



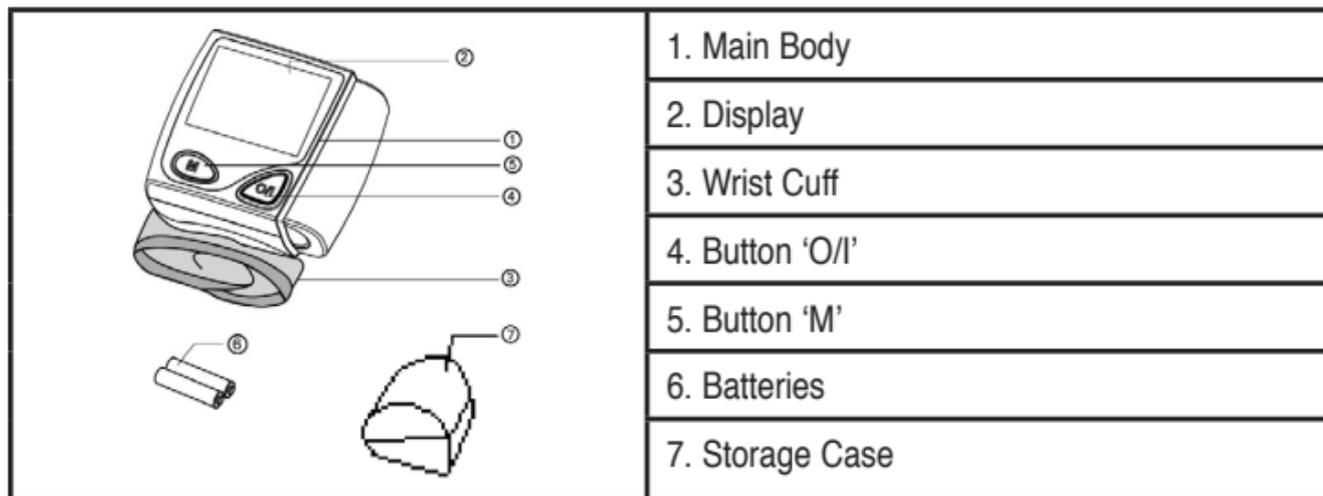
# **WRIST TYPE DIGITAL BLOOD PRESSURE MONITOR MODEL 1143 INSTRUCTION MANUAL**

- ⚠ Important! Read and understand these instructions before using the Lumiscope Blood Pressure Monitor. If you do not understand any part of these instructions, contact your medical professional or GF dealer for direction in the use of this product.**
- ⚠ If components are damaged or missing, contact your GF dealer immediately. DO NOT use substitute parts.**
- ⚠ GF Health Products, Inc. assumes no responsibility for any damage or injury caused by improper assembly or use of this product.**

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## PARTS AND COMPONENTS



## SYMBOLS

Symbol	Meaning
	Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC. The device, accessories and packing must be disposed of as 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
	Attention, consult accompanying documents
	Type B Applied Part

## **1 GENERAL**

This instruction manual is intended to assist the user in safe and efficient operation of the wrist type digital blood pressure monitor (hereinafter: device) model 1143. 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 <Tips on taking blood pressure measurement>.

This device is intended for the noninvasive measurement of systolic and diastolic arterial blood pressure and pulse rate in adults (age 15 and above). Consult your physician before using this device on children or persons with arrhythmia.

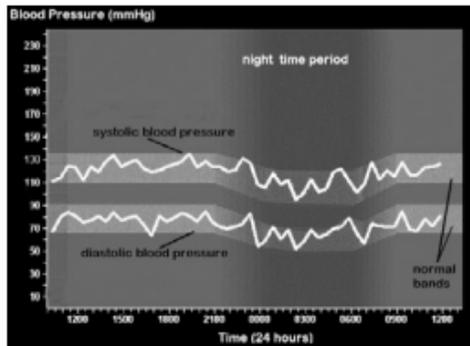
### **PRINCIPLE OF OPERATION**

This device uses oscillometric technology with Fuzzy Algorithm to measure the arterial blood pressure and pulse rate. The wrist cuff is wrapped around the wrist and automatically inflated by an air pump. The sensor of the device catches weak fluctuation of the pressure in the wrist cuff produced by extension and contraction of the artery of the wrist 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.

**Note: This device cannot provide reasonable accuracy if used or stored at temperature or humidity beyond the range stated in the <SPECIFICATIONS> section of this manual.**

## **2 TIPS ON TAKING BLOOD PRESSURE MEASUREMENT**

1. 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 the summer and higher in the winter. Arterial blood pressure changes with atmosphere pressure and is affected considerably by many factors, e.g. physical loads, emotional excitability, stress, meals, etc. Medicines, drinking, and smoking can affect blood pressure. When blood pressure is measured in the hospital, the value is sometimes higher than when taken at home. This is believed to be associated with anxiety experienced during the hospital/clinic visit. Blood pressure may be elevated when taken in low temperatures. If this device was stored at a low temperature, it is necessary to leave it at room temperature for at least 1 hour, otherwise the measurement can be inaccurate. Blood pressure varies by age and from person to person, and it is recommended to record blood pressure daily; then you can check with your physician to find out what normal blood pressure is for you.



The illustration above is from The British Hypertension Society

2. Patients with cardiovascular diseases: Take measurement under doctor's instruction.

**⚠ Under no circumstances should you alter the dosage of any drug prescribed by your doctor!**

3. Accurate measurement of blood pressure may be difficult in people with serious arteriosclerosis, weak pulse, or in patients with irregular heart rates. Please consult a qualified physician to interpret your blood pressure readings.

4. Keep quiet and relax during measurement. To obtain accurate readings, wait one hour after a meal or smoking before taking a measurement.
5. Wait at least 5 minutes before taking the next measurement. Atherosclerosis and diabetes patients require longer intervals (10-15 minutes), since vessel elasticity may have decreased in these pathologies.

### 3 BATTERY INSTALLATION

1. Open the battery cover and install two alkaline AAA batteries in the battery compartment as indicated. Check polarity and ensure the batteries are correctly positioned;
2. Close the battery compartment cover.
  - Replace the batteries when the replacement indicator  appears in the display or when the unit does not turn on when button 'O/I' is pressed;
  - Use only alkaline AAA batteries, do not use rechargeable batteries;
  - Use only same-age, same-type batteries together. Replace all batteries simultaneously;
  - If the device is to be unused for long time, take out the batteries and store in a dry environment;
  - Do not leave uncharged batteries in the device.



#### 4 CORRECT POSTURE FOR MEASUREMENT

Sit down and place your elbow on a table. Ensure the wrist is at approximately the same level as the heart, and the forearm is extended naturally, palm up. Wrap the cuff around the left wrist as shown in the illustration, and ensure the cuff is attached to the wrist securely with the display facing the user. Loosen and roll up sleeves so that the blood pressure monitor wrist cuff is in direct contact with the wrist during measurement.



## 5 SETTING THE DATE AND TIME

The device has a 12-hour time format. The icon 'AM' indicates the time of Ante Meridiem and the icon 'PM' indicates the time of Post Meridiem. To get 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 has batteries installed, the display will show as in Fig. 1;



Fig.1

2. Press and hold button 'M', then press button 'O/I', and the year number will flash;



Fig.2

3. Press button 'M' again to increase the number, and press button 'O/I' for confirmation;
4. When the year setup is confirmed, the month number will flash automatically. Follow the same instruction as above to set month, day and time;



Fig.3

5. Press button 'O/I' to finish setup. If you want to change the date and time, repeat steps 2, 3, and 4.

## 6 TAKING A MEASUREMENT



Fig 4



Fig.5



Fig. 6



Fig. 7

1. Before taking a measurement, take 3 ~ 5 deep breaths and relax. Do not talk or move your arm during measurement;
2. Press button 'O/I', all symbols will display for 2 seconds as in Fig.4; then '0' will display. The pump will then begin to inflate while displaying pressure. Generally the pressure will reach 190 mmHg as in Fig.5;
3. The pump stops inflating and pressure begins to decrease gradually, during which the user's blood pressure will display as in Fig.6 (during the deflation period, remain relaxed and keep your wrist at heart level);
4. The wrist cuff will then deflate quickly and the blood pressure and pulse measurements will continue to display as in Fig.7;

5. Press button 'O/I' to return to standby mode. Wait for at least 5 minutes before taking another measurement. If the device remains unused for 3 minutes, it will return to standby mode automatically.

### **AUTOMATIC INFLATION**

This device has 4 levels of inflation pressure: 190 mmHg, 230 mmHg, 270 mmHg and 300 mmHg. When 190 mmHg is insufficient, or arm movement occurs, the device will automatically inflate to an appropriate pressure level in order to obtain the blood pressure measurement.

### **RAPID DEFLATION DURING MEASUREMENT**

If you do not feel well during measurement, or want to stop measurement for any reason, press button 'O/I'. The cuff will quickly deflate and the device will switch to standby mode.

## 7 MEMORY FUNCTION

### MEMORY RECALL

1. Model 1143 can store 90 sets of readings and will automatically calculate the average of the last 3 readings. When memory is full (90 sets of readings are stored), the oldest reading will be replaced by the newest. Memory will not clear even if the batteries are removed;
2. After a measurement is finished, or when the device is in standby mode, the user can press button 'M' to recall memory. Press button 'M' to display the average value of the last 3 readings as in Fig. 8;



Fig.8

3. Press button 'M' again, the device displays '01'; then after 1-2 seconds the latest reading will display as in Fig.9;



Fig.9

4. Press button 'M' again, the device displays '02'; then after 1-2 seconds the second-to-the-last reading will display.

### DELETING THE MEMORY

To clear memory: After a measurement is finished or when the device is in standby mode, press and hold button 'M' for at least 5 seconds. The device will display 'Clr', which means the stored reading is deleted as in Fig.10.

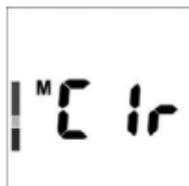
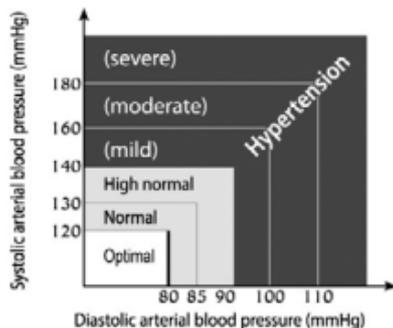


Fig.10

## 8 WHO BLOOD PRESSURE CLASSIFICATION

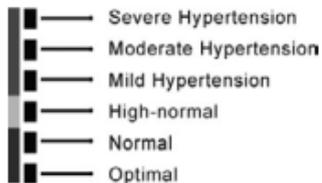
The World Health Organization (WHO) has established standards for assessment of high or low blood pressure, regardless of age, as shown in the chart below:



Arterial blood pressure classification by World Health Organization

This device has an indicator located on the display which displays a segment, based on the current data, corresponding to the WHO classification.

For example, if your blood pressure is 140 mmHg (Systolic Pressure), 76 mmHg (Diastolic Pressure), according to the world health organization standard, your blood pressure level is Mild Hypertension.



**Note: If the systolic blood pressure and diastolic blood pressure fall into different categories, use the higher value for classification.**

## 9 ERROR AND LOW BATTERY INFORMATION

INDICATION	POSSIBLE REASON	CORRECTION METHODS
	<p>The wrist cuff is positioned incorrectly</p> <p>Movement of arm (or hand) or talking during measurement</p> <p>The wrist cuff is not inflated to sufficient pressure</p> <p>Arrhythmia</p>	<p>Ensure wrist cuff is correctly positioned; repeat measurement</p> <p>Repeat measurement, following recommendations of this manual</p> <p>Repeat measurement</p> <p>Consult your physician</p>
	<p>The batteries are weak</p>	<p>Replace both batteries with new ones</p>

## **10 CARE, STORAGE, REPAIR AND RECYCLING**

1. It is necessary to protect this device against high moisture, direct sunlight, shock, alcohol and gasoline.
2. Remove the batteries if the device is to be stored for a long period of time, and keep the batteries away from children.
3. Prevent sharp objects from coming into contact with the wrist cuff, and do not stretch or twist the wrist cuff.
4. Use only clean, soft, dry cloths to clean the device.
5. The wrist cuff is sensitive and must be handled with care. Clean the wrist cuff cover with a clean, damp cloth. Ensure the cuff is dry before taking a new measurement.
6. Since neither this device nor batteries are household waste, follow your local recycling rules and dispose of them at appropriate collection sites.

## 11 TROUBLESHOOTING

SYMPTOM	CHECK POINT	REMEDY
No display when button 'O/I' is pressed	The batteries need to be replaced  The batteries are incorrectly positioned  The battery contacts are corroded	Replace both batteries with new ones  Install the batteries in correct position  Clean the battery terminals with a dry cloth
Inflation stops and re-inflates later	Inflation is automatic to ensure correct measurement  Did you talk or move your arm (or hand) during measurement?	See <AUTOMATIC INFLATION>  Keep quiet and silent during measurement

## Troubleshooting continued

<p>The reading is extremely low or high</p>	<p>Is the wrist cuff at the same level as the heart?</p> <p>Is the wrist cuff wrapped correctly?</p> <p>Did you strain your arm (or hand) during measurement?</p> <p>Did you talk or move your arm (or hand) during measurement?</p>	<p>Ensure your posture is correct</p> <p>Wrap the wrist cuff correctly</p> <p>Relax during measurement</p> <p>Keep quiet and silent during the measurement</p>
<p>Pulse rate is too low or too high</p>	<p>Did you talk or move your arm (or hand) during measurement?</p> <p>Did you take your measurement right after exercise?</p>	<p>Keep quiet and silent during the measurement</p> <p>Take measurement again after resting for at least 5 minutes</p>
<p>The batteries wear out too quickly</p>	<p>Faulty batteries used</p>	<p>Suggestion: Use alkaline batteries of known manufacturers</p>

## 12 SPECIFICATIONS

Model	1143
Size (L x W x H)	2 3/4" x 2 3/8" x 1 1/4" (70 mm x 60 mm x 30 mm)
Weight (without batteries)	~ .24 lb (110 g)
Measuring method	Oscillometry
Measuring range	40 to 260 mmHg (blood pressure)
	40 to 160 beats/minute (pulse rate)
Measuring accuracy	± 3 mmHg for systolic and diastolic pressure
	± 5% of the reading for the pulse rate
Inflation	Automatic pump
Rapid deflation	Automatic electronic valve
Batteries	2 alkaline AAA x 1.5V

<b>Specifications continued</b>	
Memory	90 sets of measurements
Temperature and humidity	Operation: 50°F to 104°F (10°C to 40°C), RH 85% and below
	Storage: -4°F to 122°F (-20°C to 50°C), RH 85% and below
Cuff size	Fits wrist size 5" - 8" (127 mm - 203 mm )
Complete kit	Main body, wrist cuff, storage case, 2 alkaline AAA batteries, instruction manual, gift box

### **13 TWO-YEAR LIMITED WARRANTY**

GF Health Products, Inc. guarantees this product free from defects in material and workmanship for a period of two years from the date of purchase, except as noted below:

This product warranty does not cover damage caused by misuse or abuse, the attachment of any unauthorized accessory, alteration to the product, or any other conditions whatsoever that are beyond the control of GF Health Products, Inc. GF Health Products, Inc. shall not be responsible for any type of incidental, consequential, or special damage. All implied warranties, including, but not limited to those implied warranties of fitness and merchantability, are limited to the total duration of two years from the original date of purchase.

To obtain warranty service on your Blood Pressure Monitor, please contact the Repair Department at 1-800-672-8293. There is a \$15 fee for return shipping and handling. Please make checks payable to GF Health Products, Inc. Upon receipt, GF Health Products, Inc. will repair or replace, as appropriate, this blood pressure monitor and return it to you.

Warranty is solely through the Repair Department. Service of this product by anyone other than the Repair Department voids warranty.

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