

INSTRUCTION MANUAL

*SmartSpeed[®] Plus
Automatic Digital
Blood Pressure Monitor
with Memory*

04-320-001 (Adult size cuff)

04-320-006 (Large adult size cuff)

Please read this instruction manual
completely before operating this unit.



**DETAILED
GUIDEBOOK**

English • French • Portuguese • Spanish

Limited Lifetime Warranty

MABIS Healthcare guarantees that its 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 Digital Blood Pressure Monitor. This warranty is voided if the Digital Blood Pressure Monitor is misused or abused in any manner.

If the Digital Blood Pressure Monitor fails to operate during the time the original purchaser owns it, return it postage prepaid along with \$5.00 for return shipping and insurance to: MABIS Healthcare, Attn: Repair Department, 1931 Norman Drive South, Waukegan, IL 60085. When returning a product, please also include a letter with your name, address, phone number and brief description of the specific problem. Please carefully package the product to avoid any damage that may occur while in the transit. Packaging insurance with returned receipt is recommended. MABIS will repair or replace the defective unit at the option of MABIS Healthcare. Repair or replacement of the defective unit, at the warrantor's 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 or how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty constitutes the warrantor's 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.

Toll-Free Information Line:
1-800-622-4714

Monday - Friday 8:00 am - 4:30 pm CST



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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 healthcare professional.

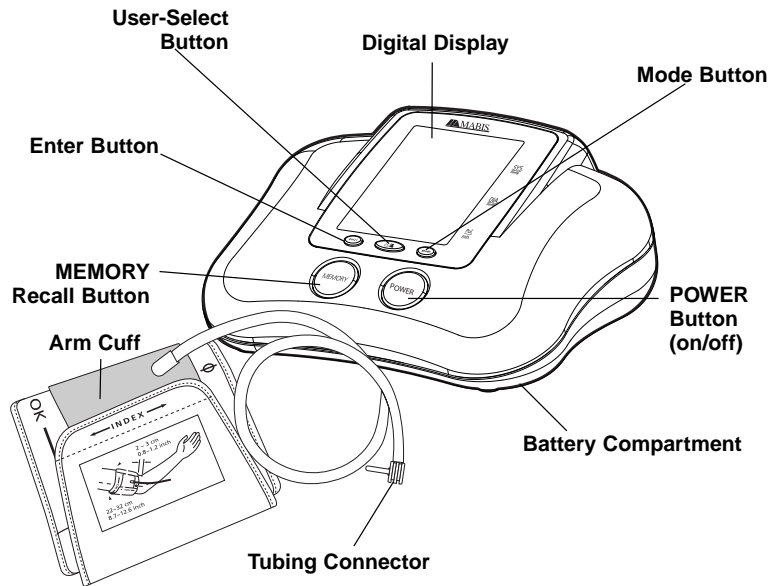
Thank you for purchasing a MABIS Automatic Digital Blood Pressure Monitor. With proper care and use, your monitor will provide you with many years of reliable readings.

The method of measurement that your Automatic Monitor uses is called the oscillometric method. The monitor detects your blood's movement through the artery in your arm and converts the movements into a digital reading. The oscillometric method does not require a stethoscope, making the monitor easy to use.

Your Automatic Monitor is specially enhanced with SmartSpeed® Plus technology, which calculates both systolic, diastolic and pulse readings while the cuff is inflating. This provides you with shorter measuring time and enhanced comfort.

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:

You can stop the inflation or deflation process anytime by pressing the POWER button.

Why Monitor Your Blood Pressure at Home?

Many people experience "White Coat Syndrome", which is a temporary elevation of blood pressure during a visit at their physician's office. Although only temporary, it can cause blood pressure to rise and give a false indication of a person's true blood pressure.

Whether or not you experience "White Coat Syndrome", home blood pressure monitoring provides:

- 1) The opportunity to supplement your physician's office measurements.
- 2) An accurate indication of any change.
- 3) A record to assist your physician in evaluating your health and making important decisions.
- 4) Consistent, daily measurements of your blood pressure.

NOTE: Variations in your individual readings should only be interpreted by your physician or trained healthcare professional.

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 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.

Both pressure readings, the SYSTOLIC and 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 decrease blood pressure, while anxiety or exercise increase blood pressure.

WHO Blood Pressure Classifications

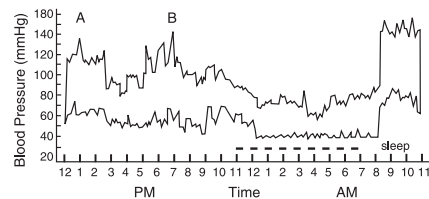
Standards for assessment of high or low blood pressure have been established by the World Health Organization (WHO) as shown on the following chart:

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. Contact your physician or trained healthcare professional to determine your NORMAL blood pressure.

Variations in Blood Pressure

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



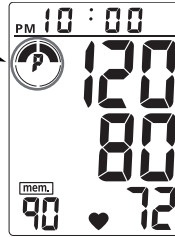
The dotted line represents the sleep period. The rise in blood pressure at 1 p.m. (A in the graph) corresponds to a stressful occurrence and at 7 p.m. (B in the graph) a period of exercise.




Important Information Before Use

1. Blood pressure readings should be interpreted by a physician or trained healthcare professional, who is familiar with your medical history.
2. Perform your measurement in a quiet place. You should be seated and relaxed.
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. Keep the monitor stable during measurements. Remain still; do not talk during measurements.
7. Record your daily readings on a chart.
8. Take your readings at the same time, each day (or as recommended by your physician).
9. Wait a minimum of 15 minutes between readings. The wait time may vary depending on individual physiological characteristics.
10. This device is intended for adult use.
11. The inflation or deflation process can be stopped by pressing the POWER button.

World Health Organization (WHO) Indicator

The WHO Indicator, located in the upper left corner of the display, will identify your reading within a range in accordance with the guidelines set by the World Health Organization (WHO). See the chart below for the corresponding symbols that appear.



	<p>Stage 2 Hypertension Systolic pressure: 160 mmHg Diastolic pressure: 100 mmHg</p>
	<p>Stage 1 Hypertension Systolic pressure: 140-159 mmHg Diastolic pressure: 90-99 mmHg</p>
	<p>Pre-Hypertension Systolic pressure: 120-139 mmHg Diastolic pressure: 80-89 mmHg</p>
<i>No display</i>	Optimal

Disabling the WHO Indicator

Certain medications may generate blood pressure readings outside of the WHO standards. If your blood pressure reading is normally outside of the WHO range, you can disable the WHO Indicator. However, this should only be disabled in consultation with your physician. Disable the WHO Indicator by following the steps listed below and entering your known systolic and diastolic values into the monitor.

To disable the WHO Indicator feature:

1. Press the Mode Button three times.
2. Press the Memory Button to adjust to your "normal/known" systolic pressure.
3. Press the Enter Button to switch from systolic pressure to diastolic pressure.
4. Press the Memory Button to adjust to your "normal/known" diastolic pressure.
5. Press the POWER button to turn the unit off. Press the POWER button again to turn the unit on to take a reading.

NOTE: A) Repeat steps 2 - 5 to disable the WHO Indicator for the second memory bank. B) If any blood pressure reading taken is above the values set by the user, the reading will blink six times, *Fig. 1*. C) To reactivate the WHO Indicator, press the Memory Button until dashes appear, *Fig. 2*.

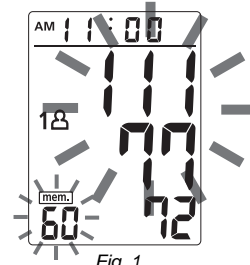


Fig. 1

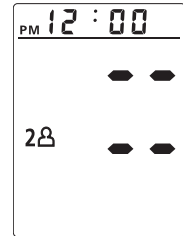


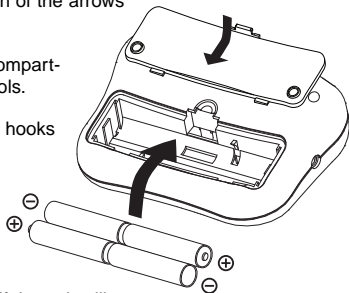
Fig. 2

Battery Installation/Replacement

- 1) Press down and lift the cover in the direction of the arrows as shown.
- 2) Insert or replace 4 "AA" batteries into the compartment, matching the indicated polarity symbols.
- 3) To close, match up and connect the bottom hooks of the cover, then push the top end.

NOTE: Replace the batteries when the Low Battery symbol appears on the display or when the display remains blank when the POWER button is pressed.

- 4) It is recommended to remove the batteries if the unit will not be used for an extended period of time.

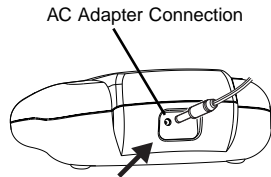


AC Power Adapter (optional)

An AC adapter is available separately for battery-free operation. The AC adapter plugs into the back of the unit as shown. Please remember to practice electrical safety precautions while using the adapter.

AC Adapter

Output: 12V DC 600mA



Setting the Date/Time

1. Press the Mode Button once to enter into the Time Adjustment mode. The blinking Month will display, Fig. 1.
2. Press the Memory Button to change.
3. Press the Enter Button to set entry.
4. The blinking Date, Fig. 2, followed by Hour and Minutes will display. Repeat steps 2 and 3 to adjust the date/time setting.
5. After setting the time and date, the time will appear on the display, Fig. 3. Press the POWER button to turn the unit off. Press the POWER button again to turn the unit on to take a reading.

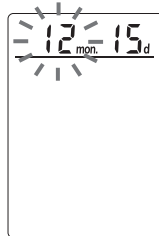


Fig. 1

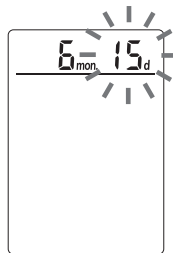


Fig. 2

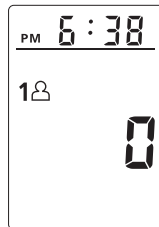
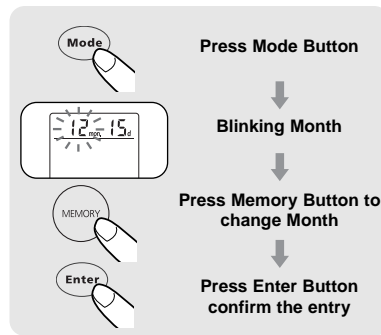


Fig. 3

Setting the Alarm Clock

Your automatic digital blood pressure monitor features an alarm clock. The alarm can be set to ring at four different times in the day. The alarm is especially helpful if you are required to measure your blood pressure at specific times (for example: 7:00 a.m., 12:00 p.m., 6:00 p.m. and 10:00 p.m.).

To set the alarm clock:

1. Press the Mode Button twice to enter into the alarm mode. The blinking hour will display, *Fig. 1*.
2. Press the Memory Button to adjust the hour.
3. Press the Enter Button to confirm.
4. The blinking minutes will display, *Fig. 2*. Press the Memory Button to adjust the minutes.
5. Press the Enter Button to confirm, *Fig. 3*.
6. Press the POWER button to turn the unit off.

NOTE: Repeat steps 2 - 5 to set the additional alarm times.

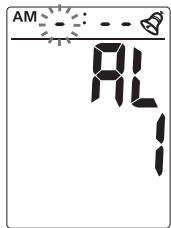


Fig. 1

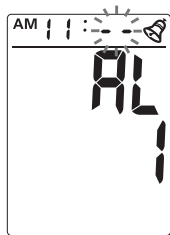


Fig. 2

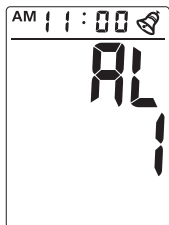


Fig. 3

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.

NOTE: If for any reason you are unable to or should not use your left arm, please modify the following instructions and apply the cuff to your right arm. Your physician can tell you which arm is best for you to use.

1. Remove any constrictive clothing or jewelry that may interfere with the cuff placement.
2. Be seated with your feet flat on the floor.
3. Position the cuff on a solid surface with the tubing facing UP and AWAY from you, *Fig. 1*. The metal bar on the cuff should be to the left of the tubing.
4. Widen or open the cuff by pulling or rolling the bottom of the cuff towards the right, *Fig. 2*. This should open the cuff, creating a cylinder. Do not extend the cuff beyond the metal bar.
5. Insert your arm into the cuff (cylinder). Position the (Φ) mark over the main artery (on the inside of your arm), *Fig. 3*.
6. The bottom edge of the cuff should be positioned approximately one inch ABOVE the elbow joint, *Fig. 4*.



Fig. 1



Fig. 2

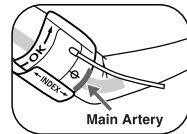


Fig. 3

7. Reaching underneath your left arm with your right hand, pull the end of the cuff towards your body to tighten the cuff, *Fig. 5*. Wrap and secure the cuff making sure that the (Φ) mark remains as shown, *Fig. 3*.
8. The cuff should fit comfortably, yet snugly around your arm. You should be able to insert two fingers between your arm and the cuff.

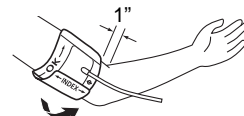


Fig. 4

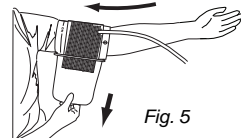


Fig. 5

NOTE: The cuff size is suitable for use when the vertical "Index" mark is within the horizontal "OK" range. A different sized cuff is needed if the "Index" mark is outside of the "OK" range.

Taking Your Blood Pressure Reading

Proceed only after reading the previous sections of this manual.

1. Position the monitor on a flat, stable surface with the digital display panel in view. Insert the cuff tubing connector into the left side of the monitor, *Fig. 1*.
2. Rest your elbow on a solid surface with your palm facing upward. Elevate your arm so that the cuff is at the same level as your heart, *Fig. 2*. Relax your left hand.
3. Select the memory bank you want your reading to be stored in by pressing the User-Select button to alternate between, memory bank 1 or 2. Press the POWER button to confirm your selection.
4. Press the POWER button again to turn the unit on. The unit will run a self-test, *Fig. 3*.

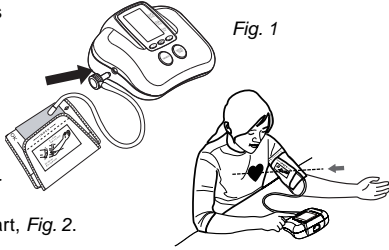


Fig. 1

Fig. 2

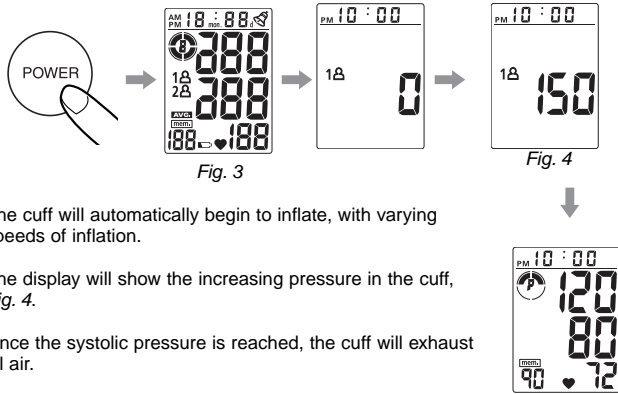


Fig. 3

Fig. 4

Fig. 5

5. The cuff will automatically begin to inflate, with varying speeds of inflation.
6. The display will show the increasing pressure in the cuff, *Fig. 4*.
7. Once the systolic pressure is reached, the cuff will exhaust all air.
8. Your blood pressure (systolic and diastolic) measurement, and pulse rate will display simultaneously, *Fig. 5*.
9. Your reading will be automatically stored in memory.

10. To conserve energy, press the POWER button to turn the power off. Otherwise, the unit will automatically shut off after approximately 1 minute.
11. Disconnect the tubing from the monitor prior to storing.

Recalling Measurements in Memory

You can recall up to 120 total measurements in memory (60 per memory bank) plus an average of the last three measurements in memory. These measurements can be shared with your physician or trained healthcare professional.

1. Press the MEMORY button. The first reading displayed is the average of the last three measurements stored in memory, *Fig. 1*.
2. Continue to press the MEMORY button to view the next previously stored measurement, *Fig. 2*.

NOTE: Each memory bank can store up to 60 readings. When the number of readings exceeds 60, the oldest data will be replaced with the new record.

All stored measurements can be erased by pressing the memory button until "0" appears on the screen.

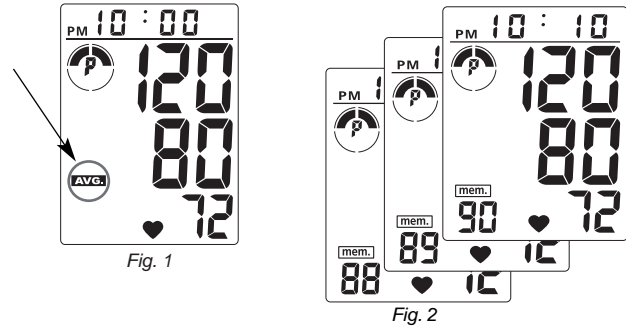


Fig. 1

Fig. 2

Description of Display Symbols



Indicates a measurement within Stage 2 Hypertension.



Indicates a measurement within Stage 1 Hypertension.



Indicates a measurement within Pre-Hypertension Stage.



Appears when batteries should be replaced.



Shows the pulse rate per minute.



Occurs when an error was made during measurement.



Tubing is leaking air.



Pressure exceeds measurement range.



Unit has malfunctioned. Unit needs to be sent in for repair or replacement.



Pressure exceeds measurement range.

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.
EE symbol displays.	Do not talk or move during the measurement. Review "Applying Your Blood Pressure Cuff" section.
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 measurements should be interpreted by your physician.

Care and Maintenance

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

Product Specifications

Name and model number	SmartSpeed® Plus Automatic Digital Blood Pressure Monitor with Memory, 04-320-001, 04-320-006
Display system	Digital display/LCD
Measuring method	Oscillometric
Power source	4 "AA" batteries
Measuring range	Pressure: 40-250 mmHg Pulse: 40-199 beats/minute
Accuracy	Pressure: ±3 mmHg Pulse: ±5% of reading
Inflation	Pump Driven
Deflation	Automatic Pressure Release Valve
Memory	Built-in memory enabling display of up to 120 (60 per memory bank) measurements
Automatic Power Off	Approximately 1 minute after last button operation
Operation Environment	Temperature 50°F – 104°F (10°C – 40°C) Humidity 40 – 85%
Storage Environment	Temperature 14°F – 140°F (-10°C – 60°C) Humidity 10 – 90%
Monitor Dimensions	5-1/2" x 4-1/2" x 2-1/4"
Weight	12.35 oz. (without batteries)
Arm Circumference Range	Small adult size cuff fits arm circumference: 7" - 10-1/4" (18-26 cm), Adult size cuff fits arm circumference: 9-3/8" - 14-1/8" (24-36 cm), Large adult size cuff fits arm circumference: 13-3/8" -18-1/8" (34-46 cm), Wide-Range™ cuff fits arm circumference: 8-5/8" - 18" (22-46 cm)
Accessories	Cuff, detailed guidebook, Four "AA" batteries, Storage case
Options (sold separately)	Small adult size cuff, Adult size cuff, Large adult size cuff, Wide-Range™ cuff, AC Adapter

Specifications are subject to change without notice

#91-032-320 07/07

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Sample Blood Pressure Log

Name:

Age:

Weight:

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