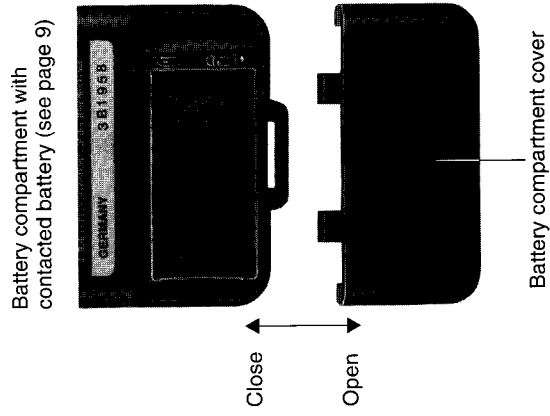
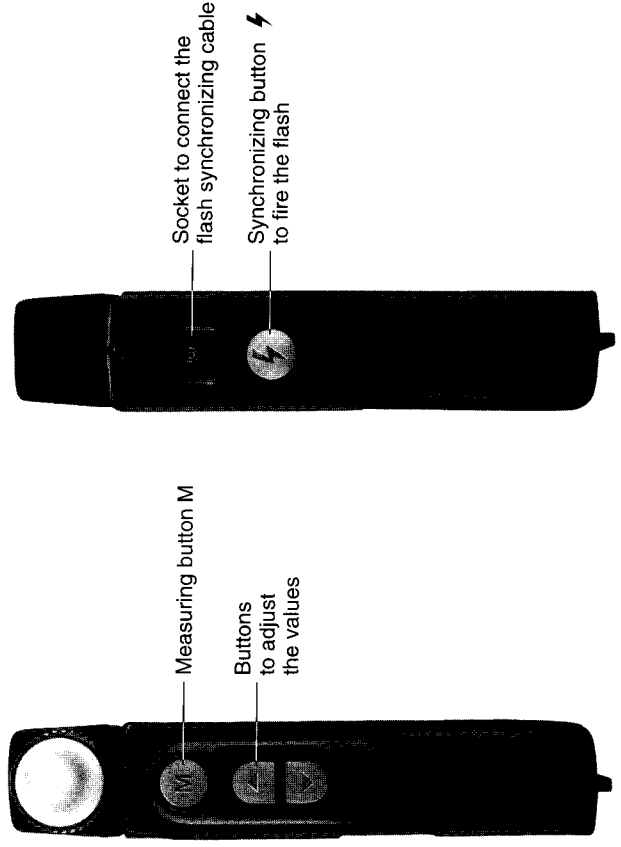




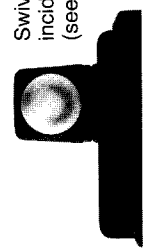
Display (Described on page 8)

VARIOSIX F2

12310



Swivel head with diffuser for incident light measurement (see page 11)

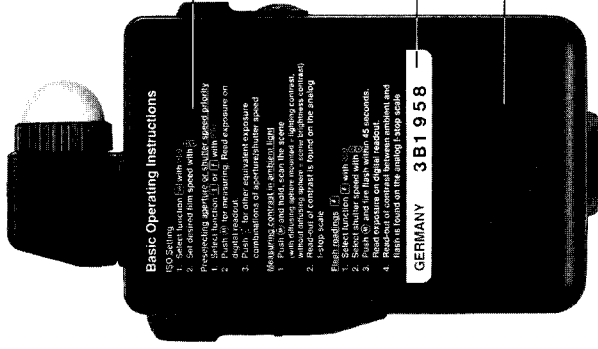


Swivel head without diffuser for reflected light measurement (see page 12)



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Brief instructions for the most important functions



1 Display

- 1.1 The display and its elements**
- 1 Functions
 - Flash measurement
 - Continuous light measurement with shutter priority
 - Continuous light measurement with aperture priority
 - Continuous light measurement with read-out of exposure values (EV)
 - Entering the correction values
 - Setting the film speed
 - 2 Digital display of film speed ASA (ISO)
 - 3 Display identification "t" for aperture
 - 4 Display identification "EV" for exposure value
 - 5 Analogue aperture scale
 - 6 Left-hand digital display
 - Aperture f
 - Exposure value EV
 - Correction value steps
 - Film speed in DIN
 - 7 Display identification "t" for exposure time (shutter speed)
 - 8 Warning sign "BAT" for battery check
 - 9 Display identification "/" for fractions of a second
 - 10 Right-hand digital display
 - Exposure time t (shutter speed)
 - Exposure extension factor
 - CINE (frames per second); symbol: f
 - Multiple flash; symbol: F at 6
 - Film speed in ASA
 - 11 Unit symbol "m" for minutes
 - 12 Unit symbol "s" for seconds

Your VARIOSIX F2 is an exposure meter with digital display from GOSSEN. It measures continuous light and flash, and it covers a wide measuring range with great accuracy.

A wealth of knowledge in the area of light metering, based on many decades of experience in the manufacture of exposure meters, is now being made available to the user, in the simplest manner possible, due to microprocessor technology.

The VARIOSIX F2 not only measures with the greatest accuracy, but it can also store the readings and complete calculations at the push of a button. Its operation is exceptionally simple and convenient.

Features that characterise the VARIOSIX F2:

- Microprocessor controlled
- Measures reflected and incident light, flash (with cord and cordless), and the share of ambient light
- Calculation of multiple flash
- Digital LCD display in tenths of stops
- Analogue contrast display in half stops
- Programmable exposure correction
- Recall of all possible paired settings for a reading
- Aperture or shutter priority preselection
- Extremely convenient to measure flashes
- Covers the entire cine scale (frames per second), including the TV standard 25 and 30 f.p.s.
- Warning when range is exceeded
- Automatic battery check
- Storage of settings and readings
- Automatic cut-off

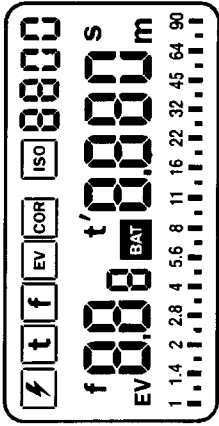
Self-checking Routine

The microcomputer performs a self-checking routine as soon as the battery has been loaded. Every possible display segment appears on the display during this routine. The duration of the self-checking routine is approximately 10 seconds, but it can be interrupted by depressing any button.

The factory-programmed basic settings are automatically adjusted as soon as the self-checking routine has been completed.

Basic values

ISO	100/21 °
COR	0/1.0
f	5.6
t	1/125
EV	12
Flash	F 1/60



1.2 Display Duration

When none of the control buttons has been actuated during the last 2 minutes, the display is automatically switched off, i.e. there are no readings.

- The stored values are recalled by depressing the function or values buttons
- Renewed measurement is instantly possible when the metering button is depressed.

The values of the last measurement are stored until a new meter reading is taken.

The VARIOSIX F2 is fitted with separate memories for continuous light and flash measurement.

2 How the VARIOSIX F2 Functions

2.1 Preparations - Battery Test

Battery

The VARIOSIX F2 operates with a 9 V battery (alkaline-manganese battery or corresponding accumulator). Since the meter's power consumption is minimal, the battery will last for a long time. When the battery's capacity becomes exhausted, the user is warned by the "BAT" display.

This means that the battery has to be exchanged at the earliest possible opportunity.

Measurements cease to be possible if the display only indicates "BAT".

The battery must be immediately replaced.

To change the battery open the battery compartment of the VARIOSIX F2. Remove the exhausted battery. Clip the contacts onto the new battery and insert in the battery compartment. Push back the battery compartment cover.

Battery changing erases all stored values.

And then a meter reading is taken that lies parallel with the projected connecting line between the actual subject and the camera. This very convenient method of light metering at a point with the same lighting level is highly recommendable for outdoor shots. The measurement is performed with a complete "about turn" in front of the camera so that the reading is taken with the meter pointing towards the camera, i.e. opposite the actual picture shooting direction.

Incident light measurement, i.e. with diffuser, also gives a precise reading of the brightness contrast range of the lighting.

Both kinds of lighting - flash and continuous light - are measured with great accuracy by the incident light method with diffuser.

Parallel to this the VARIOSIX F2 also offers the **reflected light measuring method**. In this mode the diffuser has to be removed, and the meter is pointed from the camera towards the subject. The meter now only measures the light reflected by the subject. Consequently, the reading always depends upon the

inherent brightness of the subject!

This means that inherently brighter subjects are not precisely measured and therefore rendered darker.

This mode is also used to measure the subject contrast which is displayed by the VARIOSIX F2 on its analogue scale (see page 19, 3.2.5 Measuring the Contrast).

If readings are to be taken exclusively by the reflected light measuring method, then it is advantageous for the professional to use a grey card (18 % remission capacity) in this mode.

Swivel head with diffuser for incident light measurement



Swivel head without diffuser for reflected light measurement



3.2 Continuous Light Measurement

The VARIOSIX F2 is designed for an exposure value measuring range of -2.5 to +18 at ISO 100/21°.

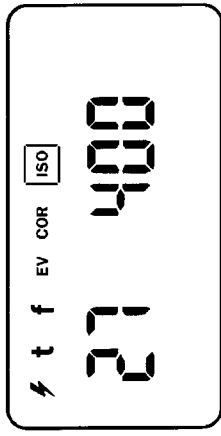
It offers the following possibilities depending on the application:

- With **shutter priority** "t" the reading is taken for the corresponding aperture
- With **aperture priority** "f" the reading is taken for the corresponding shutter speed
- For **exposure value** "EV" the shutter speed is preselectable, and the aperture is given as an analogue value
- **CINE speed** (frames per second)
- **Contrast measurement** in the function "t"

The desired continuous light function can be selected with the corresponding function button.

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3 The Individual Functions

3.1 Setting the Film Speed

- Select "ISO" with function buttons.
- Set the desired ISO value with the values buttons.
(Display: left DIN value; right ASA value)

Once the film speed has been set it is transferred to the memory of the VARIOSIX F2 when the meter is adjusted to any operating function, and it remains visible at the top on the right-hand side of the digital display.

Any change of the film speed directly influences the stored paired aperture and shutter values.

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

3.2.2 Aperture Priority Mode

- Select "f" with the function buttons
- Set the desired aperture with the values buttons
- Measure by depressing the measuring button M
- The measured shutter speed appears on the right-hand digital display. Automatic adaptation of the aperture in 1/10th stops to the fixed shutter speed
- Select other paired aperture/shutter values with the values buttons

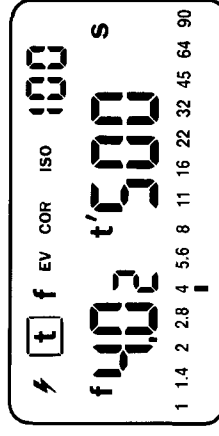
Note:

The 1/10th stop values stored from the last measurement appear when the aperture is preset. These are invalid because the valid 1/10th stops will only appear after the next meter reading is taken.

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3.2.1 Shutter Priority Mode

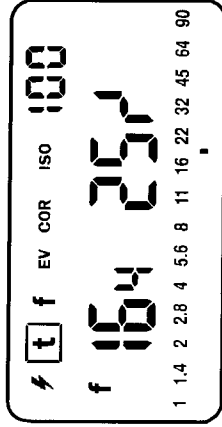
- Select "t" with the function buttons (the last stored value appears on the display)
- Adjust the desired shutter speed with the values buttons
- Measure by depressing the measuring button M
- The measured aperture stop appears on the left-hand digital display (resolution: 1/10th stops), and additionally as a mark rounded off in the analogue aperture scale
- Select other paired aperture/shutter values with the values buttons



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3.2.4 CINE Speed (Frames per Second)

- Select "t" with the function buttons
- Select the desired speed (f.p.s.) with the values buttons. For this purpose go beyond 1/8000th s. After approx. 1 second the meter switches over to CINE speeds. The symbol $\frac{f}{s}$ appears on the display. Cine speeds are variable between 8 and 64 frames/s.

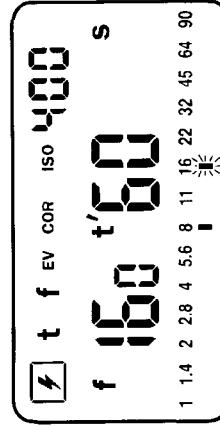
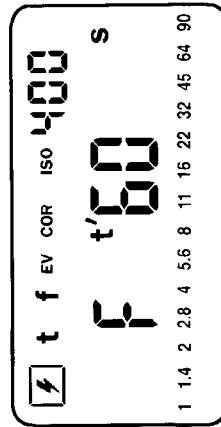


- Measure by depressing the measuring button M
 - The measured aperture stop appears on the left-hand digital display (resolution: 1/10th stops), and additionally as a mark rounded off in the analogue aperture scale
- The displayed aperture applies to a 180 degree shutter blade.
- Enter a COR value for other shutter blades as an extension factor
- V = 180° : open aperture angle

3.2.6 Flash Readings

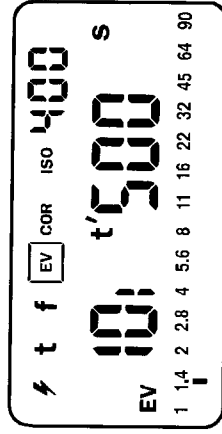
Readings can be taken with or without synchronizing cable. When used in conjunction with a synchronizing cable, the flash is fired with the synch button $\frac{f}{s}$.

- Select "f" with the function buttons
- Adjust the desired synchronizing speed with the values buttons. Synch range from 1 s to 1/1000th s (including 1/90 s).
- Depress the measuring button M.
- VARIOSIX F2 is operable for metering for a period of 45 s. (Meter readiness prevails as long as "F" remains visible on the display).
- Fire the flash
- The measured aperture stop (from the sum total of flash and continuous light) appears on the left digital display, and as a flashing mark on the analogue aperture scale. The aperture stop for the share of continuous light is additionally indicated on the aperture scale (in our example f/8).



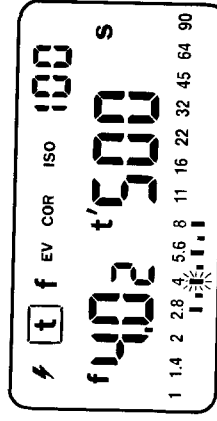
3.2.3 Exposure Value EV

- Select "EV" with the function buttons
- Measure by depressing the measuring button M
- The measured EV appears on the left-hand digital display (resolution: 1/10th stops), and additionally the f/stop as a mark in the analogue aperture scale
- With the value buttons select other paired aperture/shutter speed values corresponding to this Exposure Value



3.2.5 Measuring the Contrast

- Select "t" with function buttons
- Keep measuring button depressed for **some time** and aim meter at the various areas in your subject
- In the left digital display, there appears the first measured aperture (f/stop). It will stay on in the display as reference value (e.g. a neutral grey card) during the entire measuring operation. On the analogue aperture scale, the contrast range between the two extreme values will come on. The actual measuring value flashes.
- After the measuring button is released, the entire contrast range measured is indicated on the analogue aperture scale. The last value measured does not flash any longer.

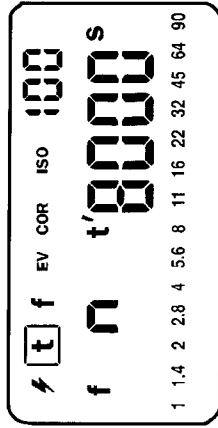
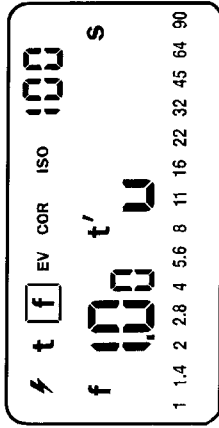


3.3.1 Read-out Outside the Display Range

– If the symbol "L" or "□" appears on the right or left digital display it means that a reading has been taken, but its display is outside the meter's display range.

– With "L" actuate values button to enter the display range.

– With "□" actuate values button to enter the display range.

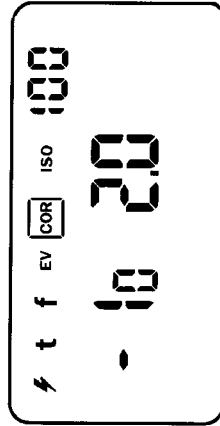
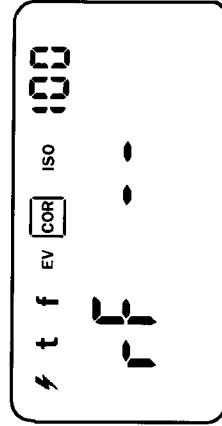


3.4.2 Measuring Correction Values

Correction values can also be directly measured. An evenly illuminated surface and constant light level are required.

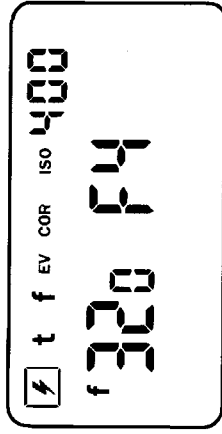
– Press measuring button and get a reference reading; displayed as "rF--".
 – Weaken light by holding e.g. a grey filter in front of the diffuser sphere. Press measuring button.

The light reducing factor will be displayed automatically in stops at the right, as extension factor at the left.



3.2.7 Multiple Flash

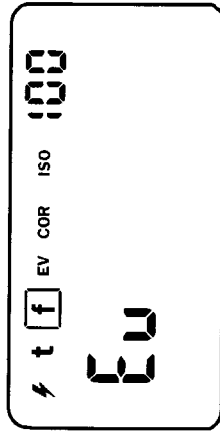
Occasionally the light output from a single flash may not be sufficient to enable you to work at the aperture desired. When this happens, simply push the top values button until the desired f/number appears in the display. The digital shutter speed display disappears, to be replaced by information on the number of flashes that have to be fired for the desired f-stop (e.g. F4 = 4 flashes).



The VARIOSIX F2 will calculate up to a maximum of 10 flash sequences.

3.3 Measurements Outside the Measuring Range

– The VARIOSIX F2 will not produce any useful readings outside its measuring range.
 – If its too dark or too bright, an "E" (= error) appears on the left digital display, and alongside "L" for too dark, or "□" for too bright.



3.4 Setting and Measuring Correction Values

(Please refer to "Important Remarks Concerning Correction Values", 3.4.4)

3.4.1 Setting Correction Values

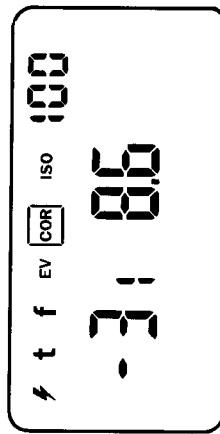
– Select with the function buttons "COR". (The last valid correction value appears on the display)
 – Enter or change the correction value with the values buttons.

The extension factor appears on the right-hand digital display, the correction value is shown on the left in stops.

Enter in 1/10th steps (small figure) within a range of ±7.9 Exposure Value steps.

A figure preceded by "-" indicates an exposure extending correction.

Example:
 – 3.1 steps equal factor 8.6



In the event of an exposure shortening correction only the left display appears as an exposure value difference in stops.

3.4.4 Important Remarks Concerning "Correction Values"

The VARIOSIX F2 is a precision meter calibrated with great accuracy to provide you with exact exposure data. Should you still not be satisfied with the results, then you should remember that there are other independent variables that can influence the success of your exposures:

For instance:

- The "true" speed of your film can deviate from that on the pack;
- The "true" shutter speeds and f-stops on your camera can differ slightly from the rated values;
- Deviations can arise when the film is processed.

In addition to that purely subjective factors and matters of taste in the assessment of the finished photos may be involved.

However, you can calibrate your VARIOSIX F2 to the peculiarities of your camera, your brand of film, your processing methods, and to your projector.

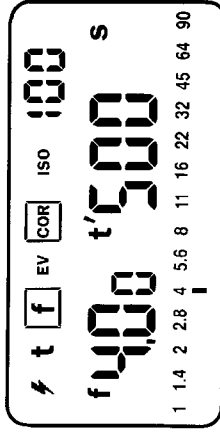
We recommend the following procedure:

Take the readings of a few normal subjects with the utmost care by the reflected and incident light measuring methods, and shoot five pictures of each subject on colour reversal film. The first frame should be exposed with the exposure settings supplied by the VARIOSIX F2. The exposure settings for two of the remaining shots are then increased by half an f-stop and a full f-stop, respectively, and for the other two decreased by half an f-stop and a full f-stop, respectively. Make a note of the shooting conditions. These must not change while the five shots are being taken. Now select from the processed pictures the one you consider to be optimal and compare its settings with the meter readings. If you find that you prefer exposures that were taken with settings that differ from those supplied by the meter, then this value can be programmed into your VARIOSIX F2.

- The COR value is now automatically taken into account in all subsequent measuring functions of the VARIOSIX F2. The frame around "COR" is retained as a reminder that a correction value was entered.
- The COR value is considered automatically at all measuring functions

3.4.3 Cancelling Correction Values

- Select "COR" with the function button
- Depress measuring button (display = "rF --")
- Select any other function with the function button
- Correction value is cancelled, and the frame around "COR" disappears



5 Care and Service

In the event that your VARIOSIX F2 is not working to your complete satisfaction, please send it to:

GOSSEN-METRAWATT GMBH
Servicestelle
Thomas-Mann-Straße 16 - 20
D-90471 Nürnberg

or to the GOSSEN agency in your country.

You will make things easier, if you return your exposure meter without any accessories, i.e. without case, carrying cord, etc.

4 Technical Specifications

Measuring possibilities	Incident light Reflected light Contrast measurement Flash (cord/cordless) Indication of ambient light share Calculation for multiple flash Silicon blue cell photodiode
Sensor	
Measuring range/continuous light (at ISO 100/21°)	LW - 2.5 to + 18 ± 0.1 EV
Repeatable accuracy	1/8000th sec. to 60 minutes
Exposure times	f/1 to f/90 9/10
Aperture stops	f/1 to f/90
Measuring range/flash (at ISO 100/21°)	f/1 to f/90

Flash synch speeds (measuring time)	1 to 1/1000th sec. incl. 1/90 sec.
Cine speeds	8 to 64 f.p.s. incl. 25 and 30 (TV)
Adjustable and measurable correction values	- 7.9 to + 7.9
Extension factors	1.0 to 240
Film speeds	ISO 3.2/6° to 8000/40°
Acceptance angle for reflected light	30°
Battery or accumulator	9 V; battery condition indication
Accessories	Case, carrying cord, battery and instructions for Use approx.
Dimensions	71 x 128 x 24 mm
Weight (without battery)	approx. 120 g