

iBed Locator

Model 5212

Connected Hospital®

stryker®

Instructions for Use and Installation







For Parts or Technical Assistance:
USA: 1-800-327-0770

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Symbols and Definitions

	Warning / Caution, consult accompanying documentation
	Direct Current
	Type B Equipment: equipment providing a particular degree of protection against electric shock, particularly regarding allowable leakage current and reliability of the protective earth connection. Internally Powered Equipment
IPX5	Protection Against Water Jets
	Medical Electrical Equipment Recognized by Underwriters Laboratories Inc for use with Stryker Hospital Bed Models 3002 Secure II and 3002 S3 and in accordance with UL 60601-1 First Edition (2003) and CAN/CSA C22.2 No. 601.1-M90 with Updates 1 and 2.

WARNING / CAUTION / NOTE DEFINITION

The words WARNING, CAUTION, and NOTE carry special meanings and should be carefully reviewed.

WARNING

Alerts the reader about a situation, which if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards.

CAUTION

Alerts the reader of a potentially hazardous situation, which if not avoided, may result in minor or moderate injury to the user or patient or damage to the equipment or other property. This includes special care necessary for the safe and effective use of the device and the care necessary to avoid damage to a device that may occur as a result of use or misuse.

Note: This provides special information to make maintenance easier or important instructions clearer.

Introduction

This manual is designed to assist you with the installation of the iBed Locator. Carefully read this manual thoroughly before beginning any installation of the product. For further details on the operations, service, troubleshooting and maintenance of this product refer to your bed product Operations and Maintenance manual.


INTENDED USE – iBED® WIRELESS WITH iBED® AWARENESS

The intended use for the iBed® Wireless (with iBed® Awareness) is to assist clinical staff to monitor bed parameters on specific Stryker beds. The desired bed parameters will be set by clinicians at the bedside. The iBed® Wireless software is intended to be used only with specifically enabled Stryker beds that have been verified and validated with the iBed® Wireless software, and is not intended to provide bed status information for non-Stryker beds. The iBed® Wireless software is not intended to communicate any patient status information, nor to permanently store any type of data. The iBed® Wireless with iBed® Awareness System is not intended to provide automated treatment decisions or as a substitute for professional healthcare judgment. The iBed® Wireless with iBed® Awareness System is not a replacement or substitute for vital signs monitoring or alert equipment. All patient medical diagnosis and treatment are to be performed under direct supervision and oversight of an appropriate health care professional.

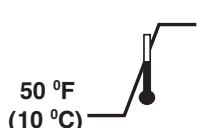
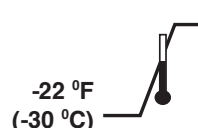
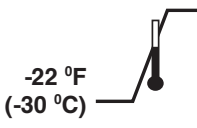



PRODUCT DESCRIPTION

The iBed Locator is a battery powered module that mounts to the hospital wall in a fixed location. It communicates to your hospital bed using Infrared (IR) LED and is a required component for wireless connectivity. The iBed Locator is only approved for use and compatible with the model 3002 Secure II and S3 Medsurg beds.

SPECIFICATIONS

Battery Voltage	<ul style="list-style-type: none">(3) 1.5V AA - iBed Locator (Alkaline Battery - LR6) <p>Note: DO NOT use rechargeable batteries.</p>
System Voltage Rating	<ul style="list-style-type: none">4.5 V DC Internally Powered
iBed Locator (for Wireless Connection)	<ul style="list-style-type: none">Uses infrared LED based Stryker proprietary communication scheme.

ENVIRONMENTAL CONDITIONS

Environmental Conditions	Operation	Storage and Transportation
Ambient Temperature		
Relative Humidity (Non-Condensing)		
Atmospheric Pressure		

Stryker reserves the right to change specifications without notice.

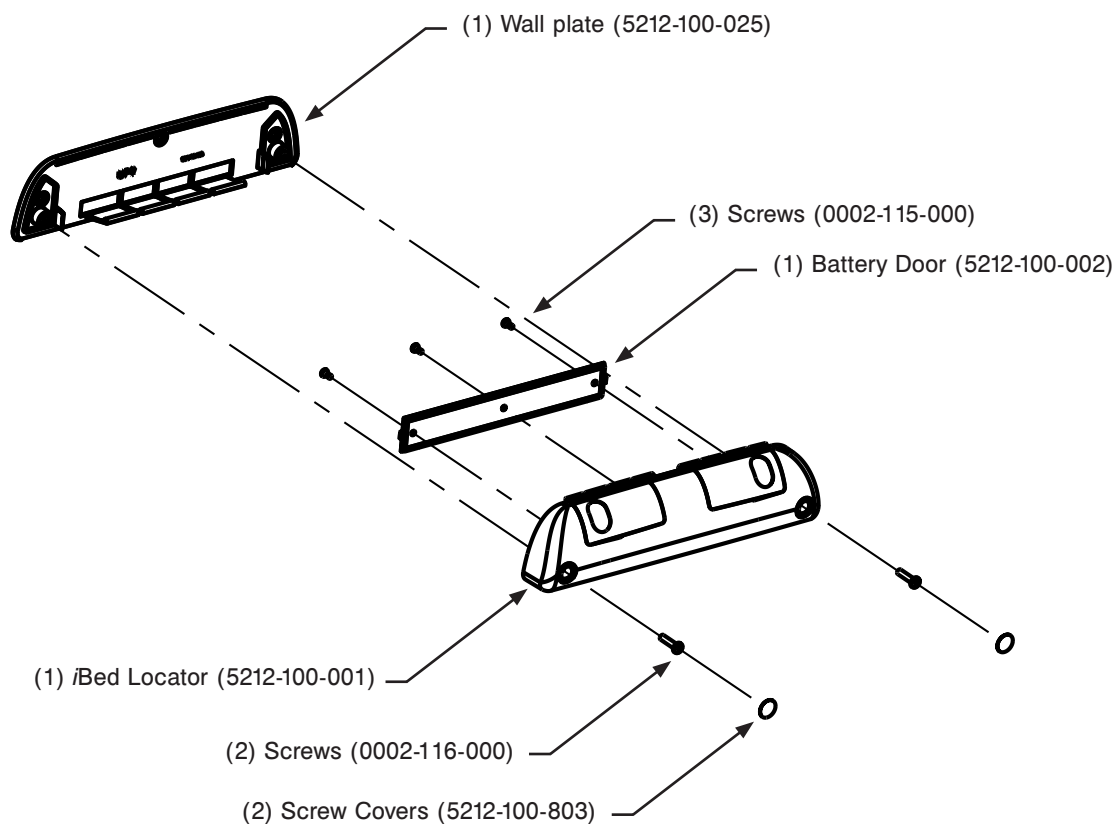
Specifications listed are approximate and may vary slightly from unit to unit or by power supply fluctuations.

PATENT INFORMATION

The Stryker iBed Locator is covered by the following patent: United States 7,598,853

Introduction

PRODUCT ILLUSTRATION



CONTACT INFORMATION

Contact Stryker Customer Service or Technical Support at (800) 327-0770.

Stryker Medical
3800 E. Centre Avenue
Portage, Michigan 49002
USA

Please have the serial number (see Figure 1 below) of your Stryker product available when calling Stryker Customer Service or Technical Support. Include the serial number in all written communication.

SERIAL NUMBER AND IDENTIFICATION NUMBER LOCATION

The serial number of the iBed Locator is located on the backside of the product as shown in Figure 1.

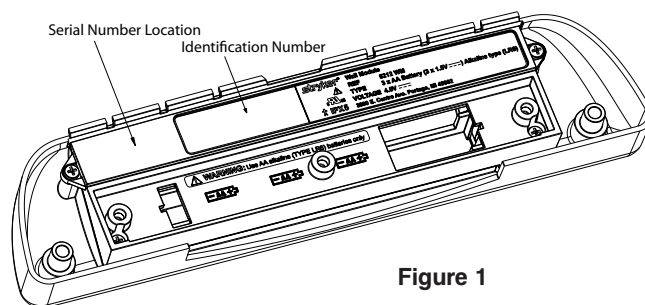


Figure 1

Summary of Safety Precautions



WARNINGS

- The iBed Locator must be correctly associated or mapped to the room / location in order to provide accurate location information. Failure to properly map the iBed Locator to the room / location will yield incorrect remote information. Additionally, if an iBed Locator is to be moved after it has been installed and mapped, it must be re-mapped to the new room / location in which it is moved to. iBed Locator re-mapping will also be required if the room / location information is changed after initial installation.
 - Line of sight between iBed Locator and the Head End of bed must be free of obstruction at all times. Any line of sight interference could impede communication and cause the room / location information not to be available.
 - iBed Locators must be installed more than 71" apart from one another in the same room, such as in semi-private room with more than one bed. Failure to do so could result in bed communicating with the adjacent iBed Locator, thus provide wrong location information.
 - After replacing batteries, reinstall the iBed Locator to the same wall plate/wall spacer which it was removed from. Do not reinstall an iBed Locator to any other location except the location it was removed from.
-



CAUTION

- The iBed Locator will be required to be mounted to the wall. Users are required to follow internal contamination control requirements when mounting the module.
-

Installation Instructions

To install the iBed Locator you will need the components identified below. All of the components listed are included in kit 5212-100-005.

Kit Contents: (5212-100-005)

- (1) iBed Locator (5212-100-001)
- (1) iBed Locator Wall Plate (5212-100-025)
- (1) iBed Locator Battery Door (5212-100-002)
- (3) #6-32 x 5/16" Screws (0002-115-000)
- (2) #10-32 x 7/8" Screws (0002-116-000)
- (2) Screw Covers (5212-100-803)

Tools Required

- #2 Phillips Screwdriver
- T27 Torx Driver
- Tools required for the selected fasteners
- Level
- Tape Measure
- Pencil

Procedure

1. Fill in the iBed Locator ID # (page 6) and its room #/location on the association form located in the back of this manual.

2. Identify left to right the center of the wall behind the bed location.

3. Using a tape measure and a pencil, mark the center of the wall 4" to 5" off of the floor for reference as shown in Figure 2.

Note: The center of the bed location on the wall has to be within 1/2" of the bed left to right center for the locator to work properly. The iBed Locator needs line of sight communication with the Bed IR module. If needed, use the optional Wall Spacer (5212-700-003) to mount the iBed Locator. The spacer will provide installation at a greater distance from the wall.

4. Select a mounting fastener that is appropriate for the wall where the wall plate (5212-100-025) will be mounted.

5. Using the iBed Locator wall plate (5212-100-025 see Figure 3) or optional wall spacer (5212-100-125 see Figure 4) as your mounting hole template, position it on the wall ensuring the bottom of the wall plate or wall spacer is 4" to 5" off of the floor.

6. Using a pencil, mark the bottom of the wall plate or wall spacer. Center the wall plate or wall spacer on the mark that was made in step one (see Figure 2).

7. Position a level on the top of the wall plate or wall spacer. Confirm the bottom and the center of the wall plate are on the two reference lines made in step 1 and 4.

8. Using a pencil, mark the three (3) screw holes in the wall plate or if using the optional wall spacer, mark the four (4) screw holes.

9. Follow the selected fastener instructions to install the fastener into the wall.

10. Using the recommended tool for the selected fastener, secure the wall plate or wall spacer to the wall.

11. Install three (3) AA alkaline batteries (not supplied) into the battery compartment.

12. Using a Phillips screwdriver, secure the battery door to the iBed Locator with the three (3) supplied screws (0002-115-000) (see Figure 3 or 4).

13. If you are using a wall spacer, continue with step 11a below. If no wall spacer is used, continue to step 12.

a. Using a T27 Torx driver, secure the wall plate to the wall spacer with the supplied three (3) screws (0004-589-000) (see Figure 4).

14. Install the iBed Locator onto the wall plate by inserting the hinged edge of the iBed Locator into the slots on the top of the wall plate. Swing the iBed Locator down and flush to the wall plate.

15. Using a Phillips screwdriver, secure the iBed Locator to the wall plate with the two (2) supplied screws (0002-116-000) (see Figure 3 or 4).

16. Install the two (2) screw covers (5212-100-803) over the two screws that were installed in step 12 (see Figure 3 or 4).

Installation Instructions

iBED LOCATOR MOUNTING SPECIFICATIONS

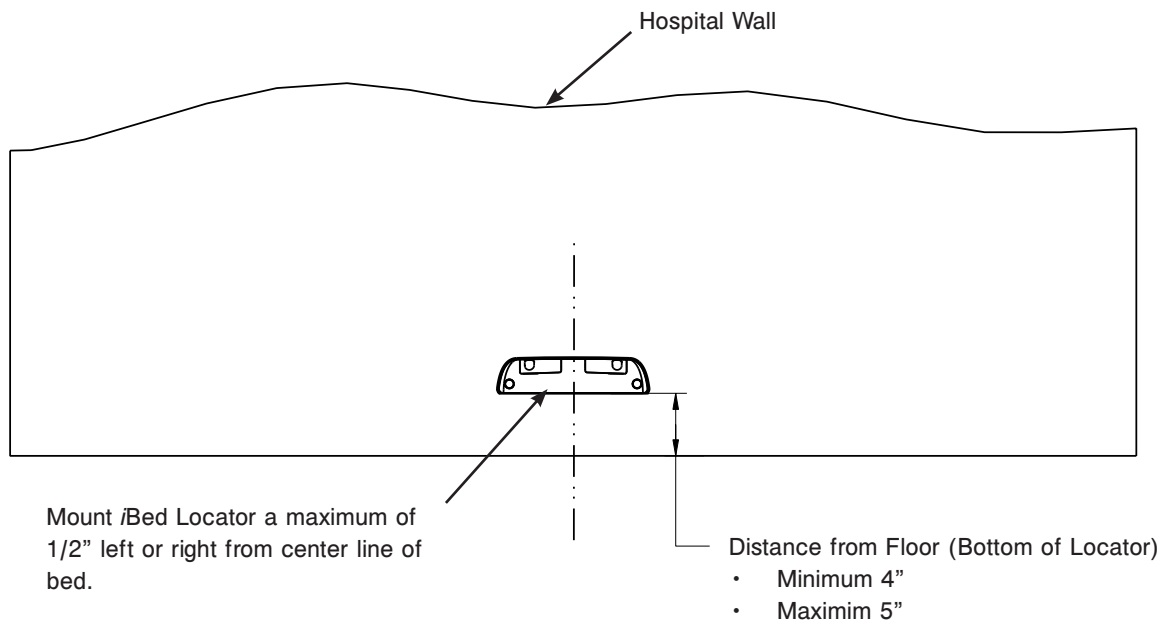


Figure 2

iBED LOCATOR MOUNTING WITH WALL PLATE

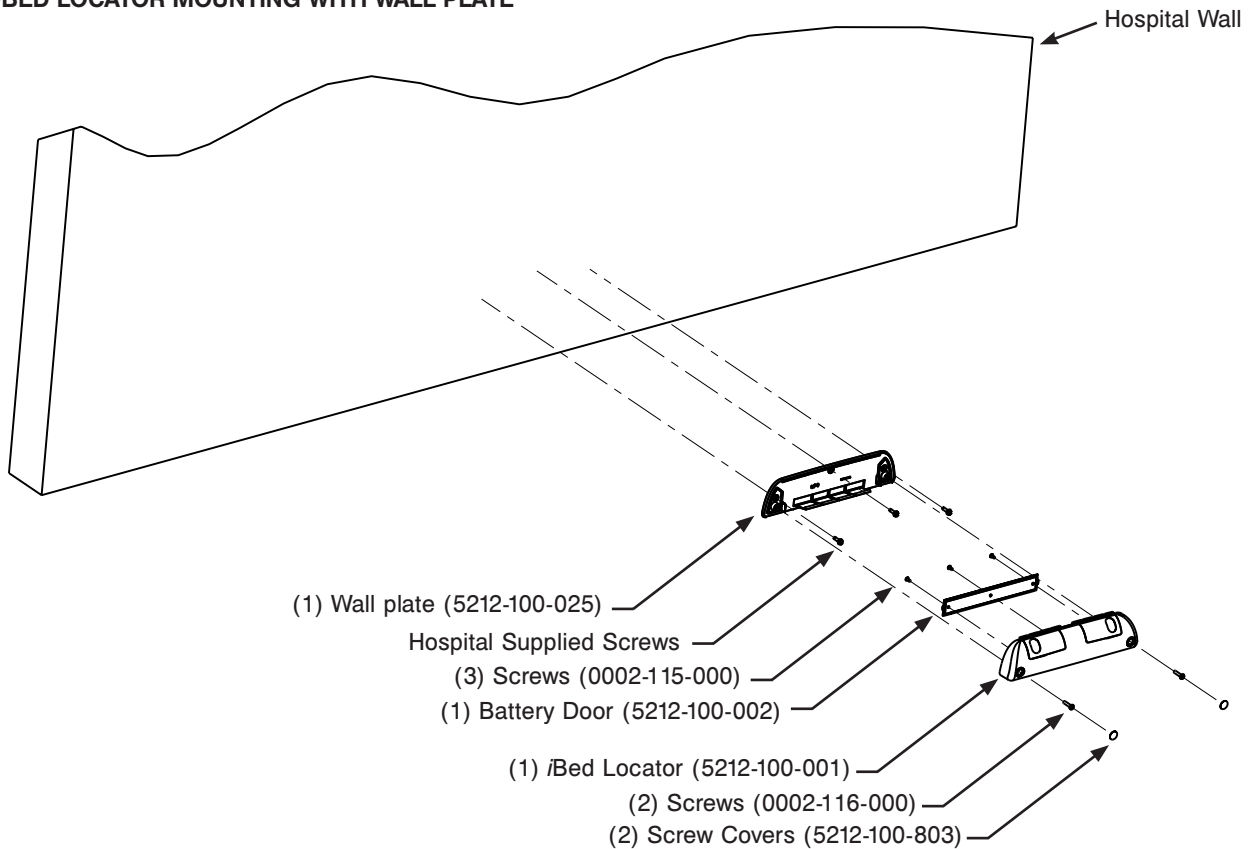


Figure 3

Installation Instructions

iBED LOCATOR MOUNTING WITH SPACER KIT (OPTIONAL)

Spacer Kit Contents (5212-700-003)

- (3) Button Head Cap Screw (0004-589-000)
- (1) Wall Spacer (5212-100-125)

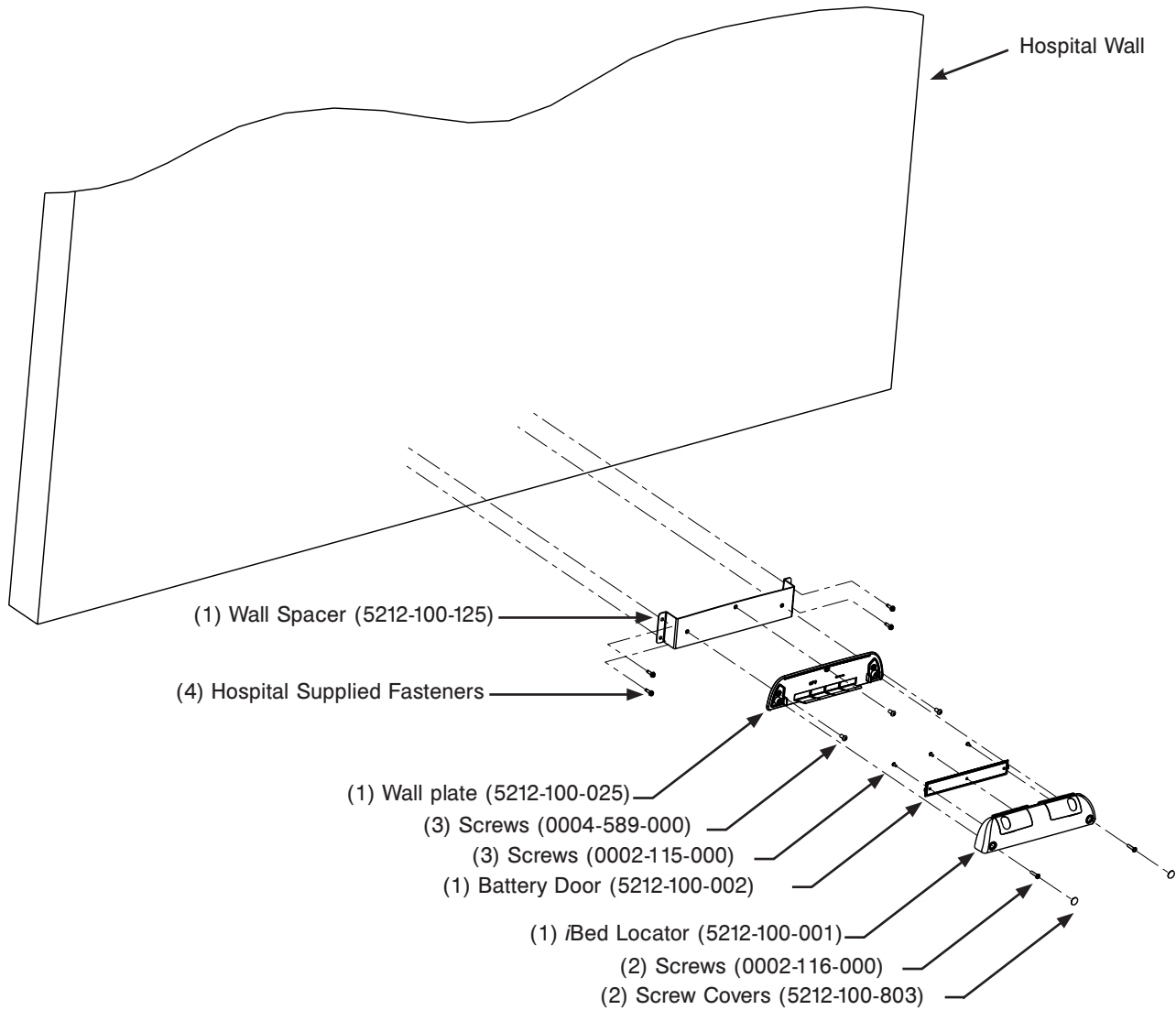


Figure 4

Installation Instructions

BATTERY REPLACEMENT PROCEDURE

Tools Required

- #2 Phillips Screwdriver
- Small Slotted Screwdriver

Procedure

1. Using a small regular screwdriver, carefully remove the two screw covers on the bottom front corners of the iBed Locator and set aside for reinstallation. If damaged, order 5212-100-803 (x2) screw cover.
2. Using a Phillips screwdriver, remove the two screws securing the iBed Locator to the wall plate and set aside for reinstallation.
3. Lift upward on the bottom of the iBed Locator and swing outward to remove it from the wall plate.
4. Using a Phillips screwdriver, remove the three screws securing the battery door to the iBed Locator and set aside for reinstallation.
5. Remove the battery door and set aside.
6. Using a small slotted screwdriver, place the flat edge between the end of the battery (right side) and the battery holder casing. Tilt the screwdriver to the right and upwards to free the battery. Remove the remaining two batteries.
7. Install new batteries paying attention to the battery orientation during the installation.
8. Using a Phillips screwdriver, reinstall the battery door and the three screws which secure the battery door to the wall module.
9. Reinstall the iBed Locator onto the wall plate by inserting it into the top of the wall plate and hinging it downward.
10. Using a Phillips screwdriver, secure the iBed Locator to the wall plate by tightening the two retaining screws.
11. Reapply the two screw covers removed in step 1 on top of the screws, if the screw covers were damaged during removal order part number 5212-100-803 (x2) to replace them.

WARNING

After replacing batteries, reinstall the iBed Locator to the same wall plate/wall spacer which it was removed from. Do not reinstall an iBed Locator to any other location except the location it was removed from otherwise it will need to be reassigned on the server with its new location.

Cleaning

Cleaning the iBed Locator

- Hand wipe the surface of the unit with warm water and mild detergent. **Dry thoroughly.**
- Do not steam clean or hose off the unit.
- Do not immerse any part of the unit. Some of the internal components of the unit are electronic and may be damaged by exposure to water.
- Clean the lens on the front of the unit as required with a soft cloth.

Suggested cleaners for unit surface:

- Quaternary Cleaners (active ingredient - ammonium chloride).
- Phenolic Cleaners (active ingredient - o-phenylphenol).
- Chlorinated Bleach Solution (5.25% - less than 1 part bleach to 100 parts water).
- Virex TB.

Avoid over-saturation and ensure the product does not stay wet longer than the chemical manufacturer's guidelines for proper disinfecting.

CAUTION

SOME CLEANING PRODUCTS ARE CORROSIVE IN NATURE AND MAY CAUSE DAMAGE TO THE PRODUCT IF USED IMPROPERLY. If the products suggested above are used to clean Stryker patient care equipment, measures must be taken to insure the unit is wiped with a damp cloth soaked in clean water and thoroughly dried following cleaning. Failure to properly rinse and dry the unit will leave a corrosive residue on the surface of the unit, possibly causing premature corrosion of critical components. Failure to follow the above directions when using these types of cleaners may void this product's warranty.

Preventative Maintenance

This unit requires an effective maintenance program, we recommend checking these items annually. Use this sheet for your records and keep on file.

CHECKLIST

- _____ With the bed connected, confirm the iBed Locator's battery status. Consult your bed product manual for detailed instructions on checking battery status. Replace as needed.
- _____ Inspect Module as follows:
 - Damage on Lens
 - Physical Integrity of Module (check for cracks)
 - Physical Mounting of Module Secure
- _____ Replace the AA batteries every three (3) years.

EMC Information

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The model 5212 iBed Locator is suitable for use in the electromagnetic environment specified below. The customer or the user of the model 5212 iBed Locator should assure that it is used in such an environment.			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment Guidance
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial and/or hospital environment.
Note: U_T is the a.c. mains voltage prior to applications of the test level.			

EMC Information

Recommended separation distances between portable and mobile RF communications equipment and the model 5212 iBed Locator.

The model 5212 iBed Locator is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the model 5212 iBed Locator can help prevent electromagnetic interferences by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the model 5212 iBed Locator as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter		
	m		
	150 kHz to 80 MHz $d=1.2 \sqrt{P}$	80 MHz to 800 MHz $d=1.2 \sqrt{P}$	8000 MHz to 2.5 GHz $d=2.3 \sqrt{P}$
0.01	1.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1


At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2

These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

EMC Information

The model 5212 iBed Locator is suited for use in the electromagnetic environment specified below. The customer or the user of the model 5212 iBed Locator should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of the model 5212 iBed Locator, including cables, than the recommended separation distance calculated from the equation appropriate for the frequency of the transmitter.</p> <p>Recommended Separation Distance</p> $d = 1.2 \sqrt{P}$ $d = 2.3 \sqrt{P}$ <p>800 MHz to 2.5 GHz</p> <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^a should be less than the compliance level in each frequency range.^b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 

Note 1

At 80 MHz and 800 MHz, the higher frequency range applies.

Note 2

These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^aField strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the model 5212 iBed Locator is used exceeds the applicable RF compliance level above, the model 5212 iBed Locator should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the model 5212 iBed Locator.

^bOver the frequency range 150 kHz to 80 MHz, field strengths are less than 3 V/m.

EMC Information

Guidance and Manufacturer's Declaration - Electromagnetic Emissions

The model 5212 iBed Locator is intended for use in an electromagnetic environment specified below. The customer or the user of the model 5212 iBed Locator should assure that it is used in such an environment.

Emissions Test	Compliance	Electromagnetic Environment
RF Emissions CISPR 11	Group 1	The model 5212 iBed Locator uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class A	The model 5212 iBed Locator is suitable for use in all establishments other than domestic and those directly connected to the public low voltage power supply network that supplies buildings used for domestic purposes.

Warranty

LIMITED WARRANTY

Stryker Medical Division, a division of Stryker Corporation, warrants to the original purchaser the model 5212 iBed Locator to be free from defects in material and workmanship for a period of one (1) year after date of delivery. Stryker's obligation under this warranty is expressly limited to supplying replacement parts and labor for, or replacing, at its option, any product which is, in the sole discretion of Stryker, found to be defective. If requested by Stryker, products or parts for which a warranty claim is made shall be returned prepaid to the factory. Any improper use or any alteration or repair by others in such manner as in Stryker's judgment affects the product materially and adversely shall void this warranty. Any repair of Stryker products using parts not provided or authorized by Stryker shall void this warranty. No employee or representative of Stryker is authorized to change this warranty in any way.

The Stryker iBed Locator product is designed for a 10 year expected service life under normal use, conditions, and with appropriate periodic maintenance as described in the maintenance manual for each device.

This statement constitutes Stryker's entire warranty with respect to the aforesaid equipment. **Stryker makes no other warranty or representation, either expressed or implied, except as set forth herein. There is no warranty of merchantability and there are no warranties of fitness for any particular purpose. In no event shall Stryker be liable here under for incidental or consequential damages arising from or in any manner related to sales or use of any such equipment.**

TO OBTAIN PARTS AND SERVICE

Stryker products are supported by a nationwide network of dedicated Stryker Field Service Representatives. These representatives are factory trained, available locally, and carry a substantial spare parts inventory to minimize repair time. Simply call your local representative, or call Stryker Customer Service USA at 1-800-327-0770, Canada 1-888-233-6888.

RETURN AUTHORIZATION

Merchandise cannot be returned without approval from the Stryker Customer Service Department. An authorization number will be provided which must be printed on the returned merchandise. Stryker reserves the right to charge shipping and restocking fees on returned items. **Special, modified, or discontinued items not subject to return.**

DAMAGED MERCHANDISE

ICC Regulations require that claims for damaged merchandise must be made with the carrier within fifteen (15) days of receipt of merchandise. **Do not accept damaged shipments unless such damage is noted on the delivery receipt at the time of receipt.** Upon prompt notification, Stryker will file a freight claim with the appropriate carrier for damages incurred. Claim will be limited in amount to the actual replacement cost. In the event that this information is not received by Stryker within the fifteen (15) day period following the delivery of the merchandise, or the damage was not noted on the delivery receipt at the time of receipt, the customer will be responsible for payment of the original invoice in full. Claims for any short shipment must be made within thirty (30) days of invoice.

Detach Here

Note: Please give this /Bed Locator Association Form to your Stryker Technology Specialist or your device Network Administrator so they can make the associations on the server. **The bed will not have an IP address until configured by IT.**

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EC	REP
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