



When using the Lumimeter for the first time it is necessary to adjust it to suit your enlarging equipment. This adjustment is quite simple and automatically takes into account such things as electricity supply voltage, type of enlarger lamp and development technique. Before you can adjust the Lumimeter however, you must be familiar with its use, so start by taking a reading on an average negative.

- (1) **Put negative in enlarger** and adjust size and sharpness on baseboard.
- (2) **Set Paper Speed Factor**—Corfield Speed Ratings for principal makes of paper are shown in the Table of Paper Speeds.
To set the speed, hold the operating knob between the thumb and index finger of one hand and with the other rotate the circular scale

until the desired speed is indicated by the index mark on the rim of the control knob.

- (3) **Take Reading.** Place Lumimeter on enlarger baseboard with scales facing you. In the circular aperture is a screen on which part of the image will appear. A dark spot is visible in the centre of the screen and any part of the image can be brought under this spot by moving the Lumimeter across the baseboard.

Bring the darkest part of the image which is important to your picture under the spot. (Example: Highlights in portrait). Now switch on the Lumimeter lamp and the spot will become lighter. It can be darkened or lightened at will by rotating knob in alternate directions. In between dark and light positions the spot exactly matches the background against which you have put it. This is the position which shows the correct exposure on the seconds scale.

Initial Adjustment. Use test strips (see note) to determine the correct exposure, processing them as you would a finished print.

Set the Lumimeter dial to this exposure and also set the speed of the paper used in the tests.

Now go through the motions of taking a reading but using the *lower* knob to match the spot against the background. It is most important at this stage that you should use the correct area of the negative for your

reading. Remember, the spot should be matched against the darkest area of importance in your negative. This is an area which would be expected to appear just off white in the finished print.

Sometimes, if a negative is over-exposed, or the subject is too contrastive there will be dark areas which would print too bright for detail to show. These must be avoided at all times when taking a reading.

Having matched the spot using the lower knob, check that the main dial has not been moved and that it is still set at the exposure and paper speed of your test. The Lumimeter is now standardised and to avoid errors you should mark the position of the lower knob.

Providing that the same processing technique is always used—i.e. constant development time and temperature,—the Lumimeter will read accurately on any negative, using any type of paper and any degree of enlargement.

Note—If you are a newcomer to enlarging and are not therefore familiar with the test-strip method of determining exposure, your photographic dealer will be happy to recommend a suitable book covering the subject.

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Paper Grade. This should not be confused with the Paper Speed. Printing papers are made in different Grades so that you may select one to suit the range of densities in your negative. If the negative shows distinct contrast between the light and dark areas you will probably need a soft Grade of paper. On the other hand if it looks dull and has no contrast, then a Vigorous paper will be required.

The Lumimeter will analyse your negative and indicate the grade of paper most suited.

- (1) Set the paper speed dial at 30.
- (2) Place Lumimeter spot over the brightest part of the image and take a reading. (If reading would be below 1 second, stop down enlarging lens to bring brightness within the instrument's range). Note reading against exposure index.
- (3) Move Lumimeter until spot covers the darkest part of the image and take another reading. This will be greater than the first but the exact figure is not important. The correct grade of paper is now shown against the exposure reading *FIRST* obtained.

You may now select a suitable paper, check its speed rating and proceed as described earlier for determining exposure.

Multigrade Paper. To avoid carrying large stocks of paper, some photographers prefer to use one paper, the grade of which varies according to the colour of the filter which is used with it.

The Lumimeter is not so easy to read when the light from the lens is coloured. The procedure therefore, is to take your exposure reading without the filter in position and then multiply the exposure by a factor according to the filter selected.

Ilford Multigrade Paper.

Use Corfield Speed No. 6 and multiply the exposure reading by the following factors.

Filter No.	1	2	3	4	5	6	7
Factor	1	1½	2	3½	5	8	11

Paper Speed. Manufacturers do not publish the speed rating of their papers but the more popular makes have been tested in the Corfield laboratories and listed on Page 8 of this folder. Should you wish to determine the speed of an unlisted paper, you may do so as follows.

- (1) Raise the enlarger (without negative) to a high level and stop down until the Lumimeter reads 30 when the paper speed dial is set at 30. Should the enlarger lens not stop down, a piece of evenly fogged negative material of medium density should be slipped under the lens to cut down the light. This is used only when taking the above reading and exposing a test strip. Its subsequent removal for making enlargements does not affect the validity of the paper speed determination.
- (2) Place a strip of paper (about 3" x 1") on the baseboard and with the aid of an opaque card give a series of exposures as follows: First

cover up ¼" of paper so that it is unexposed. Switch on enlarger light noting time. After 4 seconds cover up a further ¼", at 6 seconds cover up a further ¼" and so on at 8, 11, 15, 20, 30, 45, 60, 90 and 120 seconds and at 180 seconds switch off the light.

This assumes that the speed of the paper is quite unknown—a shorter series would be given if approximate speed were known. Example If speed were thought to be 30, give 15, 20, 30, 45 and 60 seconds. Always use the series of figures marked on the Lumimeter dial.

- (3) Develop by time and temperature and fix strip in exactly the same way as for normal prints. Note the exposure which gave the lightest grey which clearly stands out from the unexposed white—discounting steps which only have the slightest tinge of grey. This exposure is the same, numerically, as the paper speed.

Helpful Hints.

- (1) Never let stray light fall on the screen whilst taking a reading. The safe light should not be directed at the Lumimeter.
- (2) If your negative is smaller than the aperture in the carrier, cut a paper mask to cover the spaces through which excessive light may fall onto your print. This not only helps to obtain a more accurate reading, it also ensures a brighter print.
- (3) The Lumimeter uses a special over-run lamp in order to produce the correct colour temperature for matching the spot. This limits the life of the lamp so switch it on *ONLY* to take a reading.

Maker	Description	*Lumimeter Grade	Corfield Speed No.
Agfa	Brovira	Soft Normal	11
		Special Vigorous Normal	11
		Normal Vigorous	11
		Hard Vigorous Hard	15
	Portriga Rapid	Soft	11
		Normal	15
		Vigorous	20
		Vigorous	20
Gevaert	Gevarto	K44.1. Normal	15
		K44.2. Vigorous	30
		K44.3. Hard	30
	Gevatone	K44.1. Normal	15
		K44.2. Vigorous	30
		K44.3. Hard	45
	Gevabrom	K44.1. Normal Soft	3
		K44.2. Normal	6
		K44.3. Vigorous Hard	20
Ilford	Bromide	B1.1K. Soft	6
		B2.1K. Normal	11
		B3.1K. Vigorous Normal	15
		B4.1K. Normal Vigorous	15
		B5.1K. Hard	90
	Plastika	A1.K. Normal	15
		A2.K. Vigorous Hard	30
		A3.K. Hard	30
Kentmere	Bromide	1. Soft Normal	8
		2. Normal Vigorous	15
		3. Vigorous Hard	30
		4. Hard	45
Kodak	Bromide	1. Soft Normal	8
		2. Vigorous Normal	11
		3. Vigorous	15
	Bromesko	1. Normal	11
		2. Normal Vigorous	15
		3. Vigorous	15

*There can be quite a considerable difference between papers which are similarly marked due to the latitude of the descriptions. To help select the most suitable paper we have used expressions such as "Vigorous Normal" and "Normal Vigorous" etc. The former indicates a paper falling at the "Vigorous" end of the "Normal" range and the latter, falling at the "Normal" end of the "Vigorous" range.

Instruction Leaflet

Corfield

LUMIMETER



enlarging exposure meter

LUMIMETER