yuwell

YE660D

Electronic Blood Pressure Monitor

User's Manual

Please read the user's manual and label closely before using!

EC REP Metrax GmbH
Rheinwaldstr. 22, D-78628 Rottweil, Germany

JIANGSU YUYUE MEDICAL EQUIPMENT & SUPPLY CO., LTD.
NO.1 Baisheng Road Development Zone, Danyang, Jiangsu 212300 CHINA
www.yuwell.com

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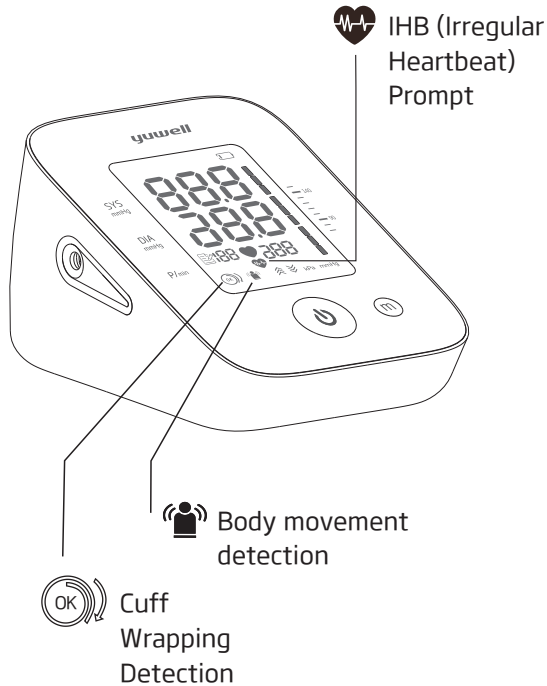
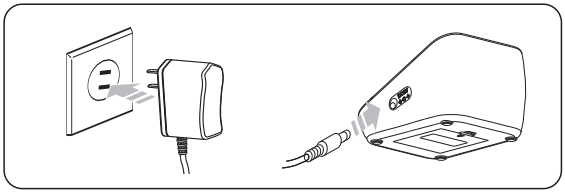


This device uses the oscillometric method of blood pressure measurement.

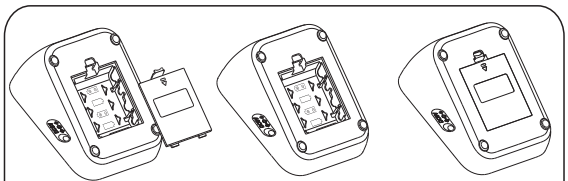
Please follow the steps as shown below

Power-on

Connect the power source



Or install four AA batteries



Open the battery cover, and install the batteries properly

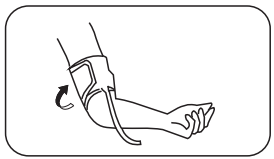
Close the battery cover

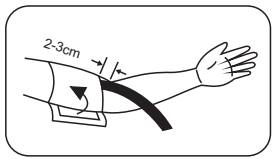
(Please turn to page 14 for details)

Measurement

1. Using method of cuff

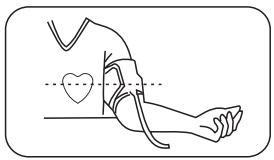
Wearing the cuff and make the lower edge 2~3cm above the elbow, keep the air tube inside of the arm.(Please turn to page 16 for details)





2. Measuring posture

Sit straightly, keep the center of cuff and heart at the same level.(please turn to page 18 for details)



3. Start measuring

Sit still for 5 minutes and then Press the " ⏻ " Button to measure

(Please turn to page 19 for details)

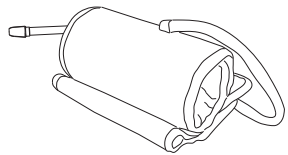
Check the records

Press the button of " m " to check the measuring records.

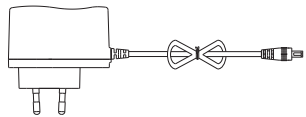
This monitor can display the average measurement and store 90 records. (Please turn to page 25 for details)

1. Main part

2. Cuff



3. Adapter

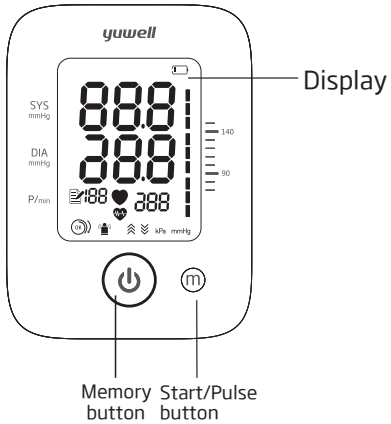


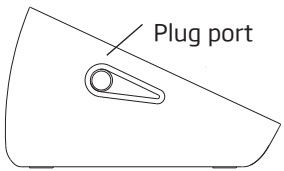
AC adapter
INPUT: 100~240Vac, 50/60Hz or 50-60Hz,
OUTPUT: 6Vdc 600mA
MFR: Dongguan Shilong Fuhua Electronic Co.,Ltd.
US Model: UE04LU-060060SPA
EU Model: UE04LV-060060SPA

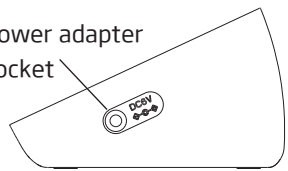
4. Accessories

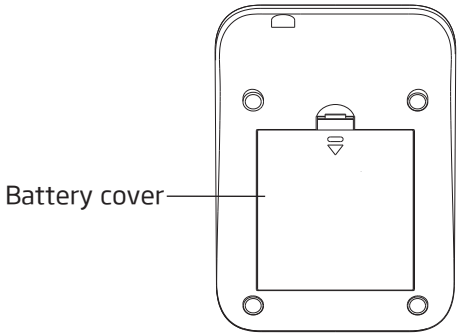
User's manual, Warranty card, 4 AA batteries

1. Main part



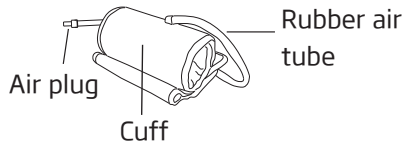






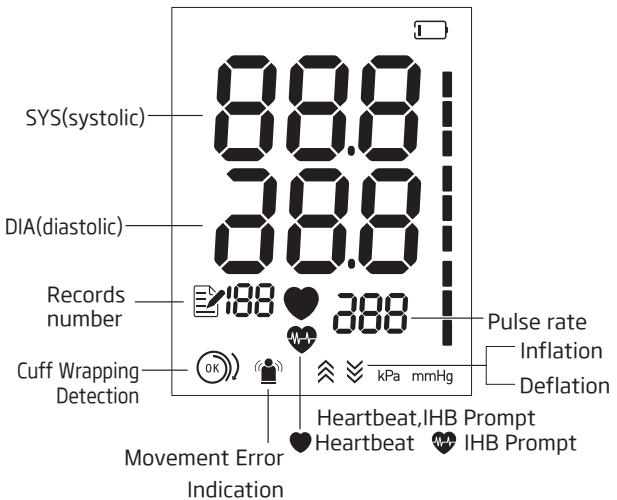
2. Cuff

The suitable upper-arm circumference: 22cm~45cm



Please select a suitable size cuff according to the arm circumference.

3. Display



Pay attention with the symbols shown here to prevent harm or damage to the user.

	Attention
	Note on important information
	Type BF application part
	Follow instructions for use
	Manufacture
	Date of manufacture
EC REP	EC-Representative
	Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC
	Temperature range
	Humidity range
	Atmospheric pressure range
	Safety and environmental protection use period for 10 years
IP 21	IP Classification
CE 0123	This device fulfils the provisions of EC directive 93/42/EEC (Medical Device Directive).
	Class II Device
	DC Current
	AC Current

1. Range of application

This product is intended to measure the blood pressure and pulse rate of adult at household or medical center(not suitable for neonate,pregnancy or pre-eclampsia).

2. Attention items

Pay attention to the following points when measuring, otherwise it may cause damage or incorrect results.

- Sit still for 5 minutes before measuring to ensure quiet and stable mode.
- Do not take the measurement within 1 hour of eating, smoking, drinking wine or coffee (black tea).
- Do not measure while standing, walking or having body pressed.
- Do not take the measurement after sport or bath.
- Do not speak, move, shake arm or bend fingers while measuring.
- Do not take the measurement at extreme temperature condition or the varied severely environment.
- The incorrect measurements of the equipment may be caused by external interference, such as accelerating during transportation or transportation.
- Do not measure continuously. (5 minutes or more should be spared between two measurements).

- Please reinstall the batteries and start again if cannot measure.
- For patient of arrhythmia, measuring results may not be accurate.
- Do not keep the cuff in the aerated state for a long time.
- The patient is an intended operator,this monitor is used for adult whom more than 12 years old.
- The AC adapter cable may cause accidental strangulation in infants.
- Do not swallowed small parts that may cause choking hazard.
- The device must not be used with high frequency surgical equipments.
- It will affect the measurement accuracy if the arm circumference is out of the given value.
- Do not use the CUFF over a wound arm or being on an intravenous drip.
- Consult your doctor if using the device on the arm with an arterio-venous (A-V) shunt.
- Please pay attention to product storage to prevent damage caused by pets, pests or children.
- Operator can't touch the accessible part of adapter/main unit and patient at the same time.

- Do not use the cuff on the arm where the side of a mastectomy or lymph node clearance.
- Note that It will lose function of other device on the same limb while cuff inflating.
- Do not allowed frequent measurements the resulting restriction of the blood flow may cause injury.
- Avoid compression or bending of the cuff connection tubing while using the device.
- Please using soft dry cloth stained with 75% ethanol to clean the device in the case of many people use it,but do not let the ethanol flow into the monitor and arm cuff.
- Please turn off the device and unplug the adapter before cleaning.
- Please use the alkaline battery,do not use the rechargeable battery.
- According to the local laws and regulations to deal with battery.

Note: Do not diagnose with the measurement, Please follow doctor's instruction.
Statement: If the monitor has not been stored in the required temperature and humidity range, it may not conformance to specification.

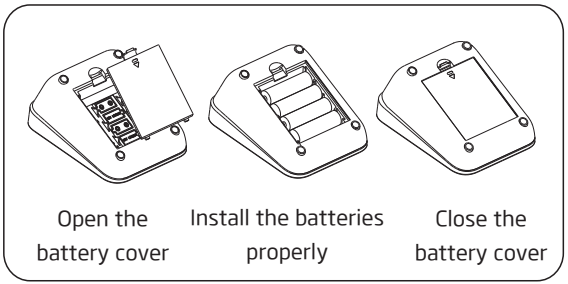
Please observe the following items to protect the device and ensure the accuracy of measurement.

- Please store the monitor and accessories properly after use.
- Do not place the monitor and accessories in high temperature, moisture, dust, or exposure to sunshine.
- The cuff contains an airbag inside, please care in applications, do not fold, pull or twist it.
- Do not modify the device without authorization.
- Do not replace the parts without authorization.
- Please clean the monitor with soft dry cloth. If it's necessary, please use wiped soft cloth with water or neutral detergent before cleaning by soft dry cloth.
- Using absorbent cotton to wipe gently with rubbing alcohol, disinfection of the machine when it necessary. Do not use detergent to clean.
- Do not let water seep into the device.

Tips!

We suggest to calibrate the monitor once a year at least. Please contact manufacturer or according to local laws and regulations.

- Open the battery cover and install four AA batteries properly. Then close the cover with a click sound.



Open the battery cover | Install the batteries properly | Close the battery cover

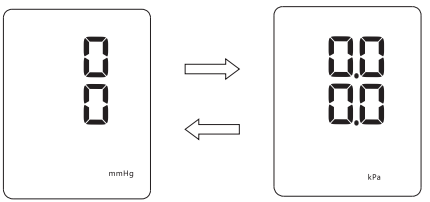
- The" ▭ "icon appearing means the battery is low.
- The" ▭ "icon appearing means the battery is running out. Please replace all the batteries.
- Please take out the batteries if the monitor will not be used for a long time (over three months).

⚠Note: 6V/600mA DC external power can be connected to the monitor. (Please use the power adapter supplied by us.)

- Please take out the batteries if use the DC external power for a long time.

Unit setting

Press the "m" button and the "⏻" button at the same time for more than 3 seconds till the mmHg/kPa starts flashing. Press the "m" button to choose unit between mmHg and kPa. Press "⏻" to finish setting.



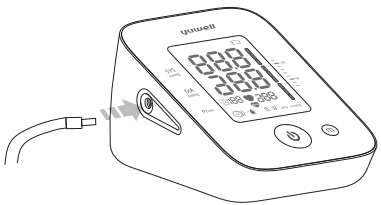
After finishing unit setting, press the "⏻" button to shut down.

Tips!

Either of arms can be measured.

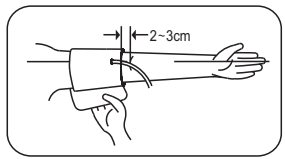
Cuff connecting

Connect the air connector of the cuff to the socket which on the left side of the monitor.



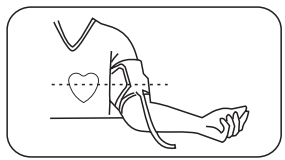
Using method of cuff

▶ Wind the cuff around the upper arm. (as shown In the picture) Keep the lower edge of the cuff at the position above 2-3cm to the elbow joint, wear the cuff at any position on the upper arm.

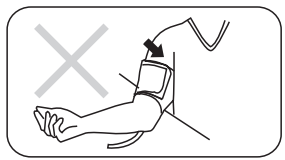


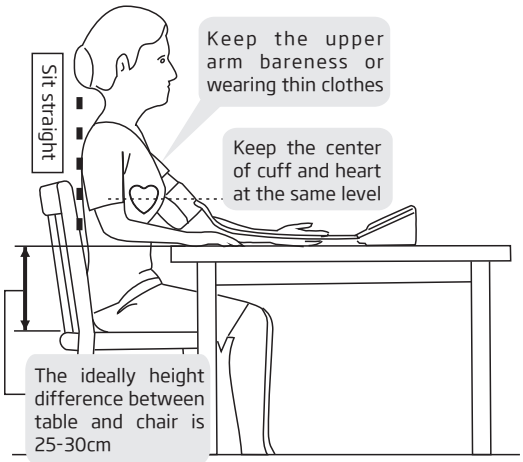
▶ Stick the cuff tightly.

⚠ Note: The cuff should be wearing comfortably, avoiding too tight or loose.



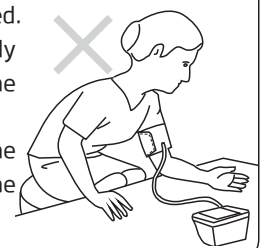
▶ Sit straight and flat the arm on table with palm up, also keep the center of cuff and heart at the same level. Also please ensure the air tube not twisted.





Wrong measurement postures

- Do not bend down or body bend forward.
- Do not sit with legs crossed.
- Do not sit on a sofa.(Belly pressure may increase the blood pressure)
- Do not put the arm on the low table.(May increase the blood pressure)

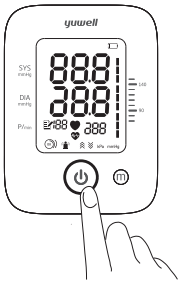


Don't eat, smoke, drink, take bath or do any high impact sport within half an hour before measuring. Measurements shall be taken at the same time every day.

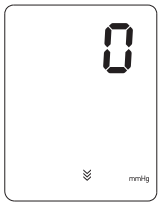
Sit still for 5 minutes before the measurement

1. Measurement

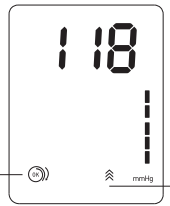
All icons on screen appear for 1 sec after pressing the" ⏻ "button, then disappear. After that the deflation" ⩔ "icon flickers which means the system is in zero testing. Several seconds later the inflation icon" ⩓ "flashes which means the zero testing is finished. Then inflation starts.



Full screen display state



The zeroing state



The inflation state

Increase with the pressure

Cuff detection icon

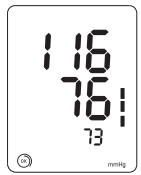
The monitor starts measuring automatically after inflation finished, and the measuring icon " ♥ " starts to flicker, pressure release value starts to decrease gradually.

Please maintain the position during the measurement and don't speak or move body or hand.

The measuring state

2. Measurement finished

After measurement, the monitor will show the SYS, DIA and pulse rate, then daflate the air automatically.



mmHg display

kPa display

3. Take off the cuff

4. Shut down

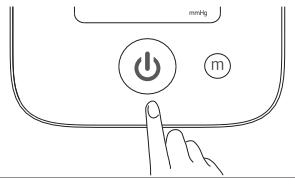
Press the" ⏻ "button to shut down. Also it will power off automatically in 3 minutes without any operation.

5. Power off

Unplug the adapter to safely disconnect it from mains.
Do not position the device to make it difficult for safely disconnection from supply mains.

Emergency stop during measurement

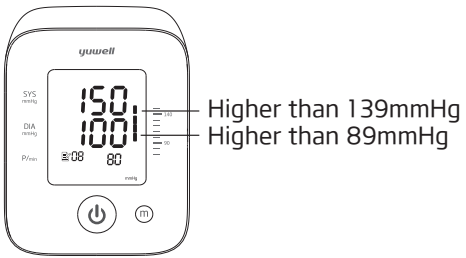
If the measurement need stoping for uncomfortableness or other reasons, please press the " ⏻ " button, the measurement will stop immediately and air releases fast. Take off the cuff manually if the " ⏻ "button is not working.



⚠ Warning: Upper limit pressure of air inflation is 300mmHg/40.0kPa. Don't keep the inflated state for a long time to avoid damage.

Blood pressure range indicator

- If the SYS is higher than 139mmHg or DIA higher than 89mmHg means having high blood pressure. Please contact with doctor for advice.
- Also the Blood pressure range indicator can show the blood pressure intuitively.



Tips!

- The time interval between two measurements should be at least 2~3 minutes or longer.
- Estimate the blood pressure condition according to the BP classification table, and consult the doctor.

Memory function

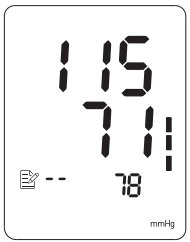
Tips!

The monitor will store the measurement data automatically (including blood pressure and pulse), and the upper limit of records is 90. Press the " m "button to check the records.

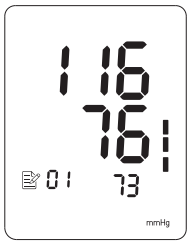
1. Press the " m "button for the records.

A. Press the" m "button to show the average value of the latest 3 times measurement.

B. Repress the" m "button to display the 1st group of memory, the serial number is displayed as "1" to "90". "1" is the latest group and the "90" is the earliest one.



The average value



The 1st group of memory

Tips!

The 90th data may be replaced by the 89th when the memory capacity is full.

C. Read the recorded data by pressing the " m "button as the sequence: "1", "2" ....."90"(max). Then return to the 1st.

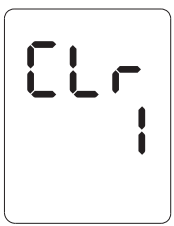
Holding the " m " button to search the data quickly.

D. Press the " ⏻ " button to shut off the monitor.

2. Delete the recorded data

press the both " m " button and " ⏻ " button until the display shown as the following picture, which means the recorded data is cleared.

Press the " ⏻ " button to turn off the monitor after deleting.



⚠ Note: This operation will delete all the recorded data.

Cuff detection

If the cuff winded properly, it will show the " OK " icon. Otherwise it will show the" " icon, then press the " ⏻ " button to stop and wind properly to measure again.

Wrong operation indication

It will show the " " icon, if body moves when measuring. Please measure again or it will show inaccurate results.

This function is mainly for professional personnel to enter the static mode to test the monitor through standard pressure gauge.

⚠ Warning: Normal users don't need to know this function and also do not operate. The company will not take any responsibility for damage caused by this operation.

System restores

Press the " ⏻ " button after battery installation, then the screen will show the"⩔" icon, which means the system is in restore testing. Several seconds later, the"⩔"icon disappears and the air pump starts inflating at the same time, which indicates the test ended. Then press the " ⏻ " button to stop inflating and take out the batteries to enter the next step.

⚠ Note: It must restore the system before entering the static mode, otherwise it may cause inaccurate results.

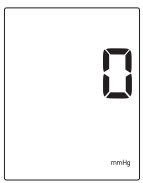
Static mode

Entering the static mode

Press the " m " button and hold, meanwhile install the batteries. Hold on for about 3 seconds then release the" m " button. Then screen will show the pressure value " 0 " . Now the system has restored and entered the static mode. Now can take the static test.

Tips!

- After entering the static mode, if the screen still doesn't show " 0 ", please operate again as the System restore. Please contact with the local distributor if it still does not work.
- The monitor will automatically power off if there is no operation in 4 minutes.



The static mode

Common questions of blood pressure measurement

1. 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 millimetres 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.

2. 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 lifestyle, avoiding stress, and with medication under a doctor's supervision.

To prevent Hypertension or keep it under control: Do not smoke, exercise regularly, reduce salt and fat intake, have regular physical checkups, maintain proper weight.

3. Why measure Blood Pressure at home?

Blood pressure measured at a clinic or doctor's office may cause apprehension and can produce an elevated reading, 25~30 mmHg higher than that measured at home. Home measurement reduces the effects of outside influences on blood pressure readings, supplements the doctor's readings and provides a more accurate, complete blood pressure history.

4. WHO Blood Pressure Classification?

Standards to assess high blood pressure, without regard to age, have been established by the world Health Organization (WHO), as shown below:

Range	Systolic pressure kPa/mmHg	Diastolic pressure kPa/mmHg	Counter measures
Ortho-arteriotony	12.0~18.5kPa 90~139mmHg	8.0~11.9kPa 60~89mmHg	Self check
Mild hypertension	18.7~21.2kPa 140~159mmHf	12.0~13.2kPa 90~99mmHg	Consult dr.
Medium hypertension	21.3~23.9kPa 160~179mmHg	13.3~14.5kPa 100~109mmHg	Consult dr.
Severe hypertension	≥24.0kPa ≥180mmHg	≥14.7kPa ≥110mmHg	Danger! Go to hospital as soon as possible

⚠ Note: There is no definition about hypopiesia, and generally SYS (systolic pressure) less than 90mmHg or DIA (diastolic pressure) less than 60mmHg is called hypotension.

5. Blood pressure variations?

An individual's blood pressure varies greatly on a daily and seasonal basis. It may vary by 30 to 50 mmHg due to various conditions during the day. In hypertensive individuals variations are even more pronounced. Normally, the blood pressure rises while at work or play and falls to its lowest levels during sleep. So do not be overly concerned by the results of one measurement.

Take measurements at the same time every day using the procedure described in this manual to get to know your normal blood pressure. Regular readings give a more comprehensive blood pressure history. Be sure to note date and time when recording your blood pressure. Consult doctor to interpret the blood pressure data.

6. When is the best time to measure blood pressure?

- After urination, before breakfast in the morning.
- Before sleeping at night.
- Before taking medicine.
- Please keep a stable body state and mind every time measuring. We suggest taking measurements at a same time every day.

Common fault	Solutions
It doesn't work after pressing the " ⏻ "button with batteries installation	Check the batteries are installed correctly
	Replace new batteries
Multiple occurrences of measuring failure, or measured value is low (or high)	Check the connection and winding of cuff
	Check if the cuff winded too tight or too loose. Take off your clothes if rolled too tight
	Please ensure a quiet, relaxed body state. Deep breathing to relax yourself before measurement
The monitor is in good condition, but the each measuring result are different	Please read the "blood pressure variations"carefully
The value is different from that measured at a clinic or doctor's office	Write down the value every day, and consult a doctor
Pump works, but the pressure doesn't rise	Check whether the cuff has connected well

Common fault and trouble shooting

The table below shows the possible fault displaying icon, possible reason, and solutions.

Wrong indication	Fault cause	Solution
Err4	Unable to measure pressure	Fasten cuff correctly before measurement
Err5	Pressurizing error	Check if there is air leakage from the cuff
Err6	Pressurizing error caused by arm or body motion	Keep arm and body still and measure again
Err7	Cuff is too lose or fall off	Fasten cuff tightly
Err8	Pressure exceeds the maximum value 300mmHg)	Measure again please
Showing low voltage icon " ▭ "	Battery is low	Replace new batteries
Showing the " ▭ "icon	Battery is running out	Replace new batteries

⚠ Warning: If the situations cannot be solved or unexpected problem happens, please consult the local distributor.

Features and technical Parameters

- Model: YE660D
- Display: LCD digital display
- Measuring method: Oscillation mensuration
- Measuring range
  - Pressure: 0-300mmHg
  - Diastolic: 20-210mmHg
  - Systolic: 40-260mmHg
- Cuff Pressure: 0-450mmHg
- Pulse rate: 40-200 beats/min
- Precision: Pressure: ± 3mmHg(± 0.4kPa)
  Pulse: ± 5% of reading value
- Electric classification: ▭ =Class II(optional AC adapter)
  ▭ =Type BF application part
- Power supply: 4X1.5v ⎓ AA batteries or 6V/ 600mA AC adapter
- Battery life: 300 times
- Cuff size: 22~45cm
- IP Classification: IP21
- Service life: 5 years or 50 thousand times
- Weight: Approx 260g
- Dimension: Approx 130x96x75(mm)
- Operating temperature /Humidity: +5℃ to +40℃/15% to 90% RH (non-condensing)
- Storage temperature/Humidity: -20℃ to +55℃/15% to 90% RH (non-condensing)

Features and technical arameters

- Operating/Storage Atmospheric pressure 70kPa to 106kPa

The contact materials detail of product

Part		Material
Rear Cover		ABS
Top Cover		PC
Cuff	Magic paster	Nylon
	edge cloth	Polyester cotton
Air tube		PVC
Air plug connect		ABS

Statement!

The SPHYGMOMANOMETER was clinically investigated according to the requirement of ISO 81060-2:2013.

The SPHYGMOMANOMETER complies with IEC 80601-2-30.

Electromagnetic compatibility information

⚠ Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the SPHYGMOMANOMETER,including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

⚠ This equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

⚠ When the instrument is in use,never put it near other instruments or stack it on other instrument.if you have to put it near other instruments or stack it on other instruments,please inspect and verify if the instrument could run normally.

There is the potentia risk of radio frequency interference between the device and other devices. If there is, please find out the problems and take the following measures:

(1) Turn off the device, and turn on again.

(2) Change the direction of the device.

(3)Keep the product away from the interferential devices.

Table 1

For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture' s declaration- electromagnetic emission	
The YE660D is intended for use in the electromagnetic environment specified below. The customer or the user of the YE660D should assure that it is used in such and environment.	
Emission test	Compliance
RF emissions CISPR 11	Group1
RF emissions CISPR 11	Class B
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 manufacture' s declaration-electromagnetic emission		
The YE660D is intended for use in the electromagnetic environment specified below. The customer or the user of the YE660D should assure that it is used in such and environment.		
Immunity test	IEC 60601 test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air
Electrical fasttransient /burst IEC 61000-4-4	± 2 kV 100kHz repetition frequency	± 2 kV 100kHz repetition frequency
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)
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0.5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 s	<5 % UT (>95 % dip in UT) for 0.5 cycle 40 % UT (60 % dip in UT) for 5 cycles 70 % UT (30 % dip in UT) for 25 cycles <5 % UT (>95 % dip in UT) for 5 s
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30A/m 50Hz or 60Hz	30A/m 50Hz or 60Hz
NOTE: UT 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 manufacture' s declaration-electromagnetic immunity		
The YE660D is intended for use in the electromagnetic environment specified below. The customer or the user of YE660D should assure that it is used in such an environment.		
Immunity test	IEC 60601 test level	Compliance level
Conducted RF IEC 61000-4-6	3 Vrms 0,15 MHz-80 MHz 6 V rms in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % Am at 1 kHz	3 Vrms 0,15 MHz-80 MHz 6 V rms in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % Am at 1 kHz
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m 80 MHz to 2.7 GHz
NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.		
[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 YE660D is used exceeds the applicable RF compliance level above, the YE660D should be observed to verify normal operation. If abnormal performance is observed,additional measures may be necessary, such as reorienting or relocating the YE660D. [b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.		

Table 4-Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

Test frequency (MHz)	Band[a] (MHz)	Service[a] (MHz)	Modulation[b]	Maximum power (MHz)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
385	380-390	TETRA 400	Pulse modulation[b] 18 Hz	1,8	0,3	27
450	430-470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0,3	28
710 745 780	704-787	LTE Band 13, 17	Pulse modulation[b] 217 Hz	0,2	0,3	9
810 870 930	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation[b] 18 Hz	2	0,3	28
1720 1845 1970	1700-1990	GSM 1800; TETRA 1900; GSM 1900; DECT; LTE Band 1,3, 4,25; UMTS	Pulse modulation[b] 217 Hz	2	0,3	28
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n RFID 2450, LTE Band 7	Pulse modulation[b] 217 Hz	2	0,3	28
5240 5500 5785	5100-5800	WLAN 802.11a/n	Pulse modulation[b] 217 Hz	0,2	0,3	9

NOTE If necesary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and theME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC61000-4-3.

a) For some services, only the uplink frequencies are included.
b) The carrier shall be modulated using a 50% duty cycle square wave signal. ,
c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not