sinar

Sinar Booster 1

Short-instructions for operating with
Minolta Flashmeter III
Minolta Flashmeter IV
Minolta Autometer IV F
Minolta Flashmeter V

Preparation

1. Plug Booster 1 connecting cable into the socket on the left side of the light meter.

2. Switch the light meter on.

3. Select film speed.

4. Connect flash synchro cable. For flash metering: especially suitable is the Sinar Y-Synchro Cable (Ref.-No. 521.51.010) which allows to connect light meter, Sinar/Copal Shutter (Ref.-No. 521.31) and flash generator simultaneously.

Remark

There is a support available to attach the Flashmeter III, IV and V and the Autometer IV F on the Sinar cameras (Ref.-No. 462.96.006).

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Minolta Flashmeter III

Ambient light readings

1. Move main switch to “ON”. Set the ASA speed. Move sliding switch to “FNo.”

2. Move measuring mode selector to “AMBI”.

3. Place Booster 1 metering probe on the ground glass.
Stop down the lens to working aperture.
Switch the Booster 1 probe to “M” (LED lit).
Shield ground glass against stray-light.
Press measuring button on the Flashmeter III.

4. Move time-selector on Flashmeter until display shows f5.6.
Set the displayed exposure time at the shutter.
The number behind “5.6” shows the necessary reduction in $^{1}/_{10}$ EV values with determined exposure time. E.g.: 5.6 3.

5. Correction: (example: **FNo. 5.6 3**)
- If possible: Move light source or reduce the output by $^{3}/_{10}$ EV.
- Stop down working aperture by $^{3}/_{10}$ f-stops.
- Reduce exposure-time by 1 EV and open working aperture by $^{7}/_{10}$ f-stops.

6. Control measurement

Flash readings

1. Move main switch to “ON”. Set the filmspeed. Move sliding switch to “FNo”.

2. Move measuring mode selector to “CORD”. Set exposure time: Turn time dial to $^{1}/_{30}$ sec. Connect synch cord to Flashmeter.

3. Place Booster 1 metering probe on the ground glass.
Stop down the lens to working aperture.
Switch the Booster 1 probe to “M” (LED lit).
Shield ground glass against stray-light.
Press measuring button on the Flashmeter III.

4. Based on the difference between indicated f-stop value and f5.6 the flash-output must be changed and/or the flash-lamps be repositioned to obtain a display of 5.6 0 (resp. 5.6 1 or 5.6 2).

5. Correction: (example: **FNo. 5.6 4**)
- Reduce flash output by $^{4}/_{10}$ EV, 1 flash.
- Stop down working aperture by $^{4}/_{10}$ f-stops, 1 flash.

6. Control measurement.

Minolta Flashmeter IV

Ambient light readings

1. Move all sliding switches on the left side to upper position.

2. Press “RECALL/ON”. Set ASA speed.

3. Move measuring mode selector to “AMBI”.

4. Move function selector to “FNo.” and select 5.6 with sliding switch.

5. Place Booster 1 metering probe on the ground glass.
Shield ground glass against stray-light.
Stop down the lens to working aperture.
Switch the Booster 1 probe to “M” (LED lit).
Press measuring button on the Flashmeter IV.

6. Read odd exposure-time and deviation, e.g.: 5.7 7.

7. Correction: (example: **FNo. 5.6 7**)
- If possible: Move the light source or reduce the output by $^{7}/_{10}$ EV.
- Divide exposure time in half and open the lens by $^{3}/_{10}$ f-stops.

8. Control measurement

Flash readings

1. Move all sliding switches on the left side to upper position. Connect Booster 1 probe cable to the Flashmeter IV.

2. Press “RECALL/ON”. Set ASA speed.

3. Move measuring mode selector to “CORD”.

4. Move function selector to “TIME” and $^{1}/_{30}$ sec. Plug synch cord into the Flashmeter.

5. Move function selector to “FNo.” and select 5.6 with sliding switch.

6. Place Booster 1 metering probe on the ground glass.
Shield ground glass against stray-light.
Stop down the lens to working aperture.
Switch the Booster 1 probe to “M“ (LED lit).
Press measuring button in the Flashmeter IV.

7. Read of guide number “GV” and deviation, e.g.: **+1 GV 5.6 6**.

8a. Correction of the “GV” steps:
+ X GV: increase flashpower by X steps
– X GV: reduce flashpower by X steps

8b. Correction of the “$^{1}/_{10}$ EV” steps:
- Increase the flash output by $^{4}/_{10}$ EV, flash once.
- Reduce flash output by $^{6}/_{10}$ EV, flash twice.
- Close the lens by $^{6}/_{10}$ f-stops, flash twice.
- Open the lens by $^{4}/_{10}$ f-stops, flash once.

9. Control measurement.

Correction table for flash measurement

(Autometer IV F and Flashmeter V)

Display “FNo.”	Correction of flashpower or working aperture (in f-stops; EV)	Correction by number of flashes and ...	... close aperture* or reduce flashpower* (in f-stops)
0.7 0	+6.0	(64)	0
0.7 3	+5.7	(50)	0
0.7 7	+5.3	(40)	0
1.0 0	+5.0	(32)	0
1.0 3	+4.7	(25)	0
1.0 7	+4.3	(20)	0
1.4 0	+4.0	16	0
1.4 3	+3.7	13	0
1.4 7	+3.3	10	0
2.0 0	+3.0	8	0
2.0 3	+2.7	6	0
2.0 7	+2.3	5	0
2.8 0	+2.0	4	0
2.8 3	+1.7	3	0
2.8 7	+1.3	3	-0.3
4.0 0	+1.0	2	0
4.0 3	+0.7	2	-0.3
4.0 7	+0.3	2	-0.7
5.6 0	0	1	0
5.6 3	-0.3	1	-0.3
5.6 7	-0.7	1	-0.7
8.0 0	-1.0	1	-1.0
8.0 3	-1.3	1	-1.3
8.0 7	-1.7	1	-1.7
11 0	-2.0	1	-2.0
11 3	-2.3	1	-2.3
11 7	-2.7	1	-2.7
16 0	-3.0	1	-3.0
16 3	-3.3	1	-3.3
16 7	-3.7	1	-3.7
22 0	-4.0	1	-4.0
22 3	-4.3	1	-4.3
22 7	-4.7	1	-4.7
32 0	-5.0	1	-5.0
32 3	-5.3	1	-5.3
32 7	-5.7	1	-5.7
45 0	-6.0	1	-6.0
45 3	-6.3	1	-6.3
45 7	-6.7	1	-6.7
90 0	-7.0	1	-7.0

* «+» = means increase flashpower (or open aperture)
* «-» = means reduce flashpower (or close aperture)
(x) = theoretical values, application not realistic

Minolta Autometer IV F

Single point reading ambient light:

1. Set measuring mode to “AMBI” by using the “MODE” button and select an approximate correct shutter speed “TIME” by using the up-down control.

2. Place the measuring window of the Booster 1 on the point to be measured.
Stop down the lens to working aperture.
Switch the Booster 1 on.
Shield focusing screen against straylight.
Press the measuring button on the Autometer IV F.

3. Adjust “FNo.” using the up-down control until it shows 5.6 and the “TIME” display shows an executable shutter speed.

4. Correction:

The figure following “5.6” shows the necessary reduction of light power or working aperture in $^{1}/_{10}$ of f-stops (EV). E.g.: **5.6 4** = reduce by $^{4}/_{10}$ EV.

5. Control measurement.

Contrast reading ambient light:

1. Set Measuring mode to “AMBI” by using the “MODE” button and select an approximate correct shutter speed “TIME” with the up-down button.

2. Measuring the *first* point:
Place the measuring window of the Booster 1 on the point to be measured.
Stop down the lens to working aperture.
Switch the Booster 1 on.
Shield focusing screen against straylight.
Press the measuring button on the Autometer IV F.
Store the Measuring value by pressing the button “M”.

3. Measuring of the *second* point as described above. Store the measuring value by pressing “M”. Press button “A”. The average value is now displayed and the contrast range is shown on the analogue scale.

4. Adjust “FNo.” using the up-down control until it shows “5.6” and the “TIME” display shows an executable shutter speed.

5. Correction:
The figure following “5.6” shows the necessary reduction of light power aperture in $^{1}/_{10}$ of f-stops (EV).

6. Control measurement

Info measurement:
As soon as the “A” button is pressed following one or several measurements, additionally selected points can be compared with this obtained average value.
Only as long as the “M” button is pressed, the display shows the deviation in exposure values (EV) to the average value, expressed in aperture steps (EV).

The Info-measurements are only available in the “AMBI” and “CORD” modes.

Single point reading flashlight:

1. Set measuring mode to “CORD” by using the “MODE” button and select the synch speed (as set at shutter) with the up-down control.

2. Place the window of the Booster 1 on the point to be measured.
Stop down the lens to working aperture.
Switch the Booster 1 on.
Shield focusing screen against straylight.
Press the measuring button on the Autometer IV F.

3. Correction:
Consult the correction table to obtain the necessary correction of flash power and/or working aperture and set the values accordingly.

4. Control measurement

Contrast reading flashlight:

1. Set measuring mode to “CORD” by using the “MODE” button and select the synch speed (as set at shutter) with the up-down control.

2. Measuring the *first* point:
Place the measuring window of the Booster 1 on the first point to be measured.
Stop down the lens to working aperture.
Switch the Booster 1 on.
Shield focusing screen against straylight.
Press the measuring button on the Autometer IV F.
Store the measuring value by pressing the button “M”.

3. Measuring of the *second* point as described above. Store the measuring value by pressing “M”. Press button “A”. The average value is now displayed and the contrast range is shown on the analogue scale.

4. Correction:

Consult the correction table to obtain the necessary correction of flash power and/or working aperture and set the values accordingly.

5. Control measurement

Minolta Flashmeter V

Single point reading ambient light

1. Set measuring mode to “AMBI” by pressing the “MODE” button and select an approximate correct shutter speed (TIME) using the thumbwheel.

2. Place the measuring window of the Booster 1 on the point to be measured.
Stop down the lens to working aperture.
Switch the Booster 1 on.
Shield focusing screen against stray-light.
Press the measuring button on the Flashmeter V.

3. Adjust the “FNo.”-value to 5.6 with the smallest possible remaining value (small digit following “5.6”) using the thumbwheel. Set the shutter speed as indicated under “TIME”.

4. The digit following “5.6” shows the still remaining overexposure in $^{1}/_{10}$ f-stops, i.e. it indicates by how many tenth the light must be reduced or the aperture must be closed.

5. Control measurement must result in **FNo. 5.6 0**.

Contrast reading continuous light

1. Set measuring mode to “AMBI” by pressing the “MODE” button and select an approximate correct shutter speed (TIME) using the thumbwheel. Contrast metering indicator “★” should *not* show at this stage (cancel with “★” button if necessary). Clear memory with the “M-CLR” button if necessary.

2. Place the measuring window of the Booster 1 on the *first* point to be measured.
Stop down the lens to working aperture.
Switch Booster 1 on.
Shield focusing screen against stray-light.
Press the measuring button on the Flashmeter V.
Store measuring value by pressing the “M” button.

3. Measure and store the *second* metering point as described above.
Press and hold the “S/A/H” button (average value will be displayed) and at the same time press shortly the “★” button (average value will remain on display).

4. Adjust the “FNo.”-value to 5.6 with the smallest possible remaining value (small digit following “5.6”) using the thumbwheel. Set the shutter speed as indicated under “TIME”.

5. The digit following “5.6” shows the still remaining overexposure $^{1}/_{10}$ f-stops, i.e. it indicates by how many tenth the light must be reduced or the aperture must be closed.

6. Control measurement must result in **FNo. 5.6 0**.

Info Metering:
As soon as the “★” button is pressed following one or several measurements, additional points can be measured and compared with this obtained average value.

As long as the measuring button is pressed the display shows the deviation of these points to the obtained average value (expressed in exposure values EV).

Single point reading flashlight

1. Set measuring mode to “FLASH” by pressing the “MODE” button and select the flash sync speed (as set on the shutter) using the thumbwheel. (The “FNo.”-display can be ignored).

2. Place the measuring window of the Booster 1 on the point to be measured.
Stop down the lens to working aperture
Switch Booster 1 on.
Shield focusing screen against stray-light.
Press the measuring button on the Flashmeter V.

3. Look for the displayed “FNo.”-value in the correction table for flash metering and set the resulting flash power and/or aperture correction accordingly. (The difference between the displayed “FNo.”-value and **5.6 0** corresponds to the necessary correction of flash power and/or aperture).

4. Control measurement must result in **FNo. 5.6 0**.

Contrast reading flashlight

1. Set measuring mode to “FLASH” by pressing the “MODE” button and select the flash sync speed (as set on the shutter) using the thumbwheel. (The “FNo.”-display can be ignored).

2. Place the measuring window of the Booster 1 on the *first* point to be measured.
Stop down the lens to working aperture
Switch Booster 1 on.
Shield focusing screen against stray-light.
Press the measuring button on the Flashmeter V.
Store the measuring value by pressing the “M” button.

3. Measure and store the *second* metering point as described above. Press and hold the “S/A/H” button (average value will be displayed) and at the same time press shortly the “★“ button (average value will remain on display).

4. Look for the displayed “FNo.”-value in the correction table for flash metering and set the resulting flash power and/or aperture correction accordingly. (The difference between the displayed “FNo.”-value and **5.6 0** corresponds to the necessary correction of flash power and/or aperture).

5. Control measurement must result in **FNo. 5.6 0**.