

Guidebook

SmartRead® *Plus* Automatic Wrist Digital Blood Pressure Monitor with Memory

Model 04-248-001

Please read this guidebook completely
before operating this unit.



English • French • Portuguese • Spanish

Lifetime Limited Warranty

MABIS Healthcare Inc. ("MABIS") guarantees that its MABIS Digital Blood Pressure Monitor will be free from manufacturing defects under normal use for as long as the original purchaser owns the product.

This warranty covers only normal use, and does not apply to use in any clinical or commercial applications. This warranty does not cover batteries or other power sources that may be provided with or used with the MABIS Digital Blood Pressure Monitor. This warranty is voided if the MABIS Digital Blood Pressure Monitor product is misused or abused in any manner.

If the MABIS Digital Blood Pressure Monitor fails to operate during the time the original purchaser owns it, return it postage prepaid to: MABIS Healthcare Inc., Attn: Repair Department, 1931 Norman Drive, Waukegan, IL 60085. MABIS will repair or replace the defective unit at the option of MABIS Healthcare. Repair or replacement of the defective unit, at MABIS' option, is the sole remedy under this warranty.

ANY IMPLIED WARRANTIES WHICH THE PURCHASER MAY HAVE ARE LIMITED IN DURATION TO THE TIME THAT THE ORIGINAL CONSUMER PURCHASER OWNS THE PRODUCT. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty constitutes MABIS' only responsibility and obligation to repair and/or replace materials or components, or refund the purchase price. MABIS will not be responsible for any indirect, incidental, special, consequential, or punitive damages or other loss, including, but not limited to, damage to or loss of other property or equipment and personal injuries, whether to purchaser or others. MABIS shall in no event be liable to the purchaser for any amount in excess of the cost of repair and/or replacement of the unit, or the purchase price of the unit. Some states do not allow the exclusive or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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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 Blood Pressure Monitor. With proper care and use, your monitor will provide you with many years of reliable readings.

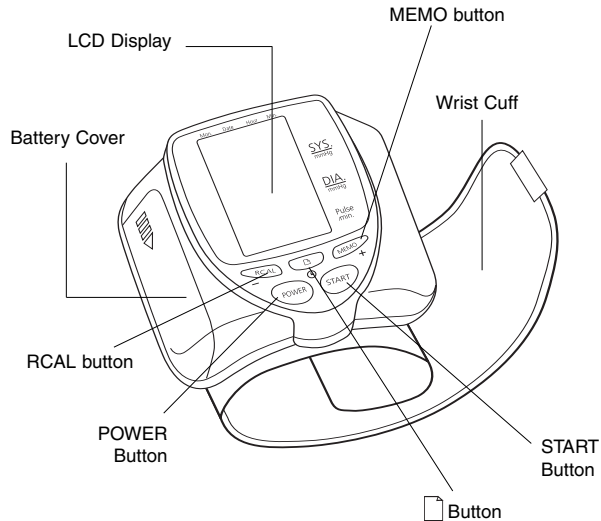
The method of measurement that your Automatic Wrist Monitor uses is called the oscillometric method. The monitor detects your blood's movement through the artery in your wrist and converts the movements into a digital reading. The oscillometric method does not require a stethoscope, making the monitor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

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.

People with severe hypertension, severe arteriosclerosis, or severe diabetes, should consult their physician about monitoring blood pressure at the wrist.

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

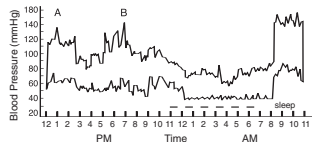
Standards for assessment of high or low blood pressure, regardless of age, have been established by the World Health Organization (WHO) as shown in the following chart.

CATEGORY	SYSTOLIC (mmHg)	DIASTOLIC (mmHg)
Optimal	<120	<80
Normal	<130	<85
High - Normal	130-139	85-89
Mild Hypertension	140-159	90-99
Borderline	140-149	90-94
Moderate Hypertension	160-179	100-109
Severe Hypertension	≥180	≥110
Isolated Systolic Hypertension	≥140	<90
Borderline	140-149	<90

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 p.m. (A in the graph) corresponds to a stressful occurrence and at 7 p.m. (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. *Fig. 1.*
2. Making sure the battery polarity is correct, install the lower battery.
3. Next, install the upper battery. *Fig. 2.*
4. Replace the battery cover, *Fig. 3.*

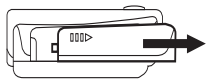


Fig. 1

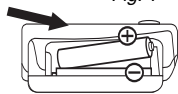


Fig. 2

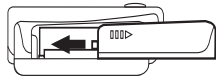



Fig. 3

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.

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.*


 **memo button** – Sets the entry and/or moves to the next mode.

MEMO button – Increases to the desired value.

RCAL button – Decreases to the desired value.

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  button to move within modes (Year/Month/Date/Hour/Minute) 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.*

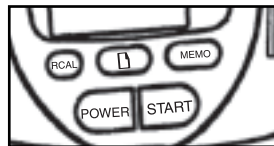


Fig. A

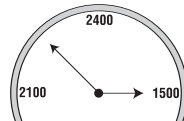


Fig. B

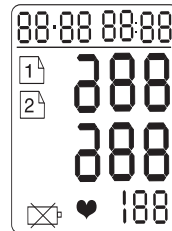


Fig. 1

Setting the Date/Time

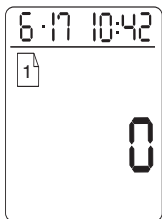




Fig. 2A




Fig. 2B

- Press and hold the  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:

- With the year mode flashing, *Fig. 2B*, press the MEMO button. Continue to press until the desired year is displayed, *Fig. 3*.
- Press the  button to set the entry.

To change the month:

- With the month mode flashing, press the MEMO button or the RCAL button until the desired month appears, *Fig. 4*.
- Press the  button to set the entry.

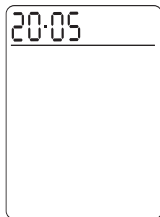


Fig. 3

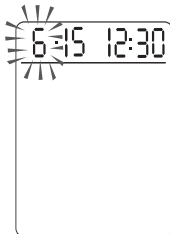


Fig. 4

Setting the Date/Time

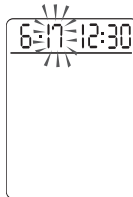


Fig. 5

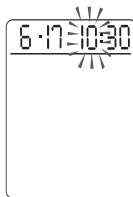


Fig. 6

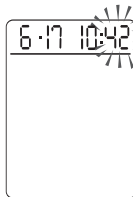




Fig. 7


To change the date:

- With the date mode flashing, press the MEMO button or the RCAL button until the desired date appears, *Fig. 5*.
- Press the  button to set the entry.

To change the hour:

- With the hour mode flashing, press the MEMO button or the RCAL button until the desired hour appears, *Fig. 6*.
- Press the  button to set the entry.

To change the minutes:

- With the minute mode flashing, press the MEMO or RCAL button until the desired minutes appear, *Fig. 7*.
- Press the  button to set the entry.

REMEMBER: Hours are displayed in 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.

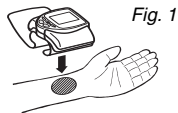


Fig. 1

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.

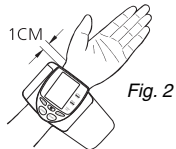


Fig. 2

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.

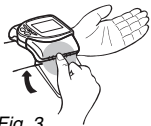


Fig. 3

5. Adjust the cuff as shown in Fig. 2, from the edge of the "Head of the Ulna Bone".
6. Wrap and fasten the cuff securely, yet comfortably around your wrist, Fig. 3.

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.

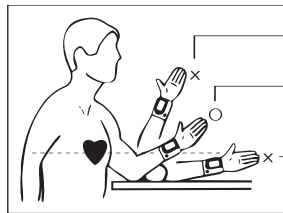


Fig. 1

Measurement value becomes lower.

Correct measurement position (at same height as heart).

Measurement value becomes higher.

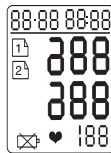


Fig. 2

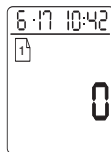


Fig. 3

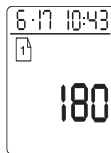


Fig. 4

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 inflate.
6. The cuff will automatically inflate to approximately 180 mmHg.
7. Once the cuff inflates to approximately 180 mmHg, measurement will begin, Fig. 4.

Taking Your Blood Pressure Reading

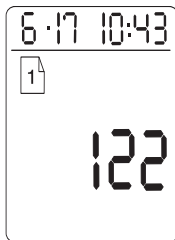


Fig. 5

- The unit will begin to automatically deflate and make “clicking” sounds.
- The numbers appearing on the display will decrease, Fig. 5.
- When all air is deflated, the measurement is complete. The unit will display your blood pressure (systolic and diastolic) measurement and pulse rate, Fig. 6.
- Record your readings on a chart.
- 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.

This monitor inflates the cuff to approximately 180mmHg. If the system detects that the cuff needs additional pressure, it will automatically reinflate to approximately 220 mmHg.

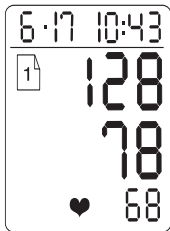


Fig. 6

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

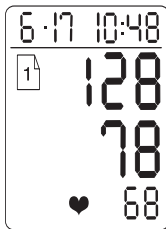


Fig. 1

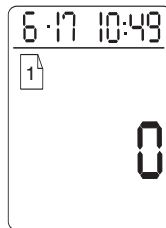



Fig. 2

Your MABIS Automatic Wrist Monitor can store up to 60 total measurements into two separate memory banks (30 each) these include the date and time of each measurement.

The memory feature must be done immediately following reading — prior to turning the unit off.

- With your blood pressure (systolic and diastolic) measurements and pulse rate displayed, press the  button to alternate between memory bank 1 or 2.
- When the correct memory bank symbol is displayed, press the MEMO button, Fig. 1. The measurement will be stored.
- The memory bank number will flash several times and the unit will return to the “ready for measurement” display, Fig. 2.

Recalling Measurements in Memory

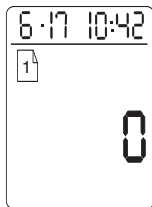


Fig. 1

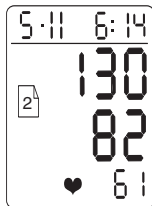


Fig. 2

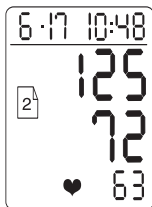










Fig. 3

You can recall up to 60 total measurements (30 per memory bank) to record on a Blood Pressure Log or to 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  button to alternate between memory bank 1 or 2.
3. When the correct memory bank is displayed, press the RCAL button to display your last stored measurement, *Fig. 2*.
4. 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

SYMBOL	CONDITION	ACTION
	Appears when pulse reading is displayed.	Record pulse reading.
	Memory banks.	Select bank for memory storage or recall.
	Appears when battery voltage is excessively low.	Replace both batteries with new ones.
	Appears when an accurate reading cannot be obtained.	Wait a minimum of 15 minutes and remeasure. Loosen cuff to allow blood circulation in the wrist and hand while waiting.
	Appears when cuff is over pressurized.	Wait a minimum of 15 minutes and remeasure. Loosen cuff to allow blood circulation in the wrist and hand while waiting.
	Appears when there is too much movement during measurement.	Do not talk or move during measurement. Review 'Applying Your Blood Pressure Cuff' section.
	Appears when unit has malfunctioned.	Unit needs to be sent in for repair or replacement.

Troubleshooting

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

Condition	Correction
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, Maintenance and Storage

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, *Fig. 1-4*.
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.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Product Specifications

Name and model number	SmartRead® Plus Wrist-styled Blood Pressure Monitor with Memory, 04-248-001
Display system	Digital display system/LCD
Measuring method	Oscillometric method
Power source	Two AAA alkaline batteries
Measuring range	Pressure: 20-280 mmHg Pulse: 40-180 beats/minute
Accuracy	Pressure: ±3mm Hg Pulse: within ±5% of reading
Pressurization	Automatic pressurization by pump.
Deflation	Automatic pressure release valve. Optimum cuff inflation level determined by Fuzzy Logic
Memory	Two built-in memory banks enabling display of up to 30 measurements each.
Automatic Power Off	Approximately 30 seconds after last key operation.
Battery life	Approximately 200 measurements.
Operation	
Temperature	50°F – 104°F (10°C – 40°C)
Humidity	40-85% RH max.
Storage	
Temperature	23°F – 140°F (-5°C – 60°C)
Humidity	10-95% RH max.
Weight	4.06 oz. (without batteries)
Dimensions	3-1/4" x 3-1/8" x 3-1/8"
Wrist Circumference Range	Suitable for 5-1/4" – 8-5/8"
Accessories	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																

Blood Pressure Log

Name:

Age:

Weight:

Date																				
Time																				
mmHg																				
240																				
220																				
200																				
180																				
160																				
140																				
120																				
100																				
80																				
60																				
Pulse																				
Body Con- dition																				