows. The C provides double normal exposure as indicated by the 2X and is used for scenes of very high contrast such as backlighted subjects.