



Technical Manual

SW Rest Secure System™



Rev. 2.0 #8038

SIZEWISE

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Technical Manual

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Definition of Symbols

Manual Definitions

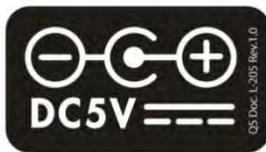
Throughout this manual different type fonts and icons are used to aid user readability and understanding of the content. Below are some examples.

Standard Text	Used for regular information.
Bold Face Text	Emphasizes a word or phrase.
NOTE	SETS APART SPECIAL INFORMATION OR IMPORTANT INSTRUCTION CLARIFICATION.

Warnings and Cautions

 **Warnings/Cautions:** This symbol is intended to alert the user to the presence of important operating, maintenance or servicing instructions. Disregarding a warning could result in patient and/or user injury as well as damage to equipment.

 **Electrical Shock Hazard Warning:** This symbol is intended to alert the user to the presence of electrical shock hazards. It is important to follow all instructions and special procedures to avoid electrical shock to the operator, care provider and/or patient.



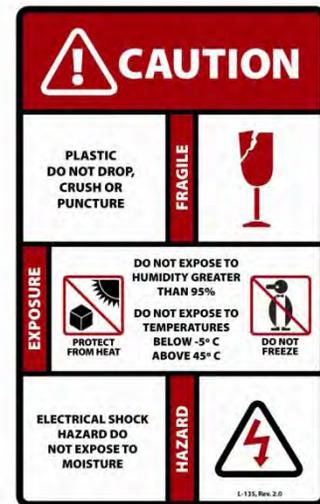
Electrical Input



Nurse Call Outlet



Rechargeable Battery



The hazards and warnings are indicated on the shipping container by this label.



WARNING: The SW Rest Secure System™ is to be used in accordance with each facility's policies and procedures.

For user and patient safety, read and follow all warnings and instructions that apply to use of the SW Rest Secure System™. Before using this integrated scale system, the user must know what to do to ensure safety.

Put the patient at ease. The care provider should communicate with the patient by telling them what they are planning to do.

Work with the patient's doctor, nurse or therapist to learn safe methods best suited to the care provider's abilities and those of the patient.

Always use good posture and proper body mechanics. When possible use assistive safe patient handling devices, if necessary to manually lift or support the patient, bend knees slightly and keep back as upright and straight as possible.

Important Safety Instructions

- The SW Rest Secure System™ is to be used in accordance with each facility's policies and procedures.

Specifications

- Any change to the specifications can result in malfunction or damage to the SW Rest Secure System™.

Set-Up Instructions

- Electric shock may occur when plugging the SW Rest Secure System™ into the wall outlet. Use ONLY grounded or hospital grade outlets.
- DO NOT use the SW Rest Secure System™ if the power cord is cut, frayed or loosely connected to the bed.
- To ensure reliable functionality, the battery reserve should only be used as a temporary power source until AC power is restored. When the Low Battery Warning screen is shown, the unit should be plugged into AC immediately.
- The bed is to be used in accordance with each facility's policies and procedures.

Operating Instructions

- The bed is to be used in accordance with each facility's policies and procedures.

Cleaning Instructions

- Before cleaning the RSS, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.

Maintenance

- The RSS requires regular maintenance to uphold performance and avoid premature wear or damage.
- Never dispose of batteries in a fire because they may explode.
- The RSS needs to be stored, transported and operated in a temperature range of -5°C to 45°C (23°F to 113°F).
- DO NOT expose the RSS to humidity greater than 95%.

Troubleshooting

- Only authorized personnel should engage in the troubleshooting process. Troubleshooting by unauthorized persons could result in personal injury or equipment damage.

SW Rest Secure System™ Installation

- Before installing the RSS Control Module, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.
- Always use the proper personal protective equipment to avoid injury to the patient and/or care provider.
- Using the existing right hole on the frame from the old black box is critical to prevent damage to the control box from moving parts of the bed and have access to the bracket on the center channel.
- Before installing the RSS Control Module, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.
- Always use the proper personal protective equipment to avoid injury to the patient and/or care provider.
- These dimensions are critical to prevent damage to the control box from moving parts of the bed.

SW Rest Secure System™ Updating Firmware

- DO NOT enter the Update Firmware menu unless instructed by Sizewise. Doing so may cause the unit to stop responding and will require factory reprogramming.

SW Rest Secure Battery System™ Replacement

- Never dispose of batteries in a fire because they may explode.
- Only attempt to recharge batteries marked as rechargeable.
- A non-rechargeable battery will rupture or leak when charge is attempted.
- Replace batteries with the same type (NiMH) or its equivalent. Failure to do so may seriously compromise the integrity of the Rest Secure System.

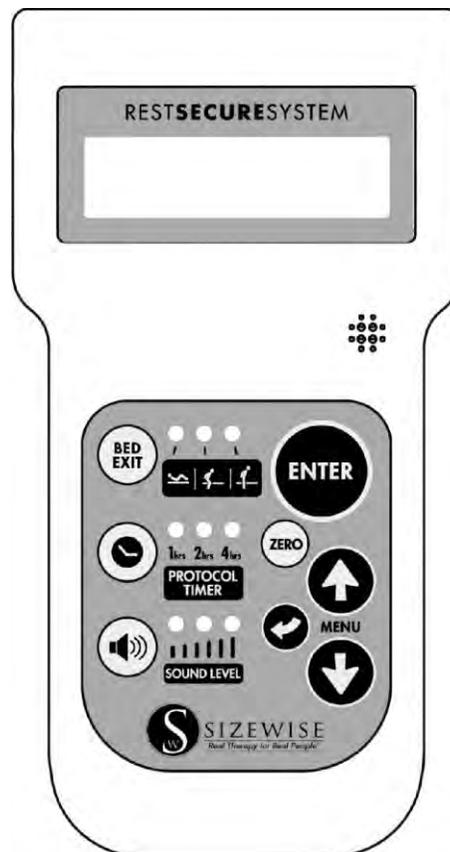
Device Information

Description of the SW Rest Secure System™ (RSS)

The purpose of the SW Rest Secure System™ is to alert the care provider that a patient is attempting to exit the bed or is in an immediate risk of falling in settings where continuous surveillance of a patient is not possible. This is achieved by precisely monitoring a change in patient position. When the patient makes an attempt to get out of bed an alarm will sound either at the hand control or activate the nurse call signal.

The SW Rest Secure System™ also has an integrated scale that utilizes a transducer based system to accurately record the weight of the patient while in the bed. It also has the capability to record the weight automatically every day for 30 days at user-defined intervals.

Another feature is the protocol timer, which can be set for 1, 2 or 4 hours, to alert the care provider that the patient needs attended to or checked on. It has the capability to alert the care provider by an audible tone or activating the nurse call signal.



Specifications

Control Module

The Control Module is located under the bed.

Housing

Material ABS, UL94-V0 rated
Width 7.25" / 18.5 cm
Length 3.25" / 8.5 cm
Thickness 2.00" / 5 cm

Connectors

Power 2.1 mm Center Positive
Load Cell 6 pin Rj11
Nurse Call 1/4 Phono TR
CAN Network 6 pin Rj11

Nurse Call

Open 0 Ohms
Alarm 0.3 Ohms
Output 0.206 VRMS Max

External Power

AC Adapter 5.0 Volts, DC, UL Recognized supply
Current 800 mA, fused at 800 mA

Battery Power

Type 2 x AA, NiMH Rechargeable
Capacity 1600 mAh
Recharge Time Nominally 30 mins, from dead 120 mins
Operating Time (No Alarms) 200 mins

Operating Current

Normal 170-280 mA
Charging 320 mA
Alarming 275 mA

Weighing Function

Resolution 1-1.5 lbs. / .5-.7 kg
Sampling Frequency 10 Hz
Averaging 16 samples/ 1.6 seconds



WARNING: Any change to the specifications can result in malfunction or damage to the SW Rest Secure System™.

Hand Control

The Hand Control is located on the footboard.

Housing

Material ABS, UL94-V0 rated
Width 3.00" / 7.5 cm
Length 7.00" / 18 cm
Thickness 1.75" / 4.5 cm

Connectors

CAN Network 6 pin Rj11

Operating Current

Normal 54-160 mA
Alarming 150 mA

Audio

Record Memory 4 Mbits
Voice Record Alarm Time 15 seconds
Sound Level 90 dB @ 12 inches
Tones 5 selectable tones

Display

Type LCD Graphic, blue LED backlighting
Size 64 x 17.9 mm
Resolution 32 Pixels

Functions

Bed Exit Alarms Off, Light, Moderate, Heavy
Protocol Alarm Off, 1, 2, 4 Hours
Sound Volumes Off, Low, Medium, High
Scale 0-1000 lbs. / 0-453.5 kg
Scale Accuracy* +/- 5 lbs. / 2.25 kg

*Scale accuracy can only be achieved by proper factory calibration



WARNING: Any change to the specifications can result in malfunction or damage to the SW Rest Secure System™.

Set-Up Instructions

Basic Set-Up



WARNING: Electric shock may occur when plugging the SW Rest Secure System™ into the wall outlet. Use ONLY grounded or hospital grade outlets.

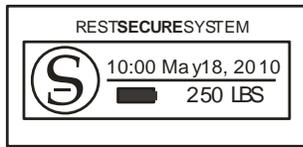
DO NOT use the SW Rest Secure System™ if the power cord is cut, frayed or loosely connected to the bed.

Make sure the unit is plugged into AC power and the hand control is connected to the bed's footboard. The Nurse Call Interface cable at the head of the bed should be securely plugged into the Nurse Call Interface on the wall to function properly. Press the enter button to activate the hand control.

The first photo shows the unit operating on AC power. The second photo shows the unit operating on battery reserve power with full charge. The third photo shows the battery reserve with 15% charge.



AC Power



Battery 100% Charge



Low Battery Warning

The unit will go into standby after 60 seconds of inactivity. If this occurs press any button, except back, to resume.

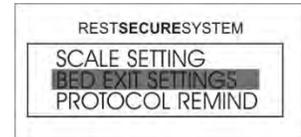


CAUTION: To ensure reliable functionality, the battery reserve should only be used as a temporary power source until AC power is restored. When the Low Battery Warning screen is shown, the unit should be plugged into AC immediately.

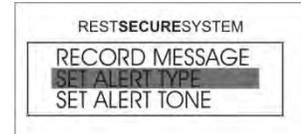
Bed Exit Alarm: Alert Type

The nurse call is always active no matter what selection is made. When selecting nurse call only, the audio alert will be disabled in the room. This unit will chime on an alarm if a voice message has not been recorded and the unit is set to Voice Recording.

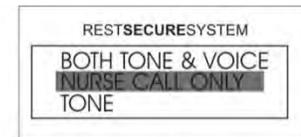
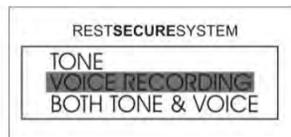
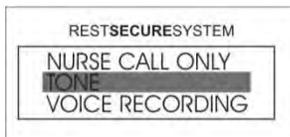
1. Access the Menu by pressing the UP or DOWN arrow until Bed Exit Settings is highlighted and then press ENTER.



2. Select Set Alert Type and then press ENTER

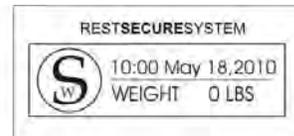
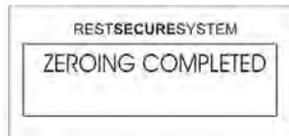
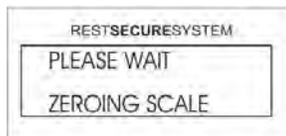


3. Choose one of the four alert types and then press ENTER. The selection has now been made and the user will be returned to the Home Screen.



Scale System: Zeroing the Scale

With the patient out of the bed, press and hold the ZERO button for 3 seconds. This process sets the tare weight (base weight) and will return to the Home Screen when complete.



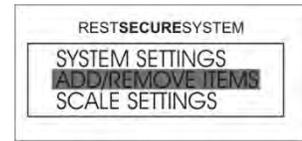
With the tare weight set, the patient may now be placed in the bed and begin recording weight.

NOTE: Make sure all equipment and linens are on the bed before zeroing the scale. If an air support mattress is being used with the patient, be sure to fully inflate the mattress prior to zeroing the scale. Adding or removing items during the zeroing process will cause inaccurate patient weight. It is highly recommended that the scale be zeroed before each new patient.

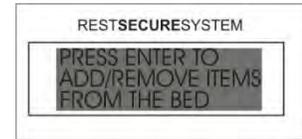
Scale System: Adding/Removing Items

The feature will allow items to be added and removed such as blankets or pillows from the bed without affecting the current weight reading of a patient.

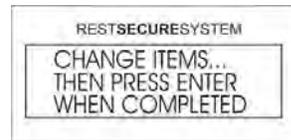
1. Access the Menu by pressing the UP or DOWN arrow until ADD/REMOVE ITEMS is highlighted and then press ENTER.



2. Press ENTER to add/remove items from the bed.



3. Change the items on the bed and press ENTER when complete. The user will now return to the Home Screen.

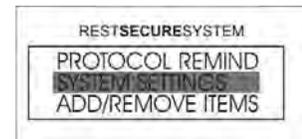


NOTE: If steps 2 and 3 are not completed within 30 minutes then the unit will automatically exit the Add/Remove Items screen and return to Standby.

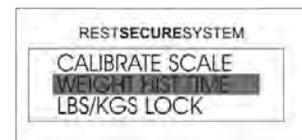
Scale System: Weight History Time Setting

The SW Rest Secure System™ is designed to record the weight of the patient by date and time. The unit will automatically record the weight for 30 days at a default time of 00:00 hours (midnight).

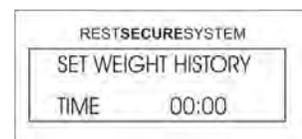
1. Access the Menu by pressing the UP or DOWN arrow until SYSTEM SETTINGS is highlighted and then press ENTER.



2. Select WEIGHT HISTORY TIME and then press ENTER.



3. Using the arrows, select the time desired for the unit to record a weight and then press ENTER. The user will return to the Home Screen.

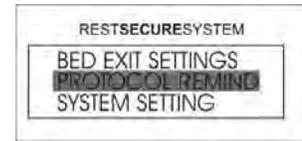


NOTE: Time must be set in 24-hour clock in 1/2 hour intervals. Example: 13:00 = 1:00 pm

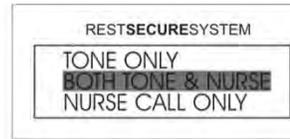
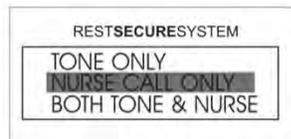
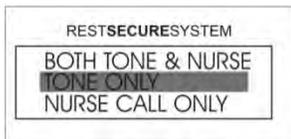
Protocol: Set Alert Reminder

The protocol reminder is a timer that can be set for 1, 2 or 4 hours as a reminder that the patient needs to be attended to or checked on. There are three alert settings for the protocol alarm.

1. Access the Menu by pressing the UP or DOWN arrow until PROTOCOL REMIND is highlighted and then press ENTER.



2. Choose from one of the three alert types and then press ENTER. The selection has now been completed and the user will be returned to the Home Screen.

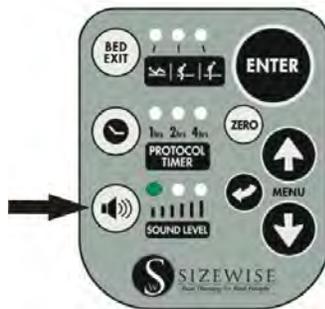


NOTE: The protocol audible tone is specific and is unchangeable to ensure differentiation between a bed exit alarm and a protocol alarm. The protocol alarm will have short frequent beeps.

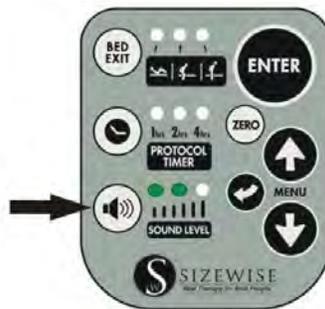
Protocol Timer: Sound Level Setting

There are 3 sound levels for the bed exit alarm/protocol reminder.

Press the sound level button once for low volume, twice for medium volume, and a third time for high volume. By pressing the sound level button for a fourth time, the sound level will be reset to low volume.



Low Volume



Medium Volume

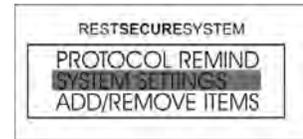


High Volume

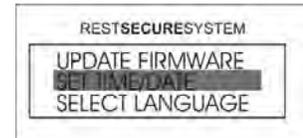
NOTE: When the bed exit alarm and protocol timer are disabled, the sound level indicator lights will be OFF. This indicates that the sound level has been disabled.

Setting the Time/Date

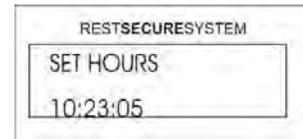
1. Access the Menu by pressing the UP or DOWN arrow until SYSTEM SETTINGS is highlighted and then press ENTER.



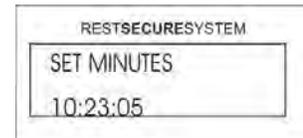
2. Select SET TIME/DATE and then press ENTER.



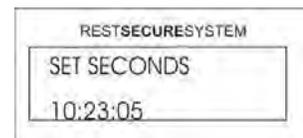
3. Using the UP or DOWN arrow, the user can now set the hours and then press ENTER. The time must be set in 24-hour clock. (13:00 = 1:00 pm)



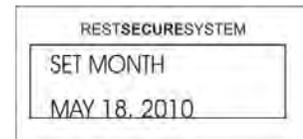
4. Using the UP or DOWN arrow, the user can now set the minutes and then press ENTER.



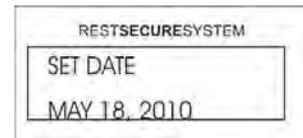
5. Using the UP or DOWN arrow the user can set the seconds and then press ENTER. This is an optional setting and may be bypassed by pressing ENTER.



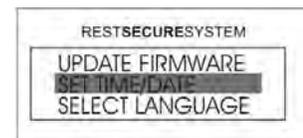
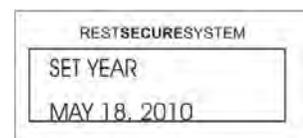
6. Using the UP or DOWN arrow the user can set the month and then press ENTER.



7. Using the UP or DOWN arrow the user can set the date and then press ENTER.

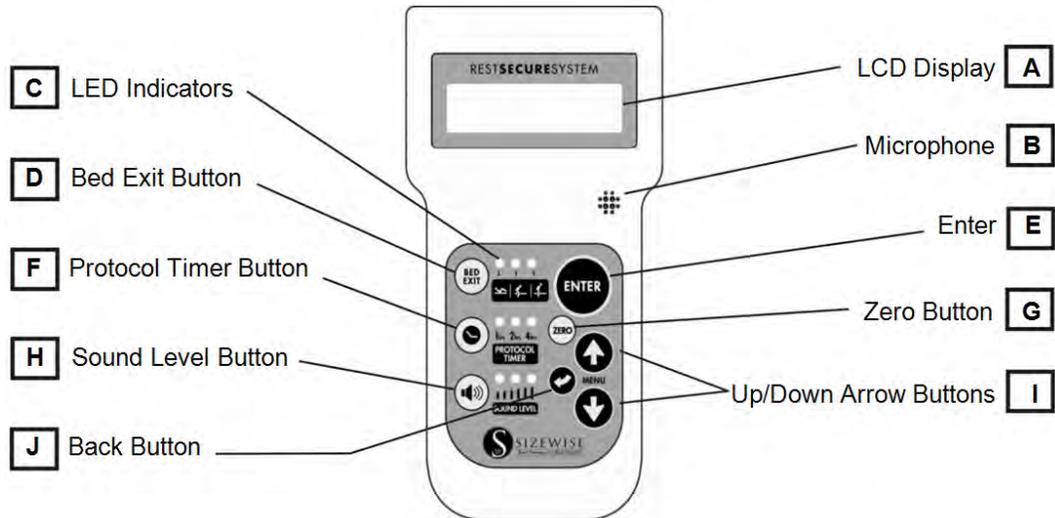


8. Using the UP or DOWN arrow the user can now set the year and then press ENTER. After pressing ENTER the user will return to the SET TIME/DATE menu. To get back to the Home Screen, press and hold the BACK button for 3 seconds.



Operating Instructions

Hand Control



The hand control has glow-in-the-dark features; in case of power outages operation is not impaired.

- A. **LCD Display** – Lighted display shows the weight and allows the navigation of on-screen menus.
- B. **Microphone** – Use to record a message for the voice alarm.
- C. **LED Indicators** – Green lights indicate what setting or function is selected.
- D. **Bed Exit Button** – Use to set the bed exit alarm.
- E. **Enter Button** – Use for making a selection when in the main and sub menus.
- F. **Protocol Timer Button** – Use to set the protocol reminder.
- G. **Zero Button** – Use for zeroing the scale and establishing the tare weight (base weight).
- H. **Sound Level Button** – Use for selecting low, medium and high volume.
- I. **Up/Down Arrow Menu Buttons** – Use for accessing the menu and making adjustments to menu items.
- J. **Back Button** – Press this button once to go to the previous menu or press and hold this button for 3 seconds at any time to go back to the Home Screen no matter what menu is displayed.

Bed Exit Alarm: Use Alarm

The bed exit alarm function on the SW Rest Secure System™ alerts the care provider that a patient is attempting to exit the bed or is in an immediate risk of falling. This is especially important in settings where continuous surveillance of the patient is not feasible.



WARNING: The bed is to be used in accordance with each facility's policies and procedures.

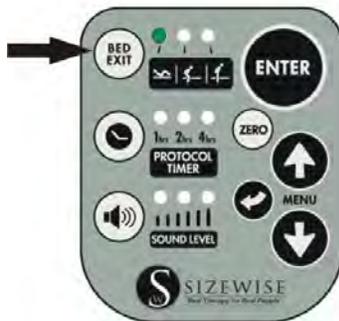
There are 3 bed exit alarm sensitivity settings:

High Sensitivity: Detects patient movement, typically this setting would be used by the care provider when needing to be notified of any movement, generally patients at very high risk for falls.

Medium Sensitivity: Detects a patient attempting to exit the bed, typically this setting would be used by the care provider in situations where the patient is at a moderate to high risk for falls.

Low Sensitivity: Detects when a patient has exited the bed. This setting would typically be used by the care provider in situations where the patient responds to verbal or audible commands and is at a lower risk for falls. If the patient is on an air support surface a lower sensitivity setting may be more appropriate as well.

NOTE: High and medium sensitivity settings may detect other movement, such as air therapy mattresses.



High Sensitivity



Medium Sensitivity



Low Sensitivity

To set the bed exit alarm:

In order to set the bed exit alarm, the patient must be in the bed prior to selecting the desired sensitivity level. To set the alarm, press the BED EXIT button until the desired sensitivity is selected. When there are no indicator lights on, the alarm is disabled. When a bed exit alarm has been activated, simply press the ENTER button to reset the alarm and the monitoring process will be restored.

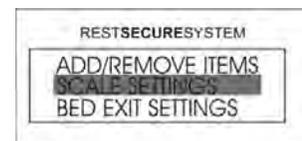
NOTE: The bed exit indicator light will blink for 10 seconds before the alarm will activate. Upon activation, the indicator will stay on. The bed exit alarm can only be activated with a minimum of 35 lbs. (16 kg) on the bed.

Scale System: Use Scale and Access Weight History

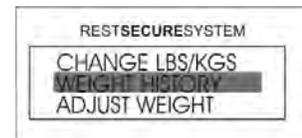
The Rest Secure System's integrated scale helps reduce the risk of care provider or patient injury by allowing care providers to accurately record the weight of the patient without having to transport or move the patient each time the weight is needed. The scale system is set to weigh and record the patient's weight automatically at midnight every day up to 30 days. This bed offers care providers convenience in attending to the patient.

Before a patient is placed into the bed, the scale should be zeroed out. See Set-Up Instructions Scale System: Zeroing the Scale (page 9).

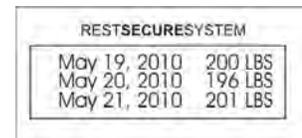
1. Access the Menu by pressing the UP or DOWN arrow until SCALE SETTINGS is selected and then press ENTER.



2. Select WEIGHT HISTORY and then press ENTER.



3. Using the arrows, the user can toggle through the last 30 days of history. Press the BACK button twice to return to the Home Screen.



NOTE: The unit will only store the last 30 days of weight history. When the memory is full, it will begin replacing the older weight history readings first.

Protocol Timer: Using the Timer

The SW Rest Secure System™ protocol timer can be utilized to alert the care provider that the patient needs to be attended to or checked on at intervals of 1, 2 or 4 hours. The protocol timer has the capability to alert the care provider by an audible tone on the unit and, if connected to the Nurse Call Interface, can activate the nurse call signal.



WARNING: The bed is to be used in accordance with each facility's policies and procedures.

Press the PROTOCOL TIMER button once to set the timer to 1 hour, press it twice to set the timer to set to 2 hours, press it three times to set to 4 hours. By pressing the PROTOCOL TIMER button a fourth time, the timer will be disabled and no indicator lights will be lit. When a protocol alarm has been activated, simply press the ENTER button to reset the alarm and repeat the timing process.



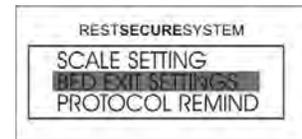
NOTE: On alarm, the unit must first be reset by pressing ENTER before the protocol timer can be changed.

The sound level on the protocol timer can be changed. For further directions see Set-Up Instruction Protocol Timer: Sound Level Setting to learn how (page 11).

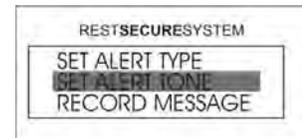
Bed Exit Alarm: Set Alert Tones

There are 5 different audible alarm tones for the bed exit alarm. The user will hear each of the different tones as they scroll through the 5 selections.

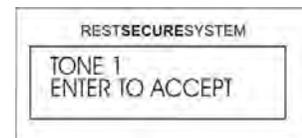
1. Access the Menu by pressing the UP or DOWN arrow until Bed EXIT SETTINGS is highlighted and then press ENTER.



2. Select SET ALERT TONE and then press ENTER.



3. Using the arrows, select one of the 5 tones and then press ENTER. The selection has now been completed and the user will return to the Home Screen.

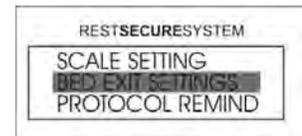


Bed Exit Alarm: Record Message

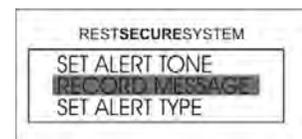
The Bed Exit Menu will allow you to change the alert type, alert tone, and also let you record a message to the patient so they are not startled by the tones of the bed exit alarm. This unit is also equipped with a Nurse Call Interface which will activate the nurse call whether the unit is set to alert tone or voice message.

NOTE: The unit must be connected to the interface in order for the nurse call to activate.

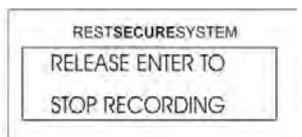
1. Access the Menu by pressing the UP or DOWN arrow until BED EXIT SETTINGS is highlighted and then press ENTER.



2. Select RECORD MESSAGE and then press ENTER.



3. Press and hold the ENTER button until the user hears a series of beeps. With the ENTER button still pressed, the user may begin to record a message by speaking directly into the microphone. The message can be recorded for a maximum length of 15 seconds. When the recording is finished, release the ENTER button and follow the on-screen prompts.



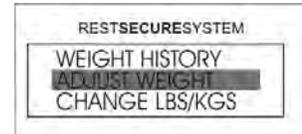
Scale System: Adjust Weight

This feature is designed to manually adjust the weight if items were added to the bed without using the Add/Remove option. The user will need to make sure the patient's weight is known before using this option.

1. Access the menu by pressing the UP or DOWN arrows until SCALE SETTINGS is highlighted and then press ENTER.



2. Select ADJUST WEIGHT and then press ENTER.



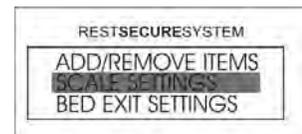
3. Adjust the weight that is added or removed from the bed in 0.5 lb. increments using the up or down arrow and then press ENTER. The user will now return to the Home Screen.

NOTE: The adjusted weight will return to 0.0 lb. when zeroing the scale as shown in the Set-Up Instructions Scale System: Zeroing the Scale (page 9).

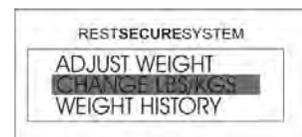
Scale System: Change LBS/KGS Setting

This feature will allow the user to display the patient's weight in either pounds (lbs.) or kilograms (kgs.). The default for patient weight display is pounds (lbs.). This unit has a Lbs./Kgs. Lockout feature to prevent an accidental change of units (see Operating Instructions Scale System: Locking/Unlocking the Unit in LBS/KGS page 20).

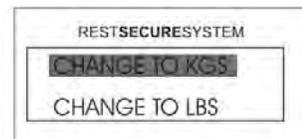
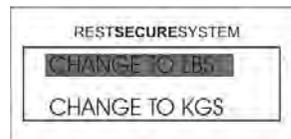
1. Access the menu by pressing the UP or DOWN arrows until SCALE SETTINGS is highlighted and then press ENTER.



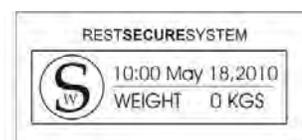
2. Select CHANGE LBS/KGS and then press ENTER.



3. Select CHANGE TO KGS or CHANGE TO LBS and then press ENTER.



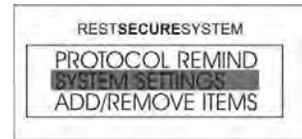
4. The unit will return to the Home Screen showing the weight in kilograms or pounds dependent upon which was chosen.



Scale System: Locking/Unlocking the Unit in LBS/KGS

As part of a safety feature, this unit has the ability to lock the unit of measure in lbs. or kgs. This will prevent accidentally changing the units in the Scale Settings menu.

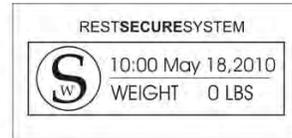
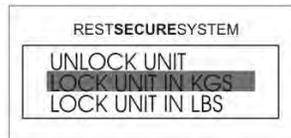
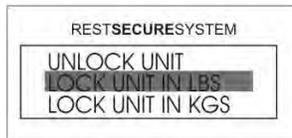
1. Access the menu by pressing the UP or DOWN arrow until SYSTEM SETTINGS is highlighted and then press ENTER.



2. Select LBS/KGS LOCK and then press ENTER.



3. Select the preferred unit of measure to lock and then press ENTER. The selection has been completed and the user will return to the Home Screen.



NOTE: Follow the directions in the Operating Instructions Scale System: Change LBS/KGS Setting on page 19 to change between lbs. and kgs.

Cleaning Instructions



WARNING: Before cleaning the RSS, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.

To minimize the negative impact of cleaning agents:

- Contact time must be monitored and kept to the required time identified on the manufacturer's instructions.
- All cleaning solutions must be diluted in accordance with manufacturer's instructions.

Recommended EPA Registered Disinfectants:

Wex-Cide 128 (Wexford Labs), EPA Reg. #34810-31

Equipment must be disinfected using an EPA registered, hospital-grade disinfectant, according to the manufacturer's recommendations for use.

***Clostridium difficile* (C. diff) Prevention:**

Clorox Germicidal Wipes (Clorox Professional Products Company), EPA Reg. #67619-12

These pre-moistened wipes meet the CDC's recommendations for *Clostridium difficile* (C.diff) bacteria, after the manufacturer's recommended "wet contact time".

1. Perform hand hygiene using soap and warm water, or hand sanitizer, and then put on disposable gloves and eye protection.
2. Use wipes to wipe the hand controls and cords.
3. Change wipes often to ensure that surfaces remain wet with disinfectant for the manufacturer's required contact time. Used wipes are to be discarded in the trash.
4. Remove disposable gloves and discard in the trash; perform hand hygiene using soap and warm water, or hand sanitizer, and then remove eye protection.

The use of bleach-based solutions must be avoided whenever possible.

General Patient Room Cleaning/Disinfecting

Personal Protective Equipment should always be used as directed by the Material Safety Data Sheet for the disinfectant.

Prepare the disinfectant according to the manufacturer's recommendations.

Prepare a separate bucket of warm, fresh water to be used for rinsing the equipment after cleaning/disinfecting procedures are completed as instructed.

Disconnect the RSS from all electrical power to avoid electrical shock.

All surfaces are to be wiped using a coarse cloth, dampened with the disinfectant solution, prepared as directed by the manufacturer's recommendations, to remove organic material and visible soil.

Prevent damage when cleaning electrical connections and components by avoiding excessive moisture.

Allow all surfaces to remain wet with disinfectant solution for the manufacturer's recommended contact time.

Rinse all surfaces with a clean cloth dampened with fresh water to remove chemical and organic residue.

After cleaning, all surfaces are to be wiped with a clean, dry cloth to remove any moisture or residue.

NOTE: Additional cleaning may be completed, as desired, with a mild soap solution and/or household cleaning products. Avoid using harsh chemicals, such as acetone or paint thinner, as they will damage the finish of the paint.

Steam Cleaning

This product must not be steam cleaned.

Scale System Components

All surfaces of the scale meter and the coiled cord are to be wiped using a coarse cloth, dampened with the disinfectant solution, prepared as directed by the manufacturer's recommendations, to remove organic material and visible soil.

Avoid excessive moisture to prevent damage.

Allow the scale meter and coiled cord to remain wet with disinfectant solution for the manufacturer's recommended contact time.

Rinse all surfaces of the scale meter with a clean cloth dampened with fresh water to remove chemical and organic residue.

After cleaning, all surfaces are to be wiped with a clean, dry cloth to remove any moisture or residue.

Cleaning Blood and Other Excretions:

Blood and other excretions should be wiped up while wet, if possible. These substances are more difficult to remove once they have dried to surfaces. Dried blood and other excretions are to be removed using ample disinfectant solution in order to moisten the substance and make it easier to clean.

Maintenance



CAUTION: The RSS requires regular maintenance to uphold performance and avoid premature wear or damage.

Check the items on this chart at the indicated intervals. If any of the items are loose, worn, bent or distorted, immediately have them checked and/or repaired by an authorized Sizewise Technician. Frequent maintenance and servicing will improve performance between each use and extend RSS life. For long term use, the following maintenance chart should be followed:

SW Rest Secure System™	Three Months	Six Months
Load Cells		X
5V Power Supply (if equipped)	X	
Control Box		X
Inline Connector		X
Nurse Call Connector		X
Hand Pendant		X
Rechargeable AA Batteries	X	

The following is an equipment safety checklist that can be used with the maintenance chart above to maintain and service this product:

- Inspect each load cell for damage to the connector, wiring, or load cell assembly.
- Inspect the 5V power supply and cable for security and damage.
- Inspect the Rest Secure control box for damage and proper wiring connections.
- Inspect the data cable connecting the RSS control box and inline connector for damage.
- Inspect the inline connector and mount for damage.
- Inspect the nurse call connections and cables for security.
- Inspect Rest Secure coiled cord from the hand control for damage.
- Unplug the bed from electrical power source to check battery life indicator.
 - If the handheld does not indicate full charge, plug bed in to recharge the batteries for 4-6 hours. If the handheld still does not indicate a full charge, replace the rechargeable AA batteries.
- Reset the system defaults and the system date and time.
- Calibrate the scale system according to the Rest Secure System Technical Manual.
- Verify Bed Exit Alarm features operate properly.

The life of the batteries is unknown, as it depends on environmental conditions and use. The batteries should be replaced, if you notice an abnormal discharge rate, while running on backup power. This can be achieved by referring to the Battery Replacement section of this manual



WARNING: Never dispose of batteries in a fire because they may explode.

The battery may require recycling in accordance with local laws. Contact a local recycling center for proper battery disposal or local regulatory authorities for more information.

All power cords are fastened in a manner to keep them free from moving or pinching parts. At any time parts are replaced, all cords should be secured into proper position to prevent damage.

If a problem is detected, make sure to repair or adjust the RSS before using it. Contact an authorized Sizewise technician to help find and correct the problem.

Storage and Disposal

The RSS should be stored in a dry location so that the components DO NOT become contaminated with moisture. If the RSS is stored for any period of time, make sure it is adjusted properly and that all components are in working order before using the RSS.



CAUTION: The RSS needs to be stored, transported and operated in a temperature range of -5°C to 45°C (23°F to 113°F).

DO NOT expose the RSS to humidity greater than 95%.

Contact Sizewise for proper disposal information on this RSS. The battery must be collected, recycled or disposed of in an environmental manner. It is unlawful to incinerate or discard in a municipal solid waste or landfill.

Serial Number Location

The RSS has a Sizewise serial number. The serial number is located on the RSS control box which is located underneath the top deck of the bed.



Serial Number

Troubleshooting



CAUTION: Only authorized personnel should engage in the troubleshooting process. Troubleshooting by unauthorized persons could result in personal injury or equipment damage.

RSS will not power up when plugged in for the first time:

- Remove control box from bed and ensure the 2 AA rechargeable batteries are seated firmly in the battery holder (see the SW Rest Secure System Battery Replacement section page 56).
- Batteries may be discharged. Allow the unit to charge for a minimum of 15 minutes.
- Re-boot hand control by disconnecting and reconnecting the cable from the inline connector at the foot end of the bed.
- Check SD Card.

RSS will not power up when ENTER is pressed:

- Check 110V power cord from wall to power supply.
- Check 5V power cable from power supply to RSS control box.

Hand control will not respond to any/all key presses on the key pad:

- Re-boot hand control by disconnecting and reconnecting the cable from the inline connector at the foot end of the bed.
- Check/replace the hand control overlay (see the section SW Rest Secure System Hand Control Parts Listing on page 30).
- Check hand control overlay to PCB connector (see the section SW Rest Secure System Hand Control Parts Listing on page 30).

RSS displays “Load Cell Error” or displays incorrect weight:

- Check load cell cables for damage.
- Ensure all load cells are connected to the control box. A yellow LED above a load cell will flash to help you locate the faulty/disconnected load cell.
- Re-boot hand control by disconnecting and reconnecting the cable from the inline connector at the foot end of the bed.

RSS displays “Check SD Card” or “SD Card Error”:

- Open case and check to make sure SD card is installed (see the section SW Rest Secure System Updating Firmware for SD card location on page 43).
- Verify the lock on the SD card is in the unlocked position.

Scale showing incorrect weight:

- Make sure the zeroing process was done correctly (see the section Set-Up Instructions Scale System: Zeroing the Scale on page 10).

Weight is displayed without any weight on the bed:

- Batteries low, unit not receiving correct voltage.
- Check the DC power cable.
- Zero the scale by pressing and holding the Zero button for 3 seconds (see the section Set-Up Instructions Scale System: Zeroing the Scale on page 10).
- The zero point was not established during calibration. Recalibrate scale (see the section SW Rest Secure System Calibration Bed Exit Alarm & Scale System Calibration on page 49).

Weight shows a fluctuation of 5 lbs. +/-:

- Check for bad load cell.
- Re-calibrate scale (see the section SW Rest Secure System Calibration Bed Exit Alarm & Scale System Calibration on page 49).

Unit will not change from LBS to KGS in the scale settings menu:

- Unlock LBS/KGS (see the section Operating Instructions Scale System: Locking/Unlocking the Unit in LBS/KGS on page 20).

Bed Exit False Alarm:

- Sensitivity too high (see the section Operating Instructions Bed Exit Alarm: Use Alarm on page 15).
- Recalibrate scale (see the section SW Rest Secure System Calibration Bed Exit Alarm & Scale System Calibration on page 49).

No sound from handheld on alarm:

- Ensure the sound level is active (see the section Set-Up Instruction Protocol Timer: Sound Level Setting on page 12).
- Reset defaults in the System Settings (see the section SW Rest Secure System Default Settings: Resetting to Factory Variables on page 53).
- Disassemble the hand control and check the speaker connector on the circuit board connector (see the section SW Rest Secure System Hand Control Parts Listing on page 30).

Weight history readings will not store:

- Make sure the clock time and weight history time is set correctly (24-hour clock format).
- Check time to make sure it is correct (see the section Set-Up Instructions Setting the Time/Date on page 13).
- Open case and check to make sure SD card is installed (see the section SW Rest Secure System Updating Firmware to find the SD card location on page 43).

Nurse call will not activate:

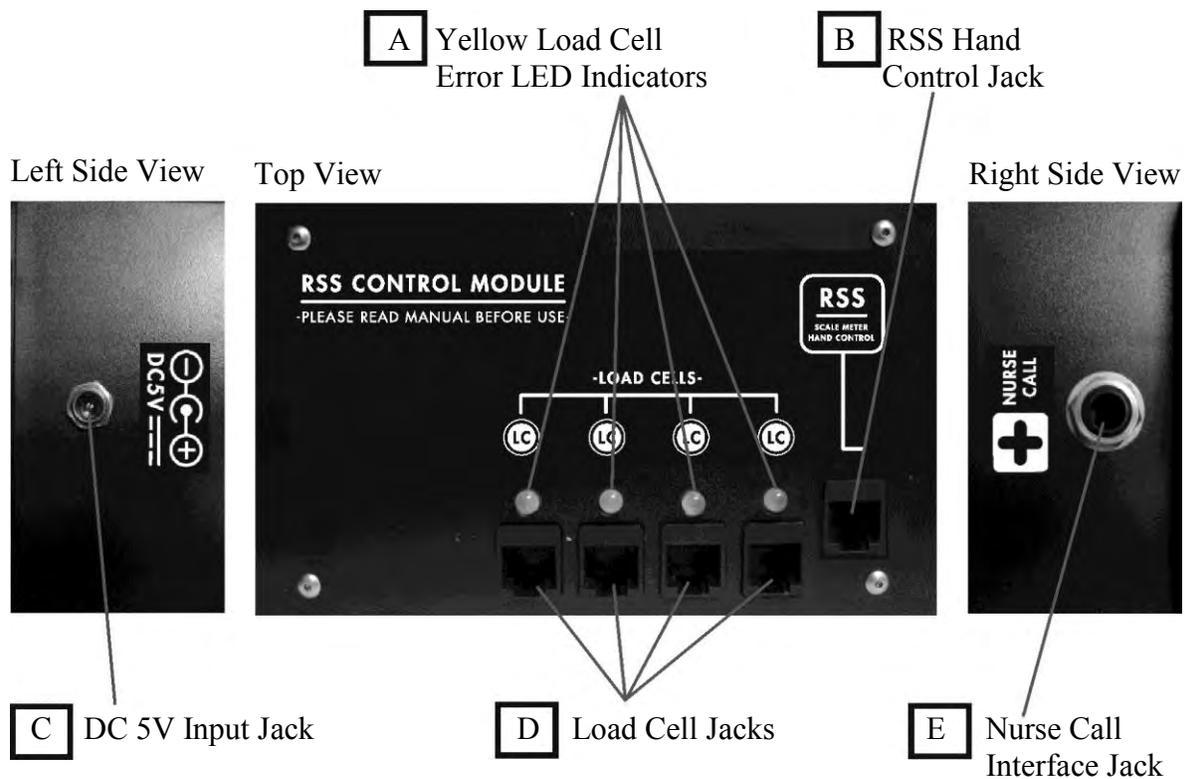
- Make sure cable from bed to wall interface is securely plugged. Check cable from CPU box to bed frame.

RSS displays “Calibration Error” while performing a calibration:

- Check load cells
- Allow the scale to adjust to the weight applied during the calibration process. This typically takes 10 seconds.
- Repeat calibration steps (see the section Bed Exit Alarm & Scale System Calibration on page 49).

NOTE: If the troubleshooting process does not solve the problem please contact a Sizewise representative for service.

SW Rest Secure System™ Control Box Descriptions



- A. **Yellow Load Cell LED Error Indicators:** If a load cell is disconnected or damaged the LED will blink. A severed load cell cable will cause an error light.
- B. **RSS Hand Control Jack:** This jack is used for the hand control unit.
- C. **DC 5V Input Jack:** Primary power input jack for the RSS. Use only 5 V DC to prevent damage to the RSS.
- D. **Load Cell Jacks:** The four load cells from the bed will connect to these jacks. There is no specific order to connect the load cells.
- E. **Nurse Call Interface Jack:** This jack is used to interface with a hospital or long term care facility's nurse call system.

SW Rest Secure System™ Parts



RSS Control Box
Part Number 42070100



RSS Hand Control w/ Cable
Part Number 42070000 (Bari-Rehab Platform 2)
Part Number 42070010 (Evolution Bed)



5V DC Cable
Part Number 42070097



Power Cord
3' 110V M/F
Part Number 27002081



Cable from RSS
Control Box to
Inline Connector
Part Number
27002055



Nurse Call Jack
Part Number 42070096



Inline Jack Bracket
Part Number 27002433



Inline Jack
Part Number
27000551

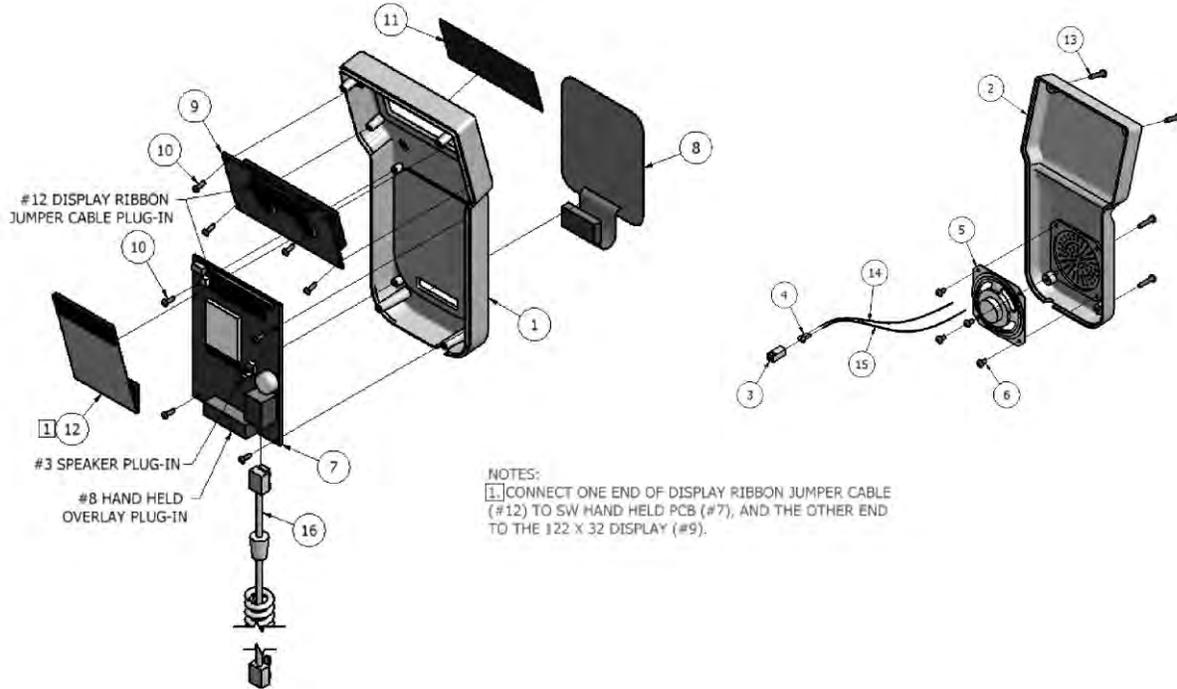


5V Power Supply
Part Number 42070095



Self-tapping Screws
#8x 1/2"
Part Number 27001179

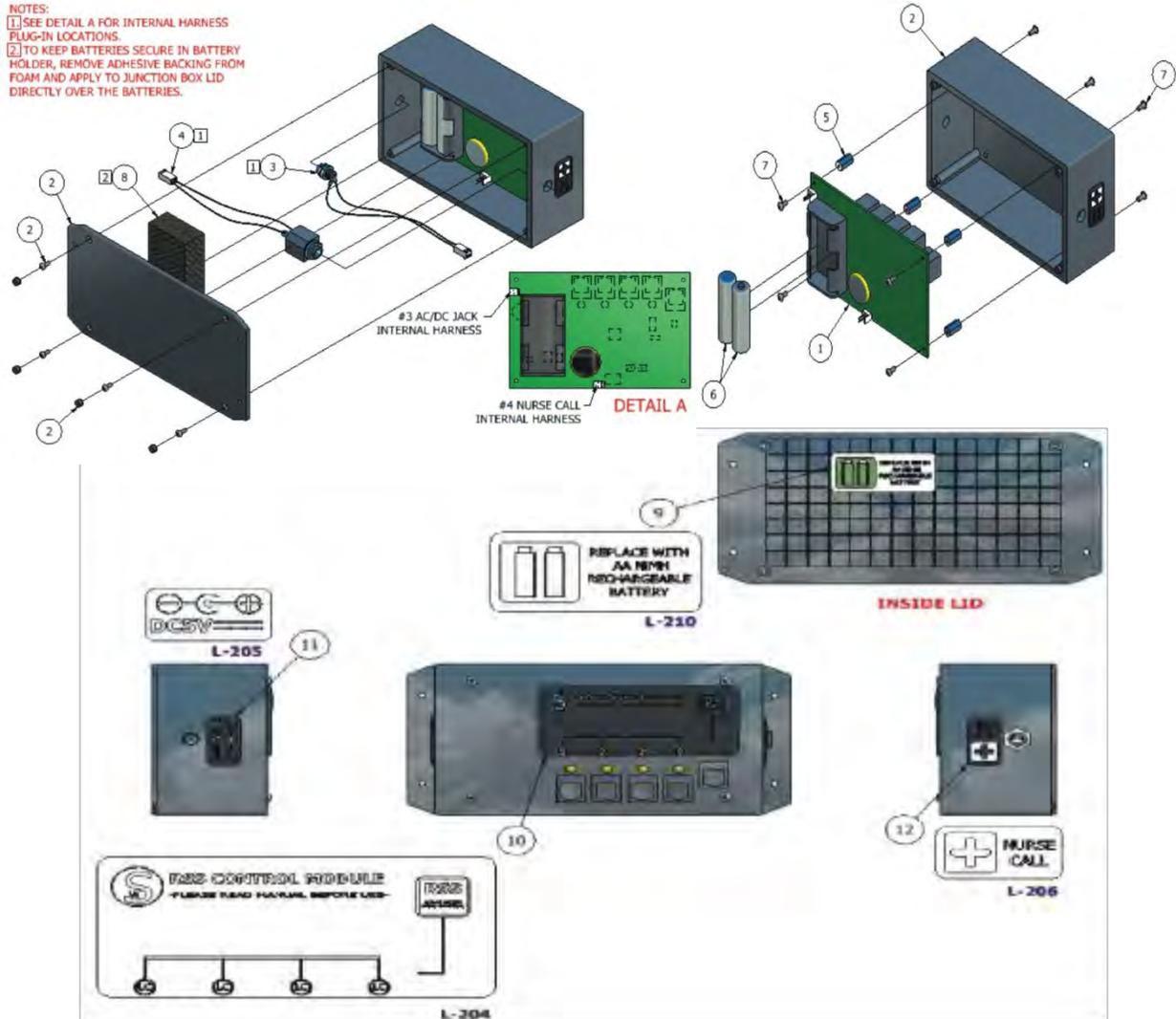
SW Rest Secure System™ Hand Control Assembly



SW Rest Secure System™ Hand Control Parts Listing

	PART NUMBER	DESCRIPTION
1.	1 each27001981.....	Scale Meter Front Case
2.	1 each27001982.....	Scale Meter Back Case
3.	1 each27002065.....	Terminal Housing
4.	2 each27002066.....	Pin Connector
5.	1 each27002071.....	Hand Control Speaker
6.	4 each27002057.....	Speaker Mount Screw
7.	1 each27002051.....	Hand Control PC Board
8.	1 each27002053.....	Hand Control Display Overlay
9.	1 each27002052.....	122 X 32 LCD Display
10.	8 each27002060.....	PC Board Mount Screw
11.	1 each27002072.....	Hand Control Display Overlay
12.	1 each27002073.....	Display Jumper Ribbon Cable
13.	4 each27002059.....	Case Screw
14.	6" each27000318.....	Red Wire
15.	6" each27000319.....	Black Wire
16.	1 each27002054.....	1' 6" Conductor Coil Cord (used on the Bari-Rehab Platform 2 Bed) or
16.	1 each27002055.....	3' 6" Conductor Coil Cord (used on Evolution Bed)

SW Rest Secure System™ Control Box Assembly



SW Rest Secure System™ Control Box Parts Listing

	PART NUMBER	DESCRIPTION
1.	1 each27002050.....	Control (Junction) Box PC Board
2.	1 each27002031.....	Milled Control (Junction) Box w/ Lid & Screws
3.	1 each42070099.....	AC/DC Jack Internal Harness
4.	1 each42070098.....	Nurse Call Internal Harness
5.	4 each27002058.....	4-40 X 1/2" PCB Standoff
6.	2 each27002063.....	AA NiMH Rechargeable Battery
7.	8 each27002075.....	4-40 X 1/4" Phil Std Screw
8.	1 each27002086.....	Battery Foam
9.	1 eachL-210.....	Battery Replacement Label
10.	1 eachL-204.....	RSS Control Module Label
11.	1 eachL-205.....	DC5V Label
12.	1 eachL-206.....	Nurse Call Label

SW Rest Secure System™ Installation

RSS Control Module on the Bari Rehab Platform 2 Installation



WARNING: Before installing the RSS Control Module, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.



WARNING: Always use the proper personal protective equipment to avoid injury to the patient and/or care provider.

Items needed to complete steps 1-4:



RSS Control Box
Part Number 42070100



Self-Tapping Screws
#8 x 1/2"
Part Number 27001179

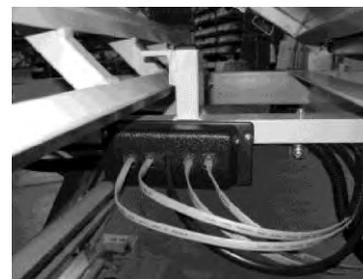


Tape Measure



Cordless Drill w/
Phillips Head Bit

1. Raise all bed functions to the highest position (such as, Bed Up, Head Up and Foot Up).
2. Locate the black box that has the 4 load cell cables and hand control cable in the patient left foot main frame area. Disconnect all the cables. Remove the black box with the cordless drill.
3. Replace the black box with the new RSS control box. Utilize the existing right hole on the frame from the old black box. The existing left hole in the frame will not be used due to the size of the RSS control box. You will use the top two mounting holes on the control box to mount the box to the frame of the bed. Secure with the 2 - #8 x 1/2" self-tapping screws (27001179). The top of the RSS Control Box should be flush with the frame.



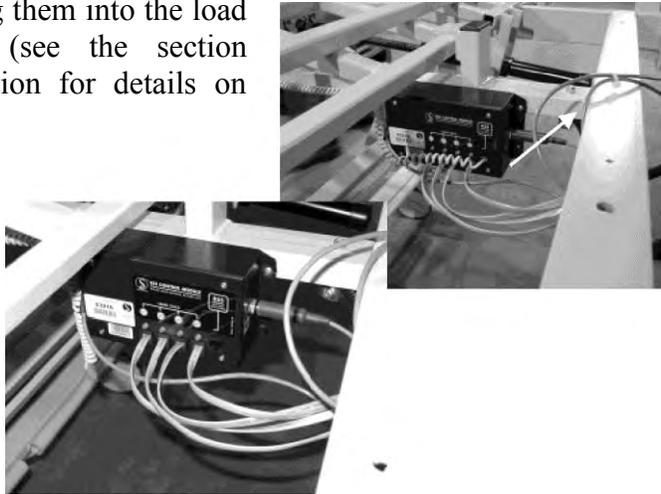
NOTE: To ensure correct placement, measure 5" from the cross member closest to the center of the bed and 3/4" down from the top edge of the frame.



WARNING: Using the existing right hole on the frame from the old black box is critical to prevent damage to the control box from moving parts of the bed and have access to the bracket on the center channel.

4. Locate the 4 load cell cables and plug them into the load cell jacks on the control box (see the section Specifications Control Module Section for details on page 9.)

The cables should be run over the top of the main frame, as shown in the picture.



Items needed to complete steps 5-6 (Installing the 5V Power Supply):



5V DC Cable
Part Number 42070097

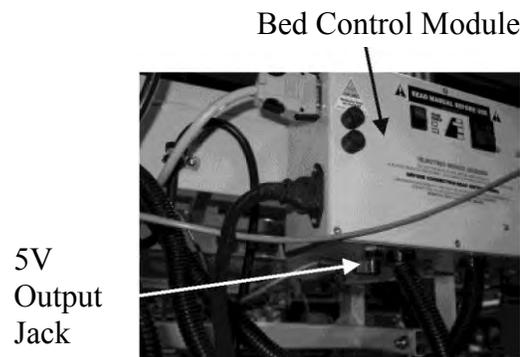


8" Zip Ties



Side Cutters

5. Plug in the 5V DC Cable (42070097) to the ECM of the bed. The outlet is located on the bottom (as shown in the picture).
6. Route the cable to the RSS Control Box by securing with zip ties along the center channel then running the cable over the center of the main frame (similar to the load cell cables). See the Introduction Section on the Descriptions of the Control Box for the 5V input jack location. Cut off the excess ties using the side cutters.



Items needed to complete steps 7-8 (Installing the Nurse Call Jack):



Nurse Call Jack
Part Number
42070096



Self-Tapping Screws
#8 x 1/2"
Part Number 27001179



8" Zip Ties



Side Cutters

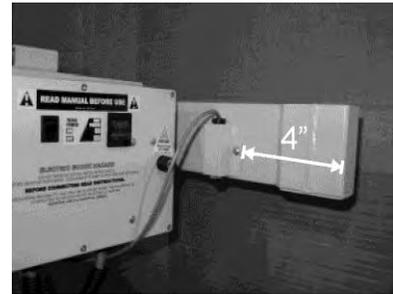


Tape Measure



Cordless Drill w/
Phillips Head Bit

7. Install the Nurse Call Jack (42070096) to the main frame on the head end of the bed using the cordless drill and 2 - #8 x 1/2" self-tapping screw (27001179). The right hole should be 4" from the end of the bed and the bottom of the Jack should be flush with the bottom of the frame.
8. Route the cable down the center of the bed frame to the RSS Control Box. Secure the cable to the center of the frame using 8" zip ties and cut off the excess tie using the side cutters. See the section Specifications Control Module Section for details on page 9.



Items needed to complete steps 9-14 (Installing the Hand Control Inline Jack):



Self-Tapping Screws
#8 x 1/2"
Part Number 27001179



Inline Jack
Part Number
27000551



Cable from RSS
Control Box to
Inline Connector
Part Number 27002055



Inline Jack Bracket
Part Number
27002433



Cordless Drill w/
Phillips Head Bit



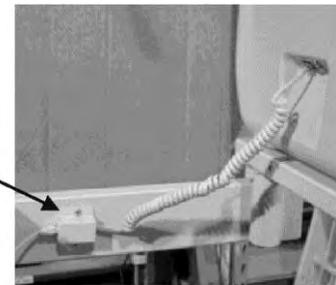
8" Zip Ties



Side Cutters

- Place the inline jack (27000551) into the inline jack bracket (27002433) and secure it to the bed main frame on the patient left foot using the cordless drill and 2 - #8 x 1/2" self-tapping screw (27001179). **Some beds may have this inline jack already installed, but it MUST BE replaced with the one provided.**

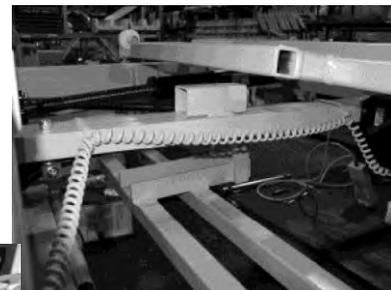
Inline
Jack
And
Bracket



- Plug in appropriate cable to inline jack.

- Route the Coiled Cable (27002055) down the center of the bed from the RSS Control Box to the back side of the inline jack. Secure the Coiled Cable to the center of the frame using 8" Zip Ties and cutting off the excess tie using the side cutters.

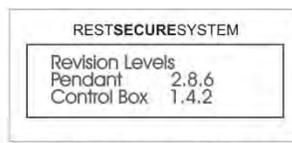
Coiled Cable from
RSS Control Box
to Inline Connector



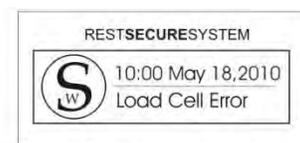
12. Plug the bed power cord into a hospital grade AC receptacle. Allow a minimum of 15 minutes for the batteries to charge before plugging in the RSS Hand Control to the front of the inline jack. **The unit will not operate correctly if ample charge time was not provided.**
13. Plug the RSS Hand Control into the inline jack on the foot end of the bed.
14. The hand control will boot up showing the revision screen for a period of 10 seconds and return to the Home Screen. This indicates that the unit has successfully passed the boot up self-test. **If the unit did not pass the boot up self-test, or display shows see the section Troubleshooting, RSS displays “Load Cell Error” or displays the incorrect weight on page 27.**



Loading Screen



Revision Level Screen



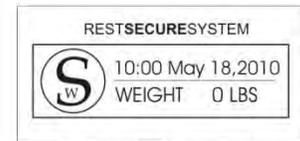
Load Cell Error Screen



SD Card Error Screen



SD Card Error Screen



Home Screen

NOTE: Check the time and date for accuracy. See the section Set-Up Instructions Setting the Time/Date on page 13 if changes to the time or date are required.

RSS Control Module on the SW Evolution™ Installation



WARNING: Before installing the RSS Control Module, be sure to disconnect it from the power source. Failure to do so could result in electrical shock and could result in damage to equipment.



WARNING: Always use the proper personal protective equipment to avoid injury to the patient and/or care provider.

Items needed to complete steps 1-6:



RSS Control Box
Part Number 42070100



Self-Tapping Screws
#8 x 1/2"
Part Number 27001179



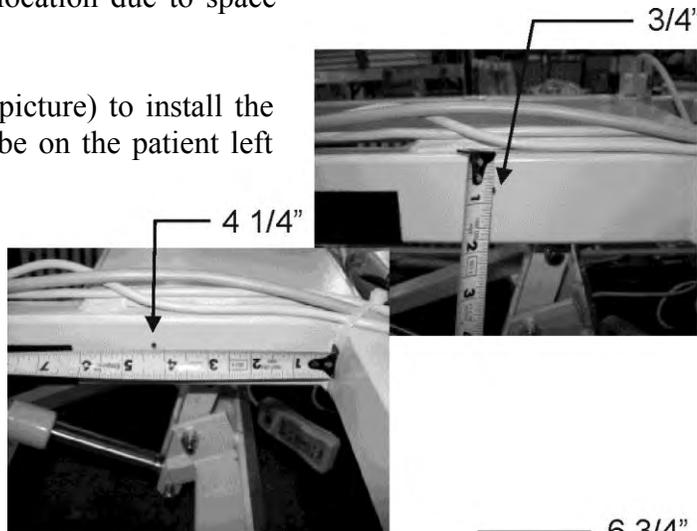
Tape Measure



Cordless Drill w/
Phillips Head Bit

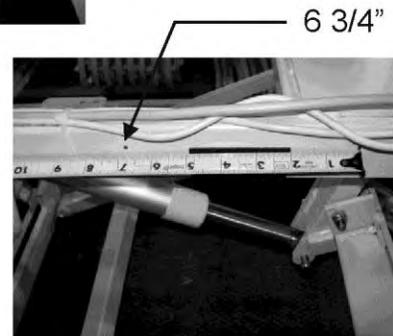
1. Raise all bed functions to the highest position (such as, Bed Up, Head Up and Foot Up).
2. Remove existing black box that connects the load cells (if equipped). DO NOT replace with new black box in the same location due to space restrictions.

3. Locate the area (as shown in the picture) to install the RSS Control Box. This area will be on the patient left foot main frame. Using a tape measure, make a mark at 4 1/4" from the cross member closest to the center of the bed and 3/4" down from the top edge of the frame.



WARNING: These dimensions are critical to prevent damage to the control box from moving parts of the bed.

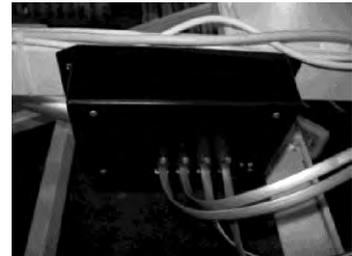
4. The next mark you will make is at 6 3/4" from the center of the mark you made in the previous step. Make sure to mark down 3/4" from the top edge in order to keep the control box level.



5. Using the cordless drill, secure the control box to the frame of the bed with 2 - #8 x 1/2" self-tapping screws (27001179). You will use the top two mounting holes on the control box to mount the box to the frame of the bed. The control box should be flush with the top of the frame.



6. Locate the 4 load cell cables and plug them into the load cell jacks on the control box (see the section Specifications Control Module on page 7 for jack locations).



Items needed to complete steps 7-9 (Installing the 5V Power Supply):



5V Power Supply
Part Number 42070095



5V DC Cable
Part Number 42070097



Power Cord
3' 110V M/F
Part Number 27002081

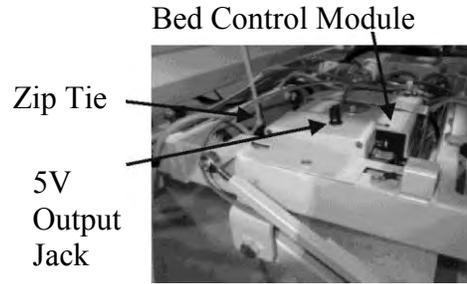


8" Zip Ties

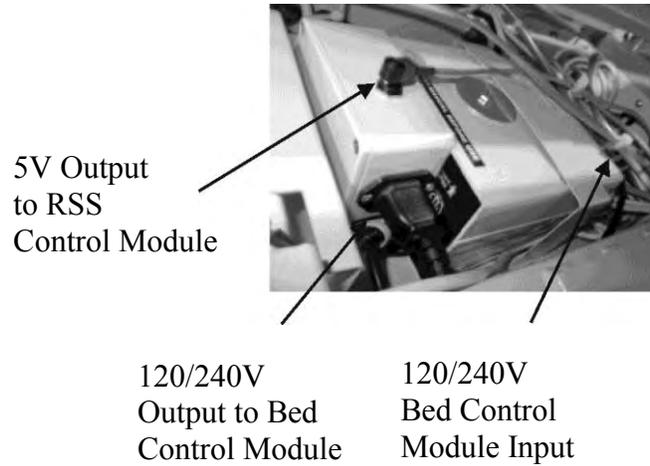


Side Cutters

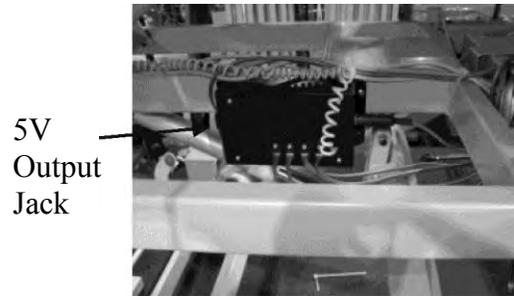
- Install the 5V power supply next to the back side of the beds electronic control module (located at the center joint of the bed).



- Insert the 3' 110V Power Cable (27002081) to the power supply (42070095) and route it to the bed control module. Then secure with a zip tie, this will prevent the power supply from coming loose during transporting. Make sure the male prongs in the receptacle are facing the head end of the bed and the 5V output jack is facing up.



- Plug the 5V DC Cable (42070097) into the Power Supply (42070095). Then route to the RSS Control Box. Plug into the appropriate outlet, as shown on the picture.



Items needed to complete steps 10-11 (Installing the Nurse Call Jack):



Nurse Call Jack
Part Number
42070096



Cordless Drill w/
Phillips Head Bit



Self-Tapping Screws
#8 x 1/2"
Part Number 27001179



8" Zip Ties



Side Cutters

10. Install the Nurse Call Jack (42070096) to the main frame on the head end of the bed using the cordless drill and 2 - #8 x 1/2" self-tapping screw (27001179).
11. Route the cable down the center of the bed frame to the RSS Control Box. Secure the cable to the center of the frame using 8" zip ties and cut off the excess tie using the side cutters. See the section Specifications Control Module on page 7 for jack locations.



Items needed to complete steps 12-16 (Installing the Hand Control Inline jack):



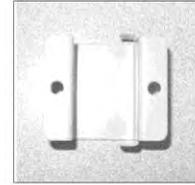
Self Tapping Screws
#8 x 1/2"
Part Number 27001179



Inline Jack
Part Number
27000551



Cable from RSS
Control Box to
Inline Connector
Part Number 27002055



Inline Jack Bracket
Part Number
27002433



Cordless Drill w/
Phillips Head Bit

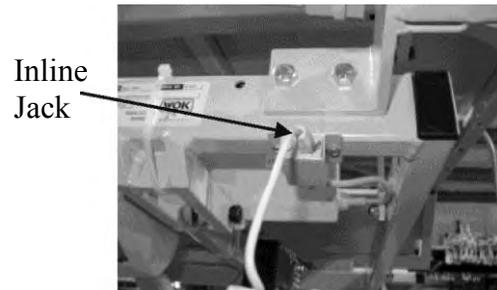


8" Zip Ties

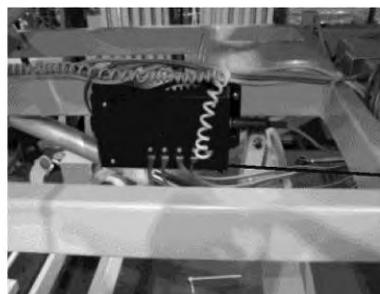


Side Cutters

- Place the inline jack (27000551) into the inline jack bracket (27002433) and secure it to the bed main frame on the patient left foot using the cordless drill and 2 - #8 x 1/2" self-tapping screw (27001179). **Some beds may have this inline jack already installed, but it MUST BE replaced with the one provided.**



- Route the Coiled Cable (27002055) down the center of the bed from the RSS Control Box to the back side of the inline jack. Secure the Coiled Cable to the center of the frame using 8" Zip Ties and cut off the excess tie using the side cutters.

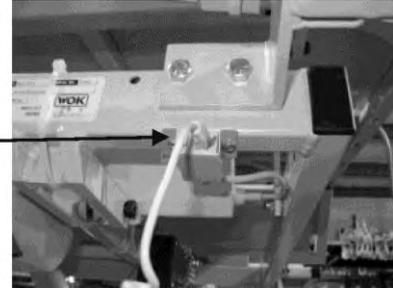


Coiled Cable
from RSS
Control Box to
Inline
Connector

14. Plug the bed power cord into a hospital grade AC receptacle. Allow a minimum of 15 minutes for the batteries to charge before plugging in the RSS Hand Control to the front of the inline jack. **The unit will not operate correctly if ample charge time was not provided.**

15. Plug the RSS Hand Control into the inline jack on the foot end of the bed.

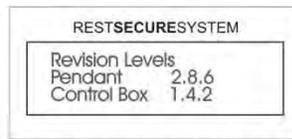
RSS Jack



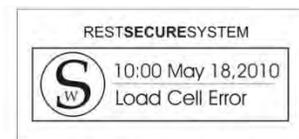
16. The hand control will boot up showing the revision screen for a period of 10 seconds and return to the Home Screen. This indicates that the unit has successfully passed the boot up self-test. **If the unit did not pass the boot up self-test, or display shows “Load Cell Error” or “Check SD card”, see the section Troubleshooting on page 25.**



Loading Screen



Revision Level Screen



Load Cell Error Screen



SD Card Error Screen



SD Card Error Screen



Home Screen

Check the time and date for accuracy. See the section **Set-Up Instructions Setting the Time/Date on page 13** if changes to the time or date are required.

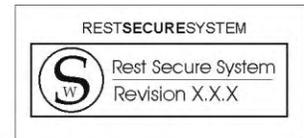
SW Rest Secure System™ Updating Firmware

The Sizewise Rest Secure System has the capability to perform firmware updates using a PC with and a standard SD card reader/writer. Firmware updates are on an “as needed basis” and occur very infrequently. The firmware updates will be sent to you via email, disk or SD card.

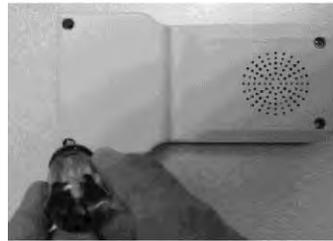


CAUTION: DO NOT enter the Update Firmware menu unless instructed by Sizewise. Doing so may cause the unit to stop responding and will require factory reprogramming.

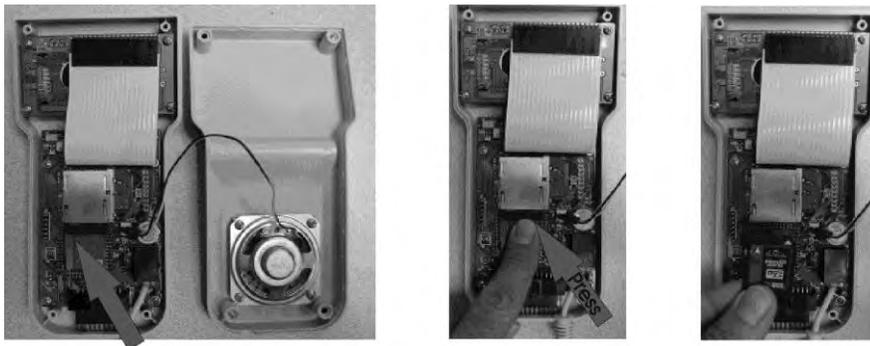
1. Press ENTER to power up the unit. With the unit powered up, press the “back” button twice. This will show you what version of firmware the RSS is operating on. It is important to write this down for future reference.



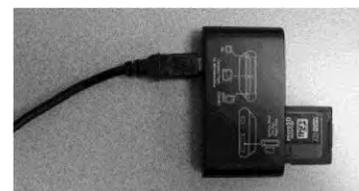
2. Disconnect the hand control from the jack located at the foot end of the bed. Locate the four (4) screws that secure the hand control back case. Using a #1 Phillips head screwdriver, remove the screws and set off to the side.



3. Locate the removable SD memory card and gently press the back side of the card. The SD card holder is spring loaded and the card will be ejected.

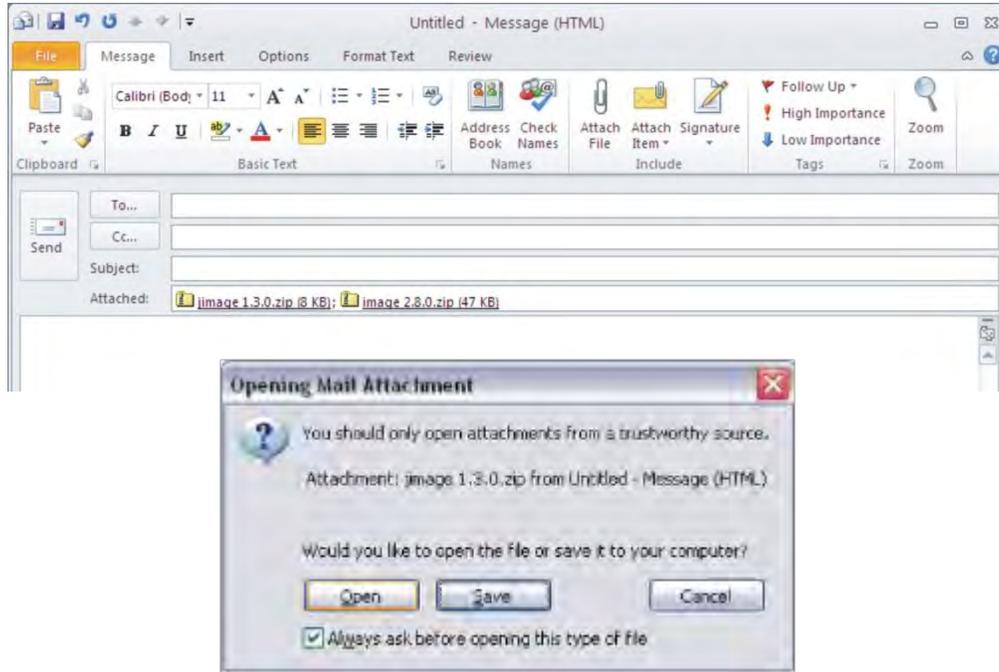


4. Insert the SD card from the hand control into a memory card reader/writer. A USB style card reader shown below.



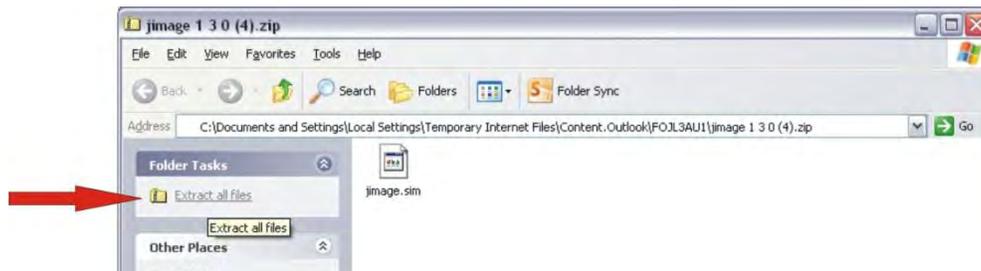
5. With a computer running Windows 2000/XP/Vista/7, locate the “image.zip” file. Typically this file will be emailed to you. Open this file by double-clicking the icon.

NOTE: Revision levels shown throughout this manual are for illustrative purposes only, please contact Sizewise for correct revision levels.



NOTE: The same steps will apply to transfer the file from an Apple Computer to the SD Memory card.

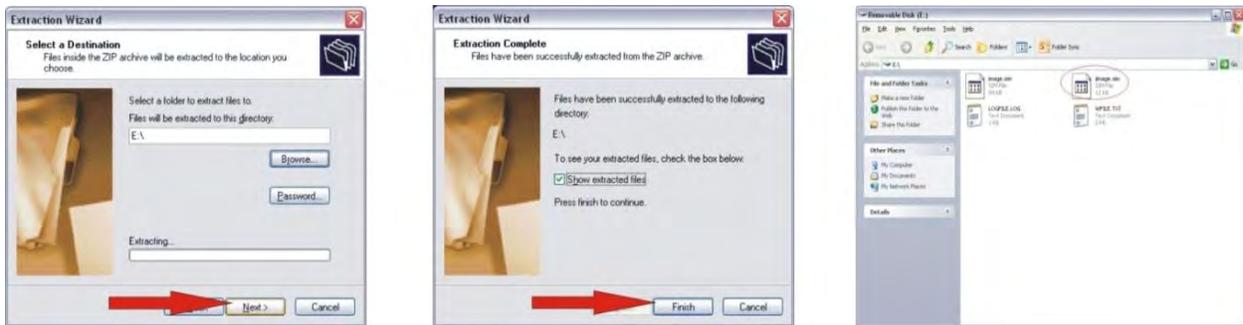
6. Select “Extract all files”.



7. Select “Next” and “Browse” until you locate your SD card drive. Highlight the SD drive and click “OK”.



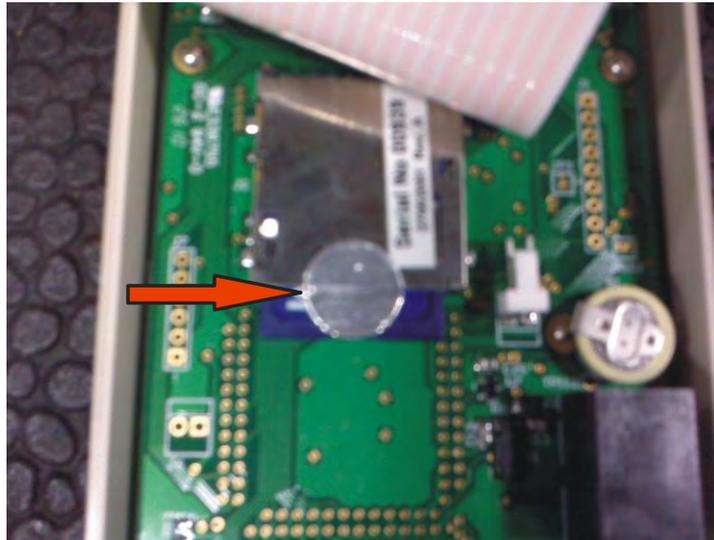
8. Select “Next” and then “Finish”. The screen with the file name “jimage.sim” will be displayed to indicated the file extraction was successful.



9. Repeat steps 5 thru 8 extracting the second file from the email. The second file will be named “image.sim.” Please be sure to choose “Yes” to replace the existing file already on the SD card. The old firmware will not be updated if you select “No” or “Cancel”.

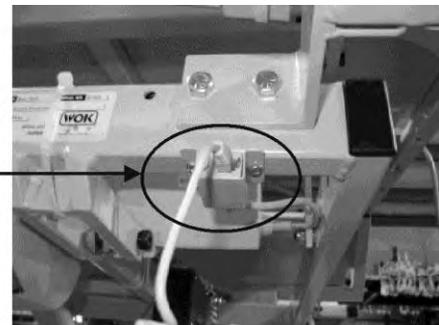


10. Replace the SD card into the holder and apply a foil security sticker on the SD card and holder. This sticker will keep the SD card firmly in place.



11. Reassemble the unit and plug hand held into bed

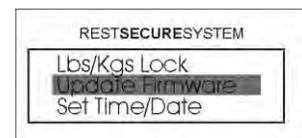
RSS Jack



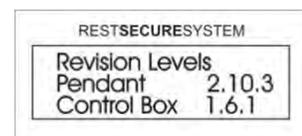
12. Access the Menu by pressing the UP or DOWN arrow until System Settings is highlighted and then press ENTER.



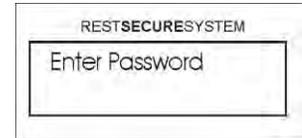
13. Highlight Update Firmware and then press ENTER.



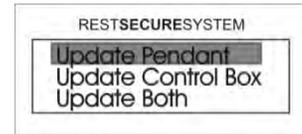
14. The screen will now display the revision levels of the pendant and the control box for approximately 5 seconds before prompting for the password.



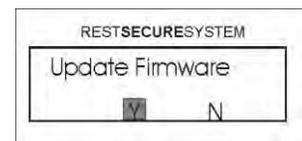
15. Enter the password using the key pad. The password for this operation is “up, down, up, down, Enter”. The password is not displayed on the screen upon entering. If the password is not entered correctly, the screen will display “Invalid Password Try Again” and you will be returned to the Update Firmware screen where you must press ENTER to try again.



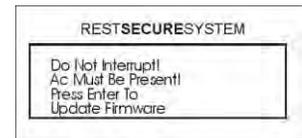
16. Highlight Update Pendant, Update Control Box or Update Both and then press ENTER.



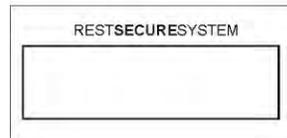
17. The screen will display the Update Firmware confirmation screen. Highlight Y for yes to begin the update process.



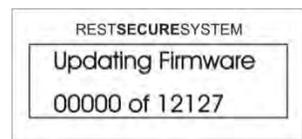
18. Make sure that AC current is present and then press ENTER to begin the update. DO NOT interrupt the update process.



19. The high sensitivity bed exit setting LED will blink repeatedly while the update process is taking place. The display will also be blank during this time. The update process usually takes about a minute to complete.



A rolling byte counter will be displayed while the control box update is taking place.



20. The unit will reboot and display “Loading...” and the revision level screen before returning to the home screen.

Before you begin to use the RSS after updating the firmware:

1. Complete a Calibration (see the section SW Rest Secure System Calibration Bed Exit Alarm & Scale System Calibration on page 49)
2. Reset the Defaults (see the section SW Rest Secure System Default Settings: Resetting to Factory Variables on page 53)

NOTE: Please contact Sizewise technical support if the unit does not respond after completing a firmware update.

SW Rest Secure System™ Calibration

Bed Exit Alarm and Scale System Calibration

It is important to calibrate this device after replacing a bed axle, caster, load cell(s) or the PC Board in either the control box or the hand control.

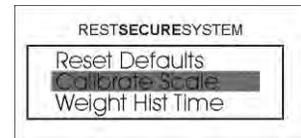
It is recommended to check the scale for accuracy if the bed is subject to excessive relocation, which may cause stress on the axles and load cells.

NOTE: Make sure all equipment and linens are on the bed before calibration. If an air support mattress is being used with the patient, be sure to fully inflate mattress prior to zeroing the scale. Adding or removing items during the calibration process will cause inaccurate patient weight.

1. Access the Menu by pressing the UP or DOWN arrow until System Settings is highlighted and then press ENTER.



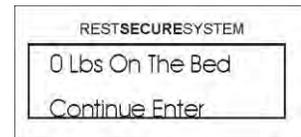
2. Select Calibrate Scale and press ENTER.



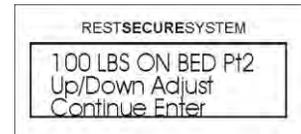
3. Enter the password using the UP or DOWN arrows on the key pad. The password for this operation is “up, down, up, down, Enter”. The password is not displayed on the screen upon entering. If the password is not entered correctly, the screen will display “Invalid Password Try Again” and you will be returned to the Calibrate Scale screen where you must press ENTER to proceed.



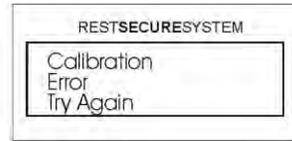
4. Make sure there is no weight on the deck of the bed and press ENTER. This will set the zero portion of the scale



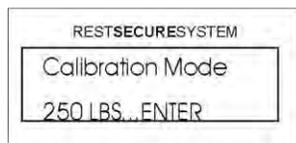
5. The screen will now instruct you to place 100 lbs. on the bed to calibrate point 2. Place 25 lbs. of certified test masses (weights) on each corner of the bed. Wait 10 seconds to allow the scale to adjust to the weight applied and then press ENTER.



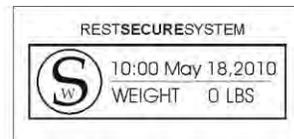
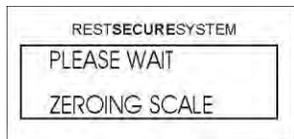
- The screen will now instruct you to place 250 lbs. on the bed to calibrate point 3. Place an additional 150 lbs. of certified test masses (weights) towards the center portion of the bed for a total of 250 lbs. Wait 10 seconds to allow the scale to adjust to the weight applied and then press ENTER. This calibrates point 3 of the scale calibration to 250 lbs. If you receive an error after pressing ENTER, you will need to repeat steps 1 — 6.



- The screen now shows you Calibration Mode. Wait until the screen reads 250 lbs. (+/- 2 lbs.) and then press ENTER. The calibration process is now complete and you will be returned to the Home Screen. You may now remove the test masses (weights) from the bed.



- Press and hold the ZERO button for 3 seconds. The unit will return to the Home Screen when the zeroing process is complete.



NOTE: A calibration error may be caused by not allowing the unit to adjust to the applied weight before pressing ENTER or by using non standardized weights. A faulty load cell(s) will also cause a calibration error (see the section Troubleshooting on pages 25-26).

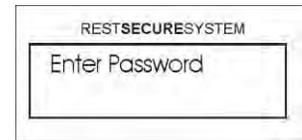
Please use ASTM, OIML, NIST certified test masses when calibrating this scale. This will ensure proper calibration and scale readings. If your facility does not have certified test masses, enlist the service of an accredited body to perform the scale calibration.

SW Rest Secure System™ Bed Exit Alarm Sensitivity Adjustment

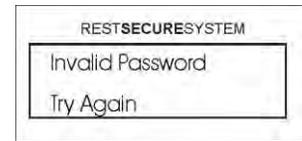
This section gives instructions on how to customize or adjust each sensitivity setting. These settings may be adjusted to meet the direct needs of the patient. The preset weight settings have been optimized for reliable functionality. The bed exit alarm uses a change in weight to determine the position of the patient.

- High Sensitivity Setting: +/- 6 lbs. change in patient weight
- Medium Sensitivity Setting: -10 lbs. change in patient weight
- Low Sensitivity Setting: -50 lbs. change in patient weight.

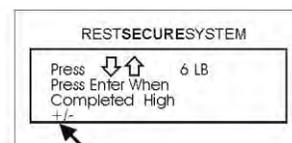
- From the Home Screen, hold the ENTER button for 10 seconds until the Enter Password screen is shown.



- Enter the password using the UP or DOWN arrows on the key pad. The password for this operation is “up, down, up, down, Enter”. The password is not displayed on the screen upon entering. If the password is not entered correctly, the screen will display “Invalid Password Try Again” and you will be returned to the Home Screen where you must repeat step 1 to proceed.



- The high sensitivity setting light on the key pad will blink and the screen will show the high sensitivity weight adjustment screen. Using the UP or DOWN arrows you may adjust the weight sensitivity in 1 lb. increments. It is highly recommended that you keep this value between +/- 4 thru 6 lbs. for optimal monitoring. This setting will monitor a +/- change in weight. You may change to a minus only weight monitoring by pressing the Zero button. Press ENTER when you have changed the value. If you wish to skip changing the adjustment of this value and proceed to the medium sensitivity setting, simply press ENTER.

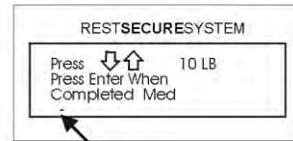


This setting shows a (+/-) weight monitoring.

This can be changed to a (-) weight monitoring by pressing the ZERO button.

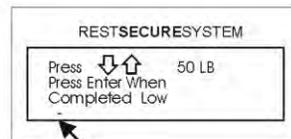
NOTE: It is highly recommended to keep the preset weight adjustments at their default settings to ensure proper monitoring of the bed exit alarm system.

- The medium sensitivity setting light on the key pad will blink and the screen will show the medium sensitivity weight adjustment screen. Using the UP or DOWN arrows you may adjust the weight sensitivity in 1 lb. increments. It is highly recommended that you keep this value between -10 thru -20 lbs. for optimal monitoring. Press ENTER when you have changed the value. If you wish to skip the adjustment of this value and proceed to the low sensitivity setting, simply press ENTER.



This setting shows (-) weight monitoring. This can be changed to a (+/-) weight monitoring by pressing the ZERO button.

- The low sensitivity setting light on the key pad will blink and the screen will show the low sensitivity weight adjustment screen. Using the UP or DOWN arrows you may adjust the weight sensitivity in 1 lb. increments. It is highly recommended that you keep this value between -40 thru -60 lbs. for optimal monitoring. Press ENTER when you have changed the value. If you wish to skip adjusting this value and proceed to the home screen simply press ENTER.



This setting shows a (-) weight monitoring. This can be changed to a (+/-) weight monitoring by pressing the Zero button.

NOTE: It is highly recommended to keep the preset weight adjustments at their default settings to ensure proper monitoring of the bed exit alarm system.

SW Rest Secure System™ Default Settings: Resetting to Factory Variables

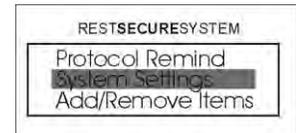
It is important to reset to the factory defaults, before placing a different patient in the bed. This routine is typically performed during quality control checks or during routine service. Resetting defaults should also be performed, if the PC board in either the RSS control box or the RSS hand control has been replaced, or if the firmware has been updated (See Maintenance Section page 23). Performing a reset will ensure that the RSS is operating to the specifications in which it was intended. Resetting the defaults will not require a re-calibration to the scale.

Resetting the defaults will:

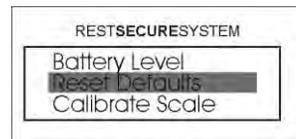
- Set the Bed exit alarm to its default tone #1.
- Reset the bed exit sensitivity thresholds to the default values: +/- 6 lbs. for High, -10 lbs. for Medium and -50 for Low.
- Set the language back to English.
- Set the weight units to Pounds.
- Clear patient weight history file.
- Set lbs./kg lock to unlock.
- Set bed exit alert type to tone.
- Set protocol alert type to tone.
- Erase voice message is erased and replace with a tone sound.
- Reset the weight history record time to 24:00 (00:00) hours.

Resetting the Defaults:

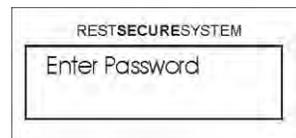
1. Access the Menu by pressing the UP or DOWN arrow until System Settings is highlighted and then press ENTER.



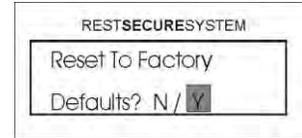
2. Select Reset Defaults and then press ENTER.



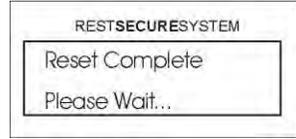
3. Enter the password using the UP or DOWN arrows on the key pad. The password for this operation is “up, down, up, down, Enter”. The password is not displayed on the screen upon entering. If the password is not entered correctly, the screen will display “Invalid Password Try Again” and you will be returned to the Reset Defaults screen as shown in step 2, where you must press ENTER to proceed.



4. Using the UP or DOWN arrows on the keypad, select Y for Yes and then press ENTER. If you select N for No, you will be returned to the Home Screen without resetting the defaults.



5. The unit is now resetting the defaults and will return to the Home Screen when complete.



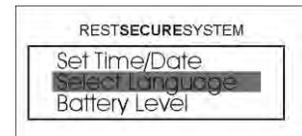
SW Rest Secure System™ Language Options

The Sizewise Rest Secure System is available with 4 languages, English, French, Spanish and German. English is the default setting for this device. To change language setting follow the below instructions:

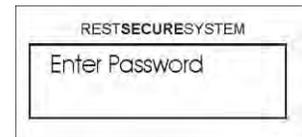
1. Access the Menu by pressing the UP or DOWN until System Settings is highlighted and then press ENTER.



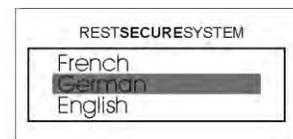
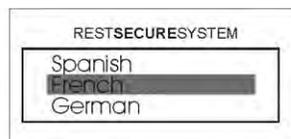
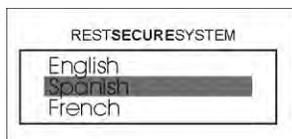
2. Highlight Select Language and then press ENTER.



3. Enter the password using the key pad. The password for this operation is “up, down, up, down, Enter”. The password is not displayed on the screen upon entering. If the password is not entered correctly, the screen will display “Invalid Password Try Again” and you will be returned to the “Select Language” screen where you must press ENTER to try again.



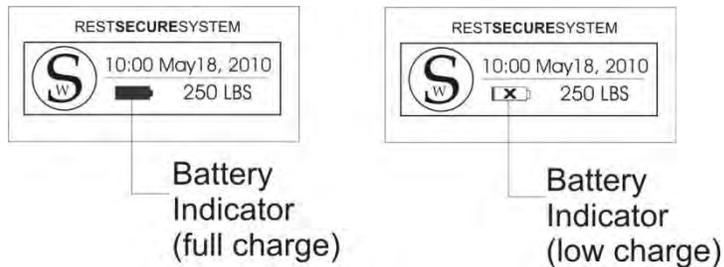
4. Select one of the 3 languages and then press ENTER. The selection has now been made and you will need to press and hold the back button for 3 seconds to return to the Home Screen.



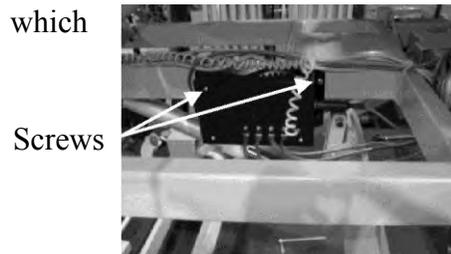
NOTE: If you accidentally changed the language, press and hold the “back” button for 10 seconds and it will allow you to revert back to English.

SW Rest Secure System™ Battery Replacement

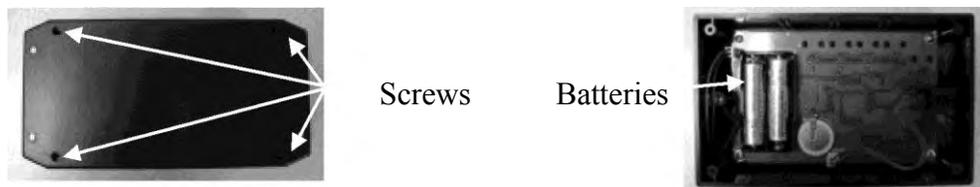
The Sizewise Rest Secure System contains 2 AA NiMH Rechargeable Batteries. These batteries serve as the back-up power source. The unit will monitor a patient for 200 minutes, without any alarms being triggered. The life of the batteries is unknown, as it depends on environmental conditions and use. The batteries should be replaced if you notice an abnormal discharge rate while running on backup power. This can be observed by monitoring the battery indicator on the home screen.



1. Disconnect the bed from AC current and locate the RSS control box under the bed. Disconnect the load cells, nurse call, AC adapter and RSS hand control cable from the control box.
2. Locate and remove the two Phillips head screws which secure the control box to the frame.



3. Remove the four screws from the back of the control box. Replace the batteries as marked and reassemble.



4. Mount the control box to the bed and reconnect the cables. Plug the bed AC into the wall receptacle and allow the new batteries 15 minutes to charge before using the RSS.



NiMH batteries are far more environmentally friendly than their alkaline counterparts, they do eventually lose their charge capacity and must be discarded. To minimize environmental impact, some companies offer recycling of NiMH batteries. Taking advantage of this program keeps the batteries out of the landfills. Contact your local recycling center for proper battery disposal or local regulatory authorities for more information.



WARNING: Never dispose of batteries in a fire because they may explode.

Only attempt to recharge batteries marked as rechargeable.

A non-rechargeable battery will rupture or leak when charge is attempted.

Replace batteries with the same type (NiMH) or its equivalent. Failure to do so may seriously compromise the integrity of the Rest Secure System.



NOTE: The battery indicator will only be shown on the Home Screen while running on battery power. This unit contains a button cell battery which maintains all of the default and calibration settings. No reprogramming is necessary when replacing the two AA rechargeable batteries. The RSS will not operate without batteries installed.

Warranty Information

Sizewise Rentals™, LLC (Sizewise) Limited Warranty

Sizewise is dedicated to manufacturing and distributing equipment that provides solution-oriented approaches to exceed the clinical, comfort and safety needs of our customers. Sizewise is proud to offer to the original purchaser, the following warranties, effective February 20, 2012:

How to obtain Parts and Service

1. Contact Sizewise Parts and Service at 1-800-814-9389 to speak with a qualified specialist who can assist with troubleshooting, parts and repairs. The product model and serial identification numbers are required for service and parts. Parts can be expedited upon request for an additional fee. If on-site technical service is required, a qualified service representative will be dispatched.
2. If a product or part should be returned to Sizewise, a return authorization number (RA#) will be issued. The RA# will be valid for 21 days from the date it is issued.
3. If the problem is a result of defective material or workmanship, the product or part will be replaced or repaired at the discretion of Sizewise, at no charge to the customer.
4. For replacement or repair of a product or part not covered under this warranty, or if warranty is void, the standard rates will apply. Freight or delivery charges will be billed to the customer.
5. Sizewise products are identified by serial number. Removal of this number may void the warranty.

Limitations and Exclusions

1. Products that have been subject to negligence, abuse, improper storage or handling, improper operation, unauthorized modifications or damages beyond normal wear and tear, as determined by Sizewise, are not covered by this warranty.
2. If weight capacity on any such product is exceeded, the warranty will be void. Any unauthorized repairs to product/part, as well as tampering with any components, will void the warranty.
3. Parts or materials that are subject to normal wear resulting from the use of these products that must be replaced or repaired are excluded and are not covered by this warranty.
4. **SUBJECT TO STATE SPECIFIC LAW, THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND SHALL NOT EXTEND BEYOND THE DURATION OF THIS WARRANTY. SIZEWISE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.**
5. This warranty applies to the original purchaser only and is non-transferable.
6. Headboard, footboard and batteries are excluded from the one (1) year warranty.
7. Cleaning upholstery or fabrics with harsh chemicals, or bleach, outside the recommended cleaning guidelines may void the warranty.

Manufacturer Disclaimer

General Information

All specifications, equipment and prices are subject to change without notice. Sizewise reserves the right to make improvements from time to time. Photos and drawings are representative of the products and may vary slightly from actual production models. Some items photographed in this user's manual may include optional equipment. Contact or consult Sizewise to ensure proper equipment sizes, specifications and options.

Trademarks and Patents

SW Rest Secure System™ is a trademark of Sizewise Rentals LLC.

Patent Pending for the SW Rest Secure System.

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User Assistance Information

For questions or assistance with this product, contact Sizewise at:

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