

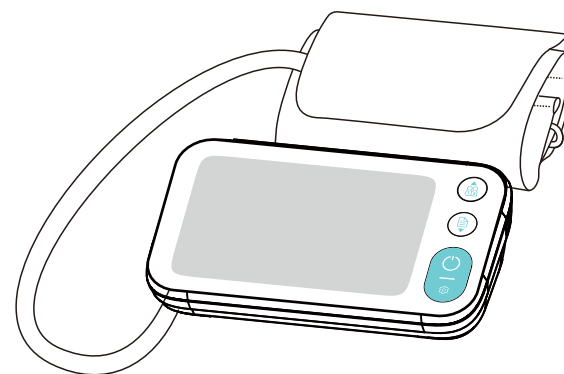
Version: A/0

TRANSTEK

User Manual

Blood pressure monitor
Model: TMB-2288-BT

TRANSTEK



 **Guangdong Transtek Medical Electronics Co., Ltd.**
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- Thank you very much for selecting TRANSTEK Blood Pressure Monitor TMB-2288-BT.
- Please read the user manual carefully and thoroughly so as to ensure the safe usage of this product, keep the manual well for further reference in case you have problems.

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♥ General Description

Thank you for selecting TRANSTEK arm type blood pressure monitor (TMB-2288-BT). The monitor features blood pressure measurement, pulse rate measurement and the result storage.

The design provides you with two years of reliable service.

FEATURES:

- 124 mm × 76 mm Digital LCD display
- 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

This Blood Pressure Monitor is a digital monitor intended for use in measuring blood pressure and pulse rate with arm circumference ranging from 22cm to 32cm (about 8¾"-12½"), 22cm to 42cm (about 8¾"-16½"), 22cm to 45cm (about 8¾"-17¾").

It is intended for adult, home use.

The device can be used to detect irregular pulse rate.

Only the matched cuff of 22cm to 45cm (about 8¾"-17¾") is applicable to pregnant woman (including pre-eclampsia patients) and diabetic patients.

♥ 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.

♥ Receiving and Inspecting your Monitor

Check that the device packaging has not been tampered with and make sure that all contents are present. Before use, ensure that there is no visible damage to the device or accessories and that all packaging material has been removed. If you have any doubts, do not use the device and contact your retailer or the specified Customer Services address.

♥ Safety Information

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

	Manufacturer		Type BF applied part
	Date of manufacture		Direct Current
			Serial Number
	Recyclable		Medical Device
	For indoor use only		Class II Equipment
	Refer to instruction manual/booklet To signify that the instruction manual/ booklet must be read. Note: The background color of the symbol is blue.		
	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.		
	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.		
	MR Unsafe To identify an item which poses unacceptable risks to the patient, medical staff or other persons within the MR environment.		

INTRODUCTION

Precaution

- * This device is intended for indoor, home use and is not intended for self-use in public areas.
- * 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 non-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 and adolescents unless otherwise instructed by a medical professional.
- * Consult with your physician before using this monitor if you suffer from the following conditions: common arrhythmias such as premature ventricular beats or atrial fibrillation; peripheral arterial disease; pregnancy; preeclampsia; implantation with electrical devices; undergoing intravascular therapy; arteriovenous shunt or mastectomy. Please note that any of these conditions may affect measurement readings, in addition to patient motion, trembling or shivering.
- * 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.
- * 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.
- * The blood pressure monitor, its adapter, and the cuff are suitable for use within the patient environment.
- * Do not wash the cuff in a washing machine or dishwasher !
- * 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.
- * Blood Pressure Monitor is intended for use by medical staffs and lay persons, and patient is also an intended user or operator.

Caution

- * Do not attempt to repair the unit yourself if it malfunctions. Only have repairs carried out by authorized service centers.
- * 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). Please contact manufacturer or distributor for authorized service personnel.
- * 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.
- * Dispose of accessories, detachable parts, and the device according to the local guidelines.

INTRODUCTION

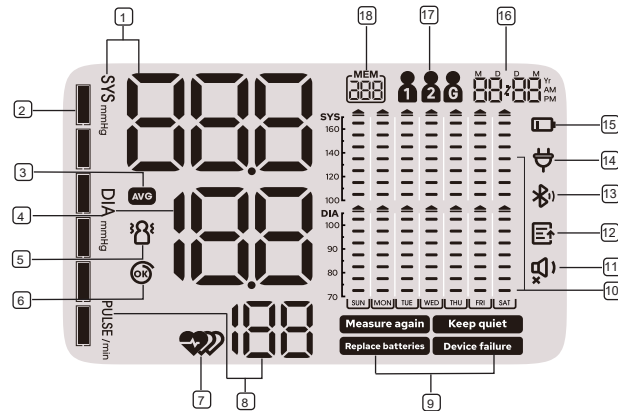
Warning

- * Do not apply the cuff on an arm that has an intravenous drip or a blood transfusion attached.
- * 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.
- * Taking blood pressure measurements too frequently could disrupt blood circulation and cause injuries.
- * Do not apply cuff to areas on patient where skin is delicate or damaged. Check cuff site frequently for irritation.
- * 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 (for example, by observation of the limb concerned) that the operation of the device does not result in prolonged impairment of patient blood circulation.
- * 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.
- * Do not use this device with high-frequency (HF) surgical equipment at the same time.
- * This device is not used in conjunction with oxygen rich environments, not intended for use with flammable anaesthetics, not intended for use in conjunction with flammable agents.
- * Do not touch output of the batteries/adaptor and the user simultaneously.
- * 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.
- * Do not use this device if you are allergic to polyester, nylon, or plastic.
- * Only use accessories approved by manufacturer. Using unapproved accessories might cause damage to the unit and injure users.
- * 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.
- * Do not use the device while under maintenance, or being serviced.
- * The air tube poses a risk of strangulation. Furthermore, the small parts of product and batteries present a choking hazard if swallowed. They should therefore always be kept away from infants/children.
- * Sensor degradation or looseness may reduce performance of device or cause other problems.

Notice

- * You can use this device to take your own measurement, no third-party operator is required.
- * Adapter is specified as a part of ME EQUIPMENT.
- * 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.
- * The service life of the cuff may vary by the frequency of washing, skin condition, and storage state.
- * Please report to the manufacturer and the competent authority of the Member State / the FDA in which you are established about any serious incident that has occurred in relation to this device.

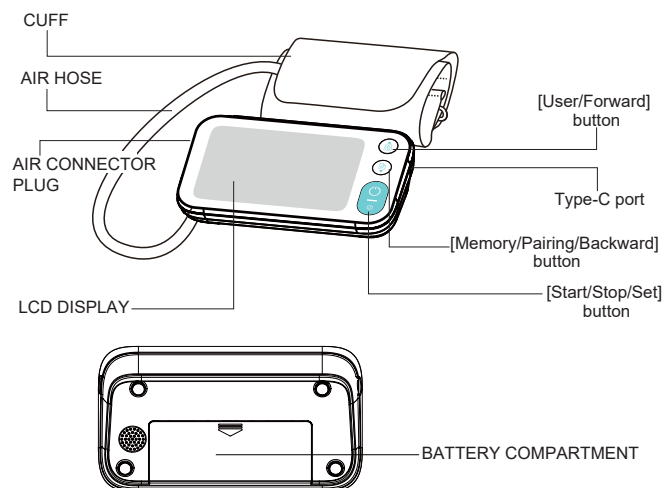
♥ Display and Symbols



SYMBOL	EXPLANATION
1	Systolic blood pressure reading
2	Blood pressure level See the blood pressure classification on page 27-28.
3	Average value symbol Appears when viewing the average value of the latest 7 days under the memory mode.
4	Diastolic blood pressure reading
5	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.
6	Cuff wearing OK symbol Appears when the cuff is wrapped well.
7	Heartbeat symbol Flashes when detected during a measurement.
	Irregular heartbeat symbol Appears when detected during a measurement. Refer to page 28 for more information.

SYMBOL	EXPLANATION
8	Pulse display Pulse rate appears after the measurement.
9	Warning Messages Refer to page 30 for more information.
10	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 value of systolic and diastolic pressure. Refer to page 20 for more information.
11	Voice broadcast The function of voice broadcast is turned off.
12	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.
13	Bluetooth symbol Flashes when the Bluetooth is working.
14	Adapter power mode / Adapter error symbol Appears when the power is supplied by AC adapter. Or appears along with "bAt H& Replace batteries" to indicate the voltage of the blood pressure monitor is high.
15	Low Battery symbol Indicate the battery is low when appears with "BAAt Lo & Replace batteries".
16	Date / Time display
17	User ID symbol The user ID number appears when the monitor is operated by the selected user.
18	Memory symbol Indicate it is in the memory mode and which the group of memory it is.

♥ Name of Each Part



♥ Contents/Product Includes

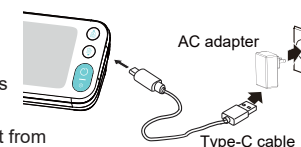
- Blood Pressure Monitor (TMB-2288-BT)
 - Cuff (Type BF applied part)
 - Upper arm cuff:22-32cm or
 - Upper arm cuff:22-42cm or
 - Upper arm cuff:22-45cm.
 - User manual
 - 4x AA batteries (Optional!)
 - Type-C cable (Optional!)
 - AC Adapter (Optional!)
- Reference model: BLJ06L050100U-U

♥ Choice of Power Supply

1. Battery powered mode:
6VDC 4×AA batteries (Optional!)

2. AC adaptor powered mode:
5V $\equiv$ 1A (Optional!)

(Please use the AC adapter which is authorized by the manufacturer!)

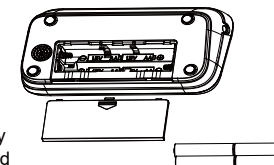


⚠ CAUTION

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.

Replace the batteries:

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



⚠ CAUTION

- New and used batteries, or different types of batteries shall not be used together.
- Remove batteries if the device is not likely to be used for some time.
- Do not heat or deform the batteries, or dispose of them in fire.
- Batteries should not be disposed of with household waste.
- Please check with your local authority for battery recycling advice.

♥ Setting the Date, Time and Voice

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: 2022—2052, Time format: 24H/12H)

1. When the monitor is off, press and hold the “START/STOP” button, it will display the bluetooth symbol  first.

(If the voice is on, it will broadcast “Please set up the product before measurement.”, “Bluetooth pairing is in progress, please wait”)

Press the “START/STOP” button again, it will skip Bluetooth pairing and enter the [Year] setting.

(If the voice is on, it will broadcast “Please Set the year.”)

Press the “USER” or “MEM” button to change the year.



2. Press the “START/STOP” button to confirm the [Year], then the date format will flash. Press the “USER” or “MEM” switch the date format between [month/day] and [day/month]. (If the voice is on, it will broadcast “Set the date format. You can set the format as day, month, year or month, day and year.”)



3. Press the “START/STOP” button to confirm the date format, then the [Month] will flash. Repeat the same steps to set the [Month] and [Day].

(If the voice is on, it will broadcast “Please Set the date.”)



4. Repeat the same steps to set the time format between [24H] and [12H].

(If the voice is on, it will broadcast “Please Set the time format. You can set the [24H] system or [12H] system.”)



5. Repeat the same steps to set the [Hour] and [Minute].

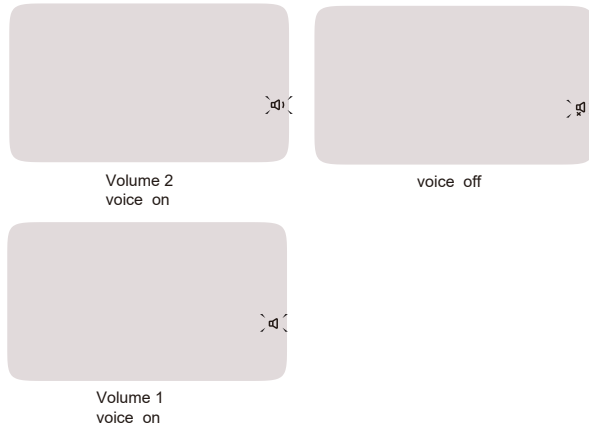
(If the voice is on, it will broadcast “Please Set the time.”)



BEFORE YOU START

6. After confirming the [Minute], it will enter the voice setting. Press the “USER” or “MEM” button to change the voice volume.

(If the voice is on, it will broadcast “Please Set the voice for you.”)



7. After confirming the voice setting, the LCD will display all the settings you have done, and then it will display “do nE” and the device will turn off automatically.

Note:

1. 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".
2. The device can also enter the setup mode automatically when the battery is installed for the first time.
3. You can also enter the voice settings by long pressing the “USER” button.

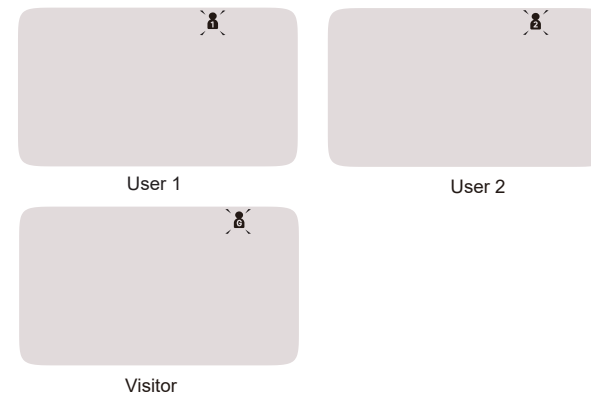
BEFORE YOU START

♥ 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 “USER” button to display the current user ID. Press the “USER” button again to switch the user ID among the user ,  and .

(If the voice is on, it will broadcast “Please Select the user” and broadcast the current user ID.”)



2. Press the “START/STOP” button to confirm the selected user ID, it will enter the measurement automatically. Press the “MEM” button to confirm the selected user ID, it will enter the memory query automatically.

BEFORE YOU START

♥ Pair a smart device with the monitor

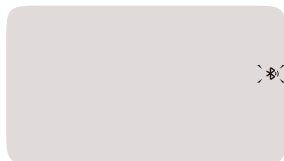
You are the intended operator of this blood pressure monitor. You can measure your blood pressure and then save and send measurement data to a smart device (such as smartphone or tablet) with Bluetooth wireless connectivity.

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 “MEM” button to start pair-up, the bluetooth symbol will flash.

(If the voice is on, it will broadcast “Bluetooth pairing is in progress, please wait.”)



3. If successful, the bluetooth symbol will not flash any more and the monitor will automatically shut off after about several seconds.

(If the voice is on, it will broadcast “Bluetooth Pairing is successful.”)

Note:

1. The date and time on your monitor will automatically be set after paired with your smart device successfully.
2. The device can also enter the Bluetooth pairing automatically when the battery is installed for the first time.

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

(If the voice is on, it will broadcast “Bluetooth Pairing is failed!”)

BEFORE YOU START

Bluetooth Module information :

RF Frequency Range: 2402 MHz to 2480 MHz
Output Power Range: see test report
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 more.
For Android devices:
The operating system must be Android 5.0 or more.

CAUTION

- Interference may occur in the vicinity of equipment marked with the following symbol . And TMB-2288-BT may interfere the vicinity electrical equipment.
- 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.

♥ Applying the cuff

Only use a cuff that has been approved by the manufacturer for this device model.
Before use, please confirm if it fits your arm circumference.

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.

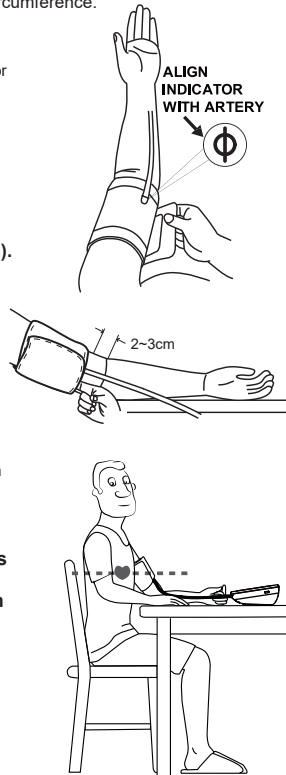
5. **Sit upright in a comfortable chair with your back against the backrest of the chair. Keep your feet flat and your legs uncrossed.**

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 relaxed 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

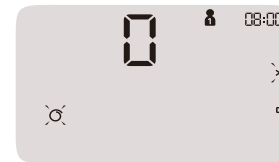
You can use your monitor without pairing to a smart device. To pair your monitor with a smart device refer to the foregoing chapters.

1. **When the monitor is off, press the “START/STOP” button to turn on the monitor, and it will finish the whole measurement. Remain still and do not talk until the full measurement is complete.**

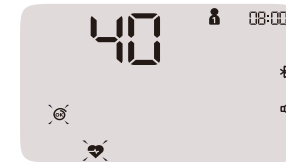
If the voice is on, it will speak “ Starting measurement, please remain still and quiet” first, and then complete the measurement process.

(Take User 1 with voice on for example)

Cuff wrap detection



Inflating and measuring
(a heartbeat is detected)



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



MEASUREMENT

Note

- Any time, to stop the measurement, press the “START/STOP” button.
- If you don't pair with the device or don't keep the app ON, the bluetooth symbol  will flash during the measurement.

2. Press the “START/STOP” button to turn off the monitor, or it will shut off within 1 minute.

3. 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  and  will disappear and the monitor will automatically shut off.



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 drops from the list after the measurement.

MEASUREMENT

4. 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 28 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.

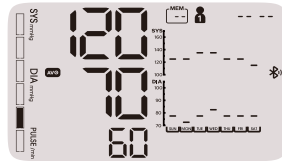
Note

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



♥ Recall the Records

1. When the monitor is off, press the "MEM" button, the LCD will display the total groups of the memory records, with the user ID blinking.
2. Press the "USER" or "MEM" button to switch the user ID between user 1 and 2. Press the "START/STOP" 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. (Example shown below for User 1)
(If the voice is on, it will broadcast: "The average value of your measurement for the last 7 days is XXX.")

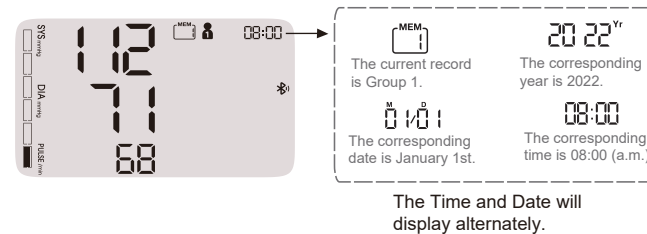


Note

- 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.
- 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 170mmHg or the maximum average diastolic pressure is higher than 110mmHg, the symbol "▲" will be displayed.
- When the minimum average systolic pressure is lower than or equal to 100mmHg, the minimum average diastolic pressure is lower than or equal to 70mmHg, the grid corresponding to 100mmHg or 70mmHg will be lit.

4. Press the "USER" or "MEM" button to display the next record.



Note:

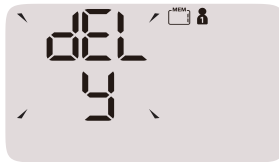
- If there is untransmitted data, the symbol "□" displays on the record.
- The latest record (1) is shown first. Each new measurement is assigned to the first (1) record. All other records are pushed back one digit (e.g., 2 becomes 3, and so on), and the last record (250) will be dropped from the list.
- When the voice 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 "MEM" button about 3 seconds, the LCD will display "dEL y" and blink.
(If the voice is on, it will broadcast: "Delete current data.")



3. Press the "START/STOP" button to confirm the deletion, the LCD will display "dEL donE" and then the previous record will be displayed.
(If the voice is on, it will broadcast: "Successfully deleted.")



Note

Before you confirm the deletion, you could press the "USER" or "MEM" button to switch the LCD display from "dEL y" to "dEL no". Then press the "START/STOP" button, you could stop clearing the memory and if the voice is on, it will broadcast: "Cancel".



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 "USER" or "MEM" button about 5 seconds, the LCD will display "dEL AL" and blink.
(If the voice is on, it will broadcast: "Delete all data.")



3. Press the "START/STOP" button to confirm the deletion, the LCD will display "dEL done".
(If the voice is on, it will broadcast: "Successfully deleted.")



Note

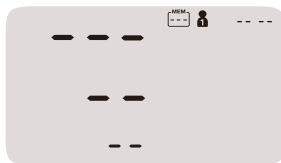
Before you confirm the deletion, you could press the "USER" or "MEM" button to switch the LCD display from "dEL AL" to "dEL no". Then press the "START/STOP" button, you could stop clearing the memory and if the voice is on, it will broadcast: "Cancel".



DATA MANAGEMENT

4. Once deleted, your readings cannot be restored. The LCD will display “---” like the following picture.

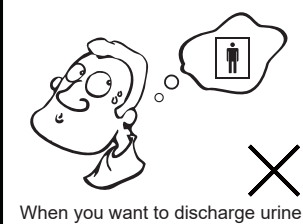
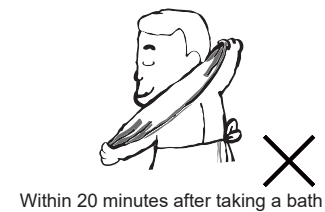
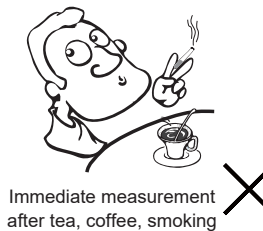
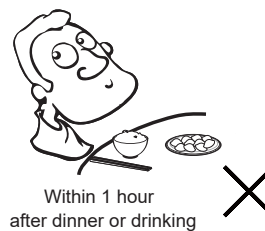
Press the “START/STOP” button to turn off the monitor, otherwise it will power off automatically within 1 minute.



INFORMATION FOR USER

♥ Tips for Measurement

Measurements may be inaccurate if taken in the following circumstances.



♥ Maintenance

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

1. Cleaning Process:

- Step 1: Make sure to switch off and unplug the device prior to cleaning.
 Step 2: Use a soft cloth wetted with soapy water to clean the cuff first, and then use a soft cloth wetted with clear water to remove residual soap until there is no visible residual contaminants. Attention shall be paid to avoid liquid invasion into the cuff.
 Step 3: Use a dry soft cloth to wipe the cuff, in order to remove residual moisture.
 Step 4: Dry the cuff at a well-ventilated place after cleaning.

2. Disinfection Process:

- Step 1: Make sure to switch off and unplug the device prior to disinfection.
 Step 2: Use a soft cloth wetted with 70% isopropanol to disinfect the cuff for about 3 minutes. Attention shall be paid to avoid liquid invasion into the cuff.
 Step 3: Use a clean dry cloth or towel to wipe off the disinfectant until there is no visible residue.
 Step 4: Dry the cuff at a well-ventilated place after disinfection.

•Suggestion:

Frequency of Cleaning and Disinfection:

For single patient multiple use, it's recommended to clean the device surface once a month or whenever it's necessary.

For multiple patient multiple use, it's recommended to clean the device every time before and after usage. Maintenance procedures shall be taken as per instruction.

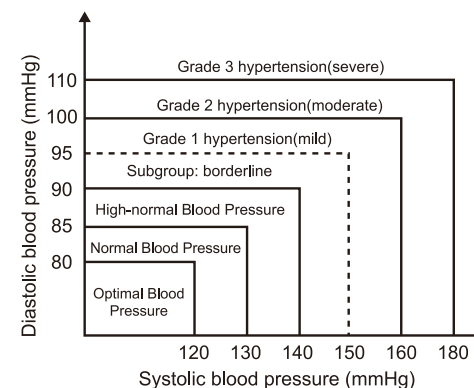
♥ What are systolic pressure and diastolic pressure?

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:



ABOUT BLOOD PRESSURE

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.

♥ 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.

! 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.

ABOUT BLOOD PRESSURE

♥ 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.



♥ Why do I get a different blood pressure at home compared to the hospital?

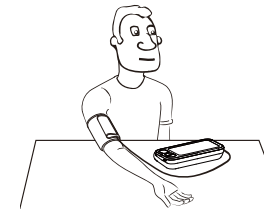
The blood pressure is different even throughout the day due to weather, emotion, exercise etc. Also, there is the "white coat" effect, which means blood pressure usually increases in clinical settings.

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.

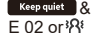
♥ Is the result the same if measuring on the right arm?

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.
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 01 shows	The cuff is loose.	Re-wear the cuff before measurement.
	 & E 02 or  shows	Excessive body motion (such as shaking of the arm with the cuff on or weak Pulse is detected.)	Do not move during measurement and measure again.
	 & E 03 shows	No pulse is detected.	Wear the cuff again before measurement.
	 & E 04 shows	The measurement failed.	Relax for 5 minutes and measure again.
	EExx shows	Hardware error (XX can be some digital symbol, such as 01, 02, 03, etc.)	Turn off monitor and measure again. If EExx still appears on the display, please contact the retailer or our customer service.
	 & bAt H shows	The voltage of the blood pressure monitor is high.	Replace with the authorized adapter.
Warning message	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

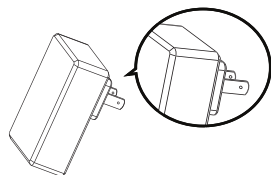
External dimensions	Approx.174 mm × 100 mm × 41 mm
Display mode	Digital LCD V.A.124 mm × 76 mm
Weight	Approx.343 g (Excluding the batteries and cuff)
Measurement mode	Oscillographic testing mode
Mode of operation	Continuous operation
Measurement range	Rated cuff pressure: 0 mmHg~299 mmHg Measurement 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, but not requiring a water vapour partial pressure greater than 50 hPa An atmospheric pressure range of 700 hPa to 1060 hPa
Storage & transportation condition	Temperature:-20°C to +60°C A relative humidity range of ≤ 93%, non-condensing, at a water vapour pressure up to 50 hPa An atmospheric pressure range of 500 hPa to 1060 hPa
Measurement perimeter of the upper arm	About 22-32 cm or 22-42 cm or 22-45cm
Degree of protection	Type BF applied part
Protection against ingress of water	IP21 It means the device could be protected against solid foreign objects of 12,5mm Φ and greater, and against vertically falling water drops.
Device Classification	Battery Powered Mode: Internally Powered ME Equipment AC Adapter Powered Mode: Class II ME Equipment
Expected Lifetime	Device: 3 years or 30,000 measurements (may vary based on usage conditions) Cuff: 10000 times Alkaline battery: About 200-300 times
Types of use/reuse	Multiple patient multiple use

WARNING: No modification of this equipment is allowed.

AUTHORIZED COMPONENT

♥ Authorized Component

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.transtekcorp.com.

Manufactured by: Guangdong Transtek Medical Electronics Co., Ltd.

Company: Guangdong Transtek Medical Electronics Co., Ltd.

Address: Zone A, No.105, Dongli Road, Torch Development District,
528437 Zhongshan, Guangdong, China

EMC GUIDANCE

♥ 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 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
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								
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE 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)
	385	380-390	TETRA 400	Pulse modulation 18 Hz	1.8	0.3	27	27
	450	430-470	GMRS 460, FRS 460	FM ± 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							
	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							

FCC STATEMENT

♥ FCC Statement

FCC ID: OU9TMB2273BT

FCC Regulatory Compliance

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

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, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Compliance

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.

ID ISCED

♥ ID ISCED

HVIN:TMB-2288-BT
IC:12725A-TMB2273BT

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISED Radiation Exposure statement

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0 mm between the radiator and your body.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 0mm entre le radiateur et votre corps.