

Blood Pressure Monitor

Model : ABP-2088-T

User Manual



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Introduction

♥ General Description

Thank you for selecting Alcedo arm type blood pressure monitor (ABP-2088-T). The monitor features blood pressure measurement, pulse rate measurement and the result storage.

Features:

- 124 mm × 76 mm Digital LCD Backlit Display
- Cuff Fit Indicator
- Movement Indicator
- Voice Announcement
- Average of Last 3 Values
- Blood Pressure Trend
- Bluetooth
- Systolic, Diastolic Blood Pressure & Pulse Display
- Date / Time Indication
- Irregular Heartbeat Detection
- 2 × 250 Memory Storage, Guest Mode Available
- Up-to-Date Measuring-During-Inflation Technology

♥ Indications for Use

The Alcedo Blood Pressure Monitor is digital monitors intended for use in measuring blood pressure and pulse rate with

arm circumference ranging from 22 cm to 42 cm. It is intended for indoor, adult use only.

♥ Contraindications










1. The device is not suitable for use on the women who are or may be pregnant.
2. The device is not suitable for use on patients with implanted, electrical devices, such as cardiac pacemakers, defibrillators.

♥ Measurement Principle

This product uses the Oscillometric Measuring method to detect blood pressure. Before every measurement, the unit establishes a “zero pressure” equivalent to the atmospheric pressure. Then it starts inflating the arm cuff, meanwhile, the unit detects pressure oscillations generated by beat-to-beat pulsatile, which is used to determine the systolic and diastolic pressure, and also pulse rate.

♥ Safety Information

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

 Direct current	 Type BF applied part
 Recyclable	SN Serial number
 Date and country of manufacture	 Manufacturer
 For indoor use only	 Class II Equipment
 Refer to instruction manual / booklet to signify that the instruction manual / booklet must be read.	
 The symbol indicates that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling.	

Caution

Indicates that caution is necessary when operating the device or control close to where the symbol is placed, or that the current situation needs operator awareness or operator action in order to avoid undesirable consequences.

Caution

- This device is intended for indoor, home use.
- This device is not intended for public use.
- This device is portable, but it is not intended for use during patient transport.
- This device is not suitable for continuous monitoring during medical emergencies or operations.
- 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 any purpose other than obtaining a blood pressure measurement.
- This device is for adults. Do not use this device on neonates or infants. Do not use it on children unless otherwise instructed by a medical professional.
- Do not use on the women in pregnant, including pre-eclamptic, patients.
- The device is not suitable for use on patients with implanted, electrical devices, such as cardiac pacemakers, defibrillators.
- The effectiveness of this device has not been established for use:
 - on users with common arrhythmias such as atrial or ventricular premature beats or atrial fibrillation,
 - on users with peripheral arterial disease,
 - on users undergoing intravascular therapy, or with arteriovenous (AV) shunt.
 Consult a medical professional before use.
- Do not use this device for diagnosis or treatment of any health problem or disease. Contact your physician if you have or suspect any medical problem. Do not change your medications without the advice of your physician or health care professional.
- If you are taking medication, consult your physician to determine the proper time to measure your blood pressure.
- This device may be used only for the intended use described in this manual, the manufacturer shall have no liability for any incidental, consequential, or special damages caused by misuse or abuse.
- Report any unexpected operation or events to the manufacturer.

Caution

- Do not apply the cuff on an arm that has an intravenous drip or a blood transfusion attached.
- **Warning:** Do not kink, fold, stretch, compress, or otherwise deform the tube during measuring, as the cuff pressure might continuously increase, which could prevent blood flow and result injury.
- **Warning:** Taking blood pressure measurements too frequently could disrupt blood circulation and cause injuries.
- **Warning:** Do not apply cuff to areas on patient where skin is delicate or damaged. Check cuff site frequently for irritation.
- **Warning:** Do not place the cuff on the arm of a person whose arteries or veins are undergoing medical treatment, i.e. intra-vascular access or intra-vascular therapy or an arteriovenous (A-V) shunt, which could disrupt blood circulation and cause injuries.
- Do not place the cuff on the arm on the same side of a mastectomy (especially when lymph nodes have been removed). It is recommended to take measurements on the unaffected side.
- Do not wrap the cuff on the same arm to which another monitoring device is applied. One or both devices could temporarily stop functioning if you try to use them at the same time.
- Please check that the operation of the device do not result in prolonged impairment of patient blood circulation.
- **Warning:** On the rare occasion of a fault causing the cuff to remain fully inflated during measurement, loosen and remove the cuff immediately.
- Prolonged high pressure applied to the arm (cuff pressure >300 mmHg or constant pressure >15 mmHg for more than 3 minutes) might lead to bruising and discolored skin.
- **Warning:** Do not use this device with high-frequency (HF) surgical equipment at the same time.
- **Warning:** This device is not AP/APG equipment. Do not use the device where flammable anesthetic are present, or in environments mixture with air of with oxygen or nitrous oxide.

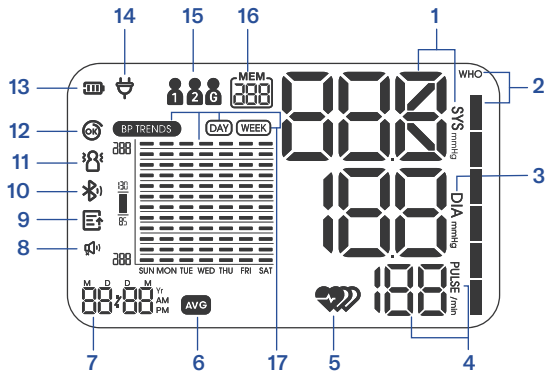
Caution

- The device contains sensitive electronic components. To avoid measurement errors, avoid taking blood pressure measurements near a strong electromagnetic field radiated interference signal or electrical fast transient/burst signal.
- Wireless communication equipment, such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies may cause interference that may affect the accuracy of measurements. A minimum distance of 1 foot (30 cm) should be kept from such devices during a measurement.
- You can use this device to take your own measurement, no third-party operator is required.
- Please use the device under the environment which is provided in the user manual. Otherwise, the performance and lifetime of the device will be impacted and reduced.
- The device may require up to 30 minutes to warm up / cool down from the minimum / maximum storage temperature before it is ready for use.
- **Warning:** Excessive cuff tube lengths could cause strangulation if you don't manage them properly.
- **Warning:** Do not touch output of the batteries/adaptor and the user simultaneously.
- Adapter is specified as a part of ME EQUIPMENT.
- **Warning:** The power cord is considered the disconnect device for isolating this equipment from supply mains. Do not position the equipment so that it is difficult to reach or disconnect.
- The blood pressure monitor, its adapter, and the cuff are suitable for use within the patient environment.
- **Warning:** Do not use this device if you are allergic to polyester, nylon, or plastic.
- **Warning:** Only use accessories approved by manufacturer. Using unapproved accessories might cause damage to the unit and injure users.
- **Warning:** If you experience discomfort during a measurement, such as pain in the arm or other complaints, press the Power button immediately to release the air from the cuff.

Caution

- No calibration is required within two years of reliable service.
- Do not attempt to repair the unit yourself if it malfunctions. Only have repairs carried out by authorized service centers.
- At the request of authorized service personnel, circuit diagrams, component part lists, descriptions, and calibration procedures will be made available by the manufacturer or distributor.
- It is recommended that the performance should be checked after repair, maintenance, and every two years of use, by retesting the requirements in limits of the error of the cuff pressure indication and air leakage (testing at least at 50 mmHg and 200 mmHg).
- **Warning:** Do not use the device while under maintenance, or being serviced.
- Store your device, cuff and adapter in a clean and dry place, protect it against extreme moisture, heat, lint, dust and direct sunlight. Never place any heavy objects on it.
- Make sure the rubber tube of the cuff is not squeezed, stretched, or kinked during storage.
- **Warning:** Keep the device, cuff, and batteries away from children as they may pose a risk of choking or strangulation if used improperly.
- Clean both device and cuff with a soft, dry cloth. If necessary use a dampened cloth and natural detergent. Do not use alcohol, benzene, or other harsh chemicals.
- Do not wash the cuff in a washing machine or dishwasher!
- The service life of the cuff may vary by the frequency of washing, skin condition, and storage state. The typical service life is 10000 times.
- Dispose of accessories, detachable parts, and the device according to the local guidelines.







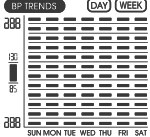
♥ Display and Symbols



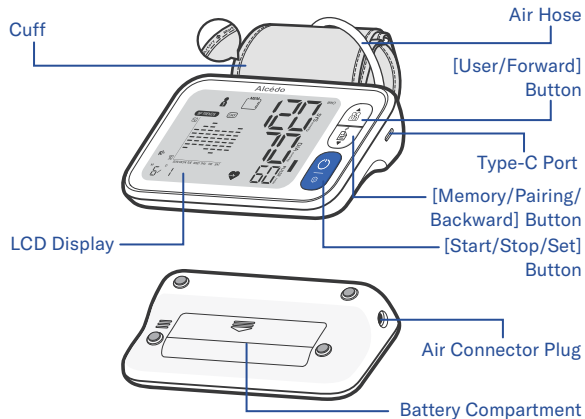
Picture-01

SYMBOL	EXPLANATION
1	Systolic blood pressure reading
2	Blood pressure level See the blood pressure classification on page 21-22
3	Diastolic blood pressure reading

SYMBOL	EXPLANATION
4	Pulse display Pulse rate appears after the measurement.
5	Heartbeat symbol Flashes when detected during a measurement.
	Irregular heartbeat symbol Appears when detected during a measurement. Refer to page 22 for more information.
6	Average value symbol Appears when viewing the average value of the latest 7 days under the memory mode.
7	Date / Time display
8	Voice broadcast The function of voice broadcast is turned off.
9	Data pending to transmit symbol Displays when the data transmission failed. The measurements are saved on the device and will be sent when a successful connection is achieved.
10	Bluetooth symbol Flashes when the Bluetooth is working.
11	Excessive body motion detector symbol Appears when talking, moving, or shaking of the arm with the cuff on is detected during a measurement. NOTE: The measured blood pressure reading may not be accurate when this symbol is displayed with the reading.

SYMBOL	EXPLANATION
12	 <p>Cuff wearing OK symbol Appears when the cuff is wrapped well.</p>
13	 <p>Battery power mode / High power Appears when the power is only supplied by batteries. Or appears along with the error symbol "BAT H" to indicate the DC power is too high.</p>
	 <p>Low Battery symbol Indicate the battery is low when appears with the error symbol "BAT Lo".</p>
14	 <p>Adapter power mode / Adapter error symbol Appears when the power is supplied by AC adapter. Or appears along with the error symbol "Err " to indicate the adapter error.</p>
15	 <p>User ID symbol The user ID number appears when the monitor is operated by the selected user.</p>
16	 <p>Memory symbol Indicate it is in the memory mode and which the group of memory it is.</p>
17	 <p>Blood Pressure Trends Appears when viewing the blood pressure trends of the specified period of the past 7 days under the memory mode. The X-axis of the histogram represent the time, while the Y-axis represents the average value of systolic and diastolic pressure. Refer to page 17 for more information.</p>

♥ Name of Each Part



Picture-02

♥ Contents/Product Includes

- Blood Pressure Monitor
 - User Manual
 - Quick Start Guide
 - 4x AA Batteries
 - Type-C Cable
 - Cuff
- Upper arm circumference:
22-42 cm

Before You Start

♥ The Choice of Power Supply

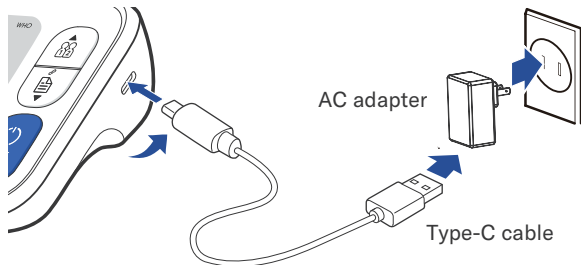
1. Battery powered mode:

6V DC 4× AA batteries

2. AC adapter powered mode:

5V = 1A (Please only use the AC adapter authorized by the manufacturer!)

Note: Please unplug the adapter to depart from the using utility power, when you finish the measurement.




Picture-03

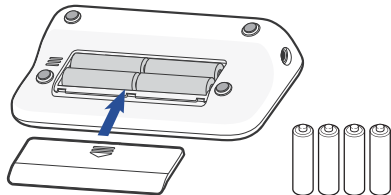
⚠ Caution

In order to get the best effect and protect your monitor, please use the right batteries and approved power adapter which complies with local safety standard.

♥ Installing and Replacing the Batteries

- Slide off the battery cover.
- Install or replace 4 AA size batteries according to the polarity indications inside the battery compartment.
- Place back the battery cover.

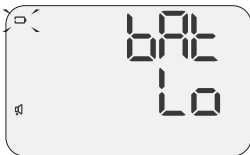
Any time the battery is low, it will display the icon  & "bAt Lo" and then power off automatically after about 5 seconds.



Picture-04

Replace the batteries:

- When the low battery symbol appears. (see the LCD display on the picture below)
- When any button is pressed and nothing is displayed on the screen.






⚠ Caution

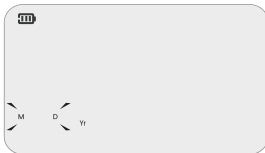
- Do not use new and used batteries together.
- Do not use different types of batteries together.
- Do not dispose the batteries in fire. Batteries may explode or leak.
- Remove batteries if the device is not likely to be used for some time.
- Worn batteries are harmful to the environment. Do not dispose with daily garbage.
- Remove the old batteries from the device following your local recycling guidelines.

♥ Setting the Date and Time

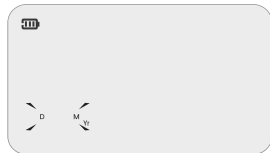
It is important to set the date and time before using your blood pressure monitor for the first time, so that a correct time stamp can be assigned to each record that is stored in the memory.

(The setting range of the year: 2021–2050, Time format: 24H/12H)






1. When the monitor is off, press and hold the  button to display the date format. Press the  or  button to switch the date format between [month/day/year] and [day/month/year].




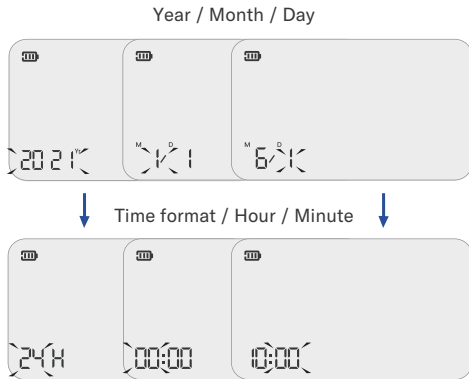
[month/day/year] format




[day/month/year] format

2. Press the  button to confirm the date format, then the year will flash. Press the  or  button to change the year.
 - Press and hold the  button to quickly advance the years.
 - Press and hold the  button to quickly go backwards through the years.

3. Press the  button to confirm the year, then the month will flash. Repeat the same steps to change the month, day, time format, hour, and minute.

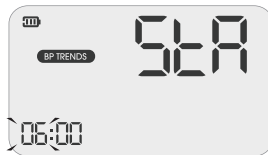


4. Press the  button to store the setting, then it will enter BP trends time setting mode. Repeat the steps 2 and 3 to set the start time and then the end time.

By default,

BP trends start time: 06:00 (a.m.).

BP trends end time: 10:00 (a.m.) .

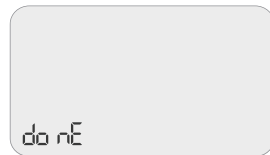


BP trends start time setting




BP trends end time setting

5. After confirming the BP trends end time, the LCD will display “do nE” and the monitor will shut off after several seconds.








Note:

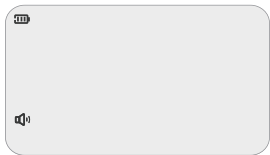
- The date and time will automatically be set when the monitor is paired with app. Refer to the section "Pair a smart device with the monitor".
- If you need to reset the date and time, replace batteries or press and hold the  button, then set the date and time as shown in above steps.

♥ Setting the Voice

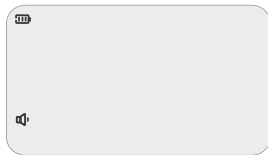
This blood pressure monitor comes equipped with the optional function of voice. This section will guide you to Turn on or Turn off the voice before you use your monitor.

1. When the monitor is off, press and hold “” button to enter the voice setting mode. Press the “” or “” button to switch the voice. It will speak “Voice on” or “Voice off” at the same time.

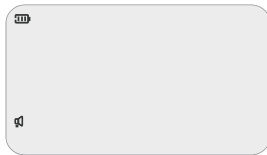
- Each press “” button will increase the voice volume by one in a cycling manner (voice volume 2 - OFF - 1 - 2 ...).
- Each press “” button will decrease the volume by one in a cycling manner (voice volume 2 -1 - OFF - 2 ...).




Voice volume 2
broadcast "Voice on"









Voice volume 1
broadcast "Voice on"







Voice off
broadcast "Voice off"



2. Press the  button to confirm the voice setting, the monitor will display “do nE” and shut off after several seconds.

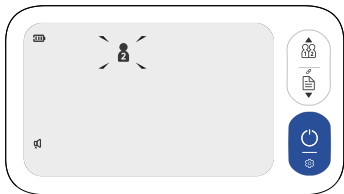
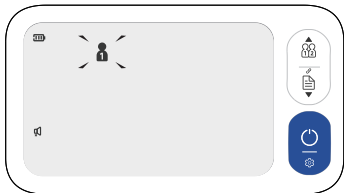
♥ Setting a User ID


There are 3 user ID  available. The user  and , each with 250 memory spaces, are designed for 2 different people to save the measured values separately. The user , no memory space, is reserved for guest.

1. When the monitor is off, press the  button to display the current user ID. Press the  button to switch the user ID between the user  and .

Note:



- Only user  and  can be selected in this setting mode.
- When the voice is on, it will broadcast the user ID at the same time.

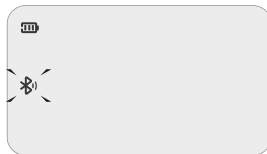




2. Press the  button to confirm the selected user ID, the monitor will display the user ID and “do nE”, and then shut off after several seconds.

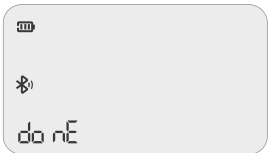
♥ Pair a Smart Device with the Monitor

You are the intended operator of this blood pressure monitor. You can measure your blood pressure and then save and send measurement data to a smart device (such as smartphone or tablet) with Bluetooth wireless connectivity.

1. Turn on Bluetooth and the app on your smart device. Make sure both are ON when pair-up is proceeding.
2. When the monitor is off, press and hold the  button to start pair-up, the bluetooth symbol  will flash.



3. If successful, the bluetooth symbol  will not flash any more and the monitor will display “do nE”. Press the  button to turn off the device, or the monitor will automatically shut off after about 1 minute.




Note: The date and time on your monitor will automatically be set after paired with your smart device successfully.

If unsuccessful within 60 seconds, it is judged timeout and the monitor will shut off.

Bluetooth Module information	
Bluetooth Module No.	B2088-T
RF Frequency Range	2402 MHz to 2480 MHz
Output Power Range	0 dBm
Supply Voltage	1.8-3.6 V
Transmitting Distance	10 meters

List of compatible devices	
For iOS devices	The operating system must be iOS 13.0 or up.
For Android devices	The operating system must be Android 5.0 or up.

⚠ Caution

- Interference may occur in the vicinity of equipment marked with the following symbol . And ABP-2088-T may interfere the vicinity electrical equipment.
- Sensitive people, including pregnant women, including pre-eclamptic, patients and those patients with implanted, electrical devices should avoid using this product whenever possible.
- Keep the monitor at least 20 centimeters away from the human body (especially the head) when the data transmission is proceeding after the measurement.
- To enable the data transmission function, this product should be paired to Bluetooth end at 2.4 GHz.

How to mitigate possible interference?

1. The range between the device and BT end should be reasonably close, from 1 meter to 10 meters. Please ensure no obstacles between the device and BT end so as to obtain quality connection and to lower the RF output range.
2. To avoid interference, other electronic devices (particularly those with wireless transmission / Transmitter) should be kept at least 1 meter away from the monitor. And BT end so as to obtain quality connection and to lower the RF output range.

Measurement

♥ Applying the Cuff

1. Remove all jewelry, such as watches and bracelets from your left arm.

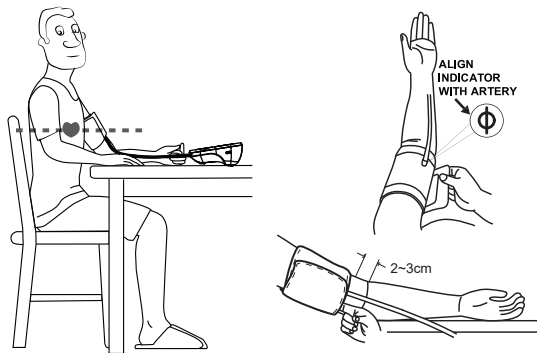
Note: If your doctor has diagnosed you with poor circulation in your left arm, use your right arm.

2. Roll or push up your sleeve to expose the skin. Make sure your sleeve is not too tight.
3. Hold your arm with your palm facing up and tie the cuff on your upper arm, align the Artery indicator ϕ with the main Artery (on the inside of your arm).

Note: Locate the main Artery by pressing with 2 fingers approximately 2 cm above the bend of your elbow on the inside of your left arm. Identify where the pulse can be felt the strongest, that is your main Artery!

4. Make sure the bottom edge of the arm cuff 2 to 3 cm above the inside elbow. Then wrap the cuff securely.

Note: The cuff should be snug but not too tight. You should be able to insert one finger between the cuff and your arm.



Picture-05

5. Sit upright in a comfortable chair with your back against the backrest of the chair. Keep your feet flat and your legs uncrossed.

Place your arm resting comfortably on a flat table. The cuff worn on your arm should be placed at the same level as your right atrium of the heart.







6. Take 5-6 deep breaths and let's start measuring!

Helpful tips:

- Take the measurement in a silent room.
- Rest for 5 minutes before a measurement.
- Wait at least 3 minutes before another measurement. This allows your blood circulation to recover.
- Be relax and do not move and talk during the measurement procedure.
- 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.

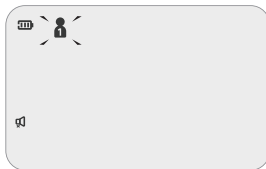
♥ Start a Measurement

You can use your monitor without pairing to a smart device. To pair your monitor with a smart device refer to the foregoing chapters.

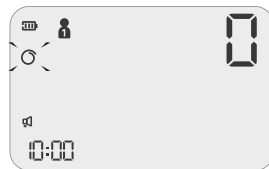
1. When the monitor is off, press the  button, the current user ID will flash.
2. Press the  button to switch the user  or  or . press the  button to confirm the selected user ID.

3. Remain still and do not talk until the full measurement is complete. When the voice is on, it will speak “Starting measurement, please remain still and quiet” first, and then complete the measurement process.
(Example shown below for User 1)

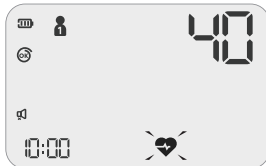
Select user ID



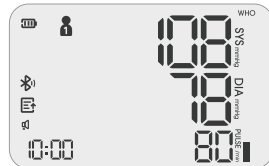
Cuff wrap detection





Inflating and measuring
(a heartbeat is detected)






Display and save the
measurement result
(When the voice is on, it will
broadcast your measuring result.)



Note:

- Any time, to stop the measurement, press the  button.
4. Press the  button to turn off the monitor, or it will shut off after about 1 minute.
 5. If your monitor is already paired with your smart device and both Bluetooth and app are ON, when the measurement completed, the measurement result will start transmitting. (only user 1 and 2 available)



If successful, both symbols   will disappear and the monitor will display "do nE".

Press the  button to turn off the device, or the monitor will automatically shut off after about 1 minute.






If unsuccessful within 60 seconds, it is judged timeout and the monitor will shut off. In the case of a data transmission failure, up to 250 measurements are saved on the device and will be sent when a successful connection is achieved.

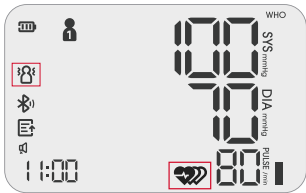
Note

- Both user  and  can store maximum 250 groups of record. When you pass that limit, every time you take the measurement, the monitor will prompt "FULL" first and the oldest record will drop from the list after the measurement.

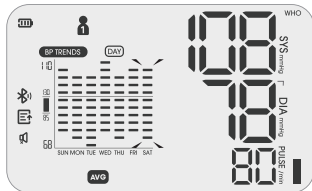
6. About the irregular heartbeat and excessive body motion during the measurement.

- During a measurement, if an irregular heartbeat is detected, the symbol  will display in the measurement result. See page 22 for more information.
- During a measurement, when the excessive body motion, especially of the arm the cuff is worn is detected, the symbol  will flash about 5 seconds and detect again. If it is no longer detected, the symbol will disappear; If still detected, the symbol  will final display in the measurement result.

Note: The measured blood pressure reading may not be accurate if this symbol is displayed.








top horizontal line



Data Management

♥ Recall the Records

1. When the monitor is off, press the  button, the LCD will display the total groups of the memory records, with the user ID blinking.
2. Press the  button to switch the user ID between user  and . Press the  button to confirm the selected user ID.
3. Then the LCD will display the average value of all the records of last 7 days and BP Trends chart of a specified period of last 7 days, with the histogram of the latest day blinking. (Example shown below for User 1)

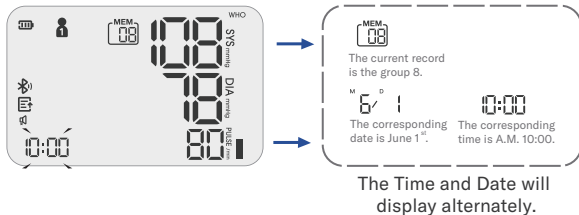
Note

- BP trends is a histogram, designed to display the average blood pressure value of a specified period of last 7 days, to help the user to visually know their blood pressure changes.
- To set the specified period of the BP trends, please refer to the section "Setting the Date and Time".
- If there is no measurements for that period of time on a given day, the histogram for that day will be blank.
- For the BP trends chart, the X-axis of the histogram represent the time (from left to right, from Sunday, Monday, Tuesday, Wednesday, Thursday, Friday to Saturday), while the Y-axis of the histogram represents the average value of systolic (high) pressure and diastolic (low) pressure of the specified period each day.



- The data displayed on the top left is the maximum average systolic pressure value in the past 7 days, while the bottom left is the minimum diastolic pressure value in the past 7 days.
- When the maximum average systolic pressure is higher than or equal to 130 mmHg, a top horizontal line will display. When the minimum average diastolic pressure value pressure is lower than 85 mmHg, a lower horizontal line will display.
- If there is no lower horizontal line displayed or if the histogram is higher than this top horizontal line, that means these days your blood pressure is beyond the optimal blood pressure, it is suggest you should pay more attention to rest. If the problem persists, contact your physician. Please note that only a physician can tell whether your blood pressure value has reached a dangerous point.

(p.s. according to WHO blood pressure classification, the optimal blood pressure is systolic <130 mmHg, while diastolic <85 mmHg. see page 21 for more information)

4. Press the or button to display the next record.




Note

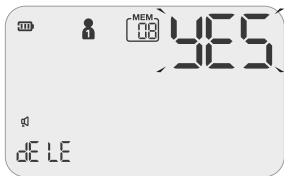
- When your monitor is paired with your smart device and both Bluetooth and app are ON, the records will start transmitting with the symbol . Once successful, the symbol  will disappear.
- The most recent record (1) is shown first. Each new measurement is assigned to the first (1) record. All other records are pushed back one digit (e.g., 2 becomes 3, and so on), and the last record (250) is dropped from the list.
- When the volume is on, it will broadcast the record for you.


♥ Delete the Records

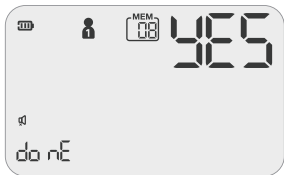
Delete the records by following the steps below.

A: Delete one record (Example shown below for User 1)




1. Enter the memory recall mode as described in the previous section "Recall the records", find out the record you want to delete.
2. Press and hold the  button about 3 seconds, the LCD will display "dELE yES" with "yES" blinking.

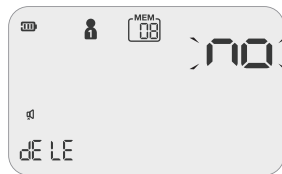


3. Press the  button to confirm the deletion, the LCD will display "yES donE" and then the previous record will be displayed.





Note


- Before you confirm the deletion, you could press the  or  button to switch the LCD display from "dELE yES" to "dELE no". Then press the  button, you could stop clearing the memory.



B: Delete all records (Example shown below for User 1)




1. Enter the memory recall mode as described in the previous section "Recall the records".
2. Press and hold the  and  button about 5 seconds, the LCD will display "dELE ALL" with "ALL" blinking.

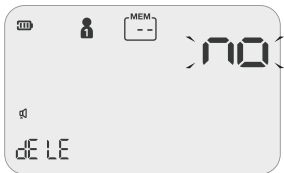


3. Press the  button to confirm the deletion, the LCD will display “ALL donE” and then “- -” will be displayed.



Note

- Before you confirm the deletion, you could press the  or  button to switch the LCD display from “dELE ALL” to “dELE no”. Then press the  button, you could stop clearing the memory.



Information For User

♥ Tips for Measurement

Measurements may be inaccurate if taken in the following circumstances.

- Within 1 hour after dinner or drinking
- Immediate measurement after tea, coffee, smoking
- Within 20 minutes after taking a bath
- When talking or moving your fingers
- In a very cold environment
- When you want to discharge urine

♥ Maintenance

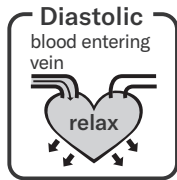
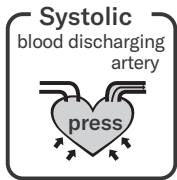
In order to get the best performance, please follow the instructions below.

- Put in a dry place and avoid the sunshine
- Avoid touching water, clean it with a dry cloth in case
- Avoid intense shaking and collisions
- Avoid dusty and unstable temperature environment
- Using wet cloths to remove dirt
- Do not attempt to clean the reusable cuff with water and never immerse the cuff in water

About Blood Pressure

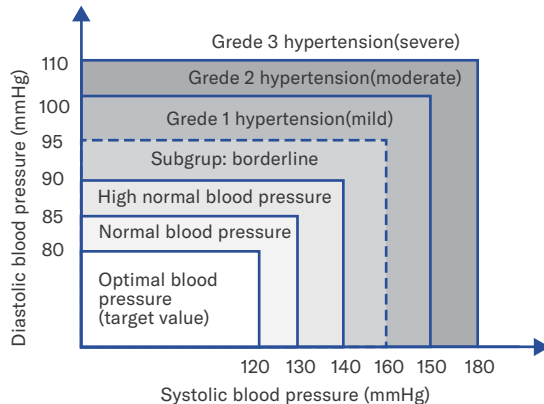
♥ What are Systolic Pressure and Diastolic Pressure?

When ventricles contract and pump blood out of the heart, the blood pressure reaches its maximum value in the cycle, which is called systolic pressure. When the ventricles relax, the blood pressure reaches its minimum value in the cycle, which is called diastolic pressure.



♥ What is the Standard Blood Pressure Classification?

The blood pressure classification published by World Health Organization (WHO) and International Society of Hypertension (ISH) in 1999 is as follows:




Picture-06

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 your normal BP range. Please contact a physician if your measuring result falls out of the range. Please note that only a physician can tell whether your blood pressure value has reached a dangerous point.

⚠ Caution

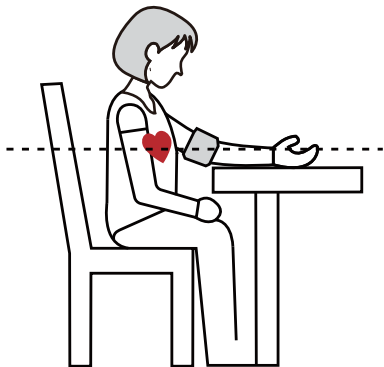
The appearance of the IHB icon  indicates that a pulse irregularity consistent with an irregular heart-beat was detected during measurement. Usually this is NOT a cause for concern. However, if the symbol appears often, we recommend you seek medical advice. Please note that the device does not replace a cardiac examination, but serves to detect pulse irregularities at an early stage.

♥ Irregular Heartbeat Detector

An irregular heartbeat is detected when a heartbeat rhythm varies while the unit is measuring the systolic and diastolic blood pressure. During each measurement, the monitor records all the pulse intervals and calculate the average; if there are two or more pulse intervals, the difference between each interval and the average is more than the average value of $\pm 25\%$, or there are four or more pulse intervals, the difference between each interval and the average is more than the average value of $\pm 15\%$, the irregular heartbeat symbol appears on the display when the measurement results are appeared.

♥ Why Does My Blood Pressure Fluctuate Throughout the Day?

1. Individual blood pressure varies multiple times everyday. It is also affected by the way you tie your cuff and your measurement position, so please take the measurement under the same conditions.
2. If the person takes medicine, the pressure will vary more.
3. Wait at least 3 minutes for another measurement.



Picture-07

What you need to pay attention to when you measure your 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.
- Taking 2-3 deep breaths before beginning will be better for measuring.
- Advice: Relax for 4-5 minutes until you calm down.

♥ Why Do I Get a Different Blood Pressure at Home Compared to the Hospital?

The blood pressure is different even throughout the day due to weather, emotion, exercise etc. Also, there is the “white coat” effect, which means blood pressure usually increases in clinical settings.




♥ Is the Result the Same if Measuring on the Right Arm?

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

Troubleshooting

If any abnormality arises during use, please check the following points:

PROBLEM	SYMPTOM	CHECK THIS	REMEDY
No power	Display can not light up.	Batteries are depleted.	Replace with new batteries.
		Batteries are inserted incorrectly.	Insert the batteries correctly.
		Adapter is inserted incorrectly.	Insert the AC adapter correctly.

PROBLEM	SYMPTOM	CHECK THIS	REMEDY
High Battery	bAt H shows	The battery is too high.	Replace with new batteries.
Low Battery	bAt Lo &  shows	The battery is too low.	Replace with new batteries.
Error message	E 1 shows	The cuff is not wrapped or wrapped incorrectly, or the cuff air plug is loose.	Refasten the cuff and insert air tube plug correctly then measure again.
	E 2 or  shows	Excessive body motion (such as shaking of the arm with the cuff on) or weak pulse is detected.	Relax for 5 minutes. and then keep still, measure again.
	E 3 shows	Pulse is not detected during measuring.	Loosen the clothing on the arm and measure again.
	E 4 shows	The measurement failed.	Relax for 5 minutes and measure again.
	EEx shows	Hardware error (X can be some digital symbol, such as 1, 2, 3, etc.)	Turn off monitor and measure again. If EEx still appears on the display, please contact the retailer or our customer service.
Warning message	Err &  shows	Adapter error	Replace with the authorized adapter.
	out shows	Out of measurement range	Relax for a moment and then measure again. If the problem persists, contact your physician.

NOTE: If the product still does not work, contact Customer Service. Under no circumstance should you disassemble or attempt to repair the unit by yourself.

Specifications

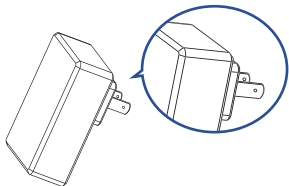
External dimensions	Approx.174 mm × 100 mm × 41 mm
Display mode	Digital LCD V.A.124 mm × 76 mm
Weight	Approx.329 g (Excluding the batteries and cuff)
Measurement mode	Oscillographic testing mode
Mode of operation	Continuous operation
Measurement range	Rated cuff pressure: 0 mmHg~299 mmHg Measurement pressure: SYS: 60 mmHg ~ 230 mmHg DIA: 40 mmHg ~ 130 mmHg Pulse value: (40-199) beat/minute
Accuracy	Pressure: 5°C-40°C within ±3 mmHg Pulse value: ±5%
Normal working condition	A temperature range of: +5°C to +40°C A relative humidity range of: 15% to 90%, non-condensing An atmospheric pressure range of : 70 kPa to 106 kPa
Storage & transportation condition	Temperature: -20°C to +60°C A relative humidity range of ≤ 93%, non-condensing

Measurement perimeter of the upper arm	About 22-42 cm
Degree of protection	Type BF applied part
Protection against ingress of water	IP21 It means the device could protected against solid foreign objects of 12.5mm and greater, and protect against vertically falling water drops.
Device Classification	Battery Powered Mode: Internally Powered ME Equipment AC Adaptor Powered Mode: Class II ME Equipment
Software version	A01

WARNING: No modification of this equipment is allowed.

Authorized Components

please use the authorized adapter (optional).



Adapter
Type: BLJ06L050100U-U
Input: 100-240V, 50-60Hz,
0.2A max
Output: 5V $\overline{\text{---}}$ 1000 mA

Contact Information

For more information about our products, please visit www.AlcedoHealth.com

- **Distributed by:**
Nature Major Inc.
500 7th Ave, New York, NY 10018

FCC Statement

FCC ID: OUT9TMB2088-B

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

⚠ Caution

The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

EMC Guidance

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

- **Warning:** Don't be near the 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.
- **Warning:** Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- **Warning:** 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 equipment ABP-2088-T including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

Technical description :

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 emissions	
Emissions 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 emissions IEC 61000-3-3	Comply

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	±2 kV for power supply lines ±1 kV signal input/output 100 kHz repetition frequency	±2 kV for power supply lines Not Applicable 100 kHz repetition frequency

Guidance and manufacturer's declaration – electromagnetic Immunity

Surge IEC61000-4-5	±0.5 kV, ±1 kV differential mode ±0.5 kV, ±1 kV, ±2 kV common mode	±0.5 kV, ±1 kV differential mode Not Applicable
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% U _T ; 0,5 cycle. At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°. 0% U _T ; 1 cycle and 70% U _T ; 25/30 cycles; Single phase: at 0°. 0% U _T ; 250 / 300 cycle	0% U _T ; 0,5 cycle. At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°. 0% U _T ; 1 cycle and 70% U _T ; 25/30 cycles; Single phase: at 0°. 0% U _T ; 250 / 300 cycle
Power frequency magnetic field IEC 61000-4-8	30 A/m 50 Hz / 60 Hz	30 A/m 50 Hz / 60 Hz
Conducted RF IEC61000-4-6	3 V 0,15 MHz – 80 MHz 6 V in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80% AM at 1 kHz	3 V 0,15 MHz – 80 MHz 6 V in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80% AM at 1 kHz
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. mains voltage prior to application of the test level.

Table 3

Guidance and manufacturer's declaration – electromagnetic Immunity								
	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Maximum Power (W)	Distance (m)	IEC 60601-1-2 Test Level (V/m)	Compliance level (V/m)
Radiated RF IEC61000-4-3 (Test specifications for EN-CLOSURE PORT IMMUNITY to RF wireless communications equipment)	385	380-390	TETRA 400	Pulse modulation 18 Hz	1.8	0.3	27	27
	450	430-470	GMRS 460, FRS 460	FM \pm 5k Hz deviation 1 kHz sine	2	0.3	28	28
	710	704-787	LTE Band 13, 17	Pulse modulation 217 Hz	0.2	0.3	9	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	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	28
	1845							
	1970							

Guidance and manufacturer's declaration – electromagnetic Immunity

Radiated RF IEC61000-4-3 (Test specifications for EN-CLOSURE PORT IMMUNITY to RF wireless communications equipment)	Test Frequency (MHz)	Band (MHz)	Service	Modulation	Maximum Power (W)	Distance (m)	IEC 60601-1-2 Test Level (V/m)	Compliance level (V/m)
	2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz	2	0.3	28	28
	5240	5100-5800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0.2	0.3	9	9
	5500							
	5785							

Customer Support

If you have any questions or concerns about your product, please contact our helpful Customer Support Team.*

✉ Email: info@alcedohealth.com

☎ Toll-Free: (833)682-8655

🌐 www.AlcedoHealth.com

Support Hours

Monday-Friday 10:00 am – 4:00 pm EST

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New York, NY 10018

**Please have your order invoice and order ID ready before contacting Customer Support.*