

Bluetooth<sup>®</sup>

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- Thank you very much for selecting TRANSTEK Blood Pressure Monitor TMB-1583-BT.
- Please do read the user manual carefully and thoroughtly so as to ensure the safe usage of this product, and 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-1583-BT). The monitor features blood pressure measurement, pulse rate measurement and the result storage. The design provides you with two years of reliable service.

Readings taken by the TMB-1583-BT are equivalent to those obtained by a trained observer using the cuff and stethoscope auscultation method.

This manual contains important safety and care information, and provides step by step instructions for using the product.

Read the manual thoroughly before using the product.

Features:

- · 84mm×73 mm Digital LCD display
- · Maximum 60 records
- 3rd technonoly: Measuring during inflation (The updated technology in the world)

## Indications for Use

The Transtek Blood Pressure Monitor is digital monitors intended for use in measuring blood pressure and heartbeat rate with arm circumference ranging from 22 cm to 32 cm ( about  $8\frac{3}{4}-12\frac{12}{2}$  ) or 22cm to 42cm(about  $8\frac{3}{4}-16\frac{12}{2}$ ). It is intended for adult indoor use only.

## Safety Information

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

8	Symbol for "THE OPERATION GUIDE MUST BE READ"	★	Symbol for "TYPE BF APPLIED PARTS"
	Symbol for "MANUFACTURER"	Ver	Symbol for "ENVIRONMENT PROTECTION - Electrical waste products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling
SN	Symbol for "SERIAL NUMBER"	Ŕ	
====	Symbol for "DIRECT CURRENT"		advice"
М	Symbol for "MANUFACTURE DATE"	$\square$	For indoor use only
F1	T1A/250V Ф3.6*10CCC		Symbol for "Class II Equipment"
😵 Bluetooth	The Bluetooth Combination Mark	(())	Symbol for "Including RF transmitter"
	Caution: These notes must be observed to prevent any damage to the device.		

# - \land CAUTION

The device is not suitable for measuring the blood pressure of children. Ask your doctor before using it on older children.

The device is not suitable for use on pregnant women, patients with implanted, electrocical devices, patients with pre-elcampsia, premature ventricular beats, atrial fibrillation, peripheral, arterial disease and patients undergoing intravascular therapy or arterio-venous shunt or people who received a mastectomy. Please consult your doctor prior to using the unit if you suffer form illnesses

Do not take any therapeutic measures on the basis of a self measurement. Never alter the dose of a medicine prescribed by a doctor. Consult your doctor if you have any question about your blood pressure.

Please keep the unit out of reach of infants, children or pets, since inhalation or swallowing of small parts is dangerous or even fatal.

# LCD display signal





SYMBOL	DESCRIPTION	EXPLANATION	
SYS Systolic blood pressure		High pressure result	
DIA Diastolic blood pressure		Low pressure result	
Pulse/min	Pulse per minute	Beats per minute, BPM	
LAST 3 AVG.	Average value	The average value of the latest three records	
MEMORY REVIEW	Memory	The displayed measurement values is from the memory.	
kPa	kPa	Measurement Unit of the blood pressure (1kPa=7.5mmHg)	
mmHg	mmHg Measurement Unit of the blood pres (1mmHg=0.133kPa)		
lo+ 📼	Low battery	Batteries are low and need to be replaced	
IHB	Irregular heartbeat	Irregular heartbeat Detection	
	Grade	The grade of the blood pressure	
88/88 <sub>PM</sub>	Current Time	Year/Month/Day(M/D or D/M), Hour/Minute	

This device is intended only for adult use in homes.

Λ CAUTION

This device is intended for non-invasive measuring and monitoring of arterial blood pressure. It is not intended for use on extremities other than arm or for functions other than obtaining a blood pressure measurement.

If you experience discomfort during a measurement, such as pain in the arm or other complaints, press the START/STOP button to release the air immediately from the cuff. Loosen the cuff and remove it from your arm.

On the rare occasion of a fault causing the cuff to remain fully inflated during measurement, open the cuff immediately. Prolonged high pressure (cuff pressure >300mmHg or constant pressure >15mmHg for more than 3 minutes) applied to the arm may lead to an ecchymosis.

Too frequent and consecutive measurements could cause disturbances in blood circulation and iniuries.

Do not wrap the cuff on the same arm which other monitoring ME EQUIPMENT is applied simultaneously, because this could cause temporary loss of function of those simultaneously-used monitoring ME EQUIPMENT.

Don't kink the connection tube during use, otherwise, the cuff pressure may continuously increase which can prevent blood flow and result in harmful injury to the PATIENT.

The maximum temperature that the applied part can be achieved is 42.5 C while the environmental temperature is 40°C .(only for wrist blood pressure monitor)

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

This unit is not suitable for continuous monitoring during medical emergencies or operations. This device cannot be used with HF surgical equipment at the same time.

This device is not intended for patient transports outside a healthcare facility.

To avoid measurement errors, please avoid the condition of strong electromagnetic field radiated interference signal or electrical fast transient/burst signal.

The operator shall not touch output of batteries/adapter and the patient simultaneously. Manufacturer will make available on request circuit diagrams, component parts list etc. The materials of the cuff have been tested and found to comply with requirements of ISO 10993-5:2009 and ISO 10993-10:2010. It will not cause any potential sensization or irritation reaction.Never apply the cuff over hurt skin.

Do not use the unit in case of existing polyester resp. synthetic allergies.

Be careful to strangulation due to cables and hoses, particularly due to excessive length. Do not connect the air hose to other medical equipment, as this could cause air to be pumped into intravascular systems or high pressure, what could lead to dangerous injuries.

Before use, make sure the device functions safely and is in proper working condition.

Please use the device under the environment which was provided in the user manual. Otherwise, the performance and lifetime of the device will been impacted and reduced.

Please use ACCESSORIES and detachable partes specified/ authorised by MANUFACTURE. Otherwise, it may cause damage to the unit or danger to the user/patients.

Please dispose of ACCESSORIES, detachable parts, and the ME EQUIPMENT according to the local guidelines.

Please do not attempt to repair the unit yourself in the event of malfunctions. Only have repairs carried out by authorized service centers.

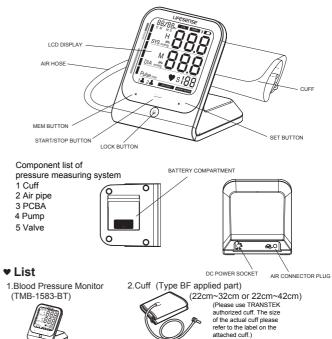
Please report to Manufacturer if any unexpected operation or events occur.

The device doesn't need to be calibrated in two years of reliable service.

Please use the soft cloth to clean the whole unit. Don't use any abrasive or volatile cleaners.

SYMBOL	DESCRIPTION	EXPLANATION
ERROR	Error	Error
H	Hour	The hour in the clock mode
M	Minute	The minute in the clock mode
S	Second	The second in the clock mode
•	Heartbeat	Heartbeat detection during the measurement
1 🚨	User 1	Start measurement, save and transmit the measuring results for User 1
2 🛎	User 2	Start measurement, save and transmit the measuring results for User 2
*	Bluetooth icon	The bluetooth icon blinks when the bluetooth is working

## Monitor Components



5. AC Adaptor

(KH0601000UW !)

3. 4×AAA alkaline batteries 4.User manual



## ♥ The Choice of Power Supply

1.Battery powered mode: 6VDC 4×AAA alkaline batteries

2.AC adaptor powered mode: 6V --- 1A (Please only use the recommended AC adaptor model).



Please unplug the adaptor to depart from the using utility power.

### 

In order to get the best effect and protect your monitor, please use the right battery and special power adaptor which complies with U.S. safety standard.

## Installing and Replacing the Batteries

- •. Open the battery cover.
- . Install the batteries by matching the correct polarity, as shown.
- Replace the cover.



Replace the batteries whenever the below happen

- •The Lo+ m shows
- •The display dims
- The display does not light up

## 

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

- The old batteries are harmful to the environment, do not dispose with other daily trash.
- Remove the old batteries from the device and follow your local recycling guidelines.
- Do not dispose of batteries in fire. Batteries may explode or leak

## 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 air 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.

The device also compares the longest and the shortest time intervals of detected pulse waves to mean time interval then calculates standard deviation. The device will display a warning signal with the reading to indicate the detection of irregular heartbeat when the difference of the time intervals is over 25%.

## Setting Date, Time, Measurement Unit and Clock Mode

It is important to set the clock before using your blood pressure monitor, so that a time stamp can be assigned to each record that is stored in the memory. (The setting range of the year :2014—2054 time format:12H/24H)

 When the monitor is off, hold pressing "SET" button for 3 seconds to enter the mode for year setting.



2.Press the "MEM" button to change the [YEAR]. Each press will increase the numeral by one in a cycling manner.



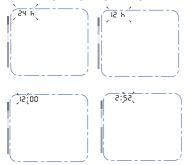
 When you get the right year, press "SET" button to set down and turn to next step to set the date format between "M/D" or "D/M".



**4**.Repeat steps 2 and 3 to set the [DATE FORMAT], then set the [MONTH] and [DAY].



 Repeat steps 2 and 3 to set the [TIME FORMAT] between 12H or 24H, then set the [HOUR] and [MINUTE].



6.Repeat steps 2 and 3 to set the [UNIT].



7.Repeat steps 2 and 3 to set the clock mode.



8.After the clock mode is set, the LCD will display "done" and then turn off.



### • Select the User

 When the monitor is off, press and hold the MEM button to enter user setting mode. The user ID will blink.



2. Then press MEM button again, select the user ID between user 1 and user 2.



3. After selecting the suitable user ID, press SET button to confirm. Then the LCD will turn off.

# Pair-up the Blood Pressure Monitor with Your Device

- 1.Turn on Bluetooth and the app. Make sure both are ON when pair-up is proceeding.
- 2.When the monitor is OFF, press and hold the START/STOP button to start pair-up. The bluetooth symbol ℜ will blink, indicating pair-up is proceeding.



**3**. Then please select the user ID you want to connect with your smartphone on the app to continute the pair-up.

If SUCCEED, symbol d0 nE will be shown on the LCD.

If FAIL, only bluetooth symbol E  $\ rr$  will be shown on the LCD.



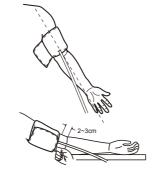
4. The monitor will shut off after Pair-up process is complete.

Bluetooth Module No.: AW2540MV1 RF Frequency Range: 2402 MHz to 2480 MHz Output Power Range: -1 dBm Supply Voltage: 2V-3.6 V Transmitting Distance: 10 meters

#### MEASUREMENT

## ♥ Tie the cuff

- 1. Tie the cuff on your upper arm, then position the tube off-center toward the inner side of arm in line with the little finger.
- 2. The cuff should be snug but not too tight. You should be able to insert one finger between the cuff and your arm.



- 3.Sit comfortably with your tested arm resting on a flat surface.
- 4. Patients with Hypertension: The middle of the cuff should be at the level of the right atrium of the heart; Before starting measurement, please sit comfortably with legs uncrossed, feet flat on the floor, back and arm supported

• Rest for 5 minutes before measuring.

 Wait at least 3 minutes between measurements. This allows your blood circulation to recover.

· For a meaningful comparison, try to measure under similar conditions. For example, take daily measurements at approximately the same time, position of upper 14 arm, or as directed by a physician.



### Start the Measurement

1. When the monitor is off, press the "START/STOP" button to turn on the monitor, and it will finish the whole measurement. (Take User 1 for example.)

LCD display

Adjust to zero.





Inflating and measuring.

Display and save the measurement results.



3:27 SYS mmH

2. This device will proceed to data transmission after measurement. The Bluetooth symbol blinks on the LCD indicates data is transmitting.



If the data transmission fails, the LCD will display  $\varepsilon$  rr.

If the data transmission succeeds, the LCD will display  $_{\rm dD}$  ns.





3.Press the "START/STOP" button to power off, otherwise it will turn off within 1 minute.

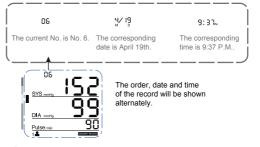
Tips: Maximum 60 records are both for User 1 and User 2.

### ♥ Recall the Records

- 1. When the monitor is off, please press "MEM" button to show the average value of the latest three records. (Take User 1 for example.)
- 2. Press "MEM" button or "SET" button to get the record you want.







# 

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 (60) is dropped from the list.

### Delete the Records

If you did not get the correct measurement, you can delete all results by following steps below.(Take User 1 for example)

1.Hold pressing "MEM" button for 3 seconds when the monitor is in the memory recall mode ,the flash display " User ID+ dEL ALL" will show.



2.Press "SET" button to confirm deleting and the monitor will display "dEL dOnE" and then turn off.



Note: To exit out of delete mode without deleting any records, press START/STOP button before pressing "SET" to confirm any delete commands.  If there is no record. the following display will show.



## ♥ About the Clock mode

If you set the clock mode on in the setting mode, when you turn off the blood pressure monitor, the backlight of the LCD will turn off, the LCD will display the current time.

When the backlight of the LCD is off, press any buttons to light it up, the following display will show.





### About the Lock Button

The unnecessary keys' touch will make the blood pressure monitor turn on and waste electricity. To avoid this, you can press the Lock button to lock the keys if necessary.

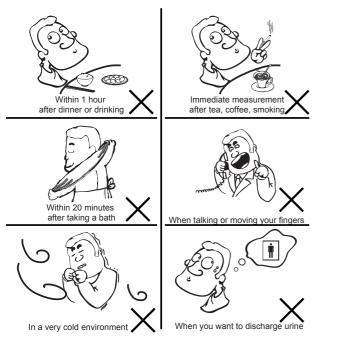
Hold pressing the Lock button until the LCD displays "OFF", this indicates the touch keys (such as MEM, START/STOP, SET) have been locked.

Hold pressing the Lock button until the LCD displays "ON" to unlock the keys.



### 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.



Put in a dry place and avoid the sunshine



Avoid intense shaking and collisions



Using wet cloths to remove dirt



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



Avoid dusty and unstable temperature environment



Do not attempt to clean the reusable cuff with water and never immerse the cuff in water.

#### 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.



Diastolic

and

or 80-89

or

or

mmHg (lower#)

less than 80

100 or higher

Higher than 110

or 90-99

This chart reflects blood pressure categories defined by American Heart Association

mmHg (upper#)

less than 120

120-139

140-159

160 or higher

Higher than 180

Systolic

### What is the standard blood pressure classification?

Blood Pressure Category

Normal

Prehypertension

High Blood Pressure

(Hypertension) Stage 1

High Blood Pressure

(Hypertension) Stage 2

Hypertensive Crisis

(Emergency care needed)

The chart on the right is the standard blood pressure classification published by American Heart Association (AHA).

#### AHA Home Guideline for Upper Limit of Normal BP

SYS	135 mm Hg
DIA	85 mm Hg

## 

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, this equipment records the heartbeat intervals and works out the standard deviation. If the calculated value is larger than or equal to 15,the irregular heartbeat symbol appears on the symbol when the measurement results are displayed.

The appearance of the IHB icon indicates that a pulse irregularity consistent with an irregular heartbeat 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.

## 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.

## 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.



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 yourself for 4-5 minutes until you calm down.



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

PROBLEM	SYMPTOM	CHECK THIS	REMEDY
	Display will not light up.	Batteries are exhausted.	Replace with new batteries
No power		Batteries are inserted incorrectly.	Insert the batteries correctly
		AC adaptor is inserted incorrectly.	Insert the AC adaptor tightly
Low batteries	Display is dim or show	Batteries are low.	Replace with new batteries
		Data communication is failed.	Check if the App/Bluetooth is on or not,try data transmission again.
	E 1 shows	The cuff is not secure.	Refasten the cuff and then measure again.
	E 2 shows	The cuff is very tight	Refasten the cuff and then measure again.
Error	E 3 shows	The pressure of the cuff is excess.	Relax for a moment and then measure again.
massage	E10 or E11 shows	The monitor detected motion,talking or the pluse is too poor while measuring.	Relax for a moment and then measure again.
	E20 shows	The measurement process does not detect the pulse signal.	Loosen the clothing on the arm and then measure again.
	E21 shows	The treatment of the measurement failed.	Relax for a moment and then measure again.
	EExx,shows on the display.	A calibration error occurred.	Retake the measurement. If the problem persists, contact the retailer or our customer service department for further assistance.Refer to the warranty for contact information and return instructions.

Battery powered mode: 6VDC 4×AAA alkaline batteries AC adaptor powered mode: 6V 1A (Please only use the recommended AC adaptor model).
Digital LCD V.A.84mm×73mm
Oscillographic testing mode
Rated cuff pressure: 0kPa - 40kPa (0mmHg~300mmHg) Measurement pressure: 5.3kPa-30.7kPa (40mmHg-230mmHg) pulse value: (40-199) beat/minute
Pressure: 5°C-40°C within±0.4kPa(3mmHg) pulse value:±5%
Temperature:5℃ to 40℃ Relative humidity: ≤85%RH Atmospheric pressure: 86kPa to 106kPa
Temperature:-20 C -60 C Relative Humidity: 10%RH-93%RH Atmospheric Pressure: 50kPa-106 kPa
About 22cm~32cm or 22cm~42cm
Approx.250g(Excluding the dry cells and cuff)
Approx.107mm×103mm×118mm
4×AAA alkaline batteries, user manual
Continuous operation
Type BF applied part
IP21
V01

WARNING: No modification of this equipment is allowed.

## Authorized Component

1. please use the TRANSTEK authorized adapter.



Adapter Type: KH0601000UW Input: 100~240V~ 50/60Hz, 0.4A Max Output: 6V---1000mA

### Contact Information

For more information about our products, please visit www.transtek.cn.you can get customer service, usual problems and customer download, transtek will serve you anytime.

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, Zhongshan,528437, Guangdong,China

## Complied Standards List

Risk management	ISO/EN 14971:2012 Medical devices — Application of risk management to medical devices
Labeling	ISO/EN 15223-1:2012 Medical devices. Symbols to be used with medical device labels, labelling and information to be supplied. General requirements
User manual	EN 1041: 2008 Medical equipment manufacturers to provide information
General Requirements for Safety	IEC 60601-1: 2005+A1: 2012 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance IEC 60601-1-11 Medical electrical equipment - Part 1-11: General requirements for basic safety and essential performance - Collateral standard: Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment
Electromagnetic compatibility	IEC/EN 60601-1-2:2007 Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard:Electromagnetic compatibility - Requirements and tests
Performance requirements and Clinical investigation	IEC 80601-2-30:2009 Medical electrical equipment- Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers ISO81060-2 Non-invasive sphygmomanometers — Part 2: Clinical validation of automated measurement type
Software life-cycle processes	IEC/EN 62304:2006+AC: 2008 Medical device software - Software life cycle processes
Usability	IEC 62366 Medical devices - Application of usability engineering to medical devices (IEC 62366:2007) IEC 60601-1-6 Medical electrical equipment - Part 1 -6 : General requirements for basic safety and essential performance - collateral standard : Usability

#### FCC STATEMENT

#### FCC Statement

#### FCC ID: OU9TMB1583-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, and (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

1) This equipment needs to be installed and put into service in accordance with the information provided in the user manual;

2) Wireless communications equipment such as wireless home network devices, mobile phones, cordless telephones and their base stations, walkie-talkies can affect this equipment and should be kept at least a distance d=3,3m away from the equipment.

(Note: As indicated in Table 6 of IEC 60601-1-2:2007 for ME EQUIPMENT, a typical cell phone with a maximum output power of 2 W yields d=3, 3m at an IMMUNITY LEVEL of 3V/m)