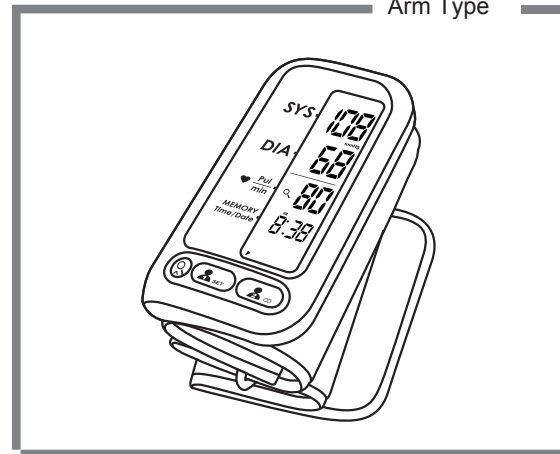


# User Manual

Blood Pressure Monitor LS808-BS

Arm Type



- Thank you very much for selecting TRANSTEK Blood Pressure Monitor LS808-BS.
- Please do read the user manual carefully and thoroughly so as to ensure the safe usage of this product, and keep the manual well for your further reference in case you have problems.

FCC ID: OU9LS808-B-S



Guangdong Transtek Medical Electronics Co., Ltd.  
Zone B, No.105 ,Dongli Road, Torch Development District,  
Zhongshan,528437, Guangdong, China

TRANSTEK

# Table of Contents

INTRODUCTION .....	2
• General Description	
• Indications for Use	
• Contraindications	
• Measurement Principle	
• Safety Information	
• LCD Display Signal	
• Monitor Components	
• List	
BEFORE YOU START .....	9
• Power Supply and Charge Power	
• Setting the Time, Date and Unit	
• Pair up with Your Device	
• Tie the Cuff	
MEASUREMENT .....	16
• Start Measurement	
DATA MANAGEMENT .....	18
• Recall the Records	
• Delete the Records	
INFORMATION FOR USER .....	22
• Tips for Measurement	
• Maintenance	
ABOUT BLOOD PRESSURE .....	24
• What are systolic pressure and diastolic pressure?	
• What is the standard blood pressure classification?	
• Irregular heartbeat detector	
• Why does my blood pressure fluctuate throughout the day?	
• Why do I get a different blood pressure at home compared to the hospital?	
• Is the result the same if measuring on the right arm?	
TROUBLESHOOTING .....	26
SPECIFICATIONS .....	27
AUTHORIZED COMPONENT .....	28
CONTACT INFORMATION .....	28
COMPLIED EUROPEAN STANDARDS LIST .....	29
FCC STATEMENT .....	30
EMC GUIDANCE .....	31

## ♥ General Description

- \* Thank you for selecting TRANSTEK blood pressure monitor (LS808-BS). The monitor features blood pressure measurement, pulse rate measurement and the result storage. The design provides you with two years of lifetime.
- \* This manual contains important safety information and caution, and provides step by step instructions for using the product.
- \* Please do read this user manual carefully and thoroughly before use.

### FEATURES:

- 86.1mm×24mm Blue LCD Display with White Backlight
- Measure-during-inflating Technology
- Up to 60 pieces of record stored per each user

## ♥ 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 8¾"-12½" ) or 22cm to 42cm(about 8¾"-16½"). It is intended for adult indoor use only.

## ♥ Contraindications













- 1.The device is not suitable for use on may be pregnant women or pregnant women.
- 2.The device is not suitable for use on patients with implanted,electrocal 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 point" equivalent to the atmospheric pressure. Then it starts inflating the cuff. Meanwhile, the unit detects pressure oscillation generated by beat-to-beat pulsatile, which is used to determine the systolic pressure and diastolic pressure as well as pulse rate.

## ♥ Safety Information

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

	Symbol for "THE OPERATION GUIDE MUST BE READ"		Symbol for "TYPE BF APPLIED PARTS"
	Symbol for "MANUFACTURE DATE"		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 advice"
	Symbol for "MANUFACTURER"		
	Symbol for "SERIAL NUMBER"		Symbol for "Recycle"
	Symbol for "DIRECT CURRENT"		
	Symbol for "Class II Equipment"		Caution: These notes must be observed to prevent any damage to the device.
<b>F1</b>	T1A/250V Φ3.6*10CCC		The Green Dot is the license symbol of a European network of industry-funded systems for recycling the packaging materials of consumer goods.
	For indoor use only		

## ⚠ CAUTION

- \* This device is intended for adult use in homes only.
- \* The device is not suitable for use on neonatal patients, pregnant women, patients with implanted, electrical devices, patients with pre-eclampsia, 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 from illnesses.
- \* 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 intended for patient transport outside a healthcare facility.
- \* The device is not intended for public use.
- \* 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 functions other than obtaining a blood pressure measurement.
- \* Do not confuse self-monitoring with self-diagnosis. This unit allows you to monitor your blood pressure. Do not begin or end medical treatment without asking a physician for treatment advice.
- \* If you are taking medication, consult your physician to determine the most appropriate time to measure your blood pressure. Never change a prescribed medication without consulting your physician.
- \* 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.
- \* When the device was used to measure patients who have common arrhythmias such as atrial or ventricular premature beats or atrial fibrillation, the best result may occur with deviation. Please consult your physician about the result.
- \* 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.
- \* When using this device, please pay attention to the following situation which may interrupt blood flow and influence blood circulation of the patient, thus cause harmful injury to the patient: connection tubing kinking too frequent and consecutive multiple measurements; the application of the cuff and its pressurization on any arm where intravascular access or therapy, or an arterio-venous (A-V) shunt, is present; inflating the cuff on the side of a mastectomy.
- \* Warning: Do not apply the cuff over a wound; otherwise it can cause further injury.
- \* Do not inflate the cuff on the same limb which other monitoring ME equipment is applied around simultaneously, because this could cause temporary loss of function of those simultaneously-used monitoring ME equipment.
- \* 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 echymosis.
- \* Please check that operation of the device does not result in prolonged impairment of patient blood circulation.
- \* When measurement, please avoid compression or restriction of the connection tubing.
- \* The device cannot be used with HF surgical equipment at the same time.

## ⚠ CAUTION











- \* The ACCOMPANYING DOCUMENT shall disclose that the SPHYGMOMANOMETER was clinically investigated according to the requirements of ISO 81060-2:2013.
- \* To verify the calibration of the AUTOMATED SPHYGMOMANOMETER, please contact the manufacturer.
- \* This device is contraindicated for any female who may be suspected of, or is pregnant. Besides providing inaccurate readings, the effects of this device on the fetus are unknown.
- \* Too frequent and consecutive measurements could cause disturbances in blood circulation and injuries.
- \* This unit is not suitable for continuous monitoring during medical emergencies or operations. Otherwise, the patient's arm and fingers will become anaesthetic, swollen and even purple due to a lack of blood.
- \* When not in use, store the device with the adapter in a dry room and protect it against extreme moisture, heat, lint, dust and direct sunlight. Never place any heavy objects on the storage case.
- \* This device may be used only for the purpose described in this booklet. The manufacturer cannot be held liable for damage caused by incorrect application.
- \* This device comprises sensitive components and must be treated with caution. Observe the storage and operating conditions described in this booklet.
- \* The maximum temperature that the applied part can be achieved is 42.5 °C while the environmental temperature is 40 °C.
- \* The equipment is not AP/APG equipment and not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- \* Warning: No servicing/maintenance while the ME equipment is in use.
- \* The patient is an intended operator.
- \* The patient can measure, transmit data and charge power under normal circumstances and maintain the device and its accessories according to the user manual.
- \* To avoid measurement errors, please avoid the condition of strong electromagnetic field radiated interference signal or electrical fast transient/burst signal.
- \* The blood pressure monitor, its adaptor, and the cuff are suitable for use within the patient environment. If you are allergic to polyester, nylon or plastic, please don't use this device.
- \* During use, the patient will be in contact with the cuff. 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 sensitization or irritation reaction.
- \* Adaptor is specified as a part of ME EQUIPMENT.
- \* If you experience discomfort during a measurement, such as pain in the arm or other complaints, press any button to release the air immediately from the cuff. Loosen the cuff and remove it from your arm.
- \* If the cuff pressure reaches 40 kPa (300 mmHg), the unit will automatically deflate. Should the cuff not deflate when pressures reaches 40 kPa (300 mmHg), detach the cuff from the arm and press any button to stop inflation.
- \* Before use, make sure the device functions safely and is in proper working condition. Check the device, do not use the device if it is damaged in any way. The continuous use of a damaged unit may cause injury, improper results, or serious danger.
- \* Do not wash the cuff in a washing machine or dishwasher!

## ⚠ CAUTION

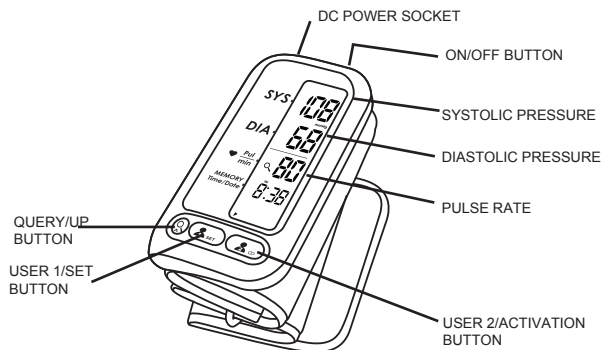
- \* The service life of the cuff may vary by the frequency of washing, skin condition, and storage state. The typical service life is 10000 times.
- \* It is recommended that the performance should be checked every 2 years and after maintenance and repair, by retesting at least the requirements in limits of the error of the cuff pressure indication and air leakage (testing at least at 50mmHg and 200mmHg).
- \* Please dispose of ACCESSORIES, detachable parts, and the ME EQUIPMENT according to the local guidelines.
- \* Manufacturer will make available on request circuit diagrams, component part lists, descriptions, calibration instructions, etc., to assist to service personnel in parts repair.
- \* The plug/adaptor plug pins insulates the device from the main supply. Do not position the device in a position where it is difficult to disconnect from the supply mains to safely terminate operation of ME equipment.
- \* The operator shall not touch output of batteries /adaptor and the patient simultaneously.
- \* Cleaning :Dust environment may affect the performance of the unit. Please use the soft cloth to clean the whole unit before and after use. Don't use any abrasive or volatile cleaners.
- \* The device doesn't need to be calibrated within two years of reliable service.
- \* If you have any problems with this device, such as setting up, maintaining or using, please contact the SERVICE PERSONNEL of Transtek. Don't open or repair the device by yourself in the event of malfunctions. The device must only be serviced, repaired and opened by individuals at authorized sales/service centers.
- \* Please report to Transtek if any unexpected operation or events occur.
- \* Keep the unit out of reach of infants, young children or pets to avoid inhalation or swallowing of small parts. It is dangerous or even fatal.
- \* Be careful to strangulation due to cables and hoses, particularly due to excessive length.
- \* At least 30 min required for ME equipment to warm from the minimum storage temperature between uses until it is ready for intended use. At least 30 min required for ME equipment to cool from the maximum storage temperature between uses until it is ready for intended use.
- \* This equipment needs to be installed and put into service in accordance with the information provided in the ACCOMPANYING DOCUMENTS;
- \* 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 away from the equipment. The distance d is calculated by the MANUFACTURER from the 80MHz to 5.8 GHz column of Table 4 and Table 9 of IEC 60601-1-2:2014, as appropriate.
- \* Please use ACCESSORIES and detachable partes specified/ authorised by MANUFACTURE. Otherwise, it may cause damage to the unit or danger to the user/patients.
- \* There is no luer lock connectors are used in the construction of tubing, there is a possibility that they might be inadvertently connected to intravascular fluid systems, allowing air to be pumped into a blood vessel.
- \* Please use the device under the environment which was provided in the user manual. Otherwise, the performance and lifetime of the device will be impacted and reduced.

## ♥ LCD Display Signal



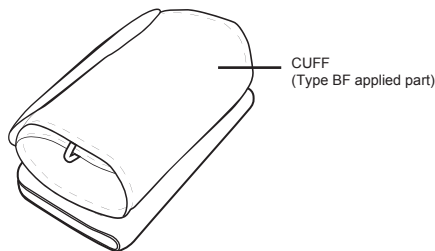
SYMBOL	DESCRIPTION	EXPLANATION
<b>SYS</b>	Systolic Blood Pressure	High blood pressure
<b>DIA</b>	Diastolic Blood Pressure	Low blood pressure
 <b>Pul/min</b>	Pulse display	Pulse in beats per minute
 <b>+Lo</b>	Low Battery	Low battery and please charge the power.
<b>KPa mmHg</b>	Unit	Measurement unit of blood pressure
	Irregular heartbeat	Blood pressure monitor is detecting an irregular heartbeat during measurement.
	Data pending to transmit	Measurement data stored in the device
	Data transmitting	Data transmission succeeds.
	Memory Query	Indicate it is in the memory mode and which group of memory it is.
	User ID	Start measurement for selected user, and transmit the measuring result
	Current time	Year/Month/Day(Hour:Minute)
	Motion indicator	Motion may result in an inaccurate measurement.
	Heartbeat	Blood pressure monitor is detecting a heartbeat during measurement.

## ♥ Monitor Components



### Component list of pressure measuring system

- 1 PCBA
- 2 Air pipe
- 3 Pump
- 4 Valve
- 5 Cuff



## ♥ List

1. Blood Pressure Monitor (LS808-BS)

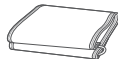


3. User Manual

2. AC Adaptor ( Model: BLJ06L060100P-U)

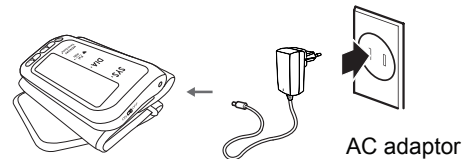
4. Cuff (22cm-32cm or 22cm-42cm) (Type BF Applied Part)

(Please use TRANSTEK authorized cuff. The size of the actual cuff please refer to the label on the attached cuff.)



## ♥ Power Supply and Charge Power

1. The battery of LS808-BS is built-in rechargeable li-polymer battery, the battery current is 1000 mAh.
2. Please use the AC adaptor to charge the battery, just like the following picture:



Charging the power under following circumstances:

- +Lo displays on the LCD
- The LCD display is dim.
- When powering on the monitor, the LCD doesn't light up.

### ⚠ CAUTION

- The battery of LS808-BS is built-in rechargeable lithium-ion battery, please do not disassemble it by the unauthorized maintenance personnel.
- \* Under the normal using, it can charge power about 300 times, if the battery cannot charge the power normally or the blood pressure monitor cannot use normally, please connect with the authorized maintenance personnel. If measured three times per day, and the battery is fully charged, it can be used for about 20 days.
- \* Storage and use the blood pressure monitor at the cool, dry and ventilated environment. Avoid to approach to the fire and the heat source, or it will cause the battery explode.
- \* Only can use the Transtek's authorized AC Adaptor (Model: BLJ06L060100P-U) to charge the power. You cannot use the blood pressure monitor during the process of charging.
- \* During the process of charging, the blood pressure monitor display When the charging is finished, please pull the plug in time.
- \* When charging, shall not touch charging connector and the patient simultaneously.

### ⚠ CAUTION

- Do not attempt to replace your blood pressure monitor's battery. It is built-in and not changeable.
- Only charge the battery in accordance with the user instructions supplied with the blood pressure monitor.
- Avoid charging your blood pressure monitor in extremely high or low temperatures.
- Do not use your blood pressure monitor while you are charging it.
- Do not attempt to disassemble the blood pressure monitor or force open the built-in battery.
- Do not clean the blood pressure monitor when it is being charged. Always unplug the charger first before cleaning the blood pressure monitor.
- Do not dispose of your blood pressure monitor in a fire. The battery could explode causing injury or death.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

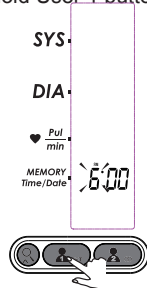
## ♥ Setting the Time, Date and Unit

To ensure the stored measurement result has correct time record, please set time and unit before device is used.

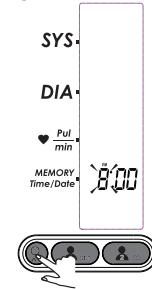
Before use, switch the button to the "ON" side to turn on the monitor.

Note: If the button is on the "OFF" side, there is no reaction when you press any button.

(1) When the monitor is off, press and hold User 1 button for 3s to enter Time Setting Mode.



(2) As pictured in the right, the blinking numeral representing [HOUR]. Press "Query" button to change the numeral. Each press will increase the numeral by one in a cycling manner.



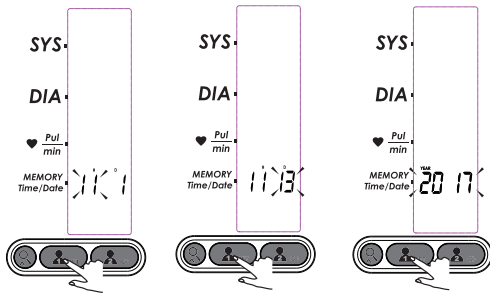
(3) Press "User 1" button again to confirm [HOUR]. Then the numeral representing [MINUTE] blinks.



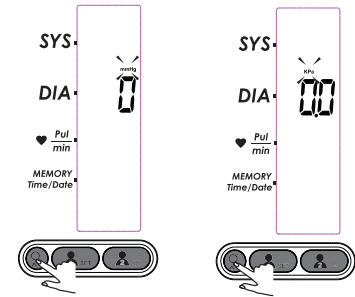
(4) Repeat steps 2 and 3 to confirm [MINUTE].



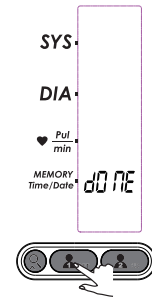
(5) Repeat steps 2 and 3 to confirm [MONTH], [DAY] and [YEAR].



(6) Repeat steps 2 and 3 to confirm the measurement unit.




(7) After confirming the measurement unit, the LCD will display "dOnE" and the monitor will shut off.








## ♥ Pair up the Blood Pressure Monitor with Your Device



(1) Turn on Bluetooth and the app. Enter to “MedM Health” then press “My Setting” , the app will display My Setting tap.

(2) Press “My devices”, the app will display My Devices tap.

(3) When the monitor is off, press “User 1” to measure, the  will show and  will blink after measuring, then the data are transmitting.

(4) Press **Add New** in “MedM Health” to research, then select “808A0” to connect the monitor.

(5) After selecting the device, select the “account” and return; then enter device to “Set device” . When the app displays “Receive data automatically”, please choose “Yes”.

(6) When the monitor is connected, the data will transmit to “MedM”, if transmitted successfully, the symbol  and  will disappear, then the monitor turns off; or not, it will turn off within one minute.

### Bluetooth Module No. : LS51802

Frequency Range	2.402 - 2.480 GHz	Supply Voltage	1.8-3.6 V
Output Power Range	≤ 0 dBm	Transmitting Distance	10 meters

#### List of compatible devices:

For iOS devices:

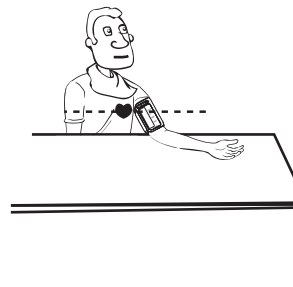
The operating system must be iOS 8 or more, such as iPhone 4S, iPhone 5/5C/5S, iPhone 6/6 Plus and so on.

For Android devices:

The operating system must be 4.3 or more.

## ♥ Tie the Cuff

1. Remove all accessories (watch, bracelet, etc) from your arm. If your physician has diagnosed you with poor circulation in your arm, use the other one.
2. Roll or push up your sleeve to expose the skin.
3. Apply the cuff to your arm with your palm facing up.
4. Position the edge of the cuff about 2cm~3cm from elbow.
5. Fasten the cuff around your arm, leaving no extra room between the cuff and your skin. If the cuff is too loose, the measurement will not be accurate.
6. Sit comfortably with your tested arm resting on a flat surface. Place your elbow on a table so that the cuff is at the same level as your heart. Turn your palm upwards. Sit upright in a chair, and take 5-6 deep breaths.
7. Helpful tips for Patients, especially for Patients with Hypertension:
  - Rest for 5 minutes before first measuring.
  - Wait at least 3 minutes between measurements. This allows your blood circulation to recover.
  - Take the measurement in a silent room.
  - The patient must relax as much as possible and do not move and talk during the measurement procedure.
  - The cuff should maintain at the same level as the right atrium of the heart.
  - Please sit comfortably. Do not cross your legs and keep your feet flat on the ground.
  - Keep your back against the backrest of the chair.
  - 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 Measurement

When the monitor is off, press User 1 button to turn on the monitor and it will finish the whole measurement, and then save the measure data for User 1.  
The same to the User 2. (Take User 1 for example.)

(Note: Select the same user on your app and BPM to take the measurement, or the measurement data won't be transmitted to the app.)

(1) When the monitor is off, press the User 1 button to turn on the monitor.



LCD display



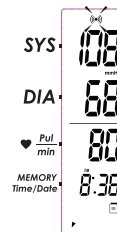
Adjust to zero.



Inflating and measuring.



Display and save the results.  
The data transmission will proceed.





(2) Press User 1 button to power off, otherwise it will turn off within one minute.



Tips:

- When finish the whole measurement, press another user button, the blood monitor will begin measuring again.
- Maximum 60 records are both for user 1 and user 2.

### ⚠ CAUTION

- With LS808-BS successfully pair-up with your mobile device, the measurement data will be automatically transmitted to your mobile device via Bluetooth.
- The symbol  will disappear after successful data transmission, and you may check your personal health data stored in your mobile device.
- If the data transmission fails, the symbol  will remain. The pending measurement data will be transmitted to your mobile device when next measurement is complete.

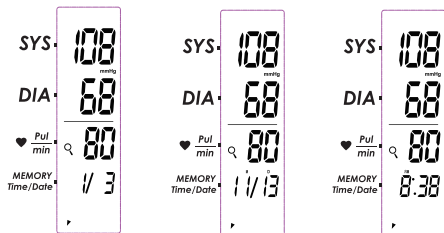
## ♥ Recall the Records

(1) When the monitor is off, press “Query” button to access the memory.

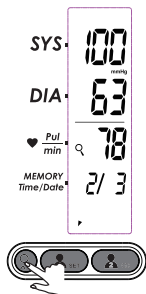


(2) The LCD will display the latest measuring result of the user ID which completes the last measurement.

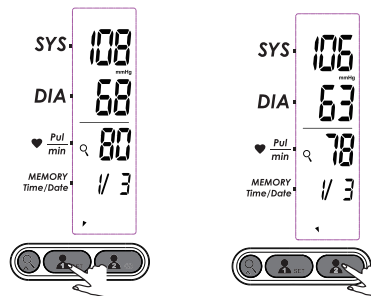
The record number, measuring date and measuring time will be displayed alternatively.



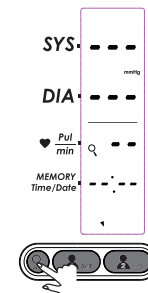
(3) Press “Query” button to rotate the history records.



(4) When in the memory mode, press the User 1 button to recall the measurement history of User 1, or press the User 2 button to recall the measurement history.



(5) When no history stored for the specific user in the monitor, press “Query” button and the LCD will display as pictured to the right.



### ⚠ CAUTION

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

(1) When under the query mode, press and hold “Query” button for 3 seconds to clear the memory.



(2) When the LCD display “dEL ALL”, press “Query” button to confirm.



(3) The LCD will display “dEL dONE” and then shut off.



(4) If you wish to stop clearing the memory, you may press the other button, rather than “Query” button to turn off the monitor, or wait until the monitor shuts off.

### ⚠ CAUTION

- Interference may occur in the vicinity of equipment marked with the following symbol (⚡). And LS808-BS may interfering vicinity electrical equipment.
- Sensitive people, including pregnant women pre-eclamptic and those who implanted medical electronic instruments, should avoid using the unit whenever possible.
- Keep the monitor at least 20 centimeters away from the human body (especially the head) when the data transmission is proceeding after 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.

## ♥ 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

To obtain the best performance, please follow instructions below.



Put in a dry place and  
avoid the sunshine



Avoid immersing it in the water.  
Clean it with a dry cloth in case.



Avoid intense shaking and collisions.



Avoid dusty environment and  
unstable temperature surrounding



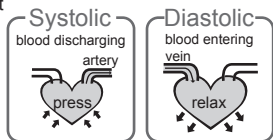
Use the slightly damp cloth  
to remove the dirt.



Avoid washing the cuff

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

This chart reflects blood pressure categories defined by American Heart Association.

Blood Pressure Category	Systolic mmHg (upper#)		Diastolic mmHg (lower#)
Normal	less than 120	and	less than 80
Prehypertension	120-139	or	80-89
High Blood Pressure (Hypertension) Stage 1	140-159	or	90-99
High Blood Pressure (Hypertension) Stage 2	160 or higher	or	100 or higher
Hypertensive Crisis (Emergency care needed)	Higher than 180	or	Higher than 110

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

SYS	135 mm Hg
DIA	85 mm Hg

#### CAUTION

Please consult a physician if your measuring result falls outside 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 appear.

#### CAUTION

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.



What you need to pay attention to when you measure your blood pressure at home:

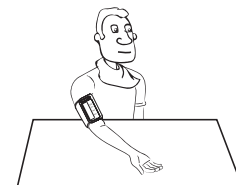
- If the cuff is tied properly.
- If the cuff is too tight or too loose.
- If the cuff is tied on the upper arm.
- If you feel anxious.
- Taking 2-3 deep breaths before beginning will be better for measuring.
- Advice: Relax yourself for 4-5 minutes until you calm down.

### 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.



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.

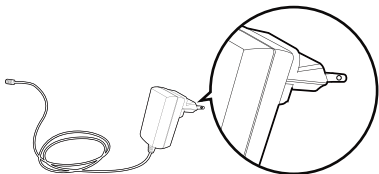
PROBLEM	SYMPTOM	CHECK THIS	REMEDY
<b>No power</b>	Display will not light up.	Power is exhausted.	Charge the power
		AC adaptor is inserted incorrectly.	Insert the AC adaptor tightly
<b>Low batteries</b>	Display is dim or shows  +Lo	Power is low.	Charge the power
<b>Error message</b>	E 1 shows	The cuff is not secure.	Refasten the cuff and then measure again.
	E 3 shows	The pressure of the cuff is excess.	Relax for a moment and then measure again.
	E 10 or E 11 shows	The monitor detected motion, talking or the pulse is too poor while measuring.	Relax for a moment and then measure again.
	E 20 shows	The measurement process does not detect the pulse signal.	Loosen the clothing on the arm and then measure again.
	E 21 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.
<b>Warning message</b>	"out " shows	Out of measurement range	the measurement result is out of the measurement range (SYS: 60mmHg to 230mmHg; or DIA: 40mmHg to 130mmHg; or Pulse: 40-199 pulse/minute)

<b>Power supply</b>	3.7V 1000mAH Built-in rechargeable li-polymer battery, 6V  1A AC Adaptor
<b>Display mode</b>	Blue LCD with White Backlight V.A.= 86.1mm(L) x24mm(W)
<b>Measurement mode</b>	Oscillographic testing mode
<b>Measurement range</b>	Rated cuff pressure: 0mmHg-299mmHg(0kPa ~ 39.9kPa) Measurement pressure: SYS: 60mmHg~230mmHg (8.0kPa~30.7kPa) DIA: 40mmHg~130mmHg (5.3kPa~17.3kPa) Pulse value: (40-199)beat/minute
<b>Accuracy</b>	Pressure: 5°C-40°C within±3mmHg(0.4kPa) Pulse value:±5%
<b>Normal working condition</b>	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
<b>Storage &amp; transportation condition</b>	Temperature:-20°C to +60°C A relative humidity range of ≤ 93%, non-condensing, at a water vapour pressure up to 50hPa
<b>Measurement perimeter of the arm</b>	About 22cm-32cm or 22cm-42cm
<b>Weight</b>	Approx.285g
<b>External dimensions</b>	Approx. 130.9mm×73mm×29.4mm
<b>Attachment</b>	AC Adaptor, user manual
<b>Mode of operation</b>	Continuous operation
<b>Degree of protection</b>	Type BF applied part
<b>Protection against ingress of water</b>	IP22: The first number 2: Protected against solid foreign objects of 12,5mm Φ and greater. The second number: Protected against vertically falling water drops when enclosure tilted up to 15°. Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical.
<b>Software version</b>	A01
<b>Device classification</b>	Battery Powered Mode: Internally Powered ME Equipment AC Adaptor charged Mode: Class II ME Equipment

WARNING: No modification of this equipment is allowed.

## ♥ Authorized Component

1. Please use the TRANSTEK authorized adaptor



Adaptor

Type: BLJ06L060100P-U

Input: 100-240V, 50-60Hz, 0.2Amax

Output: 6V --- 1000mA

## ♥ Contact Information

For more information about our products, please visit [www.transtek.cn](http://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 B, No.105 ,Dongli Road, Torch Development District, Zhongshan,528437,Guangdong,China

## ♥ Complied Standards List

<b>Risk management</b>	EN ISO 14971:2012 / ISO 14971:2007 Medical devices - Application of risk management to medical devices
<b>Labeling</b>	EN ISO 15223-1:2016 / ISO 15223-1:2016 Medical devices. Symbols to be used with medical device labels, labelling and information to be supplied. Part 1 : General requirements
<b>User manual</b>	EN 1041:2008 Information supplied by the manufacturer of medical devices
<b>General Requirements for Safety</b>	EN 60601-1:2006+A1:2013/ IEC 60601-1:2005+A1:2012 Medical electrical equipment - Part 1: General requirements for basic safety and essential performance EN 60601-1-11:2015/ IEC 60601-1-11:2015 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
<b>Electromagnetic compatibility</b>	EN 60601-1-2:2015/ IEC 60601-1-2:2014 Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic disturbances - Requirements and tests
<b>Performance requirements</b>	EN ISO 81060-1:2012 Non-invasive sphygmomanometers - Part 1: Requirements and test methods for non-automated measurement type EN 1060-3:1997+A2:2009 Non-invasive sphygmomanometers - Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems IEC 80601-2-30:2009+A1:2013 Medical electrical equipment- Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers
<b>Clinical investigation</b>	EN 1060-4:2004 Non-invasive sphygmomanometers - Part 4: Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers ISO 81060-2:2013 Non-invasive sphygmomanometers - Part 2: Clinical validation of automated measurement type
<b>Usability</b>	EN 60601-1-6:2010+A1:2015/IEC 60601-1-6:2010+A1:2013 Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard: Usability IEC 62366-1:2015 Medical devices - Part 1: Application of usability engineering to medical devices
<b>Software life-cycle processes</b>	EN 62304:2006/AC: 2008 / IEC 62304: 2006+A1:2015 Medical device software - Software life-cycle processes
<b>Bio-compatibility</b>	ISO 10993-1:2009 Biological evaluation of medical devices- Part 1: Evaluation and testing within a risk management process ISO 10993-5:2009 Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity ISO 10993-10:2010 Biological evaluation of medical devices - Part 10: Tests for irritation and skin sensitization



## ♥ FCC Statement

FCC ID: OU9LS808-B-S

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 product needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided, and this unit can be affected by portable and mobile RF communications equipment.

2)\* Do not use a mobile phone or other devices that emit electromagnetic fields, near the unit. This may result in incorrect operation of the unit.

3) Caution: This unit has been thoroughly tested and inspected to assure proper performance and operation!

4)\* Caution: This machine should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, this machine should be observed to verify normal operation in the configuration in which it will be used.

Table 1

Guidance and manufacturer's declaration – electromagnetic emissions		
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Table 2

Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	power supply lines: ±2 kV input/output lines: ±1 kV	power supply lines: ±2 kV	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	line(s) to line(s): ±1 kV line(s) to earth: ±2 kV 100 kHz repetition frequency	line(s) to line(s): ±1 kV 100 kHz repetition frequency	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0%U <sub>r</sub> ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0%U <sub>r</sub> ; 1 cycle and 70%U <sub>r</sub> ; 25/30 cycles Single phase: at 0° 0% U <sub>r</sub> ; 300 cycle	0% U <sub>r</sub> ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315° 0% U <sub>r</sub> ; 1 cycle and 70% U <sub>r</sub> ; 25/30 cycles Single phase: at 0° 0% U <sub>r</sub> ; 300 cycle	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50Hz/60Hz) magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U <sub>r</sub> is the a.c. mains voltage prior to application of the test level.			

Table 3


Guidance and manufacturer's declaration – electromagnetic immunity			
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	150 kHz to 80 MHz: 3 Vrms 6Vrms (in ISM and amateur radio bands) 80% Am at 1kHz	150 kHz to 80 MHz: 3 Vrms 6Vrms (in ISM and amateur radio bands) 80% Am at 1kHz	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated from the equation appropriate for the frequency of the transmitter. Recommended separation distances: $d=0.35\sqrt{P}$ ; $d=1.2\sqrt{P}$
Radiated RF IEC 61000-4-3	10V/m, 80% Am at 1kHz	10V/m, 80% Am at 1kHz	80 MHz to 800 MHz: $d=1.2\sqrt{P}$ 800 MHz to 2.7 GHz: $d=2.3\sqrt{P}$ where, P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer, d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<p>a Field strengths from fixed transmitters, such as base stations for radio (cellular / cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the device.</p> <p>b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.</p>			

Table 4

Recommended separation distances between portable and mobile RF communications equipment and the device.			
The device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the device as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 3.5\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.7 GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance $d$ in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Table 5

Guidance and manufacturer's declaration - electromagnetic immunity								
The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device, should assure that it is used in such an environment.								
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment)	Test Frequency (MHz)	Band a) (MHz)	Service a)	Modulation b)	Modulation b) (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)	
	385	380-390	TETRA 400	Pulse modulation b) 18Hz	1.8	0.3	27	
	450	380-390	SMRS 460, FRS 460	FM c) ± 5kHz deviation 1kHz sine	2	0.3	28	
	710	704-787	LTE Band 13, 17	Pulse modulation b) 217Hz	0.2	0.3	9	
	745							
	780							
	810	800-960		Pulse modulation b) 18Hz	2	0.3	28	
	870							
	930							
	1720							
	1845	1700-1990		Pulse modulation b) 217Hz	2	0.3	28	
	1970							
	2450	2400-2570		Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0.3	28
	5240	5100-5800	WLAN 802.11 a/n		Pulse modulation b) 217 Hz	0.2	0.3	9
5240								
5785								
NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.								
a) For some services, only the uplink frequencies are included. b) The carrier shall be modulated using a 50% duty cycle square wave signal. c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.								
The MANUFACTURER should consider reducing the minimum separation distance, based on RISK MANAGEMENT, and using higher IMMUNITY TEST LEVELS that are appropriate for the reduced minimum separation distance. Minimum separation distances for higher IMMUNITY TEST LEVELS shall be calculated using the following equation: $E = \frac{E}{d} \sqrt{P}$								
Where P is the maximum power in W, d is the minimum separation distance in m, and E is the IMMUNITY TEST LEVEL in V/m.								