DIGITAL AUTOMATIC
WRIST BLOOD PRESSURE MONITOR

USER MANUAL

MODEL : MD5200/MD5210/MD5220/
MD5230/MD5240/MD5250

INTRODUCTION

Thank you for purchasing this blood pressure monitor. Please read this manual thoroughly before use. Contact your physician if you have any queries about your blood pressure.

This fully automatic instrument utilizes the non-invasive oscillometric method, which detects your blood movement through you brachial artery, for measuring your blood pressure and pulse rate, and the result will display on a digital panel. Without using a stethoscope, you can get the readings promptly and easily.

This device conforms to European Council Directive 93/42/EEC concerning medical devices. This is made evident by the CE mark of conformity accompanies by the reference number of the designated authority.

This device complies with :

- EN ISO 81060 standard relating to non-invasive sphygmomanometers Part 1: Requirements and test methods for non-automated measuremnt 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.

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 of an adult individual by using a non-invasive technique, in which an inflatable cuff is wrapped around the wrist.

SAFETY NOTES

WARNING	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING

- Consult your physician before starting to measure your blood pressure.
- Like any oscillometric blood pressure measurement devices, certain medical conditions can affect the measurement accuracy, among others:
  - Disorder of the cardiac rhythm
  - Very low blood pressure
  - Very low blood perfusion
  - Patients in shock
  - Diabetes
  - Vessel anomalies
  - People with electrical implants such as a cardiac pacemaker
  - Women who are pregnant
  - Patient who are pre-eclamptic
  - Patient motion during measurement

  Due to their condition the oscillometric measurement method can produce incorrect readings. This represents a risk for your health, since values may be interpreted incorrectly. Always consult your physician to determine what will be suitable for you.

SAFETY NOTES

- This product does not and is not intended to provide a medical diagnosis. Measurement results are for reference only. Self-diagnosis and treatment, e.g. regarding medication, using measured results represent a risk for your health. Always consult with a licensed physician for determination of appropriate medication and dosage thereof. Follow the instructions of your physician or licensed healthcare provider.
- Please note that technically related measuring tolerances are possible. Please see the section “TECHNICAL SPECIFICATION”.
- Any cuff related blood pressure measurement in high repetition rates, can lead to severe measurement side effects, e.g.
  - A nerve compression with temporary wrist/ hand paralysis
  - The release of an arterial or venous thrombus, which can cause a life threatening situation.

  Please contact your physician about the specific risks of cuff pressure in your specific case.
- The “irregular heartbeat” function does not replace a cardiac examination, but may help to detect potential heart rate irregularities at an early stage. Always consult your physician to determine what will be suitable for you.
- The “irregular heartbeat” function is not designed for diagnosing or treating an arrhythmic disorder. Arrhythmia can only be ascertained by a licensed physician.
- The “WHO BLOOD PRESSURE CLASSIFICATION” chart is not intended to replace a medical diagnosis. This chart is only for reference for different classifications of blood pressure.
- If you notice abnormal or suspicious variations in blood pressure measurements, consult your physician immediately.
- Women who underwent a breast or axillaries lymph node removal operation should consult a physician or licensed healthcare provider before starting blood pressure measurements.
- This device must be used in accordance to the specified ambient conditions, otherwise the accuracy of readings might be affected. See “TECHNICAL SPECIFICATION” for details.

SAFETY NOTES

- Do not wrap the cuff around body parts other than your left wrist. Misuse represents a risk to your health.
- This product is not intended for use by or on children, toddlers and infants or on persons who cannot express their consent, e.g. persons with mental disorders or the like. Consult your physician for alternative methods of measuring a child's blood pressure.
- 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.
- This product contains small parts that may present a choking hazard to children. Keep the unit and all parts out of reach of children.
- Proper cuff size is important for accurate measurements. Only use the device on adults who have the right wrist circumference for this unit. See "TECHNICAL SPECIFICATION" for suitable wrist circumferences.
- Electromagnetic interference: Avoid strong electrical or electromagnetic fields in the direct vicinity of the device (e.g. mobile phones, microwave ovens) while it is in operation, a inaccurate measurements may result. To prevent such interference, use the unit at a sufficient distance from such devices or turn the disturbances off.
- 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.
- In case battery fluid leaks and come into contact with your eyes or skin, do not rub and immediately rinse with plenty of clean water and seek medical advice.
- Do not use the equipment where flammable gas (e.g. anaesthetics gas, oxygen or hydrogen) or flammable liquid (e.g. alcohol) are present.

SAFETY NOTES

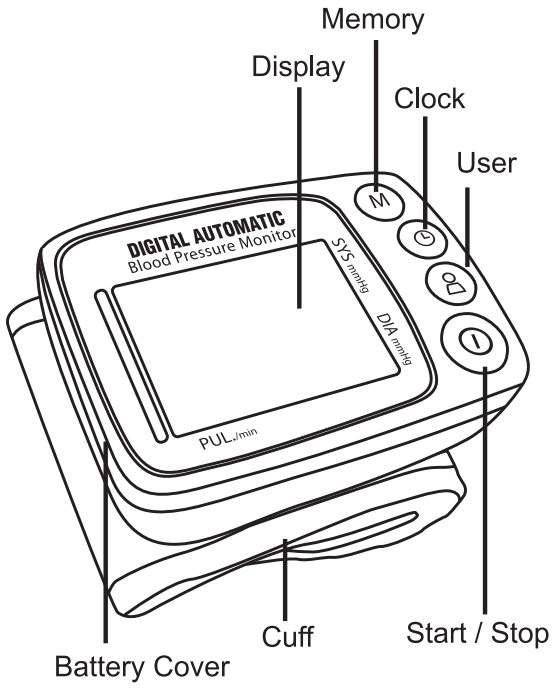
CAUTION

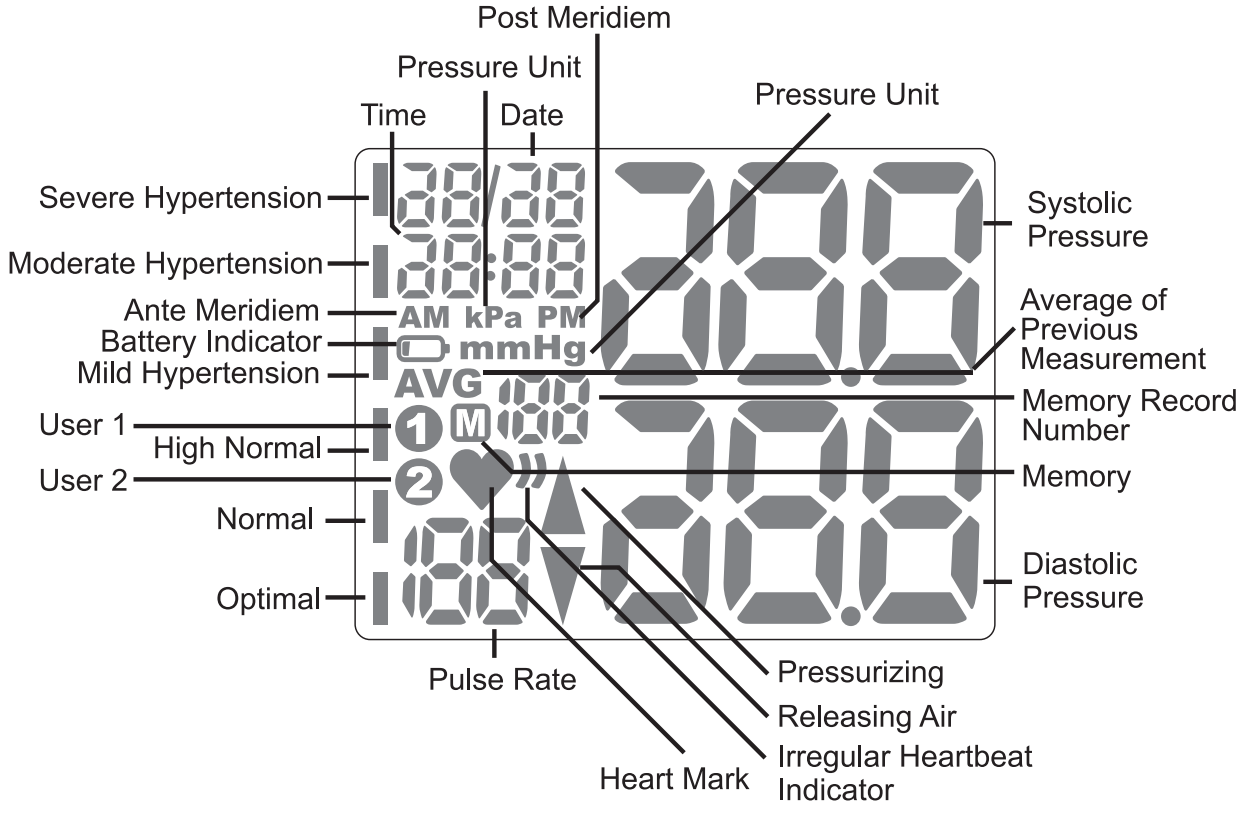
- This device should not be used when your wrist has been wounded/ injured or when a catheter has been inserted. Such use may result in injury.
- Remove any kind of wrist jewellery or the like before taking a measurement. This could cause bruises.
- Do not place the wrist cuff over heavy clothing (e.g. 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.
- 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.
- Do not disassemble the device, it may cause damage to yourself and to the product. If you cannot fix the problem using the “TROUBLESHOOTING” instructions, request service from your dealer.
- 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.

MAINTENANCE AND STORAGE

- The blood pressure monitor is constructed by precision electronic components. Accuracy of readings and the instrument's service life depend on careful handling. Protect the unit against hard knocks (e.g. dropping the unit), moisture, water, dirt, dust, chemicals, extreme hot or cold temperatures, major temperature fluctuations, direct exposure to sunlight and heat sources which are too close (e.g. stoves, heating radiators). This may damage the unit. The device must be stored in the specified ambient conditions. Please see section "Technical Specification" for details.
- 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.
- Never immerse and/or spill water or any other liquid onto the monitor or any components, otherwise liquid may enter it and cause damage.
- Never use rechargeable batteries. This may damage the unit.
- Replace all batteries at the same time and use batteries of the same type. Do not mix old and new batteries.
- Never attempt to repair, open and/or disassemble the unit or adjust it yourself. This may cause damage to the unit and impair functions. If you cannot fix the problem using the "TROUBLESHOOTING" instructions, request service from your dealer.
- 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.
- Clean your device and cuff carefully only with a slightly moistened soft cloth and dry it immediately with a soft dry cloth. Do not press.
- Do not use any aggressive solvents, cleaning agents, detergents or any other strong chemicals (e.g. thinner, alcohol, benzene) to clean the device.
- When storing the device, make sure that no heavy objects are placed on top of it.
- Do not fold the cuff and tubing tightly. The cuff tube should not have any sharp kinks and keep it away from sharp edges.
- Leaking batteries may damage the unit. If you do not intend to use the unit for longer periods, remove the batteries from the battery compartment before placing the device in storage.
- Used equipment, parts and batteries are not treated as ordinary household waste, and must be disposed according to applicable local regulations for material disposal. Unlawful disposal may cause environmental pollution.

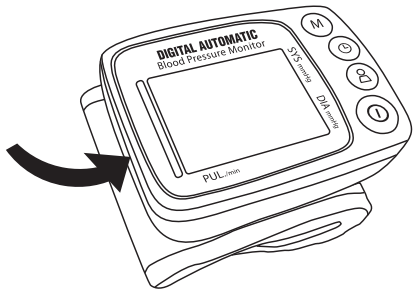
PART IDENTIFICATION & DISPLAY READINGS





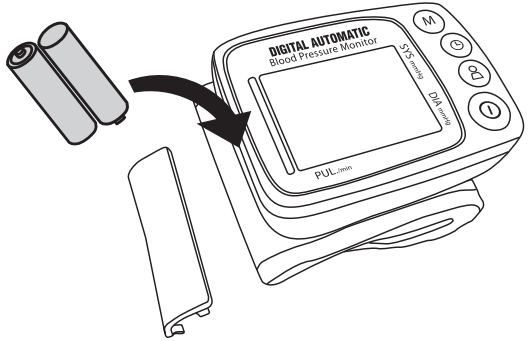
INSTALL/ CHANGE BATTERIES

1. Pull the battery cover located on the bottom side on the unit as shown in the the figure.

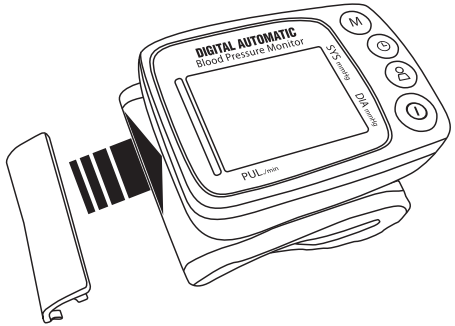


2. Remove old batteries and insert new ones. Use LR03 or AAA alkaline batteries and use batteries of the same type only.

3. Make sure the battery polarities (+) and (-) match the making on the battery compartment.



4. Place back the battery door.



NOTE:

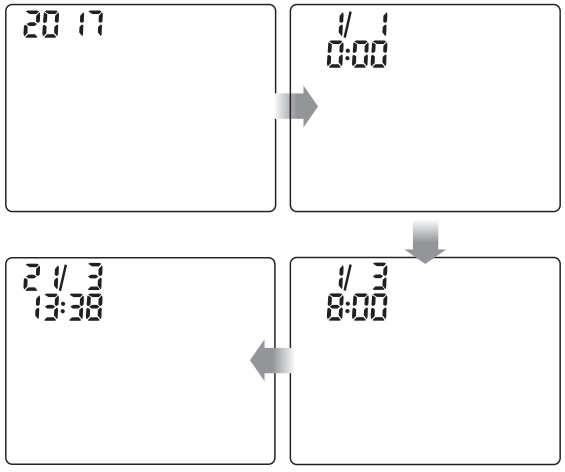
- Insert the batteries as shown in the battery compartment. If not, the device will not work or even be damaged.
- When battery power becomes weak, the [ ] icon and “E6” appear in the display, replace all batteries with new ones. Do not mix old and new batteries.
- Never use rechargeable batteries. This may damage the unit.
- Battery life may vary with ambient temperature and may be shorter at low temperature.

TO SELECT UNIT AND SET CLOCK (Model: MD5200 / MD5220 / MD5240)

You may select the unit of measurement and set the clock under two conditions:

(A) When new batteries are installed

1. “24h” will flash on display.
2. Press [**M**] key to select “24h” or “12h”
3. Press [⏲] key to confirm and “YEAR” will display.
4. Press [**M**] key to advance to current Year.
5. Press [⏲] key to confirm and “MONTH” will display.
6. Press [**M**] key to advance to current Month.
7. Press [⏲] key to confirm and “DAY” will display.
8. Press [**M**] key to advance to current Day.
9. Press [⏲] key to confirm and “HOUR” will display.
10. Press [**M**] key to advance to current Hour.
11. Press [⏲] key to confirm and “MINUTE” will display.
12. Press [**M**] key to advance to current Minute.
13. Press [⏲] key to confirm and turn off the unit.



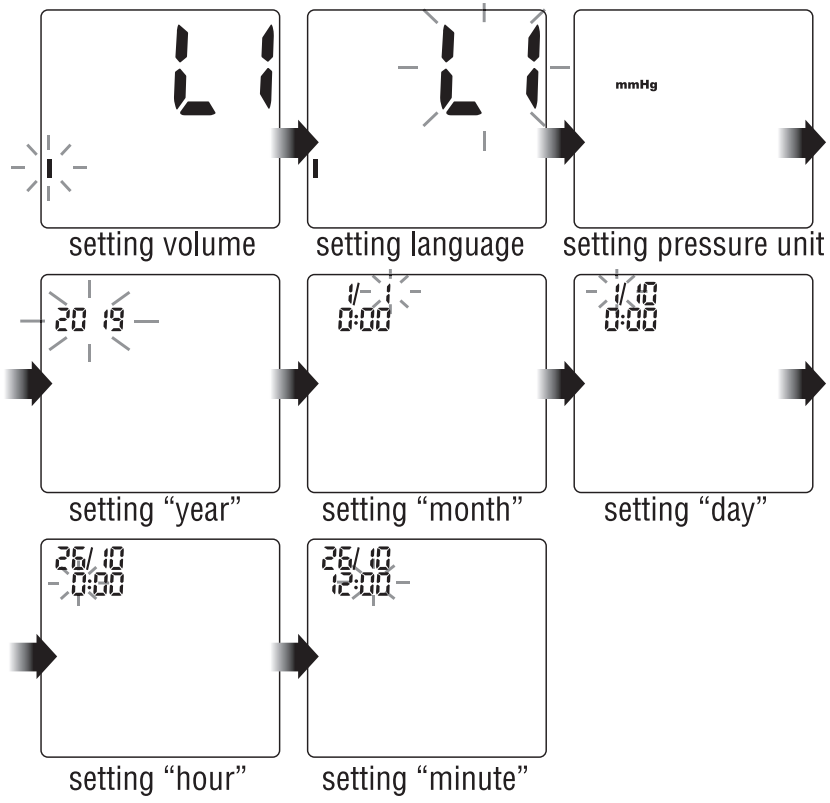
(B) At any time

Press [⏲] once to turn on the screen and Normal Time display is shown. Press and hold [⏲] key for about 3 seconds and “2017” will blink to indicate you are inside the setting sequence.

TO SET VOLUME / LANGUAGE / DATE / CLOCK (Model: MD5210 / MD5230 / MD5250)

(A) When new batteries are installed

1. Volume bar will blink on the display.
2. Press [**M**] key to increase or decrease volume.
3. Press [🕒] key to confirm and then language number “L1” will start to blink.
4. Press [**M**] 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**] key to select the pressure unit.
7. Press [🕒] key to confirm and then "YEAR" will start to blink.
8. Press [**M**] key to set the current Year.
9. Press [🕒] key to confirm and then "MONTH" will start to blink.
10. Press [**M**] key to set the current Month.
11. Press [🕒] key to confirm and then "DAY" will start to blink.
12. Press [**M**] key to set the current Day.
13. Press [🕒] key to confirm and then "HOUR" will start to blink.
14. Press [**M**] key to set the current Hour.
15. Press [🕒] key to confirm and then "MINUTE" will start to blink.
16. Press [**M**] key to set the current Minute.
17. Press [🕒] key to confirm. Setting is completed.
18. Device will turn off automatically.

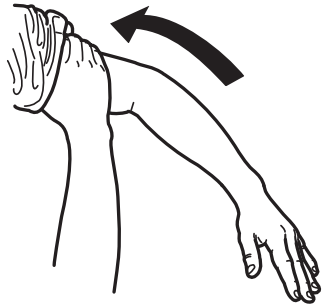


(B) At any time

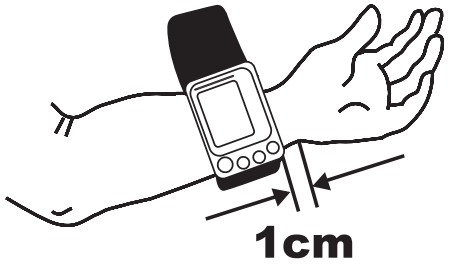
Press [🕒] once to turn on the device in clock display. Press and hold [🕒] key for about 3 seconds until volume bar blinks on the display. Follow the same procedure above to set the device.

TO APPLY WRIST CUFF

1. Bare your left wrist, make sure that the circulation in the arm is not restricted by any cloth etc. that are too tight. Position the cuff on the inside of your wrist.



2. Fasten the cuff with the Velcro fastening so that the upper edge of the monitor is positioned approximately 1cm below the ball of your thumb.



3. The cuff has to be fitted tightly around the wrist but should not constrict it.

BEFORE MEASURING BLOOD PRESSURE

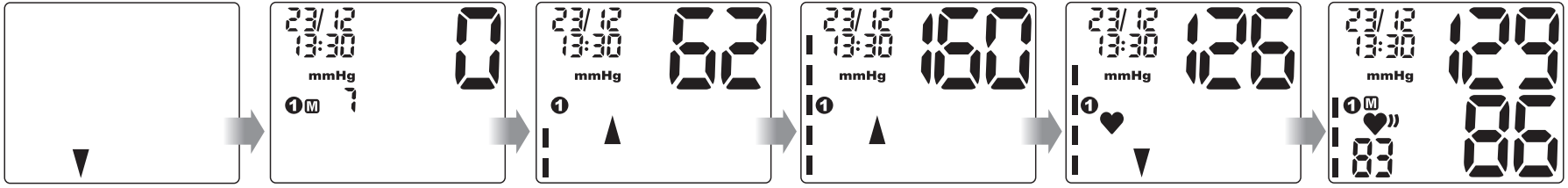
1. Apply the wrist cuff following the instruction in “TO APPLY WRIST CUFF”.
2. Rest at least for 5 minutes before each measurement. Otherwise there may be erroneous results.
3. Sit down in a comfortable position, which your legs should be uncrossed, feet should be feet on the floor and your back should be supported by a chair. At the same time your wrist should be supported on a flat surface which the cuff is on a level with your heart.
4. Relax your wrist and turn your palm upward.
5. Relax, keep still and do not talk during the measurement in order not to distort the result.

NOTE:

- This instrument is intended for use by adult only. Do not use this device on or by children, toddlers and infants.
- For reliable monitoring and reference of blood pressure, it is recommended to do the measurement daily at the same time.
- In order to obtain a resting condition blood pressure, do not eat, drink alcohol and caffeinated beverages, smoke, exercise or bath for at least 30 minutes before taking a measurement since your blood pressure varies from time to time depending on what you have eaten, drunk and what you have done.
- To minimize measurement variations due to physical activity, relax for five to ten minutes before taking a measurement. If you are excited by emotional stress or muscular movement, the measurement result given out may be inaccurate. Stress raises blood pressure.
- You should not be physically tired or exhausted while taking measurement.
- Perform measurements in a quiet and relaxed environment at room temperature.
- Remain relax, still and do not speak during measurement since the accuracy of any blood pressure measurement with this device can be affected by those multitude of causes.
- Always wait at least 5 minutes between measurements to allow the blood circulation in your wrist to return to normal. You may need to wait longer depending on your individual physiological characteristics.
- Should the device detect an abnormal condition, it stops the measurement and display an error code. See “TROUBLESHOOTING” for more details.
- This device bases its measurements on your heartbeat. If you have a very weak or an irregular heartbeat, the device may have difficulty in determining your blood pressure. (An irregular heartbeat is defined as a heartbeat that varies by 25% from the average of all heartbeats during measurement.)

TO MEASURE YOUR BLOOD PRESSURE

1. Follow the recommended way of measurement to make yourself ready.
2. Press [⏻] button when the device is off to start measurement. The average blood pressure and last data number are displayed briefly. The current pressure is displayed, as the measurement begins.
3. The cuff starts to inflate. It is normal for the cuff to feel very tight. A pressure bar indicator is displayed during measurement. See “PRESSURE BAR INDICATOR” for more details.
4. When inflation is complete, deflation starts automatically. Once the pulse is detected, the [♥] blinks with each pulse beat, indicating that the measurement is in progress.
5. When the measurement is complete, the systolic and diastolic pressure and pulse rate are displayed and stored. At the same time, the cuff exhausts the remaining air and deflates completely.
6. Press [⏻] button to turn off the power.



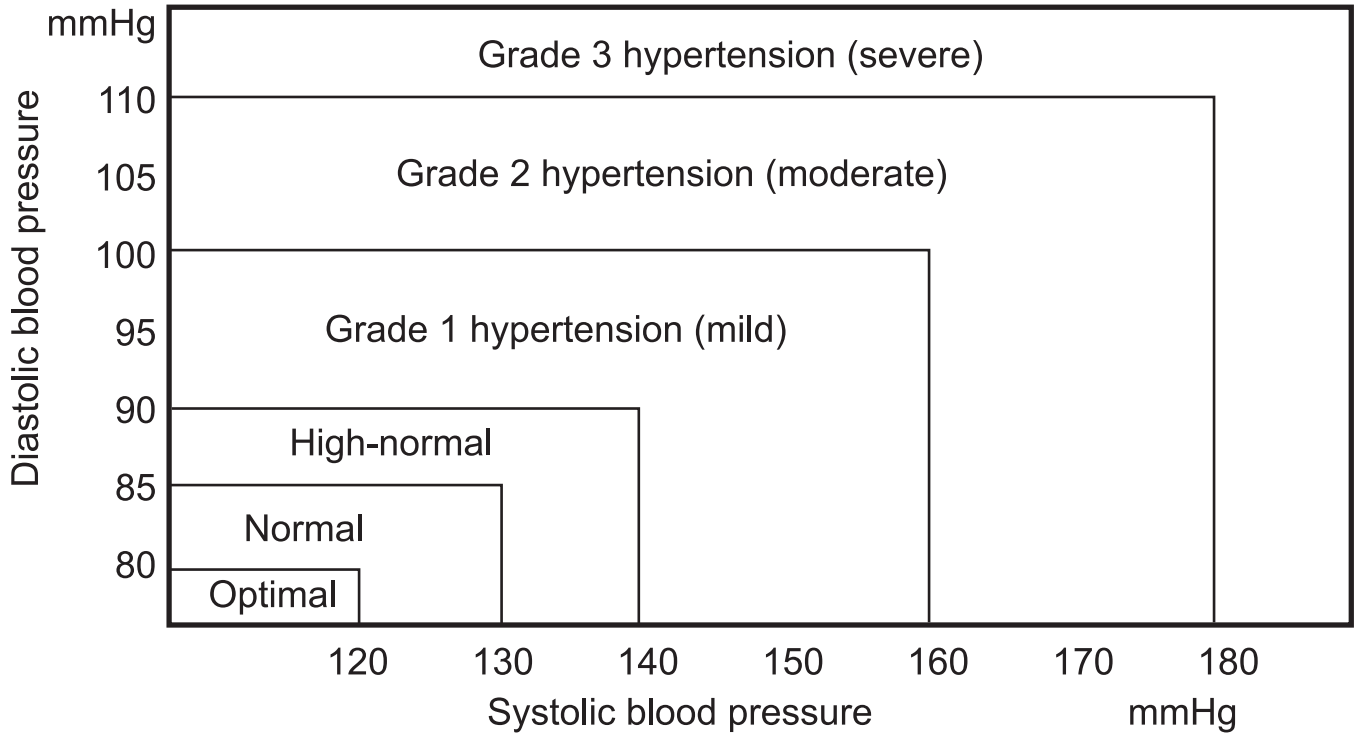
Deflation for start measuring | Measurement record number shown | Inflation in progress | Pressurizing | Measurement in progress | Measurement result shown

Note:
You can stop inflation by pressing [⏻] button at any time.

PRESSURE BAR INDICATOR

Standards to assess high blood pressure, without regard to age, have been established by the World Health Organization (WHO), as shown in the chart below.

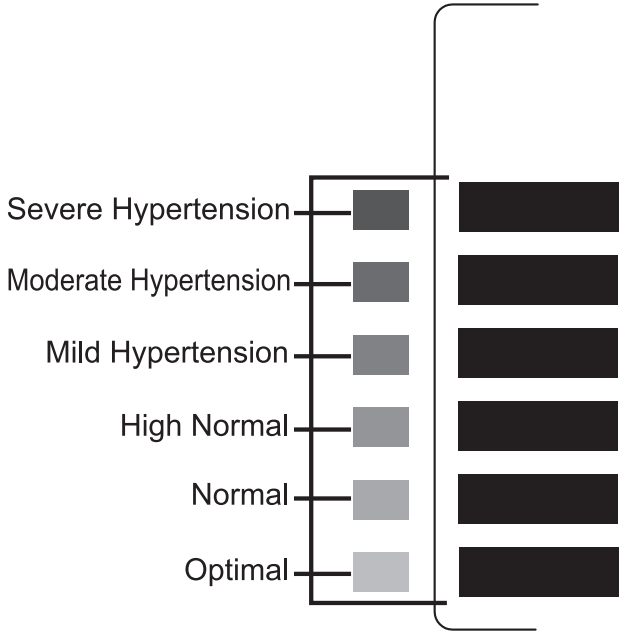
Reference Material: Journal of Hypertension 1999, Vol 17 No.2



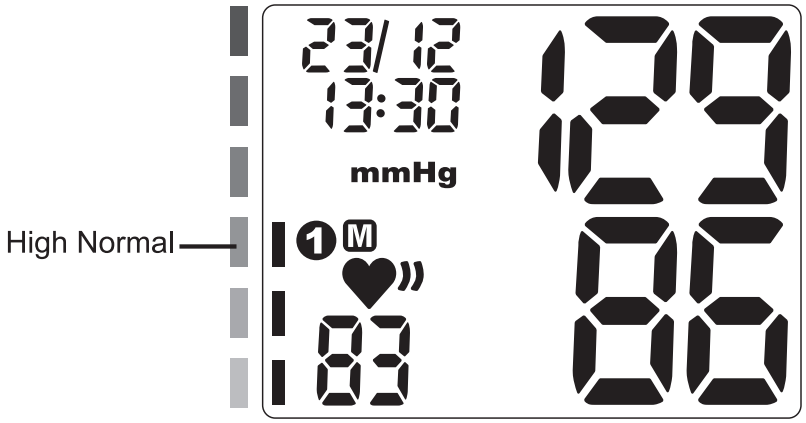
WHO CLASSIFICATION INDICATOR

Each of the six segments of the bar indicator corresponds to the WHO blood pressure classification.

WHO Classification Indicator:



Example:



The indicator displays a segment, based on the current data, corresponding to the WHO classification.

TO RECALL AVERAGE AND PREVIOUS MEASUREMENT DATA

This device has a memory capability to store the measurement readings for each user. Every time you complete the measurement, the device automatically stores the measurement result.

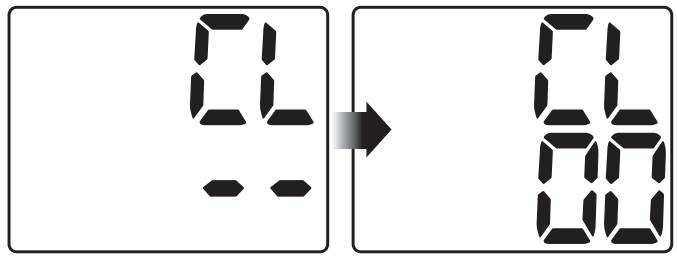
1. To get the average measurement data of the last 3 measurements and view previous measurement data.
2. Press [👤] key to select the user you desire.
3. Press [M] key to read the average data.
4. Press [M] key continuously to view previous measurement data.
5. Press [⏻] button to turn off the device.

TO DELETE MEASUREMENT DATA

This monitor has 2 methods to delete the recorded memory.

(A) To delete one single record

1. Select the record you want to delete
2. Press and hold [M] button until the screen display "CL" and "--"
3. Press and hold [M] button again to confirm and the screen will display "CL" and "00"



(B) To delete all memories

1. Press the [M] button to enter average mode
2. Press and hold [M] button until the screen display "CL" and "--"
3. Press and hold [M] button again to confirm and the screen will display "CL" and "00"

WHAT IS AN IRREGULAR HEARTBEAT

This blood pressure monitor provides a blood pressure and pulse rate measurement even when an irregular heartbeat occurs. An irregular heartbeat is defined as a heartbeat that varies by 25% from the average of all heartbeats during the blood pressure measurement. It is important that you are relaxed, remain still and do not talk during measurements.
Note: We recommend contacting your physician if you see this [♥〃] indicator frequently.

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.
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

Display	: LCD Display
Measurement Range	: Systolic Pressure: 50-250 mmHg ; Diastolic Pressure: 30-200 mmHg Pulse : 40-180 beats/minute
Accuracy	: Pressure : +/-3 mmHg Pulse : +/-5% of reading
Resolution	: Pressure : 1 mmHg Pulse : 1 beat / minute
Measurement Method	: Non-invasive, Oscillometric method
Power Source	: 2 x 1.5V AAA batteries
Operating Temperature / Humidity	: +5˚C to +40˚C, 15-90% RH maximum
Storage Temperature / Humidity	: -25˚C to +70˚C, up to 90% RH maximum
Operation, storage and transport atmospheric pressure	: 700hPa to 1060hPa
Outer Dimensions	: Approx. 83 x 60 x 32mm
Wrist Circumference	: 13.5 - 21.5cm
Accessories	: Cuff, User manual, Storage box, Batteries (Optional)
Classification	: Application part Type BF
Key to symbols	: Application part Type BF Class II equipment symbol

SYMBOLS

Symbols	Function / Meaning
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
	EC Directive Medical Device Label
	Caution
	Authorized Representative in the European Community
	WEEE Label
	Refer to instruction manual / booklet
	Keep dry

NOTICE:
• Operation mode : Continuous
• ⚠ Attention, Consult ACCOMPANYING DOCUMENTS.

Appendix I

Guidance and manufacture's declaration – electromagnetic emission

The Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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 (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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 (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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 (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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 (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) is intended for use in the electromagnetic environment specified below. The customer or the user of the Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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 (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250), 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*

(MD5200/MD5210/MD5220/MD5230/MD5240/MD5250)

The Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Sphygmomanometer (MD5200/MD5210/MD5220/MD5230/MD5240/MD5250) 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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P/N: 83-M5200-SEN00A-R
MADE IN CHINA

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