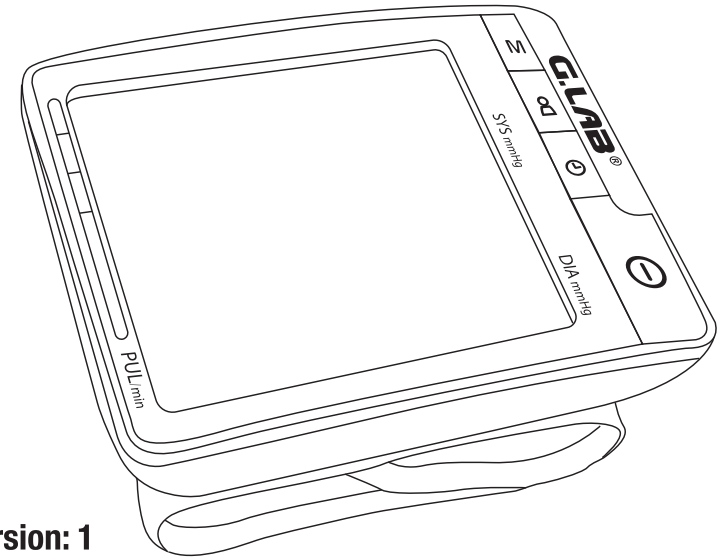
G.LAB®

DIGITAL AUTOMATIC WRIST BLOOD PRESSURE MONITOR INSTRUCTION MANUAL

MODEL No.:
MD5300/MD5301/MD5330/MD5331/MD5350/MD5351/
MD5370/MD5371/MD5390/MD5391/MD53B0/MD53B1



Version: 1

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INTRODUCTION

Thank you for purchasing the G.LAB Wrist Blood Pressure Monitor. The device is easy-to-use and good for home users and healthcare professionals. It applies non-invasive oscillometric method which can measure your blood pressure and pulse rate quickly and easily, and it saves the data automatically to let you review the average and measured data at any time.

Indication for use

This device is for use by medical professional or home users. It is intended to measure the systolic and diastolic blood pressure on an adult individual by using a non-invasive technique, in which an inflatable cuff is wrapped around the wrist.

COMPLIANCE

This device conforms to European Medical Device Directive 93/42/EEC.

This device complies with:

- EN ISO 81060 standard relating to non-invasive sphygmomanometers
  Part 1: Requirements and test methods for non-automated measurement types and EN 1060 standard relating to non-invasive sphygmomanometers.
  Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems.
- EN 60601 standard relating to medical electrical equipment
  Part 1-2: General requirements for basic safety and essential performance and essential performance – Collateral standard: Electromagnetic compatibility – Requirements and tests.
- ISO 81060-2:2013 standard relating to non-Invasive sphygmomanometers
  Part 2: Clinical validation of automated measurement type.
- IEC 80601-2-30:2009+A1:2013 standard relating to medical electrical equipment
  Part 2-30: Particular requirements for the basic safety and essential performance of automated type non-invasive sphygmomanometers.

SYMBOLS

The following symbols are used in this instruction manual, or appear on the device, accessories and packaging.
To assure correct use of the device, basic safety measures should always be followed including the warnings and cautions listed in this instruction manual.

Symbols	Function / Meaning
	WARNING / ATTENTION Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	PRECAUTION / IMPORTANT INFORMATION
SN	Serial Number
	Manufacturer
	Type BF: Device, cuff and tubing are designed to provide special protection against electrical shocks.
SYS	Systolic Blood Pressure in mmHg
DIA	Diastolic Blood Pressure in mmHg
PUL	Pulse

Symbols	Function / Meaning
	EC Directive Medical Device Label
	WEEE Label
	Refer to instruction manual / booklet
	Keep dry
	Authorized Representative in the European Community
	This item is a medical device

IMPORTANT NOTES

⚠ DO NOT use this device on newborns, infants, children, toddlers or persons who cannot express their intentions. The device is designed for use on adults only.

⚠ DO NOT self-diagnosis from the measurement results and start treatment by yourself.

⚠ DO NOT adjust medication based on the measurement results.

⚠ Consult your physician for specific information about your blood pressure.

⚠ The Irregular Heartbeat detection function may help to detect potential cardiac arrhythmia at an early stage but it is not intended to replace cardiac examination.

⚠ The “WHO Blood Pressure Classification” chart is a guide for reference and is not intended to replace medical diagnosis.

⚠ Use the device only as intended. Do not use the device for any other purpose.

⚠ Do not apply the device on a wrist with an unhealed wound or under medical treatment.

⚠ Do not take measurements more than necessary. High measurement repetition rates may cause pain, numbness, temporary red marks or bruising to the arm/wrist due to blood flow interference.

⚠ If you have any of the following medical conditions, you may get an inaccurate reading with the device. Please consult your physician before using the device.

- Patients in shock
- Cardiac arrhythmias
- Atrial or ventricular premature beats
- Atrial fibrillation
- Arterial sclerosis
- Poor perfusion
- Vessel anomalies
- Very low blood pressure
- Pregnancy
- Diabetes
- Pre-eclampsia
- Renal diseases
- Underwent breast or axillary lymph node removal operation
- With an arteriovenous shunt.
- With an intravenous drip or blood transfusion.
- With implanted electrical device such as cardiac pacemaker
- With other medical electrical equipment attached
- With condition that may compromise circulation
- Severe blood flow problems or blood disorders, as cuff inflation can cause bruising.
- Trembling or shivering

⚠ Do not use the device with other medical electrical equipment simultaneously.

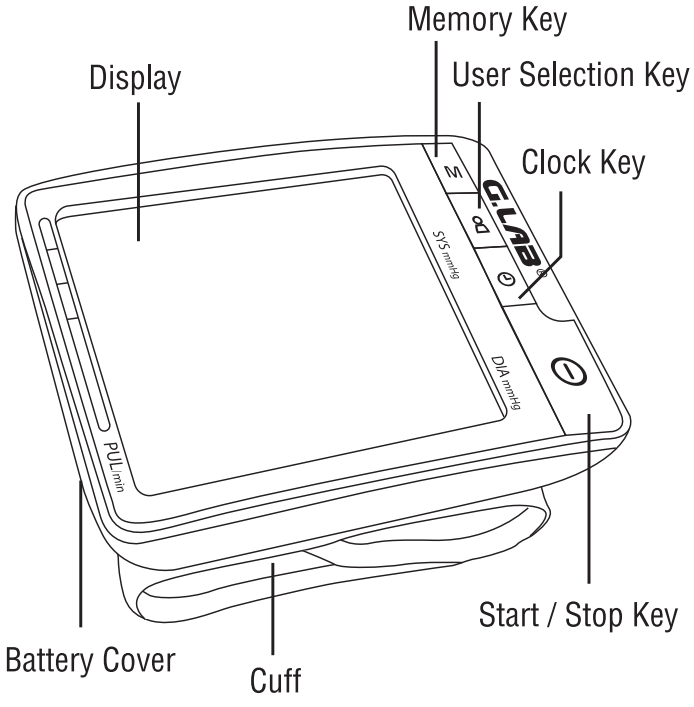
IMPORTANT NOTES

- Do not use the device where high frequency surgical equipment, magnetic resonance imaging (MRI), computerized tomography (CT) scanner or X-ray machine is operating.
- Do not use the device near electromagnetic fields emission equipment such as cellular phones, microwave ovens or televisions.
- Do not use the device where flammable gases (e.g. anesthetics gas, oxygen and hydrogen) or flammable liquids (e.g. alcohol) are present.
- Do not use the device in a moving vehicle such as car or airplane.
- Do not use the device outside the specified environment. It may cause an inaccurate reading.
- The product contains small parts that may cause a choking hazard to infants and children. Keep the device and its parts out of reach of infants and children.
- Do not attempt to open, disassemble, repair, modify or adjust the device by yourself. It may cause accident, damage the device, cause inaccurate measurement and void the user warranty.
- Do not subject the device to strong knocks (e.g. dropping the unit on the floor), extreme in temperature, high humidity, direct sunlight, dust or chemicals. This may damage the device.
- The device is not water resistant. Avoid water, rain or sweat from infiltrating the device.
- Clean the device and cuff carefully with a dry, soft cloth or a cloth dampened with water. Do not use aggressive solvents such as alcohol, benzene, thinner or other strong chemicals to clean the device.
- Do not fold the cuff tightly for a long period. Such condition may shorten the life of the part.
- Dispose used equipment, parts, batteries and optional accessories according to applicable local regulations. Unlawful disposal may cause environmental pollution.
- Do not use any cuffs and accessories other than those explicitly recommended by the manufacturer for use with this product. Cuffs and accessories not approved for use with this device may cause damage to your health and to the product.
- Do not exert any kind of pressure on the hose during measurement, e.g. laying your arms or any other object on the hose. This could cause incorrect measurements.

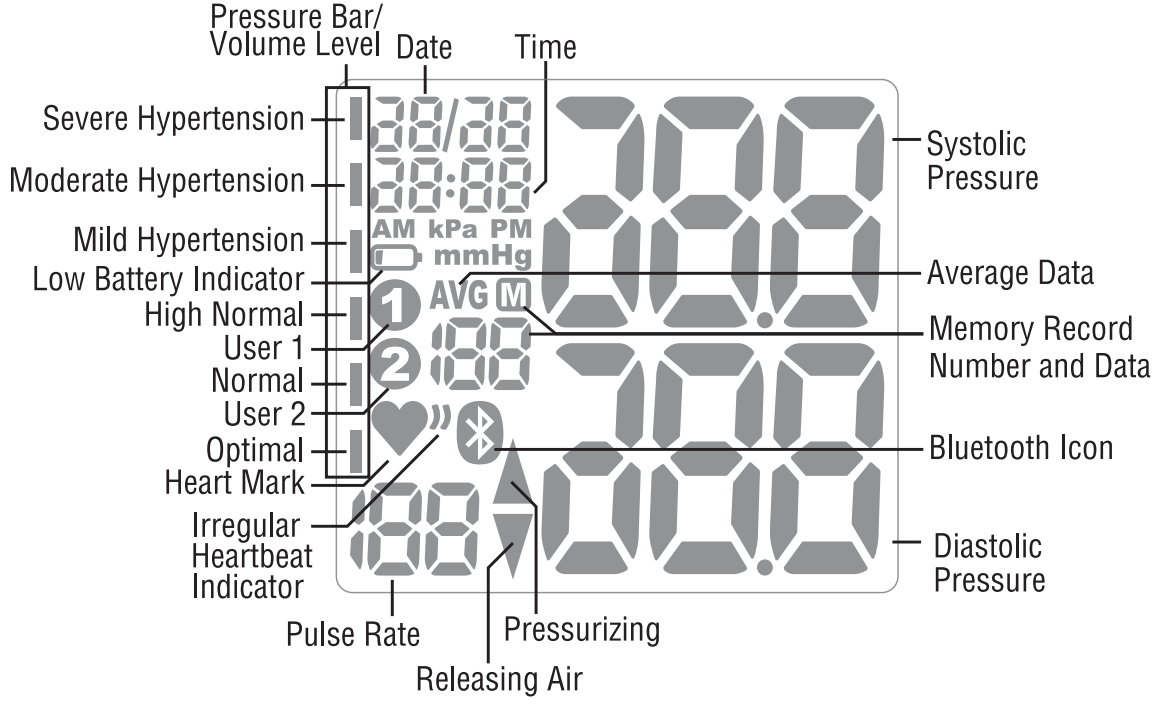
IMPORTANT NOTES

- Packaging materials are a deadly hazard for children and can cause suffocation. Remove all packaging materials immediately and keep them away from children at all times.
- Proper cuff size is important for accurate measurements. Only use the device on adults who have the right circumference for this unit. See “TECHNICAL SPECIFICATION” for suitable circumferences.
- Batteries should not be charged or reactivated by any other means. The batteries may explode.
- Take extra precaution to keep a leaking battery away from fire as there is a risk of ignition or explosion.
- Remove any kind of arm jewellery or the like before taking a measurement. This could cause bruises.
- When storing the device, make sure that no heavy objects are placed on top of it.
- Do not place the cuff over heavy clothing (e.g. a jacket or sweater sleeve) as the blood pressure monitor will not be able to take a proper measurement and there is an elevated danger of acquiring hematoma or skin marks during the course of the measurement.
- In case the cuff does not stop inflating, interrupt the measurement by pressing the ON/OFF button and open the cuff at once.
- When applying the cuff, make sure there are no wrinkles in the cuff as this could cause bruises.
- Blood pressure measurements can lead to temporary marks on the skin at the site of the cuff placement. This is especially the case in high repetition rates, in hypertonic patients and in patients with weak heart rates. In rare cases a mark may persist for couple of days. Please contact your physician about these specific risks of cuff pressure in your specific case.
- The device is designed and manufactured for a long service life. However it is generally recommended to have the monitor inspected every 2 years to ensure proper functioning and accuracy. Please contact your dealer for maintenance.
- Do not drop or insert any object into any openings or hoses. This may damage the unit.
- Do not press the buttons with excessive force or with pointed objects.

DEVICE DESCRIPTION

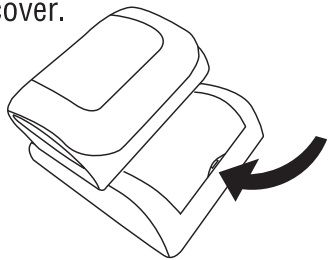


Information on the Display :



BATTERY INSTALLATION

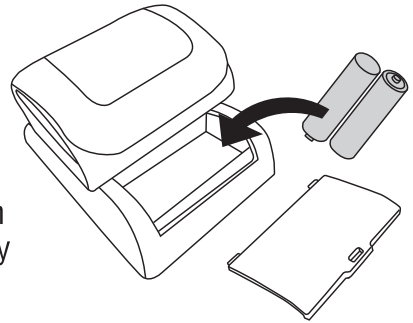
1. Remove the battery cover.



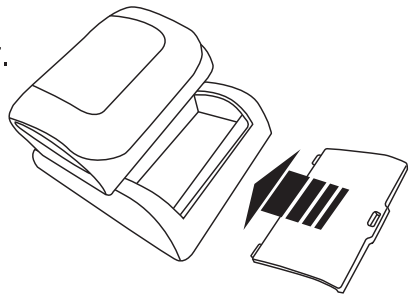
2. Remove the used batteries and insert new batteries.

⚠ Use LR03 / AAA alkaline batteries.

⚠ Make sure the battery polarities (+) and (-) match the markings on the battery compartment.



3. Close the battery cover.



Battery Level Indicator

When battery level is getting low, symbol and “E6” will appear on the display. Replace all used batteries with new batteries.

NOTE:

⚠ Batteries may cause a choking hazard to children. Store the batteries out of the reach of children.

⚠ In case battery fluid leaks, do not touch the battery fluid. Avoid skin contact (e.g. put on protective gloves) and clean the battery compartment with dry cloth.

⚠ Remove the batteries from the battery compartment if the device will not be used for a long period.

⚠ Use only 1.5V alkaline batteries. Do not use other types of battery such as rechargeable battery. This may damage the device.

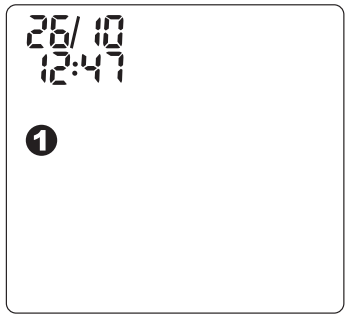
⚠ Replace all batteries at the same time. Do not mix used and new batteries. Use same brand and model of batteries is recommended.

⚠ Battery life may vary with ambient temperature and may be shorter at low temperature.

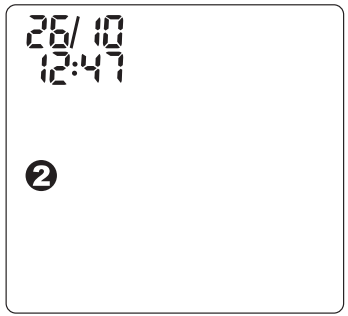
SELECT USER

The device has a memory capability to store the measurement data for 2 users – User 1 and User 2. Every time you complete the measurement, the device automatically stores the measurement result.

1. Press [👤] key to turn on the device.
2. Press [👤] key to select User 1 or User 2.
3. Press [⏻] key to confirm and turn off the device.



User 1 is selected



User 2 is selected

SETTING DATE / TIME (Model: MD5300/MD5350/MD5390)

(A) When new batteries are installed
1. “YEAR” will blink on the display.
2. Press [M] or [👤] key to set the current Year.
3. Press [🕒] key to confirm and then "MONTH" will start to blink.
4. Press [M] or [👤] key to set the current Month.
5. Press [🕒] key to confirm and then "DAY" will start to blink.
6. Press [M] or [👤] key to set the current Day.
7. Press [🕒] key to confirm and then "HOUR" will start to blink.
8. Press [M] or [👤] key to set the current Hour.
9. Press [🕒] key to confirm and then "MINUTE" will start to blink.
10. Press [M] or [👤] key to set the current Minute.
11. Press [🕒] key to confirm. Setting is completed.
12. Device will turn off automatically.

(B) When device is in OFF status
1. Press [🕒] key to turn on the device in Clock display.
2. Press and hold [🕒] key for about 3 seconds until volume bar blinks on the display.
3. Follow the same procedure above to set the device.

SETTING VOLUME / LANGUAGE / DATE / TIME

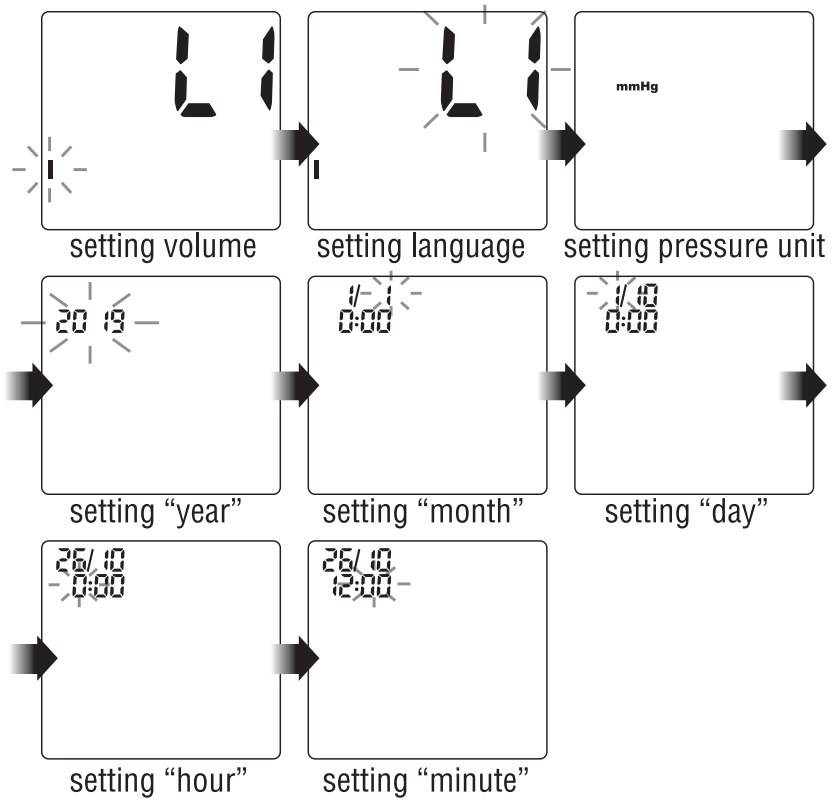
(Model: MD5330/MD5370/MD53B0)

(A) When new batteries are installed

1. Volume bar will blink on the display.
2. Press [M] or [ ] key to increase or decrease volume.
3. Press [ ] key to confirm and then language number “L1” will start to blink.
4. Press [M] or [ ] key to select the talking language. (L0 = Beep tone / L1 = English / L2 = Spanish / L3 = Chinese)
5. Press [ ] key to confirm and then pressure unit “mmHg” will start to blink.
6. Press [M] or [ ] key to select the pressure unit.
7. Press [ ] key to confirm and then "YEAR" will start to blink.
8. Press [M] or [ ] key to set the current Year.
9. Press [ ] key to confirm and then "MONTH" will start to blink.
10. Press [M] or [ ] key to set the current Month.
11. Press [ ] key to confirm and then "DAY" will start to blink.
12. Press [M] or [ ] key to set the current Day.
13. Press [ ] key to confirm and then "HOUR" will start to blink.
14. Press [M] or [ ] key to set the current Hour.
15. Press [ ] key to confirm and then "MINUTE" will start to blink.
16. Press [M] or [ ] key to set the current Minute.
17. Press [ ] key to confirm. Setting is completed.
18. Device will turn off automatically.

(B) When device is in OFF status

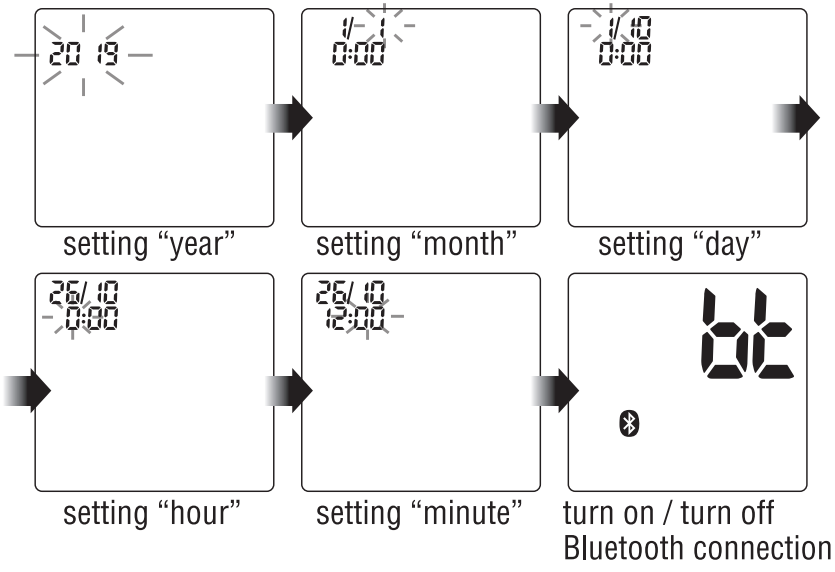
1. Press [ ] key to turn on the device in Clock display.
2. Press and hold [ ] key for about 3 seconds until volume bar blinks on the display.
3. Follow the same procedure above to set the device.



SETTING DATE / TIME / BLUETOOTH
(Model: MD5301/MD5351/MD5391)

(A) When new batteries are installed
1. “YEAR” will blink on the display.
2. Press [M] or [ ] key to set the current Year.
3. Press [ ] key to confirm and then "MONTH" will start to blink.
4. Press [M] or [ ] key to set the current Month.
5. Press [ ] key to confirm and then "DAY" will start to blink.
6. Press [M] or [ ] key to set the current Day.
7. Press [ ] key to confirm and then "HOUR" will start to blink.
8. Press [M] or [ ] key to set the current Hour.
9. Press [ ] key to confirm and then "MINUTE" will start to blink.
10. Press [M] or [ ] key to set the current Minute.
11. Press [ ] key to confirm and then Bluetooth icon will start to blink.
12. Press [M] or [ ] key to turn on / off the Bluetooth connection.
13. Press [ ] key to confirm. Setting is completed.
14. Device will turn off automatically.

(B) When device is in OFF status
1. Press [ ] key to turn on the device in Clock display.
2. Press and hold [ ] key for about 3 seconds until volume bar blinks on the display.
3. Follow the same procedure above to set the device.



SETTING VOLUME / LANGUAGE / DATE / TIME / BLUETOOTH

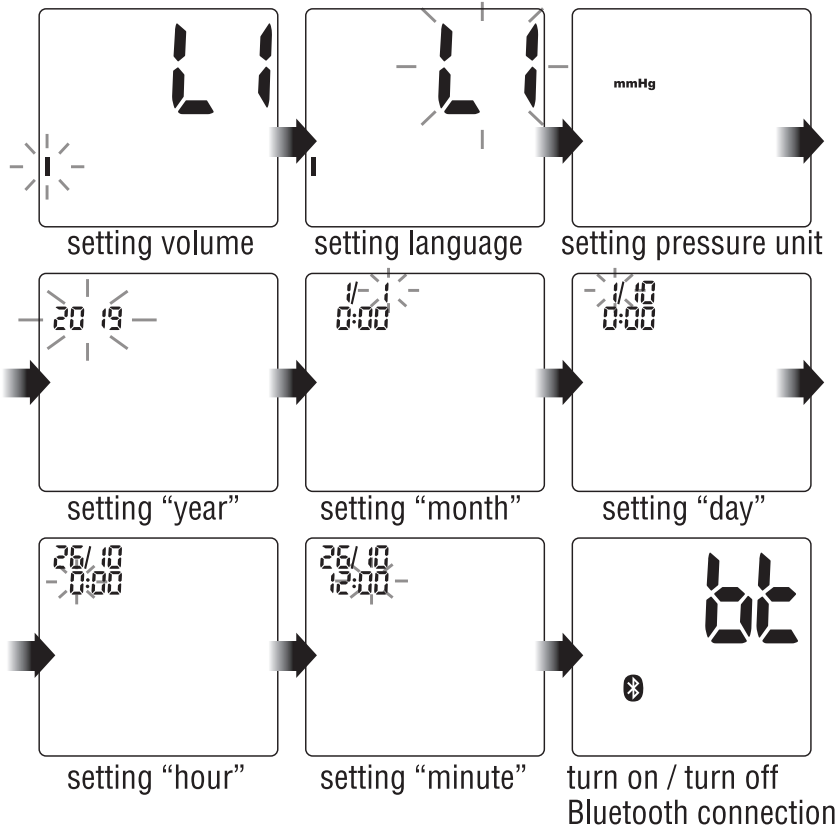
(Model: MD5331/MD5371/MD53B1)

(A) When new batteries are installed

1. Volume bar will blink on the display.
2. Press [M] or [ ] key to increase or decrease volume.
3. Press [ ] key to confirm and then language number “L1” will start to blink.
4. Press [M] or [ ] key to select the talking language. (L0 = Beep tone / L1 = English / L2 = Spanish / L3 = Chinese)
5. Press [ ] key to confirm and then pressure unit “mmHg” will start to blink.
6. Press [M] or [ ] key to select the pressure unit.
7. Press [ ] key to confirm and then "YEAR" will start to blink.
8. Press [M] or [ ] key to set the current Year.
9. Press [ ] key to confirm and then "MONTH" will start to blink.
10. Press [M] or [ ] key to set the current Month.
11. Press [ ] key to confirm and then "DAY" will start to blink.
12. Press [M] or [ ] key to set the current Day.
13. Press [ ] key to confirm and then "HOUR" will start to blink.
14. Press [M] or [ ] key to set the current Hour.
15. Press [ ] key to confirm and then "MINUTE" will start to blink.
16. Press [M] or [ ] key to set the current Minute.
17. Press [ ] key to confirm and then Bluetooth icon will start to blink.
18. Press [M] or [ ] key to turn on / off the Bluetooth connection.
19. Press [ ] key to confirm. Setting is completed.
20. Device will turn off automatically.

(B) When device is in OFF status

1. Press [ ] key to turn on the device in Clock display.
2. Press and hold [ ] key for about 3 seconds until volume bar blinks on the display.
3. Follow the same procedure above to set the device.

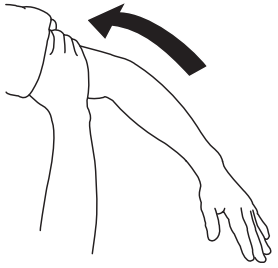


BEFORE TAKING A MEASUREMENT

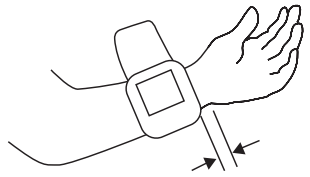
- Before using the device, check your wrist circumference and make sure it matches the wrist cuff circumference range.
- Keep record of your blood pressure and pulse rate. A single measurement does not provide an accurate indication of your true blood pressure.
- To ensure comparable data, measure your blood pressure at the same time of the day for consistency.
- Measurement should be taken in a quiet and comfortable indoor environment.
- To ensure a reliable measurement, follow these recommendations:
  - Avoid eating, drinking alcohol or caffeinated beverages, smoking, exercising, or bathing for 30 minutes before taking a measurement.
  - Rest for at least 5 minutes before taking each measurement.
  - Stress raises blood pressure. Avoid taking measurements during stressful conditions.
  - Avoid taking measurement while you are physically tired or exhausted.
  - Remain still and do not talk during the measurement.
  - Position the cuff at heart level throughout the measurement.
- Relax and sit comfortably on a chair. Lay your feet flat on the floor. Do not cross your feet. Keep your back straight.

APPLYING WRIST CUFF

1. Bare your left wrist. Make sure that the blood circulation in your arm in not constricted by any clothing that is too tight.

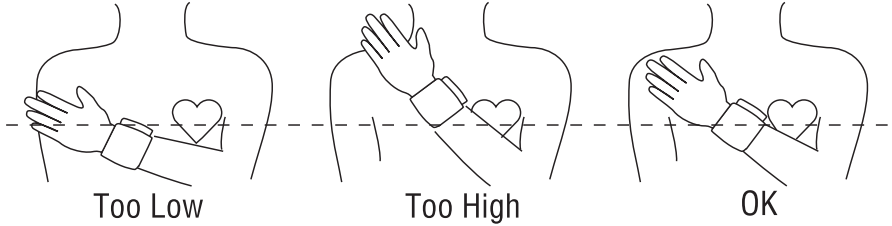


2. Put your wrist through the cuff loop. Both your palm and the device display should face upward. Position the cuff approximately 1cm or 1/2 inch below the bottom edge of your palm.



3. Pull the end of the cuff and fasten the Velcro. Make sure the wrist cuff is wrapped firmly around your wrist but should not constrict blood circulation.

4. Place your elbow steadily on a table or at a position so that the cuff is level with your heart.



PERFORMING BLOOD PRESSURE MEASUREMENT

1. Press ⏻ key to turn on the device.

2. The cuff deflates to remove residue air before starting measurement. ▼ Releasing air indicator blinks on the display.

3. Memory record number appears on the display.

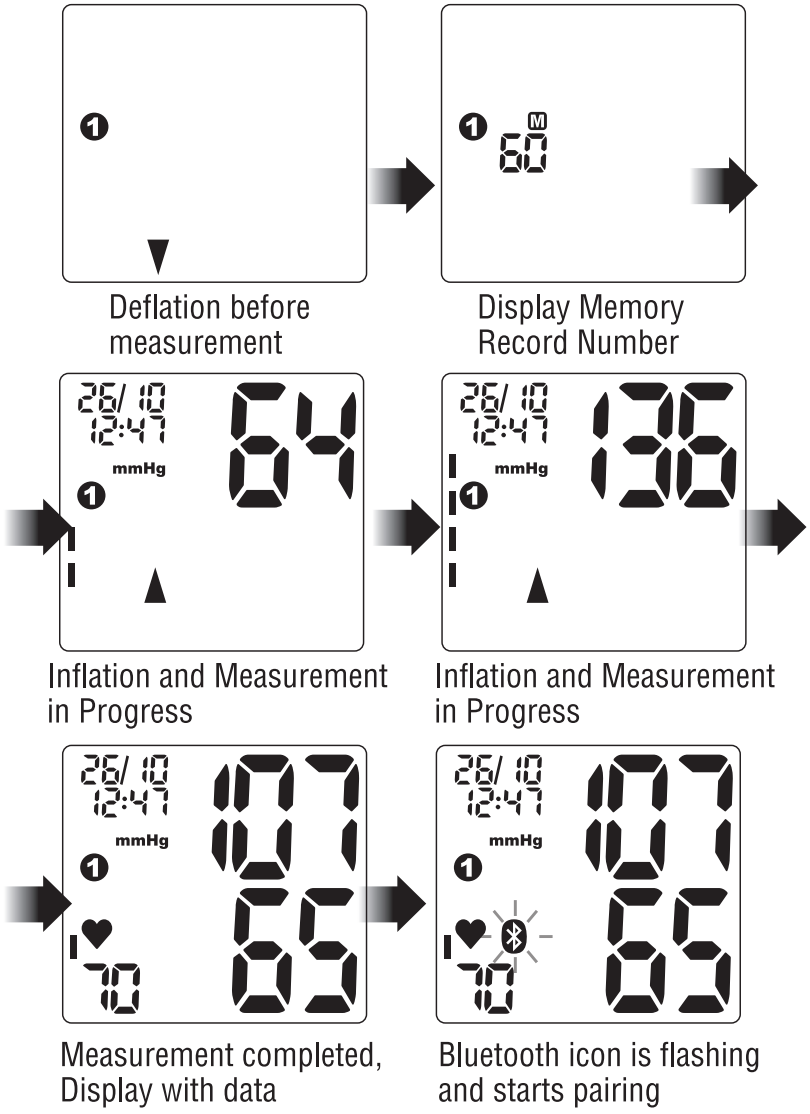
4. The cuff starts to inflate. It is normal for the cuff to feel tight.
   ❗ If you want to stop cuff inflation, press ⏻ key to turn off the device and the cuff will deflate.

5. The device is measuring the blood pressure and pulse rate while the cuff is inflating. ▲ Pressurize indicator, the corresponding pressure bar indicators and the current cuff pressure appear on the display. As soon as a pulse is detected, the Heart Mark ♥ flashes at every heartbeat.

6. When the measurement is completed, the systolic pressure, the diastolic pressure and pulse rate are displayed and are stored to memory. The cuff deflates automatically.

7. While measurement result are displayed, the Bluetooth icon is flashing. Turn on the G.LAB Health APP on your smart device and the new measurement record will send to your smart device at the same time.

8. Press ⏻ key to turn off the device.
   ❗ The device will automatically turn off after 1 minute of inactivity.

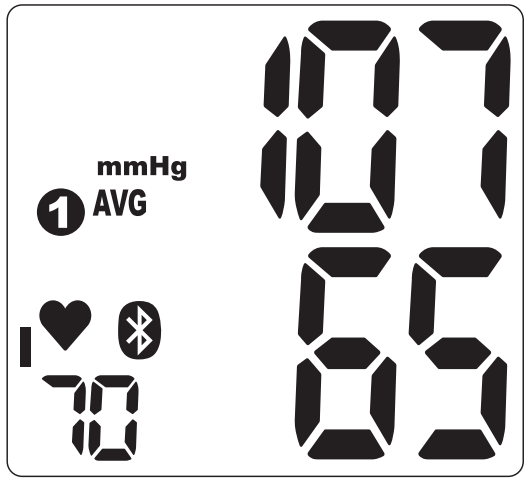


RECALL AVERAGE AND PREVIOUS MEASUREMENT DATA

The device has a memory capability to store the measurement data for 2 users – User 1 and User 2. Every time you complete the measurement, the device automatically stores the measurement result. You can view the average reading based on the last 3 measurements and the previous measurement data in the memory.

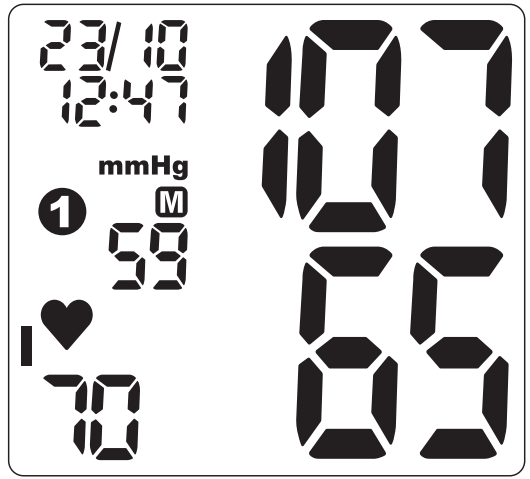
View average measurement data of the last 3 measurements

1. Press [M] key to turn on the device and view the average measurement data.



View previous measurement data.

2. Press [M] key to view previous measurement data. Corresponding memory record number and time of measurement appear on the display.
   Press [M] key again to display the measurement data from most recent data to older data in order.
3. Press [⏻] key to turn off the device.



Select User

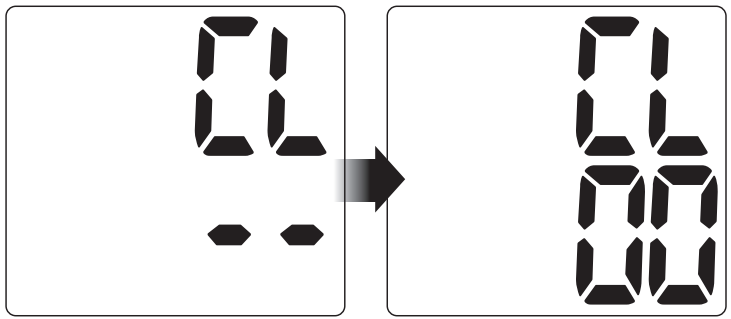
You can also press [👤] key at any time in memory data viewing mode to select from User 1 or User 2 memory record.

DELETE MEASUREMENT DATA

There are 2 methods to delete the memory record.

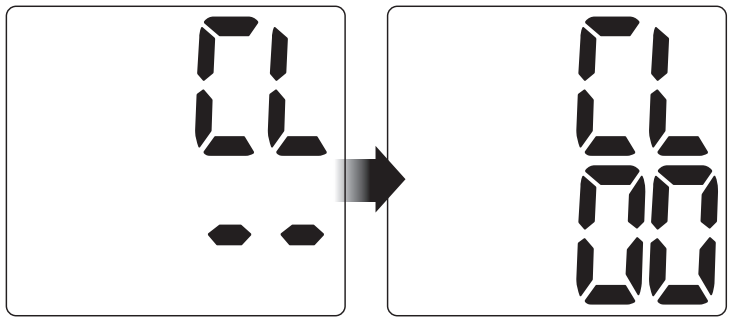
(A) Delete one memory record

1. While you are viewing previous measurement data, select the record you want to delete.
2. Press and hold [M] key for about 3 seconds until "CL" and "--" appear on the display.
3. Press [M] key again to confirm. The display shows "CL" and "00" and the selected record is deleted.
4. The display will automatically return to view the previous measurement data.



(B) Delete all memory records

1. Press [M] key to view the average measurement data.
2. Press and hold [M] key for about 3 seconds until "CL" and "--" appear on the display.
3. Press [M] key again to confirm. The display shows "CL" and "00" and all memories are deleted.
4. The display will automatically return to view the average measurement data with an empty record.
5. Press [⏻] key to turn off the device.



TRANSFER MEASUREMENT DATA TO SMART DEVICE

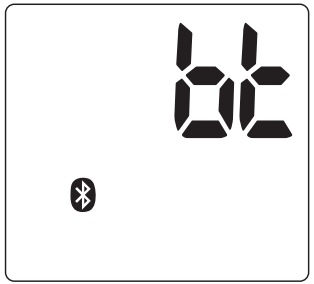
For the first time use

1. Download and install the free “G.LAB Health” app on your smart device.

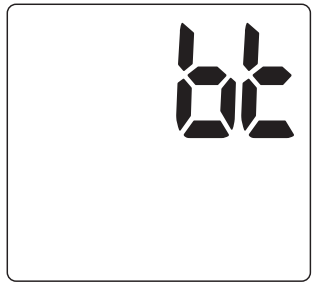
Download on the App Store

GET IT ON Google Play

2. Turn on the Bluetooth feature of the smart device.
3. Open the “G.LAB Health” app on your smart device and sign up a new account.
4. Make sure the Bluetooth feature of the monitor is on.
   To turn on/off the Bluetooth feature of the monitor:
   Press [◷] button to turn on the monitor. Press and hold [◷] button to enter the setting mode.



When Bluetooth is ON, Bluetooth icon is flashing



When Bluetooth is OFF, Bluetooth icon is off

5. Press [M] button on the device to enter AVG mode. Bluetooth icon is flashing on the display.
6. Click the [⚙] icon on the app and click ‘Setup Bluetooth Device”. Select your monitor model on the device list. All the measurement data will be sent to your smart device automatically.

Transfer the measurement data

1. Make sure the monitor is within 5m of your smart device and the “G.LAB Health” app is active.
2. Make sure the Bluetooth feature of the monitor is on. Press the [M] button to enter AVG mode, Bluetooth icon is flashing on the display.
3. Click the [↻] icon on the app to get the new measurement data from your monitor.

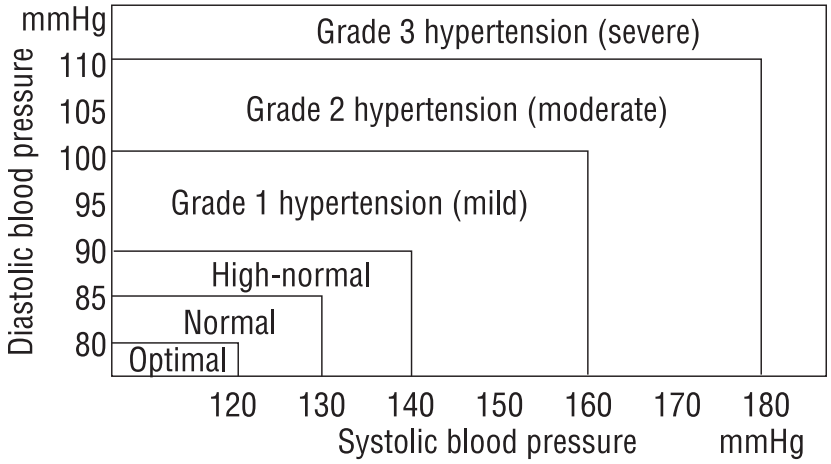
Notes:

- If data transmission fails, error code “E7” will be shown. Check the Bluetooth feature of the monitor and your smart device.
- The monitor comes with the Bluetooth already turned on as default. Please turn off the Bluetooth in the monitor in the areas where use of wireless equipment is prohibited.

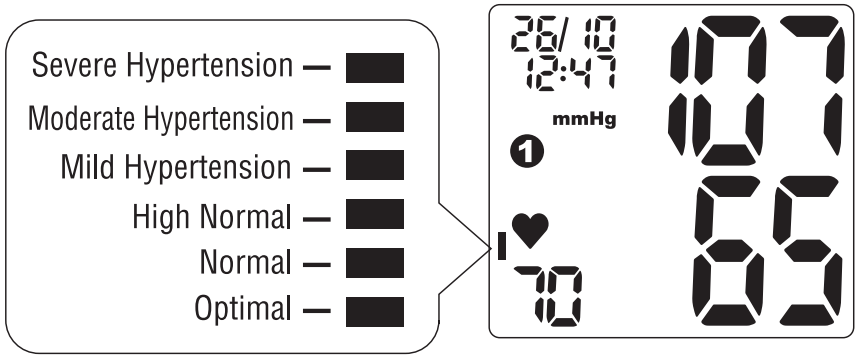
WHO CLASSIFICATION INDICATOR

The World Health Organization (WHO) has established the following chart as a standard to assess high blood pressure, regardless of the age.

Reference Material: Journal of Hypertension 1999, Vol 17 No.2



The WHO Classification Indicator is a feature which provides a snapshot of your blood pressure classification based on your measurements. This will help you to understand what your blood pressure values mean. Each segment of the bar corresponds to the WHO blood pressure classification.



ABOUT IRREGULAR HEARTBEAT [IHB]

An irregular heartbeat is defined as a heartbeat that varies by 25% from the average of all heartbeats during the blood pressure measurement. When the device detects an irregular heartbeat two or more times during the measurement, the Irregular Heartbeat indicator will appear on the display.
It is important that you are sitting relax, steadily and stay quite during the measurement.

⚠ If the irregular heartbeat indicator ♥)) displays frequently after the measurement, you are recommended to consult your physician.

ABOUT BLOOD PRESSURE

What Is Blood Pressure?
Blood pressure is the force exerted by blood against the walls of the arteries. Systolic pressure occurs when the heart contracts. Diastolic pressure occurs when the heart expands. Blood pressure is measured in millimeters of mercury (mmHg). One's natural blood pressure is represented by the fundamental pressure, which is measured first thing in the morning while one is still at rest and before eating.

What Is Hypertension And How Is It Controlled?
Hypertension, an abnormally high arterial blood pressure, if left unattended, can cause many health problems including stroke and heart attack. Hypertension can be controlled by altering one's lifestyle, avoiding stress, and with medication under a doctor's supervision. To prevent hypertension or to keep it under control:
- Do not smoke
- Exercise regularly
- Reduce salt and fat intake
- Have regular physical checkups
- Maintain proper weight

TROUBLESHOOTING

Problem	Probable Cause	Correction
Nothing appears on the display, even when the power is turned on.	Batteries are drained.	Replace all used batteries with new batteries.
	Batteries are not installed in correct polarities.	Re-install the batteries with their polarities (“+” and “-“) match the polarity marking in the battery compartment.
ERROR code 1 (E1) appears	No pulse signal is detected. The cuff may not apply correctly.	Reapply the cuff and fasten the cuff correctly. Position the cuff at heart level.
ERROR code 2 (E2) appears	Noise is detected. Your arm or body is moving during the measurement.	Remain still and do not talk during the measurement.
ERROR code 3 (E3) appears	No pressure is detected. The cuff may not fasten properly or too loose.	Reapply the cuff and fasten the cuff correctly.
ERROR code 4 (E4) appears	The device cannot measure the blood pressure correctly.	If the heartbeat is very weak or irregular, the device may not able to measure the blood pressure. Reapply the cuff and fasten the cuff correctly. Sit comfortably and remain still during the measurement.
ERROR code 5 (E5) appears	The cuff is over inflated. Blood pressure over 300 mmHg.	It is recommended to consult your physician immediately.
ERROR code 6 (E6) appears	Low battery level.	Replace all used batteries with new batteries.
ERROR code 7 (E7) appears	Data transmission fail.	Check the bluetooth connection of the device and the smart device.
The monitor keeps re-inflating	System lockup.	Restart the device: remove the batteries, wait for 1 minute, and then re-install the batteries.

TECHNICAL SPECIFICATION

Model No.	: MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0 MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1
Display	: LCD Display
Measurement Method	: Non-invasive, Oscillometric method
Measurement Range	: Systolic Blood Pressure: 50-250 mmHg Diastolic Blood Pressure: 30-200 mmHg Pulse Rate : 40-180 beats/minute
Accuracy	: Pressure : +/-3 mmHg Pulse Rate : +/-5% of reading
Resolution	: Pressure : 1 mmHg Pulse Rate : 1 beat / minute
Memory	: 240 (120 x 2 users)
Dimensions	: Approx. 4” x 3.1” x 1.2” (102 x 78 x 30mm)
Wrist Cuff Circumference Range	: 5.3” - 8.5” (13.5 - 21.5cm)
Operating Temperature	: 41˚F to 104˚F (5˚C to 40˚C)
Operating Humidity	: 15 to 90% RH
Storage Temperature	: -13˚F to 158˚F (-25˚C to 70˚C)
Storage Humidity	: up to 90% RH
Operation, storage and transport atmospheric pressure	: 700hPa to 1060hPa
Power Source	: 2 x 1.5V AAA alkaline batteries
Accessories	: Cuff, User manual, Storage box, Batteries
Classification	: Application part Type BF
Key to symbols	: Application part Type BF Class II equipment symbol

APPENDIX I

Guidance and manufacture's declaration – electromagnetic emission		
The Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/ MD5391/MD53B1) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/ MD5391/MD53B1) should assure that it is used in such an environment.		
Conducted and radiated RF EMISSIONS	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	The Sphygmomanometer (MD5300/MD5330/MD5350/ MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/ MD5371/MD5391/MD53B1) uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emission CISPR 11	Class B	The Sphygmomanometer (MD5300/MD5330/MD5350/ MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/ MD5371/MD5391/MD53B1) is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

Guidance and manufacture's declaration – electromagnetic immunity

The Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge IEC 61000-4-2	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Rated power frequency magnetic fields IEC 61000-4-8	50 Hz: 30 A/m 60 Hz: 30 A/m	50 Hz: 30 A/m 60 Hz: 30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

APPENDIX II

Guidance and manufacture's declaration – electromagnetic immunity

The Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted disturbances induced by RF fields IEC 61000-4-6	3 V_{rms}[a] 0.15 MHz - 80 MHz 6 V_{rms}[a] in ISM and amateur radio bands between 0,15 MHz and 80 MHz[b] 80% AM at 1 kHz	3 V_{rms}[a] 0.15 MHz - 80 MHz 6 V_{rms}[a] in ISM and amateur radio bands between 0,15 MHz and 80 MHz[b] 80% AM at 1 kHz	Portable and mobile RF communications equipment should be used no closer to any part of the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1), including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \left[\frac{6}{E}\right]\sqrt{P}$ where P is the maximum output power rating of the transmitter in Watts (W), d is the minimum recommended separation distance in meters (m), and E is the immunity test level in V/m. Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF EM fields IEC 61000-4-3	10 V/m[c] 80 MHz - 2.7 GHz 80% AM at 1 kHz	10 V/m[c] 80 MHz - 2.7 GHz 80% AM at 1 kHz	

NOTE These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] r.m.s., before modulation is applied.

[b] The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

[c] Before modulation is applied.

APPENDIX III

Recommended separation distances between
portable and mobile RF communications equipment and the *Sphygmomanometer*
(MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1**)**

The Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Sphygmomanometer (MD5300/MD5330/MD5350/MD5370/MD5390/MD53B0/MD5301/MD5331/MD5351/MD5371/MD5391/MD53B1) as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)	
	3 V_{rms}	10 V/m
0.01	0.200	0.060
0.1	0.632	0.190
1	2.000	0.600
10	6.33	1.90
100	20.0	6.00

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

APPENDIX IV

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 technician for help.

WARNING

- To comply with the limits of the Class B digital device, pursuant to Part 15 of the FCC Rules, this device is comply with Class B limits. All peripherals must be shielded and grounded. Operation with non-certified peripherals or non-shielded cables may results in interference to radio or reception.
- Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC. The device, accessories and the packaging have to be disposed of waste correctly at the end of the usage. Please follow Local Ordinances or Regulations for disposal.

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CE 0123 MD

P/N: 83-M5300-XXXXXX-R
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G.LAB Health

Download on the App Store

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iOS 9.0 or above
Andriod 5.0 or above

If the instruction manual is damaged or if you no longer have the instruction manual in your possession and in case of any complaints or unexpected events, please contact us at: www.grandway.com.hk