
SMART GLUCOSE METER

USER MANUAL

Brand Name: IGLUCOSE



FCC ID: 2ACEUSGM-03

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Part I: Safety and Precautions

To ensure your safety and wellbeing, and the optimal functioning of your Smart Meter unit, please familiarize yourself with the following safety measures and precautions before using Smart Meter.

1. Safety Measures

1. Switch off and do not use Smart Meter when you are:

- At a gas station, chemical plant or other location containing explosive or inflammable materials.
- Before boarding an airplane and throughout the flight.
- In the vicinity of devices such as pacemakers, hearing aids and other electro-medical equipment which may be disrupted by Smart Meter (see “Interference with Medical Equipment” below).

2. Charge Smart Meter safely:

- Charge the unit only when the battery is properly installed. Attempting to charge without a properly installed battery will result in damage to the unit.
- Charge the unit only in a well-ventilated environment and away from inflammable and explosive materials (see “Charging the Battery” below).

3. Protect Smart Meter from damage:

- Keep the unit away from magnetic substances, such as magnetic discs or credit cards, so as to avoid demagnetization.
- Never leave the unit exposed to direct sunlight, or dusty or high humidity environments.
- Keep the unit away from liquid. If the unit is soaked or immersed in liquid, dry and remove the battery and contact the supplier. Do not attempt to use a unit in this condition!
- Do not use liquids or a cloth with detergents to clean the unit, use soft dry cloth only..

4. Use only authorized parts and services for repairs:

- Never attempt to take the unit apart by yourself. Contact the supplier in case of any malfunction of your Smart Meter.

- Warranty and guarantee for the accessories and parts are voided by any unauthorized repairs or the use of parts not produced by the original factory.

5. Store the unit safely:

- Avoid storing or using the unit at too high or too low temperatures. The working temperature of SGM-03 is -10 °C ~ 50 °C
- Keep the unit out of reach of children. Store it in a secure location when not in use.

2. Interference with Medical Equipment

The use of equipment that transmits radio signals, at the time of transmitting data, can interfere with insufficiently protected medical apparatus. Consult a doctor or the manufacturer of the unit to determine if it has adequate protection against external radio signals, or if you have any questions about where and how to use this unit.

Pacemaker manufacturers recommend a distance at least 15 cm (6 inches) between a mobile wireless device and a pacemaker to avoid the risk of interference with the pacemaker.

3. Charging the Battery

Your device is powered by a rechargeable battery. The full performance of a new battery is achieved only after two or three complete charge and discharge cycles.

If you do not intend to use Smart Meter for a long time e.g. more than 1 month, remove the battery from the Smart Meter so as to prevent damage to the battery or the unit.

If the battery is completely discharged when recharging commences, it may take a few minutes before the charging indicator appears on the display or before any calls can be made.

Note: Actual operation time of the battery varies according to operation mode, network settings and call settings.



Warnings:

Be careful not to short-circuit the battery accidentally. Short-circuiting will occur when a metallic object such as a coin, clip, or pen causes direct connection of the positive (+) and negative (-) terminals of the battery. (These look like metal strips on the battery.) This might happen, for example, when you carry a spare battery in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

Dispose of batteries safely and legally. Do not dispose of batteries in a fire as they may explode. Batteries may also explode if damaged. Dispose of batteries safely according to local regulations. Do not dispose of as household waste. Please recycle when possible.

Part II: Features and Functions Highlights

The Smart Meter is a new brand of glucose meter, with the following special features and functions:

- High quality color display
- Rechargeable battery
- Voice prompt
- Glucose reading transmitted automatically to server
- Alerts and reports to family member or other designated individual if needed
- Compact and fashionable look

Part III: Smart Meter Parts

1. Smart Meter at a Glance



Figure 1: Front and reverse views of the Smart Meter unit

Please see the following page for descriptions of the functions of the parts numbered above.

2. Smart Meter Functions

Note: Several keys perform different functions depending on the mode of use. The normal mode is indicated first; where applicable, another function is indicated by the “in standby” or “press and hold” mode.

#	Name	Function
1	Up key	Go up <i>In main standby:</i> go to Main Menu <i>Press and hold:</i> go to Information
2	Middle (‘home’) key	Enter <i>In standby:</i> change Test Mode <i>Press and hold:</i> turn unit on or off
3	Down key	Go down <i>In standby:</i> go to Average <i>Press and hold:</i> go to History
4	GSM signal strength	Indicates GSM signal strength Signal strength is shown by number of bars (0 -4; in airplane mode, it is zero)
5	Battery level	Indicates battery level
6	Airplane mode	Network name shows here in when GSM is on. <i>In standby:</i> GSM is off
7	Sending signal	Signal blinks when data is being sent to server
8	Test mode	Icon indicates one of three test modes: Before Meal, After Meal or Control Solution.
9	Glucose value	Indicates the glucose value
10	Time/Date	Indicates the time and date
11	Charging light	Small indicator light illuminates while battery is charging
12	Strip slot	Test strip is inserted here
13	USB port	USB port for charging battery only
14	Speaker	Sound comes from here
15	Strip ejector	Push key to eject test strip after test is completed

Part IV: Operating Smart Meter

1. Preparing the unit

Take out the battery from the plastic bag, open the back cover, and install the battery inside battery compartment.

Prepare some test strips and test solution to test the unit.

2. Getting started

To turn Smart Meter on, press and hold the middle key. A brief animation appears and the screen lights up.

Note:

- 1) When the meter is turned on for the first time, it automatically connects to GSM to synchronize the time and date (This may take few seconds to 3 minutes!), and the network name will show at the top of the screen. If it does not synchronize, select Menu, then Date and Time, then Synchronize Time.

To set the time and date manually.

3. Testing glucose level

- 1) To test glucose level, go to main standby mode, press the middle key to select Test Mode.

OR

Go to Menu and select Test Mode

One of three 3 options appears – Before meal, After meal and Control solution.

- 2) Insert a strip to the slot. The meter displays “Strip inserted”

After 3-4 seconds, a prompt “Apply a drop of blood” appears.

- 3) Place a drop of blood on the strip. The meter shows the glucose value with a 5 seconds count-down before it activates the GSM and sends the data. The sending signal (see #7 of Figure 1) blinks.

“Successfully recorded” displays once the data is sent successfully to the server.

- 4) After the test, push the strip ejector (#15 of Figure 1) to eject the strip, without touching the used strip.

Notes:

- Whenever the unit is turned on, it will synchronize the time and date; however, it must connect to network. In areas with poor network coverage, this may take a long time, or fail to connect. In this case, you must set time and date using the menu options.
- If the network signal is weak, sending data can fail. Check the signal strength indicator (#4 of Figure 1). If the unit indicates that the signal is poor, the unsent data will be sent automatically the next time the unit connects and the signal strength is sufficient.
- You can manually select a test mode, and this will remain as the default mode. Do not change modes or the data will be inconsistent and the results unreliable.
- To save power, the unit is ALWAYS in airplane mode, except for the occasions that network connection is needed, e.g. sending data, synchronizing time etc.

4. Selecting Menu Options

The following table indicates the first level of menu options that are available when you select “menu” and then the second level of options, and where applicable, the third level of options, available under each menu:

<i>First level options</i>	<i>Second level options</i>	<i>Third level options</i>
Date and time	Synchronize time Set Date Set Time Date Format Time Format	Year – Month - Day Hour – Minutes MM/DD/YYYY DD/MM/YYYY YYYY/MM/DD 24 hours 12 hours
	Back	
Test Mode	Before Meal After Meal Control Solution	
Glucose Unit	Mg/dl Mmol/l	
User Mode	Single User Multi User	
Back	Go back to last page	

5. Obtaining Averages and History

- 1) To go to Averages, press the key on the right (#3 in Figure 1)

The average figures will be displayed for the last 7, 14, 30 and 90 days, and the previous readings.

- 2) To go to History, press and hold the key on the right. All the tested records are stored here.

6. Obtaining Information

1) To go to Information, press and hold the key on the left (#1 in Figure 1). The following information appears:

- IMEI: International Mobile Equipment Identity number of the device
- IMSI: International Mobile Subscriber Identity number for the SIM card
- Network selection: you can select network here
- Tools: Switch between flight mode and normal mode, or test other functions
- Version: Software version information
- Shutdown: to turn off the device
- Back: go back to previous screen

7. Testing data transfer principle.

1) In most of time, this device is in flight mode, the GSM module is closed. so, get more battery life and negligible radiation.

2) When using this device to test glucose, hand it in front of eyes, easily viewing (about 20cm-30cm), and insert stripe, get the glucose data.

3) After getting the data, the device open the GSM module, send these data to the service web by GSM network. If finished, show the informations in screen, and close the GSM again.

Note: In “User Mode”, if you select “Multi User”, up to 35 patient IDs will be shown in the Menu (from P01 – P35).

Appendix 1: Models

The Smart Meter models can be identified by model number as follows:





IG02 Golden

APPENDIX 2: SGM-03 Specification

	Main	Sub	Details
Hardware			
GSM	GSM Platform	MT6260	
	Frequency	GSM850/900/1800/1900	
	Antenna	Interior on the bottom	
Glucose	Type	Module mounted	
	IC	NEC 78F0593	
	Test Sample	Fresh Capillary Whole Blood	
	Test Result	Plasma / Serum glucose	
	Sample Size	Less than 0.5 uL	
	Measuring Time	Less than 5 seconds	
	Measuring Range	10 – 650 mg/dL (0.6 – 36.1 mmol/L)	
	Working temp	-10°C ~ 50°C	
General	LCM	Size	2.4" QVGA
		Nature	Hi contrast TFT
		Colors	260K
		Resolution	320 * 240 pixels
	Keypad (3 Keys)	Left key	Menu
		Middle key	ON/OFF; Enter, test mode change
		Right key	Check data
	Dimension	100 * 50 * 15mm	
	Port	Micro-usb	Charging, software download
	Speaker	15mm	mini-speaker as buzzer or vocal reminding

Battery	Capacity	3.7V, 1,000mAh Li-Ion	
	Last time	25-30 days for normal use (2-3 tests per day)	
Software function			
1	Data entry	Storage	1,000 entries
2	Main standby page	GSM signal strength, battery level, carrier name, date/time etc	
3	Message	Yes	Server can send to SGM-03, for any tips, feedbacks etc
5	Alarm	Yes	5 items
6	GPRS/USSD	Yes	--
8	Languages	English, Chinese, Spanish, Arabic, Hebrew, Portuguese, Indian etc	

APPENDIX 3

Trouble Shooting

Problem	Possible reason	Solution
Cannot turn on meter	No battery Battery connection error	Fix a battery Check the connection
Battery running out fast	Meter in normal mode during standby	Switch the meter to airplane mode manual, long press Left key, go to Tools
No prompts after inserting strips	Connection error between glucose & GSM	Return for service
Cannot turn it off by pressing middle key	Software error	Long press left key, go to Shutdown
Cannot insert strips	Strips spec mistake	Change strip
Cannot send data	Weak signal or network error	All unsent data will be sent together with data for next test
Cannot synchronize time	Network error	Do it by hand. Menu – Date and time

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could damage the phone and may violate FCC regulations.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/TV technician for help

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

*RF warning for Portable device: The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Do not use the device with the environment which below minimum -10°C or over maximum 50°C, the device may not work.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.