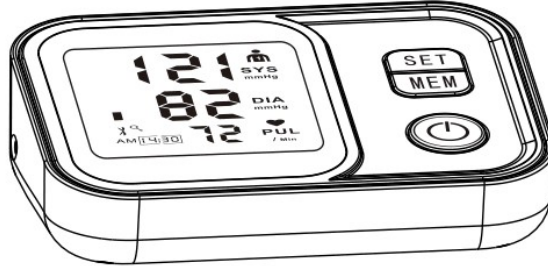


User Manual

Blood Pressure Monitor

Model: AES-U181



- Thank you very much for selecting our AES-U181 model Blood Pressure Monitor.
- To use the monitor correctly and safely, please read the manual thoroughly before operating it.
- Please store this manual for future reference.

Thank you for selecting arm type blood pressure Monitor (AES-U181).















The monitor features blood pressure measurement, pulse rate measurement and auto-save the result. The design provides you with many years of reliable service.

Reading taken by the AES-U181 is equivalent to those obtained by a trained observer using the cuff and stethoscope auscultation method.

This manual contains important safety and care information, and provides step by step instruction for using the product. Read the manual thoroughly before using the product.

Safety information

The below signs might be in the user manual, labeling or other component. They are the requirement of standard and using.

	PROHIBITION Means Forbidden with detailed items expressed in words or figures within or beside the mark. Left one means General Forbidden.
	MUST OBSERVE Means Obligatory with detailed items expressed in words or figures within or beside the mark. Left one means General Compulsory.
	Refer to instructions manual/booklet.
	IMPLICATION OF SYMBOL Type-B applied part.
	Caution: Consult accompanying documents.
	Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
	Stand-by button
	Transport package shall be kept away from rain.
	Transport package shall not be exposed to sunlight.
	Indicates correct upright position of the transport package.
	Contents of the transport package are fragile therefore it shall be handled with care.
	Indicates temperature limits within which the transport package shall be stored and handled.
	Non-ionizing electromagnetic radiation
On/Off	Of/Off button used to take a measurement
MEM	Memory icon, to recall memory
SET	SET the unit
	Manufacturer

CAUTION


This device is intended for adult use only.

This device is intended for no-invasive measuring and monitoring of arterial blood pressure. It is not intended for use on extremities other than the arm wrist or for functions other than obtaining a blood pressure measurement.

Do not confuse self-monitoring with self-diagnosis. This unit allows you to monitor your blood pressure. Do not begin or end medical treatment based solely on this measurement. Consult your physician for treatment advice.

If you are taking medication, consult your physician to determine the most appropriate time to measure your blood pressure. Never change a prescribed medication without consulting your physician.

This unit is not suitable for continuous monitoring during medical emergencies or operations.

If the cuff pressure exceeds 40 kPa (300 mmHg), the unit will automatically deflate. Should the cuff not deflate when pressures exceeds 40 kPa (300 mmHg), detach the cuff from the arm wrist and press the  button to stop inflation.

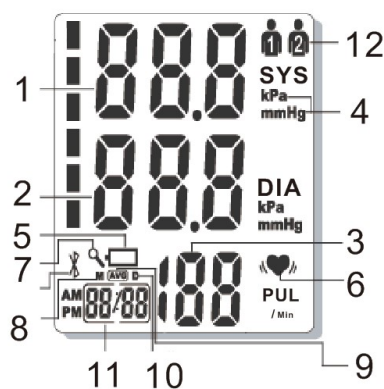
To avoid measurement errors, carefully read this manual before using the product.

The equipment is not AP/APG equipment and not suitable for use in the presence of a flammable anesthetic mixture with air of with oxygen or nitrous oxide.

The operator shall not touch output of AC adapter and the patient simultaneously.

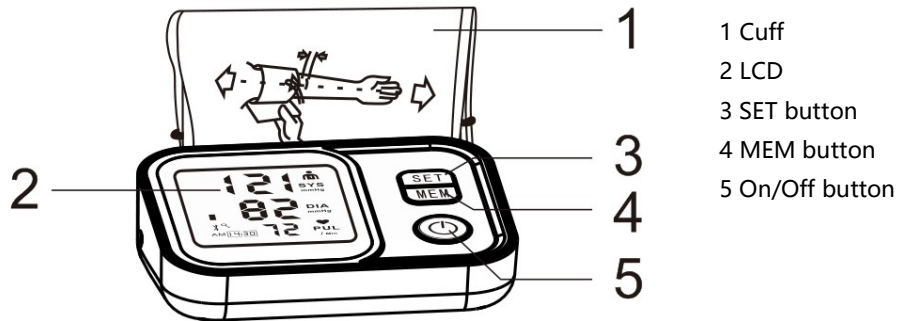
To avoid measurement errors, please avoid the condition of strong electromagnetic field radiated

LCD display signal



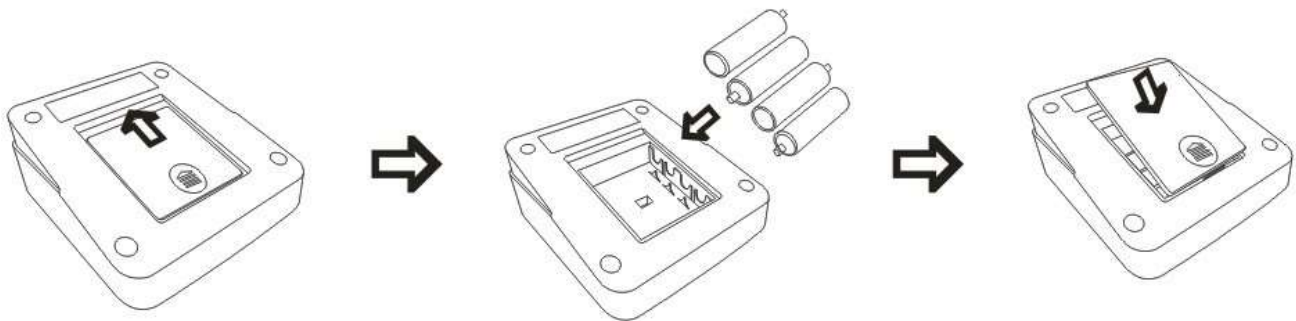
Item	Description
1	Systolic blood pressure, SYS
2	Diastolic blood pressure, DIA
3	Pulse
4	Measurement unit of blood pressure
5	Battery
6	Arrhythmia
7	Recalling memory
8	Memory
9	Average of blood pressure
10	Date
11	Time
12	User

Monitor components



Replace the batteries in following conditions

1. Slide off the battery cover.
2. Install the batteries by matching the correct polarity, as shown.
3. Replace the cover.



Replace the batteries whenever the below happen:

The shows.

The display dims.

The display does not light up.

CAUTION

Remove batteries if the device is not likely to be used for some time.

The old battery is harmful to the environment, so please do not dispose with other daily trash.

Remove the old battery from the device and follow your local recycling guidelines.

Setting User, Date, time and measurement unit

It is important to set the clock before using your blood pressure monitor, so that a time stamp can be assigned to each record that is stored in the memory.

1. Switch User

When the unit is turn off, press SET button until the icon is flashing.

Press MEM to choose or .

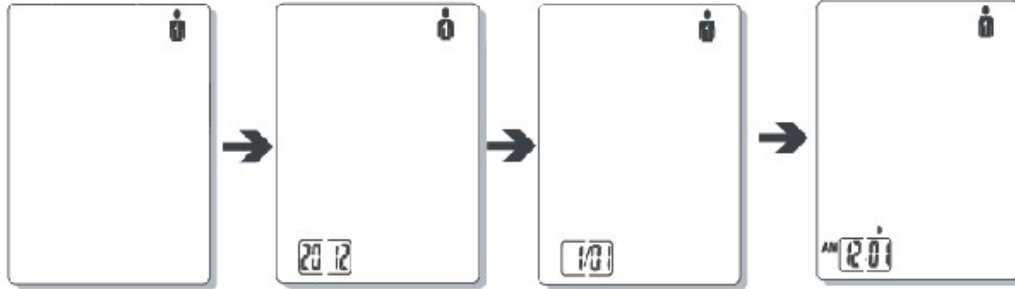
Turn off the unit.

2. Set Date&Time

After chosen User, press SET button to enter the Date and Time mode.

Press On/Off button to adjust the digital No.,

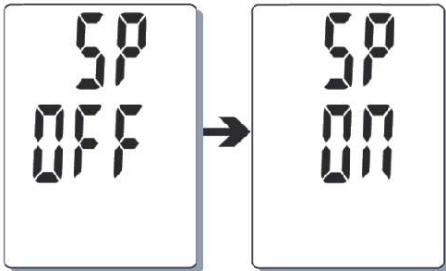
Press MEM button to confirm and enter the next parameter.



3. Set the Voice On/Off

After set the Date&Time, press SET button to enter the Voice mode.

Press MEM button to choose the Voice On or Off.



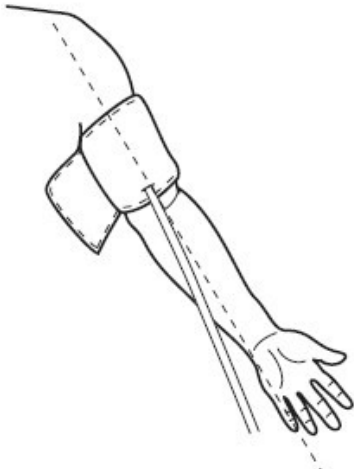
4.

5. After the Voice set, press SET to enter the Unit mode.

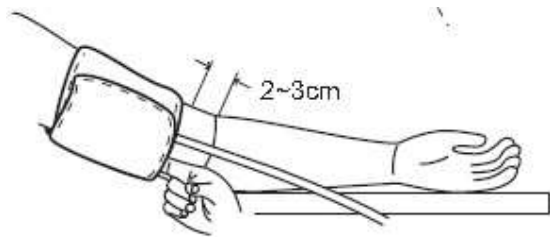
Press MEM button to choose PA unit or mmHg unit.

Tie the cuff

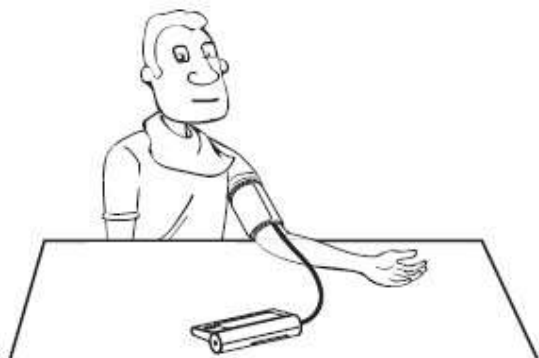
1. Tie the cuff on your upper arm, position the tube off-center toward the inner side of arm in line with the little finger.



- The cuff should not too tight. You should be able to insert one finger between the cuff and your arm.



- Sit comfortably with your left arm resting on a flat surface.



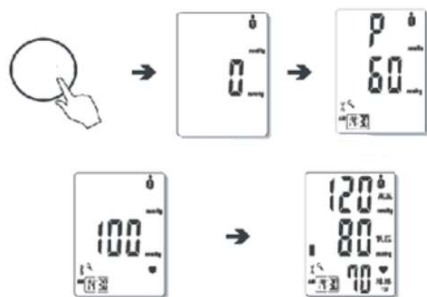
Take a rest for 5 minutes before measuring.

Wait at least 3 minutes between measurements. This allows your blood circulation to recover. For a meaningful comparison, try to measure under similar conditions. For example, take daily measurements at approximately the same time, on the same arm, or as directed by a physician

Start the Measurement

- Press the On/Off button to run the BP monitor, it will begin to inflate and measure Blood Pressure automatically.
Do not move when in the measuring process.

The measurement will displayed and saved automatically.

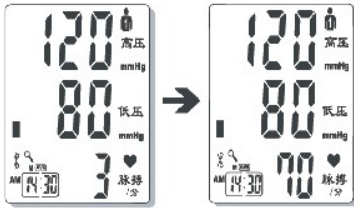


Press On/Off button to Turn off after measured.

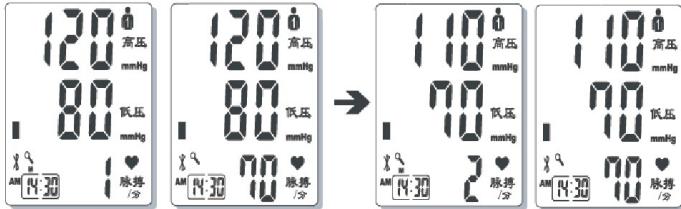
Recall records

Choose the User 1 or User 2 before recall the memory.

1. Turn off the unit, then press MEM button the recall the memory.
2. It will show the average value of latest 3 measurements. There is a No. 3 on the Pulse position, after 1 second it will show the average pulse of latest 3 measurements.



3. Press the MEM again, it will show the latest 1 measurement, and press again the second, then the third...



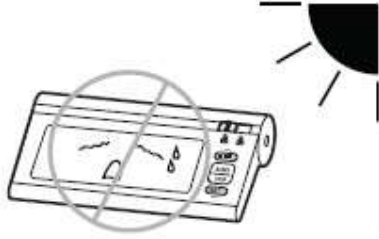
Delete Memory

1. Press MEM button to choose the memory that needs to be deleted.
2. Press SET button when the display shows dEL
3. Press MEM to confirm delete this memory.
4. When the unit is off, press MEM button for 3 seconds, then press SET button until the device shows ALL EE, that's means the memories are all deleted.



Maintenance

In order to get the best performance, please follow the below instructions:



Put in a dry place and avoid direct sunshine



Avoid touching water, in such case clean it with a dry cloth.



Avoid the intense shaking or dropping



Avoid the dusty and unstable-temperature environment



Use mild wet clothing to remove the dirt



Avoid washing the cuff

Why the blood pressure I get from the hospital is different from home?

The blood pressure is different even during 24 hour because of the weather, emotion, exercise etc.

The attention need to pay

When you measure you blood pressure at home:

If the cuff is tied properly.

If the cuff is too tight or too loose.

If the cuff is tied on the upper arm.

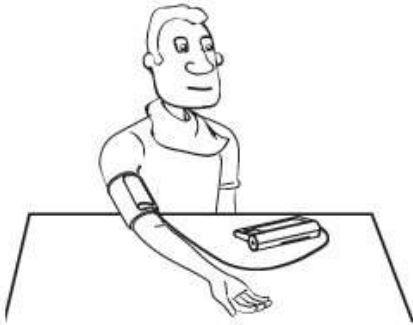
If you feel anxious pressured.

You had better take deep breath 2-3 times before beginning.

Advice: adjust yourself for 4-5 minutes until you calm down.

Can I measure the right arm?

It is ok for both arms, but there will be some different results for different people, so we suggest you measure the same arm every time.



Trouble Shooting

PROBLEM	SYMPTOM	CHECK THIS	REMEDY
No power	Display is dim or will not light up.	Batteries are exhausted.	Replace with new batteries
		Batteries are inserted incorrectly.	Insert the batteries correctly
Low batteries	Lo Show on the display	Batteries are low.	Replace with new batteries
Error message	E 1 shows	The heart beat signal is too weak or the pressure of cuff descend	Refasten the cuff and then measure again.
	E 2 shows	The monitor detected motion while measuring.	Refasten the cuff and then measure again.
	E 3 shows	Measurement is not right.	Relax for a moment and then measure again.
	E P shows	Inflation fail	Relax for a moment and then measure again.
	E E shows	EEPROM incorrect	Relax for a moment and then measure again.
	HI shows	The Inflation time is too long	Refasten the cuff and then measure again.

Specification

Power supply	6V DC 4*AAA alkaline batteries
Display	Digital LCD V.A.86*55mm
Measurement Method	Voltage reduced capacitance
Measurement range	Pressure: 4~37kpa(30~280mmHg) Pulse value:(40~199)times/minute
Accuracy	Pressure: 10°C~40°C within±0.4kpa(3mmHg) pulse value:±5%
Normal working condition	Temperature:10°C~40°C Relative humidity: 15%~80%
Storage & transportation condition	Temperature:-20°C~+55°C Relative humidity:10%~90%
Weight	Approx.280g(including the batteries)
Product dimensions	130*99*45mm
Attachment	4*AAA alkaline batteries, user manual
Mode of operation	Continuous operation
Degree of protection	Type B applied part

The EMC declaration according to the requirement of EN 60601-1-2

Cautions:

User must regard EMC, please install and put in service AES-U181 according to the EMC information provided in the accompanying documents.

Portable and mobile RF communications equipment can affect medical electrical equipment.

The use of accessories, transducers and cables other than those specified, with the exception of transducers and cables sold by MY WINGS as replacement parts for internal components, may result in increased Emissions or decreased Immunity of AES-U181.

The performance of the EQUIPMENT and SYSTEM that was determined to be essential performance. AES-U181 should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, AES-U181 should be observed to verify normal operation in the configuration in which it will be used.

Table 201-Guidance and manufacturer's declaration-electromagnetic emissions-for AES-U181,as following table.

Table 202-Guidance and manufacturer's declaration-electromagnetic immunity -for AES-U181, as following table.

Table 204 -Guidance and manufacturer’s declaration-electromagnetic immunity -for AES-U181, as following table.

Table 206 Recommended separation distances between portable and mobile RF communications equipment and AES-U181, as following table.

Table 201

Guidance and manufacturer’s declaration – electromagnetic emissions		
The AES-U181 is intended for use in the electromagnetic environment specified below. The customer or the user of the AES-U181 should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The AES-U181 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 AES-U181 is suitable for use in all establishments, including domestic establishments.
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Not applicable	

Table 202

Guidance and manufacturer’s declaration – electromagnetic immunity			
The AES-U181 is intended for use in the electromagnetic environment specified below. The customer or the user of the AES-U181 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± (2, 4, 6) kV contact ± (2, 4, 8) kV air	± (2, 4, 6) kV contact ± (2, 4, 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	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	Not applicable	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 % 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 sec	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the AES-U181 requires continued operation during power mains interruptions, it is recommended that the AES-U181 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 UT is the a.c. mains voltage prior to application of the test level.			

Table 204


Guidance and manufacturer's declaration – electromagnetic immunity			
The AES-U181 is intended for use in the electromagnetic environment specified below.			
The customer or the user of the AES-U181 should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment –guidance
<p>Conducted RF IEC 61000-4-6</p> <p>Radiated RF IEC 61000-4-3</p>	<p>3 Vrms</p> <p>150 kHz to 80 MHz</p> <p>3 V/m</p> <p>80 MHz to 2,5 GHz</p>	<p>Not applicable</p> <p>3 V/m</p>	<p>Portable and mobile RF communications equipment should be used no closer to any part of the AES-U181, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d=1,2 \sqrt{P}$ $d=1,2 \sqrt{P} \text{ 80 MHz to 800 MHz}$ $d=2,3 \sqrt{P} \text{ 800 MHz to 2,5 GHz}$ <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> 
<p>NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			
<p>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 AES-U181 is used exceeds the applicable RF compliance level above, the AES-U181 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the AES-U181.</p>			
Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.			

Table 206

Recommended separation distances between portable and mobile RF communications equipment and the AES-U181			
The AES-U181 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the AES-U181 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the AES-U181 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		
Electrical fast transient/burst IEC 61000-4-4	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
<p>For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.</p> <p>NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.</p> <p>NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			