User Manual

Arm Blood Pressure Monitor

Model: AES-U181

1 Year Warranty



1.Thank you very much for selecting our model Arm Blood Pressure Monitor for the model of AES-U181
2.To use the monitor correctly and safely, please read the manual thoroughly before operating it.
3.Please store this manual for future reference.
Version:1.0 Date Modified:2020-05-19

Intended use

Used to measure adult systolic blood pressure, diastolic blood pressure and pulse rate.
Thank you for selecting arm type Arm 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.

Packcage contents

1x Arm Blood Pressure Monitor
1x Cuff
1x Operation Manual
4x AAA Batteries

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.
	Follow instructions for use.
	IMPLICATION OF SYMBOL Type-BF 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.
	Transport package shall be kept away from rain.
	Do not roll

	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.
	Set User 、Time、 unit
START /STOP	Start measurement,Stop measurement, Turn off
	Memory icon, when the MEM icon flashing, operator could save or recall memories.
	Open
	Close
IP21	IP21:Protected against solid foreign objects of 12,5 mm ∅ and greater,Protection against vertically falling water drops.
	Non-ionizing electromagnetic radiation
LOT	Production lot number
	Production date
	Manufacturer
	The device should not be used after the end of the shown or the day
CE 0123	CE Mark: conforms to essential requirements of the Medical Device Directive 93/42/EEC.
EC REP	Authorized Representative in the European Community

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 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.

Specification

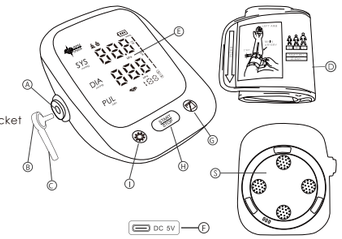
Power supply	DC 6V, 4*AAA batteries
Type-c power supply	DC 5V, 1A
Measurement Method	Oscillographic mode
Measurement range	Pressure: 0 ~ 39 kPa (0 ~ 290 mmHg) Pulse value:(40~199)Times/min
Accuracy	Pressure: ±0.4kPa (±3mmHg), Pulse value:±5%
Memory	2 X 90
Operate Condition	Temperature:5°C~40°C,RH:15%~80%, Pressure: (70~106) kPa
Storage & transportation Condition	Temperature:-20°C~+55°C,RH:15%~93%, Pressure: (70~106)kPa
Weight	About 276g
Product Dimension	109*137*82mm
Arm circumference	22-42 cm
Product life	5 years

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 and press the Start/Stop 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.

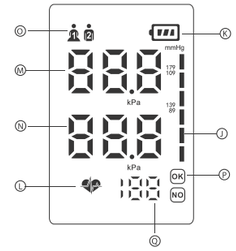
To avoid measurement errors, please avoid the condition of strong electromagnetic field radiated

Know Your Unit

Ⓐ Air Jack
Ⓑ Air Plug
Ⓒ Air Tube
Ⓓ Arm Cuff
Ⓔ Display Screen
Ⓕ TYPE-C power socket
Ⓖ Memory Button
Ⓗ Switch Button
Ⓘ Setting Button
Ⓢ Battery Cover



Ⓙ Blood Pressure Level Indication
Ⓚ Low Battery Symbol
Ⓛ Heartbeat Icon
Ⓜ High Pressure Value(Systolic Pressure)
Ⓝ Low Pressure Value(Diastolic Pressure)
Ⓞ Number of User Groups
Ⓟ Cuff Detection
Ⓠ Pulse Rate Display



Set User, Date, Time,voice and Measurement unit

It is important to set the clock before using your Arm Blood Pressure Monitor, so that a time stamp can be assigned to each record that is stored in the memory.
Turn off the unit.

Step1: Press the " ⚙ " button for 3 seconds, when the figure symbol which at the bottom of the screen is flashing, means enter the user setting mode.
Step2: Press the " ⏍ " button, chose user 🚹 or user 🚺.
Step3: And then press the " ⚙ " button and enter the next parameter setting



Repeat the Step2 and Step3 to set the date.



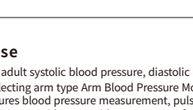
Repeat the Step2 and Step3 to set the time.



Repeat the Step2 and Step3 to set the voice,Set "ON" to open voice and "OFF" to close voice.

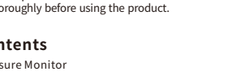


Repeat the Step2 and Step3 to set the Unit,Set to "ON" in kPa; Set it to "OFF" and the unit is mmHg. The unit will be closed automatically after settinge.

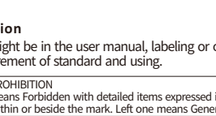


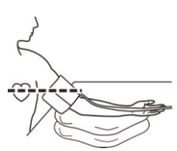
Tie the cuff

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



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





These situations could lead to higher blood pressure values due to strain or the arm cuff being lower than the heart.



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

Resting 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

- Select the user 🚹 or 🚺
- Press the Start/Stop Button to measure BP automatically .
- Press the Start/Stop to turn off, or it will turn off automatically within 1 minute.

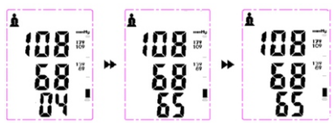


Recall records

1. Please choose the user 🚹 or user 🚺 when the Arm Blood Pressure Monitor turns off, and press the " ⏍ " to show the average of last 3 record.



2. Press the " ⏍ " to turn over the records.



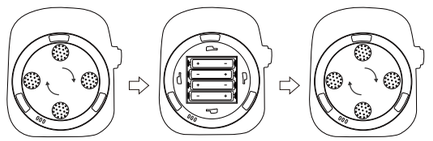
Delete record

In the off state, press the " ⏍ " button for 3s, and then press the " ⚙ " button, the display shows " -d EL", means all the memories have been deleted.



Replace the batteries in following conditions

- Slide off the battery cover.
- Install the batteries by matching the correct polarity. (4*AAA)
- Replace the cover.



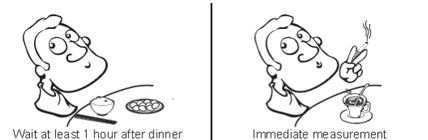
Replace the batteries whenever the below happen:
The ▭ is flashing.
The display dims.
The display does not light up.

CAUTION⚠

Please take out the battery if you do not use the product for a long time.
Please refer to the relevant laws and regulations for the disposal of waste batteries.
Do not mix old and new batteries.
Do not mix alkaline, standard (carbon-zinc), or rechargeable (Ni-Cd, Ni-MH, etc) batteries.

Tips for Operation

It can cause incorrectness if the measurement are taken in the following circumstances.



Wait at least 1 hour after dinner or drinking

Immediate measurement after tea, coffee, smoking



Wait at least 20 minutes after taking a bath



When talking or moving your fingers



In a very cold enviroment



When you want to discharge urine

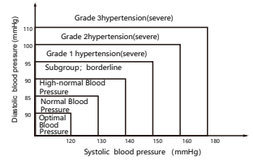
Maintenance

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

Avoid intense shaking or dropping	
Please do not repair it by yourself	
Avoid twist the cuff	
Use mild wed cloth to remove the dirty	
Avoid dusty and unstable temperature environment	
Take off batteries if not use it for a long time	
Please do not turn on the unit when cuff is not tied	

What is the standard blood pressure classification?

Below illustrates the blood pressure classification mode by World Health Organization (WHO) and International Society of Hypertension (ISH) in 1999:



Blood Pressure(mmHg) \ Level	Optimal	Normal	High-normal	Mild	Moderate	Severe
SYS	<120	120～129	130～139	140～159	160～179	⩾180
DIA	<80	80～84	85～89	90～99	100～109	⩾110

CAUTION⚠

Only a physician can tell you your normal blood pressure range and the point at which you are at risk. Consult your physician to obtain these values.
If the measurements taken with these products fall outside the range, Consult your physician immediately.

Why my blood pressure is varies even in one day?

1. Individual blood pressure varies even in one day, it is also affected by the way you tie your cuff and the your measurement position, so please take the measurement at the same condition.
2.The varies of the pressure is greater if the person take medicine.
3.Wait at least 4 – 5 minutesbetween measurements.

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.

If the result is the same if measuring on the right arm:

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



This section includes a list of error messages and frequently asked questions for problems you may encounter with your Arm Blood Pressure Monitor.
If the products not operating as you think it should, check here before arranging for servicing.

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	▭	Batteries are low.	Recharge with new batteries.
Error massage	“Err 1”	The heart beat signal is too weak or the pressure of cuff descend.	Refasten the cuff and then measure again.
	“Err 2”	There are some noise to affect measurement.	Refasten the cuff and then measure again.
	“Err 3”	The measurement is not right.	Refasten the cuff and then measure again.
	“Err P”	Inflate failed.	Refasten the cuff and then measure again.
	“Err H”	Overcharging pressure.	Refasten the cuff and then measure again.

Electromagnetic Compatibility

The ME EQUIPMENT or ME SYSTEM is suitable for home healthcare environments and so on.

Warning：Don’t near active HF surgical equipment and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of EM disturbances is high.

Warning：Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

If any：a list of all cables and maximum lengths of cables (if applicable), transducers and other ACCESSORIES that are replaceable by the RESPONSIBLE ORGANIZATION and that are likely to affect compliance of the ME EQUIPMENT or ME SYSTEM with the requirements of Clause 7 (EMISSIONS) and Clause 8 (IMMUNITY). ACCESSORIES may be specified either generically (e.g. shielded cable, load impedance) or specifically (e.g. by MANUFACTURER and EQUIPMENT OR TYPE REFERENCE).

If any：the performance of the ME EQUIPMENT or ME SYSTEM that was determined to be ESSENTIAL PERFORMANCE and a description of what the OPERATOR can expect if the ESSENTIAL PERFORMANCE is lost or degraded due to EM DISTURBANCES (the defined term “ESSENTIAL PERFORMANCE” need not be used).

1. All necessary instructions for maintaining BASIC SAFETY and ESSENTIAL PERFORMANCE with regard to electromagnetic disturbances for the excepted service life.

2. Guidance and manufacturer’s declaration -electromagnetic emissions and Immunity.

Table 1

Guidance and manufacturer´s declaration – electromagnetic emission	
Emissions test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR11	Class B
Harmonic emissions IEC 61000-3-2	N/A
Voltage fluctuations /flicker emissions IEC 61000-3-3	N/A

Table 2

Guidance and manufacturer’s declaration - electromagnetic Immunity		
Immunity Test	IEC 60601-1-2 Test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air
Electrical fast transient/burst IEC 61000-4-4	Power supply lines：±2 kV input/output lines：±1 kV	N/A
Surge IEC 61000-4-5	line(s) to line(s): ±1 kV. line(s) to earth: ±2 kV. 100 kHz repetition frequency	N/A
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% 0.5 cycle At 0°, 45 °, 90 °, 135 °, 180 °, 225 °, 270 ° and 315 ° 0% 1 cycle And 70% 25/30 cycles Single phase: at 0 0% 300 cycle	N/A
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conduced RF IEC61000-4-6	150KHz to 80MHz: 3Vrms 6Vrms (in ISM and amateur radio bands) 80% Am at 1kHz	N/A
Radiated RF IEC61000-4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz
NOTE U_T is the a.c. mians voltage prior to application of the test level.		

Table 3
Guidance and manufacturer’s declaration - electromagnetic Immunity

	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Modulation (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment)	385	380–390	TETRA 400	Pulse modulation 18 Hz	1,8	0.3	27
	450	380–390	GMRS 460, FRS 460	FM ±5 kHz deviation 1 kHz sine	2	0.3	28
	710	704–787	LTE Band 13, 17	Pulse modulation 217 Hz	0,2	0.3	9
	745						
	780						
	810	800–960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	2	0.3	28
	870						
	930						
	1720	1700–1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz	2	0.3	28
	1845						
	1970						
	2450	2400–2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz	2	0.3	28
	5240	5100–5800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0,2	0.3	9
	5240						
	5785						

Disposal

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities. Contact you local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

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