

# GOSSEN MASTERSIX

Complete Operating Manual, Visual Control Diagram & Quick Reference Guide

ENGLISH TRANSLATION • FULLY TRANSLATED GRAPHICS • CREATED BY APERTUREONEPOINTFOUR

## 1. Device Overview & Control Diagrams

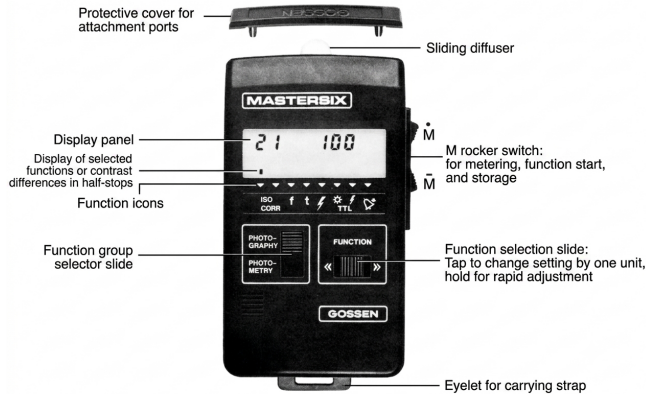


Figure 1: Front panel controls, display & function switches

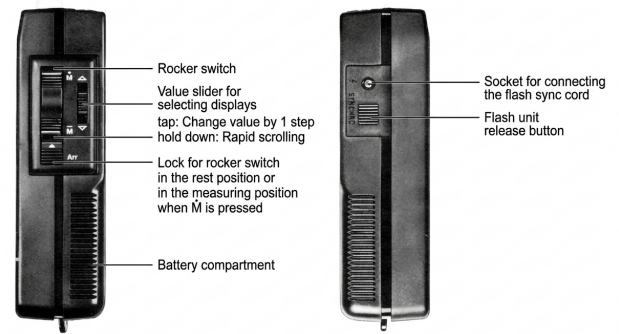


Figure 2: Side profiles: M rocker switch, value slider & sync port

### Summary of Key Operating Controls

- **M • Upper Rocker Switch:** Triggers light readings, initiates function timing, and saves measurements to memory.
- **M — Lower Rocker Switch:** Completely clears all stored readings from memory.
- **Value Slider (<|||>):** Adjusts parameters (Aperture, Shutter Speed, ISO). Tap for single-step adjustments; hold for rapid scrolling.
- **Function Selector Slide:** Toggles between **PHOTOGRAPHY** and **PHOTOMETRY** operating modes.
- **Automatic Shut-Off:** The Mastersix automatically turns off after 2 minutes of inactivity to preserve battery life.



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## 2. Quick Reference Guide (Rear Plate Instructions)



### QUICK GUIDE — PHOTOGRAPHY MODE

#### 1. DIN / ASA Setting

1. Slide **FUNCTION** until indicator aligns with **DIN/ASA**.
2. Adjust setting using the Value Slider **<III>**.

#### 2. Aperture or Shutter Priority

1. Align indicator to **f** (Aperture) or **t** (Shutter) using **FUNCTION** slider.
2. Take measurement by pressing **M** upper switch.
3. Select equivalent f/t combinations using Value Slider.

#### 3. Contrast Measurement

1. Press **M** and scan target measurement spots.

#### 4. Average Value Calculation

1. Take initial measurement with **M**.
2. Take subsequent measurements with **M** (up to 15 spots).

#### 5. Flash Measurement

1. Move **FUNCTION** slider to Flash symbol **⚡**.
2. Select sync shutter speed using Value Slider.
3. Press **M** and trigger test flash within 45 seconds.

## 3. Battery & System Self-Test

### Battery Operation

The **Gossen Mastersix** is powered by a standard **9V alkaline battery** (or 9V rechargeable battery). A fresh battery delivers at least **2,000 individual readings**.

**Low Battery Indicator (BAT)**: When the warning symbol **BAT** appears on the LCD, approximately **50 measurements** remain before battery replacement is required.

**Battery Replacement**: Slide open the battery compartment door on the rear in the direction of the arrows. Remove the depleted battery, insert a new 9V battery observing proper polarity, and snap the cover shut.

### Automatic Microcomputer Self-Test

Upon inserting a battery, the internal microcomputer automatically performs a display self-test. All liquid crystal segments turn on simultaneously.

After the test completes, the unit automatically defaults to factory settings:

- **Film Speed**: ISO 100/21° (21 DIN / 100 ASA)
- **Function**: DIN/ASA mode

**Important Note**: Replacing the battery will erase all stored readings and custom exposure correction values from memory!

## 4. Setting Film Speed (ISO / ASA)

1. Ensure the function selector switch on the side is set to **PHOTOGRAPHY** (FOTOGRAFIE).
2. Move the horizontal **FUNCTION** slider until the indicator arrow points to **DIN/ASA**.
3. Push the vertical **Value Slider** up or down until your desired film speed is displayed.
4. The set film speed remains stored in memory until intentionally readjusted or until the battery is removed.

| ISO Rating  | ASA Speed | DIN Speed | Typical Film Types                       |
|-------------|-----------|-----------|------------------------------------------|
| ISO 50/18°  | 50 ASA    | 18 DIN    | Ilford Pan F+, Fuji Velvia 50            |
| ISO 100/21° | 100 ASA   | 21 DIN    | Kodak Ektar 100, Ilford FP4+, Fuji Acros |
| ISO 400/27° | 400 ASA   | 27 DIN    | Kodak Tri-X 400, Portra 400, Ilford HP5+ |
| ISO 800/30° | 800 ASA   | 30 DIN    | Kodak Portra 800, Cinestill 800T         |

## 5. Exposure Metering Methods: Reflected vs. Incident

### Reflected Light Metering (Objektmessung)

**Setup:** Retract the white diffuser dome to the side.

**Method:** Aim the meter sensor directly from the camera position toward the subject or specific shadow/highlight detail.

**Application:** Ideal for evaluating scene contrast, landscape photography, telephoto work, or measuring distant subjects.

### Incident Light Metering (Lichtmessung)

**Setup:** Slide the translucent white sphere dome over the receiving sensor.

**Method:** Position the meter at the subject location and point the white dome directly back toward the camera lens.

**Application:** Measures light falling onto the subject. Immune to subject reflectivity; gives perfect exposure for portraits and studio setups.

### TTL Metering Note

Direct film-plane TTL metering for continuous light and flash photography is supported when using the optional **PROFI-select TTL** attachment (used with view cameras / large format film planes).

## 6. Photometric Measurements & Units

When the main function selector is switched from **PHOTOGRAPHY** to **PHOTOMETRY** (FOTOMETRIE), the Mastersix becomes a precision light meter capable of displaying absolute physical lighting values:

| Function Code    | Physical Quantity        | Required Sensor Position                                                                                      | Unit of Measurement               |
|------------------|--------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>lx</b>        | Illuminance              | Incident (Dome Extended  )   | Lux (lx)                          |
| <b>fc</b>        | Illuminance (Imperial)   | Incident (Dome Extended)                                                                                      | Foot-Candles (fc)                 |
| <b>cd/m²</b>     | Luminance                | Reflected (Dome Retracted  ) | Candela per m²                    |
| <b>cds/m²</b>    | Luminance (Imperial)     | Reflected (Dome Retracted  ) | Candela-seconds per m²            |
| <b>lxs / fcs</b> | Light Exposure / Pulse   | Incident (Dome Extended  )   | Lux-seconds / Foot-candle-seconds |
| <b>D</b>         | Density / Contrast Ratio | Either Incident or Reflected                                                                                  | Relative Density Units            |
| <b>COLOR</b>     | Color Temperature        | Incident (with PROFI-color)                                                                                   | Kelvin / LB Filter values         |

## 7. Advanced Functions: Memory, Averaging & Signals

### Measured Value Memory

Releasing the  upper switch holds the current measurement in display memory for **2 minutes**.

Taking a new reading updates the stored value instantly. You can recall stored values anytime during the 2-minute period by nudging the Function selector or Value slider slightly.

Pressing the  lower switch completely clears all stored values from memory.

### Automatic Averaging (Up to 15 Readings)

To calculate balanced exposure for high-contrast scenes:

1. Press  for the first spot reading.
2. Press  for additional spot readings (highlights, shadows, midtones).

The microcomputer automatically calculates and displays the exact arithmetic mean of up to 15 accumulated measurements!

### Acoustic Beep Signals

An audible beep confirms meter operation in all function modes (except TIMER mode):

- **Flash Mode:** Beep signals completion of readiness window (45 seconds after arming).
- **Averaging Mode:** Beep alerts you when the maximum limit of 15 spot readings has been reached.



## 8. Range Limit Signals & Measuring Range Extension

### Display Symbols & Warnings

**⏏ ⏏ ⏏ Overrange:** Measured brightness exceeds meter limits. Push Value slider toward smaller apertures / faster speeds.

**⏏ ⏏ ⏏ Underrange:** Light level is below threshold. Push Value slider toward larger apertures / longer exposure times.

**Blinking Display:** Signals an invalid reading (e.g., implausible aperture/shutter combination or extreme lighting out of bounds).

**ΔX Correction Factor Active:** Appears when a custom exposure correction value has been programmed into memory.

### +5 Stop Range Extension Filter

When measuring extremely intense flash or ambient light, if the flash symbol flashes with **⏏ ⏏ ⏏**, the measuring range is exceeded.

**Operation:** Slide the built-in neutral density filter knob on top of the meter completely to the **+5** position. Take the measurement again for a correct display reading.

**Important:** Always return the filter knob completely back to the **0** position when range extension is no longer required!

## 9. Modular System Accessories & Attachments

The Gossen Mastersix is a modular system consisting of the base meter body and **9 specialized attachments**:

| Attachment       | Function & Primary Application                                                                |
|------------------|-----------------------------------------------------------------------------------------------|
| TELE             | Narrows reflected measurement angle down to 15° or 7.5° for telephoto evaluation.             |
| PROFI-spot       | Precision spot-metering attachment with view-finder, narrowing angle to 10°, 5°, or 1°.       |
| PROFI-color      | Color temperature meter attachment for reading Kelvin and calculating conversion filters.     |
| REPRO            | Determines accurate exposure values for artwork reproduction and flat-art copying.            |
| PROFI-flex       | Flexible fiber-optic probe for metering ground glass screens, macro subjects, or tight spots. |
| PROFI-lux        | Incident light attachment for precision illumination measurements in lux and foot-candles.    |
| PROFI-select TTL | Direct film-plane metering probe for continuous light and flash in large format cameras.      |
| PROFI-micro      | Microscope adapter attachment for photomicrography exposure metering.                         |
| LAB              | Darkroom attachment for measuring negative density and enlarger exposure timing.              |

# 10. Special Feature Guide: Exposure Correction Diagrams & Procedures (CORR & Delta-X)

**Programming Exposure Correction Values**

Select PHOTOGRAPHY mode.  
Move FUNCTION slider until indicator aligns with CORR.  
Enter a correction value using the Value Slider.  
Example: -0.5 stops (i.e., factor of 1.4).

For setting correction values with non-electrical attachments, refer to Part 2 "Attachments" of the operating manual.

Once a correction value is entered, the warning marker appears across all photography functions to indicate that the correction factor is automatically being applied.

Exposure Difference in Stops

Correction Factor

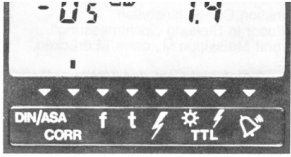


Figure 4: Programming Exposure Correction Values (English Diagram)

**Clearing Exposure Correction Values by Adjusting Value Slider or Quick-Resetting Correction Values:**

Select CORR mode.  
Slide diffuser into "Incident Light" position.  
First press upper rocker switch M+, then press lower rocker switch M-.  
Constant light on the sensor is required.

Display in CORR mode with cleared correction value.

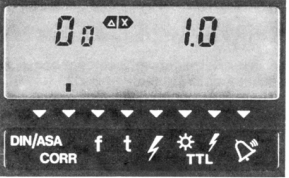
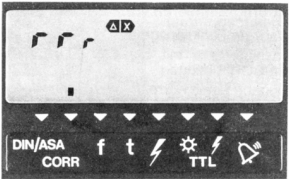


Figure 5: Clearing & Quick-Resetting Correction Values (English Diagram)

**Key Summary: Exposure Correction Operation**

- Programming Offset:** In **CORR** mode, use the Value Slider to dial in your desired offset (e.g. -0.5 stops = Factor 1.4). The **ΔX** icon remains active across all modes.
- Quick-Reset Sequence:** In **CORR** mode under constant incident light, press **M+** upper switch then **M-** lower switch. The LCD flashes x x x and resets instantly to 0.0 stops and Factor 1.0.

## 11. Special Feature Guide: Measuring Range Extension (+5 Stops) & Warning Marker

### Measuring Range Extension +5 Stops

If the display flashes  $\infty$   $\infty$   $\infty$  during a flash measurement, the measuring range is exceeded. Slide the range extension filter in front of the sensor port (+5 position). Taking a new reading will yield a correct display measurement.

Important: Always slide the filter knob completely to the stop, and return it back to position 0 when range extension is no longer required.

### Warning Marker for Active Correction Values

The warning marker appears in the PHOTOGRAPHY function group whenever you have programmed a correction value to intentionally offset the display readout.

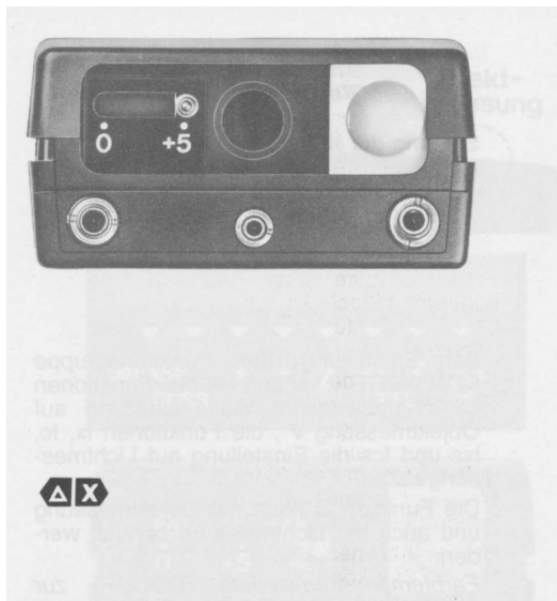


Figure 6: Measuring Range Extension (+5 ND Filter Switch) & Delta-X Warning Marker (English Diagram)

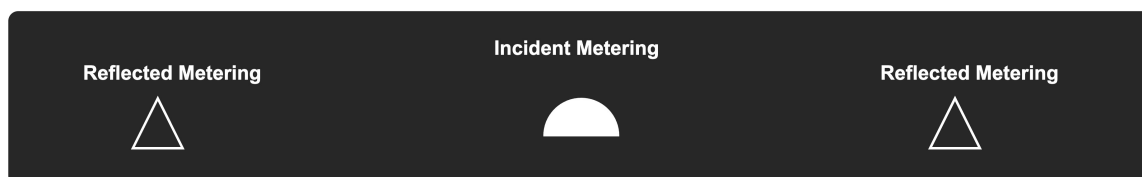
### Key Summary: Range Extension & Offset Warning

- **+5 Stop Range Extension:** If the flash measurement screen blinks  $\infty$   $\infty$   $\infty$ , slide the top ND filter switch from 0 directly to +5. Retake the measurement for an accurate readout. Always slide the switch back to 0 when done!
- **Warning Symbol (  $\Delta X$  ):** Whenever a custom correction offset is programmed into memory, the  $\Delta X$  warning symbol remains visible in all photography modes to notify you that display values are being modified.

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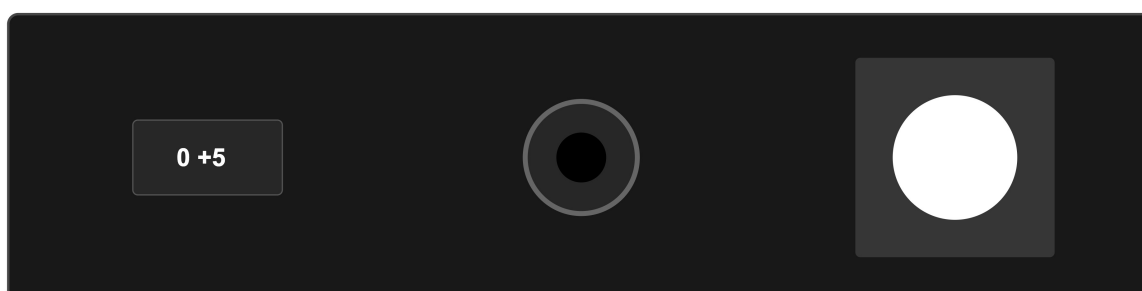
## 12. Reflected and Incident Light Metering

When set to the PHOTOGRAPHY function group, all measurements in f (Aperture), t (Shutter Speed), and ⚡ (Flash) modes can be performed using either method.



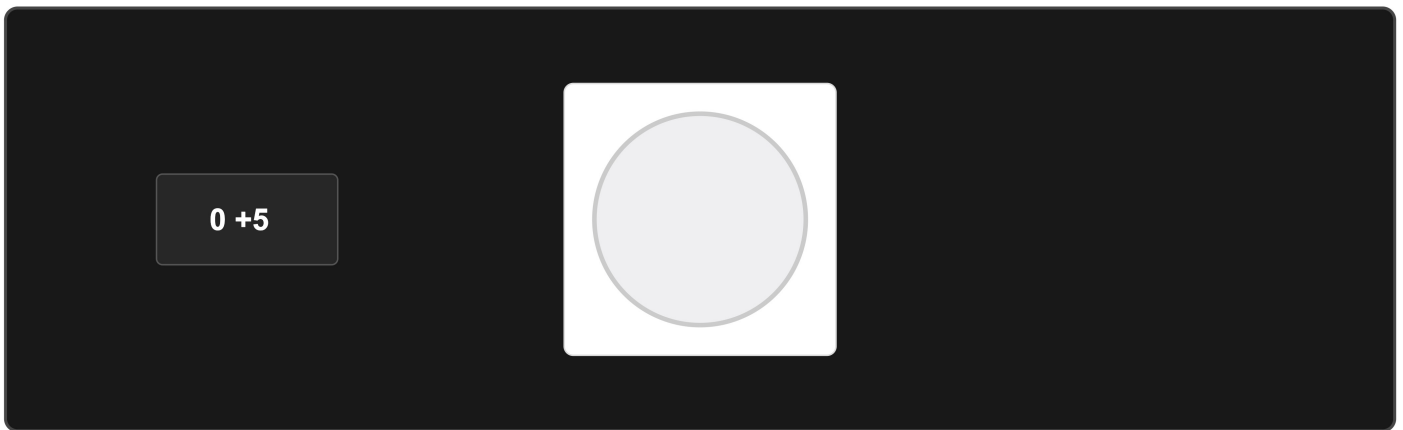
### Reflected Light Metering (Objektmessung ▽):

- Diffuser Setup: Retract the white sphere dome completely to the side.
- Position & Aim: Point the sensor from the camera position directly toward the subject.



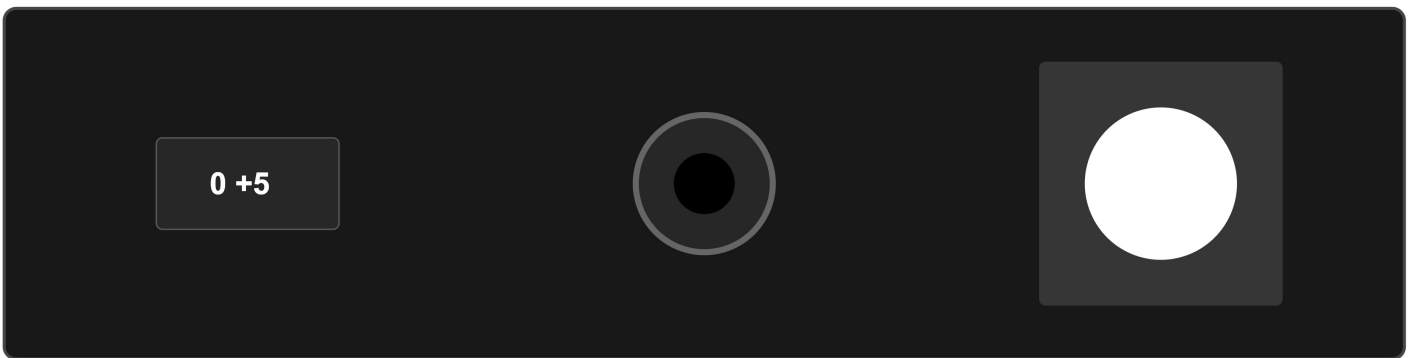
### Position of the Diffuser Dome for Incident Light Metering (Lichtmessung ●):

- Setup: Slide the translucent white diffuser dome centered over the sensor port.
- Execution: Hold the meter at the subject location and point the dome back toward the camera lens.



### Reflected Light Metering (Objektmessung ▽):

- Diffuser Setup: Retract the white sphere dome completely to the side.
- Position & Aim: Point the sensor from the camera position directly toward the subject.



The Mastersix naturally supports both reflected and incident light metering. When set to the Photography function group, all measurements, whether for aperture, shutter speed, or flash, can be performed using either method. For reflected light metering, simply retract the dome and point the meter toward your subject. For incident light metering, slide the dome over the sensor and aim the meter back toward the camera.

## 13. Shutter Priority or Aperture Priority

The Mastersix gives you the choice between shutter priority and aperture priority. You can preselect any shutter speed from 1/4000 of a second up to 8 hours, and the meter calculates the matching aperture. Alternatively, you can set an aperture between f/0.7 and f/128, and the Mastersix will determine the correct exposure time.