

MODEL KD-5985

Fully Automatic Arm Cuff Blood Pressure Monitor

(ELECTRONIC SPHYGMOMANOMETER)

OPERATION GUIDE

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IMPORTANT INFORMATION

NORMAL BLOOD PRESSURE FLUCTUATION

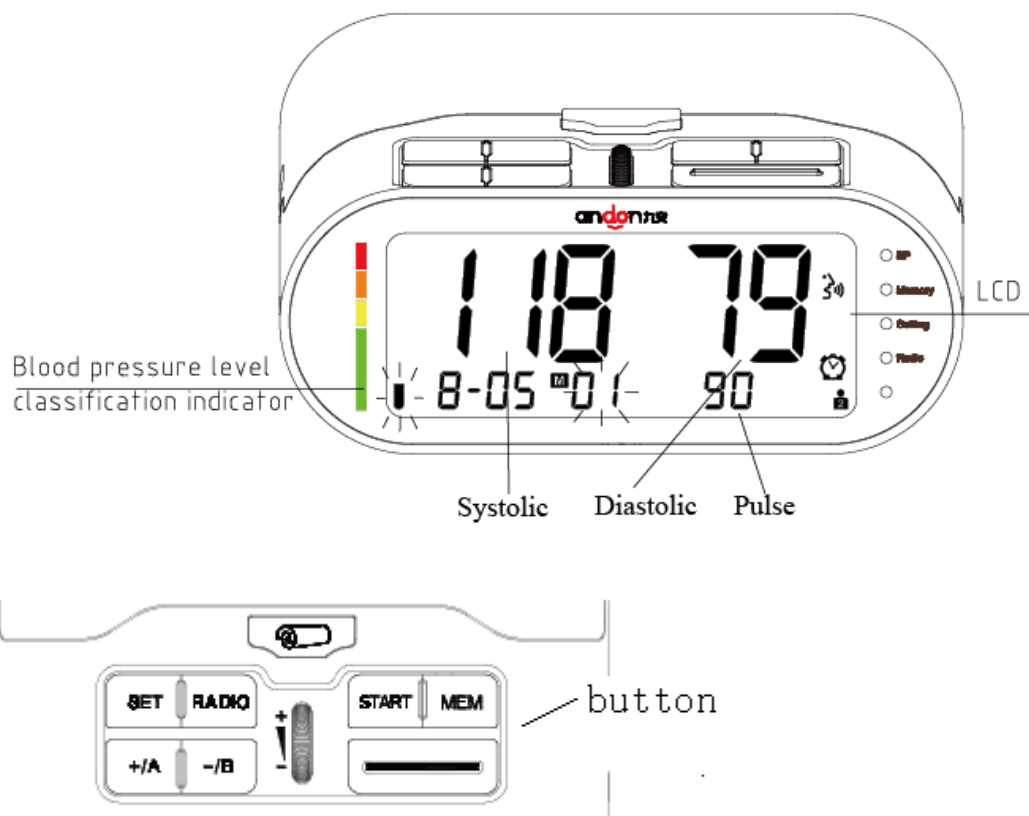
All physical activity, excitement, stress, eating, drinking, smoking and many other activities or factors (including taking a blood pressure measurement) will influence blood pressure value. Because of this, it is mostly unusual to obtain identical multiple blood pressure readings.

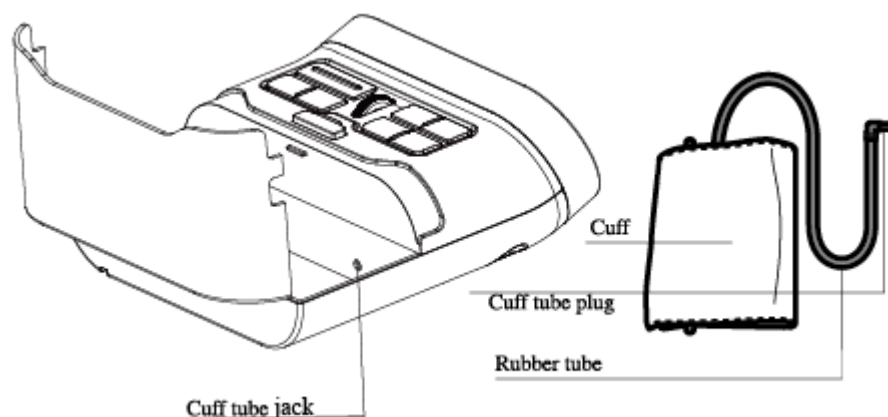
Blood pressure fluctuates continually day and night. The highest value usually appears in the daytime and lowest one usually at midnight. Typically, the value begins to increase at around 3:00AM, and reaches to highest level in the daytime while most people are awake and active.

Considering the above information, it is recommended that you measure your blood pressure at approximately the same time each day.

Too frequent measurements may cause injury due to blood flow interference, please always relax a minimum moment of 1 to 1.5 minutes between measurements to allow the blood circulation in your arm to recover. It is rare that you obtain identical blood pressure readings each time.

PARTS AND DISPLAY INDICATORS






INTENDED USE

Fully Automatic Electronic Sphygmomanometer is for use by medical professionals or at home and is a non-invasive blood pressure measurement system intended to measure the diastolic and systolic blood pressures and pulse rate of an adult individual by using a non-invasive technique in which an inflatable cuff is wrapped around the upper arm. The cuff circumference is limited to 22cm-48cm/8 21/32"-18 29/32" (three kind of cuff circumference: 22cm-30cm/8 21/32"-11 13/16", 30cm-42cm/11 13/16"-16 17/32"(Optional), 42cm-48cm/16 17/32"-18 29/32"(Optional)) .

CONTRAINDICATION



 It is inappropriate for people with serious arrhythmia to use this Electronic Sphygmomanometer.

PRODUCT DESCRIPTION

Based on Oscillometric methodology and silicon integrated pressure sensor, blood pressure and pulse rate can be measured automatically and non-invasively. The LCD display will show blood pressure and pulse rate. The most recent 2×60 measurements can be stored in the memory with date and time stamp. The monitor can also show the average reading of the measurements. The voice function will ease the operation. The blood pressure monitor corresponds to the below standards: IEC 60601-1:2005/EN 60601-1:2006/AC:2010 (Medical electrical equipment -- Part 1: General requirements for basic safety and essential performance), IEC60601-1-2:2007/EN 60601-1-2:2007 /AC:2010 (Medical electrical equipment -- Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and tests), IEC 80601-2-30: 2009+Cor.2010/EN 80601-2-30:2010(Medical electrical equipment –Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers)EN 1060-1: 1995 + A1: 2002 + A2: 2009 (Non-invasive sphygmomanometers - Part 1: General requirements), EN 1060-3: 1997 + A1: 2005 + A2:



2009 (Non-invasive sphygmomanometers - Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems), ANSI/AAMI SP-10:2002+A1:2003+A2:2006. The radio control clock function will automatically amend the real time. While the monitor is in Clock Mode, the monitor can also show measure the Environmental temperature and humidity automatically every other about five second. The LCD backlight will automatically adjust Light intensity according to its environment when the monitor turn on. When use the AC adapter, the LCD backlight will automatically adjust Light intensity according to its environment in the Clock Mode. With a radio chip, the monitor can be used as a radio.

SPECIFICATIONS

1. Product name: Blood Pressure Monitor
2. Model: KD-5985
3. Classification: class II, Internally powered, Type BF applied part, IPX0, No AP or APG, Continuous operation
4. Machine size: 203mm×180mm×81mm (approximate: 8" × 7 3/32" × 3 3/16")
5. Cuff circumference: 22cm-30cm/8 21/32"-11 13/16", 30cm-42cm/11 13/16"-16 17/32" (Optional), 42cm-48cm/16 17/32"-18 29/32" (Optional)
6. Weight: about 626g (approximate: 22 3/32oz) (exclude batteries and cuff)
7. Measuring method: Oscillometric method, automatic inflation and measurement
8. Memory volume: 2×60 times with time and date stamp
9. Power source: DC: 6V  800mA, batteries: 4 × 1.5V  SIZE AA
10. Measurement range:
 - Cuff pressure: 0-300mmHg
 - Systolic: 60-260mmHg
 - Diastolic: 40-199mmHg
 - Pulse rate: 40-180 beats/minute
11. Accuracy:
 - Pressure: ±3mmHg
 - Pulse rate: ±5%
12. Environmental temperature for operation: 5°C ~ 40°C (41°F ~ 104°F)
13. Environmental humidity for operation: ≤90%RH
14. Environmental temperature for measure range: 5°C ~ 40°C (41°F ~ 99.9°F)
15. Temperature accuracy: ±2°C (±3.6°F)
16. Environmental humidity for measure range: 25%RH-80%RH
17. Humidity accuracy: ±10%RH
18. Environmental temperature for storage and transport: -20°C ~ 55°C (-4°F ~ 131°F)
19. Environmental humidity for storage and transport: ≤90%RH
20. Environmental pressure: 80kPa-105kPa
21. Battery life: Approx. 180 times
22. All components belonging to the pressure measuring system, including accessories: Pump, Valve, LCD, Cuff and Sensor.

Note: These specifications are subject to change without notice.

NOTICE

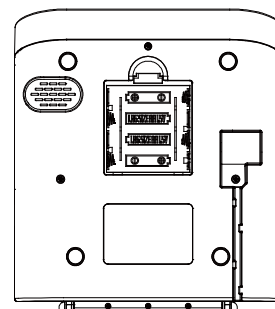
1. Read all of the information in the operation guide and any other literature in the box before operating the unit.
2. Stay quiet, calm and rest for 5 minutes before blood pressure measurement.
3. The cuff should be placed at the same level as your heart.
4. During measurement, neither speak nor move your body and arm.
5. Measuring on same arm for each measurement.
6. Please always relax at least 1 or 1.5 minutes between measurements to allow the blood circulation in your arm to recover. Prolonged over-inflation (cuff pressure exceed 300 mmHg or maintained above 15 mmHg for longer than 3 minutes) of the bladder may cause ecchymoma of your arm.
7. Consult your physician if you have any doubt about below cases:
 - 1) The application of the cuff over a wound or inflammation diseases;
 - 2) The application of the cuff on any limb where intravascular access or therapy, or an arterio-venous (A-V) shunt, is present;
 - 3) The application of the cuff on the arm on the side of a mastectomy;
 - 4) Simultaneously used with other monitoring medical equipments on the same limb;
 - 5) Need to check the blood circulation of the user.
8.  This Electronic Sphygmomanometers is designed for adults and should never be used on infants or young children. Consult your physician or other health care professionals before use on older children.
9. Do not use this unit in a moving vehicle, This may result in erroneous measurement.
10. Blood pressure measurements determined by this monitor are equivalent to those obtained by a trained observer using the cuff/stethoscope auscultation method, within the limits prescribed by the American National Standard Institute, Electronic or automated sphygmomanometers.
11. Information regarding potential electromagnetic or other interference between the blood pressure monitor and other devices together with advice regarding avoidance of such interference please see part ELECTROMAGNETIC COMPATIBILITY INFORMATION.
12. If Irregular Heartbeat (IHB) brought by common arrhythmias is detected in the procedure of blood pressure measurement, a signal of  will be displayed. Under this condition, the Electronic Sphygmomanometers can keep function, but the results may not be accurate, it's suggested that you consult with your physician for accurate assessment.
There are 2 conditions under which the signal of IHB will be displayed:
 - 1) The coefficient of variation (CV) of pulse period >25%.
 - 2) The difference of adjacent pulse period $\geq 0.14s$, and the number of such pulse takes more than 53 percentage of the total number of pulse.
13. Please do not use the cuff other than supplied by the manufacturer, otherwise it may bring biocompatible hazard and might result in measurement error.

14. ⚠️ The monitor might not meet its performance specifications or cause safety hazard if stored or used outside the specified temperature and humidity ranges in specifications.
15. ⚠️ Please do not share the cuff with other infective person to avoid cross-infection.
16. The AC adapter which output is DC 6.0V, 800mA and complied with IEC 60601-1/EN 60601-1/UL 60601-1 and IEC 60601-1-2/EN 60601-1-2/UL 60601-1-2 is suitable for this monitor, we suggest use ASP5-06008002EU (input: 100-240V, 50/60Hz, 200mA; output: DC 6V, 800mA) or ASP5- 06008003UK (input: 100-240V, 50/60Hz, 200mA; output: DC 6V, 800mA) which are complied with IEC 60601-1/EN 60601-1/UL 60601-1 and IEC 60601-1-2/EN 60601-1-2/UL 60601-1-2, if use the monitor with AC adapter in USA, use only ASP5-06008002JU(input: 100-240V, 50/60Hz, 200mA; output: DC 6V, 800mA) which is complied with IEC 60601-1/EN 60601-1/UL 60601-1 and IEC 60601-1-2/EN 60601-1-2/UL 60601-1-2. Other adapters not approved for use with the monitor may damage it. Please note that the monitor jack size: hole Φ 5.5mm, center pin Φ 2.0mm. Please pay attention to polarity.
17. This blood pressure monitor is verified by auscultatory method. It is recommended that you check annex B of ANSI/AAMI SP-10:2002+A1:2003+A2:2006 for details of verification method if you need.
18. 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.

SETUP AND OPERATING PROCEDURES

1. BATTERY LOADING AND AC ADAPTER LOADING


- a. Open battery cover at the back of the monitor.
- b. Load four “AA” size batteries. Please pay attention to polarity.
- c. Close the battery cover.



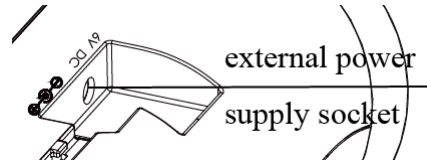
When LCD shows battery symbol , replace all batteries with new ones.

Rechargeable batteries are not suitable for this monitor.

Remove the batteries if the monitor will not be used for a month or more to avoid relevant damage of battery leakage

 Avoid the battery fluid to get in your eyes. If it should get in your eyes, immediately rinse with plenty of clean water and contact a physician.






- d. If you use the AC adapter, please make sure the monitor turn off or no batteries. Then put the connector plug of the adapter into the socket, at last connect the other plug of the adapter to AC. The monitor can work normally when use the AC adapter.



When disconnect the AC Adapter:

Remove the AC Adapter from the electrical outlet;

Remove the AC Adapter plug from the monitor socket.

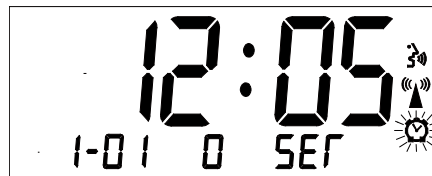
-  Do not plug or unplug the power cord into the electrical outlet with wet hands.
-  Do not overload power outlets. Plug the device into the appropriate voltage outlet.
-  If the AC adapter is abnormal, please change the adapter.
-  Do not pull out the adapter when you are using the monitor.
-  Other adapters not approved for use with the monitor may damage it.



The monitor, the batteries and the cuff, must be disposed of according to local regulations at the end of their usage.

2. SETTING

- a. Once you install the battery or turn off the monitor, it will enter Clock Mode, and LCD will display time and date.
- b. While the monitor is in Clock Mode, press the “SET” button, the data and time, VOICE symbol, RCC symbol and ALARM symbol will display, then the ALARM symbol will blink at first. Press the button “A+” repeatedly, the VOICE symbol, the data and time, the RCC symbol will blink in turn. Also you can press the button “B-” repeatedly, but the order is opposite. The different symbol stand for different setting option. When the accordingly symbol blink, press the “SET” button can be into the accordingly setting adjust status.



2.1 ALARM SETTING

- a. When the ALARM symbol is blinking, press the “SET” button the alarm option will display on the LCD. Then the alarm enable or disable option is blinking, press the button “A+” or “B-” enable alarm with alarm sound or enable alarm with radio sound or disable the alarm. Press the button “SET” repeatedly, the hour and the minute will blink in turn, While the number is blinking, press the button “A+” to increase the number or press the button “B-” to reduce the number. Keep on pressing the button "

A+", the number will increase fast. Keep on pressing the button "B-", the number will reduce fast.



- b. You can turn off the monitor by pressing "SET" button when enable or disable option is blinking and it be set disable , then the setting is confirmed.
- c. You can turn off the monitor by pressing "SET" button when the minute is blinking, then the alarm time is confirmed.
- d. The monitor will turn off automatically after 1 minute of no operation with unchanged.
- e. You can press START button turn off the monitor with unchanged.
- f. While the monitor is in Clock Mode, you can set enable or disable alarm by keeping on press the button "ALARM".
- g. While the alarm ring is ringing, press any button will break the ring, but if you set the radio as alarm ring, you must press START to turn off the radio.

2.2 VOICE SETTING

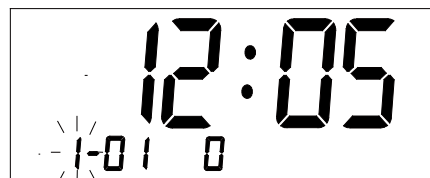
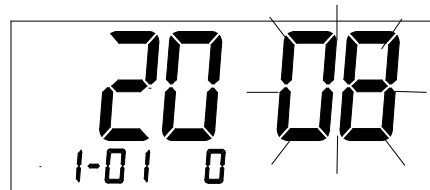
When the VOICE symbol is blinking, press the SET button you can adjust the voice language. Now LCD display "L0", "L1", "L2" ... "Ln" (n means the number of language) circularly (see picture 4). "L0" represents closing voice function,



"L1" represents language 1, "L2" represents language 2, ... "L7" represents language 7. You can select the wanted language by press the button "A+" or "B-" to increase the number of language or reduce the number of language. If the voice function is be closed, the VIOCE symbol will disappear. You can adjust the volume knob to adjusting the volume at any moment. The monitor will turn off automatically after 1 minute of no operation with the voice language unchanged.

2.3 CLOCK AND DATE ADJUSTMENT

a. When the time and date is blinking, press the "SET" button, the year will blink at first. Press the button "SET" repeatedly, the month, the day, the hour, the minute and the time difference will blink in turn. While the number is blinking, press the button "A+" to increase the number, press the button "B-" to reduce the number. Keep on pressing the button "



A+", the number will increase fast. Keep on pressing the button "B-", the number will reduce fast.

- b. You can turn off the monitor by pressing "SET" button when the time difference is blinking, then the time and date is confirmed.
- c. The monitor will turn off automatically after 1 minute of no operation with the time and

date unchanged.

- d. The monitor will turn off if you press the button “START” with the time and date unchanged.
- e. Once you change the batteries, you should readjust the time and date.

2.4 RCC(Radio Controlled Clock)

a. Initial receiving:

Once you install the battery, the machine enters the RCC receiving mode. The RCC symbol twinkles during the receiving process.

If clock data received, the time and date will be adjusted automatically, and then enter the Clock Mode. If no clock data received, the machine enters Clock Mode and keeps the time and date unchanged.



When the machine is in the RCC Mode, you can skip RCC receiving and enter the Clock Mode by pressing “START” button.

b. Forced RCC Receiving

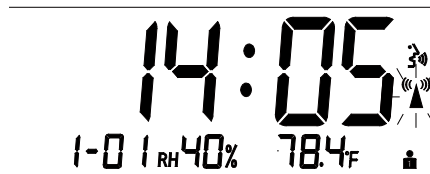
When the monitor working in the SETTING mode and the RCC symbol is blinking, press the “SET” button will enter forced RCC mode and the RCC symbol is twinkling. If clock data received, the time and date will be adjusted automatically.



When the machine is in the RCC Mode, you can skip RCC receiving and enter the Clock Mode by pressing “START” button.

c. Periodical receiving

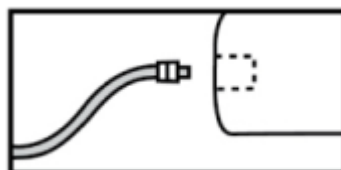
The machine will automatically receive the RCC signal at the time 2:05 and 14:05 every day. You can skip the receiving process by press the button “START” to enter clock mode.



We suggest use battery and avoid strong electromagnetism interference when the RCC is working.

3. CONNECTING THE CUFF TO THE MONITOR

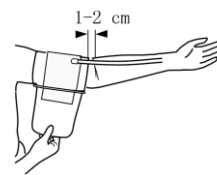
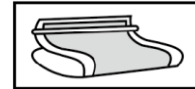
Insert the cuff tubing connector into the socket in the behind of the monitor. Make certain that the connector is completely inserted to avoid air leakage during blood pressure measurements.



Avoid compression or restriction of the connection tubing during measurement, which may cause inflation error, or harmful injury due to continuous cuff pressure.

4. APPLYING THE CUFF

- a. Pulling the cuff end through the medal loop (the cuff is packaged like this already), turn it outward (away from your body) and tighten it and close the Velcro fastener.
- b. Place the cuff around a bare arm 1-2cm above the elbow joint.
- c. While seated, place palm upside in front of you on a flat surface such as a desk or table. Position the air tube in the middle of your arm in line with your middle finger.
- d. The cuff should fit comfortably, yet snugly around your arm. You should be able to insert one finger between your arm and the cuff.



Note:

- Please refer to the cuff circumference range in “SPECIFICATIONS” to make sure that the appropriate cuff is used.
- Measuring on same arm each time.
- Do not move your arm, body, or the monitor and do not move the rubber tube during measurement.
- Stay quiet, calm for 5 minutes before blood pressure measurement.
- Please keep the cuff clean. If the cuff becomes dirty, remove it from the monitor and clear it by hand in a mild detergent, then rinse it thoroughly in cold water. Never dry the cuff in clothes dryer or iron it. Clean the cuff after the usage of every 200 times is recommended.

5. BODY POSTURE DURING MEASUREMENT

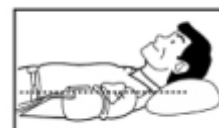
Sitting Comfortably Measurement

- a. Be seated with your feet flat on the floor, and don't cross your legs.
- b. Place palm upside in front of you on a flat surface such as a desk or table
- c. The middle of the cuff should be at the level of the right atrium of the heart.



Lying Down Measurement

- a. Lie on your back.
- b. Place your arm straight along your side with your palm upside.
- c. The cuff should be placed at the same level as your heart.



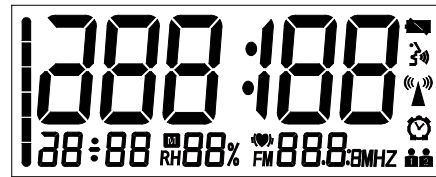
6. GROUP SELCET

When the monitor is working in Clock mode, you can press the A+ or B- button to change the memory bank. The monitor has three banks: user 1, user 2, and guest. There are special symbols that stand for user 1 and user 2. If you select the guest bank, the special symbols will disappear and the measurement result won't be stored.



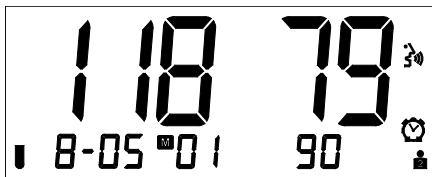
7. TAKING YOUR BLOOD PRESSURE READING

- a. After applying the cuff and your body is in a comfortable position, press the "START" button. A beep is heard and all display characters are shown for self-test. You can check the LCD display according to the right



picture. Please contact the service center if a segment is missing.

- b. After 1 second, the most recent result will be displayed with date and time. And LCD will show 0 with current date and time if no memory is stored in the selected bank.



- c. If the voice function is switched on, the monitor will speak out measurement tips.
 d. Then the monitor inflates the cuff until sufficient pressure has built up for a measurement. Then the monitor slowly releases air from the cuff and carries out the measurement. Finally the blood pressure and pulse rate will be calculated and displayed on the LCD screen. The blood



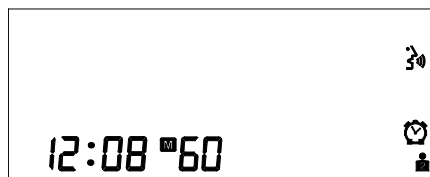
pressure classification indicator and Irregular heartbeat symbol (if any) will blink on the screen. If the voice function is on, it will announce the measurement result. The result will be automatically stored in the current memory bank.

- e. After measurement, the monitor will turn off automatically after 1 minute of no operation. Alternatively, you can press the "START" button to turn off the monitor manually.
 f. During measurement, you can press the "START" button to turn off the monitor manually.

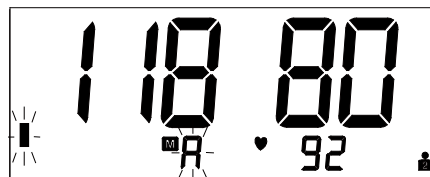
⚠ Please consult a health care professional for interpretation of pressure measurements.

8. DISPLAYING STORED RESULTS

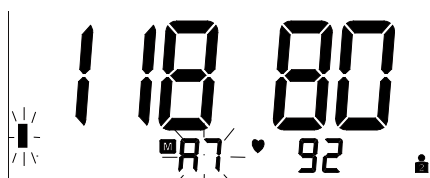
- a. Press “MEM” button in Clock Mode to display the stored results. The amount of results in current bank will be displayed. About 1 second later, the LCD will display the average value of all results in this bank. If the voice function is on, the monitor will announce the average value. If no result stored, 0 will display on the LCD. If the current bank is guest bank, the monitor will turn off with the LCD backlight blink.



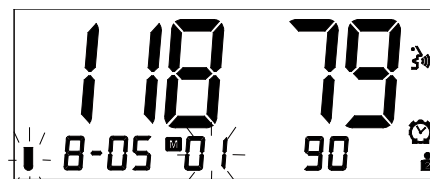
- b. When the average of all results is displayed, press the MEM button, the LCD will display the average of all the results which is measured in last 7 days. If the voice function is on, the monitor will announce the average value. If no result stored, 0 will display on the LCD.



- c. When the average of the last 7 days is displayed, press the “MEM” button, the most recent result will be displayed. Press “A+” button to review the next result. Press “B-” button to review the front result. In this way, repeatedly pressing the “A+” or “B-” button displays the respective results measured previously.

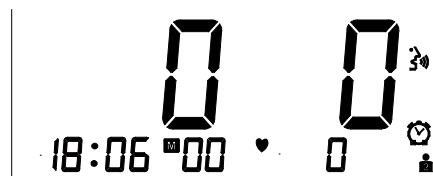
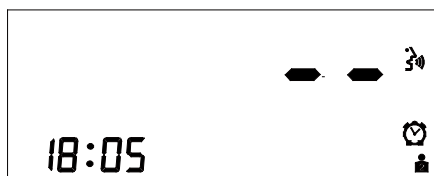


- d. When displaying the stored results, the monitor will turn off automatically after 2 minutes of no operation. You can also press the button “START” to turn off the monitor manually.



9. DELETING MEASUREMENTS FROM THE MEMORY

When any result is displaying (exclude average value displaying), keep on pressing button “MEM” for three seconds, all results in the current memory bank will be deleted after three “beep”. Until button “MEM” is released, LCD will show 0. Press the button “MEM” or “START”, the monitor will be turned off.

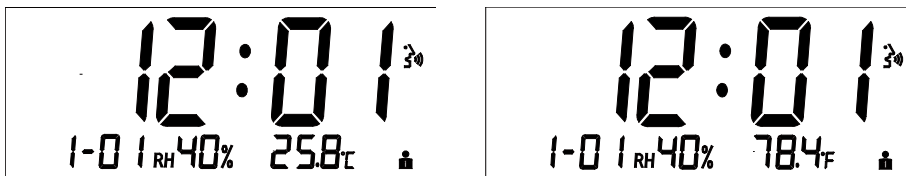


10. RADIO

- a. While the monitor is in Clock Mode, press “RADIO” button, it will enter Radio Mode. After a moment, LCD will display frequency of a broadcasting station, the current time and date.

- ⚠ The radio support worldwide frequency band is 87 -108 MHz.
- b. Pressure “A+” button, the monitor will seek up for another broadcasting station base on the frequency of current broadcasting station. Pressure “B-+” button, the monitor will seek down for another broadcasting station.
- c. The monitor will turn off automatically after 5 minutes of no operation, the LCD backlight will turn off if you use batteries, when you use the AC adapter, the LCD backlight will automatically adjust Light intensity according to its environment.
- d. Press the button “START”, the monitor will be turned off.

11. OTHERS

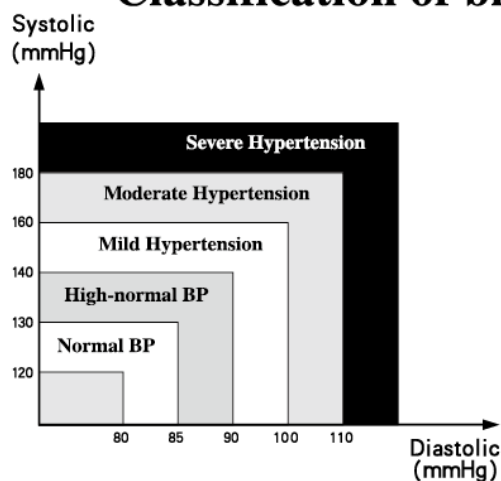


- a. While the monitor is in Clock Mode, the monitor can also show the environmental temperature and humidity automatically every other about five second. And the temperature will display with Celsius or Fahrenheit by turns.
The monitor can't be used as a thermometer or a hygrometer.
- b. The LCD backlight will automatically adjust Light intensity according to its environment when the monitor turn on. When use the AC adapter., the LCD backlight will automatically adjust Light intensity according to its environment in the Clock Mode.
- c. If the voice function is on and you press the button in Clock Mode, the monitor will speak the current time.

12. ASSESSING HIGH BLOOD PRESSURE FOR ADULTS

The following guideline for assessing high blood pressure (without regard to age or gender) has been established by the World Health Organization (WHO). Please note that other factors (e.g. diabetes, obesity, smoking, etc.) need to be taken into consideration. Consult with your physician for accurate assessment, and never change your treatment by yourself.

Classification of blood pressure for adults



BLOOD PRESSURE CLASSIFICATION	SBP mmHg	DBP mmHg	COLOR INDICATOR
Optimal	<120	<80	GREEN
Normal	120-129	80-84	GREEN
High-Normal	130-139	85-89	GREEN
Grade 1 Hypertension	140-159	90-99	YELLOW
Grade 2 Hypertension	160-179	100-109	ORANGE
Grade 3 Hypertension	≥ 180	≥ 110	RED

WHO/ISH Definitions and Classification of Blood Pressure Levels

⚠ It is not intended to provide a basis of any type of rush toward emergency conditions/diagnosis based on the color scheme and that the color scheme is meant only to discriminate between the different levels of blood pressure.

13. TECHNICAL ALARM DESCRIPTION

The monitor will show 'SYS HI', 'SYS Lo', 'DIA HI' or 'DIA Lo' as technical alarm on LCD with no delay if the determined blood pressure (systolic or diastolic) is outside the rated range specified in part SPECIFICACIONES. In this case, you should consult a physician or check if your operation violated the instructions.


The technical alarm condition (outside the rated range) is preset in the factory and cannot be adjusted or inactivated. This alarm condition is assigned as low priority according to IEC 60601-1-8.

The technical alarm is non-latching and need no reset. The signal displayed on LCD will disappear automatically after about 8 seconds.

14. TROUBLESHOOTING (1)




PROBLEM	POSSIBLE CAUSE	SOLUTION
LCD Display shows abnormal result	The cuff position was not correct or it was not properly tightened	Apply the cuff correctly and try again
	Body posture was not correct during testing	Review the "BODY POSTURE DURING MEASUREMENT" sections of the instructions and re-test.
	Speaking, arm or body movement, angry, excited or nervous during testing	Re-test when calm and without speaking or moving during the test
	Irregular heartbeat	It is inappropriate for people with serious arrhythmia to use this blood pressure monitor.

15. TROUBLESHOOTING (2)

PROBLEM	POSSIBLE CAUSE	SOLUTION
LCD Display shows battery symbol 	Low Battery	Change the batteries
LCD shows "Er 0"	Pressure system is unstable before measurement	Don't move and try again.
LCD shows "Er 1"	Fail to detect systolic pressure	
LCD shows "Er 2"	Fail to detect diastolic pressure	
LCD shows "Er 3"	Pneumatic system blocked or cuff is too tight during inflation	Apply the cuff correctly and try again
LCD shows "Er 4"	Pneumatic system leakage or	

	cuff is too loose during inflation	Measure again after five minutes. If the monitor is still abnormal, please contact the local distributor or the factory.
LCD shows "Er 5"	Cuff pressure above 300mmHg	
LCD shows "Er 6"	More than 160 seconds with cuff pressure above 15 mmHg	
LCD shows "Er 7"	EEPROM accessing error	
LCD shows "Er 8"	Device parameter checking error	
LCD shows "Er A"	Pressure sensor parameter error	
No response when you press button or load battery.	Incorrect operation or strong electromagnetic interference.	Take out batteries for five minutes, and then reinstall all batteries.

MAINTENANCE

1.  Do not drop this monitor or subject it to strong impact.
2.  Avoid high temperature and solarization. Do not immerse the monitor in water as this will result in damage to the monitor.
3. If this monitor is stored near freezing, allow it to acclimate to room temperature before use.
4.  Do not attempt to disassemble this monitor.
5. If you do not use the monitor for a long time, please remove the batteries.
6. It is recommended the performance should be checked every 2 years or after repair. Please contact the service center.
7. Clean the monitor with a dry, soft cloth or a soft cloth squeezed well after moistened with water, diluted disinfectant alcohol, or diluted detergent.
8. No component can be maintained by user in the monitor. The circuit diagrams, component part lists, descriptions, calibration instructions, or other information which will assist the user's appropriately qualified technical personnel to repair those parts of equipment which are designated repairably can be supplied.
9. The monitor can maintain the safety and performance characteristics for a minimum of 10,000 measurements or three years, and the cuff integrity is maintained after 1,000 open–close cycles of the closure.
10. It is recommended the cuff should be disinfected 2 times every week if needed (For example, in hospital or in clinique). Wipe the inner side (the side contacts skin) of the cuff by a soft cloth squeezed after moistened with Ethyl alcohol (75-90%), then dry the cuff by airing.

EXPLANATION OF SYMBOLS ON UNIT



Symbol for "THE OPERATION GUIDE MUST BE READ" (The sign background colour: blue. The sign graphical symbol: white)



Symbol for "WARNING"



Symbol for "TYPE BF APPLIED PARTS" (The cuff is type BF applied part)



Symbol for "ENVIRONMENT PROTECTION – Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local Authority or retailer for recycling advice".



Symbol for "MANUFACTURER"



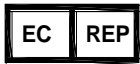
Symbol for "CLASS II"



Symbol for "COMPILES WITH MDD93/42/EEC REQUIREMENTS"



Symbol for "DATE OF MANUFACTURE"



Symbol for "EUROPEAN REPRESENTATION"

SN

Symbol for "SERIAL NUMBER"



Symbol for "KEEP DRY"

WARRANTY INFORMATION

Only charge the cost of components and transport.

SERVICE CENTER


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ELECTROMAGNETIC COMPATIBILITY INFORMATION

Table 1
For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration - electromagnetic emissions		
The KD-5985 is intended for use in the electromagnetic environment specified below. The customer or the user of the KD-5985 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The KD-5985 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 emissions CISPR 11	Class B	The KD-5985 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.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 2
For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacturer's declaration - electromagnetic immunity			
The KD-5985 is intended for use in the electromagnetic environment specified below. The customer or the user of the KD-5985 should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 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 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	<5 % U_T (>95 % dip in U_T) for 0.5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles <5 % U_T (>95 % dip in U_T) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the KD-5985 requires continued operation during power mains interruptions, it is recommended

			that the KD-5985 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the a.c. mains voltage prior to application of the test level.			

Table 3
For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacturer's declaration - electromagnetic immunity			
The KD-5985 is intended for use in the electromagnetic environment specified below. The customer or the user of the KD-5985 should assure that it is used in such an environment.			
IMMUNITY test	IEC 60601test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the KD-5985, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: $d = 1.2\sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2,5 GHz


		<p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>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.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.		
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.		
<p>^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the KD-5985 is used exceeds the applicable RF compliance level above, the KD-5985 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the KD-5985.</p>		
<p>^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.</p>		

Table 4
For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and the KD-5985			
The KD-5985 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the KD-5985 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the KD-5985 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		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2,5 GHz $d = 2.3\sqrt{P}$
0,01	0,12	0,12	0,23

0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be determined 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 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.