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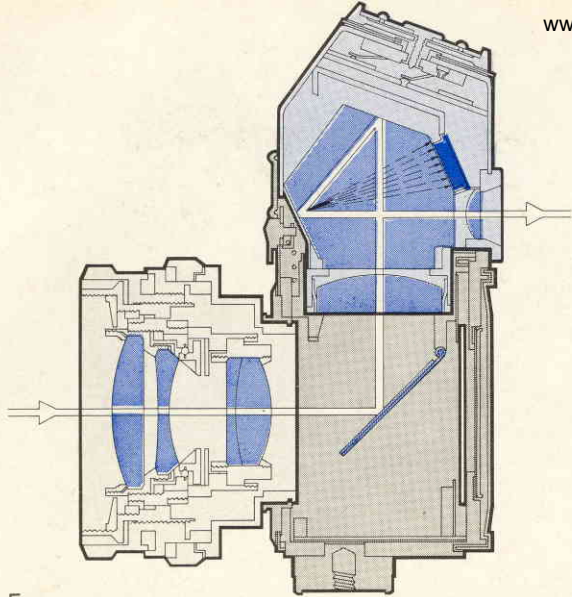
INSTRUCTIONS FOR USE

for Cameras of the Exakta System

EXAMAT



Harwix Berlin



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Measurement Through the Lens

The sectional drawing illustrates the path of a ray of light within the Exakta camera. Passing through the lens, light is reflected from the mirror to the pentaprism via the microgrid Fresnel lens screen. In the pentaprism the light of ray is refracted several times and emerges again through the viewfinder eyepiece. The light is measured by a cadmium sulfide (CdS) photo-electric cell which is mounted directly in the pentaprism.

Measuring Range

The measuring range of the EXAMAT covers 13 exposure values. Each shutter speed from $1/1000$ s to 8 s can be combined with each f-stop number from 22 to 1,4.

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Readiness for Operation

Type of Battery and How to Insert it

The light is measured by a photo-electric cell. The voltage source is a Mallory PX 13 button battery (mercury oxide cell). The battery should be inserted into the EXAMAT before inserting the EXAMAT into the camera.

Remove battery cover (1) with the aid of a coin, insert battery with the + sign directed upwards, then screw cover into position again.

The life of the battery varies from about one to one and a half years, provided the measuring mechanism is switched off after each measurement. Spare batteries are available from specialized photographic dealers.

Inserting the EXAMAT into the Camera

Insert the EXAMAT into the camera exactly as the normal prism finder.

Insert the EXAMAT from above and push it down gently until it clicks into place. Please do not use force.

Setting Film Speed

Retaining main setting dial (5), set film speed with the aid of the two stubs (11) so that the DIN value coincides with index mark (9) or, in case of ASA values, coincides with index mark (10).

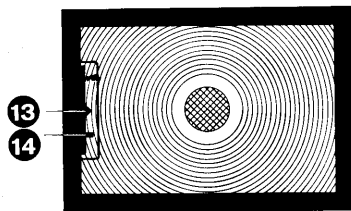
Checking of Readiness for Measurement

Switch on measuring mechanism by shifting switch (3) to the green on-position index mark (2).

Fully open the diaphragm and rotate the main setting dial (5) from stop to stop (good light conditions required). If the meter needle (14) on the left-hand side in the viewfinder reflex image moves, the EXAMAT is ready for operation. Switch off measuring mechanism by shifting switch (3) to the red off-position index mark (4).

If the meter needle fails to move although all operating instructions have been closely observed it is necessary for the battery to be replaced.

Mode of Operation



Measuring bracket as seen in the viewfinder reflex image

The EXAMAT affords three ways of measuring and, therefore, can be adapted to any particular shooting situation:

- 1. Varying the aperture setting**
- 2. Varying the shutter speed setting**
- 3. Shutter speed/aperture combinations**

1. Varying the Aperture Setting

(the shutter speed is preselected)

This measuring method should be employed when taking photographs of moving objects. In case of varying light conditions only the aperture has to be adjusted with the camera held at eye-level. Thus measuring and taking the picture can take place in rapid succession.

This measuring method requires the automatic diaphragm mechanism to be moved to the inoperative position.

Set the shutter speed on the camera according to the prevailing light conditions.

Turn main setting dial (5) until the shutter speed is in register with the white setting

mark (8). The aperture dial (6) is now inoperative but for clarity's sake it should be turned so that the black setting mark (12) is likewise in register with the white setting mark (8).

Switch on measuring mechanism by shifting switch (3) to the green on-position index mark (2).

After focusing with the diaphragm fully open, turn the aperture selector ring at the lens until the meter needle (14) on the left-hand side of the viewfinder reflex image is in exact register with the zero index mark (13).

Press the shutter release.

Switch off measuring mechanism by shifting switch (3) to the red off-position index mark (4).

If the needle (14) cannot be zeroed with the index mark (13) it is not possible to take a well-

exposed picture at the shutter speed pre-selected and, therefore, a longer exposure time has to be chosen.

2. Varying the Shutter Speed Setting (the f-stop value is preselected)

This method is particularly advisable if a particular aperture setting is required to obtain a given depth-of-focus. This measuring method requires the automatic diaphragm mechanism to be moved to the inoperative position.

After focusing with the diaphragm set at full aperture, stop down to the required f/value. The aperture dial (6) is now in-

operative but for clarity's sake it should be turned so that the black setting mark (12) is in register with the white setting mark (8).

Switch on measuring mechanism by shifting switch (3) to the green on-position index mark (2).

With the viewfinder eyepiece at eye-level, turn main setting dial (5) until the needle (14) on the left-hand side of the viewfinder reflex image coincides exactly with the zero index mark (13).

Read shutter speed from the white setting mark (8) and set corresponding value at the camera lens.

Now press the shutter release.

3. Shutter Speed/Aperture Combinations or Measuring at Full Aperture (with the automatic diaphragm mechanism engaged)

This method corresponds to that of a manually operated exposure meter but offers the great advantage that only such light is measured as actually affects the quality of the photographic image. The automatic diaphragm mechanism remains engaged.

Turn aperture dial (6) until the smallest aperture value (= open diaphragm) of the lens employed is set against the white setting mark (8).

Switch on measuring mechanism by shifting switch (3) to the green on-position index mark (2).

Focus.

Turn main setting dial (5) until the needle (14) on the left-hand side of the viewfinder reflex image exactly coincides with the zero index mark (13).

Switch off measuring mechanism by shifting switch (3) to the red off-position mark (4).

Read off the shutter speed aperture combinations which now coincide with each other on the shutter speed dial and on the aperture dial. Select the values required for your particular shot and set them on the camera and lens.

Press the shutter release.

General Instructions

Bright Back or Side Lighting

To prevent disturbance from side light, a rubber eyecup should be fitted in the viewfinder eyepiece. Into this eyecup a special lens can be fitted by any optician on request so that spectacle wearers can use the EXAMAT without glasses.

Handling

The EXAMAT is a sensitive electrical measuring instrument. To maintain its precision it should be protected from shocks, dust, sand and strong light.

Safe Keeping

Ever-ready cases are available from photographic dealers which fit the camera with the EXAMAT inserted.

Make sure that the microgrid Fresnel lens is always protected by the cover supplied along with the EXAMAT when keeping it separate from your camera.

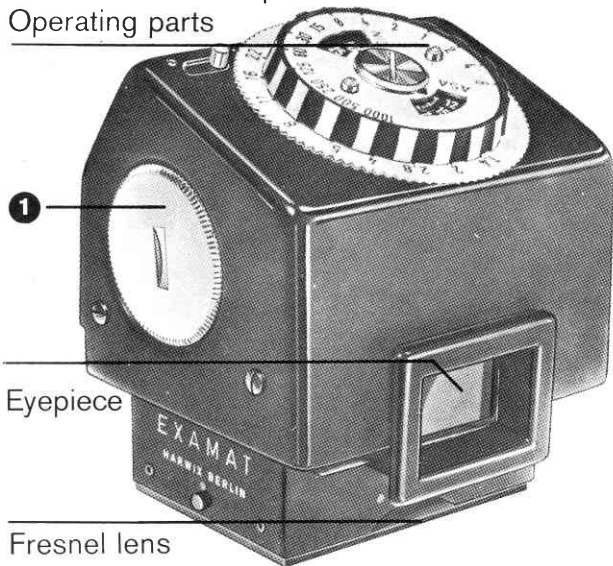
Proper Preselection of Shutter Speed

Movement	f-stop value in s
Moderate (pedestrian)	1/ 60, 1/ 125
Fast (traffic, sports)	1/175, 1/250, 1/ 500
Very fast (racing cars, airplanes)	1/1000

Telephoto lenses	f-stop value in s
Focal length in mm	not longer than
100	1/ 60
200	1/125
300	1/250

Different light conditions	f-stop value in s
Film speed 18° DIN	
Sunny weather (March-Oct.)	1/175, 1/250
with a light yellow filter	1/125
with an orange filter	1/ 60
Sunny weather (Nov. - Febr.)	1/125
with a light yellow filter	1/ 60
with an orange filter	1/ 30
Covered sky	1/ 60, 1/125
Rainy weather	1/ 30

Operating parts



1
Eyepiece

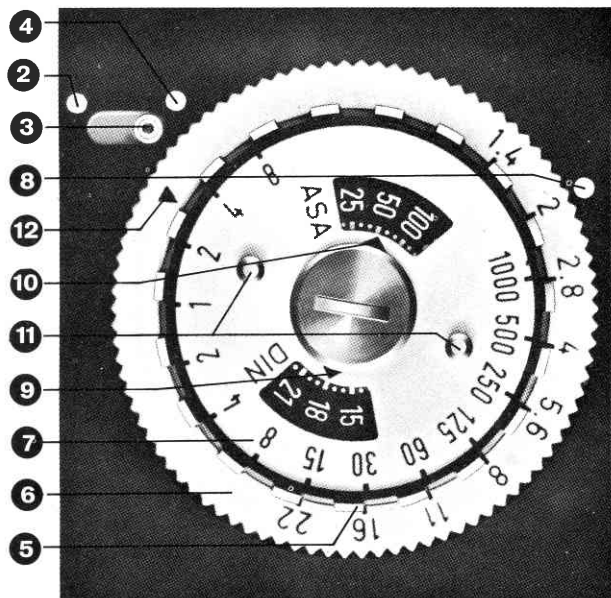
2
Fresnel lens

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Description of Parts

- 1 Battery cover
 - 2 Green on-position index mark
 - 3 Switch
 - 4 Red off-position index mark
 - 5 Main setting dial
 - 6 Aperture dial
 - 7 Shutter speed dial
 - 8 White setting mark
 - 9 DIN film speed index mark
 - 10 ASA film speed index mark
 - 11 Stubs for setting
DIN or ASA film speeds
 - 12 Black setting mark
 - 13 Zero index mark
 - 14 Meter needle
- } (see page 10)

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