

CHG[®]

HOSPITAL BEDS

User Manual for Spirit One™ Beds



Please read carefully before using your new bed

Spirit ONE[™]



Contact Information

Technical Service	Phone: (519) 963-4010 Toll Free: 1 (866) 516-5446 Fax: (519) 963-4013
Mailing Address	CHG Hospital Beds Inc. 1020 Adelaide Street South London, Ontario Canada N6E 1R6

To ensure prompt and accurate attention to your concerns please have the following information available before you call:

Spirit One™ Bed Service Call Information

Your facility's phone number:	
Your facility's fax number:	
Bed(s) Model and Type:	
Bed(s) Serial Number	
Date of Purchase:	
List of defective part(s):	
List of deficiencies or type of problem:	

A Message from CHG Hospital Beds

To Our Valued Customers,

Thank you for selecting CHG Hospital Beds as your hospital bed provider and congratulations on your purchase of a Spirit One™ bed. You are a part of the growing majority of healthcare providers that recognize the benefits of a low hospital bed.

CHG Hospital Beds is committed to meeting the needs of our customers through quality products that are innovative, user-friendly, easy to maintain, and most importantly, focused on patient safety. We are sure that your hospital will enjoy the benefits and safety features of the Spirit One™ bed for many years to come.

The Spirit One™ bed is manufactured in London, Ontario, Canada. Each and every Spirit One™ bed is inspected and tested by our team of highly trained and dedicated quality technicians to ensure that all Spirit One™ beds meet our strict quality standards before entering your hospital.

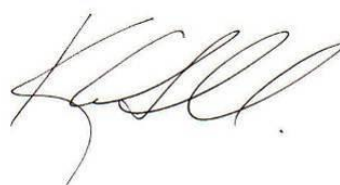
Our sales team is focused on providing exceptional sales support before, during, and after the delivery of your Spirit One™ bed. If at any time you have questions or concerns regarding your Spirit One™ bed, we strongly encourage you to call us at 1-866-516-5446. Our hands-on company philosophy enables us to respond to our customers quickly and effectively.

We recommend that you carefully read this Spirit One™ Bed Owner's Manual prior to operating your bed. Becoming acquainted with the safe operation and maintenance procedures outlined in this manual will ensure proper bed use and can extend the service life of the bed.

Sincerely,



Steve Walker
Vice President of Operations
CHG Hospital Beds



Kyle Sobko
Vice President of Sales & Marketing
CHG Hospital Beds

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Section 1:

Specifications & Precautions

1.1 Full Bed Warranty

CHG Hospital Beds' pro-rated warranty covers manufacturing defect, or failure due to workmanship or materials.

CHG Hospital Beds warrants to the original purchaser of its products that the electrical components are guaranteed to be free from manufacturing defect for one (1) year from the date of purchase.

CHG Hospital Beds warrants to the original purchaser of its products that the product or any part thereof, in the judgment of CHG Hospital Beds, will not be defective in material or workmanship for one (1) year from date of original purchase.

Such defects will be repaired or replaced (at the company's option) free of charge for parts only, provided the defective product is shipped to the factory or an authorized depot at the customer's own expense. Shipping charges for return of the product to the customer will also be at the customer's own expense.

This warranty does not include any labour or shipping charges incurred in replacement part installation or repair of any such part. CHG Hospital Beds' sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

After one year, for the next four years, frame parts only will be covered by the warranty according to the following five (5) year prorated fee schedule:

2 nd year	frame parts only	list price less 60
3 rd year	frame parts only	list price less 40
4 th year	frame parts only	list price less 20
5 th year	frame parts only	list price less 10

Parts, in the judgment of CHG Hospital Beds, found to be damaged through normal wear and tear, impact, abuse, overloading, fire, lightening, water damage, power surges, brown-outs, improper supply voltage or use of other manufacturer's head and/or footboards and/or accessories will not be covered. Replacement parts will be charged out at the full list price.

Any alteration made to and/or performed on the bed and/or one of its components voids this warranty.

A Return Goods Authorization number (RGA) must be obtained before returning any products or parts to the factory. We regret that no products will be accepted at the factory without an RGA number. No other warranty expressed or implied by CHG Hospital Beds or its agents shall be considered valid.

CHG Hospital Beds Inc.
1020 Adelaide Street South
London, Ontario
Canada
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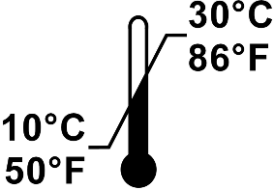
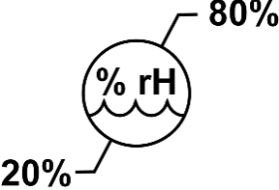
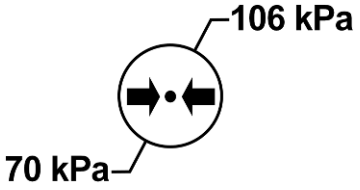
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Fax: (519) 963-4013
Toll Free: (866) 516-5446

1.2 Intended Use

The Spirit One™ bed is intended for low to moderate acuity patients in the medical and/or surgical area of the hospital. The Spirit One™ bed is also intended for use as a general-purpose variable height hospital bed for general care, post-operative, and general medicine wards. The Spirit One™ bed is intended for used in Application Environments 1-3, 5 as described in IEC 60601-2-52, Clauses 201.3.201 - 205.




Application Environment		Use of Spirit One™ Bed
No.	Description	
1	Intensive/critical care provided in a hospital where 24 hour medical supervision and constant monitoring is required and the provision of life support system/equipment used in medical procedures is essential to maintain or improve the vital functions of the patient.	Suitable
2	Acute care provided in a hospital or other medical facility where medical supervision and monitoring is required and medical equipment used in medical procedures is often provided to help maintain or improve the condition of the patient.	Suitable
3	Long-term care in a medical area with medical supervision is required and monitoring is provided if necessary and medical equipment used in medical procedures may be provided to help maintain or improve the condition of the patient.	Suitable
4	Care provided in a domestic area where medical equipment is used to alleviate or compensate for an injury, disability, or disease.	-
5	Outpatient (ambulatory) care which is provided in a hospital or other medical facility, under medical supervision where medical equipment is provided for the need of persons with illness, injury, or disability for treatment, diagnosis, or monitoring.	Suitable

Environmental Conditions for Normal Use

		
Ambient Temperature Range	Ambient Humidity Range (Non Condensing)	Atmospheric Pressure Range

1.3 Standard Conventions Used in this Manual









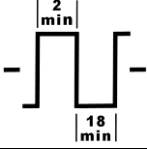



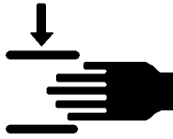


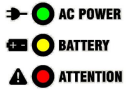














This manual includes information essential to the safety of the patient, staff, and equipment during the normal operation of the Spirit One™ bed. Before operating the Spirit One™ bed, be sure you have read and understood the contents of this manual. It is important that you use this equipment in accordance with the procedures outlined in this manual. As you read through this manual be alert to the four signal words.









 DANGER	Information appearing under the DANGER caption concerns the protection of patient, staff, and others from the immediate and imminent hazards that, if not avoided, will result in immediate, serious personal injury or loss of life in addition to equipment damage.
 WARNING	Information appearing under the WARNING caption concerns the protection of patient, staff, and others from potential hazards that can result in personal injury or loss of life in addition to equipment damage.
 CAUTION	Information appearing under the CAUTION caption concerns the protection of patient, staff, and others from potential hazards that can result in minor personal injury or equipment damage.
NOTE:	Information appearing in a NOTE caption provides additional information which is helpful in understanding the item being explained.

1.3.1 Patient Left & Patient Right Determination

CHG Hospital Beds' determination of the "Patient Left" and the "Patient Right" side of the bed is made from the patient's point of view while positioned normally on the bed facing up.

1.4 Symbols Used on the Spirit One™ Bed

WARNING SYMBOLS					
	PROTECTIVE EARTH GROUND		POTENTIAL EQUALIZATION (EQUIPOTENTIAL POINT)		SAFE WORKING LOAD THE MAXIMUM ALLOWABLE LOAD THAT CAN BE PLACED ON THE BED
	MAXIMUM PATIENT WEIGHT THE MAXIMUM ALLOWABLE WEIGHT OF PATIENT THAT CAN BE PLACED ON THE BED		READ OWNER'S MANUAL BEFORE USE		SYMBOL TO DRAW USER ATTENTION TO AN IDENTIFIED DANGER, WARNING, OR CAUTION
CLASS 1	EQUIPMENT CLASSIFICATION IN TERMS OF PROTECTION AGAINST ELECTRICAL SHOCK	IPX4	INGRESS PROTECTION CODE (IP RATING)		ALTERNATING CURRENT (AC) POWER
	TYPE B EQUIPMENT		DUTY CYCLE 2 MINUTES ON 18 MINUTES OFF		EXPLOSION HAZARD
	FIRE HAZARD		DO NOT STAND		PINCH HAZARD
ADVANCED BED MOTION CONTROLS				INDICATOR DISPLAYS	
	ELECTRONIC CARDIOPULMONARY RESUSCITATION (CPR) FUNCTION PRESS AND HOLD TO LOWER ALL SECTIONS OF MATTRESS DECK FLAT TO BED FRAME		CHAIR FUNCTION PRESS AND HOLD TO BRING PATIENT TO SITTING POSITION		POWER STATUS INDICATORS
	TRENDELENBURG FUNCTION PRESS AND HOLD TO MOVE THE BED INTO TRENDELENBURG POSITION		LEVEL ALL FUNCTION PRESS AND HOLD WILL FULLY FLATTEN ALL SECTIONS OF MATTRESS DECK AGAINST BED FRAME AND RETURN BED FRAME TO HORIZONTAL POSITION		BED EXIT ALARM BED EXIT ALARM VOLUME AND NURSE/PRIORITY CALL ACTIVATION SETTINGS
	REVERSE TRENDELENBURG FUNCTION PRESS AND HOLD TO MOVE THE BED INTO REVERSE TRENDELENBURG POSITION		CONTOUR FUNCTION TOGGLE TO INITIATE AUTOMATIC ACTION OF KNEE-FOOT SECTION WHEN ACTION IS INITIATED TO HEAD SECTION OF MATTRESS DECK		
BED MOTION CONTROLS				MENU CONTROLS	
	UP CONTROL ELEVATES THE CORRESPONDING SECTION OF THE MATTRESS DECK		FUNCTION LOCK-OUT (HEAD DECK) ACTIVATE TOGGLE SWITCH TO RESTRICT FUNCTION OF PATIENT AND PENDANT		MENU SELECTOR ARROW BUTTONS PRESS TO SELECT VARIOUS MENU OPTIONS, AND AVAILABLE SELECTIONS WITHIN MENU OPTIONS
	DOWN CONTROL LOWERS THE CORRESPONDING SECTION OF THE MATTRESS DECK		FUNCTION LOCK-OUT (MATTRESS DECK) ACTIVATE TOGGLE SWITCH TO RESTRICT FUNCTION OF PATIENT AND PENDANT		MENU SCROLL ARROW BUTTONS PRESS TO SCROLL UP/DOWN THROUGH HOME SCREENS, MENUS, MENU OPTIONS, AND AVAILABLE SELECTIONS WITHIN MENU OPTIONS
			FUNCTION LOCK-OUT (FOOT DECK) ACTIVATE TOGGLE SWITCH TO RESTRICT FUNCTION OF PATIENT AND PENDANT		DISPLAY ON/ENTER BUTTON PRESS TO ACTIVATE OR "WAKE UP" HOME SCREENS PRESS TO MAKE SELECTIONS WITHIN MENUS AND MENU OPTIONS
					BACK FUNCTION PRESS TO RETURN TO PREVIOUS MENU OPTIONS

SIDERAIL CONTROLS					
	<p>DISPLAY FUNCTION</p> <p>TOGGLE SIDERAIL LCD DISPLAY</p>		<p>UP CONTROL</p> <p>ELEVATES THE CORRESPONDING SECTION OF THE MATTRESS DECK</p>		<p>DOWN CONTROL</p> <p>LOWERS THE CORRESPONDING SECTION OF THE MATTRESS DECK</p>
	<p>NURSE CALL FUNCTION</p> <p>SENDS NURSE CALL NOTIFICATION THROUGH 37 PIN CONNECTOR</p>		<p>FUNCTION FEATURE</p>		<p>ELECTRONIC FOOT SIDERAIL RELEASE</p> <p>RELEASES FOOT SIDERAIL</p>
	<p>TILT FUNCTION</p> <p>PRESS AND HOLD TO PLACE THE BED IN A REVERSE TRENDLENBURG. PRESS AND HOLD TO REVERSE</p>		<p>LOCKOUT NOTIFICATION</p> <p>LED ILLUMINATES WHEN A FUNCTION THAT IS LOCKED OUT IS ATTEMPTED</p>		

1.5 Technical Specifications


Certifications		
Certified to: CAN/CSA C22.2 No. 60601-1:2008 & 60601-2-52:2011, UL 60601-1:2003, IEC 60601-2-52/C1:2010 & 60601-2-38/A1:1999, ANSI/AAMI ES 60601-1:2005/A2:2010 Conforms to: IEC 60601-1:2005/C2:2007		
Articulation Range	Spirit One™	
Head Section Angle	0° to 60°	
Knee Section Angle	0° to 25°	
Foot Section Angle	0° to 10°	
Foot Section Angle in Vascular Position - Knee Fully Flat	15°	
Foot Section Angle in Vascular Position - With Knee Articulation	0° to -4°	
Trendelenburg	0° to 12°	
Reverse Trendelenburg	0° to -12°	
Mattress Deck Height - Lowest Elevation	273 mm	10 ¾"
Mattress Deck Height - Highest Elevation	762 mm	30"
Underbed Clearance	133 mm	5 ¼"
Electrical Specifications	120V Models	230V Models
Mode of Operation - Intermittent Operation (Actuators)	Duty: 10% (2 Minutes ON, 18 Minutes OFF)	
Mains Input Voltage (90-264VAC)	115 Volts AC	230 Volts AC
Mains Input Current	8.6 Amps	4.3 Amps
Mains Input Current (Beds with Auxiliary Mains AC Outlet)	13.6 Amps	7.3 Amps
Mains Input Frequency (47-63Hz)	60 Hertz	50 Hertz
Motor (Actuator) Voltage - Safety Extra Low Voltage (SELV)	24 Volts DC	24 Volts DC
Controls Voltage - Safety Extra Low Voltage (SELV)	3.3-24 Volts DC	3.3-24 Volts DC
Power Consumption - at Maximum Load (Safe Working Load)	989 Watts	989 Watts
Power Consumption - at Idle	24 Watts	24 Watts
Auxiliary Mains AC Outlet - Maximum Output Power	120 Volts, 5 A (600 Watts)	230 Volts, 3 A (690 Watts)
Control Locations	Spirit One™	
Footboard Staff Control	Enhanced Control with 4.3" LCD Graphics Display	
Siderail Controls (Patient and Staff)	Standard	
Safety Features		
Protective Earth Ground	Class I (Equipotential Point)	
Electric Shock Protection	Type B	
Enclosure Protection	IPX4	
Dual Foot Pedal – Lock & Steer Feature	Standard	


On-Board Battery Back-up	Standard		
Safety & Convenience Features on Footboard Staff Control			
PRESS and Hold Electronic CPR Function	Standard		
Trendelenburg/ Reverse Trendelenburg Capability	Standard		
Chair Positioning	Standard		
Auto Contour Mode	Standard - Toggle Button with LED		
Security			
Patient Lock-Outs - Bed Elevation, Head Section, and Knee/Foot Section (Patient Controls only)	Standard – Individual Toggle Button with LED's		
Master Lock-Out - All Patient and Staff Control Locations (including Footboard Staff Control)	Standard – Requires deactivation of Master Lock-out to operate bed		
Security Lock-Out - All Patient and Staff Control Locations (including Footboard Staff Control)	Standard – Requires facility-set user passcode to operate bed		
Dimensions & Weight	Spirit One™		
Length (Overall Bed Length)	2318 mm	91 ¼"	
Length - Between Head & Footboards	2057 mm	81"	
Length - Mattress Deck	2127 mm	83 ¾"	
Width - Between Outer Edges of Siderails (36" Position)	1016 mm	40"	
Width – Between Outer Edges of Siderails (42" Position)	1168 mm	46"	
Width – Between Outer Edges of Siderails (48" Position)	1321 mm	52"	
Width - Mattress Deck (36" Position)	889 mm	35"	
Width - Mattress Deck (42" Position)	1041 mm	41"	
Width - Mattress Deck (48" Position)	1194 mm	47"	
Load Capacity (Safe Working Load)	454 kg	1000 lbs	
Weight of Bed (Empty)	414 kg	910 lbs	
Sound Pressure Level (Measured 1m from Device)			
Bed Operation - at Maximum Load (Safe Working Load)	< 54 dBA		
Confirmation/Notification "Chirp"	< 62 dBA		
Bed Exit Alarm Volume Settings	Low Setting	Medium Setting	High Setting
	54 - 62 dBA	68 - 87 dBA	80 - 101 dBA


**All dimensions are nominal and have approximate manufacturing tolerances of ± 12.7 mm (½") for length/height and ± 2° for angular dimensions*


1.6 Important Electrical Precautions

AC Power Outlet Requirements	
120 VAC models	Plug the three prong power supply cord ONLY into a properly grounded 120 VAC, 60 Hz power outlet that is rated to at least 15 A.
230 VAC models	Plug the three prong power supply cord ONLY into a properly grounded 230 VAC, 50 Hz power outlet that is rated to at least 10 A.

	⚠ DANGER
	<p>Possible ELECTROCUTION Hazard</p> <p>DO NOT expose the AC power supply cord or other electrical components to water.</p> <p>DO NOT allow the power supply cord, AC power outlet, auxiliary AC outlet socket (if equipped), actuators, control boxes, or other electrical accessories to become wet or submerged during normal bed operation or when performing cleaning.</p> <p>DO NOT submerge the bed frame or electrical parts. DO NOT allow liquids to enter electrical components. If a liquid is spilled in or around the bed, unplug the bed before cleaning. Clean up the spill and allow the bed and/or the area around the bed to dry thoroughly before using the controls again.</p> <p>DO NOT open assemblies such as actuators, control boxes, battery, or other electrical accessories. These parts are not serviceable. Only service technicians, specifically trained to service CHG Hospital Beds Spirit One™ beds, should attempt to service bed and/or replace electrical components.</p> <p>DO NOT use the auxiliary AC outlet socket (if equipped) if the socket receptacles appear to be damaged and/or if the plug (of the device that you are connecting the bed to) does not remain connected when inserted in the outlet socket receptacles.</p>

	⚠ DANGER
	<p>Possible EXPLOSION Hazard</p> <p>DO NOT use near explosive gases. DO NOT operate this bed in the presence of a flammable anaesthetic mixture with air or with nitrous oxide.</p> <p>DO NOT use this bed in Active Treatment "Ether Environments".</p>

	⚠ DANGER
	<p>Possible FIRE Hazard exists when connecting (plugging in) the power supply cord to an AC power outlet if oxygen administering equipment is in use.</p> <p>Use either a patient nasal mask or half-length tent, ensuring the tent NEVER extends below the mattress deck, when administering oxygen.</p>

	⚠ DANGER
	<p>Possible FIRE Hazard exists if the pendant or pillow speaker is not disabled when oxygen administering equipment is in use. If bed is equipped with a pendant, disconnect the pendant from the port at the side of the bed and insert pendant into its holster or attach pendant to bed linen using the included linen clip when not in use.</p>



⚠ WARNING

DO NOT operate the bed if any actuator has malfunctioned or has been damaged in any manner.

DO NOT open assemblies such as actuators, control boxes, battery, or other electrical accessories. These parts are not serviceable.



⚠ WARNING

Possible **ELECTRIC SHOCK Hazard** exists when servicing bed and/or replacing electrical components.

ENSURE Transportation Mode is set before servicing bed. Refer to page 80 for Transportation Mode instruction.

Only service technicians, specifically trained to service CHG Hospital Beds Spirit One™ beds, should attempt to service bed and/or replace electrical components.



⚠ WARNING

All Spirit One™ beds are equipped with a power supply cord storage device located at the head end of the bed. **ALWAYS** keep the power supply cord clear of any moving bed parts or mechanisms. The power supply cord should **ALWAYS** be stowed whenever moving, transporting, or storing the bed.

DO NOT allow the power supply cord (or any other cord) to become entangled around other objects. A pinched power supply cord (or any other cord) can become damaged and could be dangerous. Be aware of the power supply cord (or any other cord) location especially when moving the bed.

DO NOT roll the bed over the power supply cord (or any other cord). **DO NOT** operate the bed if the power supply cord (or any other cord) is damaged. **ALWAYS** keep power supply cord (or any other cord) clear of moving equipment. The power supply cord is a replaceable component by service personnel. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

DO NOT position the bed so that it is difficult to disconnect the power supply cord should the need ever arise. **DO NOT** use an extension cord.



⚠ WARNING

ALWAYS confirm replacement part numbers and/or control box circuit board revisions are the same prior to installation. Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.



⚠ CAUTION

Connecting electrical equipment to auxiliary mains AC outlet effectively leads to creating a medical equipment system and can result in a reduced level of safety. When connecting devices, the system shall be evaluated in end use application to ensure compliance to medical device standard 60601-1.



⚠ CAUTION

A safety feature of this product includes protection against overheating caused by excessive or extended periods of operation. Depending on the duration, this includes multiple or repeated adjustments or the use of multiple functions at once.

To ensure trouble free operation, **ALWAYS** allow a slight pause between multiple adjustments. **DO NOT** exceed the maximum continuous mode of operation. Refer to page 12 for complete technical specifications.

1.6.1 Battery Back-up

Battery Location

All Spirit One™ beds are equipped with a rechargeable, back-up battery. The battery is located within the caster cover at the foot end of the bed.

Battery Charging and Operation Characteristics

The battery is continuously charged when connected an AC power outlet. When the bed is unplugged from the AC power outlet, the bed is powered by the battery. Refer to pages 27 to ensure proper battery cable connection.

The footboard staff control on Spirit One™ beds has an integrated power status indicator. When the ATTN light is flashing, the battery requires inspection. Refer to pages 41 for power status indication.

The battery is maintenance free, however battery life is not indefinite, and thus semi-annual inspection is required to verify operation. Refer to page 87 for details. In the event the battery is deemed to be faulty, does not hold a charge, will not operate the functions of the bed while the bed is disconnected (unplugged) from the AC power outlet, or if the battery case or mounting hardware has been damaged in any way, replace the battery.



⚠ WARNING

Emergency bed functions cannot be guaranteed under abnormal operating conditions.

ALWAYS be aware of the power status indicator and take appropriate action when the ATTN light is flashing. **ALWAYS** perform periodic battery inspection.



⚠ WARNING

Potential **ELECTROCUTION, EXPLOSION, and/or FIRE HAZARD**


These potential hazards could occur resulting in injury or loss of life in addition to equipment damage can occur if battery is replaced with components other than those approved for use on the Spirit One™ bed by CHG Hospital Beds.




⚠ WARNING

EXPLOSION or FIRE HAZARD

DO NOT expose the battery to heat. Keep away from flames and sparks

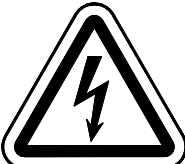
	⚠ WARNING
	If a sulphuric odour (smells like a burnt match) is detected, or if any residual leakage is found on or around the area of the battery, ALWAYS replace the battery immediately.
	Battery is NOT a serviceable item. DO NOT attempt to open the battery. In the event that the battery enclosure has been compromised, avoid contact with internal components. Internal components are primarily lead oxide and electrolyte (sulphuric acid).
	In the event a person is exposed to sulphuric acid, flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and seek medical attention if necessary. An eye wash station and emergency shower should be readily available. If swallowed, give large amounts of water. DO NOT induce vomiting. Seek medical attention immediately.
	Lead-acid batteries can be HAZARDOUS to your health. Short-term exposure – Sulphuric acid may cause irritation of eyes, nose and throat. Prolonged contact may cause severe burns. Long term exposure – repeated contact causes irritation and skin burns. Repeated exposure to mist may cause erosion of teeth, chronic eye irritation and/or chronic inflammation of the nose, throat, and bronchial tubes.
If a sulphuric acid spill is found under the bed, dilute the spill cautiously with five to six volumes of water and gradually neutralize with sodium bicarbonate, soda ash or lime. When exposure level is not known, wear NIOSH approved positive pressure self-contained breathing apparatus. Reference North American Emergency Response Guidebook #154 (or equivalent current documentation). Be sure to wear acid resistant gloves, safety glasses, and acid resistant clothing when cleaning a sulphuric acid spill.	

	⚠ CAUTION
	ALWAYS dispose of faulty batteries or batteries that have reached the end of their service life according to local laws and regulations.









1.6.2 Grounding

This electric bed must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current, thereby reducing the risk of electric shock.

This product is equipped with a cord having an equipment-grounding conductor and a grounded plug. The plug must be inserted into an appropriate AC power outlet that is properly installed and grounded in accordance with all local electrical codes and ordinances.

	⚠ DANGER
	Improper connection of the equipment-grounding conductor can result in electrocution. Check with a qualified electrician or service person if you are doubtful that the electrical outlet is properly grounded.
	DO NOT modify the three prong plug provided. If it will not fit into the AC power outlet, have a proper AC power outlet installed by a qualified electrician.
Grounding reliability can only be achieved when bed is connected to an equivalent receptacle marked " HOSPITAL ONLY " or " HOSPITAL GRADE ".	

1.7 Important Mechanical Precautions

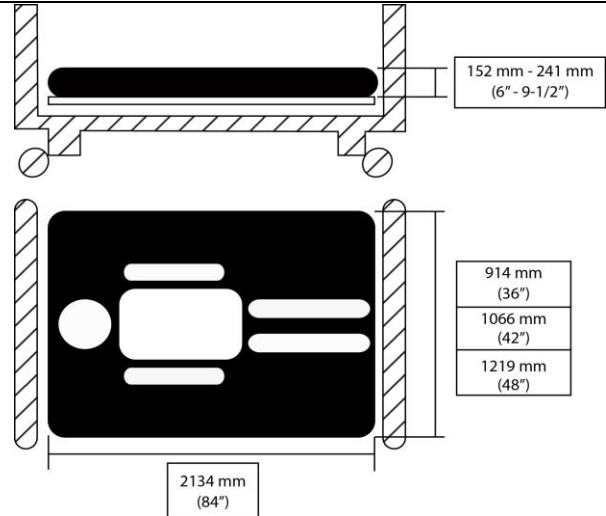
	<p style="text-align: center;">⚠ WARNING</p> <p style="text-align: center;">Safe Working Load of Bed 454 kg (1000 lbs)</p> <p>DO NOT overload the bed. The total combined weight of patients, visitors, mattress, additional equipment/accessories, and bedding MUST NOT exceed 454kg (1000 lbs)</p>	
	<p style="text-align: center;">⚠ WARNING</p> <p style="text-align: center;">Maximum Patient Weight EQUALS Safe Working Load: 454 kg (1000 lbs) LESS</p> <p>The total combined mass of all additional equipment on the bed (mattress, additional equipment/accessories, and bedding, etc.) DO NOT overload the bed.</p>	
	<p style="text-align: center;">⚠ WARNING</p> <p style="text-align: center;">Safe Working Load of Siderails 80 kg (176 lbs)</p> <p>DO NOT exceed a 80 kg (176 lbs) load on any siderail</p>	
	<p style="text-align: center;">⚠ WARNING</p> <p>DO NOT use headboards or footboards from other manufacturers on any Spirit One™ bed. Spirit One™ beds are specifically designed and manufactured for use in conjunction with CHG Hospital Beds accessories. Accessories designed by other manufacturers have not been tested by CHG Hospital Beds and are not recommended for use on Spirit One™ beds.</p> <p>On Spirit One™ beds, ALWAYS ensure that the headboard and footboard brackets are properly attached to the frame before use.</p>	
	<p style="text-align: center;">⚠ WARNING</p> <p>Possible PINCHING HAZARD exists when bed is configured with manual CPR release. Powered bed mechanisms can cause SERIOUS INJURY.</p> <p>ONLY trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. ONLY operate the Electronic CPR button and/or the manual CPR release with persons clear of mechanisms.</p>	

1.8 Mattress Specifications

A mattress is not included with the Spirit One™ bed. A CHG Hospital Beds mattress is recommended. Any mattress that is used on the Spirit One™ bed must suitably fit on the mattress deck and fit snugly within the confines of the mattress.

The length and width of the mattress **MUST** suitably fit on the mattress deck.

DO NOT use the bed without a mattress having a thickness of at least 152 mm (6") but not more than 241 mm (9-1/2").



LENGTH:	2134 mm (84 inch)		
WIDTH:	OR	914 mm (36 inch)	
		1066 mm (42 inch)	
		1219 mm (48 inch)	
THICKNESS:	152 mm (6 inch) but not more than 241 mm (9-1/2")		



⚠ WARNING

The mattress **MUST** entirely rest upon the mattress deck. The mattress **MUST** fit snugly within the mattress keepers.

Incompatible mattresses can create hazards. **DO NOT** use this bed without a special mattress specifically designed to bend and conform to the shape of the bed. **DO NOT** use water filled or gel filled mattress on this bed.



⚠ WARNING

Possible patient **ENTRAPMENT Hazard** or **FALL RISK** if using non-specified mattress.

Patient entrapment may result in injury or death. Use only a mattress of recommended specifications with this bed. CHG Hospital Beds will not be responsible for any injury to patient and/or staff and/or damage to bed that may result with use of non-specified mattress.



⚠ WARNING

CHG Hospital Beds recommends that the customer perform a thorough patient assessment to determine if the bed system and mattress selection is appropriate for the patient on the basis of their clinical needs, fall risk, and mental capacity. CHG Hospital Beds is of the belief that to ensure maximum patient safety, there is simply no substitute for frequent patient monitoring by qualified healthcare practitioners. CHG Hospital Beds also recommends that the customer conduct and document a patient entrapment risk assessment for every mattress combination that is intended for use on the Spirit One™ bed in both the flat (horizontal) and articulated positions to identify and address any exposure to areas of potential patient entrapment and/or fall risk as part of a comprehensive and proactive bed safety program.



⚠ WARNING

A potential increase in **FALL RISK** may result when using the Spirit One™ bed with a mattress having a thickness greater than 152 mm (6"). All patients should be monitored closely and CHG Hospital Beds recommends that when a patient is to be left unattended the bed should **ALWAYS** be lowered to the lowest position.

1.9 General Precautions



⚠ **WARNING**

Close supervision by trained healthcare practitioners is **ALWAYS** necessary when this product is used by or near children and/or people with disabilities.

DO NOT let any person climb/crawl underneath the bed, between the bed legs and/or the raised bed frame components at any time.



⚠ **WARNING**

DO NOT use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's manuals, service manuals, or instruction sheets supplied with this product or optional equipment.



If you are unable to understand the warnings, cautions or instructions contact a healthcare professional, your Spirit One™ bed dealer, or a service technician, specifically trained to service CHG Hospital Beds Spirit One™ beds, before attempting to install and/or use this equipment, otherwise injury to the patient and/or staff and equipment damage may occur.



⚠ **WARNING**

DO NOT drop the bed. **DO NOT** allow patients to fall onto and/or jump on the bed.

These types of activity can cause impact loads that can permanently damage the actuators and/or other bed components resulting in an inoperable bed.

In the case of an inoperable bed due to a damaged actuator, replace the actuator immediately. If left unattended, a damaged actuator could result in injury to the patient and/or staff and additional equipment damage.



⚠ **WARNING**

Check all parts for shipping damage and test bed to confirm proper operation before putting the bed into active service.

DO NOT use bed if any component damage is discovered or a service technician suspects that damage has occurred. A damaged bed may expose staff and/or patients to unforeseen safety hazards. Contact your Spirit One™ bed dealer or a service technician, specifically trained to service CHG Hospital Beds Spirit One™ beds, for further instruction.

Before the bed is returned to active service after any adjustment, repair, and/or service have been performed, **ALWAYS** ensure that all attaching hardware is tightened securely.



⚠ **WARNING**

NEVER allow patients to use trapeze or traction units as a total individual weight support.

Traction units are to be only used for immobilizing a patient in various, therapeutic, traction set ups and/or positions that have been clinically prescribed by a trained healthcare practitioner.

Trapeze units (lifting poles) are to be only used to assist patient when repositioning and/or transferring into or out of the bed.



⚠ **WARNING**

Unauthorized modifications to the equipment can result in **HAZARDS**. **DO NOT** modify the Spirit One™ bed and/or any accessories without written authorization from CHG Hospital Beds.

Use only authorized CHG Hospital Beds replacement parts and/or accessories otherwise the warranty is void. CHG Hospital Beds will not be responsible for any injury to patient and/or staff and/or damage to bed that may result.



⚠ WARNING

ALWAYS keep all moving parts, including the main frame of the bed, the bed legs, the mattress deck, and all actuator shafts free of obstructions (ie: window sills, radiators, bed side cabinets, under bed tables/trays, chair rails, consoles, blankets/bed linens, heating blankets/pads, tubing, wiring, etc, and other types of products using electric cords which may get tangled around the bed, siderails or legs) during bed operation. **NEVER** store anything under the bed.

ALWAYS take the necessary precautions to avoid squeezing/shearing of routed cables from other equipment in the moving parts of the bed.



⚠ CAUTION

DO NOT stand on the bed or concentrate weight on any particular sections of the mattress deck. Patient body weight should be evenly distributed over the surface of the bed. **DO NOT** lay, sit or lean in such a way that the patient's entire body weight is placed only on elevated head or foot sections of the bed. This includes situation when assisting the patient to reposition and/or transfer into or out of the bed.



⚠ CAUTION

To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.



⚠ CAUTION

A patient hoist can be used with this bed however due to the ultra-low height, it has limited underbed clearance therefore the bed must be partially raised to allow the patient hoist to roll freely under it. Failure to raise the bed may result in damage to the bed when patient hoists are used.

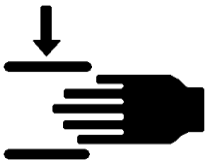


⚠ CAUTION

ONLY trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. **ONLY** operate the CPR button and/or manual CPR release with persons clear of mechanisms. **PRESS and HOLD** the CPR button to lower the head (back rest) and knee sections to a flat position.

To interrupt the CPR function, simply release the CPR button. Refer to device manual for additional safety precautions.

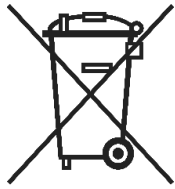
To avoid unintended CPR release keep area around CPR handle clear of obstructions.



⚠ CAUTION

Potential **PINCHING HAZARD** exist between articulating deck sections and bed frame. Moving parts and/or powered bed mechanisms can cause **SERIOUS INJURY**. Only operate bed with persons clear of all mechanisms. **ALWAYS** keep hands clear of moving bed parts.

Ensure that the backrest remains free from all obstructions. Obstructions could impair normal bed operation and/or cause component damage and/or injury. If an obstruction is detected elevate the backrest to clear obstruction before attempting to remove any obstruction.



⚠ CAUTION

The Spirit One™ bed has been supplied from an environmentally aware manufacturer that complies with the Waste of Electrical and Electronic Equipment (WEEE) directive 2002/96/CE. The Spirit One™ bed may contain substances that could be harmful to the environment if disposed of in places (landfills, etc) that are not appropriate according to legislation. Please be environmentally responsible and recycle this bed through your recycling facility when the bed has reached the end of its service life.

1.10 Standard & Optional Features

Feature	Spirit One™
150 mm (6") Easy-Glide Dual-Wheel Casters	Standard
12 Patient Restraint Tie Down Locations	Standard
2 Integrated Drainage Bag Holder Loops	Standard
Moulded Plastic Head/Footboards	Standard
Moulded Plastic Siderails c/w Integrated Staff & Patient Controls, and Nurse Call	Standard
Enhanced Footboard Staff Controls with Integrated Patient Weight Scale Display & Bed Exit Controls	Standard
Integrated Patient Weight Scale & Bed Exit System	Standard
Manual CPR Release	Standard
Underbed Obstruction Sensing	Standard/Optional
Underbed Lighting	Standard
Auxiliary AC Power Outlet Socket	Optional
2 Position Vascular Foot Bail	Standard

1.10.1 *Siderail Assemblies*

Siderail Types	Spirit One™
Tuckable Quad-Rails with Embedded Patient Controls	Standard

1.10.2 *Optional Accessories*

Accessory	Mass*	Spirit One™
Padded Floor Mat	4.5 kg (10 lbs)	A3321
Removable Universal Trapeze Adapter	5.9 kg (13 lbs)	A2404
Fixed IV Pole	1.4 kg (3 lbs)	A2320
Collapsible IV Pole and Brackets	2.7 kg (6 lbs)	A2315
Vertical Oxygen Tank Holder	0.9 kg (2 lbs)	A2210

*All masses are nominal and have approximate manufacturing tolerances of $\pm .11$ kg ($\pm \frac{1}{4}$ lbs)

**Accessory, once installed onto and/or fastened to bed is no longer considered detachable

1.10.3 *Mass of Detachable Components*

Detachable Component	Mass*	
	Headboard	Footboard
Spirit One™ Moulded Plastic Head/Footboard	9.5 kg (21 lbs)	7.7 kg (17 lbs)

*All masses are nominal and have approximate manufacturing tolerances of $\pm .11$ kg ($\pm \frac{1}{4}$ lbs)



⚠ CAUTION

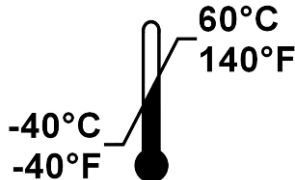
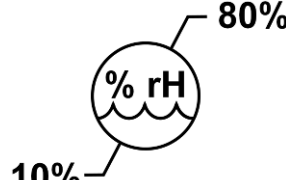
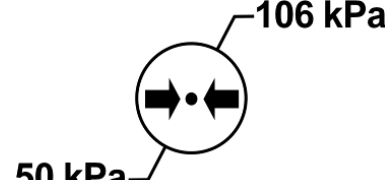
NEVER attempt to install a headboard at the foot end of the bed and vice versa. **ALWAYS** ensure that the footboard is installed in the proper orientation. The footboard staff control **MUST ALWAYS** face away from the patient. **NEVER** drop a footboard. A damaged footboard staff control and/or footboard staff control connector could result in the inability to operate the bed from this control point.

1.10.4 Applied Parts

CHG Hospital Beds considers that the following are the Applied Parts of the Spirit One™ bed: any head/footboard assemblies, head/footboard bracket assemblies, any siderail assemblies, all sections of the mattress support platform (deck) and associated mattress keepers, any CHG Hospital Beds' supplied pendant and/or pillow speaker (if equipped), any CHG Hospital Beds supplied (Prevention Surface) mattress (if equipped).

1.11 Storage & Transport

Environmental Conditions for Storage and Transport

 <p>-40°C -40°F</p> <p>60°C 140°F</p>	 <p>80%</p> <p>10%</p>	 <p>106 kPa</p> <p>50 kPa</p>
Ambient Temperature Range	Ambient Humidity Range (Non Condensing)	Atmospheric Pressure Range

During extended periods of disconnect from an AC power outlet, the battery is susceptible to permanent damage caused by being deep discharged. All Spirit One™ beds are equipped with a "Transport" feature which disengages the battery from the battery circuit to prevent damage from being deep discharged. Ensure the Transportation mode has set before prolong periods of AC power disconnection.

IMPORTANT: Reconnect bed to an AC power outlet as soon as possible to and allow battery to charge for a period of 24hr to ensure that the bed will reliably operate on battery power when needed.

IMPORTANT: The bed must be connected to an AC power outlet to energize the battery circuit. This will enable bed operation on battery power.



⚠ CAUTION

DO NOT re-use any original packaging material to transport the bed.

ALWAYS transport the bed by rolling the bed on its casters.

ALWAYS ensure the Central "Lock & Steer" system is in the "BRAKE" position before attempting to lift/lower bed. **ALWAYS** ensure that the Central "Lock & Steer" system is in the "BRAKE" position after the bed is loaded onto transportation vehicle. Use additional strapping or tie downs as necessary to ensure the bed does not move while in transport.

DO NOT use the siderails as a means of mechanically restraining the bed during transportation and/or storage. **DO NOT** use the siderails as lifting points for the bed during transportation and/or storage.

NOTE:

CHG Hospital Beds recommends that following any storage and/or transportation in extreme temperature conditions that you allow the bed to acclimatize for a period of at least 24 hours before the bed is operated/powerd up and/or put into service.

1.12 Ultra-Low Feature

The Spirit One™ product line is a family of ultra-low beds, designed to reduce patient injury due to falls out of bed. Therefore, in an effort to reduce patient injury, CHG Hospital Beds recommends that you **ALWAYS** lower the bed completely to the lowest position before leaving a patient unattended.



⚠ CAUTION

ALWAYS lower the bed completely to the lowest position before leaving a patient unattended.


Available floor mats, mattresses with side bolsters, bed exit alarm, and nurse call can be used in conjunction with the low bed based on the patient assessment and care plan.



Section 2:

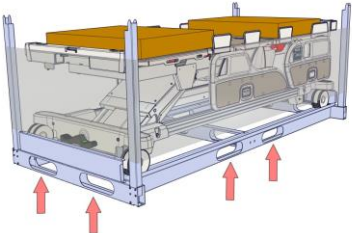
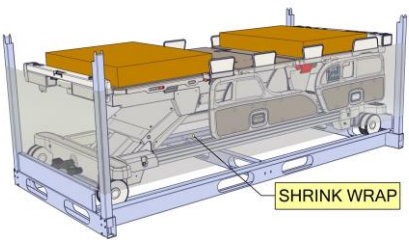
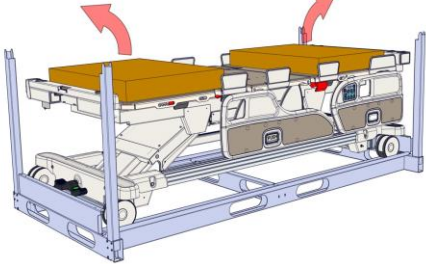
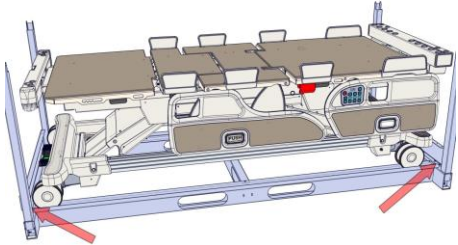
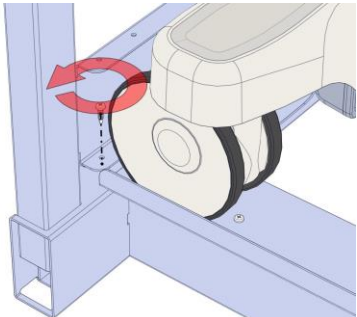
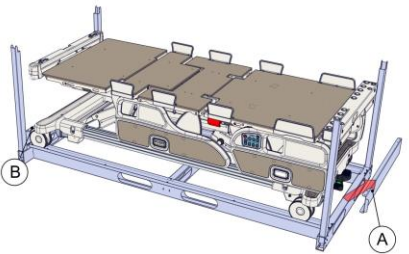
Set-Up Instructions

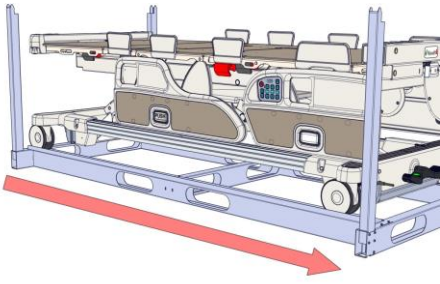
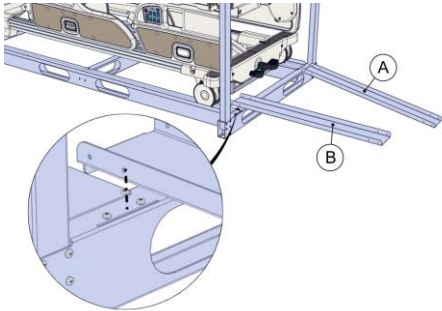
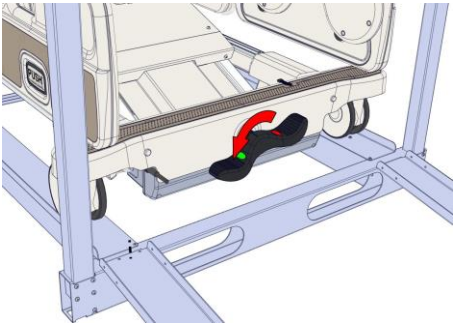
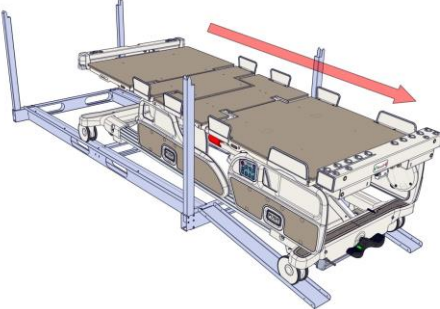
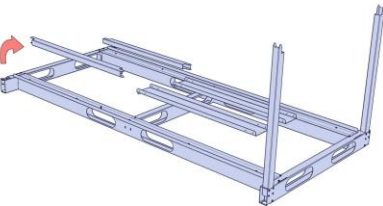
2.1 Unpacking Instructions

Upon delivery of the bed, remove all cardboard, Styrofoam, crates, or other packaging material. Follow these instructions to unpack and set up the bed.

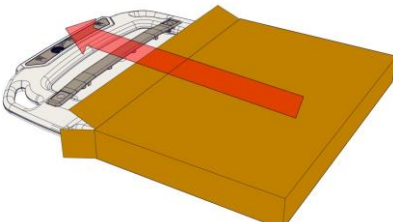
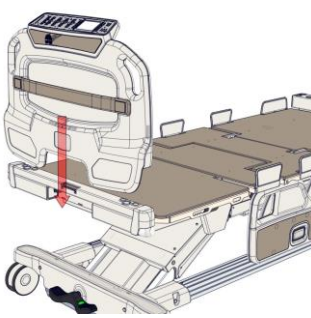
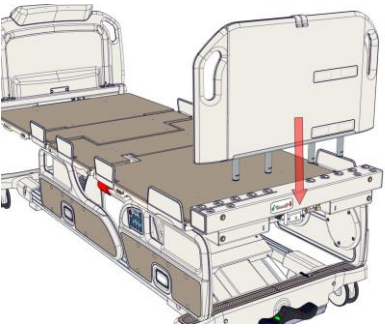
	<p style="text-align: center;">⚠ CAUTION</p> <p>Equipment DAMAGE may result from improper plastic tie wrap removal.</p> <p>DO NOT cut any trimmed plastic tie wraps. Trimmed plastic tie wraps are permanent features on the Spirit One™ bed.</p>
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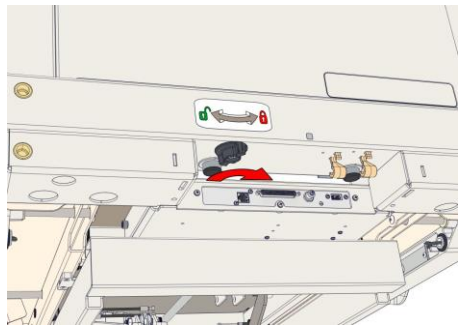
	<p style="text-align: center;">⚠ WARNING</p> <p style="text-align: center;">BED IS HEAVY!!!</p> <p>Improper handling may result in serious injury to personnel and/or damage to bed.</p> <p>Use proper lifting techniques when lifting or lowering bed.</p> <p>DO NOT attempt to lower bed without assistance.</p>	
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<p>1. The Spirit One bed is shipped on a specially designed shipping stand. Cut Outs in shipping stand have been provide to allow for removal from shipping container</p>	<p>2. Cut shrink wrap that secures bed in place</p>	<p>3. Remove both cardboard boxes from top of bed and set aside</p>
		
<p>4. Locate screws at the four corners of the bed that retain the two vertical metal brackets</p>	<p>5. Remove screws (x8)</p>	<p>6. Remove formed metal brackets that will act as ramps</p>

		
<p>7. Note the orientation of the casters. The bed will roll easiest when ramp is install in the direction of the casters</p>	<p>8. Install previously removed formed metal brackets onto the shipping stand 9. Ensure ramp lips engage into shipping stand</p>	<p>10. Engage steer by depressing the brake pedal in the direction indicated by the green sticker</p>
		
<p>11. Carefully roll bed off of shipping stand</p>	<p>12. Shipping stand collapses for easier transportation to a metal recycling facility</p>	

2.1 Set-Up of the Spirit One™ Bed

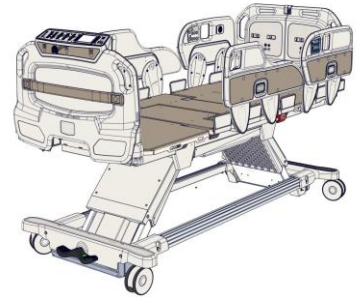
		
<p>13. Remove both head and footboards from the cardboard boxes 14. Carefully remove and dispose of any packaging materials</p>	<p>15. Install footboard onto foot end of bed</p>	<p>16. Install headboard onto head end of bed</p>



17. Lock both head and footboards using the locking mechanism (refer to page **Error! Bookmark not defined.** for further information)



18. Connect bed to an AC power source

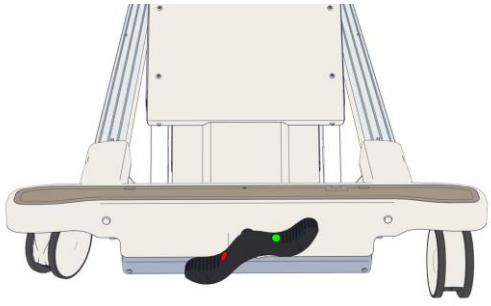
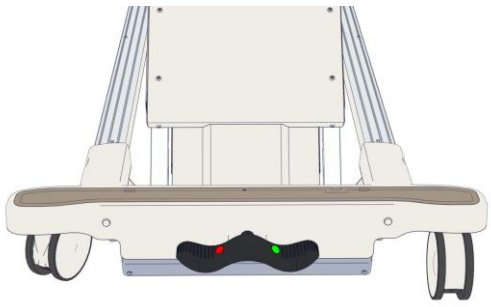
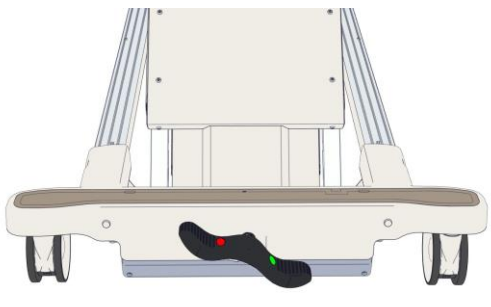



19. Your new Spirit One Bed is now ready for use

Section 3:

Bed Operation

3.1 Central "Lock & Steer" System

Mode	Caster Functionality	Pedal Position
<p>"BRAKE"</p> <p>Mode used to stabilize the bed from shifting.</p> <p>This mode prevents the bed from moving forwards, backwards or sideways.</p>	<p>Casters DO NOT swivel or roll</p>	
<p>"NEUTRAL"</p> <p>Mode used only to manoeuvre the bed in a tight area.</p> <p>This mode allows the bed to move forwards, backwards or sideways.</p>	<p>All casters swivel and roll</p>	
<p>"STEER"</p> <p>Mode used when attempting to steer the bed in a desired direction.</p> <p>All caster wheels can still rotate, enabling the bed to move forwards or backwards.</p>	<p>Head end casters swivel</p> <p>Foot end casters DO NOT swivel</p> <p>All casters roll</p>	




⚠ WARNING

Unintended bed movement may occur if bed is left in either of the two mobilized positions; "STEER" or "NEUTRAL".

NEVER leave the bed unattended in either the "STEER" or "NEUTRAL" positions.

ALWAYS engage the "BRAKE" when leaving a patient unattended.

DO NOT attempt to move the bed until the "BRAKE" has been released.



⚠ WARNING

When transferring into or out of the bed, **ALWAYS** ensure that the "BRAKE" is engaged (casters are locked). Inspect the caster locks for correct locking action before actual use.

Even with the "BRAKE" properly engaged (caster properly locked), some flooring surfaces such as tile or wood will allow the bed to move under some conditions. Bed use on surfaces such as these **MUST** be evaluated by the healthcare facility and deemed safe before the bed is put into active service.

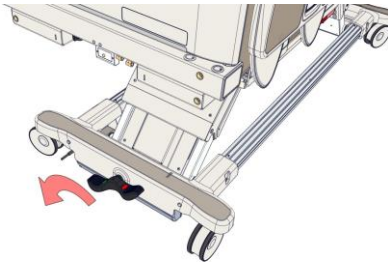
3.1.1 Bed Mobilization & Stabilization

Bed Mobilization

The bed is mobile when the Central "Lock & Steer" pedal is in either the "NEUTRAL" or "STEER" position. Use either of these two pedal positions depending on the situation, when bed mobility is needed.

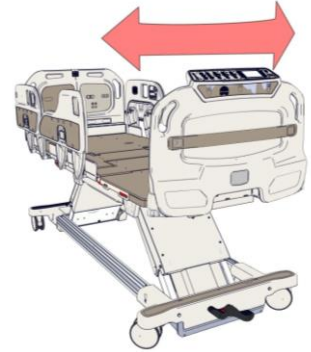
Enable "Steer"

Fully depress the left side of the Central "Lock & Steer" pedal from the head end of the bed (right side from foot end). Pedal actuation mechanism should make an audible engagement when switching between modes.



IMPORTANT: Depending upon the orientation of the castors, it may be necessary to roll the bed sideways, in a back and forth motion, at the foot end of the bed until the steering casters become engaged in the "STEER" mode.

Side-to-Side Motion



Put the bed into "Neutral"

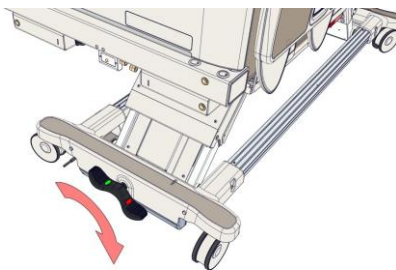
Depress or lift the Central "Lock & Steer" pedal with your foot until the pedal is level. Pedal actuation mechanism should make an audible engagement when switching between modes.

The bed can be put in "NEUTRAL" regardless of caster orientation.



Bed Stabilization

The bed is stable when the Central "Lock & Steer" pedal is in the "BRAKE" position. Use this pedal position whenever the bed is left unattended or when the bed needs to remain stable.



Apply the "BRAKE"

Fully depress the right side of the Central "Lock & Steer" pedal from the head end of the bed (left side from foot end). Pedal actuation mechanism should make an audible engagement when switching between modes.

The "BRAKE" can be applied regardless of caster orientation.



⚠ WARNING

Never attempt to move a bed by yourself. **Always** seek assistance when transporting or repositioning the bed.

It is **Strongly** recommended that the bed always be **PUSHED** and not pulled.



⚠ WARNING

DO NOT to move the bed until the siderail assemblies have been fully raised/closed and locked/latched in the UP position Refer to page 42 for siderail operation instructions.

NOTE:

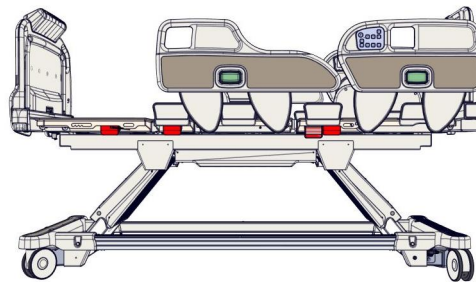
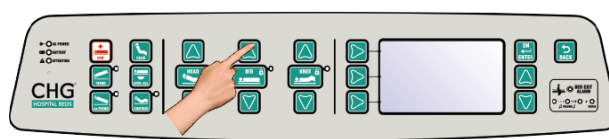
When the "NEUTRAL" mode is activated properly, the bed should move freely without any unusual noises. If any clicking noises are heard when in the "NEUTRAL" position, stop and ensure that the Central "Lock & Steer" pedal is level. Adjust, if necessary.

3.2 Bed Positioning

3.2.1 *Bed Elevation – HI-LO Operation*

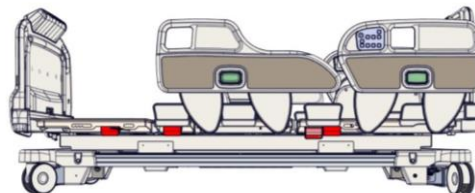
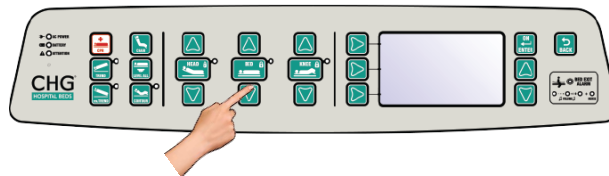
To raise the bed, press the BED UP arrow on the footboard staff control or the rail staff controls.

Release the button when the desired elevation has been achieved.

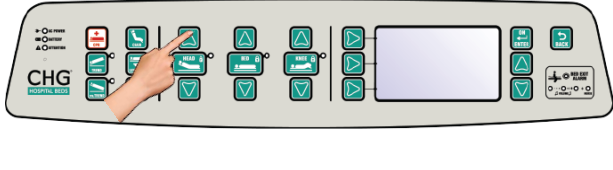

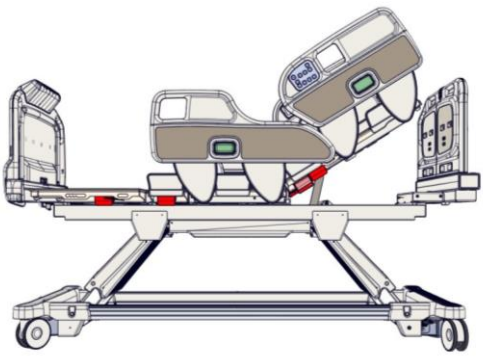
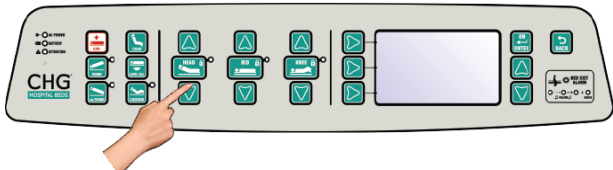

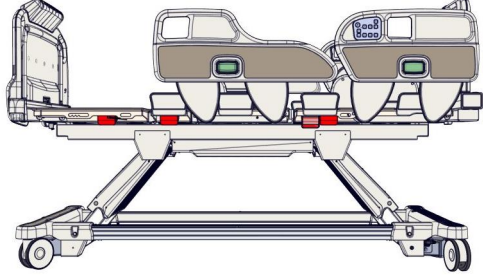


To lower the bed, press the BED DOWN arrow on the footboard staff control or the rail staff controls.

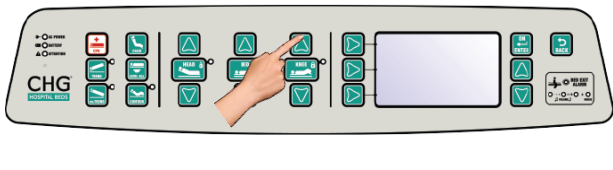

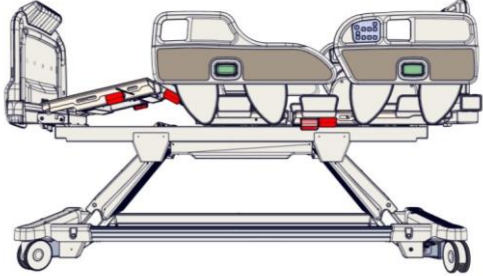
Release the button when the desired elevation has been achieved.



3.2.2 Head Deck (Back Rest) Elevation - Head Actuator Operation

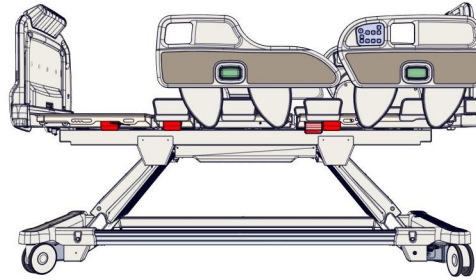
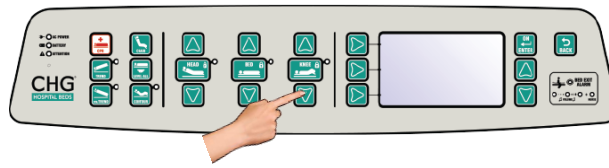
<p>To raise the head section of the bed, press the HEAD UP arrow on the footboard staff control or the rail staff/patient controls.</p>		
<p>Release the button when the desired elevation has been achieved.</p>		
<p>To lower the head section of the bed, press the HEAD DOWN arrow on the footboard staff control or the rail staff/patient controls.</p>		
<p>Release the button when the desired elevation has been achieved.</p>		

3.2.3 Knee Deck Elevation - Foot Actuator Operation

<p>To raise the knee section, press the KNEE UP arrow on the footboard staff control or the rail staff controls.</p>		
<p>Release the button when the desired elevation has been achieved.</p>		

To lower the knee section, press the KNEE DOWN arrow on the footboard staff control or the rail staff controls.

Release the button when the desired elevation has been achieved.

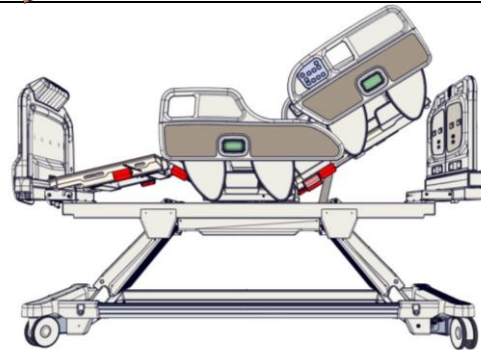
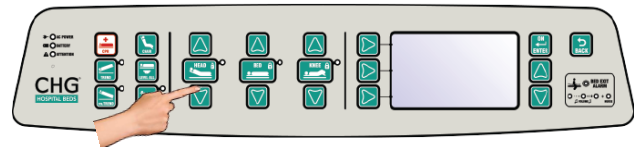


3.2.4 Auto Contour Mode

When the head section of the mattress deck (back rest) is elevated, there is often the tendency for the patient to slide towards the foot end of the bed. The Auto Contour Mode helps to prevent this motion. Auto Contour mode automatically raises/lowers the knee section, whenever the head section is raised or lowered.

To activate Auto Contour mode, simply press the CONTOUR button. The CONTOUR LED light will illuminate when the Contour mode has been activated.

To deactivate Auto Contour mode, simply press the CONTOUR button again. If the CONTOUR LED light is not illuminated, Auto Contour mode has been deactivated.



NOTE:

Patient lock-out will override Auto Contour if the knee elevation lock-out has been activated.

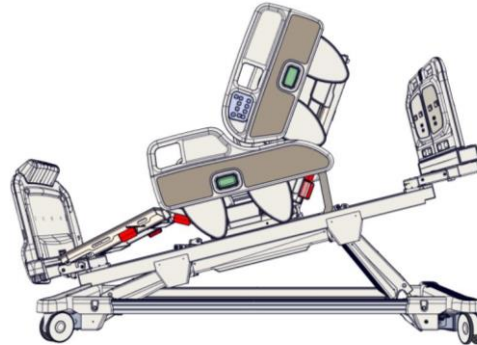
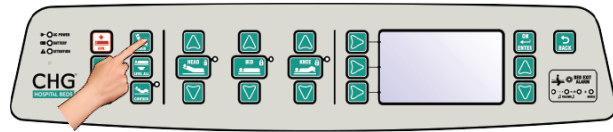
3.2.5 Chair Positioning

The Chair position allows patient to be placed in an upright seating position.

To Achieve Chair Positioning

Simply **press-and-hold** the CHAIR button.

The bed will automatically articulate into the chair position. Release the CHAIR button anytime when the desired chair position has been achieved or the bed will stop automatically once the full chair position has been achieved.



⚠ CAUTION

The reverse Trendelenburg position is integral to Chair positioning configuration. The Spirit One™ bed may shift during reverse Trendelenburg activation. Attempt Chair positioning only after the Central "Lock & Steer" system has been put in the "BRAKE" position.

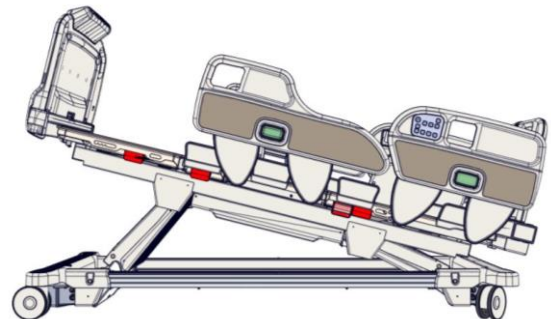
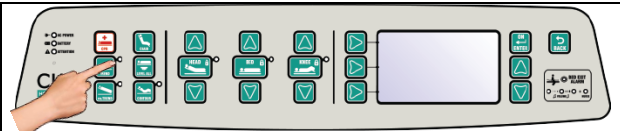
3.2.6 Trendelenburg Operation

Press-and-hold the TREND button. Release the button once the desired bed angle between 0° and 12° has been achieved.

To return the bed to the horizontal position, **press-and-hold** the rev. TREND button. The bed will automatically stop when the mattress deck has returned to the horizontal position.

The Trendelenburg angle is shown on both Footboard Staff Control LCD and the side rail LCD screens.

The TREND button LED will also illuminate once the bed has achieved a Trendelenburg angle of greater than 2°.



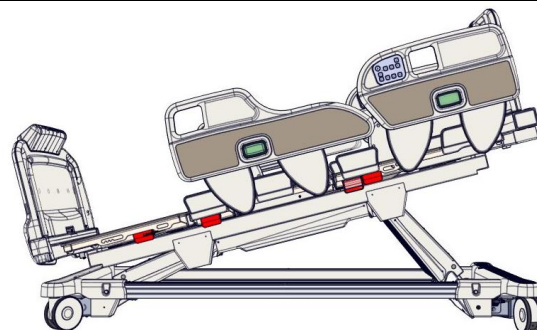
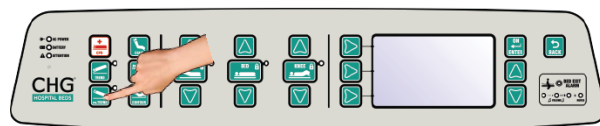
3.2.7 Reverse Trendelenburg Operation

Press-and-hold the rev. TREND button. Release the button once the desired bed angle between 0° and -12° has been achieved.

To return the bed to the horizontal position, **press-and-hold** the TREND button. The bed will automatically stop when the mattress deck has returned to the horizontal position.

The Reverse Trendelenburg angle is shown on both Footboard Staff Control LCD and the side rail LCD screens.

The rev. TREND button LED will also illuminate once the bed has achieved a Reverse Trendelenburg angle of greater than 2°.



⚠ CAUTION

Patient discomfort may result from normal operation of the Trendelenburg and reverse Trendelenburg function.

Trendelenburg and reverse Trendelenburg modes should only be used on the advice of a medical practitioner.



⚠ WARNING

The Spirit One™ bed may shift during Trendelenburg or reverse Trendelenburg activation.

Initiate Trendelenburg or reverse Trendelenburg only after the Central "Lock & Steer" system has been put in the "BRAKE" position.

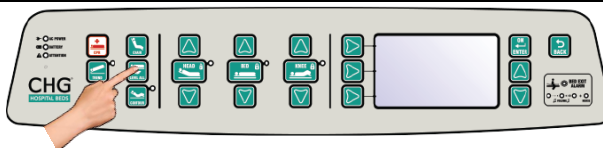
NOTE:

ACCURACY: The Trendelenburg and reverse Trendelenburg angles shown on the LCD displays have an approximate accuracy of $\pm 2^\circ$.

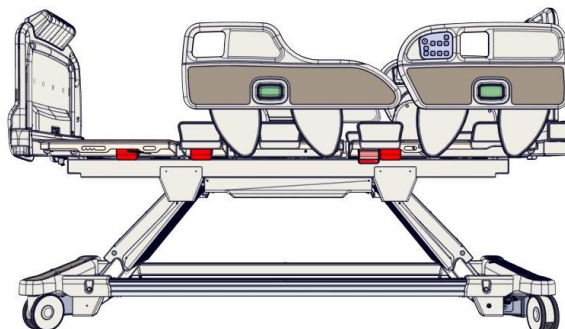
3.2.8 Level All Operation

The Level All operation allows the bed to be returned to a level and flat position with the use of a single key press.

To Return the Bed to a Horizontal Position



Simply **press-and-hold** the LEVEL ALL button until the bed is flat and level. The bed will stop automatically.



3.3 Emergency & Staff Functions

3.3.1 *Electronic CPR (Cardiopulmonary Resuscitation) Function*

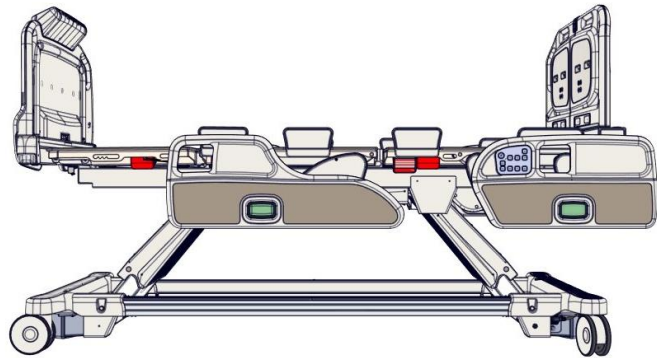
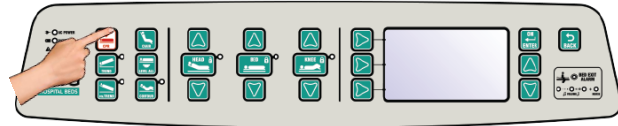
Activation of the Electronic CPR function allows **press-and-hold** flattening of the mattress deck allowing staff to administer CPR to the patient.

Activation of the Electronic CPR Function on the Footboard Staff Control

Press-and-hold the CPR button on the footboard staff control. The head and knee sections will lower to flat position. Both foot siderails will immediately drop to the low position. When the head deck has reached 0°, both head rails will drop to the low position.

IMPORTANT: The LCD display will show a notification when the CPR button on the footboard staff control is pressed to remind staff of this functional difference.

To interrupt the Electronic CPR function, simply release the CPR button. Normal bed operation can be resumed at any time. The Electronic CPR function does not need to be deactivated or reset.



⚠ CAUTION

Improper use of the Electronic CPR function may cause patient injury.

Once activated, Electronic CPR function will lower head and knee sections to flat position as long as the CPR button is pressed. To interrupt Electronic CPR function, simply release the CPR button.

3.3.2 *Manual CPR (Cardiopulmonary Resuscitation) Release*

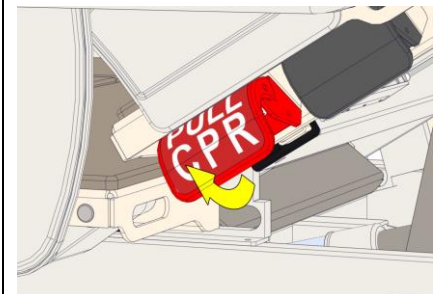
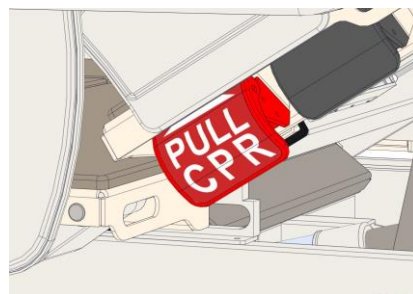
As an added level of patient safety, all Spirit One beds are equipped with a Manual CPR Release mechanism.

In the event of a medical emergency, activation of the manual CPR release handle will mechanically flatten the head section (back rest) of the mattress deck allowing staff to administer CPR to the patient. The knee section of the mattress deck will also automatically flatten.

The manual CPR release will work when mains AC power has been disrupted in the event of either a power failure or when the bed is not connected to mains AC power (unplugged from the wall outlet).

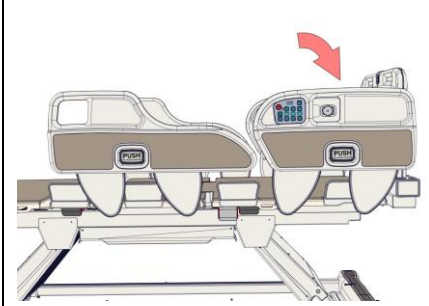
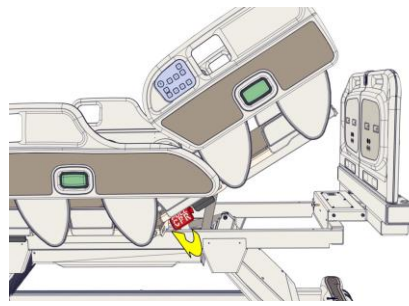
Activating the Manual CPR Release Feature

To flatten the head section (back rest), **Pull Up and Hold** either of the manual CPR release handles.



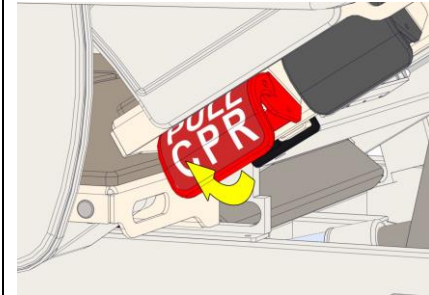
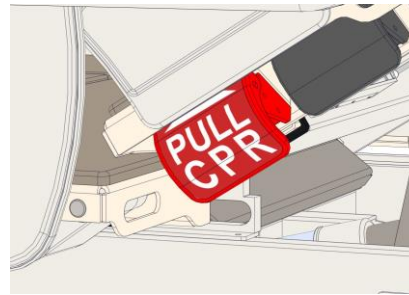
Upon **Pulling Up** on the CPR release handle, the head section (back rest) will begin to lower. **Continue to hold** the CPR release handle until the head section (back rest) has been completely flattened.

NOTE: If the manual CPR release handle is released at any time, the head section (back rest) motion will stop.

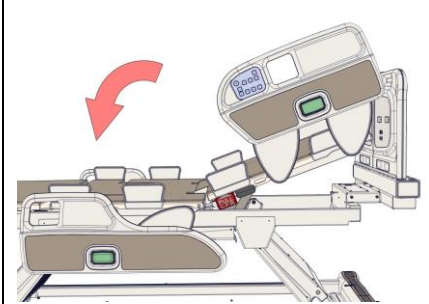
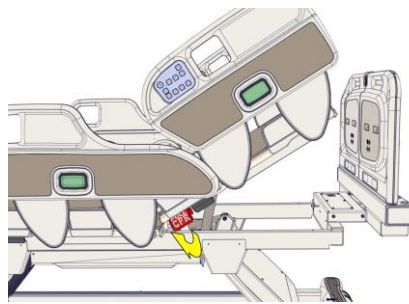


Activating the Manual CPR Release Feature (with Electronic Rail Release Feature)

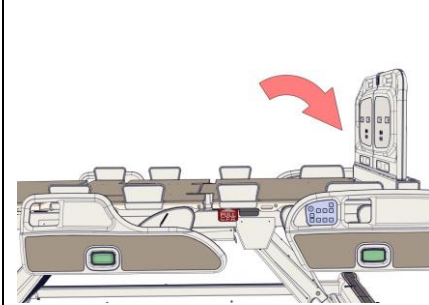
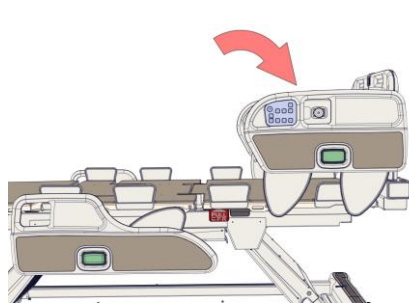
To flatten the head section (back rest), **Pull Up and Hold** either of the manual CPR release handles.



Upon **Pulling Up** on the CPR release handle, both foot rails will immediately drop to the DOWN position and the head section (back rest) will begin to lower



Continue to hold the CPR release handle until the head section (back rest) has been completely flattened. At this point, the head rails will drop to the DOWN position allowing greater access to the patient.



⚠ CAUTION

ONLY trained healthcare practitioners shall operate the manual CPR release in the event of a medical emergency. **ONLY** operate the CPR button and/or manual CPR release with all persons clear of mechanisms. **PRESS and HOLD** the CPR button to lower the head (back rest) and knee sections to a flat position.

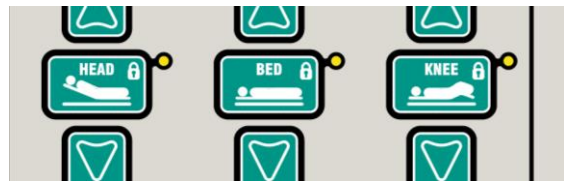
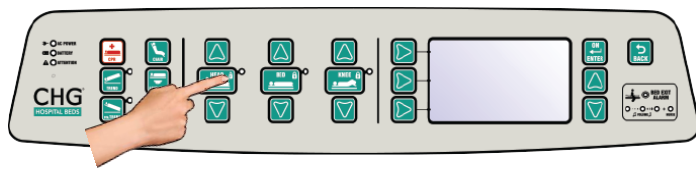
To interrupt the CPR function, simply release the CPR button.

To avoid unintended CPR release keep area around CPR handle clear of obstructions.

3.4 Patient Lock-Out Functions

3.4.1 Regular Patient Lock-Outs

Patient Lock-Outs restrict the patient from initiating head, knee, and bed motion from the siderail. The degree of restriction depends on the Lock-Out option selected.



Activating Patient Lock-Out

Staff may choose to restrict patient access to one, two, or all three bed functions. To restrict a bed function, press the Patient Lock-Out button under that particular function. The yellow LED in the top right corner of the button will illuminate when patient control of a particular function has been Locked-Out.

IMPORTANT: Patient Lock-Outs restrict bed operation from both of the siderail controls.

Deactivating Patient Lock-Out

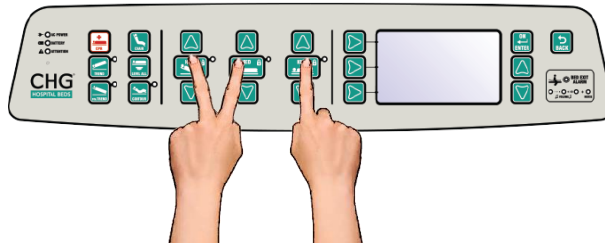
To deactivate any/all Patient Lock-Out(s), simply press the Patient Lock-Out button(s) again. When a Patient Lock-Out LED is no longer illuminated, patient control of that particular function has been restored.

NOTE:

When Patient Lock-Outs have been activated, the footboard staff control remains fully active.

3.4.2 Master Lock-Out

To completely restrict access to all bed functions (except the Electronic CPR function) from all control locations (staff and patient controls), use the Master Lock-Out function.



Activating Master Lock-Out

To activate the Master Lock-Out, **press-and-hold** all three Patient Lock-Out buttons at the same time. All three yellow LED's in the top right corner of the three Patient Lock-Out buttons will flash sequentially to indicate that Master Lock-Out has been activated.

IMPORTANT: Master Lock-Out restricts bed operation from all control locations (both siderail controls and the footboard staff control).

Deactivating Master Lock-Out

To deactivate the Master Lock-Out function, simply repeat this process. **press-and-hold** all three Patient Lock-Out buttons at the same time. When all three Patient Lock-Out buttons are no longer flashing sequentially, Master Lock-Out has been deactivated and both staff and patient control from all control locations has been restored.

NOTE:

When Master Lock-Out has been activated, the Electronic CPR function, Nurse Call, Bed Exit, and the underbed light remain operable.

**WARNING**

When a patient is left unattended, the bed should **ALWAYS** be lowered to its lowest position and the bed elevation controls should be locked-out in order to reduce the risk of patient injury.

3.5 Other Bed Functions & Features

3.5.1 Nurse Call

All Spirit One™ beds are equipped with one Nurse Call port to accommodate Nurse Call control.

The Nurse Call port is located on the underside of the headboard mounting bracket.



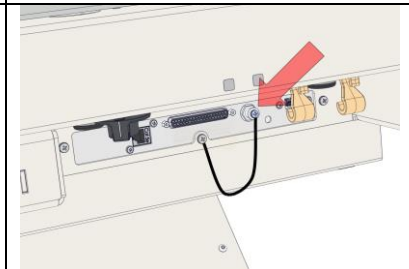
To operate the Nurse Call feature, press the red NURSE button on the rail patient or nurse controls. This will send a Nurse Call signal to the nurses' station when appropriately connected to the communication system of your healthcare facility.

Operation of the Nurse Call feature requires a conventional connection cable (not supplied) to be plugged into the ¼" Phono jack on the headboard mounting bracket and into the designated outlet in the patient station.



Ensure that the attached "dummy plug" is inserted to an inactive Nurse Call port.

The "dummy plug" has an integral lanyard that is screw connected to the headboard mounting bracket to ensure that the "dummy plug" is not lost when the Nurse Call port is being used.



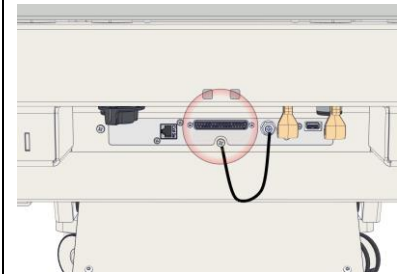
3.5.2 Standard 37 Pin Connector

All Spirit One™ beds are equipped with a standard 37 pin connector to accommodate connection to the communication system typical of most healthcare facilities.

The 37 pin connector is located on the underside of the headboard mounting bracket directly beside the Nurse Call port.

The “pin outs” for the 37 pin connector have been configured to work with the communication set-up typical of most 37 pin enabled healthcare facilities. If the configuration of the communication system used in your healthcare facility differs from conventional set-up, successful interconnection can only be guaranteed through the use of interconnection cables that have been specifically configured for your application.

If your healthcare facility requires a particular interconnection cable configuration, CHG Hospital Beds offers customized interconnection cables. Contact your sales representative for details.

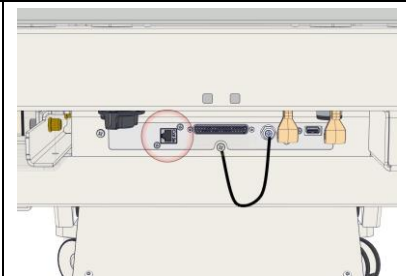


3.5.3 Ethernet Port

All Spirit One™ beds are equipped with an Ethernet port to accommodate advanced connection to communication systems.

The Ethernet port is located on the underside of the headboard mounting bracket directly beside the 37 pin connector.

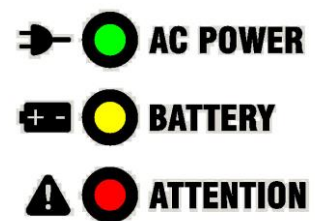
The Ethernet port can be configured to work with the communication set-up typical of most Ethernet connection within healthcare facilities.



3.5.4 Spirit One™ Power Status Indicator

The footboard staff control on Spirit One™ bed is equipped with an integrated power status indicator. This cluster of 3 discrete icons, indicate the real-time status of power available to operate the bed. The icons will illuminate respective of the source of power, the operation of the battery charging circuit, and the level of battery power.

The battery is continuously charged when the bed is plugged into an AC power outlet. If the Mains AC power is disrupted (bed unplugged from wall), the bed will immediately switch to the battery circuit.



AC Light is Solid GREEN

Bed is connected to an AC power outlet and operating on AC power. Bed is ready to operate on battery power if required. This is the optimum operating condition for the bed.

AC Light is Solid GREEN + DC Light is Flashing AMBER

Bed is connected to an AC power outlet and operating on AC power. The battery is currently recharging.

AC Light is Solid GREEN + ATTN Light is Flashing RED

IMPORTANT: Bed may not reliably operate on battery power if required.

Bed is connected to an AC power outlet and operating on AC power. The battery has been deep discharged or is not holding proper charge. Service bed and/or replace battery immediately.

DC Light is Solid AMBER

Bed is disconnected from an AC power outlet and is operating on battery power. The battery has yet exhausted the available battery power. Bed is OK to operate on battery power but it should be connected to an AC power outlet as soon as possible to recharge the battery.

IMPORTANT: Exercise caution when operating the bed on battery power. Ensure that only vital and necessary bed functions are performed to extend battery power as long as possible and ensure emergency functions remain available when needed.

DC Light is Solid AMBER + ATTN Light is Flashing RED

Bed is disconnected from an AC power outlet and has been operating on battery power. The battery is at a critically low charge and is nearing the remaining available power. Reconnect bed to an AC power outlet as soon as possible and allow battery to charge for 24hr.

IMPORTANT: At this point, reliable bed operation cannot be guaranteed although some bed functionality may still be available. Exercise caution operating the bed as the bed will cease operation without warning.

NO Light illumination

IMPORTANT: Bed may NOT operate.

The bed has been disconnected from an AC power outlet and the battery has been fully discharged. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

OR

The bed has been disconnected from an AC power outlet and the battery has been automatically disengaged from the battery circuit because the voltage has dropped below 18VDC. Reconnect bed to an AC power outlet and allow battery to charge for 24hr.

NOTE:

In-house testing has demonstrated that a new back-up battery, when fully charged, has sufficient power to deliver the equivalent of approximately 5 CPR cycles with a patient weight of 750 lbs. Battery power discharge rate depends upon factors such as patient weight, age of battery, ambient temperature and humidity, and the number of charge/discharge cycles the battery has been subjected to. For example, the heavier the patient, the faster battery power will be exhausted during battery powered bed operation. Conversely, the lighter the patient, battery power may offer a longer duration of battery powered bed operation.

3.6 Siderail Operation

All Spirit One™ bed siderail assemblies fully comply with FDA and Health Canada patient entrapment reduction guidelines and have successfully passed rail entrapment testing using test procedures outlined by the Hospital Bed Safety Workgroup. Spirit One™ bed siderail assemblies were qualified using the Cone and Cylinder Tool as specified by FDA and Health Canada patient entrapment reduction guidelines. Entrapment Test Kits are readily available so on-going compliance can be monitored by the healthcare provider. For further information, refer to the FDA's website at <http://www.fda.gov/cdrh/beds/>.

3.6.1 Intended Application/Use of Spirit One™ Bed Siderail Assemblies

When fully raised/closed and locked/latched in the UP position, the siderails define a residence area for patients to rest upon the bed. This provides positive patient location/support helping to protect against the potential for patients to fall from the bed as the siderails give the patient a visual and physical indicator of the edge of the bed. When fully lowered/open in the DOWN position, the siderails permit patient ingress to and egress from the bed. When rails are positioned in the TUCK position, the siderails allow greater clearance to permit easier and safer patient transfer by nursing staff. The integral handles common to all siderails facilitate patient mobility by providing a gripping region during ingress to and egress from the bed.



⚠ WARNING

Safe Working Load of Siderails

80 kg (176 lbs)

DO NOT exceed a 80 kg (176 lbs) load on any siderail



⚠ WARNING

Possible **PATIENT ENTRAPMENT** if use of siderails that are damaged or modified in any way.

NEVER use siderails from other manufacturers and/or with dimensions different that the original components and/or assemblies that came equipped with the bed. Variations in siderail design, (width, height, shape, profiles, opening, locking/latching mechanisms, etc) could cause/contribute to patient entrapment and/or could potentially increase the probability/possibility for patient entrapment.



⚠ CAUTION

DO NOT use the siderails as a patient lifting device/apparatus. Siderails can be deformed or broken if excessive side loading/pressure is exerted. The siderails are used for the purpose of preventing a patient from inadvertently rolling out of bed.

DO NOT use the siderails as part of a patient restraint mechanism. Siderails are **NOT** intended for nor may be used for restraint purposes. If a patient is capable of inflicting self-injury or injury to staff, a physician or other suitably trained healthcare practitioner should be consulted for alternate means of safe patient restraint. The Spirit One™ bed is equipped with 12 patient restraint tie down locations for this purpose.



⚠ CAUTION

When operating the bed, **ALWAYS** ensure that the individuals using the bed is positioned properly on the mattress within the confines of the bed.

DO NOT let any patient extremities protrude over the side and/or between the siderails when operating the bed.



⚠ CAUTION

DO NOT use the siderails as lifting points for the bed during transportation and/or storage.

DO NOT use the siderails as a means of mechanically restraining the bed during transportation and/or storage.

3.6.2 Siderails

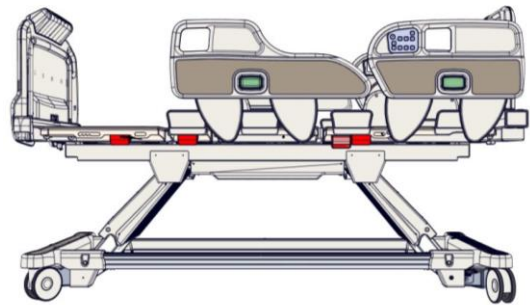
Your Spirit One™ bed is equipped with siderails*.

Operation of the Siderails

It is important that caregivers know how to operate the siderails safely. The siderails lock in both the UP and DOWN position. In the UP position, siderails provide positive patient location/support helping to protect against the potential for patients to fall from the bed as the siderails give the patient a visual and physical indicator of the edge of the bed. In the DOWN position, the siderails permit patient ingress to and egress from the bed. In the TUCK position, siderails enables patient ingress, egress, and safer patient transfer.

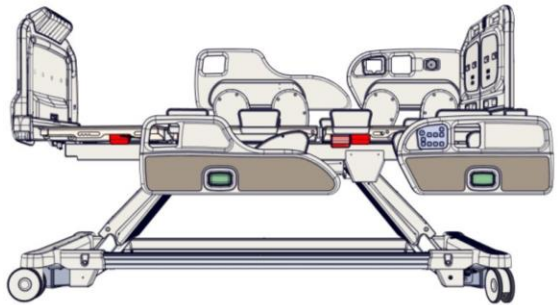
In the UP position, the siderails provide positive patient location and support helping to protect the patient from the potential of falling from the bed.

IMPORTANT: An audible “click” should be heard when each siderail assembly has been completely rotated into the UP position as the locking/latching mechanism engages.



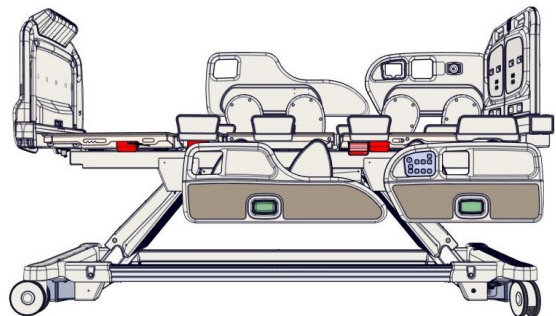
In the DOWN position, the siderails rotate below the surface of the mattress to provide unimpeded and unassisted patient ingress to and egress from the bed.

IMPORTANT: An audible “click” should be heard when each siderail assembly has been lowered into the DOWN position as the locking/latching mechanism engages.



In the TUCK position, the siderails rotate fully out of the way and safely store beneath the mattress deck. This provides a zero gap distance required between mattress and patient transfer device allowing for easier and safer patient transfers.

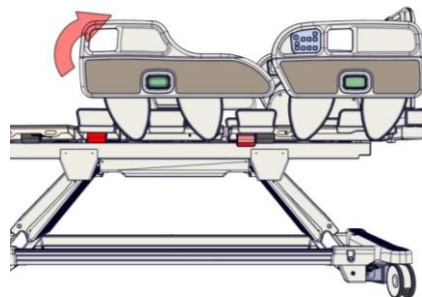
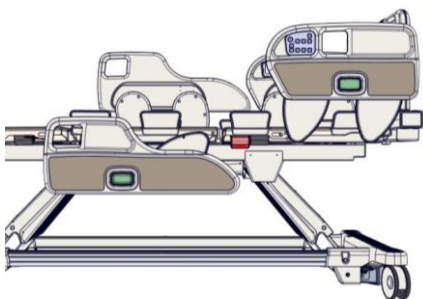
IMPORTANT: The mattress deck must be positioned at a minimum height to allow rails to TUCK beneath the mattress deck.



Raising the Foot Siderails to the UP position

Gently rotate the high foot siderail to the UP position. The high foot siderail will first arc toward the foot end of the bed then back towards the head end of the bed as it rotates to the UP position.

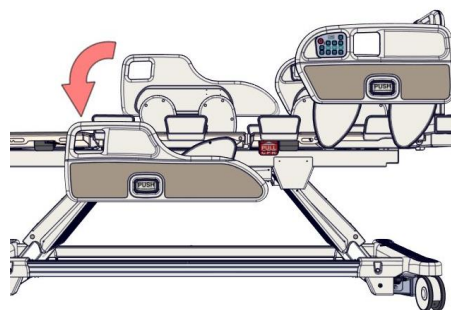
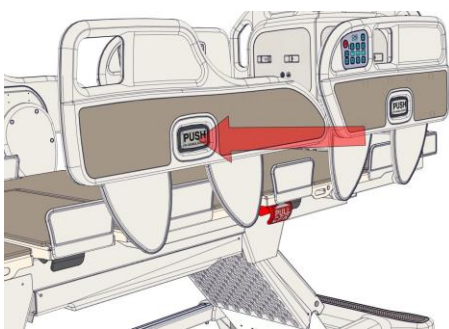
IMPORTANT: An audible “click” should be heard when the foot siderail has been completely raised to the UP position as the locking/latching mechanism engages.



Lowering the Foot Siderails to the DOWN position

Depress the PRESS button fully. The foot siderail will arc towards the foot end of the bed as it rotates to the DOWN position.

IMPORTANT: An audible “click” should be heard when the foot siderail has been lowered to the DOWN position as the locking/latching mechanism engages.

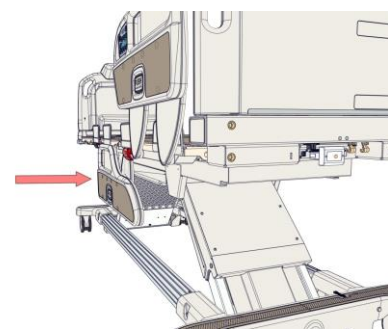
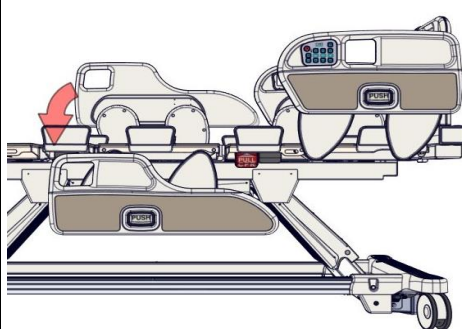
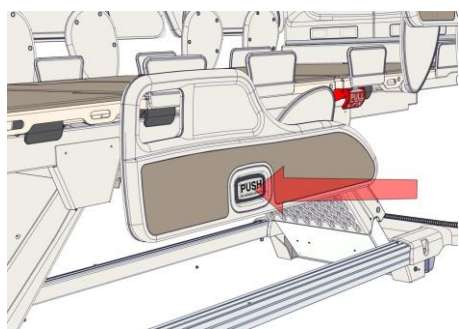


Lowering the Foot Siderails to the TUCK position

Ensure the bed is at a height that allows the rails to be placed in a TUCK position

Depress the PRESS button fully. Foot rail will freely rotate to the TUCK position. When the foot rail has reached the lowest point, gently push on the rail towards the centre of the bed.

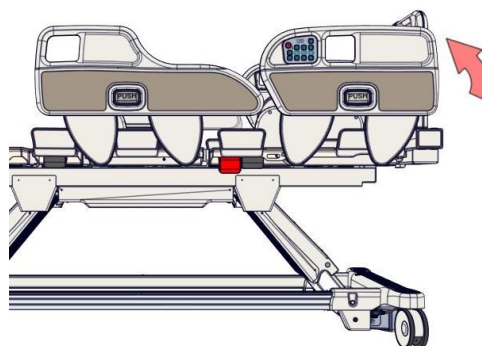
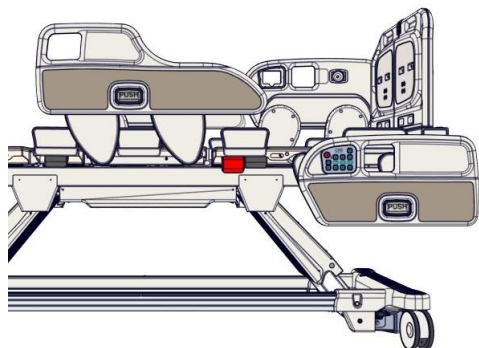
IMPORTANT: The foot siderails will not lock/latch in the TUCK position.



Raising the Head Siderails to the UP position

Gently rotate the head siderail to the UP position. The head siderail will first arc toward the head end of the bed then back towards the foot end of the bed as it rotates to the UP position.

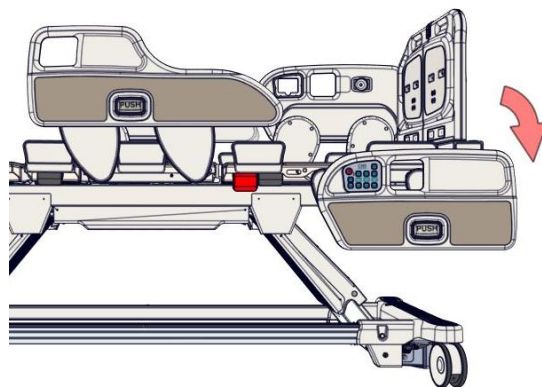
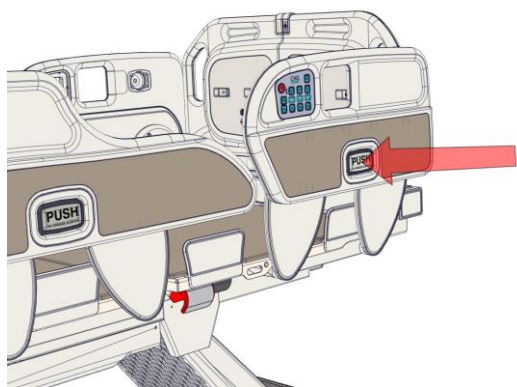
IMPORTANT: An audible “click” should be heard when the head siderail has been completely raised to the UP position as the locking/latching mechanism engages.



Lowering the Head Siderails to the DOWN position

Depress the PRESS button fully. The head siderail will arc towards the head end of the bed as it rotates to the DOWN position.

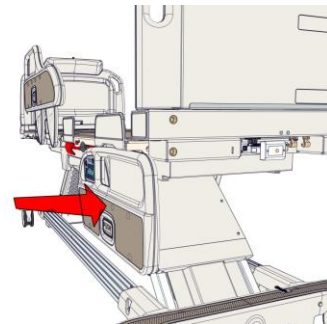
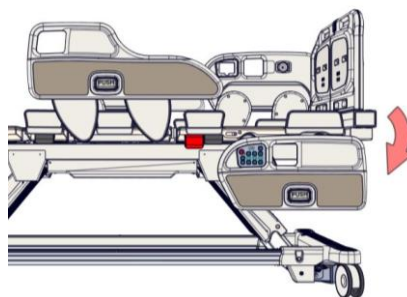
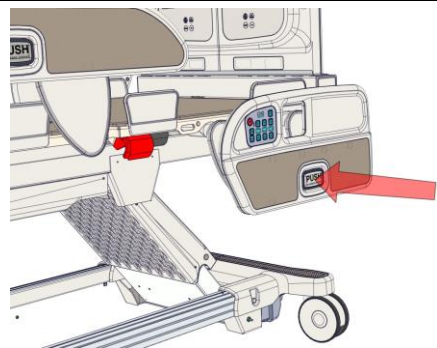
IMPORTANT: An audible “click” should be heard when the head siderail has been lowered to the DOWN position as the locking/latching mechanism engages.



Lowering the Head Siderails to the TUCK position

Depress the PRESS button fully. Head rail will freely rotate to the TUCK position. When the head rail has reached the lowest point, gently push on the rail towards the centre of the bed.

IMPORTANT: The head siderails will not lock/latch in the TUCK position.



⚠ CAUTION

To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

To ensure optimal scale accuracy, CHG Hospital Beds recommends that the siderails be fully raised/closed and locked/latched in the UP position before reading patient weight.

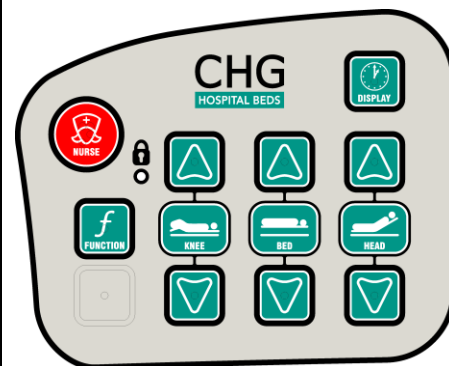
3.6.3 Integrated Features of Plastic Siderails

Staff Siderail Controls

The head siderails incorporate integrated staff control that offers staff control of basic bed operations:

- Head UP/DOWN,
- Knee/Foot UP/DOWN
- Bed UP/DOWN
- DISPLAY Function
- FUNCTION key
- NURSE Call Feature
- LOCK OUT Indicator

IMPORTANT: Bed operation from this siderail control is disabled when the patient lock-outs are activated.

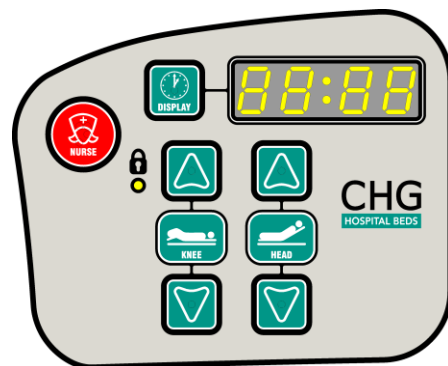


Patient Siderail Controls

The head siderails incorporate integrated patient control that offers patient control of basic bed operations:

- Head UP/DOWN,
- Knee/Foot UP/DOWN
- DISPLAY Function
- NURSE Call Feature
- LOCK OUT Indicator
- Digital Display

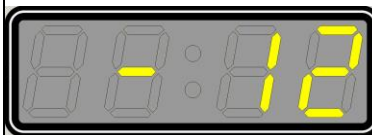
IMPORTANT: Bed operation from this siderail control is disabled when the patient lock-outs are activated however the Nurse Call feature **always** remains active.



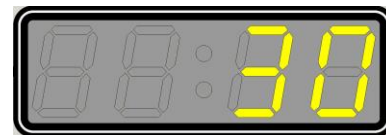
Angle Display

Anytime bed movement is initiated, the Digital Display integrated within the siderail, will display the angle associated with the bed movement:

- For Head Section (Back Rest) movement, the Digital Display will show the angle of the head section (back rest) relative to the floor (unless head angle setting has been changed)
- For Trendelenburg movement, the Digital Display will show the angle of the bed relative to the floor



Digital Display:
Head Angle



Digital Display:
Trend or rev. Trend Angle

3.6.4 Optional Electronic Foot Siderail Release

To accommodate the needs of some patients to have a greater level of mobility and independence, CHG Hospital Beds offers an optional Electronic Foot Siderail Release feature. This feature allows the patient or nurse to unlock/unlatch the foot siderails while in the bed by pressing a button on the head siderail control. This will permit patient ingress to and egress from the bed without the aid from staff.

If your Spirit One™ bed has been equipped with the the optional electronic foot siderail release it will be outfitted with enhanced staff/patient head siderail controls as shown below.

IMPORTANT: The mechanical operation of beds equipped with the Electronic Foot Siderail Release feature is the same as standard production siderails but simply have an additional button on the head rail controls which permits the foot siderail to be electronically unlocked/unlatched.

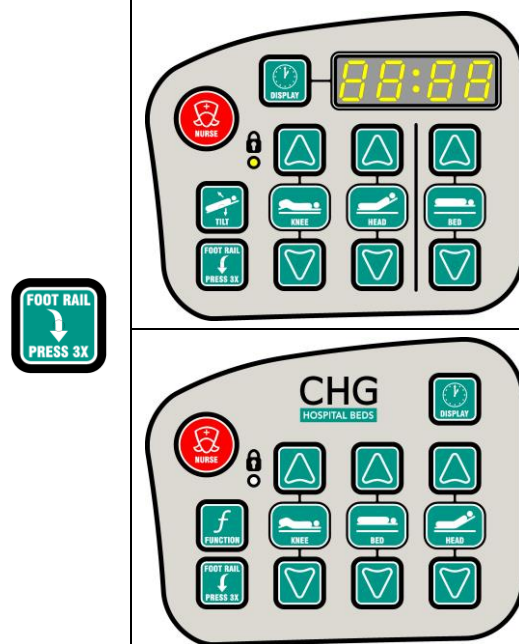
Enhanced Siderail Controls

The head siderails incorporate integrated controls which offer both staff and patient control of basic bed operations:

- Head UP/DOWN,
- Bed UP/DOWN
- Knee/Foot UP/DOWN
- Nurse Call feature
- Electronic Foot Siderail Release

IMPORTANT: Similarly to the standard siderail controls, bed operation from this from this siderail control is disabled when the patient lock-outs are activated however the Nurse Call feature **always** remains active.

- **IMPORTANT:** The Electronic Foot Siderail Release feature is disabled when the bed UP/DOWN lock-out is activated.



Electronic Foot Siderail Release Functionality

To avoid accidental release of the foot siderail, the release button must be pressed 3 times to activate the electronic release.

To Electronically Release the Foot Siderails:

- Press the “**FOOT RAIL/PRESS 3X**” button 3 times within a period of 5 seconds. An audible chirp will sound after each button press as confirmation to the patient. An audible “click” should be heard when the foot siderail(s) electronically unlocks/unlatches.

IMPORTANT: If a period of greater than 5 seconds elapses before the button is pressed 3 times, the foot rail will not release. An audible two tone chirp will sound to indicate a failed release attempt.

In the event that the foot siderails fail to electronically unlock/unlatch, if, say, bed linens prevent foot rail rotation, the patient may be inclined to make additional attempts to release the foot rail. To prevent premature component failure, only 3 attempts to activate this feature will be permitted in a row. Followed by a rest period of 1 minute to prevent the solenoid from overheating.

If your bed has been equipped with this optional feature, **the factory default setting for Electronic Foot Siderail Release is ENABLED (both PL and PR sides)**. This setting can be changed by following the instructions below.



⚠ WARNING

NEVER attempt to release the foot siderail when the patient is supporting their weight on the foot siderails. **NEVER** hang or drape anything over foot siderails.

CHG Hospital Beds recommends that the customer perform a thorough patient assessment to determine if enabling the electronic foot siderail release is appropriate for the patient on the basis of their clinical needs, fall risk, and mental capacity.



⚠ CAUTION

Linens, ill-fitting or overhanging mattresses, or other obstructions between the deck surface and the side rails may interfere with the performance of automated rail drop features.

Ensure rails are free and clear of any impediments before attempting to use the automatic rail drop feature.

To Enable/Disable the Electronic Foot Siderail Release Feature

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the FOOT RAIL RELEASE option.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
 - LEFT ENABLED (patient left foot siderail release enabled)
 - RIGHT ENABLED (patient right foot siderail release enabled)
 - BOTH ENABLED (both patient left and patient right foot siderail release enabled)
 - RAIL RELEASE DISABLED
3. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Electronic Foot Siderail Release setting has been changed. Press the BACK button to return to the home screen.

3.7 Expandable Deck Sections

Variable Deck Width

The Spirit One™ is equipped with an expandable width deck that has three selectable widths. The deck will expand from a starting width of 36" to an intermediary width of 42". From this point, the deck can be expanded further to achieve a width of 48". A simple to use pull handle releases the deck lock (located beneath the mattress decks), and an easy glide system ensures the deck expands easily for the operator.

Expandable Mattress Deck

The mattress deck expands in 3 sections:

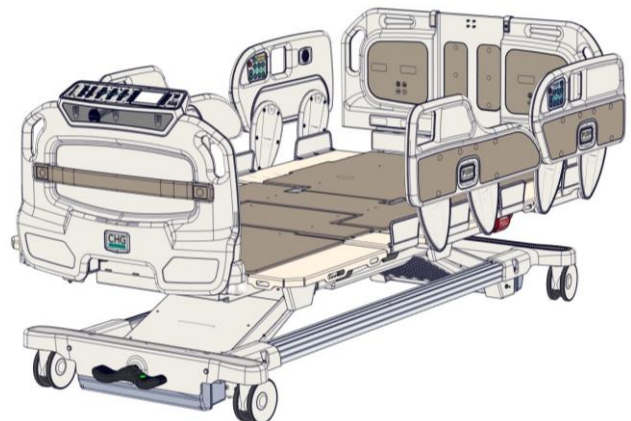
- Head Deck
- Seat/Knee Deck
- Foot Deck





Expanding each section only needs to be performed from one side of the bed.

Ensure the bed is free and clear off all possible obstructions before widening the deck.

The mattress deck has three locked positions:

- 36"
- 42"
- 48"



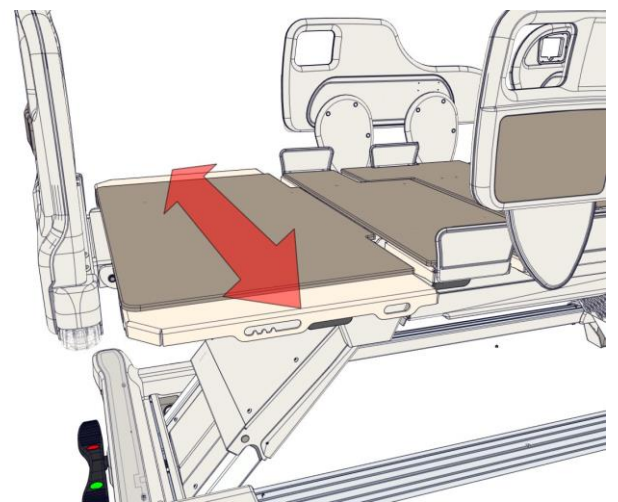
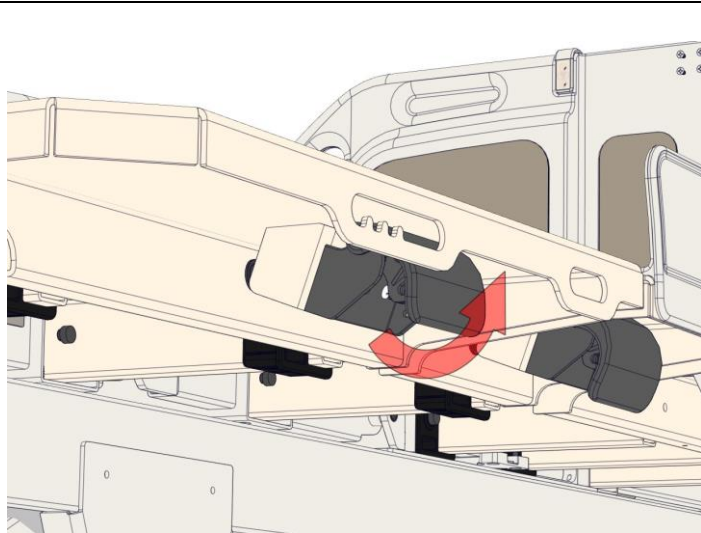
	<p style="text-align: center;">⚠ WARNING</p> <p>NEVER attempt to widen the mattress platform when a patient is in bed. Remove ALL objects from the mattress deck (mattress, linens, etc.) before widening.</p> <p>Ensure the bed is free and clear off ALL possible obstructions before widening the deck.</p> <p>Ensure ALL deck sections are in a flat and level state before widening the mattress deck.</p> <p>Ensure the brake is set before attempting to expand or retract the mattress deck. Failure to properly set the brake prior to expanding or retracting the deck may result in serious injury.</p>
	<p style="text-align: center;">⚠ WARNING</p> <p>Ensure all decks are set to the same width after expansion/retraction.</p> <p>Do Not leave a bed in a state in which the mattress decks are not aligned. Serious injury can occur to patients or staff if the mattress decks are not properly aligned before using.</p>
	<p style="text-align: center;">⚠ WARNING</p> <p>Ensure the headboard is positioned to match the width of the mattress deck.</p> <p>The headboard expands to match the width of the mattress deck to comply with regulatory requirements and patient entrapment guidelines.</p>
	<p style="text-align: center;">⚠ CAUTION</p> <p>To properly Expand the deck sections, start at the foot deck and work towards head deck.</p> <p>To properly Retract the deck sections, start at the head deck and work towards the foot deck.</p>

Expanding/Retracting the Foot Deck

Pull and hold the Deck Release handle fully. The foot deck will now be free to slide. Gently pull outward on Foot deck section to expand the width. Both sides of the Foot deck section will expand in unison. Deck expansion will stop at the second stage (42" width), to widen bed to the third stage (48" width), simply repeat process.

To retract the Foot deck, simply pull and hold the deck release handle and gently push inward on the Foot deck section until you reach the desired width.

IMPORTANT: Ensure the deck locks in one of the three mattress deck width positions.



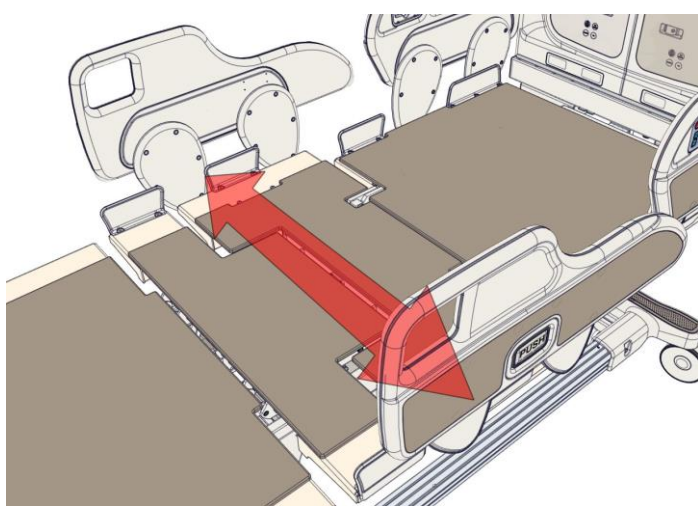
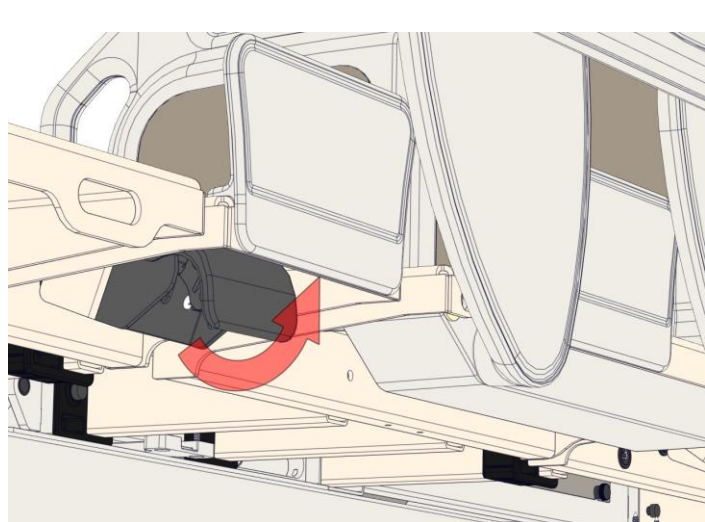
Expanding/Retracting the Seat/Knee Decks

The Seat and Knee decks are mechanically connected to expand and retract together. Only one operation is required to control the desired width of the Seat and Knee decks. The Deck Release handle for this set is located beneath the Knee section.

Pull and hold the Deck Release handle fully. The Seat and Knee decks will now be free to slide. Gently pull outward on the Seat and Knee deck sections to expand the width. Both sides of the Seat and Knee deck sections will expand in unison. Deck expansion will stop at the second stage (42" width), to widen bed to the third stage (48" width), simply repeat process.

To retract the Seat and Knee decks, simply pull and hold the deck release handle and gently push inward on the Seat and Knee deck sections until you reach the desired width.

IMPORTANT: Ensure the deck locks in one of the three mattress deck width positions.



Expanding/Retracting the Head Deck

Pull and hold the Deck Release handle fully. The Head deck will now be free to slide. Gently pull outward on Head deck section to expand the width. Both sides of the Head deck section will expand in unison. Deck expansion will stop at the second stage (42" width), to widen bed to the third stage (48" width), simply repeat process.

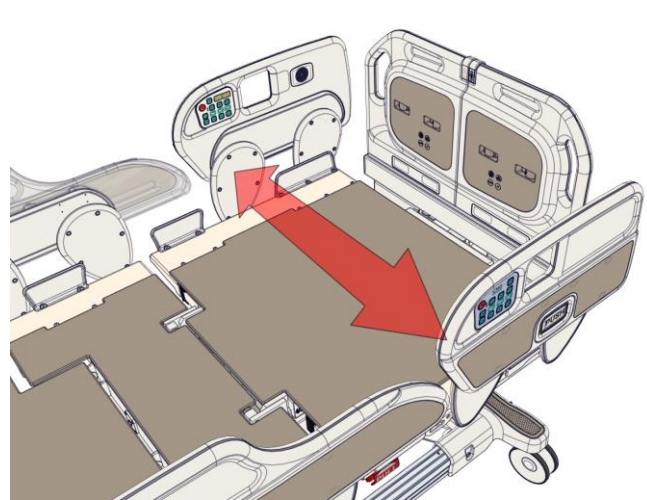
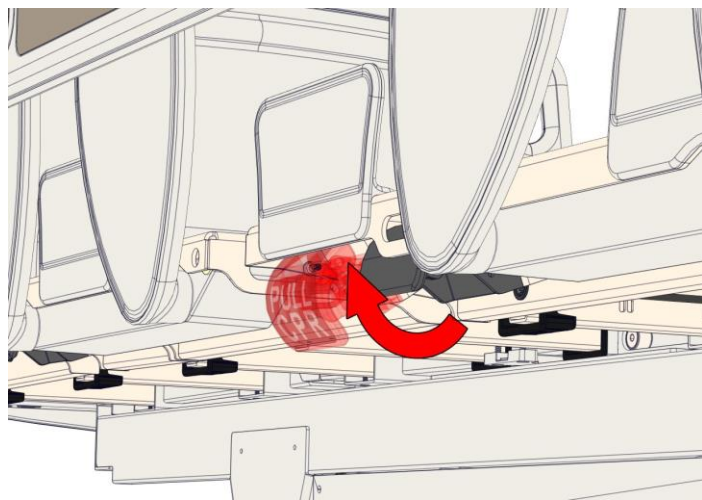
To retract the Head deck, simply pull and hold the deck release handle and gently push inward on the Head deck section until you reach the desired width.

IMPORTANT: Ensure the deck locks in one of the three mattress deck width positions.



⚠ WARNING

The Manual CPR Handle is located directly beside the Head Deck Release Handle. Use caution when expanding the head deck as to not inadvertently pull the CPR handle. The Manual CPR Handle is denoted by a red handle and sticker indicating "PULL CPR".



3.8 Expandable Headboard

Variable Headboard Width

The Spirit One™ is equipped with an expandable width headboard that has three selectable widths and works in conjunction with the expandable deck to ensure patient safety. The headboard will expand from a starting width of 36" to an intermediary width of 42". From this point, the headboard can be expanded further to achieve a width of 48". The headboard expands to match the width of the mattress deck to comply with regulatory requirements and patient entrapment guidelines.



⚠ WARNING

Failure to expand the headboard when the mattress deck is placed in a position other than 36" wide creates a patient entrapment zone.

In order to ensure patient safety, the width of headboard **MUST** be adjusted to match the selected bed width position. Failure to comply can result in patient entrapment.



⚠ WARNING

NEVER attempt to widen the headboard with a patient in bed.

Ensure the bed is free and clear off **ALL** possible obstructions before widening the Headboard.



⚠ WARNING

Ensure the brake is set before attempting to expand or retract the headboard. Failure to properly set the brake prior to expanding or retracting the headboard may result in serious injury.

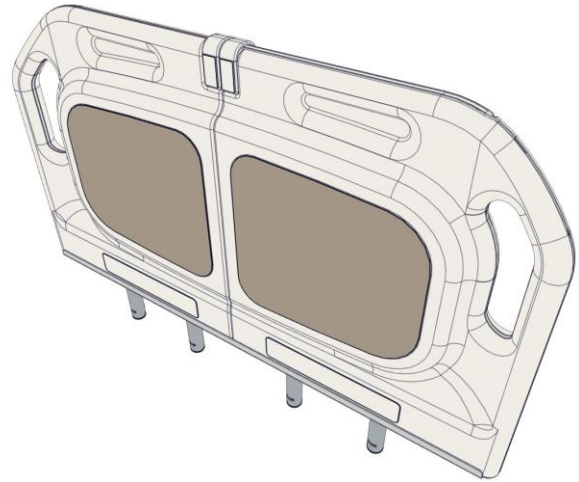
Expandable Headboard

The headboard is an integral part of the beds complete patient safety system. It is extremely important to expand/contract the headboard every time a change is made to the width of the mattress deck.

Ensure the bed is free and clear off all possible obstructions before widening the headboard.

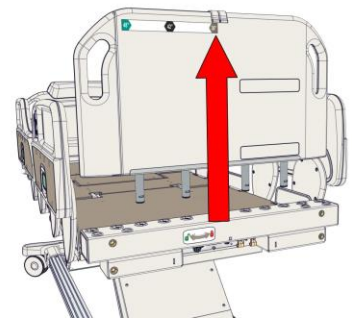
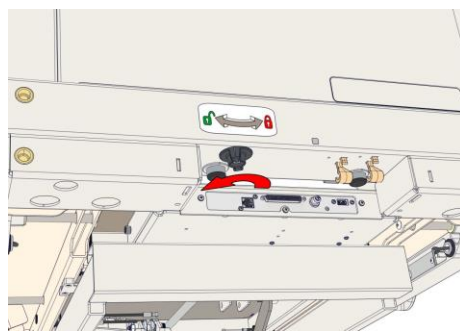
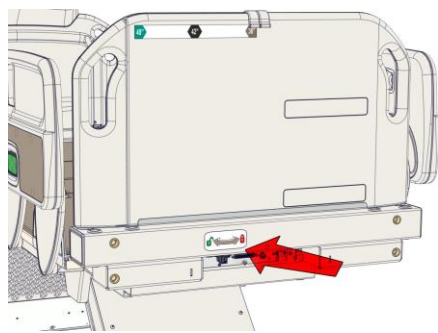
The headboard has three positions to match the width of the mattress deck:

- 36"
- 42"
- 48"



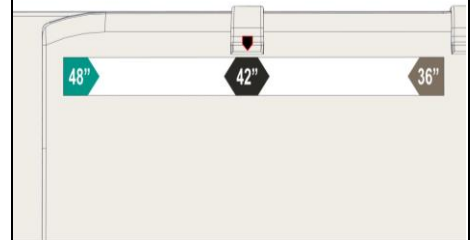
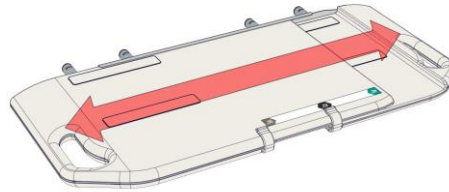
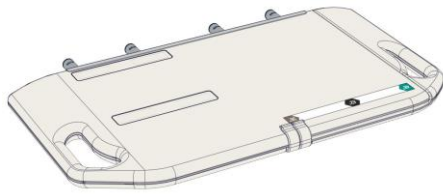
Removing the Headboard

The headboard has a positive locking mechanism which secures the headboard to the bed, but can be quickly released to remove the headboard. Locate the locking feature beneath the headboard bracket. Turn the dial to release locking mechanism (shown on decal). The headboard is now free to be removed from the bed by lifting the headboard straight up.



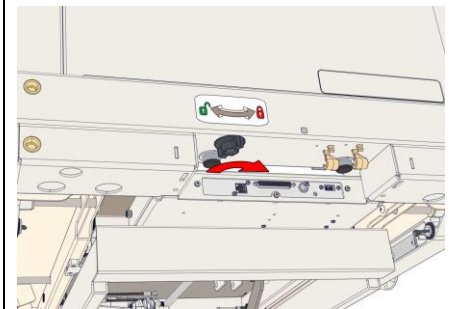
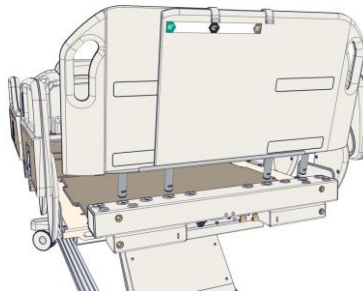
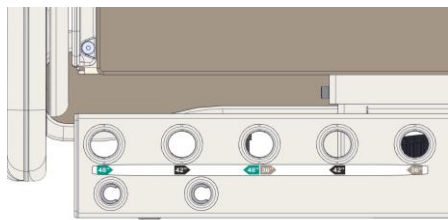
Expanding the Headboard

Place the headboard on a smooth flat surface. Grab the headboard by its handles and gently pull apart to expand the headboard's width. Continue to expand the headboard until the width marker located on the back of the headboard reaches the desired width.



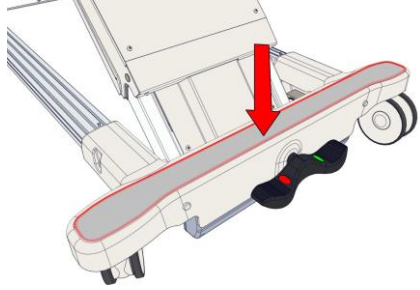
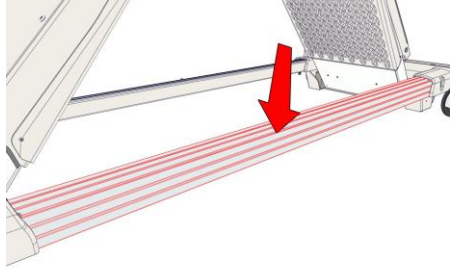
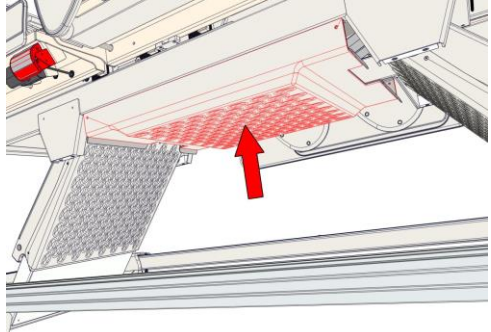
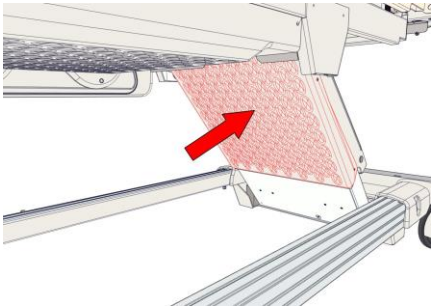
Installing the Headboard

Align the headboard posts with locating holes on the headboard bracket. Locating holes are marked for proper installation at the required width. Install headboard vertically into locating holes. Locate the locking feature beneath the headboard bracket. Turn the dial to engage locking mechanism.



3.9 Standard/Enhanced Underbed Obstruction Sensors

The Spirit One™ bed is equipped with underbed obstruction sensors. All beds will be outfitted with four obstruction sensors as shown below.

	
<p>Caster Cover Obstruction Sensor (2)</p>	<p>Bottom Frame Guard Obstruction Sensor (2)</p>
<p>If your Spirit One™ bed has been equipped with the Optional Enhanced underbed obstruction sensors, the bed will be outfitted with three additional obstruction sensors as shown below.</p>	
	
<p>Bottom Plate Obstruction Sensor (1)</p>	<p>Leg Obstruction Sensor (2)</p>

Contact with an Obstruction While the Bed is in Downward Motion

When an obstruction is detected during any downward motion of the bed (using any of the following: BED DOWN, TREND, revTREND, LEVEL ALL, or CHAIR position), the bed will immediately stop all downward motion.

Once an obstruction has been detected, an audible "chirp" will sound. A warning message will also be displayed on the LCD Screen. The warning message will continue to be displayed to remind staff that an obstruction was detected during the last attempt to initiate downward motion of the bed platform.

Any further attempts to initiate downward motion of the bed platform will not be permitted if an obstruction is still being detected and the bed platform will emit an audible "chirp" after each attempt.

Contact with an Obstruction While Bed is Stationary (ie: Bed not in Motion)

When an obstruction is detected prior to any bed movement, all downward motion of the bed (using any of the following: BED DOWN, TREND, revTREND, LEVEL ALL, or CHAIR position) will be automatically disabled.

The warning message will be displayed until the obstruction is removed. An audible "chirp" will sound when any downward motion of the bed platform is attempted. Press the ENTER button to acknowledge and clear the warning message.

Any further attempts to initiate downward motion of the bed platform will not be permitted if an obstruction is still being detected and the bed platform will emit an audible "chirp" after each attempt.

When an Obstruction is not Detected (ie: Obstruction Removed)

When an obstruction is no longer detected, the warning message will stop being displayed and normal bed operation will be restored.

Audio Indicators

Audio Obstruction Indicator:

When an obstruction is contacted during bed motion or if an obstruction is detected prior to any bed lowering motion and a downward motion of the bed platform (using any of the following: BED DOWN, TREND, revTREND, LEVEL ALL, or CHAIR position) is attempted an audible “chirp” will sound.

On Spirit One™ beds, **the factor default setting for obstruction sensors is ENABLED**. In the rare event of component failure and/or malfunction, the obstruction sensor system can be disabled in the Maintenance Menu to restore bed functionality until the bed can be properly serviced. Refer to page 75 for instructions.

3.10 Optional Auxiliary AC Power Outlet

NEMA 5-15R Outlet Socket configuration shown

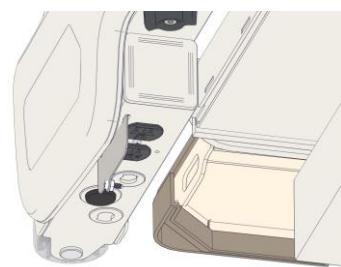
All Spirit One™ beds can be equipped with an optional auxiliary AC power outlet mounted in the patient right side of the footboard bracket.

IMPORTANT: The auxiliary AC power outlet has the following electrical ratings:

MAXIMUM Output Power Rating: 120 Volts AC, 600 Watts

OR 230 Volts AC, 690 Watts

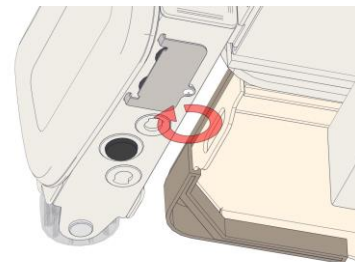
DO NOT EXCEED MAXIMUM OUTPUT POWER RATING



Auxiliary AC Power Outlet Cover

The auxiliary AC power outlet has a cover that is integrated into the footboard bracket. The attachment screw is retained with a nylon nut so that it will not be misplaced when the auxiliary outlet is in use.

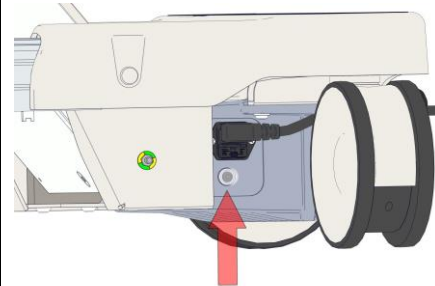
IMPORTANT: Always install the cover over the auxiliary AC power outlet when it is not in use.



Circuit Breaker: **Rating 5 Amps (120V Beds) OR 3 Amps (230V Beds)**

The auxiliary AC power outlet socket is protected by a circuit breaker. The circuit breaker is located beneath the head end caster cover on the patient left side. The circuit breaker is the resettable type. Simply depress the button to re-engage the circuit breaker.

IMPORTANT: The circuit breaker is a safety device that is designed to disengage an electrical circuit when the load exceeds the maximum rating of the circuit. An overloaded circuit may cause irreparable damage to the AC power wiring in the bed. If the circuit breaker trips, it is important to understand what has happened to cause this event. The device(s) the bed is connected to may be drawing too much power and exceeding the circuit breaker rating.





⚠ CAUTION

The auxiliary AC power outlet socket is rated for a **MAXIMUM 120 Volts AC, 600 Watts OR 230V Volts AC, 690 Watts** output power. **DO NOT** exceed the maximum output power rating.

DO NOT use the auxiliary AC power outlet socket if the socket receptacles appear to be damaged and/or if the plug (of the device that you are connecting to the bed) does not remain connected when inserted in the outlet socket receptacles.

Only replace this outlet socket with a NEMA 5-15R duplex outlet socket that is marked as hospital grade. Contact CHG Hospital Beds' Customer Service for a replacement outlet socket.



⚠ WARNING

A circuit breaker is **NOT** designed to act as a ground fault circuit interrupter (GFCI) and **DOES NOT** offer the same level of protection. The circuit breaker is a safety device that is designed to only disengage an electrical circuit when the load exceeds the maximum rating. If the circuit breaker trips, discontinue bed use immediately and have a service technician, specifically trained to service Spirit One™ beds, inspect the wiring. **Circuit Breaker Rating: 5 Amps (120V beds) or 3 Amps (230V beds)**



⚠ CAUTION

Connecting electrical equipment to auxiliary mains AC outlet effectively leads to creating a medical equipment system and can result in a reduced level of safety. When connecting devices, the system shall be evaluated in end use application to ensure compliance to medical device standard 60601-1.

Section 4:

Spirit One™ - Unique Functions & Features

4.1 LCD Display

The enhanced footboard staff control on Spirit One™ beds is equipped with an integral LCD display.

Home Screens

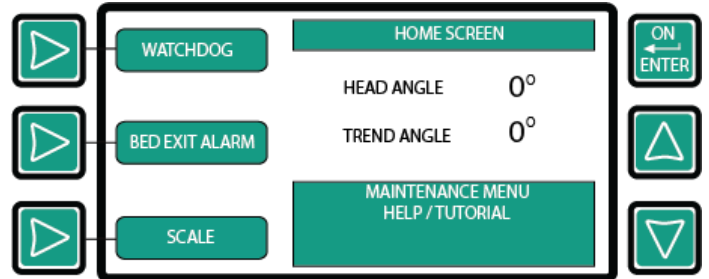
0° HEAD and 0° TREND angle for this example

When the LCD display is activated, the home screen will default display the Head and Trend angles.

Pressing the UP/DOWN arrow buttons will scroll through the home screens:

- PATIENT WEIGHT
- HEAD angle and TREND/rev.TREND angle
- WARNINGS (if any)

IMPORTANT: No warning screens will be displayed if the bed has not detected any problems or no safety feature has been disabled.



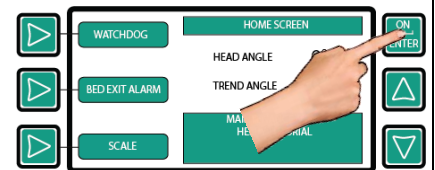
On/Enter Button

"ON" Functionality of this Button

Press this button to activate or "wake up" the LCD display.

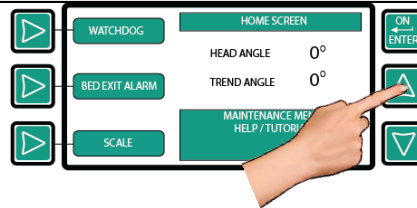
"ENTER" Functionality of this Button

Press this button (as enter button) when prompted by the LCD display to make desired selections within menu options.

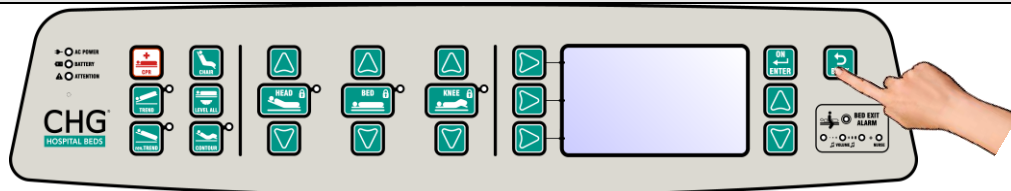


UP/DOWN Arrow Buttons

Press the UP/DOWN arrow buttons to scroll up or down in the different menus and to scroll through the available options within the menus when making desired selections.



BACK Button



Press the BACK button to return back to the previous screen. This function can be performed at any time in any menu option screen.

IMPORTANT: No settings will be changed if no selections were made prior to pressing the BACK button.

4.2 Patient Weigh Scale

All Spirit One™ beds are equipped with an integral scale to facilitate the weighing of patients while in the bed. The scale is always activated and will display the patient's weight in either kilograms (KG) or pounds (LB) depending upon which unit of measure has been set for patient weight display. **The factory default for patient weight display is imperial pounds (LB).** This setting can be changed in the Maintenance Menu.

The Spirit One™ scale is very sensitive. The patient can be weighed in any bed position but patient weight will be determined and displayed most accurately when the bed is in the flat position with nothing touching the bed and the bed is not contacting the wall, patient station, or any other equipment.

ACCURACY: The Spirit One™ scale system has an expected accuracy in a flat and level position of the greater of ± 1 kg (± 2.2 lbs) or $\pm 1\%$ of patient weight.



⚠ CAUTION

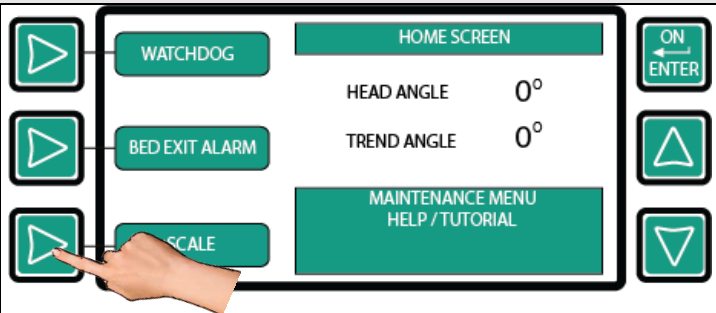
To ensure the accuracy of the scale and alarms, keep the area around and/or under the bed open and free of obstructions and/or equipment.

To ensure optimal scale accuracy, CHG Hospital Beds recommends that the siderails be fully raised and locked/latched in the UP position before reading patient weight.

Zeroing the Scale (Establish Tare Value)

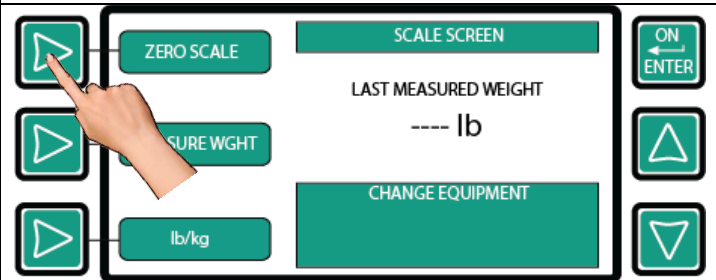
LB units used for this example

From the Home Screen, Press the Arrow button located next to the "SCALE" option to access the available scale features.



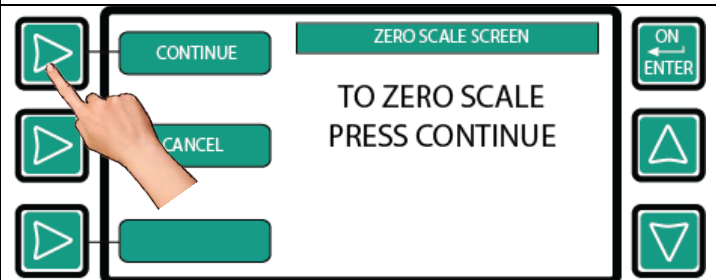
The Scale Screen will now be displayed.

From the Scale Screen press the Arrow button located next to the "ZERO SCALE" option.



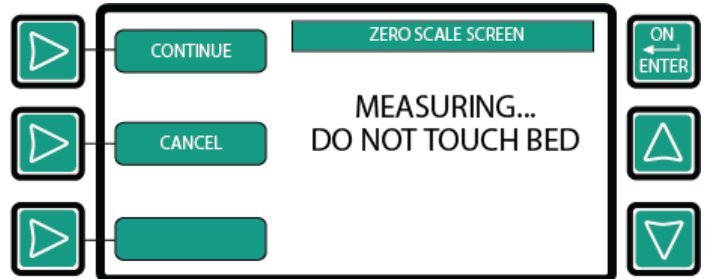
The Zero Scale Screen will now be displayed

From the Zero Scale Screen, press the Arrow button located next to the "CONTINUE" option.



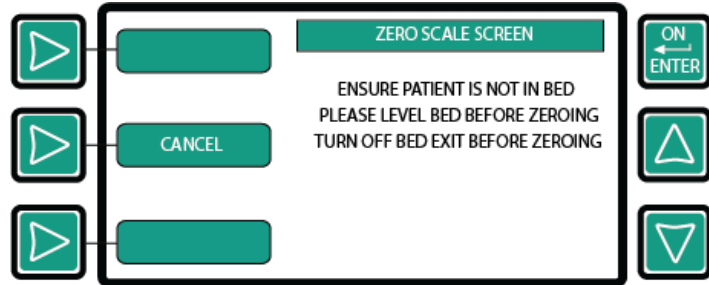
Bed will now begin the Zeroing procedure. Do Not touch the bed or attempt to make changes during this procedure.

Once completed, the LCD Screen will return to the Scale Screen. Last Measured Weight will now read 0.0 lb (or kg if applicable).



If any zeroing condition is not met before attempting to zero the scale, a warning message will be displayed on screen.

The user must satisfy the zeroing conditions must be met before the zeroing process will be allowed.



NOTE:

DO NOT zero the scale with a patient in the bed. This will result in a zero patient weight being displayed. If the scale is accidentally zeroed with a patient on the bed, remove patient from bed, re-zero scale and return patient to bed.

If an accidental attempt to zero the scale is initiated with the patient in the bed, simply press the BACK button when the reminder message is displayed.

NOTE:

Make sure that all necessary equipment and linens are on the bed prior to zeroing the scale. Placing additional items on the bed or removing items from the bed after the zeroing process will result in an inaccurate patient weight being displayed.

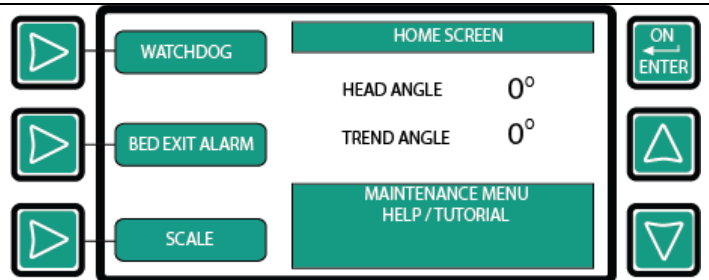
NOTE:

CHG Hospital Beds recommends that the bed is zeroed prior to use by each new patient and patient weight change is zeroed once the new patient enters the bed.

NOTE:

Zeroing the scale will override any adjustments made to patient weight.

4.3 Level All Function



All Spirit One™ beds are equipped with a Level All Function.

Press-and-hold the LEVEL ALL button to simultaneously flatten both the head and foot sections of the mattress deck and to return the bed frame to a horizontal position (parallel with the floor).

Bed motion will stop automatically when both sections of the mattress deck have been fully flattened and the bed frame is horizontal. Head and Trend angles will also display 0° once completed.

4.4 Bed Exit Feature

The enhanced footboard staff control on Spirit One™ beds is equipped with an integral bed exit feature to help monitor and report patient activity with audible and/or Nurse/Priority Call alarms.

IMPORTANT: This feature is not intended to replace patient monitoring by staff.

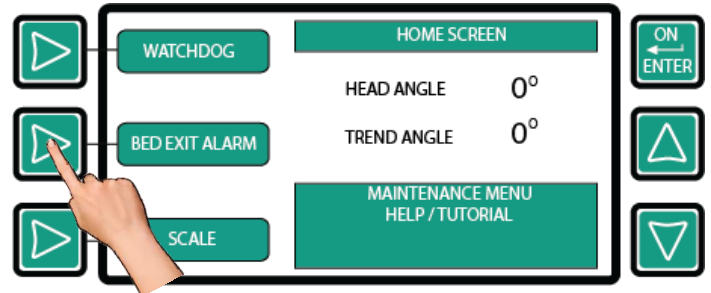
The Bed Exit Alarm can be set to produce an audible bed alarm (three different volume settings) or to send a Nurse/Priority Call alarm or it can be set to produce both audible and Nurse/Priority Call alarms.



Bed Exit Alarm Arming

To arm the Bed Exit Alarm:

From the Home Screen, Press the Arrow button located next to the "BED EXIT ALARM" option to access the available Bed Exit Alarm Features.

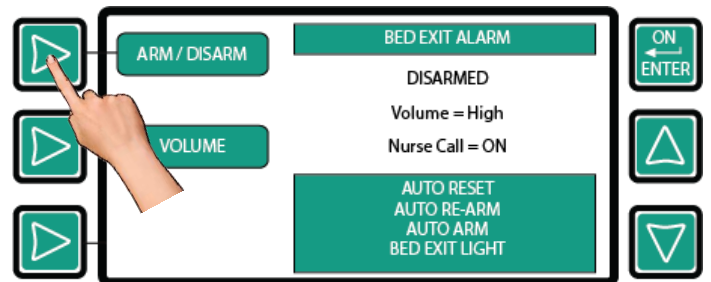


To Arm the BED EXIT ALARM, press the Arrow button located next to the "ARM/DISARM" option.

After a delay of several seconds an audible "chirp" will also sound to indicate that the Bed Exit Alarm has been armed.

Bed Exit Alarm Screen will now display "ARMED"

IMPORTANT: The Bed Exit Alarm can ONLY be armed if there is weight on the bed (9.1 kg [20 lbs] minimum). This is intended to prevent false arming of this feature that may otherwise become a nuisance to staff.



Bed Exit Alarm Disarming

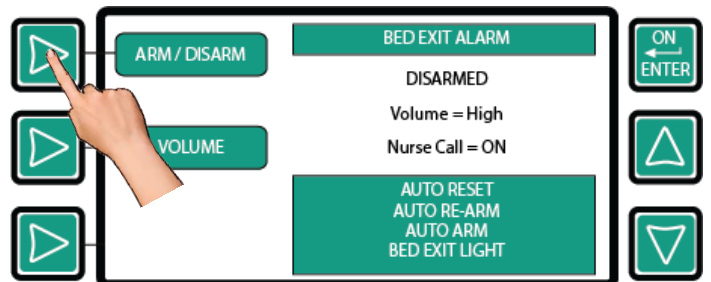
To disarm the Bed Exit Alarm:

From the Home Screen, Press the Arrow button located next to the "BED EXIT ALARM" option to access the available Bed Exit Alarm Features.

To disarm the BED EXIT ALARM, press the Arrow button located next to the "ARM/DISARM" option.

After a delay of several seconds an audible "chirp" will also sound to indicate that the Bed Exit Alarm has been disarmed.

Bed Exit Alarm Screen will now display "DISARMED"



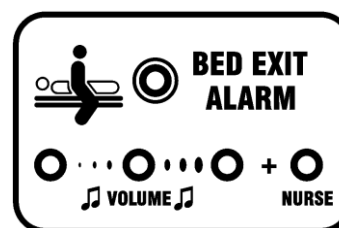
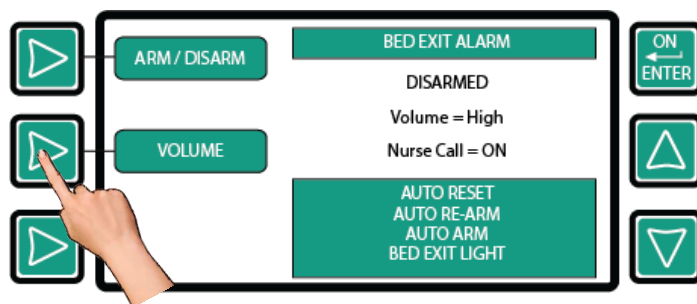
Bed Exit Alarm Volume Selection

To set the desired Bed Exit Alarm volume, the Bed Exit Alarm must first be armed.

From the Home Screen, Press the Arrow button located next to the "BED EXIT ALARM" option to access the available Bed Exit Alarm Features.

Selecting Alarm Volume AND/OR Nurse/Priority Call:

- Press the Arrow button located next to the "VOLUME" option. Each button press scrolls through the available volume and/or nurse call settings.
- With each key press, the LCD will display the selected volume and/or nurse call level. The BED EXIT ALARM indicators will also change to match LCD display.
- Simply stop scrolling through the volume settings once the desired level has been reached.
- Press the BACK button to return to the Home Screen



There are six selectable Alarm Volume and Nurse/Priority settings:

Volume = Low	&	Nurse Call = ON
Volume = Medium	&	Nurse Call = ON
Volume = High	&	Nurse Call = ON
Volume = Low	&	Nurse Call = OFF
Volume = Medium	&	Nurse Call = OFF
Volume = High	&	Nurse Call = OFF

IMPORTANT: The Nurse Call and Priority Call alarms annunciated by the bed can be separated to meet the alarm notification needs of your healthcare facility. This setting can be changed in the Maintenance Menu.

Bed Exit Alarm Chime Tone Selection

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the ALARM CHIME screen.
2. Press the ON/ENTER button to enter this menu. The current Bed Exit Alarm chime tone will be shown.
3. Press UP/DOWN to scroll through available Bed Exit Alarm chime tones. Each chime tone will sound.
4. Press ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that Bed Exit Alarm chime tone has been changed.

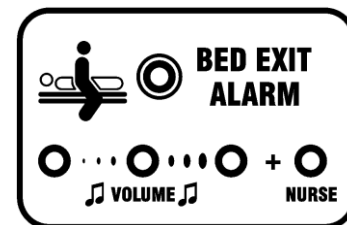
Alarm Silencing

Once a Bed Exit Alarm has been triggered, it may be silenced by pressing the Arrow Button located next to the "SILENCE" option on the Home Screen.

Once the Bed Exit Alarm has been silenced, the BED EXIT Indicator LED and VOLUME Indicator LED icons will flash simultaneously as a visual indicator and reminder to staff that the alarm has been silenced and must be either reset or deactivated.

A message will also be displayed on the LCD screen indicating that the BED EXIT Alarm has been silenced.

These LED icons will flash until the Bed Exit Alarm has been disarmed or once the Bed Exit Alarm has been automatically re-armed if this feature is ON.



4.4.1 Bed Exit Alarm: Auto Reset

When a patient attempts to exit or does exit the bed, the Bed Exit Alarm will be triggered. If the patient returns to their original position on the bed, the Bed Exit Alarm can be set to automatically stop alarming or otherwise announcing the alarm.

Bed Exit Alarm: Auto Reset Functionality

The Bed Exit Auto Reset feature will allow the bed to automatically reset the Bed Exit Alarm without staff needing to manually silence the alarm after the patient has returned to the bed.

- The Bed Exit Alarm will resume patient monitoring operation with the previous or locked alarm settings (Volume & Nurse/Priority Call levels).
- An audible "chirp" will sound to indicate that the Bed Exit Alarm has been reset.

The factory default setting for the Bed Exit Auto Reset is ON. This setting can be changed by following the instructions below.

IMPORTANT: If the Auto Reset feature has been set to OFF (disabled) in the Bed Exit Alarm Menu, the Bed Exit Alarm will continue to sound regardless if the patient has returned to the original position or has returned to bed and has ceased all motion.

To Enable/Disable Auto Reset

From the BED EXIT Alarm Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO RESET option.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to scroll to the desired setting:
 - AUTO RESET ON
 - AUTO RESET OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Reset setting has been changed. Press the back button to return to the Home screen.

4.4.2 Bed Exit Alarm: Auto Re-Arm

When a patient attempts to exit or does exit the bed, the Bed Exit Alarm will be triggered. Staff may silence the Bed Exit Alarm by pressing the Arrow button located next to the "SILENCE" option. Once in this silenced mode, nursing staff need to remember to reset the Bed Exit Alarm through the BED EXIT MENU after settling the patient and/or when the patient has returned to the bed.

Bed Exit Alarm: Auto Re-Arm Functionality

The Bed Exit Auto Re-Arm feature will allow the bed to automatically re-arm the Bed Exit Alarm once the patient has returned to bed without staff needing to manually reset the Bed Exit Alarm after the patient has returned to the bed.

- The Bed Exit Alarm will re-arm itself after a selected time delay period has elapsed. The Auto Re-Arm feature has three factory set time delay periods to select from: **1, 3, or 9 minute delay**.
- The Bed Exit Alarm will resume patient monitoring operation with the previous or locked alarm settings (Volume & Nurse/Priority Call levels).
- An audible "chirp" will sound to indicate that the Bed Exit Alarm has been re-armed.

The factory default setting for Bed Exit Auto Re-Arm is ON with a time delay period of 1 minute.

This setting can be changed by following the instructions below.

To Enable/Disable Auto Re-Arm

From the BED EXIT Alarm Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO RE-ARM option.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to scroll through available selections:
 - 1 MINUTE DELAY
 - 3 MINUTE DELAY
 - 9 MINUTE DELAY
 - OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Re-Arm setting has been changed. Press the BACK button to return to the home screen.

NOTE:

If the Auto Re-Arm feature has been set to OFF (disabled) in the Bed Exit Menu, these screens will not appear.

4.4.3 Bed Exit Alarm: Auto Arm

You may find that your healthcare facility tends to set Bed Exit Alarm for most patients. If this is the case for your healthcare facility, it may be desirable to use the Bed Exit Alarm Auto Arm feature.

Bed Exit Alarm: Auto Arm Functionality

The Bed Exit Alarm Auto Arm feature automatically arms the Bed Exit Alarm once a stable weight of 22.7 kg (50 lbs) or more has been detected by the bed for a period greater than one minute.

The factory default setting for Bed Exit Auto Arm is OFF. This setting can be changed following the instructions below.

To Enable/Disable Auto Arm

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the AUTO ARM option.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - AUTO ARM ON
 - AUTO ARM OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm Auto Arm setting has been changed. Press the BACK button to return to the home screen.

Bed Exit Alarm: Auto Arm Pause Functionality **Maximum delay time: 300 seconds**

During patient care, you may wish to temporarily override the Bed Exit Auto Arm feature. For example, if it may be necessary to temporarily position a patient on the bed for a period greater than one minute which will cause the Bed Exit Alarm to automatically arm. As expected any patient motion after the Bed Exit Alarm has automatically armed may trigger a nuisance alarm (depending on the Zone selected).

During such patient care, it is possible to temporarily delay or "pause" the Auto Arm feature for 60, 90 or 120 seconds. A countdown timer is displayed. During the final 10 seconds of this countdown a series of warning "chirps" will sound. While the countdown is in progress, the Bed Exit Alarm will not Auto Arm.

When the countdown is nearing its end, Auto Arm Pause can be extended (up to 5 additional minutes, or 300 seconds, may be added). While the Auto Arm Pause countdown is in progress, the countdown can be set to zero at any time, re-establishing the normal Auto Arm feature.

To set an Auto Arm Pause, the Auto Arm feature must first be enabled. To enable Bed Exit Alarm Auto Arm, refer to the previous section. **Maximum delay time: 300 seconds**

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to the AUTO ARM PAUSE screen.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press the UP/DOWN arrow buttons to add/remove delay time in 30 second increments.
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound and ***the countdown will begin immediately***

During the final 10 seconds of the delay countdown, a chirp will sound every second as notification that the Auto Arm Pause is about to end and that the Bed Exit Alarm Auto Arm functionality is about to resume. Press the BACK button to return to the home screen.

4.4.4 *Bed Exit Light*

The underbed light can also be set to operate as an automatic Bed Exit Light. The Bed Exit Light improves nighttime visibility around the bed and in the room providing an increased level of patient safety. When the Bed Exit Light is on, the underbed light automatically switches on just prior to the patient exiting the bed. The underbed light will remain illuminated until the patient returns to the bed, and automatically switches off after a short delay. If the patient does not immediately return to bed, the underbed light automatically shuts off after 15 minutes has elapsed.

The factory default setting for the Bed Exit Light is ON. This setting can be changed by following the steps below.

To Enable/Disable Bed Exit Light

From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the BED EXIT LIGHT option.
2. Press the ON/ENTER button to enter this menu option. The current selection will be shown.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - BED EXIT LIGHT ON
 - BED EXIT LIGHT OFF
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Light setting has been changed. Press the BACK button to return to the home screen.

4.4.5 *Bed Exit Alarm History*

When the Bed Exit Alarm is armed, the bed automatically records the number of times the Bed Exit Alarm has been triggered. This data is stored as the Bed Exit Alarm History.

To View/Reset Bed Exit Alarm History

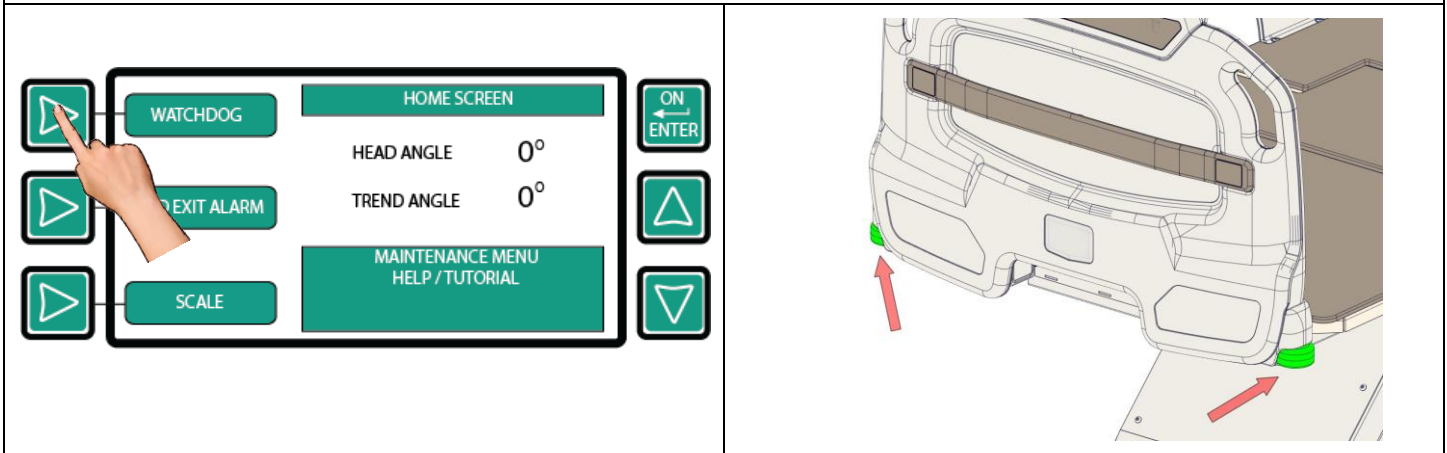
From the BED EXIT Menu:

1. Press the UP/DOWN arrow buttons to scroll to the ALARM HISTORY option.
2. Press the ON/ENTER button to enter this menu option. The BED EXIT ALARM HISTORY will display the number of times that the Bed Exit Alarms has been triggered.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - DON'T RESET
 - RESET NOW
4. Press the ON/ENTER button to make desired selection.

An audible chirp will sound to indicate that the Bed Exit Alarm History has been reset (if RESET NOW is selected). Press the BACK button to return to the home screen.

4.5 Watchdog™ Bed Monitoring System

If your Spirit One™ bed has been equipped with the optional Watchdog Bed Monitoring System, the bed will be outfitted with light assemblies installed in the foot end bumpers and a unique footboard staff control as shown below. The Watchdog Bed Monitoring System has the following modes of operation:



4.5.1 Always On™ Monitoring

A stationary bed is critical to patient safety. Therefore the status of the caster lock (brake) is continuously monitored. Whenever the caster lock (brake) is not engaged, the Watchdog lights will be illuminated Solid RED. The Watchdog system is always monitoring the beds position to ensure a acute patient safety environment.

IMPORTANT: Continuous monitoring by this WATCHDOG mode is only possible when the bed is running on AC power (plugged into a wall outlet).

4.5.2 Bed Position/Status Monitoring

The Watchdog feature can be used to monitor and indicate if a change has been made to the bed position or the status of most important bed features.

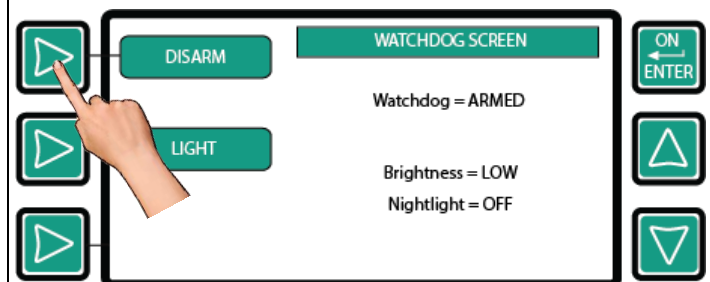
WATCHDOG Monitoring:

From the footboard staff control:

1. Position and/or set up the bed as desired (positioning, lock-outs, bed exit alarm, etc).
2. Press the Arrow button next to the "WATCHDOG" option.
3. Press the Arrow button next to the "DISARM" option.

The Watchdog lights will turn off for a period of 10 seconds. After the 10 seconds has elapsed, the Watchdog lights will become illuminated indicating the Bed Position/Status Monitoring has taken a new "snap shot" of the current bed position.

IMPORTANT: If the Bed Exit Alarm is set, Watchdog lights will be illuminated solid GREEN, otherwise they will be illuminated solid BLUE.



Once the Bed Position/Status Monitoring has been set, any change to the bed (see following table) will be indicated by Watchdog lights turning yellow or red.

Bed Position	Watchdog Lights Will Turn Yellow When...
--------------	--

Head Angle	Angle changes of approximately $\pm 5^\circ$
Knee Angle	Angle changes of approximately $\pm 3^\circ$
Bed Elevation	Height changes of approximately ± 3 inches

Bed Status	When...	Watchdog Lights Will Be...
Obstruction Sensors	An obstruction is present/detected	Flashing YELLOW
Manual CPR Release	Manual CPR release has been activated	Flashing RED
Bed Exit Alarm	A Bed Exit Alarm has been triggered	Flashing RED
Patient Lock-Outs	Any change to settings has occurred	Solid YELLOW
Rail Locks	A change to any rail position has occurred	Solid YELLOW

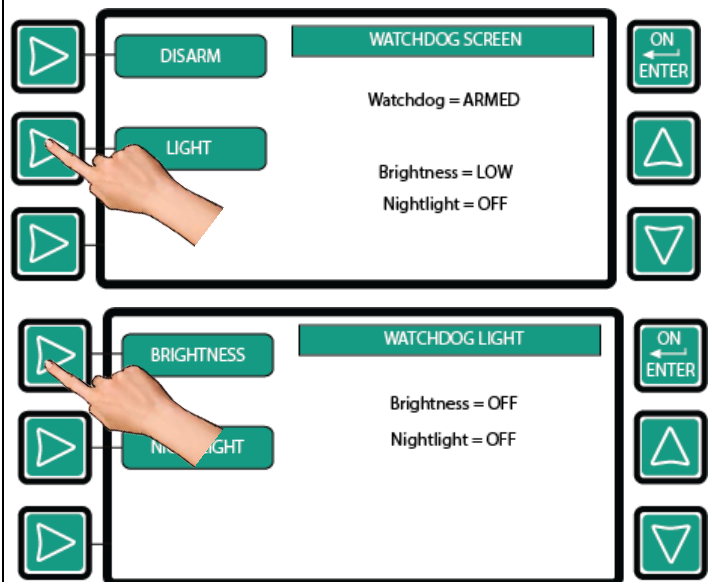
To Clear WATCHDOG Monitoring:

The Always On Monitoring system of the Watchdog function prevents the critical monitoring components from being disabled. The Watchdog lights can be turned off, but the system is still monitoring. To turn off the Watchdog lights, from the footboard staff control:

- Navigate to the WATCHDOG Screen.
- Press the Arrow button next to the "LIGHT" option.

The Watchdog Light Screen will now be displayed.

- Press the Arrow button next to the "BRIGHTNESS" option to cycle through the available settings until the screen displays "Brightness = OFF".



4.5.3 Custom Colour Nightlight

The Watchdog lights can be used to augment ambient room lighting.

To Turn On the Nightlight:

- Navigate to the WATCHDOG Screen.
- Press the Arrow button next to the "LIGHT" Option

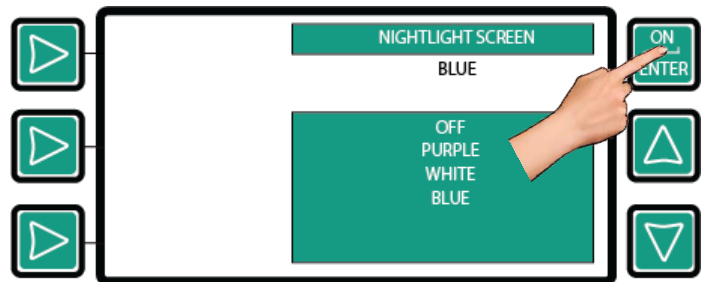
The Watchdog Light Screen will now be displayed

- Press the Arrow button next to the "NIGHTLIGHT" Option

The Nightlight Screen will now be displayed

- Use the UP/DOWN Arrow Keys to navigate to the desired Nightlight Colour
- Press the ON/ENTER button to select the desired Nightlight Colour.

The Watchdog lights will be illuminated with the desired nightlight colour and an audible chirp will sound to indicate that the Nightlight has been set.



To Turn Off the Nightlight:

Repeat the process to turn on the Nightlight. Once at the Nightlight Screen:

- Use the UP/DOWN Arrow Keys to navigate to "OFF".
- Press the ON/ENTER button to select the Nightlight "OFF" state.

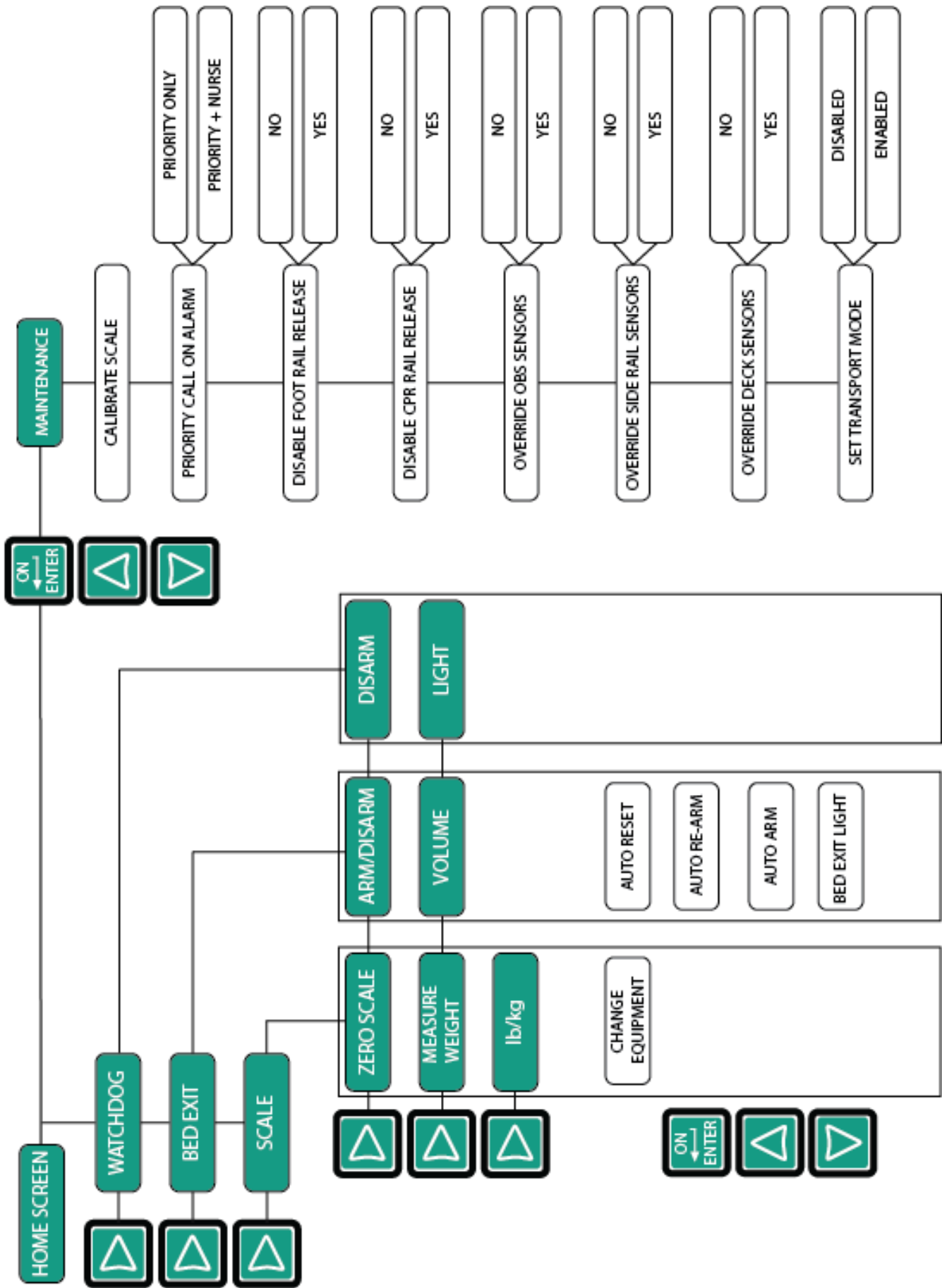
The Watchdog lights will turn off.



To Change Nightlight Colour

At any time you can change the colour of the nightlight by repeating the above steps and simply selecting another colour.

4.6 Menu Navigation



4.7 Scale Menu

A Scale Menu is standard on Spirit One™ beds. The Scale Menu includes menu options that are directly related to scale operation and offer increased functionality of the bed.

4.7.1 Selecting Patient Weight Display Units

The units that the patient weight is displayed in can be changed to suit the needs of your healthcare facility.

Selecting Patient Weight Display Units

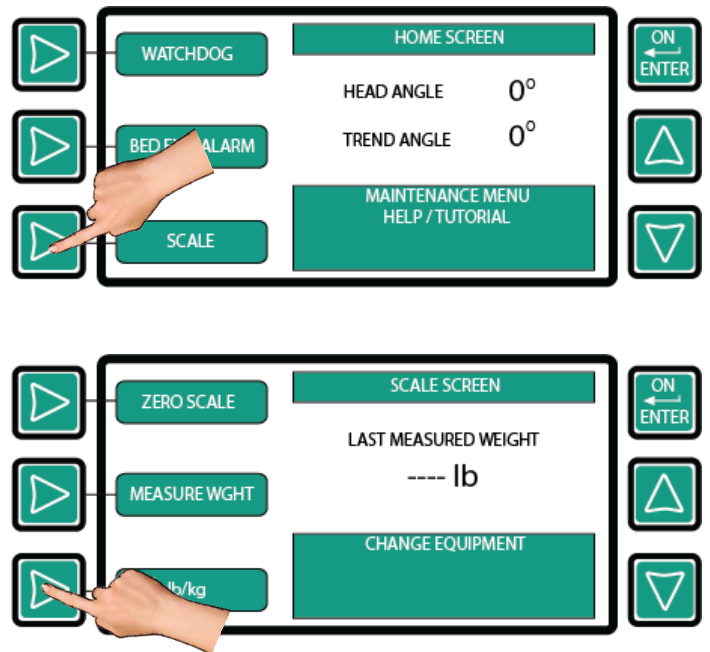
Units of Measure Selection:

From the Home Screen:

1. Press the Arrow Key located next to the "SCALE" option.

The Scale Screen will now be displayed.

2. Press the Arrow Key located next to the "lb/kg" option.
3. Use this key to toggle between the two available settings:
 - LB
 - KG



4.7.2 Changing Equipment

During routine patient care, there may arise the need to add/remove equipment (medical devices, linens, etc) to/from the bed without disturbing the patient (ie: having to patient leave the bed). Any items added to or removed from the bed will impact the displayed patient weight.

Using the Change Equipment functions, staff can add required equipment to the bed or remove unneeded equipment from the bed at any time when the patient is on the bed. The displayed patient weight will not reflect this weight increase or decrease with the addition or removal of equipment to/from the bed when this procedure is performed.

Making an Equipment Change

From the Scale Menu:

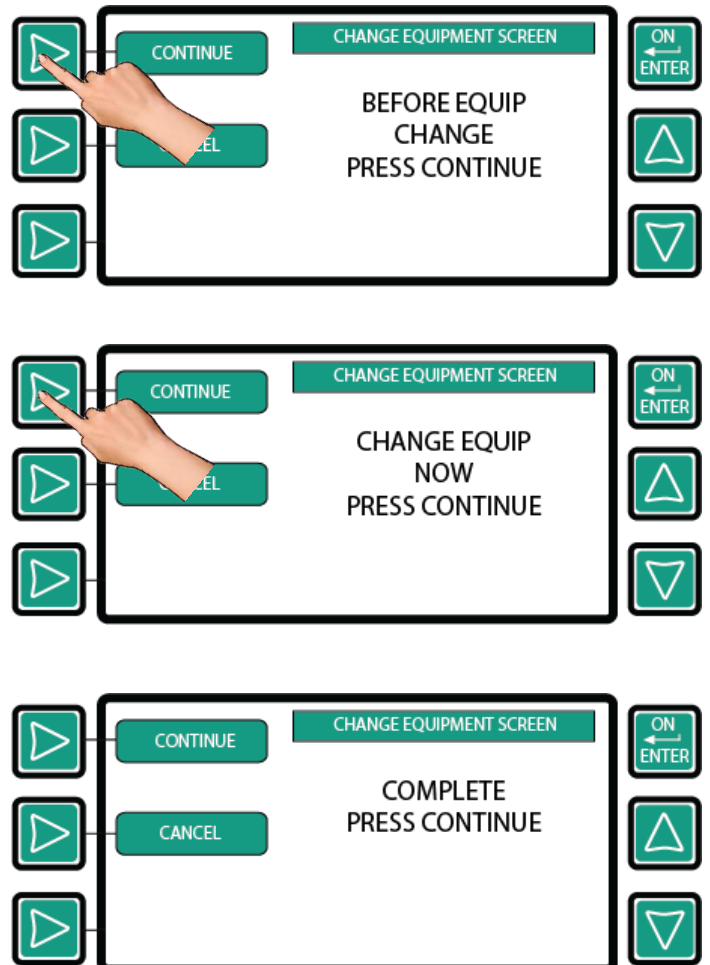
1. Press the UP/DOWN arrow buttons to scroll to the CHANGE EQUIPMENT option.
2. Press the ON/ENTER button to enter this menu option.

The Change Equipment Screen will now appear:

3. Press the Arrow key located next to the "CONTINUE" Option.
4. The bed will now take a "sanp shot" of the current weight reading
5. Once the "CHANGE EQUIP NOW PRESS CONTINUE" Message is display, make the desired equipment changes
6. Press the Arrow key located next to the "CONTINUE" Option.
7. The bed will now take a measurement of the weight of the equipment added or subtracted from the bed.

All further "Measure Weight" procedures will add (or subtract) the additional weight to the mass calculation. The Equipment change measurement will be stored in the systems memory until a ZERO SCALE is performed.

HINT: Use this feature when adding additional pillows and/or linen to the bed.



4.7.3 Priority & Nurse Call Settings

The Nurse Call and Priority Call alarms annunciated by the bed can be separated to meet the alarm notification needs of your healthcare facility.

Setting Priority & Nurse Call

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the PRIORITY CALL ON ALARM selection.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - PRIORITY + NURSE CALL
 - PRIORITY ONLY
4. Press the ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.

4.7.4 Obstruction Sensor Settings

In the rare event of component failure and/or malfunction, the obstruction sensor system can be disabled to restore bed functionality until the bed can be properly serviced

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the OVERRIDE OBS SENSORS selection.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
4. Press ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.



⚠ WARNING

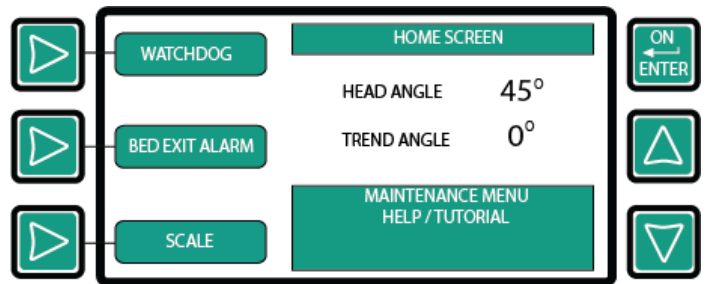
Disabling the obstruction sensors will disable a major safety device on the bed.

The obstruction sensors should only be disabled in the rare event that normal bed function has been impaired by the malfunction of a component in the obstruction sensing system. Immediate Servicing should be performed.

4.7.5 Head Angle Display

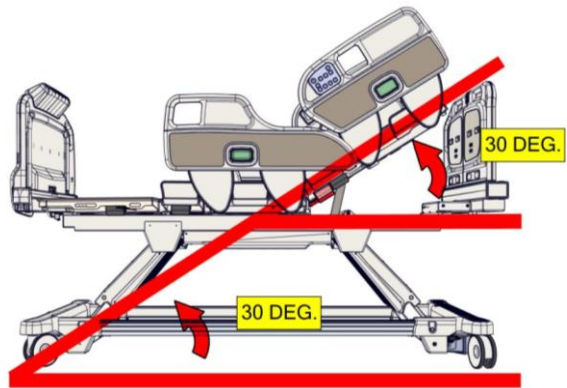
The Head Angle Display (from either the side rails or the LCD Screen) shows the angle of the head deck in relation to the deck frame.

When the bed frame is in the horizontal position, the bed frame is parallel with the floor. Under this normal operation, the true angle of the head deck is shown.



Displayed head angle when measured:

- FROM FRAME: 30°
- FROM FLOOR: 30°



However in a Trendelenburg, reverse Trendelenburg, or Chair position the bed frame is no longer in the horizontal position and the bed frame is now at an angle to the floor. In this case, the true head angle would be the Head Angle displayed, minus the Trend Angle (OR plus the Rev.Trend Angle).

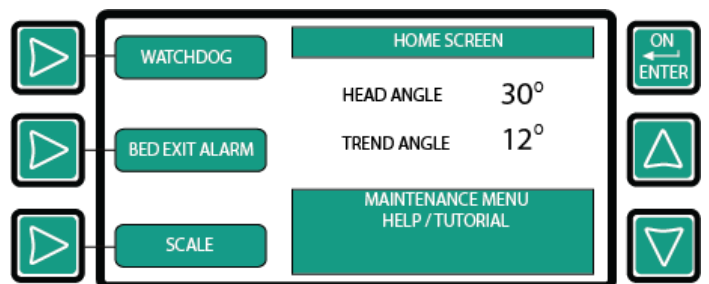
Bed in a 12° Trendelenburg angle used in this example

Displayed Head Angle:

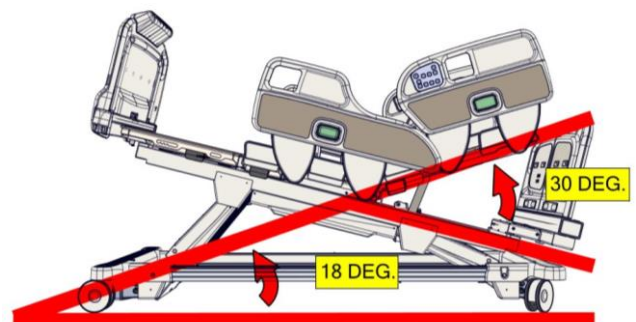
- 30°

When head angle is measured from the floor:

- 18°



Displayed head angle when measured FROM FRAME



4.8 Maintenance Menu

A Maintenance Menu is available on Spirit One™ beds. The Maintenance Menu includes menu options that are generally accessed when conducting scheduled maintenance. Also, the Maintenance Menu includes menu options that allow for the bed to be configured to work with the existing Nurse Call system in your healthcare facility. Additionally, in the rare event of component failure and/or malfunction, some of the bed's critical items can be disabled in the Maintenance Menu to restore partial bed functionality until the bed can be properly serviced.

IMPORTANT: To prevent unauthorized changes to bed settings, the Maintenance Menu can only be accessed after the access code has been successfully entered.

4.8.1 Inputting Access Code

An access code is required before staff is permitted to access the Maintenance Menu.

Entering the Access Code

CHG Hospital Beds Access Code: 825

To enter the access code:

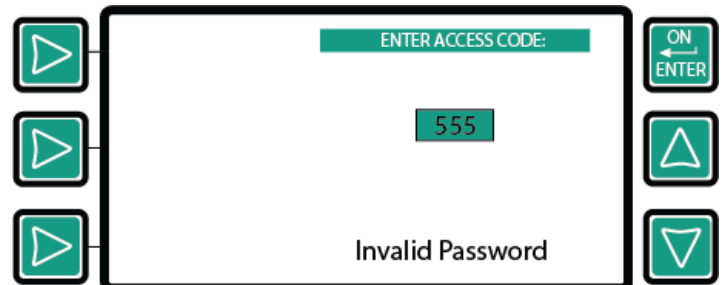
1. Use the UP/DOWN Arrow buttons to scroll to each respective number of the access code.
2. Press the ON/ENTER button to input each number of the access code. The cursor will automatically shift to the next number when the ON/ENTER button is pressed.
3. When **825** has been inputted, press the ON/ENTER button to enter the access code.

The Maintenance Menu is now unlocked. The first menu option in the Maintenance Menu will now be displayed.

The access code is not customizable

If at any time a mistake in entering the code is made, simply press the BACK button and repeat the procedure.

If an incorrect access code is entered, the LCD will display "Invalid Password". Starting at the first digit, simply re-enter the correct access code.



4.8.2 Priority & Nurse Call Settings

The Nurse Call and Priority Call alarms annunciated by the bed can be separated to meet the alarm notification needs of your healthcare facility.

Setting Priority & Nurse Call

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the PRIORITY CALL ON ALARM selection.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - PRIORITY + NURSE CALL
 - PRIORITY ONLY
4. Press the ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.

4.8.3 Disabling Foot Rail Release (if equipped)

In some cases, the side rail control of the foot rail release may be required to be disabled. At anytime the foot rail release may disabled to prevent unwanted use of the feature.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the DISABLE FOOT RAIL RELEASE selection.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
4. Press the ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.

4.8.4 Disabling CPR Rail Release (if equipped)

In some cases, automatic CPR side rail release function of the side rails may be required to be disabled. At anytime the CPR rail release may disabled to prevent unwanted use of the feature.

From the Maintenance Menu:

6. Press the UP/DOWN arrow buttons to scroll to the DISABLE CPR RAIL RELEASE selection.
7. Press the ON/ENTER button to enter this menu option.
8. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
9. Press the ON/ENTER button to make desired selection.
10. Press the BACK button to return to the home screen.

4.8.5 Obstruction Sensor Settings

In the rare event of component failure and/or malfunction, the obstruction sensor system can be disabled to restore bed functionality until the bed can be properly serviced

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the OVERRIDE OBS SENSORS selection.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
4. Press ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.



⚠ WARNING

Disabling the obstruction sensors will disable a major safety device on the bed.

The obstruction sensors should only be disabled in the rare event that normal bed function has been impaired by the malfunction of a component in the obstruction sensing system. Immediate Servicing should be performed.

4.8.6 Override Side Rail Sensors

The Side Rail positional sensors prevent the bed from being damaged if the bed is being lowered while one or all of the side rails are in the tuck position. The sensors also eliminate the possibility of a crush hazard by stopping the bed a safe distance from the floor clear of a pinch condition. In some maintenance situations, it may be necessary to disable the sensor to allow for CONTROLLED bed position.

From the Maintenance Menu:

11. Press the UP/DOWN arrow buttons to scroll to the OVERRIDE SIDE RAIL SENSORS selection.
12. Press the ON/ENTER button to enter this menu option.
13. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
14. Press the ON/ENTER button to make desired selection.
15. Press the BACK button to return to the home screen.



⚠ WARNING

Disabling the Side Rail Sensors will disable a major safety device on the bed.

The Side Rail sensors should only be disabled in the rare event that normal bed function has been impaired by the malfunction of a component. Immediate Servicing should be performed.



⚠ WARNING

Caution must be taken while positioning any Hi/Lo functionality of the bed (Up, Down, Trendelenburg, Reverse Trendelenburg or Chair positioning).

Serious injury or damage to the bed can occur when the Side Rail Sensors are disabled.

4.8.7 Override Deck Sensors

The Deck positional sensors prevent the bed from being damaged if the bed is being articulated while one or all of the deck sections are in the expanded position. The sensors help to ensure all deck sections are positioned at the same width.

From the Maintenance Menu:

16. Press the UP/DOWN arrow buttons to scroll to the OVERRIDE DECK SENSORS selection.
17. Press the ON/ENTER button to enter this menu option.
18. Press UP/DOWN arrow buttons to scroll through available selections:
 - NO
 - YES
19. Press the ON/ENTER button to make desired selection.
20. Press the BACK button to return to the home screen.



⚠ WARNING

Disabling the Deck Sensors will disable a major safety device on the bed.

The Deck sensors should only be disabled in the rare event that normal bed function has been impaired by the malfunction of a component. Immediate Servicing should be performed.

4.8.8 Set Transportation Mode

Transportation mode disengages the battery from the Mains Power circuit. It is important to set the Transportation Mode to "Enabled" during long periods of storage, transporting the bed between facilities or performing any servicing on the beds electrical components.

From the Maintenance Menu:

1. Press the UP/DOWN arrow buttons to scroll to the SET TRANSPORTATION MODE option.
2. Press the ON/ENTER button to enter this menu option.
3. Press UP/DOWN arrow buttons to scroll through the items that can be configured.
 - DISABLED
 - ENABLED
4. Press ON/ENTER button to make desired selection.
5. Press the BACK button to return to the home screen.



⚠ WARNING

Before beginning any service work on the Spirit One electrical components, ensure that Transportation Mode has been set to ENABLED.

Failure to properly set TRANSPORTATION mode may result in Serious Injury.

NOTE:

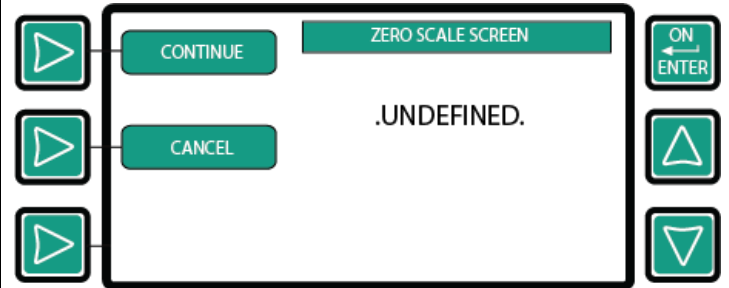
Contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446 for further assistance.

4.9 Calibration

The scale and/or bed angle must be calibrated if any/all of the load cells, actuators or control boxes have been replaced. The scale calibration procedure must be completed before the the bed can be fully operational. Additionally, until the scale has been calibrated, the scale, and/or any feature that uses the scale will not be available.

IMPORTANT: To ensure optimal scale performance CHG Hospital Beds strongly recommends calibrating the bed angle if any major bed component (ie, Hi-Lo actuators, leg actuators, leg assemblies, frame component, caster assembly, etc) has been replaced.

In most instances, calibration must be initiated by staff. However, if the scale control box or load cells have been replaced, the scale calibration process will automatically be prompted when the bed is first powered up. The LCD display will show the following message when any Scale action is attempted.



NOTE:

A scale or bed angle calibration attempt may be abandoned at any time. Simply press the BACK button at any time to return to the home screen The scale and bed angle calibration will, respectively, revert to their previous calibration settings.

4.9.1 Scale Calibration

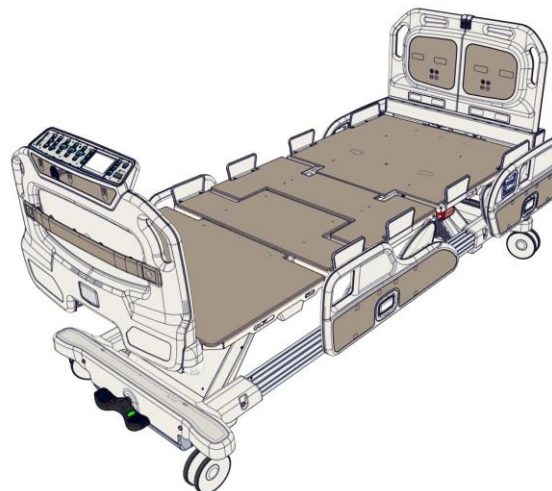
Preparing the Bed for Scale Calibration

Before beginning a scale calibration ensure all rails have been lowered to the down position to allow greater access to the mattress platform.

Ensure the mattress deck has been collapsed to the 36" mattress deck position to allow weights to be positioned directly over the load cells.

The Spirit One™ bed may shift during weight positioning/repositioning. Ensure the Central "Lock & Steer" system has been put in the "BRAKE" position.

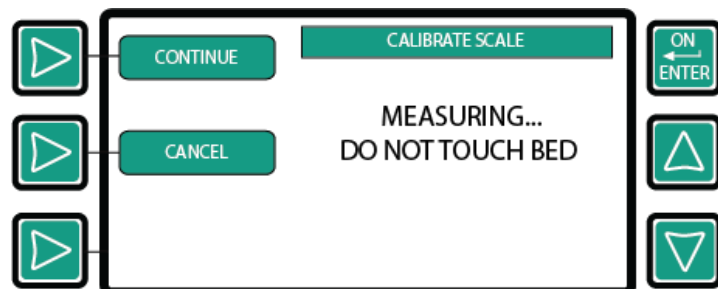
Raise/Lower bed to a comfortable working height.



You will now be instructed to remove all weight from the mattress platform. Once complete, press the CONTINUE button when you are ready to begin the scale calibration procedure.



In between each step, the screen will inform the user it is currently registering the measurement. During this period, it is important to not disturb the bed. Ensure the bed is free and clear of all obstructions to ensure a proper weight reading.



NOTE:


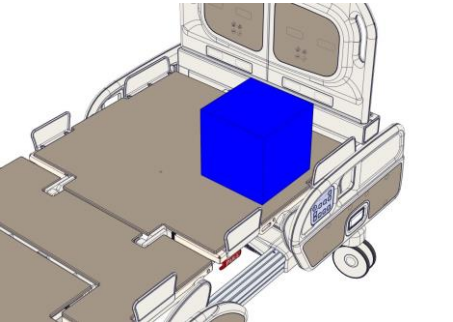

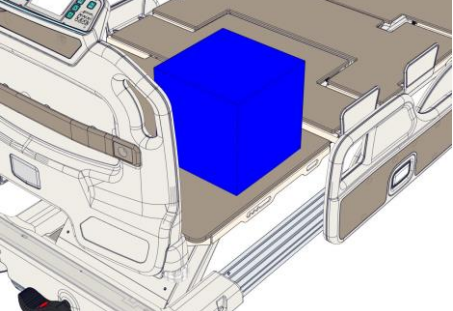
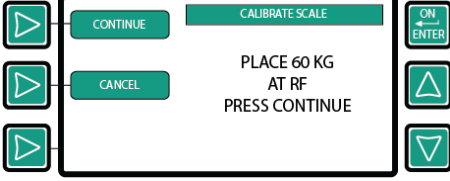
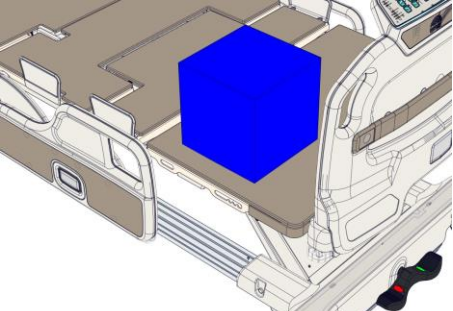

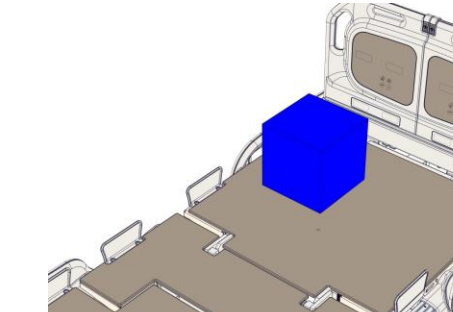

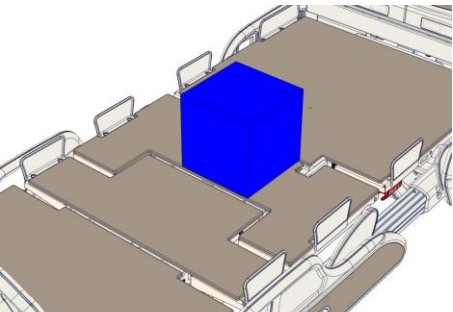
Using that exact total sum of calibration mass is essential to ensure the accuracy of the scale. CHG Hospital Beds recommends the use of certified calibration weights when performing scale calibration. If your healthcare facility does not have certified test masses, enlist the service of an accredited calibration laboratory/service to perform scale calibration. Ensure that the calibration laboratory/service has been accredited by Measurement Canada (or equivalent "weights and measures" certifying body/agency).

NOTE:

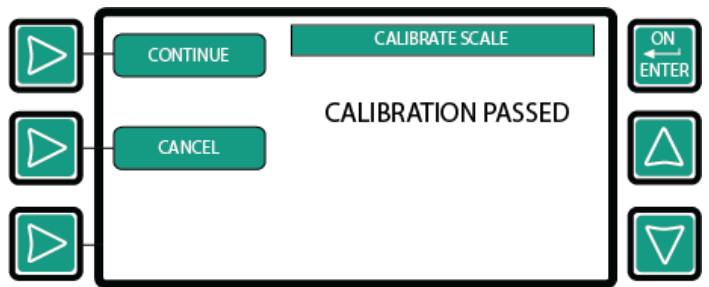
A scale is most accurate and delivers superior repeatability when it has been calibrated within the range that the scale is expected to typically operate. For this reason, the Spirit One bed uses 60kg (132 lbs) to calibrate the scale.

Scale Calibration Procedure

IMPORTANT: Position the calibration masses as shown below. These positions will locate the calibration masses directly over each respective load cell. This will produce the best calibration results.

<p>1. Place calibration masses at the patient left, head end of the bed. Press CONTINUE when the weights are in correct position.</p>		
<p>2. Place calibration masses at the patient left, foot end of the bed. Press ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.</p>		
<p>3. Place calibration masses at the patient right, foot end of the bed. Press ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.</p>		
<p>4. Place calibration masses at the patient right, head end of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.</p>		
<p>5. Place calibration masses at the centre of the bed. Press ON/ENTER button when the weights are in correct position. A confirmation "chirp" will sound to indicate that this step was successful.</p>		

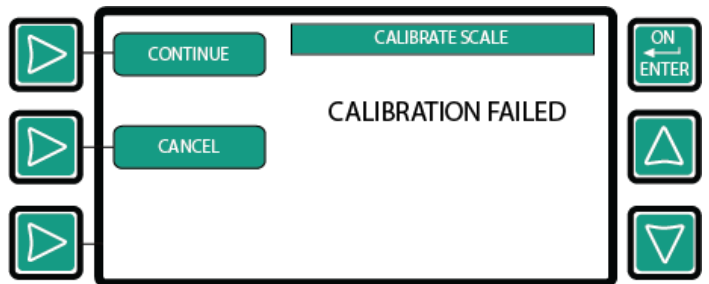
6. After successful completion of the calibration procedure, a message will be displayed. Press ON/ENTER button to continue.
- The scale has now been successfully calibrated and the bed is now ready for use.



If the bed detects a problem during any stage of the scale calibration procedure, a warning message will be displayed.

- Press the ON/ENTER button to acknowledge calibration procedure failure.
- The LCD display will automatically return you to the home screen.

IMPORTANT: If the calibration procedure fails a second time, the bed may require service and/or component replacement.



⚠ WARNING

The Spirit One™ bed may shift during weight positioning/repositioning.
Ensure the Central "Lock & Steer" system has been put in the "BRAKE" position.

Section 5:

Care & Maintenance

5.1 Regular Maintenance & Cleaning

Very little maintenance is required to keep the Spirit One™ bed in good working order.

CHG Hospital Beds recommends that bed inspections be conducted as per 5.1.2, 5.1.3 and 5.1.4 of this section, or more frequently if so specified by the facility procedures and practices.

All metal components are power coat painted and therefore are protected from corrosion. In the event that the paint become scratched or chipped, use a matching enamel touch up paint. Refer to page 90 for paint specifications.



⚠ CAUTION

Equipment or property **DAMAGE** or patient **INJURY** may occur if the following are not followed:

DO NOT submerge the bed frame or electrical parts. **DO NOT** allow liquids to enter electrical components. If a liquid is spilled in or around the bed, unplug the bed before cleaning. Clean up the spill and allow the bed and/or the area around the bed to dry thoroughly before using the controls again.

DO NOT open assemblies such as actuators, control boxes, battery, or other electrical equipment. These parts are not serviceable. Only service technicians, specifically trained to service Spirit One™ beds, should attempt to service bed and/or replace electrical or other components.

Before the bed is returned to active service after any adjustment, repair, and/or service have been performed, **ALWAYS** ensure that all attaching hardware is tightened securely.

5.1.1 Cleaning & Disinfection

CHG Hospital Beds recommends that all cleaning/disinfection be performed by hand using a non-abrasive cloth, sponge, and/or manual spray/squirt bottle. **ALWAYS** follow industry best practices for all cleaning and/or disinfection operations. **ALWAYS** reference the manufacturers' MSDS information for all cleaning/disinfection solutions prior to use.

IMPORTANT: The Spirit One™ bed is not rated for spray and/or pressure washing or steam cleaning/sterilization. Using non-recommended cleaning/disinfecting solutions, and/or not following recommended handling directions and/or industry best practices may cause damage to the bed's painted finish, bed components, and/or may result in premature mattress failure.

Cleaning

All Spirit One™ bed surfaces and the CHG Prevention Surface mattress cover may be cleaned with soapy water and/or other non-abrasive cleaners. **NEVER** use solvents, petroleum products, and/or other harsh chemicals to perform any cleaning operation.

Disinfection

All Spirit One™ bed surfaces and the CHG Prevention Surface mattress cover may be disinfected with ethanol or isopropyl alcohol, and/or Mikro Quat™ (or equivalent cleaning solution). Sodium Hypochlorite (liquid bleach) may also be used to disinfect the Spirit One™ bed and the CHG Prevention Surface mattress cover.

Maximum Recommended Sodium Hypochlorite Concentration: 0.5 or 5,000 ppm

To disinfect the Spirit One™ bed, saturate an application cloth with disinfecting solution and wipe surface(s). Using another cloth saturated with potable (tap) water, rinse disinfected surface(s) and wipe dry. **DO NOT** allow the disinfecting solution to pool and/or reside on surface(s) for extended periods of time. Exceeding the maximum recommended concentration and/or using non-recommended disinfecting solutions may cause damage to the bed's painted finish, bed components, and/or may result in premature mattress failure.

5.1.2 Semi Annual Inspections

Control Location Inspection

Perform all bed functions from all control locations: footboard staff control, patient/staff siderail controls, and pendant (if equipped).

Battery Inspection

Confirm the following:

- Bed is plugged into an AC power outlet.
- The power status indicator has **ONLY** a solid Green AC light.

If other light are on/flashing, refer to pages 53 and 54 for instructions and take appropriate action before continuing with inspection.

Unplug the bed from the AC power outlet and perform all bed functions, including emergency functions, to test bed operation under battery power.

This will verify that the battery is holding a proper charge sufficient to deliver emergency functions when needed. Replace battery if performance is inadequate.



⚠ WARNING

Potential **ELECTROCUTION** risks exist while changing and/or servicing the battery circuit.

Possible **ELECTRIC SHOCK Hazard** exists when servicing bed and/or replacing electrical components.

Only service technicians, specifically trained to service CHG Hospital Beds Spirit One™ beds, should attempt to service bed and/or replace electrical components.

Perform an inspection of all obstruction sensor pads to ensure that they are in good working order and continue to operate properly.

Obstruction Sensor Inspection

Ensure that contact at any point on each of the seven obstruction sensor pads stops all downward bed motion.

Ensure that the bed automatically elevates the 1" safety distance.

Ensure audible and visual warnings are present as described on page 62

Replace any obstruction sensor pad that fails to operate correctly or consistently.

5.1.3 Yearly Inspections & Maintenance

Inspect the bed for broken, bent, or damaged components and replace. Check for damaged components that may present a hazard due to sharp edges.

Inspect for damaged or loose wiring. Have qualified service personnel, specifically trained to service Spirit One™ beds, replace any frayed or damaged cords and/or secure any loose wiring.

Inspect the control boxes and actuators to ensure that the enclosures are not cracked or damaged.

Inspect the footboard staff control, and side rail controls to ensure that the overlays covering these controls are not cracked or damaged.

Inspect all grounding wires and equipotential conductor. Ensure they are securely fastened to the bed

frame.

Tighten, adjust and/or replace any parts or screws, bolts, clevis/hitch/cotter pins, etc. that are loose or show signs of wear.

Perform annual verification of the scale. A scale in proper working order should only require a calibration immediately following the replacement of one or more load cells and/or specific control boxes. Refer to page 94 for scale calibration instructions.

Perform inspection of side rails to ensure that they are in good working order and continue to operate properly.

Side Rail Inspection

Ensure that each side rail fully and smoothly rotates from the TUCK position to the UP position. Ensure that no binding and/or grinding noises are caused when the side rails are rotated. If a side rail fails to rotate fully and smoothly, service and/or replace side rail assembly.

Ensure that the locking/latching mechanism reliably self-engages when the side rails are fully rotated to the DOWN and UP positions. If locking/latching mechanism fails to reliably self-engage service and/or replace side rail assembly.

Ensure that the locking/latching mechanism completely disengages when the PRESS button is depressed permitting the side rails to fully rotate to the DOWN or TUCK positions. If locking/latching mechanism fails to completely disengage service and/or replace side rail assembly.

If your bed is equipped with the optional Electronic Foot Side Rail Release feature, in addition to the above, ensure that the electronically actuated unlocking/unlatching mechanism completely disengages, when the **"FOOT RAIL/PRESS 3X"** button is pressed 3 times. If electronically actuated locking/latching mechanism fails to completely disengage service and/or replace side rail assembly.

IMPORTANT: Special service instructions are required to service/replace these foot side rail assemblies. Contact CHG Hospital Beds' Customer Service for further details and special service instructions prior to performing any/all service activities on these foot side rail assemblies. Component damage may occur if service is attempted without special service instructions.



⚠ WARNING

Patient entrapment within, under, between, and beside side rails may cause injury or death. Ensure only specified mattress (minimum 6" thick) is used on bed. Ensure that mattress is in good condition and maintains proper resilience. If mattress is exhibiting any signs of wear (ie: reduced cross sectional thickness, reduced resilience, etc.) stop use immediately and replace mattress to limit patient exposure to a potential rail entrapment situation.



⚠ WARNING

To help minimize the potential for patient entrapment, CHG Hospital Beds recommends that the customer perform thorough inspection of all side rail assemblies to confirm continued compliance to IEC 60601-2-52 by conducting annual examinations of each side rail assembly to test described in IEC 60601-2-52, Amendment 1, Clause 201.9.1.101. If testing results indicate a potential risk of patient rail entrapment, discontinue patient bed use and remove the bed from active service immediately.

NOTE:

To ensure scale accuracy, use only ASTM, OIML, NIST (or equivalent) certified test masses when performing scale calibration. If your healthcare facility does not have certified test masses, enlist the service of an accredited calibration laboratory/service to perform scale calibration. Ensure that the calibration laboratory/service has been accredited by Measurement Canada (or equivalent "weights and measures" certifying body/agency).

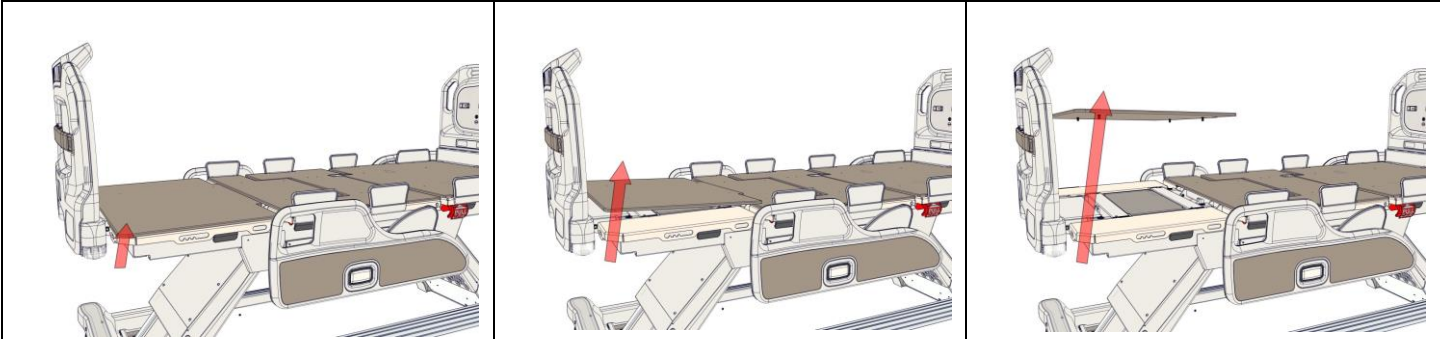
NOTE:

Calibrating the bed angle is the first step of scale calibration. If the scale has just been calibrated or is about to be calibrated, there is no particular reason to calibrate the bed angle as a separate step.

5.2 Mattress Deck Removal/Attachment

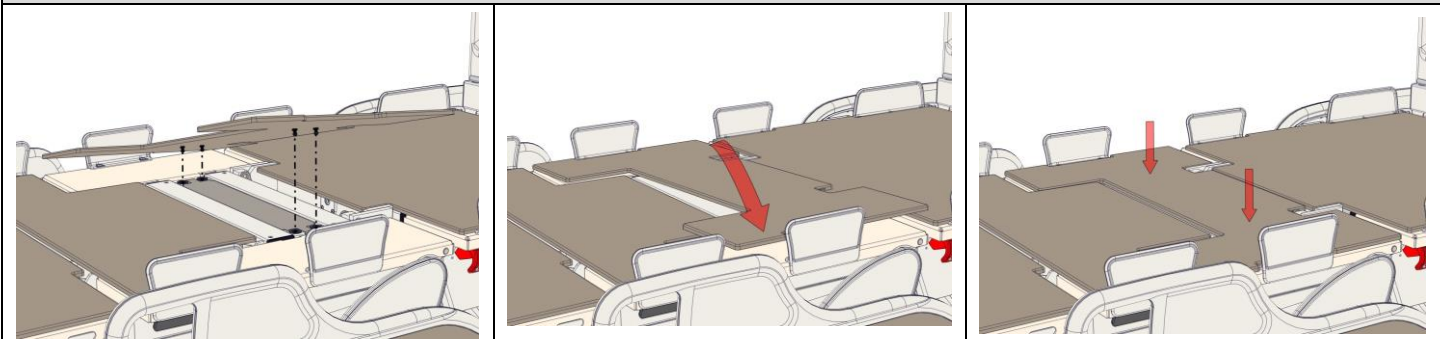
All four sections of the plastic mattress deck can be detached for thorough cleaning, sanitization, and maintenance. All deck sections are removed and reattached using the same process.

Removal of Deck Sections (Foot Deck Shown)



Firmly grab any corner of the plastic deck cover. Lift cover away from bed frame – some force may be required. Deck cover will “snap” away from bed frame as retention studs disengage from the couplers.

Attachment of Deck Sections (Seat Deck Shown)



Set plastic deck cover onto desired frame section. Align retention studs with mating couplers. “Snap” studs into couplers with a quick forceful strike over the general location of the retention studs. Gently pull on corner of plastic deck cover to ensure retention studs have made a positive lock (deck cover should not remove).

5.3 Before Calling The Factory

To ensure prompt and accurate attention to your concerns please have the following information available before you call:

Spirit One™ Bed Service Call Information	
Your facility's phone number: <i>(Where you can be reached):</i>	
Your facility's fax number <i>(If Available):</i>	
Bed(s) Model and Type:	
Bed(s) Serial Number	
Date of Purchase:	
List of defective part(s) <i>(Identify by part number, or describe relative to nearest numbered part):</i>	
List of deficiencies or Type of problem:	

NOTE:

CHG Hospital Beds' determination of the "Patient Left" and the "Patient Right" side of the bed is made from the patient's point of view while positioned normally on the bed facing up.

If you have carefully followed all of this instructions contained in this manual, you should expect many years of trouble free service. If you're not 100% satisfied with your bed, please call your sales representative or the factory immediately.

It's always better to ask if you have any questions such as part replacement procedures, performing electrical service and/or modifications, or continuing to use a bed that has been damaged and/or is exhibiting signs of minor damage. These activities could lead to more serious consequences such as potential injury to patient and staff and/or equipment damage.

If you require further information regarding circuit diagrams, component part lists, descriptions etc. please contact CHG Hospital Beds' Customer Service.

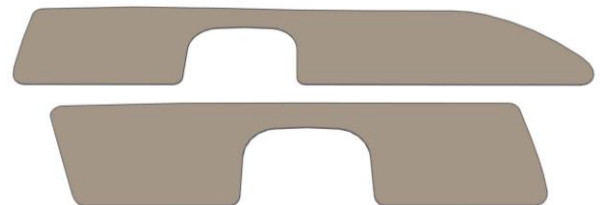
Call CHG Hospital Beds Inc. at (519) 963-4010 or Toll Free 1 (866) 516-5446.

Mailing Address: CHG Hospital Beds Inc.
1020 Adelaide Street South
London, Ontario
Canada
N6E 1R6

5.4 Colour Information

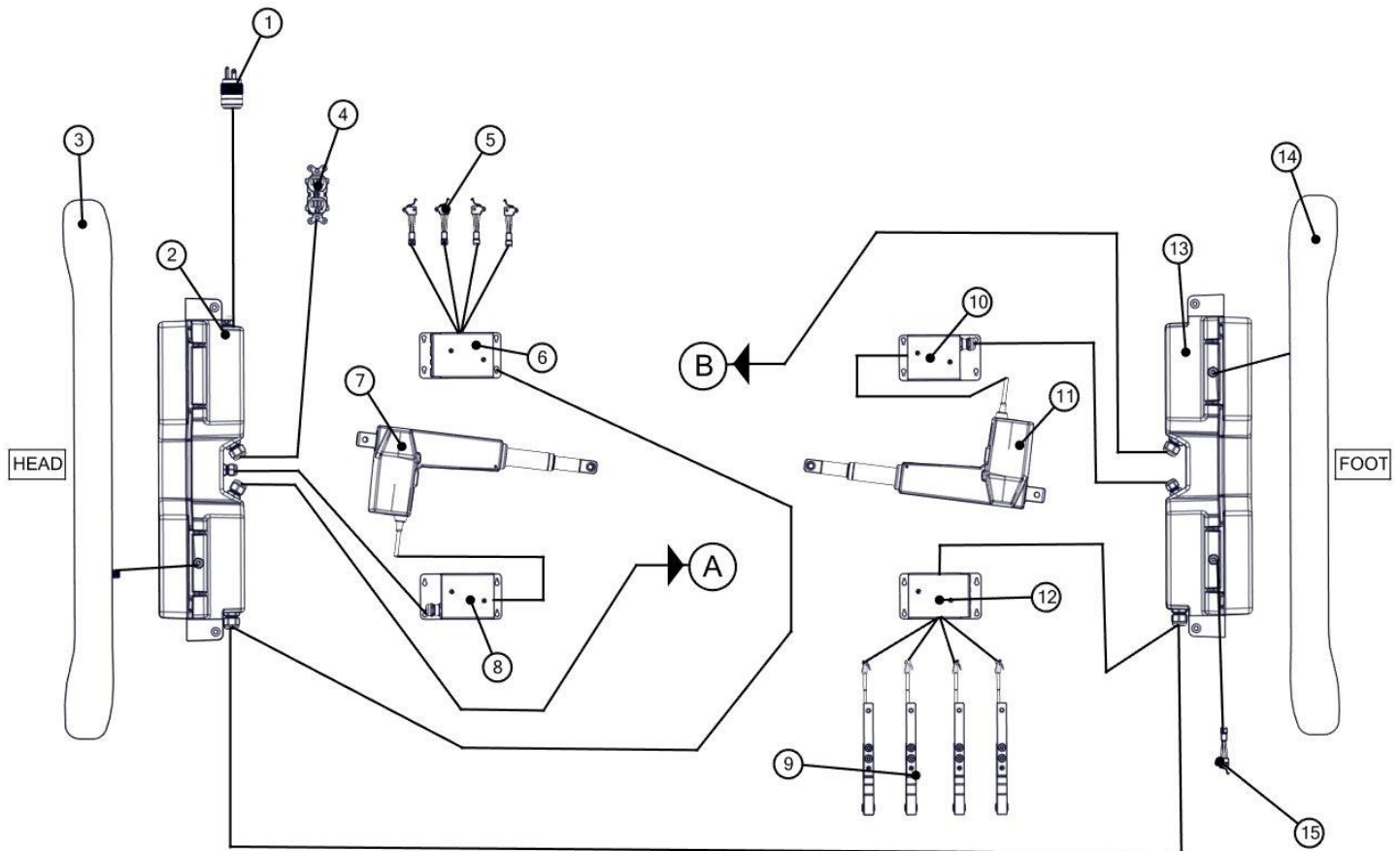
In the rare event that the painted finish on your Spirit One™ bed becomes chipped you will require touch up paint. CHG Hospital Beds uses RAL 9002 MID GLOSS.

Your Spirit One™ bed comes with coloured inlay on the siderail assemblies and on the headboard/footboard assembly. If these become damaged and require replacement, please contact CHG Hospital Beds' Customer Service to ensure that you receive matching inlays.



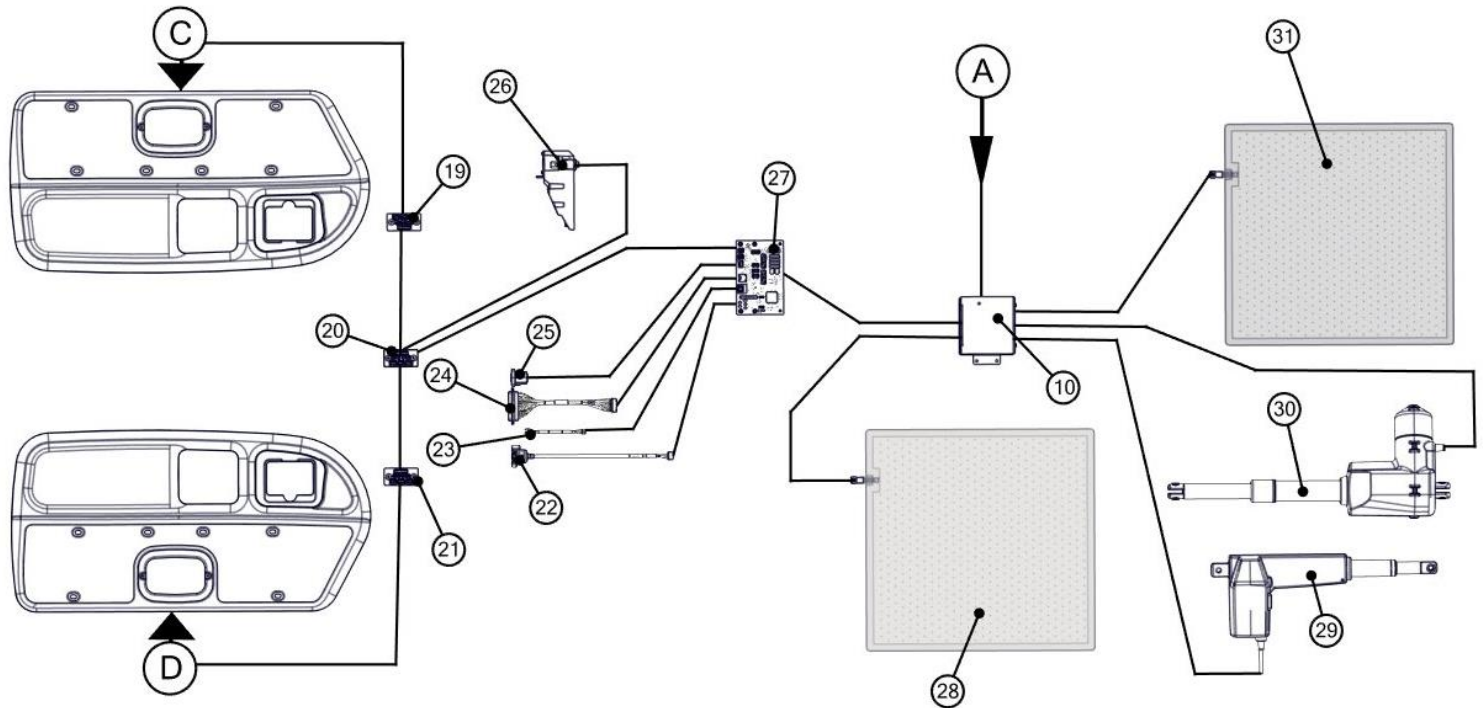
5.5 Schematic and Technical Diagrams

5.5.1 Lower Frame Electrical Schematic



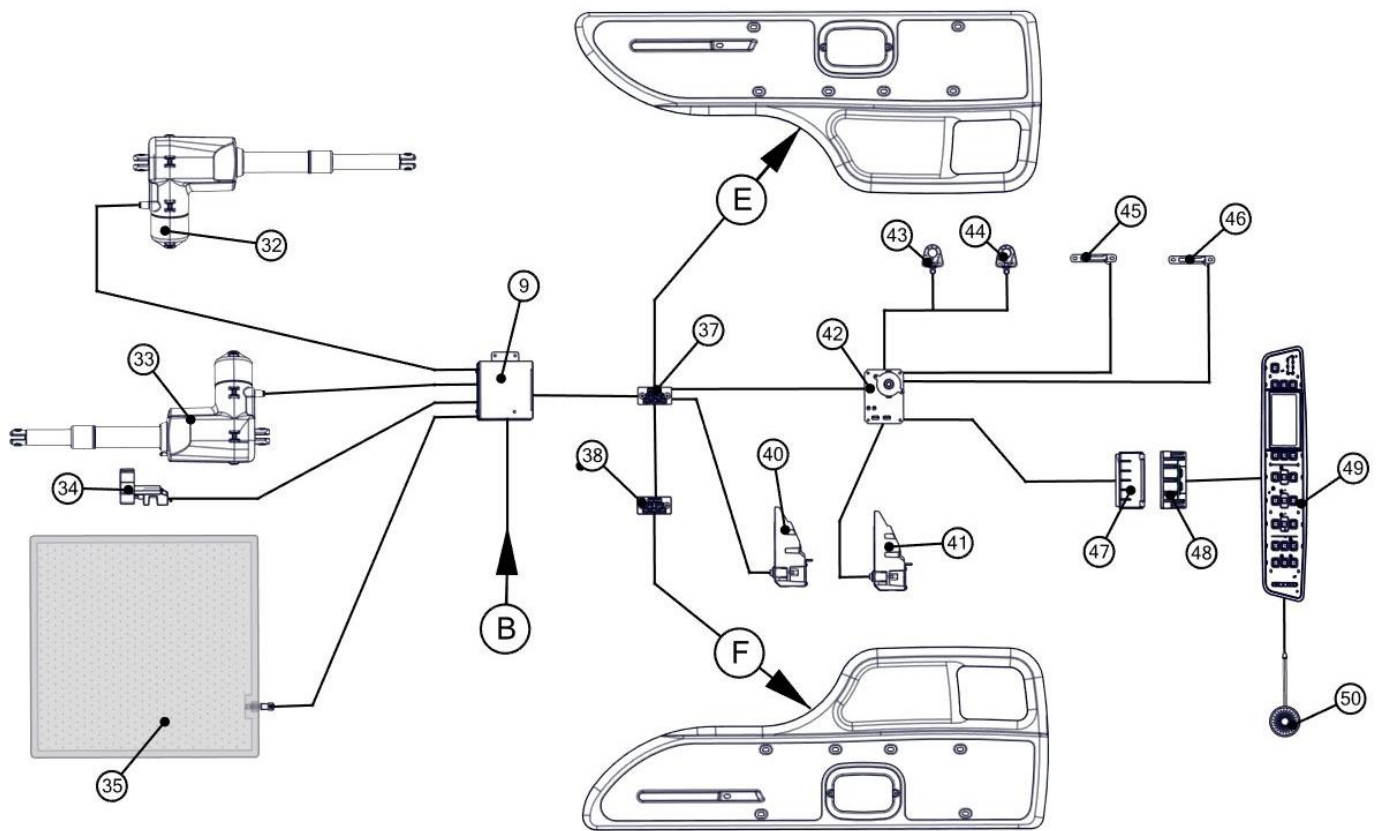
ITEM	DESCRIPTION
1	Mains AC Supply Cable
2	Head End Electrical Enclosure
3	Head End Caster Cover Obstruction Sensor
4	Auxiliary Mains AC Outlet
5	Lower Frame Obstruction Sensor Switch (x4)
6	Obstruction Sensor Enclosure
7	Head End LA31 Leg Actuator
8	Head End Lower Actuator Enclosure
9	Load Cell (x 4)
10	Foot End Lower Actuator Enclosure
11	Foot End LA31 Leg Actuator
12	Load Cell Enclosure
13	Foot End Electrical Enclosure
14	Foot End Caster Cover Obstruction Sensor
15	Brake Switch

5.5.2 Upper Frame Electrical Schematic – Head End Path



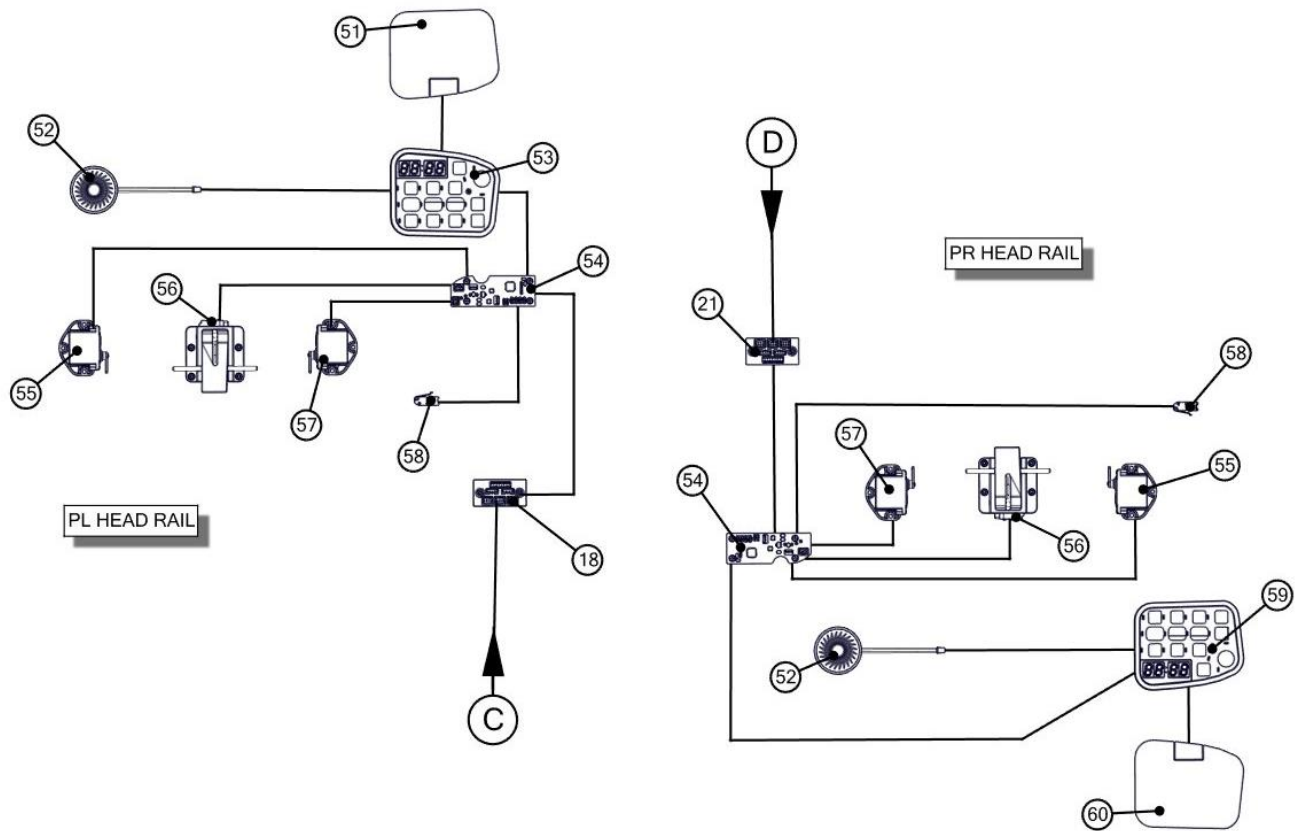
ITEM	DESCRIPTION
10	PR Actuator Input/Output Module
19	PL Head Rail Ribbon Cable Junction Board
20	Inner Junction Board
21	PR Head Rail Bracket Junction Board
22	USB Jack Cable
23	1/4" Nurse Call Jack Cable
24	DB37 Nurse Call Jack Cable
25	RJ45 Jack Cable
26	Head Deck Position Sensor
27	Master Control Unit
28	Skid Plate Obstruction Sensor
29	Knee Actuator
30	Foot End Hi/Lo Actuator
31	Foot End Leg Obstruction Sensor

5.5.3 Upper Frame Electrical Schematic – Foot End Path



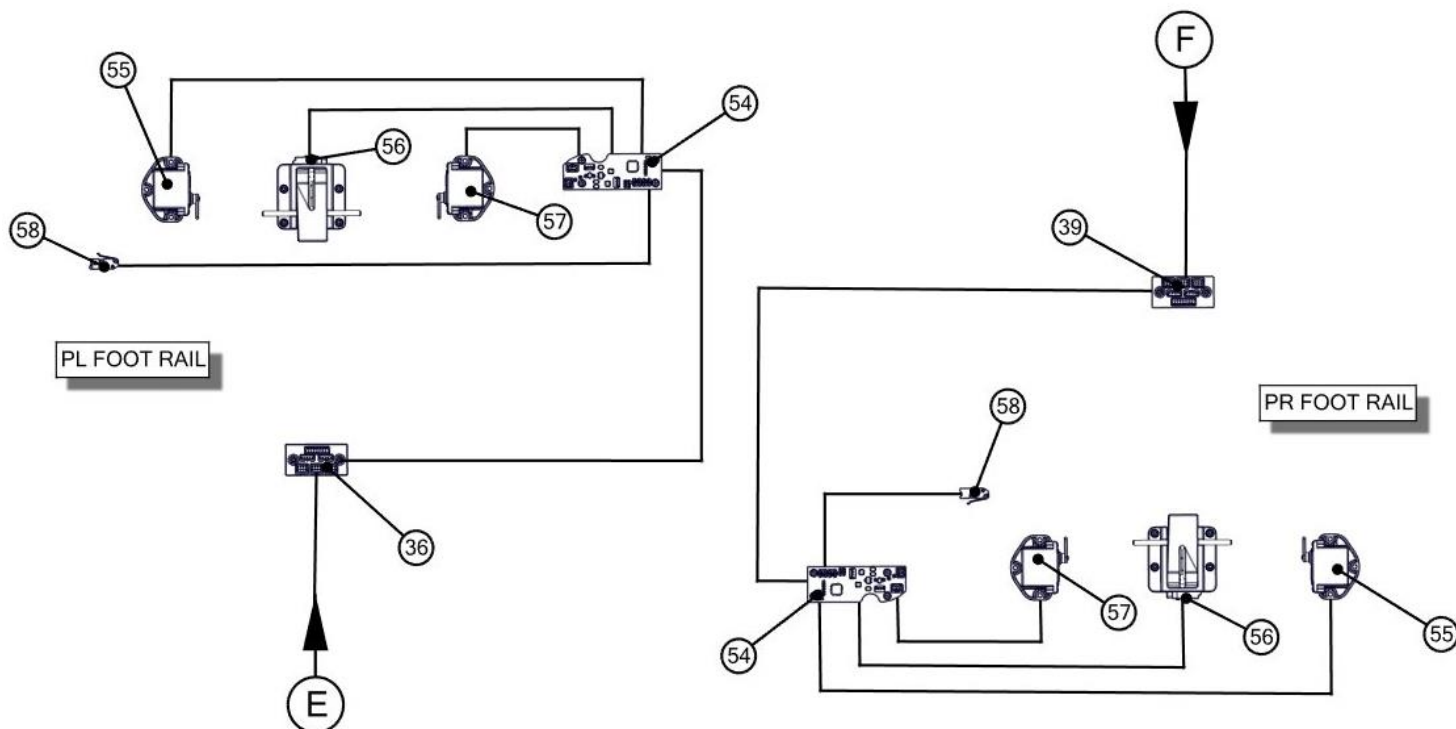
ITEM	DESCRIPTION
9	PR Actuator Input/Output Module (IOM)
32	Head End Hi/Lo Actuator
33	Head Actuator
34	CPR Switch
35	Head End Leg Obstruction Sensor
37	Inner Junction Board
38	PR Foot Rail Ribbon Cable Junction Board
40	Seat Deck Position Sensor
41	Foot Deck Position Sensor
42	A/V Board
43	Watchdog Bumper Light - PL
44	Watchdog Bumper Light - PR
45	Underbed Light - PL
46	Underbed Light - PR
47	Footboard Bracket Blindmate Connector – Female
48	Footboard Blindmate Connector - Male
49	Footboard Staff Control
50	Footboard Speaker

5.5.4 Head Rails Electrical Schematic



ITEM	DESCRIPTION
18	PL Head Rail Bracket Junction Board
21	PR Head Rail Bracket Junction Board
51	PL Nurse Controls
52	Head Rail Speaker
53	PL Patient Controls
54	Rail Input/Output Module
55	Rail Arm Electronic Release Servo - RH
56	Rail Arm Latch Switch
57	Rail Arm Electronic Release Servo - LH
58	Rail Position Switch
59	PR Patient Controls
60	PR Nurse Controls

5.5.5 Foot Rails Electrical Schematic



ITEM	DESCRIPTION
36	PL Head Rail Bracket Junction Board
39	PR Head Rail Bracket Junction Board
54	Rail Input/Output Module
55	Rail Arm Electronic Release Servo - RH
56	Rail Arm Latch Switch
57	Rail Arm Electronic Release Servo - LH
58	Rail Position Switch

5.6 Service Parts

For any and all service inquiries, please contact CHG Hospital Beds' Customer Service at (519) 963-4010 or toll free 1-866-516-5446.