

Remote Healthcare Monitoring System

User Guide

December 2011



- *Easy-to-use health monitoring system*
- *User friendly touch screen*
- *Card log-in feature*
- *Monitor 11 different vital signs*
- *Upload vital signs information*
- *Download patient history*
- *Customize health advice and warnings*
- *Professional graph analysis*
- *Mobile system using Wi-Fi or LAN*

What is the VITAL-IT Remote Healthcare Monitoring System?

The VITAL-IT Remote Healthcare Monitoring System from Emerson Network Power helps promote positive healthcare services by empowering healthcare professionals to capture and analyze a variety of healthcare vital signs in a variety of locations. It brings together a diverse array of sensors and powerful computer-based local analysis capability into a convenient and easy-to-carry terminal.

The VITAL-IT system provides the healthcare professional with immediate and direct feedback, warning of negative trends, or requesting new sensor readings. That data can then be secured to protect patient records and sent to healthcare experts at a central location for review. The system provides real-time healthcare updates while also creating a long term view of personal healthcare records.

Rapid treatment in clinics and communities is simplified and consistent acute and chronic care can be provided from the home to the hospital.



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What's in the Box?

1. Vital-IT-001 Tablet PC
2. Blood Glucose Meter
3. Pulse Oxygen Meter
4. Portable Electrocardiogram
5. Blood Pressure Monitor
6. Weighing Scale
7. Peak Flow Meter
8. Thermometer
9. External Power Adapter
10. Power Cord
11. USB Cables
12. User Guide

Set-up & Handling

Setup

1. Connect the external AC power adapter
2. Push the power button

Care & Handling

1. The system should be handled with care at all times
2. Setup the system on a clean, dry and level surface
3. Avoid contact to direct sunlight and humidity
4. Please review the instructions in this user guide before using the system
5. Do not alter any software or hardware settings
6. Please contact technical support for any questions

Contact person: Mr. Sam Lee

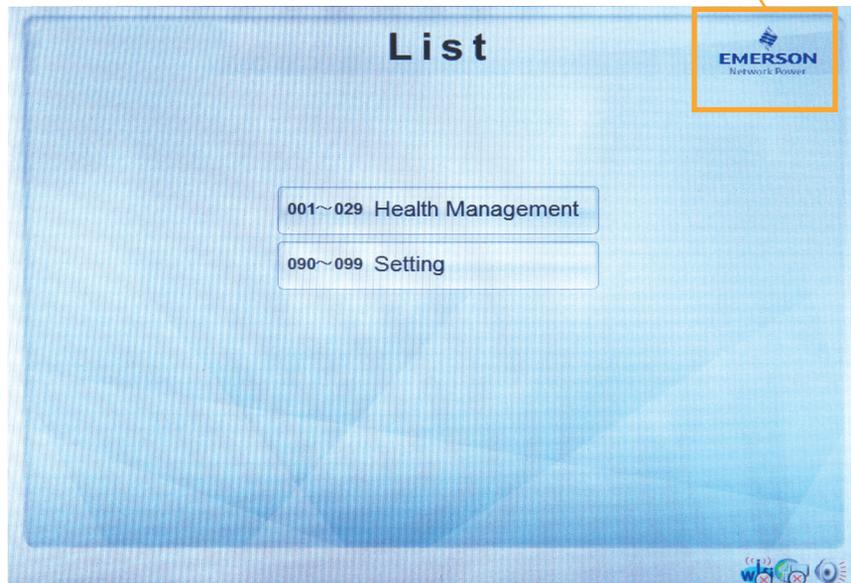
Telephone: 86-755-27506992

Email: Sam.Lee@emerson.com

Main Menu

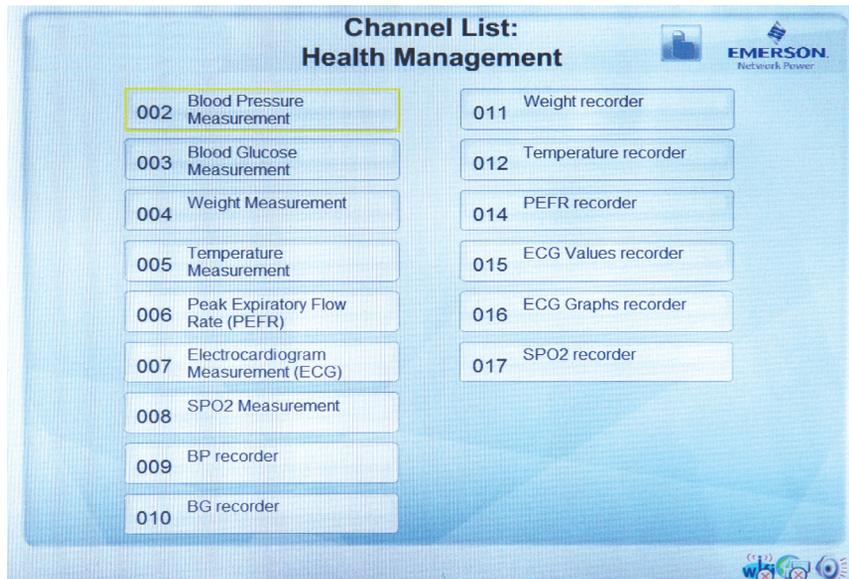
1. After pressing the power button , wait for 1 to 2 minutes to allow the system to boot up.
2. The healthcare system main menu will show 2 selections:
 - a. 001 – 029 Health Management:
Includes selection for 7 vital sign devices measurement and measurement records
 - b. 090 – 099 Setting:
Network and personal information settings
3. Press the VITAL-IT or Emerson Network Power logo to return to the main menu at any time.

Return to main menu



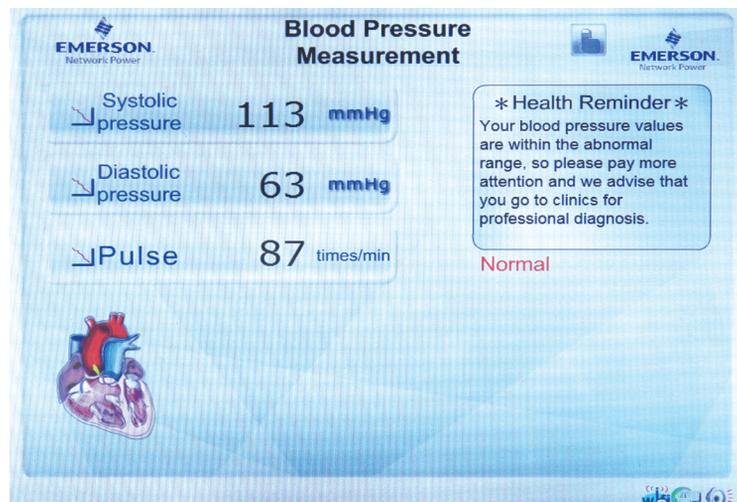
Health Management

1. Selecting 001 – 029 Health Management will display a list of healthcare measurements available in the VITAL-IT system.
2. The VITAL-IT system can measure blood pressure, blood glucose level, weight, body temperature, peak expiratory flow rate (PEFR), heart electrical activity (electrocardiogram or ECG) and oxygen saturation (SPO2).
3. Insert the patient's ID card before making any selection.



Blood Pressure Monitor

1. Ensure that the blood pressure monitor is connected to the terminal via a USB cable.
2. Select 002 blood pressure measurement from the health management menu shown on page 6.
3. Press the blood glucose meter ON/OFF button.
4. Roll up the patient's sleeve, but ensure the sleeve is not rolled up too tightly on the arm as this may constrict the flow of blood in the arm
5. Position the cuff leaving a clearance of approximately ½” to 1” between the cuff and the elbow.
6. Press the start button.
7. The cuff starts to inflate automatically and then measures the blood pressure value.
8. The blood pressure readings are captured by the terminal and displayed as shown below.
9. The VITAL-IT healthcare system will also save this data and assign it to the patient's ID.



Blood Glucose Meter Calibration

1. Check the code on the test strip vial before inserting the test strip.

Code numbers are used to calibrate your meter with the test strips to obtain accurate test results. You must code the meter before using it for the first time and every time you change to another vial of test strips.



2. Ensure that the meter is off. Remove a test strip from the vial. With clean, dry hands, you may touch the test strip anywhere on its surface. Do not bend, cut or modify the test strips in any way. Use each test strip immediately after removing it from the vial. Hold the meter as shown and insert the test strip into the test port. Make sure the three contact bars are facing you. Push the test strip in as far as it will go.



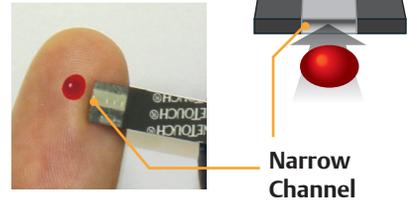
3. Match the code on the meter with the code on the test strip vial. If the code on the meter does not match the code on the test strip vial, press \uparrow or \downarrow to match the code number on the test strip vial. The new code number will flash on the display for three seconds, and then stay constant for three seconds. The display will advance to the screen with the flashing blood drop icon. If the codes already match, wait three seconds. The display will advance to the screen with the flashing blood drop icon. The meter is now ready to perform a blood glucose test.



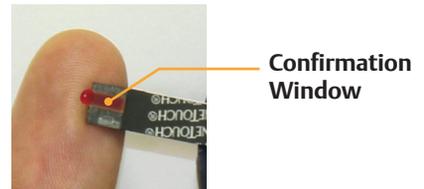
Blood Glucose Meter

Taking Measurements

1. Line up the test strip with the blood drop so that the narrow channel on the edge of the test strip is almost touching the edge of the blood drop.



2. Wait for the confirmation window to fill completely. The blood drop will be drawn into the narrow channel and the confirmation window should fill completely.



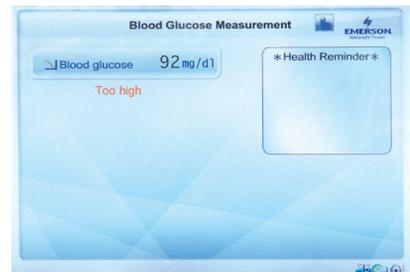
3. Remove the test strip and connect the USB cable to the blood glucose meter and the VITAL-IT terminal. Make sure the meter is turned off. If you insert the cable while the meter is on, the meter will not respond to system commands.
4. From the health management menu shown on page 6, select 003 blood glucose measurement. The blood glucose readings will be sent to the terminal automatically.

5. Once the command to start the download is sent from the computer to the meter, the meter display will show *PC* indicating that the meter is in communication mode. You will not be able to perform a test when the meter is in communication mode.



6. The VITAL-IT terminal screen will display the blood glucose reading and health recommendations. The healthcare system will also save the data and assign it to the patient ID.

7. The VITAL-IT terminal will ask you if the measurement was taken before or after a meal. Select the appropriate answer by touching the button on the screen.



Weighing Scale

1. Connect the USB cable to the weighing scale and VITAL-IT terminal.
2. From the health management menu, select 004 weight measurement.
3. Step on the scale and *0.0 kg* will first show on the scale.
4. Wait for 5 seconds while the VITAL-IT terminal captures your weight information.
5. Enter your height into the terminal, then the system will show your BMI.



Thermometer

1. Connect the USB cable to the thermometer and terminal.
2. From the health management menu, select 005 temperature measurement.
3. Press the *I/O* button. * --- ?C * will show on the thermometer display.
4. Fit the probe snugly into the ear canal, then press and release the start button.
5. The thermometer display shows your temperature.
6. Wait for 5 seconds, the VITAL-IT terminal will capture the temperature data from the thermometer.



Peak Flow Meter

1. Press the ON/OFF button to turn the monitor on. First, it will display the last result in the memory or *0* if there is no data available.



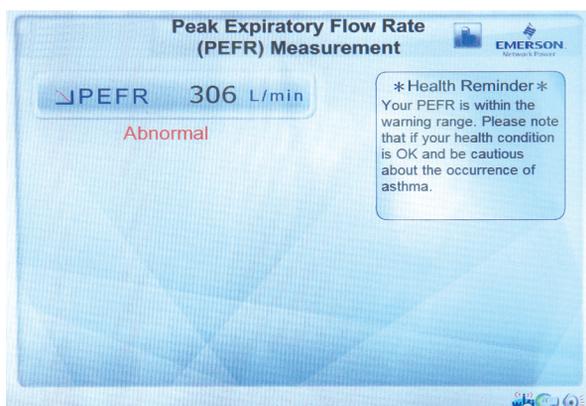
2. The device indicates *READY* for measurement with two short beeps and blinking arrows. Blow into the measuring tube as hard and as fast as you can.



3. A long beep confirms that the result is recorded. The peak flow value is displayed for about 3 seconds, and then the forced expiratory volume in one second (FEV1) is shown.



4. Connect the USB cable to the peak flow meter and the terminal.
5. From the health management menu, select 006 Peak Flow Rate Measurement. Turn the meter on.
6. The result is captured and displayed on the terminal along with health reminders.



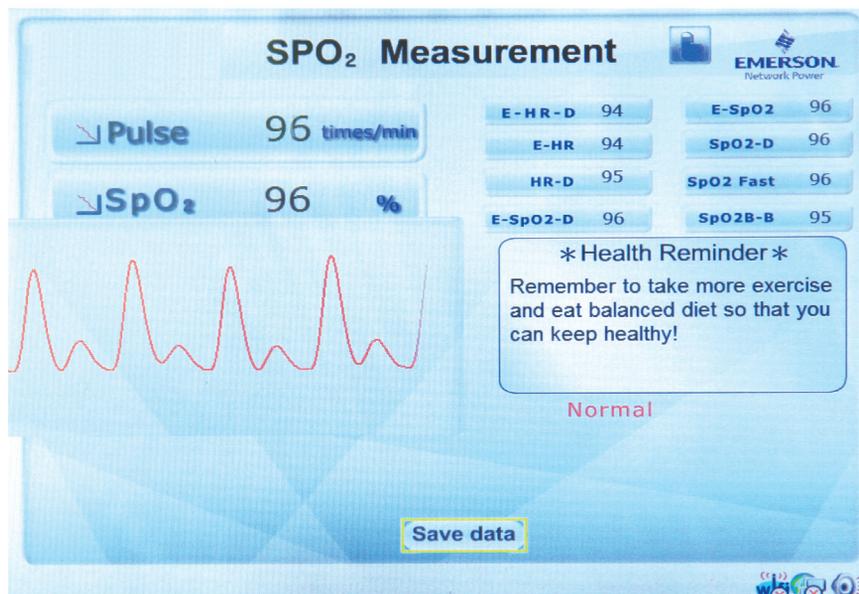
Electrocardiogram

1. Connect the USB cable to the ECG and VITAL-IT terminal.
2. Press the power button  once and gently place the right and left thumbs on the conduction electrodes to start measurement.
3. During measurement, a timer will be displayed at the bottom right corner of the touch screen. It will take 25 seconds to take the measurement, during which time the patient should avoid talking and just keep steady but gentle contact with their thumbs on the conduction electrodes.
4. Three parameters of the measured results will be displayed on the terminal. To start another measurement, simply repeat step 2 & 3. Please do not turn the power off while taking measurements.



Pulse Oxygen Meter

1. Connect the USB cable to the oximeter and VITAL-IT terminal.
2. From the health management menu shown on page 6, select 008 SPO2 measurement.
3. Clip the Nonin SPO2 to the patient's index finger and wait for few seconds.
4. The terminal will display the SPO2 value.
5. Press the save data icon and the SPO2 value data will be uploaded to the patient's ID record.



About Emerson Network Power

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