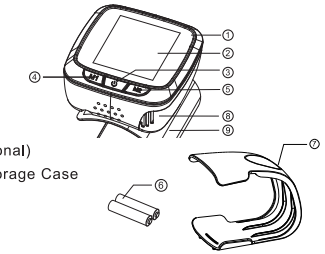
WRIST DIGITAL BLOOD PRESSURE MONITOR

scian

INSTRUCTION MANUAL
Model:LD-752

PARTS AND COMPONENTS

1. Main Body
2. Display
3. Button ' ⏻ '
4. Button 'M1'
5. Button 'M2'
6. Batteries (Optional)
7. Wrist Pillow/Storage Case
8. Battery cover
9. Wrist cuff



SYMBOLS

Symbols	Meaning
	Manufacturer
EC REP	Authorized Representative in the European community
	Symbol for the marking of electrical and electronics devices according to Directive 2012/19/EU. The device, accessories and the packaging have to be disposed of waste correctly at the end of the usage. Please follow Local Ordinances or Regulations for disposal.
CE 0123	CE marking in conformity with EC directive 93/42/EEC
	Keep dry
	Attention, consult accompanying documents
	Type BF Applied Part
⏻	Stand by

TABLE OF CONTENT

GENERAL

This instruction manual is intended to assist the user for safe and efficient operation of the automatic digital blood pressure monitor (hereinafter: device) model LD-752.The device must be used in accordance with the procedures described in the manual. It is important to read and understand the entire manual, especially the section **< IMPORTANT SAFETY INSTRUCTIONS >.**

This device is intended for the non-invasive measurement of systolic and diastolic arterial blood pressure and pulse rate in adults (age 15 and above).

CAUTION:

1. Do not use this device on infants or persons who cannot expressthein intentions.

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

3. The patient is an intended operator. But persons who suffer from arrhythmia, diabetes, cardiovascular problems or who have had a stroke should consult your doctor before using the device.

PRINCIPLE OF OPERATION

This device adopts the oscillometric technology with Fuzzy Algorithm to measure the arterial blood pressure and pulse rate. The cuff is wrapped around the arm and automatically inflated by the air pump. The sensor of the device catches weak fluctuation of the pressure in the cuff produced by extension and contraction of the artery of the arm in response to each heartbeat. The amplitude of the pressure waves is measured, converted in millimeters of the mercury column, and is displayed by digital value.

ATTENTION: This device can not provide reasonable accuracy if used or stored in the temperature, humidity or altitude beyond the range stated in the section <SPECIFICATIONS> of this manual.

NEW TECHNOLOGIES USED

Fuzzy Algorithm is the processing algorithm, taking into account the specialty of individual heartbeats, which provides higher accuracy of measurement.

Software version: V1.1

IMPORTANT SAFETY INSTRUCTIONS

It is necessary to know that arterial blood pressure is subjected to sharp fluctuations. The level of the arterial blood pressure depends on many factors. Generally arterial blood pressure is lower in summer and higher in winter. Arterial blood pressure changes with atmospheric pressure and is affected considerably by many factors, e.g. physical loads, emotional excitability, stress, meals, etc. Medicines, drinking, smoking affect greatly the level of an individual's blood pressure. Blood pressure does vary with age and individuals, and it is recommended to write down the readings from blood pressure records daily, then you can check with your doctor to find out what is a "normal blood pressure measurement" for you.

Please read the instruction manual carefully before using this device, especially < Important safety instructions>, it can help you use the device correctly and safely!

Please keep the instruction manual for future use. For specific information about your own blood pressure, consult your physician.

Warnings

• Consult your physician if you suffer from illnesses prior to using the device.
• The device is not suitable for persons who have electrical implants.
• If you had a mastectomy (breast amputation) do not use this blood pressure monitor on the arm on the side of the mastectomy.
• Pregnant women should only measure their own blood pressure in consultation with their doctor, since the readings may be changed with pregnancy.
• Do not service or maintain the cuff while in use with patient.
• Do not use this blood pressure monitor on any wrist where intravascular access or therapy (such as an intravenous drip or a blood transfusion), or an arteriovenous shunt (A-V shunt) is present. The temporary interference to blood flow by the blood pressure measurement could result in injury.
• Do not use the device with other medical electrical (ME) equipment simultaneously.
• Do not use the device in the area the HF surgical equipment, MRI, or CT scanner exists, or in the oxygen rich environment.
• Do not use a mobile phone or other devices that emit electromagnetic fields, near the device. This may result in incorrect operation of the device.
• Never use any accessories or parts from other manufacturers. Using such accessories or parts could cause a hazardous situation for the user or damage to the device.
• Do not modify this equipment without authorization of the manufacturer.
• The batteries used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat or incinerate.
• Keep equipment away from fire and heat sources to prevent fire or explosion.
• Please keep the unit out of reach of infants, children or pets, since inhalation or swallowing of small parts can be dangerous or even fatal.
• Please pay attention that the continuous CUFF pressure due to connection tubing kinking will cause a harmful injury.
• It is quite normal that two measurements taken in quick succession may produce significantly different results, because too frequent and consecutive measurements could cause disturbances in blood circulation and injuries.

Cautions

• Use this device under the right environmental conditions as indicated in this user manual. If not, this could affect the performance, lifetime of the device and measurement results.
• Only use this device for its intended purpose as described in this user manual.
• Do not confuse self-monitoring with self-diagnosis. This device allows you to monitor your blood pressure. Do not begin or end medical treatment based on the measurement results. Always consult your physician for treatment advice.
• Do not take any therapeutic measures on the basis of a self-measurement. Never change prescribed medication without consulting your physician. Consult your physician if you have any questions about your blood pressure.
• If you are taking medication, consult your physician to determine the most appropriate time to measure your blood pressure.
• Consult the physician if measurement errors occur in children or persons with arrhythmia.
• The pulse display is not suitable for monitoring the frequency of cardiac pacemakers.
• Common arrhythmias (such as atrial or ventricular premature beats or atrial fibrillation) and peripheral artery disease / arteriosclerosis can affect the accuracy of this blood pressure monitor. Please consult your physician how to best use this blood pressure monitor if you suffer from any of these conditions. Blood pressure measurement is not suitable in cases of serious arteriosclerosis (hardening of the arteries).
• The effectiveness of this blood pressure monitor has not been established in pregnant women.
• Always check the device and cuff before you use it. Do not use the device or cuff if one of them is damaged, because this may cause injury.
• This device is not intended for use on extremities other than the arm or for functions other than obtaining a blood pressure measurement.
• Do not attach the cuff on the same wrist on which other monitoring medical electrical equipment is attached simultaneously, because this could cause temporary loss of function of those simultaneously-used monitoring medical electrical equipment.
• Never attach the cuff on injured skin, an injured wrist or a wrist under medical treatment as this can cause further injury.
• Do not forcibly crease the wrist cuff excessively.
• Do not use the device in case of existing polyester or nylon material allergies.
• This device is not suitable for continuous monitoring during medical emergencies or operations.
• This device cannot be used with HF (High Frequency) surgical equipment at the same time.
• This device is not washable. Never immerse the device in water and do not rinse it under the tap.
• This device should keep dry to prevent from moisture.
• The equipment is not AP/APG equipment and is not suitable for use in the presence of a flammable anesthetic mixture with air, with oxygen or nitrous.
• To avoid measurement errors, do not use the device near strong electromagnetic fields, radiated interference signal or electrical fast transient/burst signal. For example magnets, radio transmitters, microwave ovens.
• If this device was stored in low temperature, leave it in room temperature for at least 1 hour.
• Repeated measurements with an interval of 3 minutes are recommended, so you can calculate the average to get a more accurate measurement. An internal of 3 minutes can also ensure that the operation of the device does not result in prolonged impairment of the circulation of the blood.
• Atherosclerosis patients may require longer interval (10-15minutes) as elasticity of patient's vessels decreases significantly with the disease.10-15minutes interval is also applicable for patients suffering from diabetes for a long period of time.
• Dispose of the device, components and optional accessories according to applicable local regulations. Unlawful disposal may cause environmental pollution.
• Connecting electrical equipment to mso effectively leads to creating a ME system, and can result in a reduced level of safety.

CLASSIFICATION

• ME EQUIPMENT not intended for use in an oxygen rich environment or in the presence of flammable mixers.
• Internally powered equipment.
• Type BF applied part, recognize the cuff as applied part.

BATTERY INSTALLATION


Fig.1

1. Open the battery cover and install two 'AAA' type batteries into the battery compartment as indicated. Make sure that the polarity is correct as in Fig.1;
2. Close the battery compartment cover.

● Replace the batteries when the replacement indication " ▭ " appears in the display or nothing after ' ⏻ ' button is pressed;
● Batteries in this kit are intended to check work capacity of the device and the life-span of the batteries can be shorter than the recommended;
● Use R03, LR03 or AAA alkaline batteries, do not use rechargeable battery;
● Only same type batteries are allowed to use together. Replace all batteries simultaneously;
● If the device is to be unused for long time, please take out the batteries;
● Don't leave the worn batteries in the device.

CORRECT POSTURE FOR MEASUREMENT

Sit at the table and let the table support your arm as you take the measurement as in Fig.2, or you can use arm pillow to support your arm as in Fig3. Wrap the wrist cuff around the left wrist as shown in the attached to the wrist securely with display facing the user. If your sleeve restricts blood circulation of your wrist, you roll your sleeve up so as to release in such restriction . Please take off your clothes to get accurate measurement if necessary. If measurement on your left wrist is difficult, you can use right wrist for measurement.


Fig.2


Fig.3

NOTES:

Make sure that the wrist is at approximately the same height as your heart, and that the forearm is extended naturally with palm up on the table as in Fig.4.

If the cuff is too high above your heart, your blood pressure will read artificially low. If the cuff is too low below your heart, your blood pressure will be artificially high.

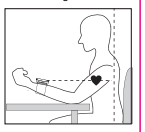


Fig.4

SETTING THE DATE AND TIME

The function provides accurate measuring time for each measurement. To get an accurate date and time, the user should preset the date and time correctly before the first use of this device.

The operation procedure for presetting Date/Time is as follows:

1. When the device is connected to power supply at first, the display will show as in Fig.5;

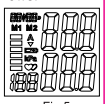


Fig.5

2. Press and hold the button 'M1', then press the button ' ⏻ ', and the year number flashes as in Fig.6;
3. Press button 'M1',or 'M2' to subtract or add the number, and press button ' ⏻ ' for confirmation;
4. When the year setup is finished, the month number will flash automatically. Please follow the same instruction as above to set month, date and time;

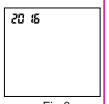


Fig.6

5. Press button ' ⏻ ' to finish the setup. If you want to change the date and time, please repeat procedure 2,3,4.

Annotation:

When under the mode of Date/Time setting without any operation, the device will automatically return to standby mode after one minute.

CARRY OUT A MEASUREMENT

1. Wrap the wrist cuff around your left wrist. See **< CORRECT POSTURE FOR MEASUREMENT>.**
2. Before the measurement, take 3~5 times deep breathe and relax yourself. Don't talk or move your arm;
3. Press button ' ⏻ ', Screen display the current time date as in Fig.7.
4. Press button ' ⏻ ' again and all symbols will appear on display in 2 seconds. Then '0 mmHg' will appear on the screen. Pump begins to inflate with display showing the reading of pressure. Generally the pressure will reach 190 mmHg as in Fig.8;


Fig.7

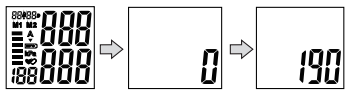


Fig.8

5. The pump stops inflating and the pressure begins to decrease gradually, during which the user's blood pressure and pulse will be calculated as in Fig.9;
6. The air in the wrist cuff will deflate quickly and the blood pressure reading, pulse reading will show in the display. Then the icon 'M1 M2' will flash to remind the user to record the reading as in Fig.10;
7. Press button 'M1' or button 'M2' to record the reading in the corresponding memory. Moreover the measurement time will be displayed on the screen alternately as in Fig.11. If the user does not press button, the reading won't record;
8. Press the button '⏻' to turn off the device. Please rest for at least 3 minutes prior to another measurement. If the power supply is not switched off and the device is unused for 3 minutes, the device will be switched off automatically with voice prompt.


Fig.9


Fig.10


Fig.11

Caution:
Make sure, you are in a comfortable, relaxed position with leg-uncrossed, feet flat on the floor, back and arm supported, middle of the cuff at the level of the right atrium of the heart and do not move or constrict your muscles and talk during measurement. Use a cushion to support your arm if necessary. Keep position in normal use.

RAPID DEFLATION DURING MEASUREMENT
If you do not feel well during measurement or want to stop the measurement for some reason, you can press the '⏻' button. The device will quickly release the air in wrist cuff and the device will be returned to standby mode.

FUNCTION OF MEMORY

MEMORY RECALL
1. The device can store 90 sets of readings respectively in 'M1' and 'M2', and will automatically calculate the average value of the latest 3 readings for 'M1' and 'M2'. When the memory is full (90 sets of readings are stored), the oldest reading will be replaced by a new one. Readings in the memory will not clear away even if power supply is removed;
2. When a measurement is finished or the device is on stand by, the user can press button 'M1' or 'M2' to recall memory. Press button 'M1' or 'M2', the display will show the average value of the latest 3 readings as in Fig.12
3. Press again, the display will show '01', which means the latest reading, then turns to another screen to show readings and measuring time as in Fig.13.
4. Press again, the display will show '02', which means the seconds to the latest reading.


Fig.12

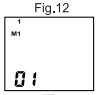


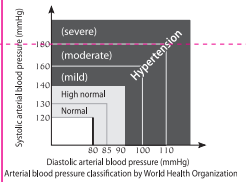
Fig.13

MEMORY CLEARANCE
When a measurement is finished or when the device is on stand by, hold down button 'M1' or 'M2' for at least 5 seconds, the display will show 'CLR' which means the stored reading for 'M1' or 'M2' are removed as in Fig.14.

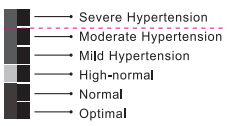

Fig.14

WHO BLOOD PRESSURE CLASSIFICATION

Standards for assessment of high or low blood pressure, regardless of age, have been established by World Health Organization(WHO) as show in the chart as below:



Arterial blood pressure classification by World Health Organization



The indicator display a segment, based on the current data, corresponding to the WHO classification.
For example, if your blood press is 145mmHg (systolic pressure), 88mmHg (diastolic pressure), according to the world health organization standard, your blood pressure level is Mild Hypertension.

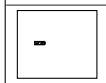
Note:
1. If the systolic blood pressure and diastolic blood pressure fall into different categories, the higher value should be taken for classification.
2. The WHO blood pressure classification indication in the device is only a reminder, it can not be regarded as the final diagnosis.

IRREGULAR HEARTBEAT DETECTOR

Mode LD-752 digital blood pressure monitor provides a blood pressure and pulse rate measurement even when an irregular heartbeat occurs. When the device detects the irregular heartbeat or any excessive body movement during measurement, the '❤' icon will display in the LCD. It is important that you are relaxed, remain still and do not talk during measurement.

Note: We recommend contacting your physician if you see this' ❤ 'indicator frequently

ERROR AND LOW BATTERY INFORMATION

INDICATION	POSSIBLE REASON	CORRECTION METHODS
	The wrist cuff is put on wrongly. Arm/hand movement or talking occurred during measurement.	Make sure that the wrist cuff is put on correctly and repeat the measurement. Entirely follow the recommendations in this manual and repeat the measurement.
	The batteries are weak	Replace all 2 batteries with new ones

TROUBLESHOOTING

SYMPTOM	CHECK POINT	REMEDY
No display after installing the batteries.	The batteries have run down. The polarity of installed batteries is wrong. The contact of battery compartment is polluted.	Replace all the batteries with new ones. Install the batteries correctly. Clean the battery terminals with dry cloth.
Inflation stops and re-inflates later.	The automatic inflation for ensuring correct measurement. Did you talk or move your arm (or hand) during measurement?	See<**AUTOMATIC INFLATION**>. Keep quiet and silent during the measurement.
The reading is extremely low or high.	Is the wrist cuff at the same level as the heart? Is the wrist cuff wrapped right? Did you strain your arm (or hand) during measurement?	Make sure that your posture is right. Wrap the wrist cuff correctly. Relax during measurement.
Pulse rate is too low or too high.	Did you talk or move your arm (or hand) during measurement? Did you talk or move your arm (or hand) during measurement?	Keep quiet and silent during the measurement. Keep quiet and silent during the measurement.
The batteries are run down soon.	Did you take measurements right after exercise? Faulty batteries are used.	Take measurement again after resting for more than 5 minutes. Use alkaline batteries of known manufacturers.

MAINTENANCE, STORING, REPAIR AND RECYCLING

1. It's necessary to protect this device against high moisture, direct sunlight, shock, solvent, alcohol and gasoline.
2. Remove the batteries if the device is being stored for a long time, and keep the batteries far away from children.
3. Keep the wrist cuff away from sharp objects and don't extend or twist the cuff.
4. This device is not washable. Never immerse the device in water and do not rinse it under the tap. Use only soft and dry cloth to clean the device.
5. Do not serve or maintain the cuff and the device when in use with patient.
6. The cuff is sensitive and must be handled with care. You can clean the cuff with damp cloth for daily maintenance.
To avoid cross infection when sharing the cuff, you can sterilize the fabric cover of the cuff with tampons moistened by 3% solution of hydrogen dioxide. After long use there will be a partial discoloration on the fabric surface of the cuff. Do not laundry the cuff as well as ironing with a hot flatiron.
WARNING: Under no circumstances may you wash the inner bladder!
7. Since neither the device nor batteries are household waste, follow your local recycling rules and dispose them at an appropriate collection site.
8. Do not open the device, or delicate electrical components as an intricate air unit could be damaged. If you can not fix the problem using the troubleshooting instruction, please request service from your dealer.
WARNING: Do not repair the device without manufacturer's authorization. Do not carry out maintenance when using the device.

Caution:
Generally, we recommend the device should be inspected every 2 years and utilize the manometer mode to verify the accuracy of the manometer at least at 50mmHg and 200mmHg after maintenance and repair. Please contact your dealer for maintenance.

SPECIFICATIONS

Model	LD-752
Size	66(L)×70(W) ×30(H)mm
Weight	Approximately 110g without batteries
Measuring method	Oscillometry
Extreme Pressure/ cuff pressure	290mmHg
Measuring range	40 to 180mmHg(DIA,diastolic pressure) 60 to 260mmHg(SYS,systolic pressure) 40 to 160 beats/minute (PUL,pulse rate)
Measuring accuracy	±3mmHg for static pressure ±5% of the reading for the pulse rate
Inflation	Automatic by the pump
Rapid deflation	Automatic electronic valve
Batteries	Optional component , 2'AAA' ×1.5V
Operation temperature and humidity, air pressure	+10℃ to + 40℃, 85% and below 800hPa to 1060hPa
Transport and storage temperature and humidity, air pressure	-20℃ to + 50℃, 85% and below 500hPa to 1060hPa
Cuff size	Applicable for wrist circumference 12.5~20.5 cm
Complete kit	Main body, wrist cuff, 2×AAA batteries(optional), instruction manual, gift box, warranty card, storage case
Pollution Degrees	Degrees 2
Overvoltage category	Category II
High Altitudes (m)	≤2000m

HONSUN (NANTONG) Co., Ltd.
Address:No.8 Tongxing Road Economic & Technological Development Area 226009 Nantong City PEOPLE'S REPUBLIC OF CHINA

EC REP **SHANGHAI INTERNATIONAL HOLDING CORP. GMBH (EUROPE)**
Address: Eiffestrasse 80, 20537 Hamburg GERMANY

MANUFACTURER'S DECLARATION

Compliance information for each EMC test

Electromagnetic Emission (Home Healthcare Environment)

Emission test (IEC60601-1-2:2014)	Compliance
Radiated RF emissions	CISPR 11 Group 1 Class B

Compliance information for each EMC test

Declaration - Electromagnetic Immunity (Home Healthcare Environment)

Immunity test	IEC 60601 test level	Compliance level
Radiated RF IEC61000-4-3	10 V/m 80 MHz to 2.7GHz also meet the requirement of table 9 of IEC 60601-1-2 :2014.	10 V/m 80 MHz to 2.7GHz also meet the requirement of table 9 of IEC 60601-1-2 :2014.

Declaration - Electromagnetic Immunity (Home Healthcare Environment)

Immunity test	IEC 60601 test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air

Compliance information for each EMC test

Declaration - Electromagnetic Immunity (Home Healthcare Environment)

Immunity test	IEC 60601 test level	Compliance level
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	30A/m	30A/m

- Use of this equipment adjacent to or stacked with other equipment should be avioded 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.
- Portable RF communications equipment(including peripherals such as antenna cables and external antennas) should be used no closer than 30cm(12 inches to any part of this devie, inluding cables specificed by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- If the essential performance is lost or degraded, additional measures are necessary,such as reorienting or relocating the device.

QUALITY GUARANTEE

MODEL		
Warranty period	Two years from purchasing date	
Purchasing date		
Purchasing shop	Name:	Telephone:
	Address:	
Customer	Name:	Telephone:
	Address:	

1. Warranty for this automatic digital blood pressure monitor is 24 months from the date of purchase. The 24 months warranty excludes the monitor cuff. The cuff is warranted for 12 months.
2. The warranty obligations are prescribed for by warranty certificate for buyer.
3. The addresses of organizations for guarantee maintenance are present in the warranty certificate.

WARNING
Do not modify this equipment without authorization of the manufacturer.
All major maintains on the device must be performed by an authorized service center or distributor. No use-serviceable parts inside, before servicing to authorized representative or manufacturer.

DECLARATION:
When technical information for user or service personnel requirements is not in the scope of confidentiality of the Company, the Company committed to provide information disclosure in accordance with procedure, including circuit diagrams and parts lists, and other related type technology information that do not involve commercial secrets may be disclosed. Access to information channels and procedures, please contact your dealer or manufacturer.

REQUIRING RECORD

Date	TROUBLE	SERVICE MAN
Guarantee Regulation	1.During warranty period the repair could be made at any BPM repair department. 2. the following things not belong to warranty range: (1) Operating BPM different from procedures or instructions of the manual. (2) The body is damaged artificially. (3) Self-repairing or modifying the monitor construc tion in any way. (4) Breakdown due to corrosion of battery leakage. (5) Problem which occurs under natural calamity and other force majeures.	

The manufacturer reserves the right to make technical changes without notice in the interest of progress.
Prior notices will not be given in case of any amendments within this manual. The mentioned trademarks and names are owned by the corresponding companies.

CE 0123

MADE IN CHINA

P752/1901/05