

Simplification

The Harrison Exposure & Color Temperature Attachment for the G.E. DW type of exposure meter is designed to give you 4-different calculations:

- (1) Measuring the color-temperature of incident-light falling upon the subject in terms of degrees Kelvin.
- (2) Measuring the incident-light falling upon the subject in terms of foot-candles.
- (3) Showing the proper Light Corrector Discs to use for any color film.
- (4) Showing the exposure-loss for any Light Corrector Disc in terms of f-stop compensation.

Attaching To the G.E. Meter

The Harrison Color Attachment is easily attached to any G.E. DW type Exposure Meter. First, pull up the Chart-Card as far as it will go and then insert the stationary lip on the dial side of the meter into the Attachment, allowing the spring to compress as it is pushed into the Attachment.

Removing it should be done in the reverse fashion, viz: Lift up on the Exposure Meter to release the spring, and then pull it out of the Attachment.

After using the G.E. meter and the Color Attachment together, if you find the meter hood goes back on the meter a bit loosely, simply apply sufficient finger pressure to the thin strip on the outside of the spring-notch on the hood. The meter-hood will snap back on with a better snugness than before.

Becoming Familiar With Your Color Attachment Before Taking a Picture

(1) First, pull the chart-card straight up as it will go out of the Attachment.

(2) Snap the Attachment on your G.E. meter as described above.

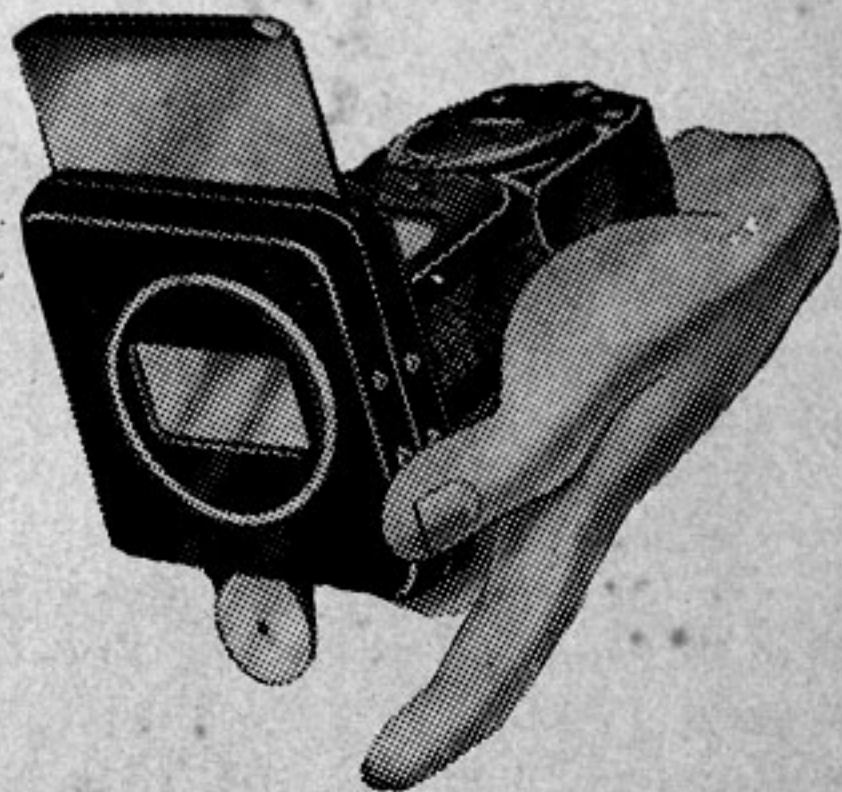


(3) Pointing at any light-source strong enough to activate the exposure meter, push plunger in (see illustration) until your finger can turn both the "free-wheeling" disc on the plunger and the notched shutter-

wheel (which protrudes from the case) simultaneously.

(4) Roll both wheels with same finger until you move meter-needle to 20 (for pre-setting at 20) or to 10 (for pre-setting at 10)—all while the plunger is in. (See the "Why" of pre-setting on page 6).

(5) Drop your finger, releasing the plunger (see illustration) and you will notice that the meter-needle swings to right or left as the case may be — and stops. Mentally transfer this position to the foot-candle scale, reproduced on the chart-card. Reading directly below that number is the Color Temperature when multiplied



by 100. And reading directly below the Color Temperature in each instance is the necessary Light Corrector Disc for whatever film you are (presumably) using.

Always pre-set on 20 or 10 because a pre-setting at some starting point is necessary to get a direct reading. The 20 has been chosen for maximum color-temperature sensitivity. For lower illumination it may be necessary to use 10. For still lower illumination, a pre-setting of 5 can be used as a starting point, in which case it is necessary to multiply the foot-candle readings by two. In all situations, however, it is necessary to pre-set at some starting point so it will be possible to make direct readings.

When pre-setting the meter-hand, at 20 or at 10, by turning the shutter-wheel, accurate readings will be influenced by how close the meter-hand is on the desired number-line before the plunger is released. Pre-setting to the right of the number-line will result in higher readings, and pre-setting to the left of the number-line will result in lower readings.

Here's How To Use Your Color Attachment To Take Readings—Photographically

SHOOTING IN SUNLIGHT—When the subject is in **direct** sunlight, point the Attachment directly at the Sun to take your reading. Then correct your picture accordingly.

SHOOTING IN THE SHADE—When the subject is in **direct** shade, point the Attachment toward the camera, but directly at the Sky to take your reading. Then correct your picture accordingly.

SHOOTING UNDER OVER-CAST SKIES or ON HAZY DAYS—Point Attachment in direction of the camera, but directly toward that part of the Sky illuminating the subject, to take your reading. Then correct your picture accordingly.

FOR THE PROFESSIONAL TOUCH—in all cases—perfection in accurate readings for ANY condition can best be had by pointing the Attachment

directly at the Camera Lens, providing you are careful to avoid Indirect or Reflected Light by tilting it sufficiently straight up whenever necessary.

WHEN SHOOTING INDOORS — Point Attachment directly at the light-source.

SHOOTING INDOORS WITH MIXED LIGHTS— Point Attachment directly at the Camera Lens, always making sure to avoid Indirect or Reflected Light by tilting it towards the lights when necessary.

Fundamentally, the Harrison Color Attachment is an Incident Light Color Temperature Instrument and should be used to measure only pure Incident Light for Color Temperature. (Incident Light is Direct Sunlight, Direct Skylight and Direct Artificial Light).

Any Indirect or Reflected Light from the ground, buildings, walls, trees, etc., is colored differently from the Incident Light and, therefore, should be

avoided unless great care and photographic judgment is used.

When Indirect or Reflected Light is also measured with Incident Light, it can easily give a false reading for photographic correctness unless its intensity is comparable or greater than the Incident Light directly illuminating the scene — and even then, photographic experience and judgment is required to determine its color effect on the scene or subject.

CAUTION: When taking a color-temperature reading, the instrument measures color very critically—and any colored object may have many times the influence on the reading than is obtained from direct or incident light.

That is the main reason why any light reflected by ground, buildings, walls, trees and the like must be taken into serious consideration or avoided whenever possible.

Here's How To Use the Attachment For Incident Exposure Readings

- As an Incident Light Attachment for Color Ex-



posure, you first set the Shutter-wheel on Red Line and point directly at the camera lens with plunger out. If the meter-needle does not swing beyond 70, read foot-candles direct and calculate the exposure on your meter-calculator. (See illustration). If the meter-needle does swing beyond 70—then set the Shutter-wheel on the Black Line and proceed as

above to calculate your exposure.

The Red Line on the shutter-wheel of your Attachment corresponds to the "Cover Open" of your G.E. DW meter. The Black Line on the shutter-wheel corresponds to the "Cover Closed" of your G.E. They are used for the same purpose, which is: The controlling of the range of the meter for Incident Light measurement.

Improve Your Pictures In Easy Steps

- As a starting point, you may improve your pictures with a single Kit of as few as four Light Corrector Discs. If you are shooting in Daylight with Daylight Film, for example, you need the "Outdoor Film A Kit" to start with. If you are shooting in Daylight with Photoflood or Tungsten Film, then you will need the "Indoor Film A Kit."

If you want to expand your control to a primary range of completeness, you will probably next seek the "Outdoor Film B Kit"—and so on until you have acquired all five of the Kits listed below—

which puts you in perfect line to attain the ultimate in picture quality. Here is the complete series, grouped into Kits for your purchasing convenience of economy:

Daylight Shooting with Daylight Films

OUTDOOR Film A KIT—B- $\frac{1}{8}$, B-1, C- $\frac{1}{8}$ and C-1
OUTDOOR Film B KIT—B- $\frac{1}{4}$, B-2, C- $\frac{1}{4}$ and C-2
OUTDOOR Film C KIT—B- $\frac{1}{2}$, B-3, C- $\frac{1}{2}$ and C-3

Daylight Shooting with Photoflood or Tungsten Films

INDOOR Film A KIT—C-3, C-4, C-5 and C-6
INDOOR Film B KIT—C- $\frac{1}{2}$, C-1, C-2 and C-7

For shooting under any Artificial Light with Photoflood or Tungsten Films, use the same "Outdoor Film A, B and C Kits," listed above. In other words, "Outdoor Film A Kit," "Outdoor Film B Kit," and "Outdoor Film C Kit" each serves a double purpose and, therefore has a double value—because you can use these same Kits for shooting either in Daylight with Daylight Films or under

Artificial Light with Photoflood or Tungsten Films.

The Light Corrector Discs are available in 4 popular sizes: No. 1 ($\frac{3}{4}$ "), No. 2 (Series V), No. 3 (Series VI), and No. 4 (Series VII), as well as in the special sizes of No. 5 (Series VIII), No. 6 (3" Sqs.) and No. 7 (2" Sqs.). Multiple Cans are available for any grouping or number assortment—or for the entire list of LCD's.

No Adjustment Necessary

- Harrison Color Attachments are made to work on any model G.E. DW Exposure Meter for all average photographic purposes. All G.E. meters are highly accurate exposure-wise. And all of the Harrison Color Attachments are highly accurate in color sensitivity.

However, if you switch from one G.E. meter to another and get different readings, it is not to be assumed that either the G.E. Meter or the Harrison

Attachment is in error. It is then merely a situation where a higher degree of color relationship between the Attachment and a particular G.E. meter may need attention.

The correct color-relationship between the Harrison Attachment and ANY G.E. DW meter can readily and accurately be established by Re-Setting the Attachment to your meter with a Special Calibrating Attachment Set.

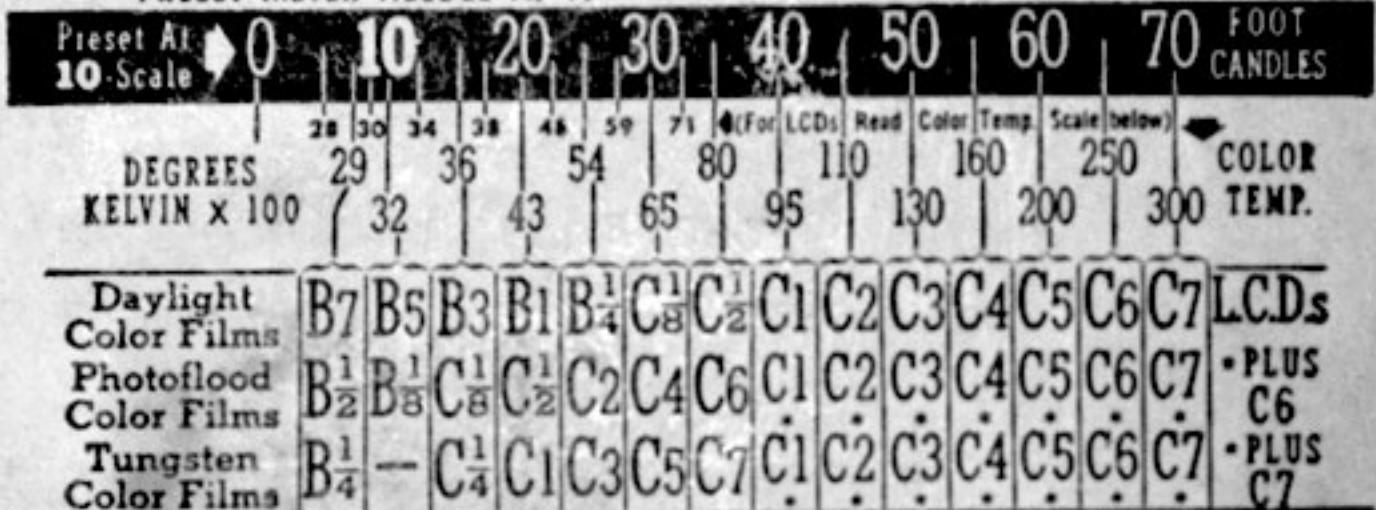
This Special Calibrating Set Consists of an Allen Wrench, a 3200°K - 6500°K Conversion Filter, a Standard 51mm Adapter for holding the filter on the face of the Attachment, and detailed instructions for all calibrating procedures. It sells as a complete set for \$7.48.

It is not broken down, since no individual item in the set would serve the consumer for any practical purpose.

HARRISON EXPOSURE & COLOR TEMPERATURE ATTACHMENT

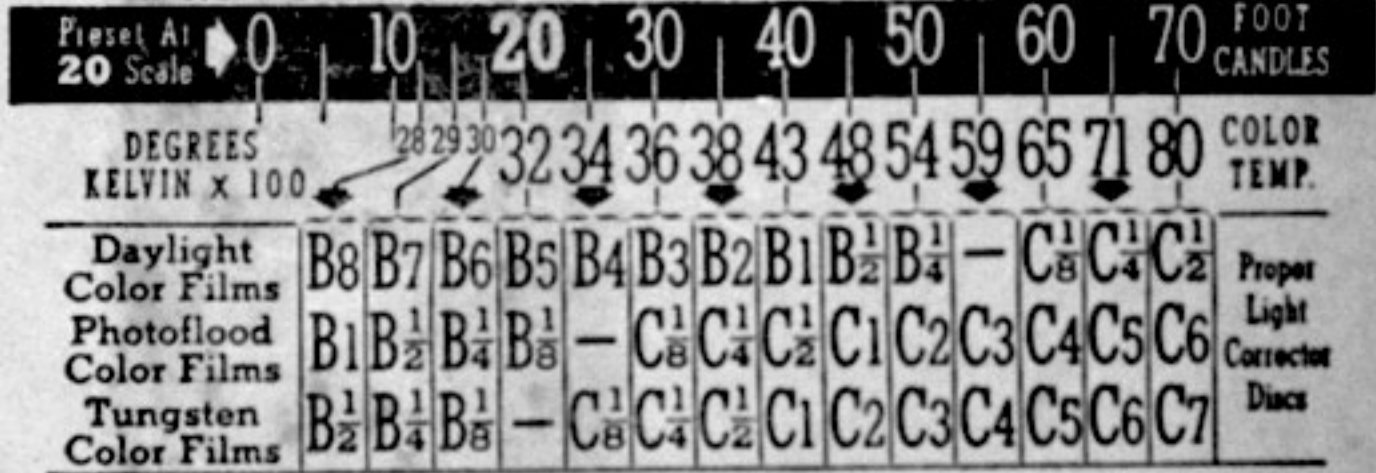
PRESET METER NEEDLE AT 10

FOR MAXIMUM RANGE . . .



PRESET METER NEEDLE AT 20

FOR MAXIMUM SENSITIVITY . . .



Light Corrector Discs B $\frac{1}{4}$ B $\frac{1}{4}$ B $\frac{1}{8}$ B1 B2 B3 B4 B5 B6 B7 B8 C $\frac{1}{4}$ C $\frac{1}{4}$ C $\frac{1}{4}$ C1 C2 C3 C4 C5 C6 C7
 Lens Stop Increases from Normal $\frac{1}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{2}$ 1 2 2 $\frac{1}{2}$ 3 3 $\frac{1}{4}$ 3 $\frac{1}{2}$ 4 0 $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$

The H & H Chart-Card, which is an integral part of the Color Attachment for All G.E. DW Meters.

The Harrison Chart-Card

- The conversion table, reproduced on back cover, elevates from within the Attachment, and may be slid out of the Attachment on the left side. Just tilt it slightly up to the right and slide out. It can be re-inserted in the same manner.

The Chart-Card shows the conversion of foot-candles to color-temperature from 2800 to 30,000 degrees Kelvin, which is the range of the Attachment.

The Harrison Color Attachment for G.E. DW Meters

Is Manufactured Exclusively By

HARRISON & HARRISON

Optical Engineers

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