

TECHNICAL DATA

USING THE ILFORD EM 10 EXPOSURE MONITOR

The ILFORD EM 10 Exposure Monitor is designed to allow you to determine the correct starting test exposure required for color and black & white printing. The monitor can be used with color transparencies as well as color and black & white negatives. It also automatically compensates for changes in exposure due to filtration modifications. Density matching can be achieved as well. Being strictly an enlarging exposure meter, however, the EM 10 is NOT a color analyzer. By following these simple steps the ILFORD EM 10 can easily be calibrated for which ever material is used. If the EM 10 is being used for the first time, install a 9 volt battery. To do this, turn the unit upside down. Using a Phillips head screw driver, remove the three screws nearest the end opposite the probe. Clip the battery onto the exposed leads and re-attach the cover.

CALIBRATING THE ILFORD EM 10 EXPOSURE MONITOR

1. Choose an original transparency or negative that has previously produced a good print at the size normally used. The original should have a full tonal range and include, for a transparency, a highlight area with some detail or (for a negative) a shadow area with some detail. This section should be large enough to cover the probe area of the EM 10 and be near the center of the image.
2. Setup your enlarger to print the negative or transparency chosen in STEP #1. If a variable contrast paper is used to print black & white negatives, the normally used filter (Filter 2 -3) should be positioned as required. Enlarge, compose and focus. Set the aperture of the lens to the middle of its scale, e.g. 50mm Lens Range f4 - f22 would be between f8 & f11. Make a pleasing straight print in the normal manner with no burning or dodging. Use the timer to increase and decrease exposure as needed. When finished making the final print, leave everything setup exactly as used to generate this print. Note the exposure time used and write it down on the box of material being exposed.
3. Position the EM 10 on the base board. Turn off all the lights including the safelight if one is being used. Turn on the focus of your enlarger. Turn on the EM 10 with the switch on the left side of the unit. Position the probe in a highlight area with some detail when using a transparency or a shadow area with some density for negatives. The chosen area should be as close to the center of the image as possible.
4. Rotate the dial, left or right, until the GREEN light is lit. Note the number or tape the dial in position. Turn off the EM10 and your enlarger. Turn on the lights. Write the number down on the box of printing material. Your ILFORD EM 10 Exposure Monitor is now calibrated for that specific box of paper, and that particular type of film.

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You can now measure any original of the same type, Color transparency or B&W or Color negative, to determine the correct starting exposure time.

1. Set up the original. Size, compose and focus. If a variable contrast B&W paper is used, the normally used filter (Filter 2 -3) should be positioned as required.
2. Set the timer to the time you wrote on the box of paper (refer to STEP #2- CALIBRATING THE ILFORD EM 10 EXPOSURE MONITOR). Make sure the number on the dial of your EM 10 matches the number written on the box of print material being used.
3. Turn off all the lights including the safelight. Turn the enlarger to focus. Position the probe in a highlight area with some detail when using a transparency or a shadow area with some density for negatives. Turn on the EM 10. Rotate the aperture of the lens until the GREEN light on the EM10 comes on. The exposure is now set for the first test.

If the EM 10 has been calibrated correctly, the density generated by the measured exposure should match the one used in the calibration procedure. NOTE: You will have a different calibration number for each different print material (Color Neg., Color Transparency or B&W neg.). There will always be some variances in density until you get used to picking the same relative density to analyze. Remember the ILFORD EM 10 Exposure Monitor may not produce a perfect exposure every time and should be used as a testing tool only.