

# CLEVER CHOICE™

## Digital Wrist Blood Pressure Monitor



# OWNER'S MANUAL

311-3018100-017

Version 3.0, DEC, 2009

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## BEFORE YOU START

### Warnings and Precautions



- ⦿ Do NOT use the device to diagnose newborns and on infants or persons who cannot communicate, for it might lead to serious accidents.
- ⦿ This device does not serve as a cure of any symptoms or disease. The data measured are only for reference. Always consult your physician to have the results interpreted.
- ⦿ Do not use the device for purposes other than measuring blood pressure.
- ⦿ Disassembly or modification the unit or wrist cuff may lead to permanent reading error.
- ⦿ This device is not able to measure in the presence of common arrhythmia, such as arterial or ventricular premature beats or arterial fibrillation. It may produce reading error.

## **BEFORE YOU START**

### **Intended Use**

Thank you for purchasing this CLEVER CHOICE Wrist Blood Pressure Monitor (BPM). CLEVER CHOICE measures blood pressure non-invasively based on the Oscillometric method. This device is designed for individuals age 16 and above, for home use only. Please read these instructions carefully before measuring.

This owner's manual contains important information that you must know about your system. Please read it carefully. For other questions regarding this monitor, please contact the dealer for service.

A warranty registration card is included with your system. Please complete it and mail it to us; if you prefer to fill it out online, please visit <http://www.SimpleDiagnostics.com>

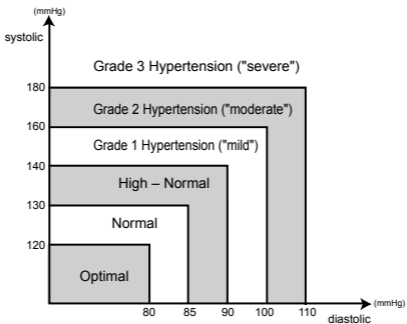
### **Features**

- One touch. Accurate result in 20 seconds.
- Comfortable automatic inflation and deflation.
- Memories for readings up to 352 sets, with time/date and automatically calculated average.
- Automatic turn-off after idle 3 minutes.

## BEFORE YOU START

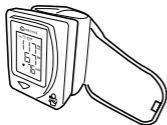
### Health Information

Knowing your blood pressure trend tells whether your body is in good condition or not. Human blood pressure naturally increases after reaching middle age. This symptom is a result of continuous aging of the blood vessel. Further causes include obesity, lack of exercise, and cholesterol (LDL) adhering to the blood vessels. Rising of blood pressure accelerates hardening of the arteries, and the body becomes more susceptible to apoplexy and coronary infarction. The WHO (world health organization) published the guideline of blood pressure range:



## ABOUT THIS SYSTEM

### Content of the System



- ❶ Monitor
- ❷ Wrist Cuff (connected to the monitor)



- ❸ Storage Case



- ❹ Owner's Manual

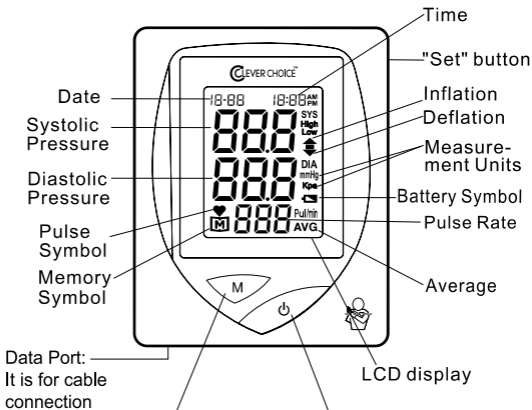


- ❺ Two 1.5V AAA batteries

Please check your system to be sure you have everything above. If not, please return your system to the place of purchase.

# ABOUT THIS SYSTEM

## Device Description



**"M" button (Memory button):**  
To set the Date/Time and to view the stored measurements.

**"⏻" button (power button):**  
Press to start inflating the cuff and measuring the blood pressure & pulse rate. Press again to turn off the device.

## PREPARATIONS BEFORE USE


Your monitor comes with batteries already installed. When replacing, use ONLY 1.5V AAA size alkaline batteries. Please use alkaline batteries for best performance and longest life.

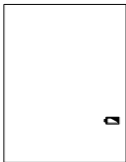
### **Low Power Warning**

The monitor will remind you when the power is getting low by displaying two different messages:




(Fig 1)

- 1 Battery Symbol  appears with your test result. (Fig. 1) This means it is about time to change the batteries although still 30 more measurements can be made.



(Fig 2)

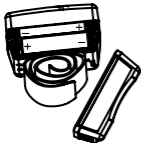
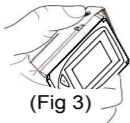
- 2 Battery Symbol  flashes by itself. (Fig. 2) This means you must change the batteries before making any measurements.



## PREPARATIONS BEFORE USE

### Batteries Installation and Replacement

To replace the batteries, please make sure the monitor is turned off.



**Step1-** Please make sure the monitor is turned off. Press the edge of the battery cover and push upward. (Fig. 3)

**Note:**

Replacing the batteries does not affect previous test results stored in the monitor. But you may need to update the settings.

**Step2-** Remove battery cover. (Fig. 4) And remove the batteries inside.

**Note:**

Do not use different type, date or brand name batteries together. Use only new batteries of the required size and type.

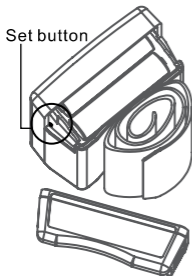
**Step3-** Insert two 1.5V AAA size alkaline batteries. Make sure the + (positive) and – (negative) marks match those indicated in the battery compartment. (Fig. 5) If inserted correctly, you will hear a “beep”.

## PREPARATIONS BEFORE USE

### Setting the monitor

Your monitor comes with the time, date, and unit preset. These options may be changed any time to fit your needs. They also need to be set again when you change the batteries.

### How to set the monitor?



(Fig 6)

#### **Step 1- Enter the Setting Mode.**

- ① Start with the monitor turned off.
- ② Remove the battery cover as shown in previous page.
- ③ Press the “SET” button located in the battery compartment.(Fig. 6)  
You are now in the setting mode.

#### **Step 2- Select and make changes.**

Press the “ Set ” button to select what you would like to change. The selected one will be flashing. Press the “ M ” button to make change.

#### **Step 3- Save the Changes**

Press the “ Set ” button to save the changes you made and move on to next step.

## PREPARATIONS BEFORE USE

See the date setting for example:



(Fig 7)



(Fig 8)



(Fig 9)

### Set the Year

- 1 The year will appear first, with the number flashing. (Fig. 7)
- 2 Press and release the “ M ” button to advance one year.

#### Note:

To move the number faster, hold the “ M ” button down.

- 3 Press the “ Set ” button and the year will be set. At the same time, the date will appear on the display with the month segment flashing. (Fig. 8)

Please set the month, day, hour, minute, and unit (in mmHg or KPa) in the same way.

After choosing the unit of measurement, press the “ Set ” button to save the settings and turn off the monitor. (Fig. 9)

**Note:**

The mmHg is the standard unit in the United States. The KPa is the International Unit (IU). Use of the wrong unit of measure may cause you to misinterpret your blood pressure level, and may lead to incorrect treatment.

## **MEASURE BLOOD PRESSURE**

### **Suggestions before Measuring**

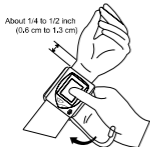
- ⦿ Avoid caffeine, tea, alcohol, and cigarette at least 30 minutes before measurement.
- ⦿ Wait 30 minutes after exercising or bathing before measurement.
- ⦿ Sit or lie down for at least 10 minutes before measuring.
- ⦿ Do not measure when feeling anxious or tense.
- ⦿ Please take a 5-10 minute break between measurements. Waiting allows the engorged blood vessels to return to normal status. This break can be longer if necessary, depending on your physical conditions
- ⦿ Keep the records for your physician as reference.

## MEASURE BLOOD PRESSURE

### Applying the Wrist Cuff



(Fig 10)



(Fig 11)



(Fig 12)

**Step 1-** Hold your left arm in front of you with your palm facing up. Slide the cuff onto your wrist. Make sure the monitor is on the inside of your wrist with the display in easy view. (Fig. 10)

**Step 2-** Wrap the cuff comfortably around your wrist. The top and bottom edges of the cuff should be tightened evenly around your wrist.

**Note:**

The top margin of the monitor should be about 1/4 to 1/2 inch (0.6 cm to 1.3 cm) below the ball of thumb. (Fig. 11)

**Step 3-** When the cuff is positioned correctly, fold the loose end back and secure it in place by pressing the pile material firmly against the hook material. (Fig. 12)

**Note:**

Blood pressure varies from two hands naturally. Always measure your blood pressure on the same wrist.

## MEASURE BLOOD PRESSURE

### Testing Your Blood Pressure

**Step 1-** Sit or lie down for at least 10 minutes before measuring. Do measurement while sitting:



(Fig 13)



(Fig 14)

**Step 2-** Apply the wrist cuff according to page 13.

**Step 3-** Press the “ $\phi$ ” button and place your arm in front of your chest. Relax and make sure the device is at the same height as your heart. Holding your left elbow with your right hand helps you hold still during measurement. Remain still and do not talk or move during the measurement. (Fig 13)

**Step 4-** After power on, the cuff automatically inflates and inflation symbol “ $\uparrow$ ” appears. You will see the number increasing on the display. (Fig14)



(Fig 15 )



(Fig 16)

After the cuff pressure is reached, the cuff begins to deflate. As the cuff deflates, deflation symbol “ $\blacktriangledown$ ” appears on the display. You will also see the number decreasing and Pulse Symbol “ $\heartsuit$ ” flashes on the display when pulse is detected. (Fig 15)

**Step5-** After completely deflation, the monitor displays the systolic pressure, diastolic pressure, and heart rate. (Fig. 16) Press the “ $\phi$ ” button to switch off or leave it for 3 minutes for auto-shut down.

**Note:**

- ▶ It is extremely important that the cuff is at the same level of the heart. If the wrist is relatively lower (higher) than the heart, the blood pressure measured will be higher (lower) than the actual value.
- ▶ If a higher pressure value is needed, the monitor will stop deflation and inflate again.
- ▶ If you press the “ $\phi$ ” button during the measurement, the monitor will turn off.



## USE MEMORY

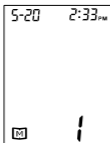
Your monitor stores the most recent 352 sets of readings. You can review them in the monitor itself or in your personal computer.

### Viewing Results on the Monitor

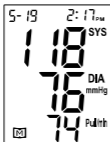


(Fig 17)

**Step1-** When the monitor is off, press the M Button. You will see the average of all data stored (Fig. 17), including systolic and diastolic blood pressure, and pulse.



**Step2-** Press the M Button again. "1" appears first, followed by the latest reading. (Fig. 18)



(Fig 18)

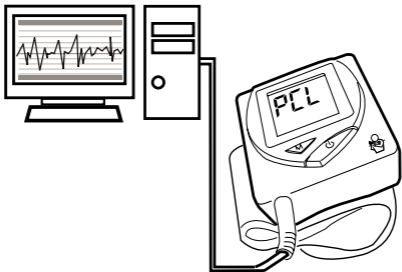
Press the M Button again to view the other results in the order of time and date taken. After viewing the oldest test result, push down the M Button again to resume to the latest test result. When the memory is full, the oldest results are deleted as new ones are added.

**Step 3.** To exit the memory anytime, press the "⏻" button to turn off the monitor. (Fig. 18)

## USE MEMORY

### Viewing Results on a Personal Computer

Transferring test results to your personal computer for home viewing requires CLEVER CHOICE Health Care System Software and an Interface Cable. The software can be downloaded from the home page of Simple Diagnostics. The interface cable is an optional accessory. Please contact your local customer service for purchasing.



### To download data

- 1 Install CLEVER CHOICE Health Care System Software on your computer by following the instructions provided on Simple Diagnostics's website:  
[www.SimpleDiagnostics.com](http://www.SimpleDiagnostics.com)

- ② Connect the Interface Cable to a serial port on the back of your computer. With the monitor turned off, connect the Interface Cable to the data port located on the bottom of the monitor.
- ③ Press the “ ⏻ ” button and then “PCL” will appear on LCD, indicating that the monitor is in the communication mode.
- ④ Follow the instructions provided in the software to transmit data. Results transmitted will include date and time. Remove the cable and the monitor with automatically turn off.

**Note:**

- ▶ While in the communication mode, you are not able to perform a blood pressure test.

## USE MEMORY


### Erasing Memories

#### Note:

Be sure to turn off the unit before erasing all readings.



(Fig 19)


**Step 1-**“ Press and hold the M button until  and “CLr ALL” appear on the LCD display.(Fig. 19)”



(Fig 20)

**Step 2-** Release the M button and the Monitor will automatically turn off. All the memories are erased. (Fig. 20)

#### Note:

When there are no test results in memory, you will only see the date, time, and the “  ” symbol. (Fig. 21)



(Fig 21)

## MAINTAINANCE

### **Storage**

- ⦿ Please protect the monitor from direct sunlight and humidity. It might not meet its performance specifications if stored or used beyond the specified temperature and humidity ranges listed below:

Operating conditions: 50°F-104°F , below 85% relative humidity

Storage conditions: -4°F-140°F , below 95% relative humidity

- ⦿ Do not drop the monitor. Please avoid strong impact.
- ⦿ Disassembly or modification the monitor or wrist cuff may lead to permanent reading error.
- ⦿ Always use the storage box provided with the monitor to transport or store it.
- ⦿ Batteries may leak chemicals that damage electronic parts. Please remove the batteries if you are not going to use the device for an extended period (i.e., 3 months or more).

## MAINTAINANCE

### **Cleaning**

- ⦿ To clean the unit, wipe with a cloth moistened with tap water or a mild cleaning agent, then dry the device with a soft and dry cloth. Do not flush with or immerse in water.
- ⦿ Do not use benzene, gasoline, or any alcoholic-base or solvent agent to clean the monitor.
- ⦿ The cuff can be cleaned by wiping with moistened cloth and soap. Do not immerse in water.
- ⦿ Do not twist any tubing. Refrain from stretching, bending or tugging on the wrist cuff. Do not flip the cuff inside out.
- ⦿ Do not separate the cuff from the unit, disassemble the device, or try to repair the unit by yourself. If any problem occurs, contact the dealer for service.

## ERROR MESSAGE

Please check the chart below for problems you can fix at home without tools. **For error messages other than the ones below, do not try to repair by yourself. Please contact dealer for service.**

Message	Cause	What to do
Err 00	Weak pulse.	Refit cuff tightly, relax, and repeat measurement as shown in "Applying the Wrist Cuff"
Err 02	Monitor can not figure out systolic pressure.	Refit cuff tightly, relax, and repeat measurement as shown in "Applying the Wrist Cuff"
Err 04	Monitor can not figure out diastolic pressure.	Refit cuff tightly, relax, and repeat measurement as shown in "Applying the Wrist Cuff"
Err 09	Cuff pressure is not enough even if the highest value is pumped.	Please contact the dealer for service

## TROUBLESHOOTING

Message	Cause	What to do
No display after pushing the " ⏻ " button although batteries are installed.	Batteries ran out or were not installed properly	Check and correct the battery polarities.
Battery symbol appears on LCD.	Batteries exhausted.	Replace the batteries.
	Batteries might perform poorly at low temperatures.	Place the batteries at a warm place for a while, then test again
Result higher or lower than user's average measurement	May be not in correct position during measuring.	Adjust to a correct position to measure.
Heart rate higher/lower than user's average.	Moving during measurement	Repeat measurement
	Measuring right after exercise.	Rest at least 30 minutes before measurement.
Power goes off when not used for a while	This feature is built into the system	Push the " ⏻ " button again.



## SPECIFICATIONS

Trade name	CLEVER CHOICE
Model No.	TD-3018
Display	LCD Digital Display
Measurement Method	Oscillometric method
Measurement Range	Pressure: 0~300mmHg Pulse rate: 40~199 / minute
Accuracy / Calibration	Pressure: $\pm 3$ mmHg or $\pm 2\%$ of reading Pulse rate: $\pm 4\%$ of reading
Memory Capacity	352 sets of readings with date and time
Inflation	Automatic inflation
Deflation	electric valve
Pressure Release	Automatic exhaust valve
Pressure Detection	Piezo-Resistive silicon pressure transducer
Power Supply	2x AAA 1.5V alkaline batteries
Operation Environment	50°F-104°F, <85% R.H. maximum
Storage Environment	-4°F-140°F, <95% R.H. maximum
Battery Life	Approx. 200 uses (alkaline batteries)
Cuff Size	Wrist Circumference approx. 135~195mm ( 5.31-7.67 inch)
Dimensions	76mm x 64mm x 29mm
Weight	132 g (with batteries)
Accessories	Storage Case, Instruction Manual

- Please understand that specifications may be changed without prior notice.

## **WARRANTY INFORMATION**

The CLEVER CHOICE Wrist Blood Pressure Monitor is guaranteed to be free from manufacturing defects under normal use for a period of TWO years from the date listed on the Purchase Record.

For repair under guarantee, our Authorized Service Agent must be advised of the problem within the warranty period. This guarantee covers parts and labor only under normal operations, any transportation fee and freight fee incurred are the owner's responsibility. Any damage resulting from natural causes, e.g., flood, hurricane etc., are not covered by this guarantee. This guaranty does not cover damage incurred by: use of the product not in accordance with the instructions, accidental damage, or being tampered with or serviced by unauthorized service agents.

Monitor subjected to misuse, abuse, or neglect of this manual's content, non-instructional purposes; unauthorized repair or modifications will be excluded from this warranty. This guarantee specifically excludes expendables and consumables, for example, batteries. All warranty claims must be directed to the distributor responsible for the sale of the device. The content of this warranty is subject to change without further notice.

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# NOTE



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# NOTE