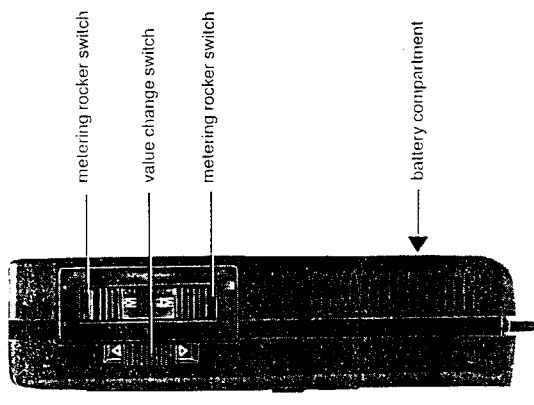


Co-ax socket for flash lead
button for firing flash from the meter

The MULTISIX switched off, when after display of the actual measured value ISO display appears again. This display does not reduce battery life.

Direct analogue readout of the contrast range ± 4 stops
Five attachments extending range of use
Programmable exposure corrections
Two silicon blue cells, one for continuous light and one for flash
Automatic averaging of measurements from separate readings (up to 15)
Converts lux readings into aperture and shutter speed combinations and exposure values and permits scanning and selecting all exposure combinations of any value measured
Provides choice of aperture or shutter priority
Extra features and information when used as a flash meter
Reminder for "under" or "over" range
Automatic battery check
In-built memory stores measurement values
Automatic cut-off

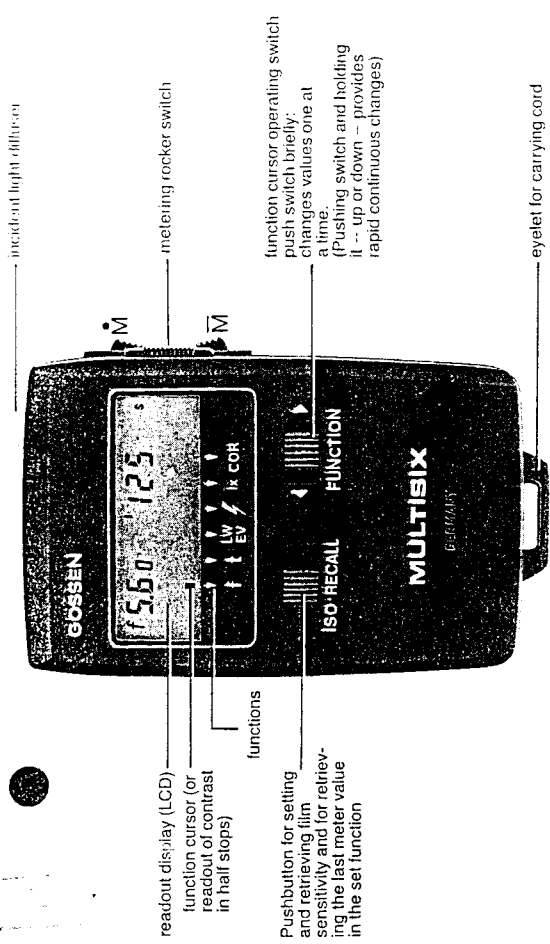


metering rocker switch
value change switch
metering rocker switch
battery compartment

The MULTISIX automatically switches off within 2 minutes. Therefore there is no "off-switch".

The MULTISIX is a digital exposure meter made by GOSSEN for flash and continuous light readings over a broad range and with high accuracy.
The five attachments make the meter into a system for facilitated use in solving even special light reading tasks in photography as well as when working with flash.

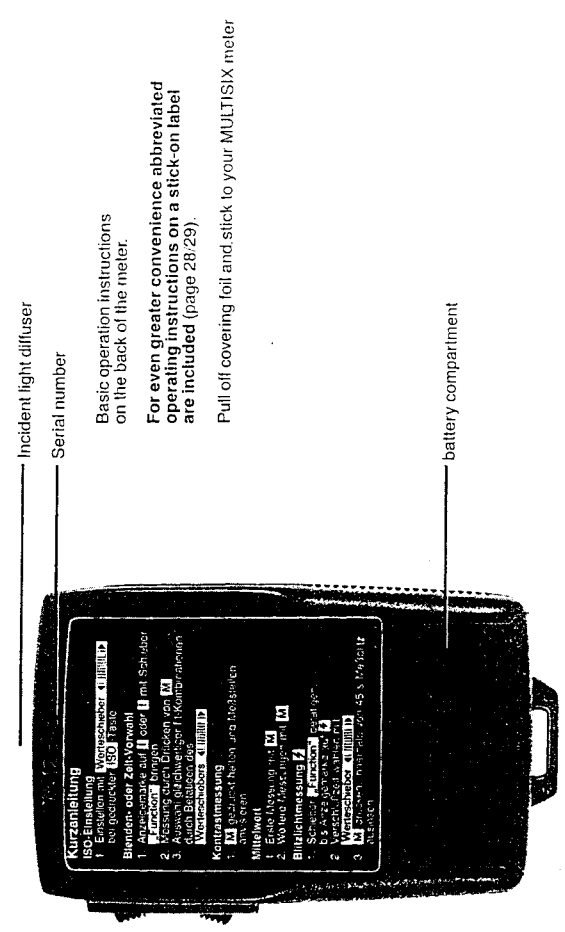
Sophisticated light reading on the basis of decades of experience in manufacturing exposure meters is now available to the user for facilitated use due to the application of microprocessor technology. The MULTISIX not only produces highly accurate readings but is also capable of saving these readings and computing the results at the touch of a button. The MULTISIX is comfortable and easy to use.
Here is an outline of some of the main features of the MULTISIX and its attachments:
Microprocessor-controlled and monitored Reads flash as well as continuous light LCD digital readout in tenths of a stop Analogue indication of tendencies in half stops



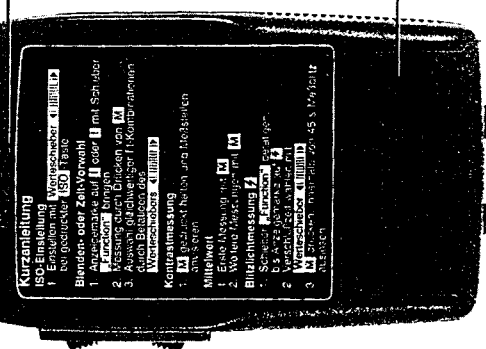
readout display (LCD)
function cursor (or readout of contrast in half stops)
Pushbutton for setting and retrieving film sensitivity and for retrieving the last meter value in the set function
functions
metering rocker switch
function cursor operating switch push switch briefly: changes values one at a time. (Pushing switch and holding it -- up or down -- provides rapid continuous changes)
eyelet for carrying cord

MULTISIX

Rear with instructions

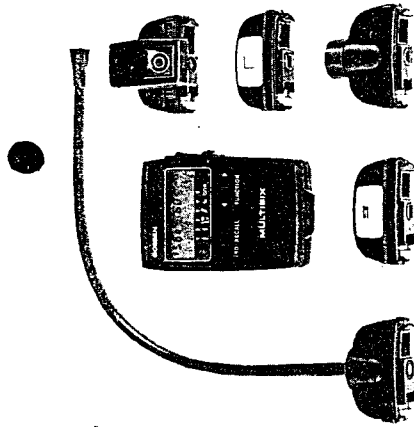


Incident light diffuser
Serial number
Basic operation instructions on the back of the meter.
For even greater convenience abbreviated operating instructions on a stick-on label are included (page 28/29).
Pull off covering foil and stick to your MULTISIX meter
battery compartment



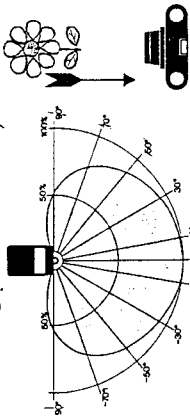
The MULTISIX system comprises the basic exposure meter and five optional attachments.

- TELE**
reduces the measuring angle to 15° or 7.5°.
- REPRO**
provides exposure information for copying.
- MESS-SONDE**
Sensor for macro and micro readings and hard-to-reach areas; for ground glass continuous light readings.
- MICRO**
assures convenient and precise measurement in micrography.
- LAB**
determines exposure data in darkroom printing and enlarging.

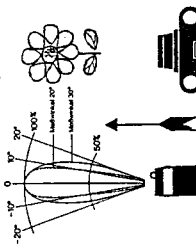


Measuring Methods incident light and reflected light

The meter will measure either incident or reflected light for f, t, LW/EV, $\frac{1}{25}$ functions.



Position of the diffuser for incident light readings Δ (point the meter from the subject towards the camera position).



Position for the diffuser when reflected light readings ∇ are being taken (point the meter from the camera position towards the subject.)

Battery

Your MULTISIX is supplied with a 9 V alkaline battery. A suitable rechargeable 9V battery may be used. The minimum life duration of such a battery is sufficient for about 2000 measurements. When the warning symbol **BAT** comes on in the display another 50 measurements (approx.) may be made.

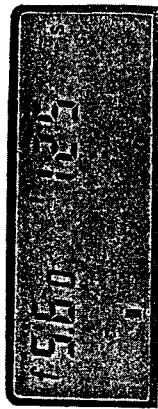
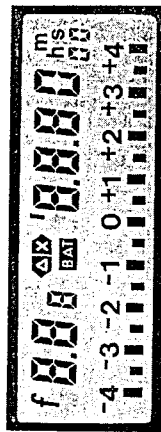
Changing the battery is easy: Slide off the battery compartment lid, remove exhausted battery, contact a fresh one, and insert it into the compartment as indicated. Close the compartment lid.

Automatic circuit check

Immediately after battery insertion the microprocessor carries out a circuit check and all LCD indicators in the meter will go on at once confirming the meter's operational status. After the test this display will be replaced by f stop 5.6 and shutter speed $\frac{1}{125}$ sec the meter's preset film speed setting (for technical data see page 25).

Changing the battery will cancel all values measured or stored in the meter.

BAT



Δ

Reminder symbol — correction factors
The reminder symbol will appear in the display in the functions f, t, LW/EV, $\frac{1}{25}$, when you have programmed a correction factor in the COR function (page 10).

Warnings of the limits of the measuring range

“Over” Range

The readout m/n signals that the values measured are greater than the meter can read (for technical data see page 25).

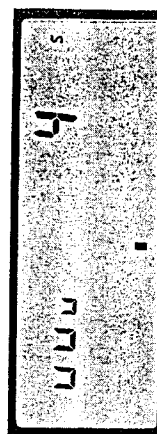
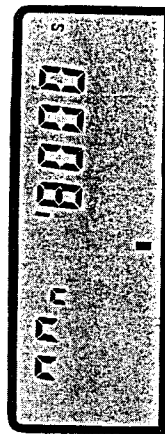
Push the value change switch down to bring the settings back to within the performance range of the meter.

“Under” Range

The readout m/n signals that the values are below the indicating range of the meter. So move value change switch upwards.

Pulsing of the display

This signal warns you that the readout must not be used, because the values are under or over range or that the aperture or shutter speed preselected by you are unsuitable for that subject.

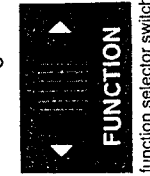


Instantaneous readout of values

When pushing the rocker switch forward M you will obtain instantaneous readings of the appropriate values in the display which will stay there for 2 minutes after the last operation of the rocker switch. Rock the switch backward (M) for computing automatically the average value of up to 15 readings (page 16).

The MULTISIX then switches off automatically, but the measured values remain stored and can be displayed by pressing the ISO button. Keep ISO button pressed for half a second.

The stored reading can also be retrieved by means of the function selector switch or the value change switch.



function selector switch



value change switch

Storing readings in the memory

Values measured and stored will be shown in the display for 2 minutes and retained in the memory until a new measurement is taken. Pushing the rocker switch M forward for metering will make the newly measured value be displayed immediately. The value is then stored in the meter memory.

In the continuous light mode this will also change all the values in the memory except those which had been preselected or programmed. In the flash mode all values in the memory pertaining to the flash metering which have not been preselected will change.

After the 2 minutes readout time the preselected film speed will appear on the display, this is regardless of the position of the function cursor.



Pressing the measuring switch eliminates the stored reading.

Setting the film speed

Press ISO button and hold pressed for at least 1/2 second.



Setting the desired ISO value using the value change switch with the ISO button pressed.

This selected film speed will be retained in the meter memory until you change it to a new setting as described above or until you change the battery.

ISO recall

By pushing the ISO · RECALL button, you can recall into the display the film speed you had set.

After releasing the button the last set of values measured will reappear.

Programming of correction factors

With the function selector switch set the cursor to COR.

Set desired correction factor with the value change switch.

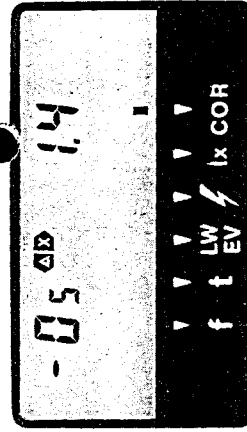
Example: -0.5 stops, factor 1.4

For programming the correction factors necessary when using the attachments see page 29 and following.

The reminder symbol will appear in the display as soon and as long as a factor is in the meter memory.

This will serve as a constant reminder that an exposure correction is in the meter's memory in the functions f, t, LW/EV, and that the reading has been adjusted automatically for that correction factor.

Correction expressed in f/stops



Correction value factor

Eliminate the correction value by altering the value change switch or quickly resetting the correction values:

Set COR mode.

Position diffuser to "Light measurement".

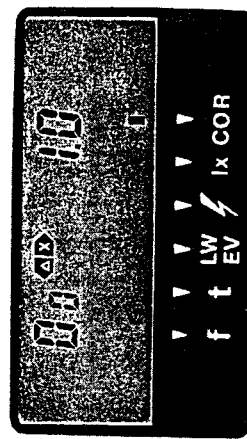
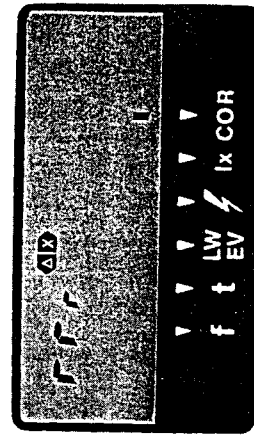
Press first rocker switch M, then M.

The surface should be evenly illuminated.

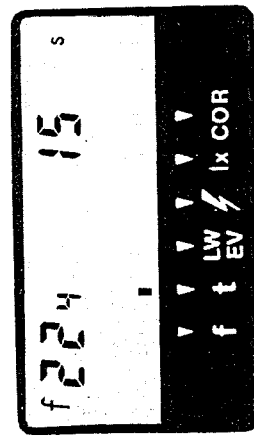
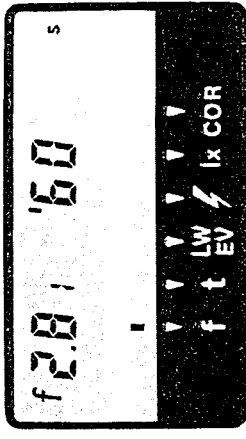
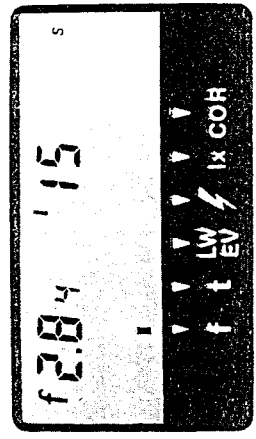


Display in COR position when correction value has been eliminated

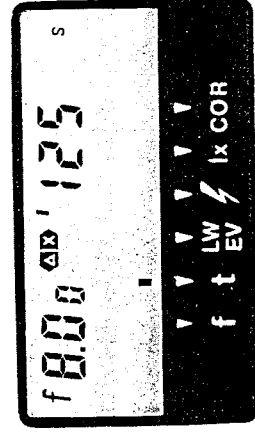
The film speed is indicated in ISO (International Organisation for Standardization) in accordance with international standards. ISO 100/21° corresponds to 100 ASA/12 DIN for example



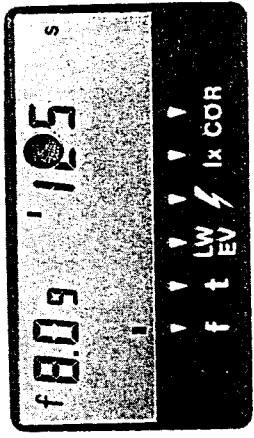
Reading with preselected aperture
 Position diffuser for either reflected light or incident light reading.
 Move indicator to f.
 Select desired aperture using value change switch.
 Push rocker switch M forward to obtain reading.
 Each reading takes roughly 1/2 second.
 When using preselection the small number alongside the aperture reading can be ignored. The indicated exposure time is the stored value of the previous measurement.
 Example: preselected aperture 2.8
 The indicated 4 can be ignored in this reading.
 Only after taking the actual measurement by pushing M forward the actual exposure time is indicated precisely with the aperture alongside in tenths of a stop.
 Example: for this take, the aperture 2.8 must be **shut down** by 0.1 stop.
 Select other suitable combinations of f/stops and shutter speeds with the value change switch.



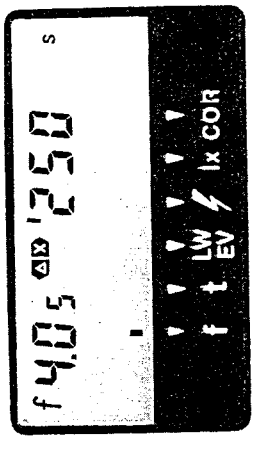
Preselected shutter speed (shutter priority) without preprogrammed correction value



Preselected shutter speed (shutter priority) with preprogrammed correction value

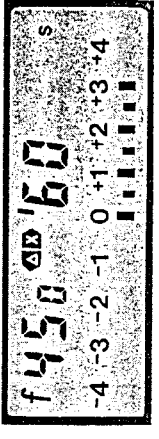
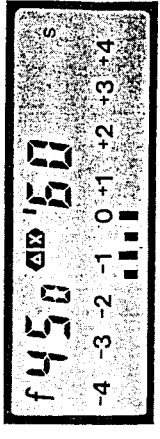
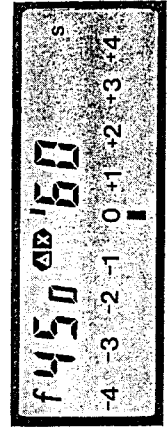
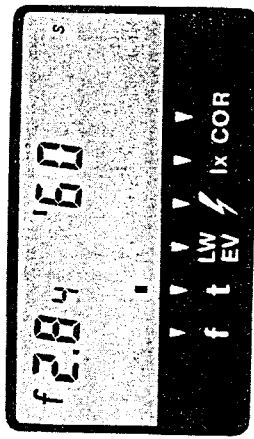
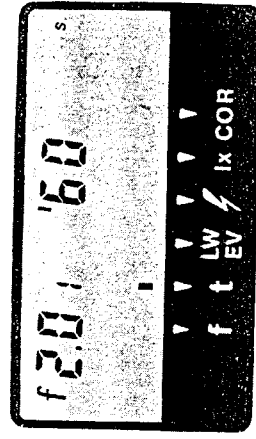


Preselected f/number (aperture priority) without preprogrammed correction value



Preselected f/number (aperture priority) with preprogrammed correction value

Reading with preselected shutter speed
 Adjust diffuser for either a reflected or incident light reading.
 Set indicator to t.
 Preselect shutter speed (shutter priority) using value change switch.
 Obtain reading by pressing M.
 Each reading lasts approx. 1/2 second.
 The shutter speeds always appear in the internationally standardized sequence as on most cameras. In addition, 1/90 second can be indicated. The high reading accuracy of the MULTISIX makes fine incrementation in 1/10 stops possible. These intermediate values in 1/10 stops are displayed on the MULTISIX logically the same as they can be set on the camera, i.e. with the f/number.
 Example of reading:
 With preselected shutter speed 1/60 sec. the reading indicates an f/number 2.8; in addition an 1/10 stop fine display is obtained, i.e. the lens must be closed by 0.4 of a stop.
 Other f/t values can be selected by means of the value change switch.



Measuring of contrast ranges

Aim the meter on the area you wish to measure, push rocker switch forward M and hold it down. As you meter other areas of the scene the graphic display of the EV contrast scale below the exposure reading will indicate the relative brightness of other scene areas in half stop increments.
 Our example shows the difference in brightness of that area as compared to the first reading -1.5 to +3 stops.

If the high-light or shadow reading is beyond the ±4 EV range of the contrast scale, the entire display will blink to signal that you are beyond the ±4 EV scale.

Evenness of illumination

This is the same measuring operation as for contrast measurements. You simply change the lights in the subject or scene until the function indicator will always remain on 0 when you aim the meter at various measuring areas while keeping the measuring switch M depressed.

Automatic averaging of readings in f, t and LW/EV modes

Aim meter at the area you wish to measure. Push the rocker switch M forward. Read the next area and push rocker back M and the meter will read the average value of those two measurements. Now aim meter at yet another area. Again push rocker back. Again the meter will compute and read a running average of up to 15 measurements. Note: each measuring operation will take approx. 1/2 second.

16

Flash measurement

Meter indicates the f/number suitable to the preselected shutter time.

Reading can be made with or without sync. cable connection.

Sync. speeds 1/60, 1/90, 1/125, 1/250 seconds.

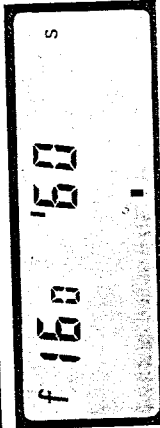
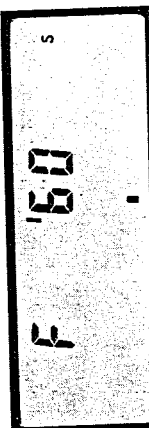
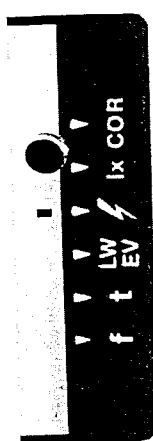
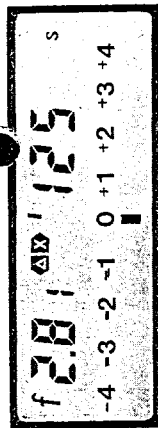
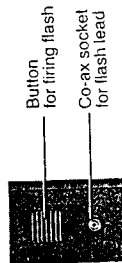
Position diffuser to obtain either incident or reflected light reading, as the case may be. Use the FUNCTION selector to set the cursor to \leftarrow .

Select sync. time using value change switch. This should be at least equal or longer than the flash duration as specified by the manufacturer of your flash unit.

Activate the meter by pressing M. F appears in the LCD display to indicate that the MULTISIX is ready for you to fire the flash within 45 seconds.

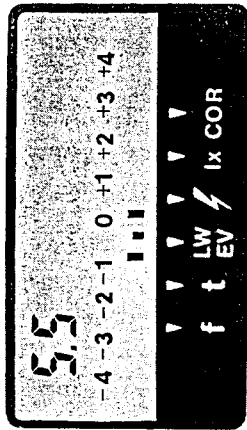
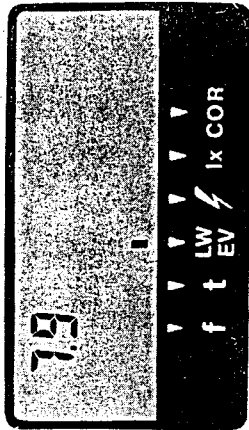
Fire the flash.

If you want to fire the flash from the meter, attach a sync cord to the connector at the meter and fire the flash by pressing the sync button.



Obtaining exposure values (LW/EV)

The exposure values are combinations of shutter time and f/number which are adjustable on some camera models. Set diffuser for either a reflected or incident light reading as the case may be. Position indicator to LW/EV. Obtain reading by pressing M



Obtain a contrast reading or automatic averaging same as for reading with preselected f/number (aperture priority) or shutter speed (shutter priority).

Here too, the reading is stored in memory and converted and indicated when changing to the corresponding function setting.

17

End of meter armed is signalled by the ISO display. Read meter by again pressing M.

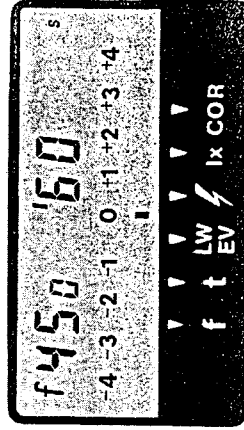
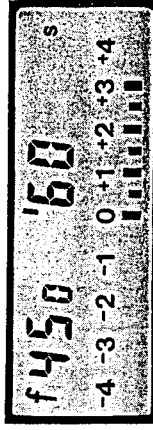
Flash/daylight analysis

The contrast scale (the scale below the digital exposure information) will show how many stops the flash differs from ambient light.

Example: the flash has increased the ambient light by 3 stops.

If the difference between ambient light and flash is greater than 4 stops the meter display will be as shown here.

The contrast scale will no longer appear, but the function indicator only.



BAT

Should the battery need changing, display will show the BAT alarm and a flash reading is no longer possible. The F indication appears only briefly before disappearing.

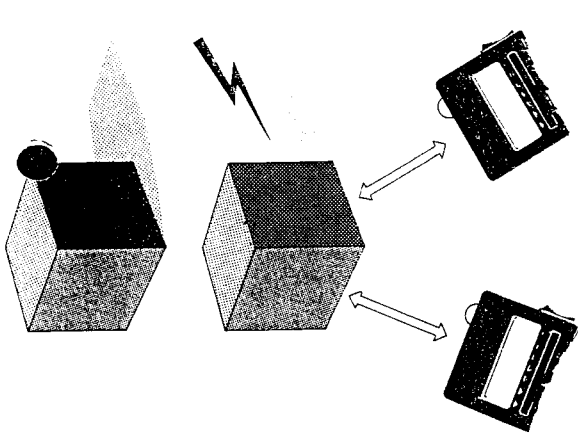
18

19

After this first flash reading you can measure the contrast between the area where the flash is being used and those areas which were not reached, i. e. the light distribution as reproduced later in the picture.

Press \bar{M} and the original contrast reading will disappear. The MULTISIX holds the first measurement in the memory. The contrast display is now continuously showing the difference in the illumination of the areas of the subject reached by the flash and by those ambient light alone.

These examples demonstrate that satisfactory results are indicated irrespective of whether the area reached by the flash is lighter or darker than the area merely receiving ambient light.



Second and subsequent readings with \bar{M} depressed Ambient light only

First Reading \bar{M} depressed Flash and ambient light

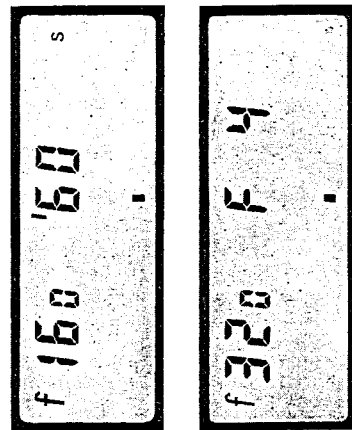
Multiple flash computing

Occasionally the light output from a single flash may not be sufficient to enable you to work at the aperture desired. When this happens, simply slide the value change switch until the desired f/stop appears in the display (to the left). The MULTISIX instantly computes the number of flashes needed for the desired aperture and indicates that number in the display to the right.

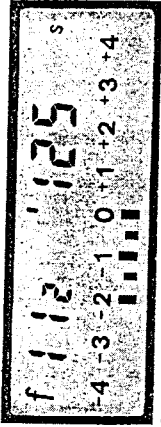
Example: first aperture reading f/16, preselected shutter speed $1/60$ second, desired f/stop 32

The indication F4 means that based on the light from the first flash you will need 4 flashes to shoot at f/32.

Using this method, the flash energy for multiple flash is therefore required only when taking the picture and not when measuring. Your batteries will last longer and the energy saved will be used for more flash pictures.

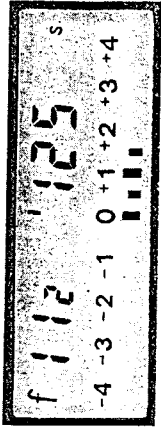


Example: the area not brightened by the flash measured in the second reading is 2 stops under the area first measured.



\bar{M} depressed

Example: the area now measured is by $1\frac{1}{2}$ stops brighter than the area where the flash was used.



\bar{M} depressed

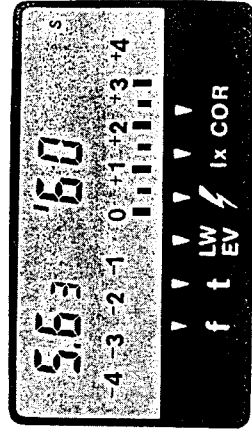
The contrast scale will blink on and off if the lighting contrast ratio is greater than + or - 4 stops. Therefore the reading cannot be used.

Obtaining readings under extremely bright ambient light conditions

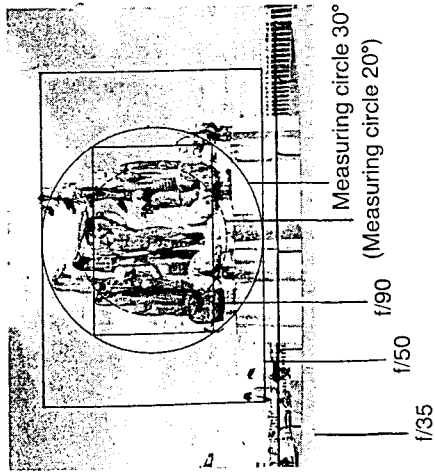
When extremely bright ambient light conditions require a shutter speed exceeding $1/60$ seconds, establish the necessary values by making the following measurement: Flash reading when setting to $1/60$ s, reading the contrast display and changing the indicated f/stop according to the following tables:

Contrast reading in stops	Correction of flash reading in stops for camera shutter speed	1/10 / 1/15 sec.
1	1/2	1
2	1/3	2/3
3	1/6	1/3
4	1/10	1/4

Example: In the example shown the indicated f/stop must be shut down by $1/3$ stop, i. e. to $5.6 \frac{2}{3}$ for the shutter speed $1/10 \frac{1}{15}$ sec.

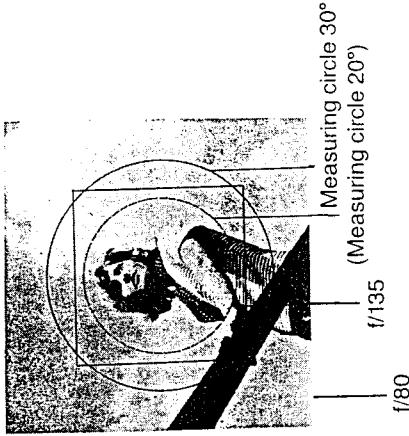


Measuring Circle of the MULTISIX with ambient light



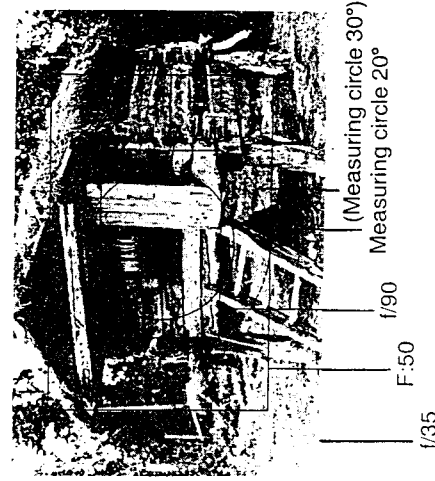
Size 24 x 36 mm

You can evaluate the size of the measuring areas by comparing them with the viewfinder image.

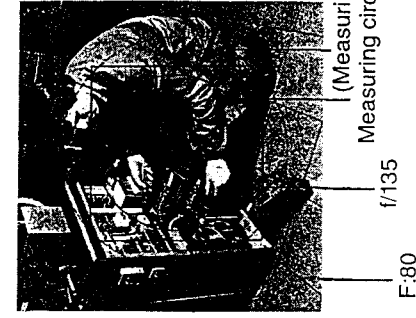


Size 6 x 6 mm

Measuring Circle of the MULTISIX with flash



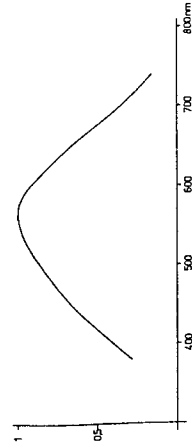
Size 24 x 36 mm



Size 6 x 6 mm

Spectral Sensitivity of the MULTISIX

The MULTISIX utilizes special filters in front of the light sensor to provide a relative spectral sensitivity that closely matches the spectral sensitivity distribution of films, for optimum compatibility.



Average relative spectral sensitivity of silicon blue cells according to manufacturers' indications

The all-purpose MULTISIX system

The attachments available for the MULTISIX expand its use in various special photography applications.

All MULTISIX attachments are elements of a light measuring system which are also compatible with other GOSSEN hand-held exposure meters, this being the reason why these attachments are furnished with Instructions for Use describing how to use them together with other exposure meters.


How to use these attachments together with the MULTISIX is described in the present Instructions for Use. General explanations given in both Instructions for Use apply correspondingly to other GOSSEN system exposure meters.

Obtaining a flash reading with the MULTISIX requires no attachment.


Pull off covering foil and stick to your MULTISIX meter

Condensed Instructions

ISO setting

1. Move **value change switch**  to set desired ISO value while keeping **ISO** button depressed

f/stop or time priority

1. Move **function selector switch** until indicator is at **f** or **t**
2. Press **M** and release for single measurement
3. Move **value change switch**  up or down for other equivalent exposure combinations of aperture/shutter speed


Measuring contrast





1. Push **M** and hold, then scan the scene

Averaging measurements

1. Push **M**
2. Take subsequent readings with **M**

Flash Measurements (cord/cordless)

1. Move **function selector switch** until indicator is at **f**
2. Select shutter speed with **value change switch** 
3. Push **M** and fire flash within 45 sec.

- Condensed Instructions**
1. Move **value change switch**  to set desired ISO value while keeping **ISO** button depressed
 1. Move **function selector switch** until indicator is at **f** or **t**
 2. Press **M** and release for single measurement
 3. Move **value change switch**  up or down for other equivalent exposure combinations of aperture/shutter speed
- Measuring contrast**
1. Push **M** and hold, then scan the scene
- Averaging measurements**
1. Push **M**
 2. Take subsequent readings with **M**
- Flash Measurements  (cord/cordless)**
1. Move **function selector switch** until indicator is at **f**
 2. Select shutter speed with **value change switch** 
 3. Push **M** and fire flash within 45 sec.

Attachments

The attachments **TELE**, **REPRO**, **MESS-SONDE**, **MICRO** and **LAB** are mechanically connected to the MULTISIX. The diffuser is slid to the right and a lug on the side of the attachment engages in a recess on the MULTISIX. With the knob pressed, the two are joined together; when the knob is released, the MULTISIX and the attachment are rigidly connected.

With the instrument set in the COR mode, the appropriate correction factors must be fed in.

TELE

Setting at 15° measuring angle +1
 Setting at 7.5° measuring angle for ambient light readings +3
 for flash readings +2

REPRO +3
MESS-SONDE +3

