



Starr Instruments  
63 Waterview Close  
DANDENONG SOUTH  
VICTORIA 3175, AUSTRALIA  
PH: 03 8787-3636

ABN: 33 998 859 720

# GMX-03

# Gloss Meter

User Manual

Please read this manual carefully before using and reserve it for reference.

## I. Product Introduction

The GMX-03 is a hand-held gloss meter with three geometries that tests the surface gloss of paint, coating, ink, plastic, paper, ceramic, stone and metal just to name a few. The GMX-03 provides accurate and repeatable tests whilst being extremely easy to use. In addition to its normal model, the QC mode can be used to undergo quality assurance checks. It is also equipped with a powerful PC software. The USB stick provided can be plugged into a computer and used to generate reports.

## II. Parameters

<b>Measuring Angle</b>	20°, 60°, 85°
<b>Measuring Aperture</b>	20°: 9mm * 9mm 60°: 9mm * 15mm 85°: 5mm * 38mm
<b>Minimum Test Material Size</b>	57mm * 10mm
<b>Measuring Range</b>	20°: 0 - 200GU 60°: 0 - 1000GU 85°: 0 - 160GU
<b>Resolution</b>	0.1GU
<b>Repeatability</b>	0 - 100GU: ±0.2GU 100 - 1000GU: ±0.2%
<b>Zero Error</b>	0.1GU
<b>Indication Error</b>	0 - 100GU: ±1.5GU 100 - 1000GU: ±1.5%
<b>Weight</b>	300g
<b>Power Supply</b>	Rechargeable Lithium Battery 3.7V@2000mAh
<b>Display</b>	240 × 128 Dot Matrix
<b>Language</b>	Simplified Chinese, English
<b>Charge Port</b>	USB(Type-C)
<b>Data Transmission</b>	USB
<b>Working Temperature</b>	10~45°C,0~85%RH (no condensation)
<b>Storage Temperature</b>	-10~60°C,0~85%RH (no condensation)

## III. Features

1. Real time and instantaneous measurements.
2. Detect samples quickly with QC judging function.
3. The environmental temperature compensation function guarantees long-term calibration stability.
4. USB Stick provides PC operating software, which has various functions and the ability to generate test reports
5. Designed with an emphasis on ergonomics, sleek style and comfortable feel.
6. Built-in rechargeable lithium battery, with ultra-low power consumption, means it can work continuously for more than 65 hours.
7. Ability to test Single, Dual and Triple gloss angle measurement.

## IV. Operation

### 1. Turn on/off

**Turn On:** When off, a short press of the power button turns on the instrument.

**Turn Off:** When on, a long press of the power button turns off the instrument. The instrument will also automatically power off with no operation for 30 minutes.

### 2. Parameter Setting

When off, a long press of the button for 3s, enters the parameter setting mode:

#### Language

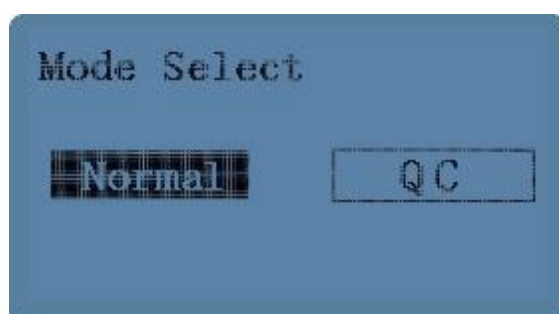
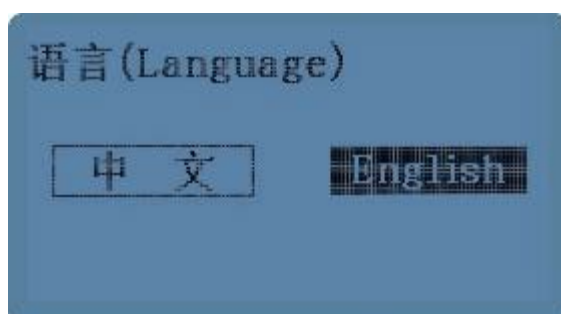
A short press of the button will switch between the two options of English or Chinese, whilst a long press for 3s will select the option and enter the mode selection.

#### Mode Selection

A short press of the button will switch between the two options of Normal or QC, whilst a long press for 3s will select the option, exit the setting and enter the calibration interface.

#### Geometry Selection

Short press the button to select geometry, single angle: 20°, 60° or 85°; dual angles: 20°60°, 20°85° or 60°60°; triple angles: 20°60°85°, long press the button for 3s to complete setting, exit setting and enter the calibration interface.



### 3. Calibration

If the meter gets powered on in the calibration holder, it will enter the calibration interface. The user can perform the calibration operation according to the prompts, the instrument will enter measurement interface after the calibration. If it is not powered on in the calibration holder, it will skip the calibration and enter the measurement interface directly.

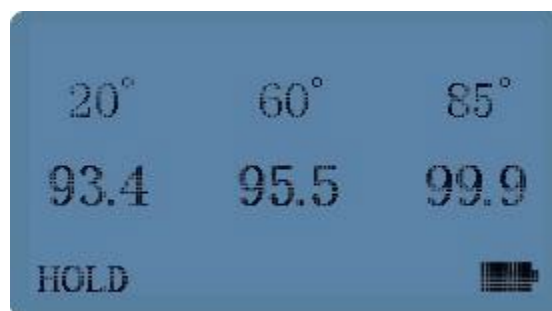
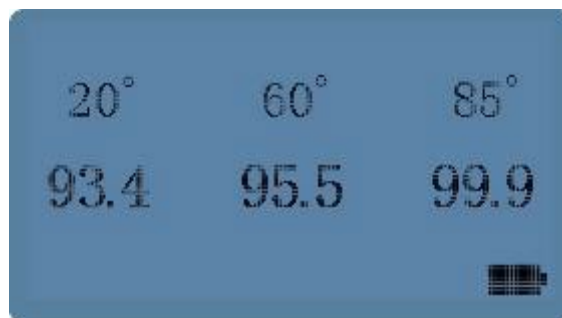
If it prompts that the calibration failed, the reasons may include:

- If the standard is not clean, please clean the standard with special lens cloth before placing the meter into the calibration holder.
- If the meter is not properly clicked to the calibration holder, please re-place into calibration holder.
- If the light source cannot work normally due to attenuation, the device should be returned for repair.

### 4. Measurement

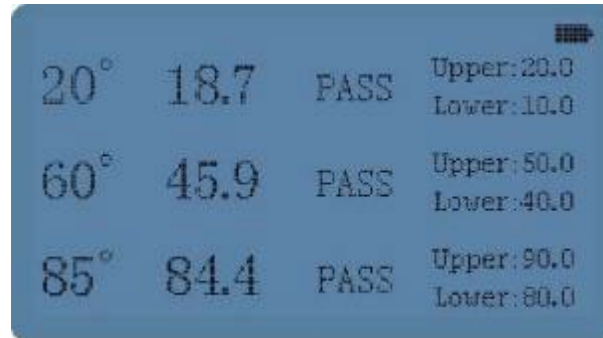
#### (1) Normal Mode

If the instrument is set to normal mode, remove the calibration holder after calibration. Place the measuring port on the surface of the object to measure, the instrument will display the measured value instantly. A short press of the button and the lower left corner of the interface displays the "HOLD" symbol, meanwhile the measurement data is held on the display. To measure again, press the button to cancel the "HOLD" state and return to the "Measuring" state.



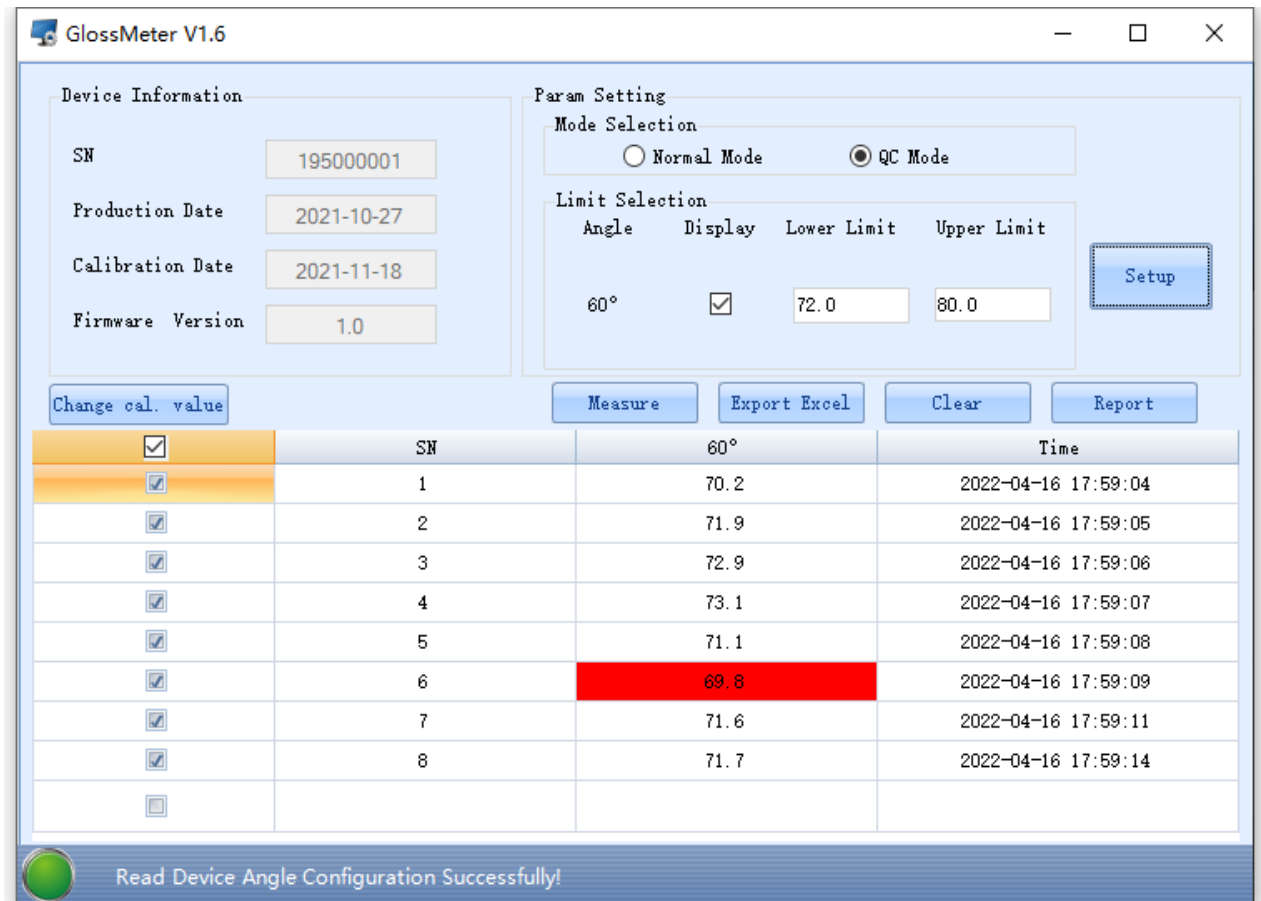
## (2) QC Mode

If the instrument is set to QC mode, remove the calibration holder after calibration. Then place the measuring port of the instrument on the surface of the object to measure. A short press of the button will measure and then the instrument will judge whether the measured value is qualified. The upper and lower limits can be set through the PC software.



## V. PC Software

By connecting the instrument to the PC software via a USB cable, it can perform functions such as online measurement, change of calibration values, parameter settings, test report generation and printing.



**Device Information**

SN	195000001
Production Date	2021-10-27
Calibration Date	2021-11-18
Firmware Version	1.0

**Param Setting**

Mode Selection:  Normal Mode  QC Mode

Limit Selection

Angle	Display	Lower Limit	Upper Limit
60°	<input checked="" type="checkbox"/>	72.0	80.0

Buttons: Change cal. value, Measure, Export Excel, Clear, Report, Setup

	SN	Angle	Time
<input checked="" type="checkbox"/>		60°	
<input checked="" type="checkbox"/>	1	70.2	2022-04-16 17:59:04
<input checked="" type="checkbox"/>	2	71.9	2022-04-16 17:59:05
<input checked="" type="checkbox"/>	3	72.9	2022-04-16 17:59:06
<input checked="" type="checkbox"/>	4	73.1	2022-04-16 17:59:07
<input checked="" type="checkbox"/>	5	71.1	2022-04-16 17:59:08
<input checked="" type="checkbox"/>	6	69.8	2022-04-16 17:59:09
<input checked="" type="checkbox"/>	7	71.6	2022-04-16 17:59:11
<input checked="" type="checkbox"/>	8	71.7	2022-04-16 17:59:14
<input type="checkbox"/>			

Read Device Angle Configuration Successfully!

## VI. Precautions

1. The temperature compensation function guarantees long-term calibration stability, it is recommended to calibrate once a week. If the environmental temperature changes significantly, please recalibrate it.
2. The measuring port of the instrument shall be attached to the surface of the object to avoid leakage of external light.
3. Please save the calibration holder in a clean place after the meter is removed, to prevent the standard from contamination.
4. Do not insert any object into the instrument for any reason, as it will damage it and influence the measuring accuracy as well as operation safety.
5. The instrument and calibration standard should be cleaned before storage and usage. As the surface of the standard is very precise, make sure there are no fine particles on the lens cloth to avoid damage of the standard.
6. If you have multiple meters, put the meter on the calibration holder in correspondence to its the serial number.
7. It is recommended that each meter should be calibrated at least once a year.

## VII. Packing List

No.	Description	Quantity	Unit
1	Gloss Meter	1	Set
2	USB Data Cable	1	pc
3	USB Stick (software)	1	pc
4	Special Lens Cloth	1	pc
5	User Manual	1	pc
6	Certificate / Warranty Card	1	pc

This Gloss Meter conforms to the following standards: ISO2813, ISO7668, ASTM D523, ASTM D2457, DIN 67530, GB/T9754, GB/T13891, GB/T7706, GB/T8807. All indexes meet the requirements of JJG 696-2015 Verification Regulation of “*Specular Gloss Meters and Gloss Plates*” as the first-class working meters.