

yuwell



YE680A

Electronic Blood Pressure Monitor


User's Manual



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Please read the user's manual closely before using!

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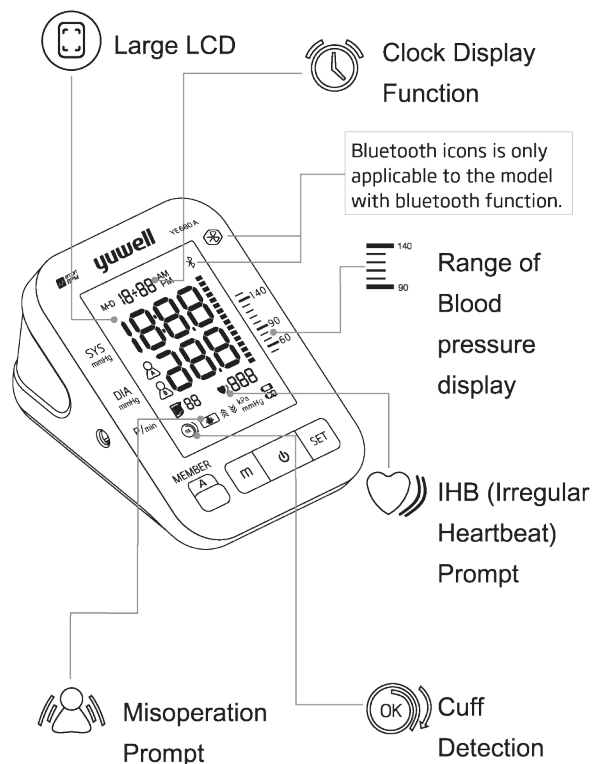
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Product Features



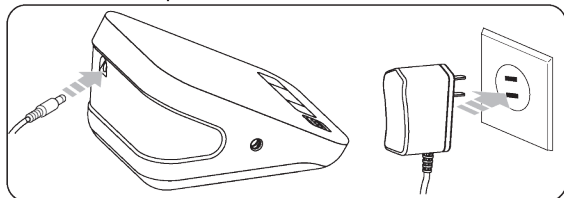
Operation guide

This device uses the oscillometric method of blood pressure measurement.

Please follow the steps as shown below

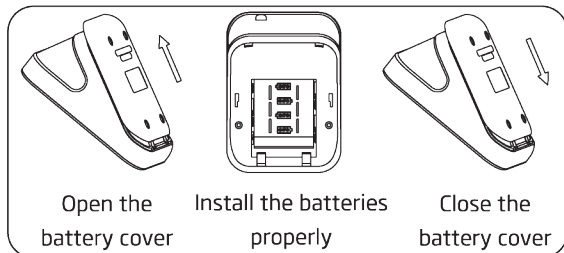
Power-on

Connect the power source



Adapter cable length: 1.2m

⚠️ Except the power adapter supplied by the manufacturer as spare parts, using any unspecified accessories or power adapter may cause increasing emission or decreasing immunity of the instrument.
Or install four AA batteries



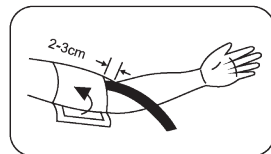
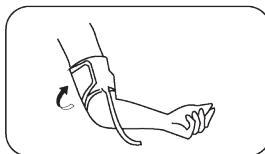
(Please turn to page 14 for details)

Operation guide

Measurement

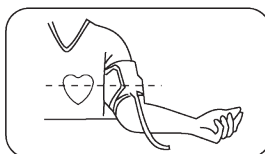
1. Using method of cuff

Wearing the cuff and make the lower edge 2~3cm above the elbow, keep the air tube inside of the arm.




2. Measuring posture

Sit straightly, keep the center of cuff and heart at the same level.



3. Start measuring

Sit still for 5 minutes and then Press the "  " Button to measure (Please turn to page 20for details)

Check the records

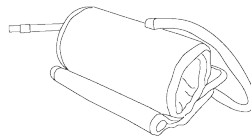
Press the button of "m" to check the measuring records.

This monitor can display the average measurement and store 60×2 records.
(Please turn to page 25 for details)

1. Main part

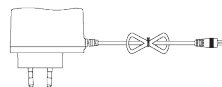


2. Cuff



Caution: Substitution of a component different from that supplied might result in measurement error.

3. Adapter

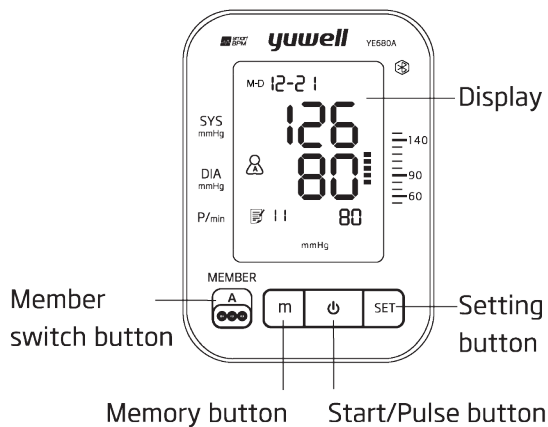


AC adapter
INPUT: 100~240Vac, 50/60Hz, 0.15A
OUTPUT: 6Vdc 600mA

4. Accessories

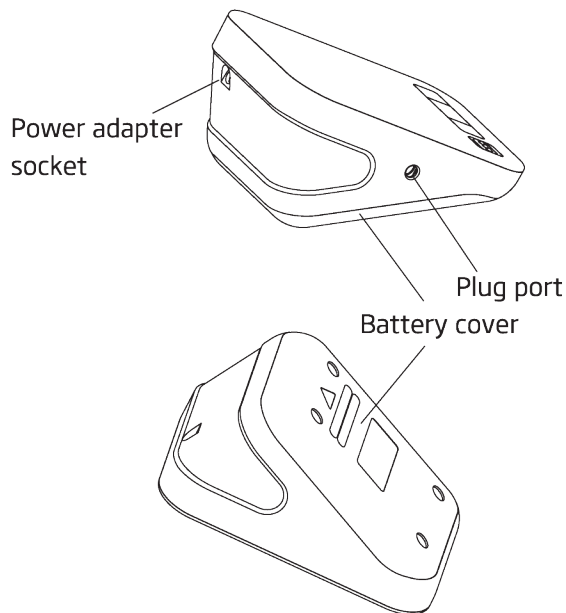
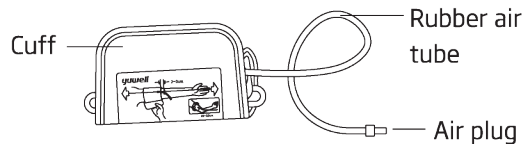
User's manual, Warranty card, 4 AA batteries

1. Main part

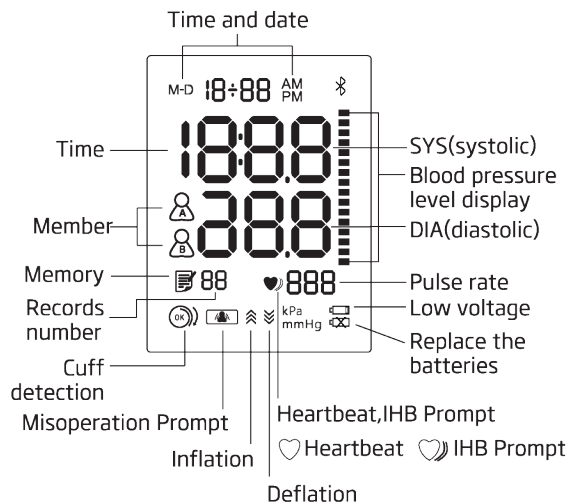


2. Cuff

The suitable upper-arm circumference:
22~45cm



3. Display



! signs and symbols

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

	Attention
	Note on important information
	Type BF application part
	Consult the manual
	Manufacture
	Date of manufacture
	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
	This device fulfils the provisions of EC directive 93/42/EEC (Medical Device Directive).
IP 20	IP Classification
	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 or it may cause the 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 swallow 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.

- Do not use the cuff on the arm where the side of a mastectomy.
- Note that It will lose function 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 use the alkaline battery, do not use the rechargeable battery.
- According to the local laws and regulations to deal with battery.

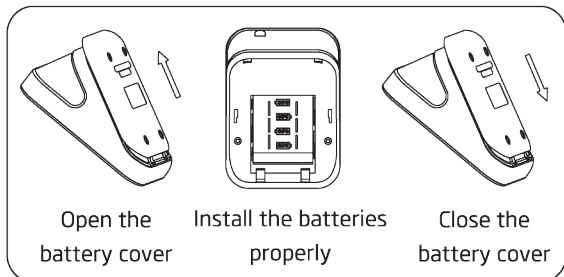
❗ **Note:** Do not diagnose with the measurement, Please follow doctor's instruction.
Statement: If the monitor has not been stored in the required temperature and humidity range, it may not conformance to specification.



- ❗ 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 (at least once a year) according to local laws and regulations.

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







- ▶ 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 AC adapter for a long time.

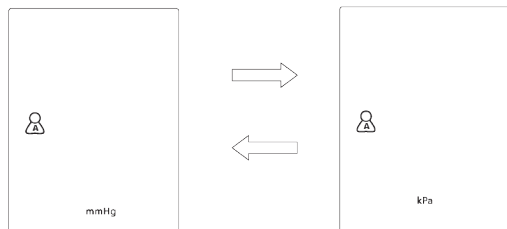
Time and date setting


The monitor will store the measuring results automatically by the management system. It is necessary to reset time and date after installing new batteries or connecting to DC power. Please operate as following steps. (For example: setting the date as 2015-1-15 and time as 08:28)

1. Year setting: Press the "  " button for more than 3 seconds till the number starts flashing.
2. The year increase once press the "  " button, and decrease once press the "  " button.
3. Press the "  " button to switch to the month setting.
4. Using the same way for other settings.

Unit setting

After finishing the time and date setting, pressing the "  " button to enter the mmHg/ kPa unit setting. Press the "  " or "  " button to switch between these two units. Finish by pressing the "  "button.



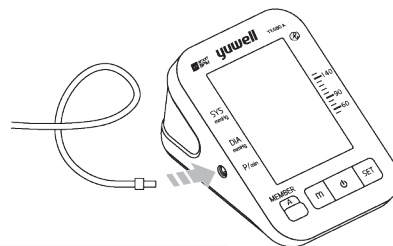
After unit setting, press the "  "button to shut down.

Tips!

Either of arms can be measured.

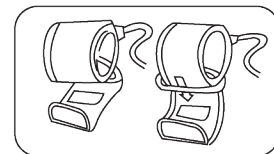
Cuff connecting

Insert the air connector of the cuff into the socket which on the left side of the monitor.



Using method of cuff

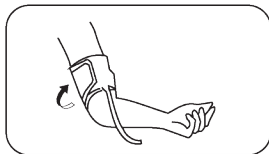
Place the cuff on table with the stick down. Make the cuff pass through the metal ring, the stick should be showing towards outside.



Using method of cuff

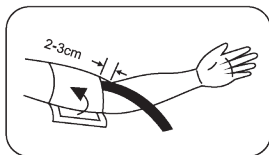
- Wind the cuff around the upper arm. (as shown

In the picture) Keep the lower edge of the cuff at the position above 2-3cm to the elbow joint and keep the air inlet which insert to the cuff at the inner side of arm.

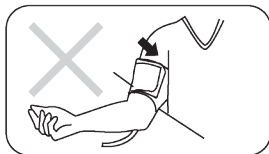
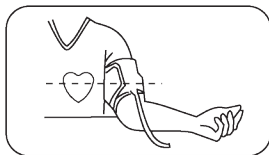


- Stick the cuff tightly.

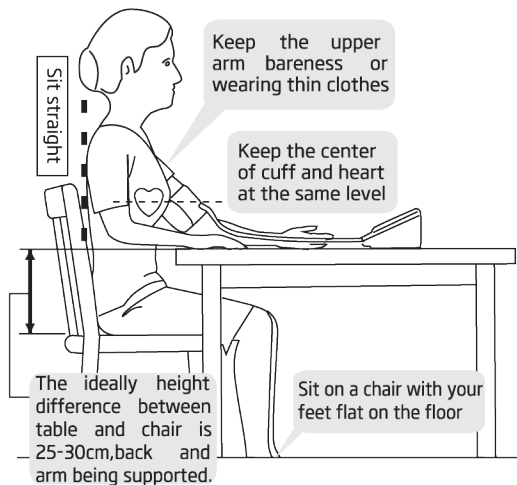
⚠ Note: The cuff should be wearing comfortably, avoiding too tight or loose.



- 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.



Measuring posture



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)



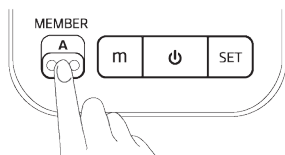
Start measuring

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. Member selecting

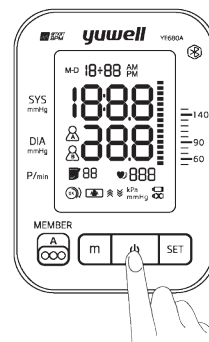
- Switch the "A" button to choose Member A or Member B.



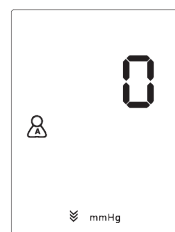
2. Measurement

All icons on screen appear for 1 sec after pressing the "power" 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.

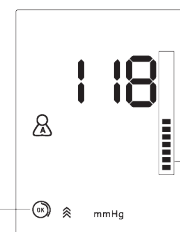
Start measuring



Full screen display state



The zeroing state



The inflation state

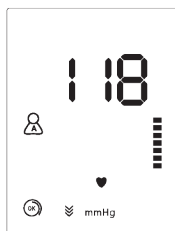
Cuff detection icon

Increase with the pressure

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

Start measuring

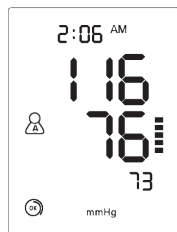
Please maintain the position during the measurement and don't speak or move body or hand.



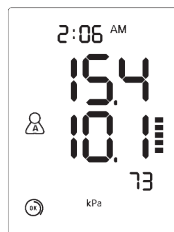
The measuring state

3. Measurement finished

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



mmHg display




kPa display



Start measuring

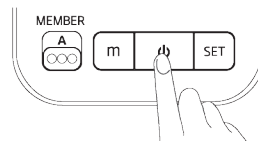
4. Take off the cuff


5. Shut down

Press the "  " button to shut down. Also it will power off automatically in 30 seconds without any operation.

Emergency stop during measurement

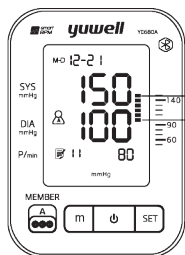
If the measurement need stopping for uncomfortableness or other reasons, please press the "  " button, the measurement will stop immediately and air releases fast. Take off the cuff manually if the "  " button is not working.



 **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.



Higher than 139mmHg
Higher than 89mmHg

Tips!


- ▶ The time interval between two measurements should be at least 5 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 time, date, blood pressure and pulse), and the upper limit of records is 60/ user. Press the "m" button to check the records.

Memory function

1. Press the "  "button for the records.

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

B. Repress the "  "button to display the 1st group of memory, the serial number is displayed as "1" to "60". "1" is the latest group and the "60" is the earliest one.



The average value





The 1st group of memory


Tips!

The 60th data may be replaced by the 59th when the memory capacity is full.




Memory function


C. Read the recorded data by pressing the "  "button as the sequence: "1", "2" "60" (max). Then return to the 1st.


Holding the "  " button to search the data quickly.

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

2. Delete the recorded data

Turn the "  " to member A, then press the both "  " 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.

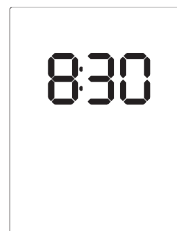
Cuff detection

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.

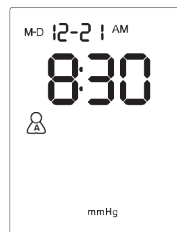
Wrong operation indication

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

- Press the "SET" button and it will show the current time, as shown blew:



- Press the "SET" button again and it will show the current date, time and pressure unit, as shown blew:







- Press the " " button to shut down the monitor.

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.

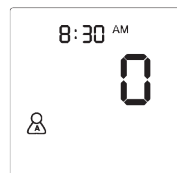
⚠️ **Note:** It must restore the system before

Entering the static mode

Press the "  " button and hold, meanwhile install the batteries. Hold on for about 3 seconds then release the "  " button. Then screen will show the pressure value "  ", the date and time. 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 "  ", 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.



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. 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 140~159mmHg	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 hypotension.


Common fault and trouble shooting

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 of cuff
	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
Err 4	Unable to measure pressure	Fasten cuff correctly before measurement
Err 5	Pressurizing error	Check if there is air leakage from the cuff
Err 6	Pressurizing error caused by arm or body motion	Keep arm and body still and measure again
Err 7	Cuff is too loose or fall off	Fasten cuff tightly
Err 8	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

Technical parameters

- ▶ Model YE680A
- ▶ Display LCD digital display
- ▶ Measuring method Oscillation mensuration
- ▶ Measuring range 0-300mmHg
- ▶ Cuff Pressure 0-450mmHg
- ▶ Pulse rate 40-200 time/min
- ▶ Precision Pressure: $\pm 3\text{mmHg}$ ($\pm 0.4\text{kPa}$)
Pulse: $\pm 5\%$ 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 IP20
- ▶ Service life 5 years or 50 thousand times
- ▶ Weight Approx.343.3g
- ▶ Dimension Approx.133x100x83 (mm)
- ▶ Operating temperature/Humidity +5°C to +40°C/15% to 90%
- ▶ Storage temperature/Humidity -20°C to +55°C/15% to 90%
- ▶ Humidity RH (non-condensing)

Technical parameters

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
Iron loop (ForYE-C11 and YE-C12)		Iron nickel plating

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.

Electromagnetic compatibility information

There is the potential 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 YE680A is intended for use in the electromagnetic environment specified below. The customer or the user of the YE680A should assure that it is used in such an environment.	
Emission test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/ flicker	Compliance

Electromagnetic compatibility information

Table 2

For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration-electromagnetic emission		
The YE680A is intended for use in the electromagnetic environment specified below. The customer or the user of the YE680A should assure that it is used in such an 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 fast transient /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)	30A/m	30A/m

Electromagnetic compatibility information

Table 3

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

Guidance and manufacturer's declaration-electromagnetic immunity		
The YE680A is intended for use in the electromagnetic environment specified below. The customer or the user of YE680A 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 YE680A is used exceeds the applicable RF compliance level above, the YE680A should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the

Electromagnetic compatibility information

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

[illegible]