Hasselblad Prism Viewfinder PM5 and Meter Prism Viewfinder PME 51

Parts and Components
Items marked * are applicable on both PM5 and PME51

1. Viewfinder Body
2. Meter Control Knobs
3. Setting Scale and Battery Check Window
4. Top Accessory Shoe
5. Interchangeable Eyepiece
6. Rubber Eye-cup
7. TCC System Mark
8. Mounting plate with TCC Display Recess
9. Protective Cover
10. Scale Illumination and Battery Check Indicator
11. Rubber Ring Cushion
12. ISO/ASA Value Selecting Knob
13. Maximum Lens Aperture Value Selecting Knob
14. ISO/ASA Value Display
15. Maximum Lens Aperture Display
16. Battery Check and Meter Start Push-button
17. Battery Compartment Lid
18. 6 V PX26 Battery (or equivalent)

PM5 and PME 51 Common Instructions

General
Optically both prism viewfinders are identical. The viewing angle is 45° to the vertical and the focusing image is unreversed and magnified 3x. The eyepiece (5, fig. 6) is fitted with a rubber eye-cup (6), which can be placed in any position but can also be replaced by a low rubber ring cushion (11), especially suited for users wearing eyeglasses. The entire eyepiece is easily interchanged with corrective eyepieces, available from your Hasselblad dealer.

On top of the viewfinder body (1) is a standard accessory shoe (4) for smaller flash units, flash adapters and other accessories. To remove the protective cover (9) you simply slide it forwards and the opposite to attach it.
Attaching the viewfinder to the camera
For camera operation please refer to the camera instruction manual. Insert the viewfinder in the viewfinder mount on top of the camera body. Push the viewfinder forwards until it reaches a positive stop. When used on the ZOFTCC it activates a switch in the end position, causing the viewfinder display to adapt to the unreversed focusing image. The viewfinder is kept in place when a magazine or the back protective cover is attached.

Corrective eye pieces
You can compensate for your individual eyesight by substituting the entire attached standard eyepiece for one with correction power. Unscrew the standard eyepiece by rotating it counter-clockwise and screw in the corrective eyepiece instead. Keeping the rubber eye cup or cushion ring gives a much better grip on the eyepiece when you screw it in or out. Corrective eyepieces, which also fit all PM and PME1 type viewfinders, are available in power steps of one diopter from -4 through +3 diopters. Consult your optician for recommendation on your individual correction power!

Care and maintenance
Treat the PM5 and PME1 Prism Viewfinders with the same care as any other optical instrument. Keep glass surfaces clean using a lens brush. Keep the protective cover on whenever the viewfinder is not attached to the camera.

PME 51 only Detail instructions
The PME51 features center-weighted integral metering, using a silicon cell with flat response. It is the perfect complement to the spotmeter in the Hasselblad ZOFTCC for overall metering where the spotmeter provides an accurate metering of defined subject areas, but it works just as well on all Hasselblad SLR models. The metered values are indicated by arrow of EV numbers, ranging from 2 to 19, underneath the focusing screen illuminated by red light diodes. The film speed range covers ISO/ASA 25 - 6400 (DIN 15 - 39). The operating knobs and buttons are countersunk and scales and indicators are behind windows to protect from physical damage and contamination.

NOTE: If no EV appears, although the battery is in good order, the ISO/ASA and MAX aperture settings combinations with the light conditions may have resulted in an EV outside the meter’s range.

How to use the PME 51
Three different settings should be made or checked before you start using the meter:
1. The lens must not be stopped down. Readings should always be taken with the lens wide open.
2. Set the maximum aperture of the lens (the lens’ speed) in the clear part of the window over the mark MAX (15, fig. 7) using the selector knob, also marked MAX (13). For legibility reasons only the most common ISO/ASA values have been indicated.
3. Set the ISO/ASA film speed in the clear part of the of the window over the mark ASA (14, fig. 7) using the unmarked selector knob (12). For legibility reasons only the most common ISO/ASA values have been indicated.

The complete scale reads:
Half-stops: 2.4, 3.4, 4.8, 6.8
Full stops: 2. 2.8 . 4 . 5.6 . 8

The meter viewfinder is now ready for use.

Taking readings
Keep in mind that the EV produced by an integral reflection exposure meter is an average that corresponds to an overall 18% grey surface! Aim the camera at the subject and start the meter by a short push on the meter start button (16, fig. 8). Do not keep it depressed - half a second is sufficient. The exposure value is displayed on the EV scale underneath the viewfinder image until the meter automatically turns itself off after approx. 20s. Pushing the button again revives the meter for another 10s. Normally a single EV is illuminated, but stray light may also faintly illuminate the next higher and lower EV. However, if two adjacent EV appear equally bright,
the correct EV is the half step in between. Transfer the reading to the orange EV scale on the right hand side of the lens. The scale has click-stops for each full EV and also for each intermediate half EV setting. The metering is made in real time. The displayed EV cannot be locked or stored. When you move the camera about in the subject, the displayed EV will keep changing as the brightness of the subject changes. 

**NOTE:** The eye must be kept close to the rubber eye-cup (6, fig. 6) during the metering. Stray light entering the viewfinder through the eye-piece can lead to an erroneous reading.

**Changing lens and film**

When changing the lens, do not forget to set new maximum aperture [lens speed] with the MAX selector knob (13, fig. 7). The same applies when you change to a film with a different film speed. Remember to set the new film speed with the marked selector knob (12, fig. 7).

**Changing focusing screen**

The exposure meter in your PME 51Viewfinder is adjusted to the very bright Acute Matte focusing screens. If you change to any other of the Hasselblad focusing screens or use the PFE 51 on earlier Hasselblad camera models you have to compensate for the lower brightness of these screens. Use one of the three equally effective ways described below to carry out the compensation:

1. **increase** the ISO ASA setting by twice the film speed as marked on the film package (e.g. to 200 for ISO ASA 100 film)
2. **Reduce** the MAX lens aperture setting one full stop (e.g. to f/4 or an f/2.8 lens)
3. **Increase** the EV reading one full step when you transfer it to the EV scale on the lens (e.g. to EV13 when the meter displays EV12)

**Exposure Compensation**

**A. Intentional over- or under-exposure**

If you have found that you prefer an exposure deviating from the "norm", the easiest way to obtain it is to set a film speed that is different from the nominal speed marked on the film box. Use the film speed selector knob.

**B. Different filters and lenses**

The PME 51 meter obtains its information from the light passing through the lens and falling on the focusing screen. For any filter attached to the lens, the light will be reduced by the factor of the filter. Individual variation between lenses may amount to ± 1/2 EV. Since these variations in filters and lenses could cancel out or reinforce each other, you are recommended to make test exposures to determine the need for calibration of your own equipment.

**C. Focusing screens**

The basic compensation for other screens than the Acute Matte screens is described above (Changing focusing screen). However, there are differences between the other Hasselblad screens and too. To find out the degree of compensation your equipment requires you should make test metering and exposures. When you have established the degree of compensation it can be carried out as described above.

**NOTE:** The Plan Glass Screen (Cat. No. 42200) is not suitable for metering with the PME 51.

**D. Focusing screen masks**

The focusing screen masks for the 6x4.5 cm and 4x5 cm formats also affect the readings and should be compensated for. Test exposures with your own equipment are recommended. Observe that when using these formats bright or dark areas outside the format may affect the meter's readings.

**NOTE:** The solid black masks should not be used.

**Additional care and maintenance, PME 51**

- Remove the battery regularly to clean it for better contact, and check for battery leakage. If there is the slightest sign of leakage, discard the battery.

**Sea and snow**

A beach with bright sand, a sea-scapes with reflections in the water or a snow-covered landscape reflects large amounts of light and may give unwanted high EV readings to overall metering. Take the readings as close to the main subject as possible or try to find a representative surface with a brightness, similar to the subject.

**Close-up photography**

Since the Hasselblad PME 51 meter pixel viewfinder reads the light after it has passed through the lens, it automatically compensates for the increased exposure when you are using extension tubes or bellows in close-up photography.

**PME 51 on the 205TC**

Since the PME 51 is not connected to the camera, it can be used on the 205TC as an overall exposure meter to check the general light level of the subject. You can easily convert the EV reading to exposure data by entering it on the EV scale on the right hand side of the lens and read the shutter speed off the shutter speed scale opposite the selected aperture value.

If you wish to use the EV reading from the PME 51 you should set the 205TC at Manual (M) mode, select aperture or shutter speed, and enter the EV reading from the PME 51 on the EV scale. You can then use the spotmeter in the camera to monitor the EV difference between that setting and any part of the subject area.

**Tolerances**

Exposure deviations may depend on a number of factors. The tolerances of the individual parts in a photographic setup, such as films, lenses, shutter and diaphragm may cancel out or enhance each other. The best way for you to avoid unpleasant surprises is to evaluate the PME 51 together with the rest of your equipment and keep track of the special adjustments that give you the best result.