

# GLOSSMETER

- GM-200
- GM-2000

This Gloss Meter is small in size, light in weight, easy to carry. Although complex and advanced, it is convenient to use and operate. Its ruggedness will allow many years of use if proper operating techniques are followed. Please read the following instructions carefully and always keep this manual within easy reach.

## 1. APPLICATIONS & FEATURES

Designed and manufactured in accordance with international standard ASTM D 5 2 3 , ASTM D 1 4 5 5 , ASTM C 3 4 6 , ASTM C 5 8 4 , ASTM D 2 4 5 7 , DIN EN ISO 2 8 1 3 , DIN 6 7 5 3 0 , EN ISO 7 6 6 8 , JIS Z 8 7 4 1 , MFT 3 0 0 6 4 , TAPPIT 4 8 0 , GB 9 7 5 4 , GB/T 1 3 8 9 1 , GB 7 7 0 6 and GB 8 8 0 7 . Its technical parameters conform with JJG 6 9 6 - 2 0 0 2 . Flexible use with its separate probe.

- \* Widely used in Floor maintenance, Surface cleaning quality control, Stone and tile gloss measurement, Checking printed matter, Quality control of paint and ink, Polished metal surface , measurement (chrome plating), Inspection of paint protection and waxing, Auto-body paint inspection, Surface inspection of plastic moldings, Evaluation of detergents and washers,

Checking masonry and building exteriors.

- \* Able to display gloss value of 20°, 60°, 85° at the same time.
- \* With single/continuous measurement function.
- \* Able to store 56 groups of measurement data.
- \* Accurate measurement and good repeatability.
- \* With low voltage indication function.
- \* With both manual power off and auto power off.
- \* With optional USB cable and Bluetooth adapter, it is able to connect with PC, realizing data transmission.
- \* The buzzer beeps during operation.

## 2. TECHNICAL SPECIFICATIONS

Measuring geometry: 20°, 60° & 85°  
 Range: □ 0~200GU  
           □ 0~2000GU  
 Resolution: 0.1 GU  
 Repeatability: ± 0.5 GU (0 ... 99.9)

Accuracy: ±1.5 GU (against reference standard JJG 696-2002)

Measuring area: 7x14mm ellipse

Data memorized: 56 groups

Data output: USB or Bluetooth

Working condition:

Temperature range: 0~40°C

Humidity: up to 85%

Power supply: Lithium Battery

Size: 140x45x75mm

Weight: 310g

Standard Accessories:

Main Unit.....1pc

Calibration Box.....1pc

Optic Cleaning Cloth.....1pc

Carrying Case.....1pc

Operation Manual.....1pc

Optional Accessories:

USB Cable & Software

Bluetooth Adapter & Software

## 3. STRUCTURE & DISPLAY



- 3-1 Display
- 3-2 Power Key
- 3-3 Single/Continuous Key
- 3-4 Calibration/Minus Key
- 3-5 Measurement Key
- 3-6 Delete Key
- 3-7 Read/Plus Key
- 3-8 USB Interface
- 3-9 Power Adapter Interface
- 3-10 Calibration Box
- 3-11 Measurement Indicator
- 3-12 Battery Indicator
- 3-13 60° Measurement Value
- 3-14 20° Measurement Value
- 3-15 85° Measurement Value
- 3-16 Save Indicator
- 3-17 Read Indicator
- 3-18 Data Amount In Memory Indicator

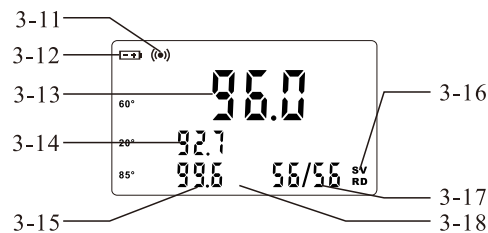


Fig. 2 Display

## 4. Power ON/OFF

- 4-1 To turn on the meter, just press the power key.
- 4-2 To turn off the meter, in the state of power-on, press and hold the Power Key for about 1 second. When 'OFF'

comes out on the display, release the key.

- 4-3 A 10 minutes auto power off can be set. Press and hold the Power Key for about 5 seconds. When 'OFF' comes out on the display, release the key. A number '10' or '0' comes out on the display, indicating auto power off in 10 minutes or no auto power off. Press the Read/Plus Key or the Calibration/Minus Key to convert between auto power off and non auto power off. Press the Power Key to confirm and exit.

## 5. CALIBRATION

- 5-1 Firstly, to set calibration values. Press and hold the Power Key for about 5 seconds. When 'CAL' comes out on the display, release the key. Then the 60° Measurement Value blinks on the display. Press the Read/Plus Key or the Calibration/Minus Key for

adjustment to the indicated value on the Calibration Box. Press the Measurement Key to confirm. Then the 20° Measurement Value blinks. Also press the Read/Plus Key or the Calibration/Minus Key for adjustment to the indicated value on the Calibration Box. Press the Measurement Key to confirm. Then the 85° Measurement Value blinks. Also press the Read/Plus Key or the Calibration/Minus Key for adjustment to the indicated value on the Calibration Box. Press the Measurement Key to confirm.

- 5-2 Afterwards, Calibrate the meter. Put the meter correctly into the Calibration Box, and then press the Measurement Key, a reading comes out on the display. Compare the reading with the predetermined calibration value. If the two are the same, it means the meter is

calibrated. If not, press the Calibration/Minus Key, 'CAL.' and the Measurement Indicator ' (●) ' come out on the display. Then the predetermined calibration value comes out. The calibration complete.

## 6. MEASUREMENT

6-1 Single measurement. In the state of power on, lay the Measurement Aperture against the tested object. Press the Measurement Key, the Measurement Indicator ' (●) ' comes out on the left top of the display. Then the measurement of 60°, 20°, 85° comes out.

6-2 Continuous measurement. In the state of power on, also lay the Measurement Aperture against the tested object. Press the Single/Continuous Key to enter the continuous measurement mode. The Measurement Indicator ' (●) ' and measurement value come out

alternately. To exit the continuous measurement mode, just press the Single/Continuous Key again.

## 7. DATA SAVE / READ & DELETE

7-1 There are 2 modes for the meter. One is save mode with Save Indicator 'SV', the other is read mode with Read Indicator 'RD'.

7-2 When taking a measurement in save mode, including single measurement and continuous measurement, the measurement data is automatically saved into the meter. Each time there is a Measurement Indicator ' (●) ', one group of data is saved, the amount of saved data increases one. For example, '55' becomes '55'. 56 groups of data can be saved at most. When the data is full, the earlier data will be replaced by the latest data.

7-3 To enter the read mode, just press the Read/Plus Key in power on state. The

Save Indicator 'SV' disappears, the Read Indicator 'RD' comes out. The Data Amount In Memory Indicator changes from 'Amount of data in memory' to 'Current data ordinal/Amount of data in memory', such as '55' to '55/55'.

7-4 In the read mode, press the Read/Plus Key or the Calibration/Minus Key to browse memorized data. Press the Delete Key here, memorized data can be deleted. To quit from the read mode, just press the Measurement Key, the Read Indicator 'RD' disappears, the Save Indicator 'SV' comes out. Back to the save mode.

7-5 To delete all stored data, just press and hold the Delete Key for about 3 seconds in measurement mode.

7-6 When there is no data stored in memory, neither to enter the read mode by pressing the Read/Plus Key nor to delete stored data by pressing

the Delete Key is available. 'Error' will be displayed.

## 8. THE INSTALLATION OF CONNECTION SOFTWARE

A CD for installation of the connection software is optional. Software installation steps are as follows, for details, please refer to the demo video and documentation in the CD.

→ Run the CD, open the compressed folder, double click the 'Test Setup. Cn'.

→ Click 'Next'.

→ Click 'Browse', select the installation position, click 'OK'.

→ Click 'Next'.

→ Click 'Install'.

→ Click 'Finish'.

## 9. DATA TRANSMISSION FUNCTION

After the installation of connection software, plug in the USB Data Cable

or the Bluetooth Adapter, then install the device on the computer. For the installation steps of device, please refer to the demo video and documentation in the CD.

→ Open the software 'TestRS232(En)' on the desktop of the computer.

→ Click 'System Settings', select the correct port, such as 'COM1', 'COM3', 'COM5'. Select 'Force Meter', Click 'Save (A)', then click 'Exit(E)'.

→ Click 'Data Collection', then Click 'Begin/Continue'. Press the Read/Plus Key, all of the data memorized in the gauge will be transmitted into the computer. These data can be used for further processing.

## 10. REAL TIME DATA TRANSMISSION FUNCTION

After the installation of connection software, plug in the USB Data Cable


or the Bluetooth Adapter, then install the device on the computer. For the installation steps of device, please refer to the demo video and documentation in the CD.

→ Open the 'TestRS232(En)' on the desktop of the computer.

→ Click 'System Settings', select the correct port, such as 'COM1', 'COM3', 'COM5'. Select 'Gloss Meter', Click 'Save (A)', then click 'Exit(E)'.

→ Click 'Data Collection', then click 'Begin/Continue'. Press the Measurement Key or the Single/Continuous Key, the present measurement data will be transmitted into the computer, for further processing.

## 11. BATTERY CHARGING

11-1 When the battery voltage is too low, the battery indicator '  ' comes out. It is necessary to charge the batteries.

11-2 To charge the battery, connect the meter and a AC power supply with the Power Adapter. The battery will be full after 4 hour charging.

11-3 After charging, remove the power adapter.

## 12. NOTES

\* The Calibration Box removed from the main unit should be kept in a safe and clean place to prevent from damage or pollution.

\* While measuring please keep environment light from directly irradiating into the measurement aperture. If necessary, especially under strong light, shade it with a piece of light-tight cloth.

\* A big temperature difference between environment and meter would badly affect measuring accuracy. In such a case, please wait for a period of time till the temperature get to a balance and then calibrate the meter again.

\* If measurement operation lasts a long time, for example an hour or more, it is necessary to re calibrate the meter.