WIRELESS2000
RF & UWB Technologies Ltd

PAM™3000
Patient Assessment Monitor

Installation and Maintenance Guide

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00	09.Mar.2006	Preliminary Draft	E. Gavrilovich
01	07.Apr.2008	Rev history and FCC standards added, Environmental conditions changed as in CSA report	Eli A
02	22.Apr.2008	P/N added to “System Hardware Installation”, troubleshooting table added	Eli A
03	29.May.2008	Grammatical and spelling errors fixed	Eli A
03	14.Jul.2008	BSI&CSA logo removed, FCC notice included	Eli A

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PAM™3000
Patient Assessment Monitor

Installation and Maintenance Guide

1 Introduction

This *Guide* provides safety information, maintenance guidelines and cleaning instructions for the PAM™3000 Patient Assessment Monitor system.

2 System Description

PAM™3000 is for use in the US and Canada. The PAM™3000 system consists of Bed Sensor (200.003.10.00), RBS Repeater Base Station (200.001.10.00), CBS Central Base Station (200.002.10.00) and software.

3 System Hardware Installation

3.1 Installing the Bed Sensor

Regulatory Notice

This equipment may only be operated indoor. Operations outdoor is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties

FCC information

Product Name: PAM 3000 Bed Sensor Panel
Model number: WHQ20000310

3.1.1 Step 1: Power Supply

Find the power supply in the shipping box and unpack it.

Only the approved Power Supply (Wireless2000 p/n 375.001.10.00) and Power Cord (Wireless2000 p/n 506.001.10.00) shipped with PAM™3000 should be used.

Attach the power supply to the closest to the headboard tubular crossbar of the bed frame with the Velcro ties as shown. Route DC output cable as shown and fasten it with the Velcro ties to the bed frame. The DC plug should be placed near the top

section of the bed surface, as shown. Route AC power cord as shown and fasten it with the Velcro ties to the bed frame. Plug the AC power cord into the approved AC wall outlet.




3.1.2 Step 2: Bed Sensor

Unpack the bed sensor. Record its serial number and the room number for the location identification during the admission procedure. Pull up or slide down the bed mattress to expose the top section of the bed. Place bed sensor on the bed 18" (46 cm) away from the headboard and ensure that bed sensor's plastic cover is facing up and the bed sensor's DC power jack is oriented toward the footboard. Insert DC plug of the power supply into the DC jack of the bed sensor and tighten the outer ring of the plug to prevent its accidental unplugging.

3.1.3 Step 3: Calibration

To perform successful self-calibration procedure, ensure that the bed is vacant and there is no motion within 1 meter from the bed for 10 minutes. The bed sensor is now calibrated and ready for integration into the PAM system.

3.2 Installing the Repeater Base Station (RBS):

The locations to install the RBSs and the necessary number of RBS units were determined during the Initial Facility Assessment (IFA). Please consult the IFA Report.

Install the RBS up on the wall near the ceiling by using mounting screws supplied. Attach the DC plug of the DC power adapter (supplied) to the RBS DC jack and insert the AC plug into the nearest AC wall receptacle. Alternately, the RBS may be mounted above the suspended ceiling.

3.3 Installing the Central Base Station (CBS):

The system requires only one CBS unit per facility's floor.

Install the CBS by plugging its cable into the USB port of designated PC and placing the unit on the desk next to PC. For proper operation ensure that the label on the CBS enclosure is facing up. Improper orientation of the CBS may greatly decrease system's communication range.

4 Replacement Parts List

200.003.10.00 – Bed Sensor
200.001.10.00 – Repeater Base Station
200.002.10.00 – Central Base Station

5 Technical Information

Model**: PAM™3000**
Type of protection against electric shock: **Class 1**
Degree of protection against electric shock: **Type BF**, Applied part

6 Environmental Specifications:

6.1 Operating

Ambient temperature range: 10°C to 40°C (50°F to 104°F)
Relative humidity: 30% to 75%, non-condensing
Altitude: Sea level to 3000m max (10,000 Ft)

6.2 Transport and Storage

Ambient temperature range: -10°C to +60°C (+14°F to 140°F)
Relative humidity: 5% to 95%, non-condensing
Altitude: Sea level to 12,000m (40,000 Ft)

6.3 Applicable Requirements:

UL 60601-1 *(1st Edition) Medical Electrical Equipment, Part 1: General Requirements for Safety*
IEC 601-1:1988 + A1:1991 + A2:1995
Safety of Medical Electrical Equipment, Part 1: General Requirements for Safety
IEC/EN 60601-1-2 *Medical Electrical Equipment, Part 1: General Requirements for Basic Safety and Essential Performance. Collateral standard, EMC Safety*

With respect to ELECTRICAL SHOCK, FIRE, MECHANICAL and OTHER specified hazards in accordance with
CAN/CSA C22.2 No.601.1- M90
Safety of Medical Electrical Equipment, Part 1: General Requirements for Safety
CAN/CSA C22.2 No.601.1S1-94
Supplement No. 1-94 to CAN/CSA C22.2 601.1-M90
CAN/CSA C22.2 No.601.1B-98
Amendment 2 to CAN/CSA C22.2 601.1-M90
EN 61000-4, IEC 61000-4 *in accordance with FCC part 15/B, 15/C, 15/F*

Power Supply complies with **UL60601-1, UL60950-1, CSA C22.2 601-1, CSA C22.2 60950-1, EN60601-1 and EN60950-1.**

Power Supply Cord complies with **UL 60601-1**.

7 Maintenance Schedule

Maintenance	Frequency	Procedure
Inspect the power cord	Daily (when not in use)	Examine the AC power plug for damage. Make sure that the prongs of the plug do not move in the casing. If damaged, replace the Power Cord with the appropriate Wireless 2000 Power Cord.
Cleaning	As needed	See “Cleaning Procedure”
Safety checks according to IEC 601-1	At least once every two years, after any repairs	See your qualified service personnel for

	or as needed	additional information
Functional Testing	When functional defects in measurements are suspected	See your qualified service personnel for additional information
Performance Assurance	At least once every year, or as needed (when functional defects in measurements are suspected)	See your qualified service personnel for additional information

8 Cleaning Procedure

Warning:

- Do not immerse the Bed Sensor, RBS or CBS in liquid or use caustic or abrasive cleaners.
- Do not spray or pour any liquid on the Bed Sensor, RBS or CBS.
- Do not allow any liquid to penetrate connectors or openings in the Bed sensor's chassis.

To clean the Bed Sensor, dampen a cloth with commercial, non-abrasive cleaner and wipe off the top and sides of the plastic cover.
If liquid is accidentally spilled on the Bed Sensor, clean and dry it thoroughly before reuse.
If in doubt about the Bed Sensor's safety, refer the unit to qualified service personnel.

9 Troubleshooting

The table below will help intended user to troubleshoot possible problems without any external help from Wireless2000's tech-support personnel. However, if any technical problems appeared, save the description of the problem into the log file for the further investigation.

	Problem	Solution
1)	"No Data" received on GUI/ No Communication Possible cause a) Bed Sensor's power	 -check power adaptor to

	unplugged b) RBS's power unplugged c) RBS is not associating with CBS	make sure power jack is connected. If it was disconnected, plug it in and proceed with calibration routine (See System Hardware Installation Step 3 for reference). -check LED indicator on RBS. If it is "OFF" (no light) than make sure RBS's Power Supply is connected. Reconnect it in case it was unplugged. Otherwise, if it is connected, call Wireless2000's tech-support personnel. -Reset the RBS by disconnecting its power jack and connecting again.
2)	"Error" display on the monitor (GUI) Possible cause d) Failed calibration of Bed Sensor	-Unplug Bed Sensor and plug it back. Make sure there is no motion one meter within the Bed Sensor for at least 1 minute.

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