

# Guidebook

## SmartRead™ *Plus* Wrist-styled Digital Blood Pressure Monitor with Memory

Model 04-187-001

Please read this guidebook completely  
before operating this unit.



**DETAILED  
GUIDEBOOK**

English • French • Portuguese • Spanish

## Limited Five Year Warranty

This MABIS Blood Pressure Monitor is guaranteed to be free of manufacturing defects for a period of five years from the date of purchase under normal use. If the unit fails to operate during warranty period, return it prepaid along with \$5.00 for return shipping and insurance to: MABIS Healthcare Inc., Attn: Repair Department, 28690 N. Ballard Drive, Lake Forest, IL 60045.

If it is determined to be of a manufacturing defect, the unit will be repaired or replaced at the option of MABIS Healthcare. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. As a condition of this warranty, the enclosed warranty registration card must be completed and sent to us within 10 days of the purchase date.



28690 N. Ballard Drive  
Lake Forest, IL 60045  
800-622-4714  
847-680-6811  
FAX 847-680-9646  
[www.mabis.net](http://www.mabis.net)

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# Introduction

*To achieve the maximum benefit from your blood pressure monitor, we recommend that you first consult with your physician or trained health care professional.*

Thank you for purchasing a MABIS Automatic Wrist Digital Blood Pressure Monitor. With proper care and use, your monitor will provide you with many years of reliable readings.

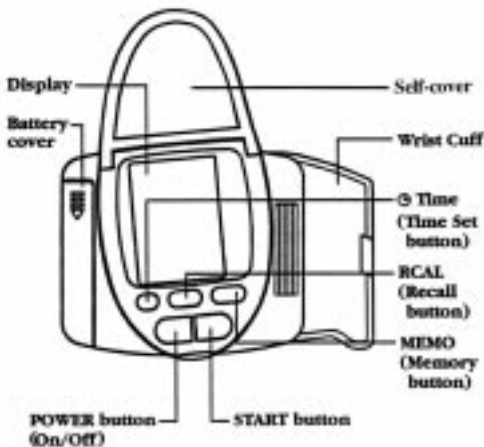
The method of measurement that your Automatic Wrist Monitor uses is called the oscillometric method. The monitor detects your blood's movement through the artery in your wrist and converts the movements into a digital reading. The oscillometric method does not require a stethoscope, making the monitor easy-to-use. The preformed cuff requires little effort to apply and is comfortable to wear.

Your Automatic Wrist Monitor is specially enhanced with SmartRead™ Technology. With the touch of a button, the cuff will automatically inflate to the optimum level. Within seconds, the cuff will deflate at the proper rate of 3-4 mmHg per pulse beat. Your blood pressure and pulse readings will be clearly displayed on the large digital panel.

Clinical research has proven a direct relationship between blood pressure in the wrist and blood pressure in the arm. Because the arteries in the wrist and the arm are connected, changes in wrist blood pressure reflect changes in arm blood pressure. Frequent wrist blood pressure measurements will provide you and your physician with an accurate indication of change in your true blood pressure.

*Blood pressure readings determined with this device are equivalent to measurements obtained by a trained observer using the cuff/stethoscope auscultation method, within the limits prescribed by the American National Standard for Electronic or Automated Sphygmomanometers.*

# Product Identification & Caution



## Caution

While taking a measurement, you can stop the inflation or deflation process of the cuff at any time by pressing the power button.

# General Blood Pressure Information

## *What is Blood Pressure?*

Blood pressure is the pressure that is exerted by blood flowing against the walls of the blood vessels throughout your body.

Your heart, which is the center of the circulatory system, provides the force for the blood to flow or circulate. When your heart contracts or beats, the blood is forced through the blood vessels increasing the pressure. This is the highest pressure in the cycle or what is referred to as **SYSTOLIC BLOOD PRESSURE**. In between beats, your heart relaxes and your blood pressure decreases. This is referred to as **DIASTOLIC BLOOD PRESSURE**.

This complete series of events which occurs in a single heartbeat is known as the **CARDIAC CYCLE**.

Your MABIS Automatic Wrist Monitor will automatically read your blood pressure and display both systolic and diastolic readings on the screen. Your systolic will be positioned as the upper number and the diastolic reading will be the lower number.

*(systolic)*  
**120/80**  
*(diastolic)*

Blood pressure is measured in millimeters (mm) of Mercury (Hg) and is generally recorded with the systolic pressure (120) listed first and the diastolic pressure (80) listed second. The numbers are typically separated by a slash mark (/) as shown above.

*Both pressure readings, the SYSTOLIC and the DIASTOLIC, are necessary for a physician to evaluate the status of a patient's blood pressure.*

*Please contact your physician for specific information regarding your own blood pressure.*

## ***What Influences Blood Pressure?***

Many factors such as genetics, age, sex, altitude, physical activity, anxiety, muscular development, certain medications or even the time of day can influence blood pressure. Influences such as sleep or relaxation decreases blood pressure, while anxiety or exercise increases blood pressure.

## ***Why Monitor Your Blood Pressure at Home?***

A visit to a physician's office can be a stressful situation for a patient. And, anxiety is a known factor in raising blood pressure. This temporary occurrence of elevated blood pressure at the physician's office is commonly referred to as "white coat syndrome".

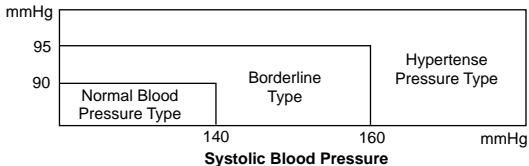
Whether or not you experience "white coat syndrome", home blood pressure monitoring provides you with the opportunity to supplement your physician's office measurements. These home readings, when taken over a period of time, can show an accurate indication of change. Furthermore, your records can assist your physician in evaluating your health and in making important decisions in the diagnosis and treatment of your condition. Because of this, it is important to take consistent, daily measurements of your blood pressure.

*The variations in your individual readings should only be interpreted by your physician or a trained health care professional.*

## WHO Blood Pressure Classifications

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

### Diastolic Blood Pressure

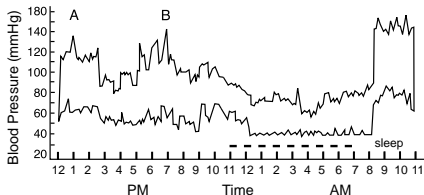


Reference Material: Investigation into Adult Diseases Report by the Ministry of Health and Social Security, 1971.

*This chart is only a general guideline. Please contact your physician to determine your NORMAL BLOOD PRESSURE.*

## Variations in Blood Pressure

Blood pressure can be influenced by many factors. This change can occur from moment to moment. Normally, blood pressure is lowest during the sleeping period and rises during the day. The graph below represents the variations in blood pressure shown over a day with measurements taken every 5 minutes.



The dotted line represents the sleep period. The rise in blood pressure at 1 PM (A in the graph) corresponds to a stressful occurrence and at 7 PM (B in the graph) a period of exercise.



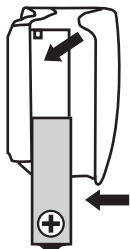
# Important Information Before Use

1. Blood pressure measurements should only be interpreted by a physician or a trained health care professional who is familiar with your medical history. Through regular use of this device and recording of your measurements, you can keep your physician informed of the changes in your blood pressure.
2. Perform your measurement in a quiet place. You should be seated in a relaxed position.
3. Avoid smoking, eating, taking medication, alcohol consumption or physical activity 30 minutes prior to taking a reading. If you are exhibiting signs of stress, avoid taking your measurement until the feeling subsides.
4. Rest 15 minutes prior to taking a reading.
5. Remove any constrictive clothing or jewelry that may interfere with the cuff placement.
6. Apply the cuff to the proper position on the left wrist. The unit should be located on the inside of your left wrist with the digital display panel in view.
7. Keep the monitor stable during measurement to achieve an accurate reading. Remain still; do not talk during the measurement.
8. Record your daily blood pressure and pulse readings on a chart.
9. Take your readings at the same time, each day (or as recommended by your physician) to get an accurate indication of change in your true blood pressure.
10. Wait a minimum of 15 minutes between readings to allow for the blood vessels to return to normal. The wait time may vary depending on your individual physiological characteristics.
11. Although such cases are rare, for those with an extremely weak pulse or irregular pulse, errors may result which prevent proper measurement. If abnormal variations are noticed, consult with your physician or trained healthcare physician.
12. This device is intended for adult use.

*While taking a measurement, you can stop the inflation or deflation process of the cuff at any time by pressing the power button.*

# Battery Installation/Replacement

1. Slide battery cover off.
2. Making sure the battery polarity is correct, install the lower battery.  
*Fig. 1.*

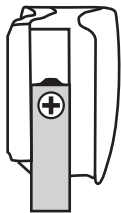


*Fig. 1*

3. Next, install the upper battery.  
*Fig. 2.*

4. Replace the battery cover.

**Note:** The batteries in your monitor will need to be replaced when the Low Battery indicator appears on the display. Replace the batteries with two new “AAA” alkaline batteries.



*Fig. 2*

*We recommend that you remove the batteries if the unit will not be used for an extended period of time.*

# Setting the Date/Time

The three buttons positioned above the Power and Start buttons are for setting the date and time, *Fig. A*.

**Time button** — Sets the entry and/or moves to the next mode.

**Memo button** — Increases (↑) to the desired number.

**RCAL button** — Decreases (↓) to the desired number.

**Note:**

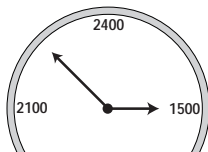
- All hours are displayed in military time (0:00 through 23:59), *Fig. B*.
- The appropriate mode must be flashing to make a change. Use the Time button to move within modes (Year/Mon/Date/Hour/Min) otherwise the mode will automatically change to the next mode after approximately 18 flashes.

**To enter the time/date mode:**

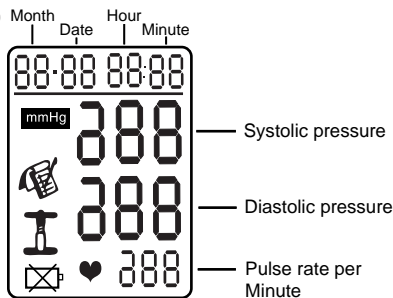
1. Press the Power button.  
The unit will start and run a self-test, *Fig. 1*.



*Fig. A*



*Fig. B*



## Setting the Date/Time

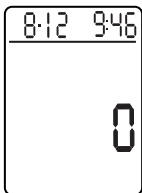


Fig. 2

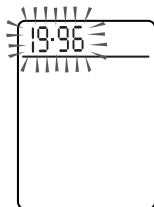


Fig. 2B

2. Press and hold the Time button for approximately 3-5 seconds until the date/time disappear (the screen will change twice), *Figs. 2A & 2B*. Release the button.

### To change the year:

3. With the year mode flashing, *Fig. 2B*, press the Memo button (↑). Continue to press to desired year, *Fig. 3*.

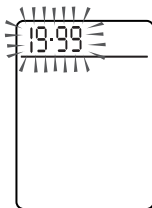


Fig. 3

4. Press the Time button to set the entry.

### To change the month:

5. With the month mode flashing, press the Memo button (↑) or the RCAL button (↓) until the desired month appears, *Fig. 4*.

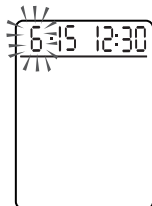


Fig. 4

6. Press the Time button to set the entry.

## Setting the Date/Time

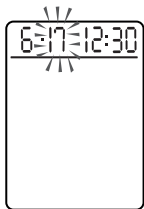


Fig. 5



Fig. 6



Fig. 7

### To change the date:

7. With the date mode flashing, press the Memo button (↑) or the RCAL button (↓) until the desired date appears, *Fig. 5*.

8. Press the Time button to set the entry.

### To change the hour:

9. With the hour mode flashing, press the Memo button (↑) or the RCAL button (↓) until the desired hour appears, *Fig. 6*.

Press the Time button to set the entry.

### To change to minute:

10. With the minute mode flashing, press the Memo button (↑) or the RCAL button (↓) until the desired minute appears, *Fig. 7*.

11. Press the Time button to set the entry.

*Remember: Hours are displayed military time.*

# Applying Your Blood Pressure Cuff

Avoid smoking, eating, taking medication, alcohol consumption or physical activity 30 minutes prior to taking a reading. If you are exhibiting signs of stress, avoid taking your measurement until the feeling subsides.

Rest 15 minutes prior to taking a reading.



Fig. 1



Fig. 2

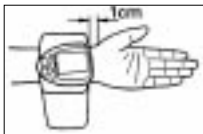


Fig. 3

1. Remove any constrictive clothing or jewelry that may interfere with the cuff placement.
2. You should be seated with your feet flat on the floor.
3. Hold your left arm in front of you with your palm facing upward.
4. Apply the preformed cuff to your left wrist. The digital display panel should be positioned on the inside area of your wrist facing you, *Fig. 1*.
5. Adjust the cuff as shown in *Figs. 2 & 3*, from the edge of the "Head of the Ulna Bone".
6. Wrap and fasten the cuff securely, yet comfortably around your wrist.

**Note:** The left wrist should be used unless you are unable to or should not use your left arm or wrist. In consultation with your physician, you may modify the following instructions and apply the cuff to your right wrist.

# Taking Your Blood Pressure Reading

Proceed only after reading the previous sections of this manual.

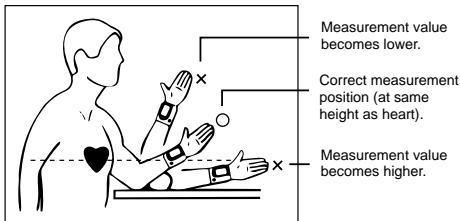


Fig. 1

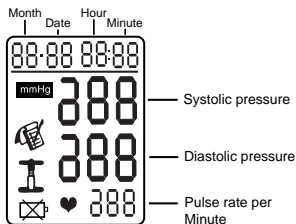


Fig. 2

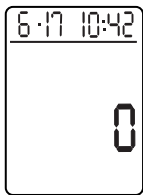


Fig. 3

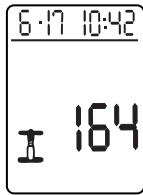


Fig. 4

1. Rest your elbow on a table with your palm facing upward. **Raise your hand so that the cuff is at the same level as your heart**, Fig. 1. Relax your hand.
2. Press the Power button. This will turn the power on and start the measurement process.
3. For a brief moment, the unit will run a self-test. Fig. 2.
4. When the display appears as shown, Fig. 3, the monitor is ready.
5. Press the Start button. The cuff will automatically begin to inflate to the optimum level.
6. Once the pulse is detected and the optimum level is achieved, the measurement is in progress, Fig. 4.

# Taking Your Blood Pressure Reading



Fig. 5

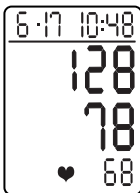


Fig. 6

7. The unit will begin to automatically deflate and make “clicking” sounds. This is referred to as the SmartRead Step Down Deflation system, which synchronizes pressure reduction with your pulse cycle.

8. The numbers appearing on the display will decrease during the Step Down Deflation process, Fig. 5.

9. When all air is deflated, the measurement is complete. The unit will display your blood pressure (systolic and diastolic) measurements and pulse rate, Fig. 6.

10. Record your readings on a chart.

11. At this point, you can store your measurement in memory (See Storing Measurements in Memory) or simply turn the power off by pressing the Power button. Otherwise, your unit will automatically shut off after approximately 3 minutes.

*If you need to take another measurement, wait a minimum of 15 minutes between readings to allow for the blood vessels to return to normal. The wait time may vary depending on your individual physiological characteristics.*



## Storing Measurements in Memory

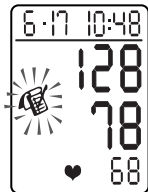


Fig. 1

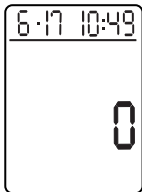


Fig. 2

Your MABIS Automatic Wrist Monitor can store up to 29 measurements, which includes the date and time of each measurement. **The memory feature must be done immediately following reading — prior to turning the unit off.**

1. With your blood pressure (systolic and diastolic) measurements and pulse rate displayed, press the Memo button.
2. The Memory symbol will display, Fig. 1, and the measurement will be stored.
3. The unit will return to the “ready for measurement” display, Fig. 2.

# Recalling Measurements in Memory



Fig. 1

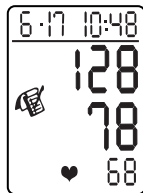


Fig. 2

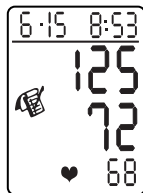







Fig. 3

You can recall up to 29 measurements in memory and record on a Blood Pressure Log or share with your physician or trained health care professional.

1. Press the Power button to turn the unit on. Wait for the display, *Fig. 1*.
2. Press the RCAL button which displays your last stored measurement, *Fig. 2*.
3. Continue to press the RCAL button to view the next previously stored measurement, *Fig. 3*.

All stored measurements will be erased by removing and reinstalling one of the batteries.

## Description of Display Symbols

 Inflate	<ul style="list-style-type: none"><li>• Appears when inflating, reinflating or when the pressure is insufficient.</li></ul>	Inflation or auto reflation in progress.
 Pulse	<ul style="list-style-type: none"><li>• Appears when pulse reading is displayed.</li></ul>	Record pulse reading.
 Memory	<ul style="list-style-type: none"><li>• Appears when storing or recalling a measurement in memory.</li></ul>	Memory function in progress.
 Replace Batteries	<ul style="list-style-type: none"><li>• Appears when battery voltage is excessively low.</li></ul>	Replace both batteries with new ones.
 Error Symbol	<ul style="list-style-type: none"><li>• Appears when an accurate reading cannot be obtained.</li></ul>	Wait a minimum of 15 minutes and remeasure. Loosen cuff to allow blood circulation in the wrist and hand while waiting.

# Troubleshooting

If any abnormality occurs during use, please check and correct the following:

<b>Condition</b>	<b>Correction</b>
Display is blank when power is on.	Check and correct the polarity of the installed batteries. Reinstall or replace batteries.
Measurement incomplete or abnormally low or high values displayed.	Review and follow “Applying Your Blood Pressure Cuff” and “Taking Your Blood Pressure Reading” sections. Replace the batteries.
Measurements are different from those typically measured by physician or every measurement reading is different.	Remember, blood pressure readings are influenced by physical and mental conditions and/or even the time of day. Daily measurement recordings should be interpreted by your physician.

## Care and Maintenance

1. Only use a soft, dry cloth to clean your blood pressure monitor.
2. Avoid using any types of liquids on the monitor or cuff.
3. Store your monitor in the provided storage case when not in use.
4. Do not store the unit where it will be exposed to direct sunlight, dust or humidity. Avoid extreme temperatures.
5. Never disassemble the monitor or cuff.
6. Dropping or subjecting your blood pressure monitor to strong shocks should be avoided.

# Product Specifications

<b>Name and model number</b>	SmartRead™ <i>Plus</i> Wrist-styled Digital Blood Pressure Monitor with Memory, 04-187-001
<b>Display system</b>	Digital display system/LCD
<b>Measuring method</b>	Oscillometric method
<b>Power source</b>	Two “AAA” alkaline batteries
<b>Measuring range</b>	Pressure: 20-280mmHg Pulse: 40-180 beats/minute
<b>Accuracy</b>	Pressure: $\pm 3$ mmHg Pulse: within $\pm 5\%$ of reading
<b>Pressurization</b>	Automatic pressurization by pump. Optimum cuff inflation level determined by Fuzzy Logic.
<b>Deflation</b>	Automatic pressure release valve.
<b>Memory</b>	Built-in memory enabling display of up to 29 measurements.
<b>Automatic Power Off</b>	Approximately 3 minutes after last key operation.
<b>Battery life</b>	Approximately 200 measurements.
<b>Operation</b>	
<b>Temperature</b>	50°F~104°F
<b>Humidity</b>	40-85% RH max.
<b>Storage</b>	
<b>Temperature</b>	14°F~140°F
<b>Humidity</b>	10-95% RH max.
<b>Weight</b>	5.2 oz. (with batteries)
<b>Dimensions</b>	3-3/8" x 3-1/8" x 3-1/8"
<b>Wrist Circumference Range</b>	Suitable for 5-1/4"~ 7-5/8"
<b>Accessories</b>	Storage case, Instruction Guidebook, Two “AAA” alkaline batteries.

*Specifications are subject to change without notice.*

# Sample Blood Pressure Log

Name:

Age:

Weight:

Date	1/2	1/2	1/3																	
Time	7:00 AM	9:30 PM	7:30 AM																	
mmHg	240																			
	220																			
	200																			
	180																			
	160																			
	140																			
	120																			
	100																			
	80																			
	60																			
Pulse	68	71	69																	
Body Condition	Headache in AM	—	Tired, Restless Night																	

# Sample Blood Pressure Log

Name:

Age:

Weight:

Date	1/2	1/2	1/3																
Time	7:00 AM	9:30 PM	7:30 AM																
mmHg	240																		
	220																		
	200																		
	180																		
	160																		
	140																		
	120																		
	100																		
	80																		
	60																		
Pulse	68	71	69																
Body Condition	Headache in AM	—	Tired, Restless Night																