

QUANTUM DX-2 FLAT DIFFUSER/ENLARGING ATTACHMENT INSTRUCTIONS

The DX-2 accessory is recommended for Calcu-Light XP and Calcu-Flash II, although it fits any Calcu-Light/Calcu-Flash model. Mount it with the swivel diffuser head over the mark Δ on the instrument housing. Tighten the thumbscrew. (On early models you must remove the thumbscrew from the DX-2 by prying off the screw retainer on the underside of the turret).

To measure enlarger light with Calcu-Light XP

Turn the swivel head so that the circular diffuser faces the front of the instrument. Place the instrument face-up on the enlarging easel. The part of the image that falls on the white disc will be measured by the meter.

The enlarging paper in use must be calibrated in ASA (or DIN) film speed. To do so, take a digital reading with the DX-2 of a "middle grey" tone of a typical negative image on the enlarger easel. Next, take a series of test exposures in a sequence such as 4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 40, 50, and 60 seconds. Use the maximum enlarger lens aperture. Record the digital light reading taken above, the f number, and the exposure time that together yield the best print.

Now, adjust the film speed dial until the digital reading set in the incident Δ window, the f number, and exposure time, recorded above, coincide. Note the resulting ASA (or DIN) setting; it is the film speed you should use for the enlarging paper tested. For example, assume that the digital reading was "17", the best exposure time 15 seconds, and the enlarger lens aperture f/5.6. By adjusting the film speed dial to read ASA 640 (DIN 29) for Calcu-Light XP, the aperture f/5.6 coincides with the time of 15 seconds.

When using a calculated paper film speed always measure enlarger light with DX-2 at the same maximum aperture as used for the test print. Set the digital readings into the incident light window, determine the combination of f number and shutter time, set the lens aperture, and proceed to expose.

Since paper film speed varies according to development technique, enlarger light color temperature, and many other factors, your experience will help you to "fine tune" the paper film speed determined above.

The DX-2 may be used for contrast measurements of areas of the image under the enlarger. See the section "contrast meter". To determine exposure times for various paper contrasts grades additional tests may be made. Or, for Kodak paper grades 0-4, subtract 2 digits from the digital readings taken with the DX-2 for each increase in paper grade number above your "test" grade number, and vice-versa for lower grade numbers.

For use as a contrast meter

To measure the light received by one side of the subject, turn the swivel head of DX-2 so that the flat diffuser is parallel to that side. Compare digital readings taken at various planes corresponding to the areas of interest in the subject. Each 3 digit difference in readings represents a contrast of one stop (1 Ev) or 2:1; 6 digits is two stops (2 Ev) or 4:1, etc.

For use in calibrated measurements

You may use DX-2 for incident light exposure measurements of subjects. In that case, apply the calibration factor indicated on the attachment by adding 6 numbers to the DIN film speed setting. (You may translate ASA to DIN on the meter dials, or else multiply ASA by 4). The calibration factor does not affect contrast measurements.

You may use the footcandle or lux charts in the meter's instruction manual, by adding 6 digits to all meter readings first. Then look up the desired values in the charts.