



BASIC AMERICAN
MEDICAL PRODUCTS

MATRIX™
SERIES

Matrix 4000 SERIES



*SHOWN AS STANDARD WIDTH
WITH OPTIONAL PEDAL LOCK AND
ADVANCED POSITIONING (APS)
FEATURES*

INSTRUCTIONS FOR USE SERVICE MANUAL

*To avoid personal injury or damage to bed,
read all sections pertaining to the bed model before use.*

FDA Recognized Standard:
ANSI/AAMI STD ES60601-1;

Health Canada Recognized Standard:
CAN/CSA C22.2 No. 60601-1 (IEC 60601-1:2012-Ed.3.1)

Includes International Standards:
IEC 60601-1, IEC 60601-2-52



**This Manual covers the Matrix 4000 Series with Standard and Advanced Positioning (APS), Standard Casters and Pedal-Lock option, for 35" and 42" Wide beds.
The Matrix 4000 Series is designed for Adult Patient and Caregiver use.**



BASIC AMERICAN
MEDICAL PRODUCTS

Basic American Medical Products
336 Trowbridge Drive
Fond du Lac, WI 54937

For Matrix 4000 Series Bed service parts,
contact our Customer Service Department
at 770-368-4700

Manufactured by:
GF Health Products, Inc.
2935 Northeast Parkway
Atlanta, GA 30360
www.grahamfield.com

Made in the USA

To order a Matrix 4000 Series bed or accessories,
contact a GF Health Products, Inc. sales representative
at 770-368-4700

IMPORTANT NOTICE

GF Health Products, Inc. is not responsible for typographical errors. All illustrations, specifications, packaging, and warranties contained in this Service Manual are based on the latest product information available at the time of printing and are subject to change. The most current product information can be found online at www.grahamfield.com.

Follow us on [in](#) [f](#) [v](#).

Check all parts for shipping damage and test before using.
In case of damage, DO NOT USE.



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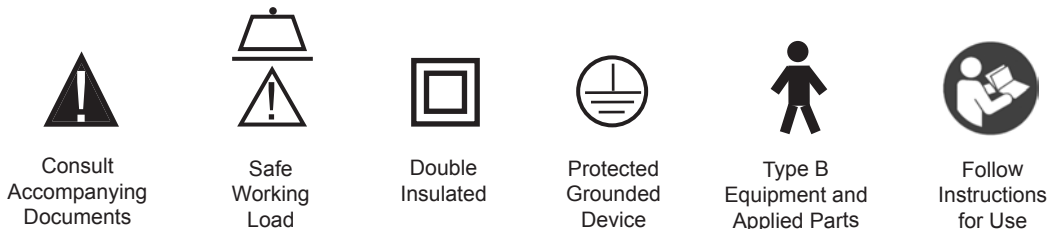
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IMPORTANT SAFETY AND WARNING INFORMATION



This product is a variable height, adjustable mattress platform. The expected service life of this product is fifteen years. Beds manufactured by Basic American Medical Products are designed for use within an institutional healthcare environment (i.e. assisted living, skilled nursing, transitional care, rehabilitation care, Environment (3), as defined in IEC60601-2-52 Safety Standard.).



The maximum safe working load for the Matrix 4000 series bed, including bedding, resident / patient, support surface, and accessories, is 450 lb (204.1 kg), with weight evenly distributed, and maximum patient weight is 400 lb (181.4 kg). Accessory weights follow:

ACCESSORY	DESCRIPTION	WEIGHT
ZA90000	84" Extension Kit, Standard Width	12 lb (5.4 kg)
ZA90200	84" Extension Kit, Wide	14 lb (6.4 kg)
ZA90100	Trapeze Adapter	13 lb (5.9 kg)
ZA78100	Trapeze	16 lb (7.3 kg)
ZA78400	Half Counter-Rotating Assist Device (Set of 2)	21 lb (9.5 kg)
ZA80300	Fixed Assist Bar, Head	6 lb (2.7 kg)
ZA85500	Pivoting Assist Bar	10 lb (4.5 kg)



WARNING: To avoid risk of electric shock, this equipment must be connected to a supply mains with protective earth (i.e. a grounded outlet).



DO NOT open assemblies such as the Actuators, Hand Control Pendant, or Control Box. If unauthorized personnel perform work on these components, the manufacturer's warranty becomes void.



DO NOT use unauthorized parts, accessories, or adapters other than those specified / authorized by GF Health Products, Inc.



When operating the HI/LO, Knee, or Back Functions of the bed, **ALWAYS** ensure the confined individual is positioned properly within the confines of the bed. **DO NOT** let any extremities protrude over the side or between the bed rails when performing these functions.



The bed should be lowered to lowest position when resident is left unattended. **DO NOT** lower the bed when objects are beneath it. Failure to inspect under the bed can result in personal injury or property damage.



The bed's Hand Control Pendant Cable **MUST BE ROUTED AND SECURED PROPERLY** to ensure it does not become entangled and eventually severed during use. Also ensure electrical cords **DO NOT** get tangled around the bed, side rails, or legs during transport or normal operation of the bed.



When using nasal-type or masked-type administering equipment, all oxygen or air tubing **MUST BE ROUTED AND SECURED PROPERLY** to ensure the tubing does not become entangled and eventually severed during the normal operation of the bed.



Keep all moving parts free of obstructions (i.e. blankets / sheets, heating blankets / pads, wiring, etc.).



DO NOT use the assist devices as push handles for moving the bed. Assist devices can be deformed or broken if excessive side pressure is exerted. Assist devices are not meant for patients considered high risks for entrapment (i.e. patients with pre-existing conditions such as confusion, restlessness, lack of muscle control, altered mental status, either organic or medicinal, or a combination thereof). Additional safety measures should be considered for such high-risk patients.



NEVER permit more than one person on / in the bed at any time.



Body weight should be evenly distributed over the sleeping surface of the bed. **DO NOT** allow the patient to lie, sit, or lean in such a way that their entire body weight is placed only on the raised head or foot section of the bed. This especially applies when repositioning or transferring a patient in or out of the bed. Increased risk may occur when the patient's size and / or weight are inappropriate for the bed's dimensions or weight capacity.



Risk of entanglement or injury may occur if the mattress used with mattress retainers does not fill the entire width between stops or which compresses to less than 1.50 inches under user's weight.



Mattress must be properly sized to fit the mattress support platform and must remain centered on the support platform relative to State and Federal guidelines. Recommended minimum dimensions of mattress are 35 inches wide and 6 inches deep. Length and width should match the mattress support platform. Use of an improperly fitted mattress could result in injury or death. Standard mattresses are 35 inches wide and 6 inches deep, and wide mattresses are 42 inches wide and 6 inches deep.



IMPORTANT SAFETY AND WARNING INFORMATION



IMPORTANT: Powered air mattress surfaces may pose a risk of entrapment. Prior to use, ensure the therapeutic benefits outweigh the risk of entrapment.



The bed is intended for use within a temperature range of 10°C to 40°C. It has a water resistance rating of IPX4 and IS NOT to be power washed or submerged. The bed may be cleaned as needed using an appropriate dilution of mild soap and water.



The head / back and knee / foot decks can be lifted freely by hand for easy cleaning access when patients are not in the bed. If you lift the head / back or knee / foot deck for any reason, take great care when lowering back down to the prone position - ensure all body parts are clear of the space between the deck and the bed prior to slowly lowering any deck manually. To avoid injury, **DO NOT LET DECKS FALL FREELY FROM ANY ANGLE.**



Notice for California Customers - California Proposition 65 **WARNING:** This product contains a chemical known to the State of California to cause cancer and reproductive or developmental harm.



WARNING: ALWAYS position bed so that the power cord and plug are easily accessed.



Proper routing and tie-off of electrical cabling, especially the power cord, is essential for proper operation and to ensure safety from electrical shock. In the event you are replacing any electrical cabling on your bed, you must ensure the cables are free from pinch points, obstructions, or stretched so tight that they may come loose or become damaged. In addition, cables should be tied off in such a way to secure them and keep them free from tangling on any part of the bed during normal operation. Refer to your service manual's electrical section for proper cable routing.

ENTRAPMENT AND COMPLIANCE INFORMATION

On April 10, 2006, the FDA (U.S. Food and Drug Administration) released long-awaited guidelines for reducing the risk of bed entrapment: "Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment". The new Guidance identifies potential entrapment areas and those body parts most at risk for entrapment; provides design criteria for manufacturers of new hospital/convalescent beds; recommends particular test methods to assess the conformance of existing hospital / convalescent bed systems; and answers frequently-asked questions about entrapment issues.

The new Guidance was a result of a long-standing collaboration between the FDA and the Hospital Bed Safety Workgroup (HBSW), formed in 1999. GF Health Products, Inc.'s Long Term Care Bed division: Basic American Medical Products, is an HBSW charter member. As a result of our commitment to product safety, **all our current long-term care beds have been strictly tested and conform to the new FDA Guidance.**

The guidelines set forth by the FDA Guidance lay out specific dimensional limitations on potentially injury-threatening gaps and spaces that can occur between bed system components, such as rails, when not properly installed. GF Health Products, Inc. and Basic American Medical Products have conformed to these guidelines from a manufacturing aspect. However, entrapment issues can often arise when a healthcare provider / facility has not correctly assembled the components on a bed. It is essential that the provider / facility fully understand their

responsibility in complying to the guidelines set forth by the FDA in order to avoid injury. To that end, we have provided the FDA's web address at right as a resource for understanding and following these guidelines for the safety of patients / residents.

It is also essential to have the correct bed components / accessories that correspond with the needs of the patient / resident and the particular bed you have purchased. Matching the correct bed component that correlates with the regulatory guidelines can be a daunting task. Our sales team at GF Health Products, Inc. and our friendly Customer Service Representatives at Basic American Medical Products can help you sift through the wide array of compliance and bed options. We will help you determine which bed / bed part is best for the patient's / resident's particular needs and help you with any compliance issues.

The MATRIX 4000 series bed and accessories listed in this manual are in full compliance with FDA guidelines for reducing the risk of bed entrapment: "Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment".

Details can be found at www.fda.gov.



RECOMMENDED MAINTENANCE

Regular maintenance of the Long Term Bed is necessary to ensure continuing proper and safe operation. Read and observe the following recommended maintenance schedule.

ITEM	RECOMMENDED INSPECTION PERIODS		
	Inspect on Receipt	Every 3 Months	Every 6 Months
Maintenance Inspection of All Components at Receipt of Shipment			
Ensure all parts / components are included (see "Unpacking The Bed").	X		
Check all bed components for obvious damage.	X		
Inspect the power cord for any cuts and / or damage.	X		
Check to see all actuator / motor cables are routed and connected properly to the control box.	X		
Mechanical Inspection of Assemblies			
Inspect all welds on the sleeping surface, frame, and base assemblies for stress fractures.			X
Inspect all fasteners for wear and looseness.			X
IMPORTANT: Lubricate all pivot points, actuator / motor clevis pins, and control arm clevis pins as needed. White Lithium Grease is recommended. Refer to page 28.			X
Mechanical Inspection of Casters and Pedal Locking Mechanism			
Check the pedal locking mechanism to ensure it engages and disengages properly.		X	
Check the casters and stationary foot pads on both the head end and foot end for any damage, wear, or debris. Replace if needed.		X	
Check all rolling casters to ensure that they roll properly and are unobstructed.		X	
Electrical Inspection of Control Box, Hand Control Pendant, and Staff Control			
Check the external power cord that plugs into the control box for any chafing, cuts, or wear. Replace if damaged.		X	
Ensure all attaching hardware is securely tightened.		X	
Check all electrical connections for wear or fractures.		X	
Check the external backup battery (if you have one). Replace if needed.		X	
Check the hand control pendant cable for chafing, cuts, or wear.		X	
Check all hand control pendant functions - check to ensure each button and associated function work properly (i.e. head section rises when the HEAD UP button is activated).		X	
Electrical Inspection of Actuators / Motors			
Check the actuator / motor cables for any chafing, cuts, or wear.		X	
Check the range of movement on all motors to ensure they do not bind in the Full Up or Full Down positions.		X	



SECTION A: MECHANICAL AND ELECTRICAL INFORMATION

MATRIX 4000 SERIES MECHANICS

NOTE: ALL DIMENSIONS ARE ±.25 INCHES

- Overall Bed Length (with boards and wallsaver)
 - 76" 82.50"
 - 80" 83.75"
- Sleep Deck Width
 - 35" (Standard) 35.00"
 - 42" (Wide) 42.00"
- Maximum Height* 27.00"
- Minimum Height* 8.95"
- Maximum Head / Back Deck Angle 70°
- Maximum Knee / Foot Deck Angle 25°
- Trendelenburg / Reverse Trendelenburg Seat Angle . ≤ 12°
- Maximum Safe Working Load 450 lb (204.1 kg)
WITH WEIGHT EVENLY DISTRIBUTED - includes bedding, resident / patient, support surface, and all accessories
- Bed Mass (without assist devices or boards)
 - 35" (Standard) 150 lb (68.0 kg)
 - 42" (Wide) 157 lb (71.2kg)

* Bed height calculated from floor surface to top of sleep deck.

MATRIX 4000 SERIES ELECTRICAL

- Power / Frequency 120 Volt / 50/60 Hz
- Output Rating 24Vdc
- Maximum Amperage 4.0 Amps
- Classification Class 1, Type B
- Power (Electrical) Cord #18 AWG 3 Conductor
..... Type SJT
- Mode of Operations 10% Max. Duty Cycle
..... (2 minutes on / 18 minutes off)

Battery Pack and Charger can be purchased separately as accessories.

TYPICAL MATRIX 4000 SERIES BED IDENTIFICATION LABELS with Grounded Electrical Cable

MP49174



MATRIX 4000 SERIES
MATRIX 4000
W/STD CASTER



MFG. DATE 10/16/15
SERIAL NO.
13160409010704150002

MP49174



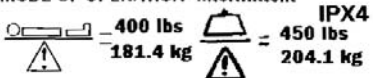
MATRIX 4000 SERIES
MATRIX 4000
W/STD CASTER



MFG. DATE 10/16/15
SERIAL NO.
13160409010704150002

GF HEALTH PRODUCTS, INC
336 Trowbridge Dr.
Fond du Lac, WI 54937

DUTY CYCLE=2 min Continuous/18 min
MODE OF OPERATION=Intermittent



MODEL NO. MATRIX 4000 SERIES

MFG. DATE 10/16/15

VOLT HZ AMP TYPE

110-120 50/60 4 AC

SERIAL NO.
13160409010704150002

Bed labels are an important part of identifying the bed's make and model when ordering replacement parts. The Serial Number is essential if you are claiming parts or service under warranty. These helpful labels can be located on the main frame rails, immediately below the sleep decks on either side of the bed.

Have this IMPORTANT information ready when calling our Customer Service or Technical Support staff at 770-368-4700; it will allow us to better assist you and quickly answer your questions and concerns.



WARNING: Do not modify this equipment without authorization from GF Health Products, Inc.

NOTE: For Matrix 4000 Series Service Parts, Technical Assistance, and Information, call our Customer Service Department at 770-368-4700.



The following warning labels have been placed on the bed to help protect you and the bed from damage. Do not remove any labels from the bed.

WARNING!

DO NOT LOWER BED WHEN OBJECTS ARE BENEATH BED. FAILURE TO INSPECT UNDER BED CAN RESULT IN DAMAGE TO PROPERTY OR PERSONAL INJURY.

ATTENTION:

S'assurer de ne pas faire descendre le lit lorsque des objets se trouvent sous le lit. Ne pas inspecter le dessous du lit pourrait entraîner des dommages matériels et des risques de blessures.



WARNING!

DO NOT LOWER BED WHEN OBJECTS ARE BENEATH BED. FAILURE TO INSPECT UNDER BED CAN RESULT IN DAMAGE TO PROPERTY OR PERSONAL INJURY.

CAUTION

THIS BED IS SUITABLE FOR USE ONLY WITH OXYGEN ADMINISTERING EQUIPMENT OF THE NASAL OR MASK TYPE OR A TENT COVERING ONLY THE UPPER HALF (HEAD END) OF THE BED. OXYGEN TENT CANOPIES SHOULD NOT EXTEND BELOW BED SPRING LEVEL. LOCK HAND CONTROL AT FOOT OF BED WHEN USING OXYGEN ADMINISTERING EQUIPMENT.

ATTENTION:

CE LIT PEUT ETRE UTILISE UNIQUEMENT AVEC UN EQUIPMENT DESTINE A L'ADMINISTRATION D'OXYGENE DE TYPE NASAL OU MASQUE OU AVEC UNE TENTE RECOUVRANT SEULEMENT LA MOTTIE AVENT (TETE) DU LIT. LES COTES DE LA TENTE OXYGENE NE DOIVENT PAS SE PROLONGER PLUS DAS QUE LA SOMMIER DU LIT.

WARNING:

Incompatible mattresses can create hazards. Read Instructions for use.

ATTENTION:

Matelas incompatibles peuvent créer des dangers. Lisez les Instructions d'utilisation.

ENVIRONMENTAL SPECIFICATIONS AND RFI INFORMATION

OPERATING CONDITIONS	
Ambient Temperature	10°C to 40°C
Relative Humidity	30% to 75% Non-Condensing
Atmospheric Pressure	700 hPa to 1060 hPa
Protected Against Splashing Water	IPX4

STORAGE AND TRANSPORT CONDITIONS	
Temperature	-10°C to 50°C
Relative Humidity	20% to 90%
Atmospheric Pressure	700 hPa to 1060 hPa

RFI (RADIO FREQUENCY INTERFERENCE)

RFI influences most electronic equipment. Caution should be exercised with regard to the use of portable communications equipment in the area around such equipment. If RFI causes erratic behavior, shut the bed off immediately. Leave it off while the transmission is in progress.

DISPOSAL OF EQUIPMENT AND ACCESSORIES



Follow local governing ordinances and recycling plans regarding disposal of the device or components normally used in operation. The device does not generate waste or residue in operation. Any accessories not part of the device **MUST** be handled in accordance with the individual product marking for disposal.



SECTION B: BED SETUP INSTRUCTIONS

UNPACKING THE BED

- Ensure all parts / components are included.
- Check all bed components for obvious damage.
- Inspect the Power Cord for cuts or damage.
- Ensure all actuator / motor cables are routed and connected properly to the control box.

DISCARD

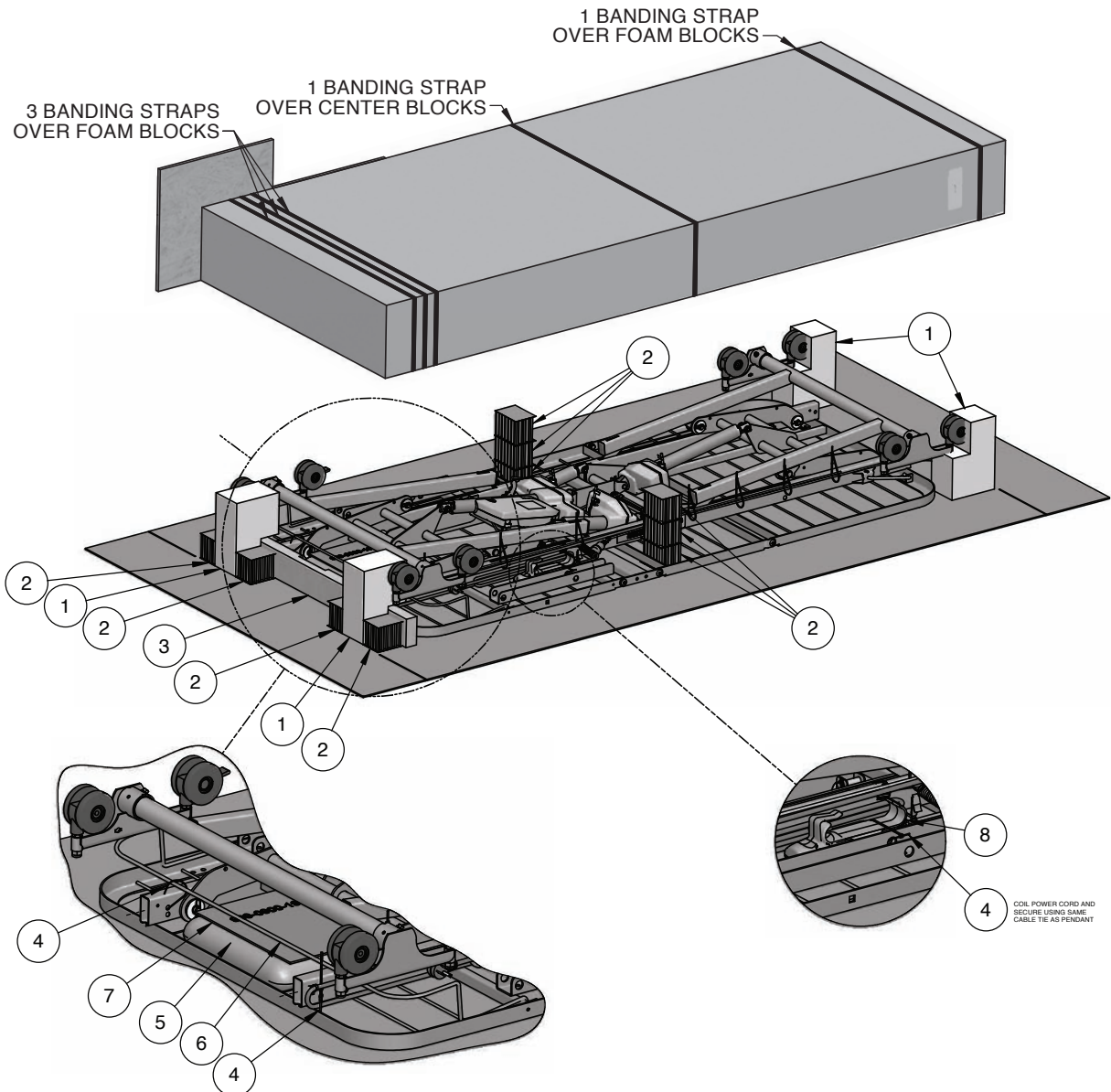
- 1) Foam Block (4)
- 2) Honeycomb Block (8)
- 3) Shipping Board (1)
- 4) Cable Tie (3) - Cut and Discard

KEEP

- 5) Panel Mount Kit
- 6) Mattress Retainer
- 7) Pendant Holster

NOTE:

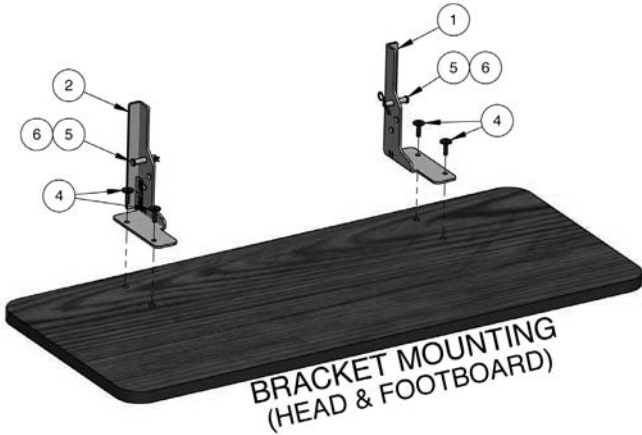
END OF POWER CORD IS COILED FOR SHIPPING AND TIED, WITH CABLE TIE, TO GRID WIRE WITH HAND CONTROL PENDANT, PENDANT CABLE AND HOLSTER.





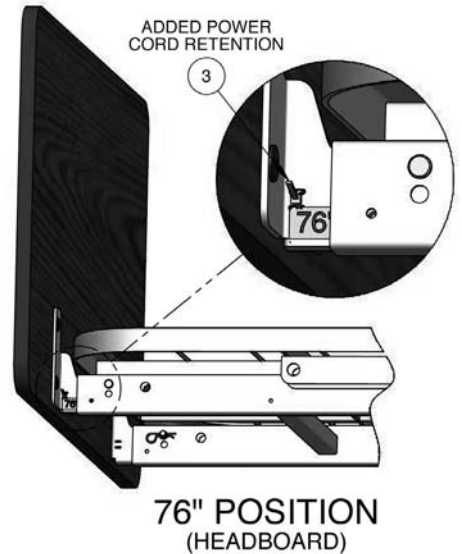
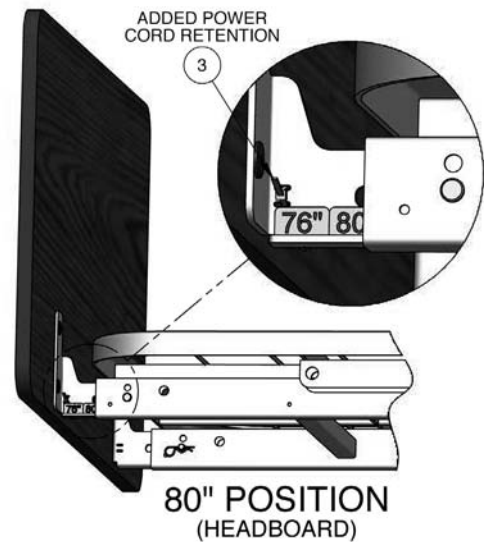
HEADBOARD AND FOOTBOARD ASSEMBLY / INSTALLATION

HEADBOARD INSTALLATION *



ITEM	QTY.	PART NUMBER	DESCRIPTION
1	2	999-0900-034	BRACKET, BOARD MOUNTING RH
2	2	999-0900-035	BRACKET, BOARD MOUNTING LH
3	2	100-1100-018	CABLE TIES 12" NYLON
4	8	100-5425-093	SCREW JCB-B 1/4-20 X 20MM HX FT BZ
5	4	100-7931-007	5/16 x 1 1/2 CLEVIS PIN -ZI
6	4	100-2001-006	1-9/16 HAIR PIN CLIP

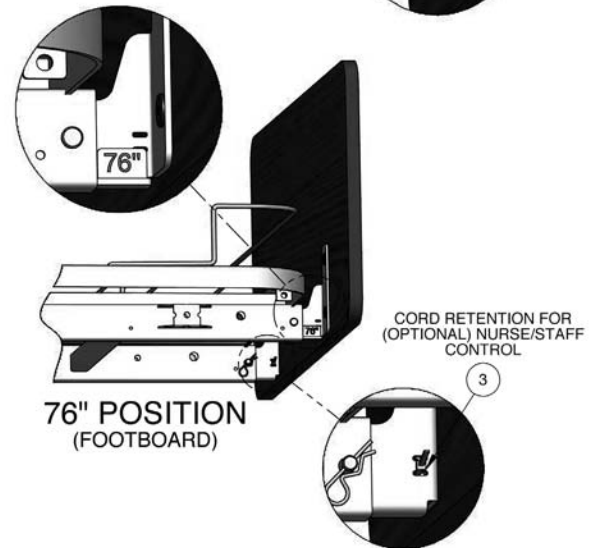
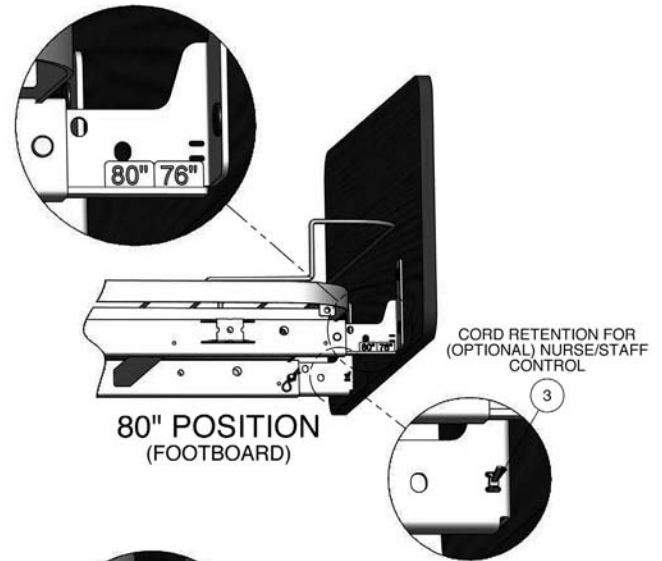
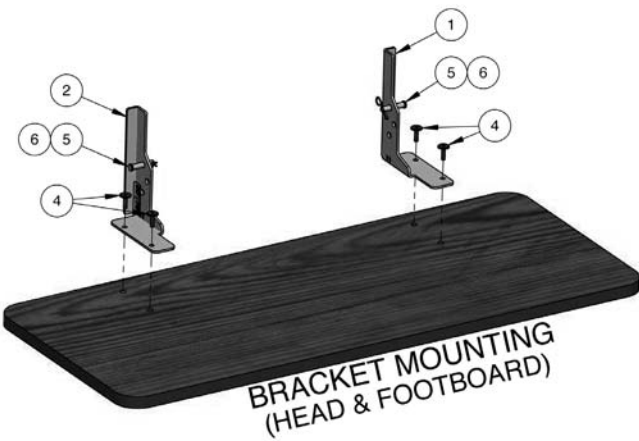
1. The headboard may come with four pre-installed inserts - if not already installed, assemble the four inserts into the outside of the headboard as shown above.
2. Position a right (#1) and left (#2) mounting bracket on the inside of the headboard with headboard mounting holes facing outward as shown above.
3. Align the bracket top holes with the headboard top holes.
4. Insert a screw (#4) through each of the top holes and bottom holes and screw into each insert. Tighten with the hex key included in the kit.



5. At the head deck end, slide the brackets into the main frame rail hollow ends.
6. **FOR 80" BEDS:** Slide the brackets in until the bracket hole aligns with the lower rail hole as shown above. 76" and 80" bracket labels will be visible.
7. **FOR 76" BEDS:** Slide the mounting brackets in until the bracket hole aligns with the upper rail hole as shown above. Only 76" bracket label will be visible.



FOOTBOARD INSTALLATION



ITEM	QTY.	PART NUMBER	DESCRIPTION
1	2	999-0900-034	BRACKET, BOARD MOUNTING RH
2	2	999-0900-035	BRACKET, BOARD MOUNTING LH
3	2	100-1100-018	CABLE TIES 12" NYLON
4	8	100-5425-093	SCREW JCB-B 1/4-20 X 20MM HX FT BZ
5	4	100-7931-007	5/16 x 1 1/2 CLEVIS PIN -ZI
6	4	100-2001-006	1-9/16 HAIR PIN CLIP

1. The footboard may come with four pre-installed inserts - if not already installed, assemble the four inserts into the outside of the footboard as shown above.
2. Position a right (#1) and left (#2) mounting bracket on the inside of the footboard with footboard mounting holes facing outward as shown above.
3. Align the bracket top holes with the footboard top holes.
4. Insert a screw (#4) through each of the top holes and bottom holes and screw into each insert. Tighten with the hex key included in the kit.

5. At the foot deck end, slide the brackets into the main frame rail hollow ends.
6. **FOR 80" BEDS:** Slide the mounting brackets in until the bracket hole aligns with the first rail hole as shown above. 76" and 80" bracket labels will be visible.
7. **FOR 76" BEDS:** Slide the mounting brackets in until the bracket hole aligns with the second rail hole as shown above. Only 76" bracket label will be visible.

* For residents taller than 185 cm (6' 1"), a 4" Length Extension Kit is available. Please contact Customer Service for more information.

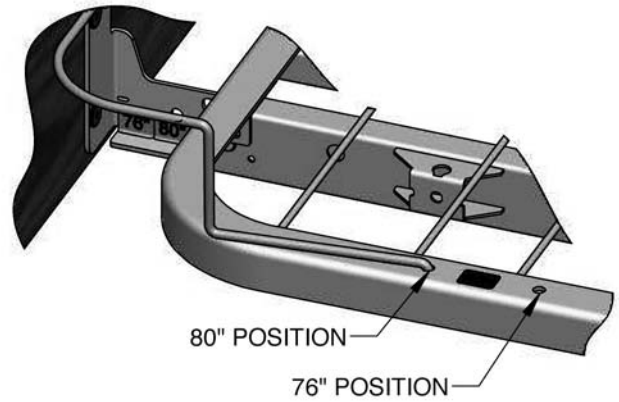
NOTE: To order a new Headboard and Footboard Panel Mounting Kit, use part # 999-0900-000. Kit includes Headboard, Footboard, Mounting Brackets, Mounting Hardware, and installation tools.



STANDARD MATTRESS RETAINER INSTALLATION USING MATTRESS RETAINER 999-0822-001 (35" WIDTH) OR 999-0902-001 (42" WIDTH) *

The Matrix 4000 Series Bed mattress retainer was designed to span the width of the sleeping surface. **One** retainer is shipped with your bed and is typically placed at the foot end, although it will fit on either end.

1. Determine if you need to position your bed in an 80" or 76" configuration (80" length bed = outside holes; 76" length bed = inside holes).
2. If installing mattress retainer on the foot end, carefully squeeze the Mattress Retainer ends inward, toward the center of the retainer, and insert the ends into the proper holes. Lay the Mattress Retainer down so that the elbows rest on the decks and the long cross rod is on the foot end side as shown.



MATTRESS RETAINER



Be sure to use a mattress that is properly sized to fit the sleep deck, which will remain centered on the deck relative to State and Federal Guidelines. Use of an improperly fitted mattress could result in injury or death.



Use a properly sized mattress in order to minimize the gap between the side of the mattress and assist devices. This gap must be small enough to prevent resident / patient from getting their head or neck caught in this location.

* *Note: An optional head end mattress retainer is available (sold separately).*



OPTIONAL WIREFORM WALLSAVER INSTALLATION

WALLSAVER ASSEMBLY

1. Position the Wireform Wallsaver with bent end facing upward and tab ends facing inward as shown at right.
2. Determine the position desired (see WALLSAVER POSITIONS).
3. Gently squeeze the wallsaver tab ends inward toward the center of the wallsaver and, holding the tabs parallel with the caster base holes, slide the tabs into the holes while letting the wallsaver gently expand outward.
4. Turn the wallsaver downward until it rests on the floor.

WALLSAVER REMOVAL

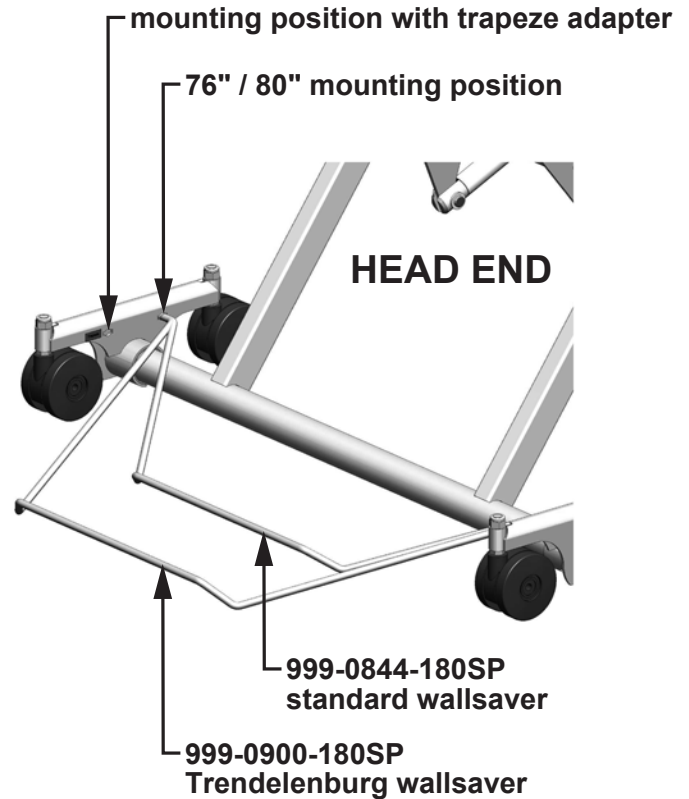
1. To remove or move the wallsaver to a new position, raise the wallsaver off the floor until the end tabs are horizontal.
2. Squeeze the ends toward the center of the wallsaver until the end tabs slide out of the caster base holes.

WALLSAVER POSITIONS

There are two positions for the Matrix 4000 series wallsaver. Holes nearest the center of the bed are for both 76" and 80" beds, and the holes closest to the head end are for use when a Trapeze Adapter is added to the bed.

The Standard Wallsaver will prevent the bed from making contact with the wall in all positions except Trendelenburg. If the *Advanced Positioning (APS)* bed is to be used in Trendelenburg position, the Trendelenburg Wallsaver must be used to prevent the bed from making contact with the wall.

A Trendelenburg Wallsaver is available when the bed is ordered with a Staff Control *with Advanced Positioning*.





PLUGGING IN THE FOOTBOARD STAFF CONTROL

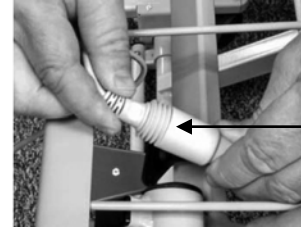
STEP 1 - ATTACHING THE FOOTBOARD

The Matrix 4000 series bed features a footboard Staff Control; however, the footboard is ordered separately with your bed because of the variety of board styles available. If ordered at the same time as the bed, the Staff Control Assembly and Shroud Cover will be pre-installed to the Footboard at the factory.



DETAIL A:
Ensure lock end caps are screwed on securely

Improper Connection
(not completely seated)



Proper Connection
(completely seated)

STEP 2 - CONNECTING THE CABLES: REFER TO DETAIL A ABOVE

- a) Insert the T-Cable end (extending out the foot end with phone jack) into the round plug, making sure the phone jack is seated correctly inside the female plug (arrow to arrow – see DETAIL A and photos above).
- b) Screw on the round lock cap onto the Staff Control female plug to secure (See DETAIL A).

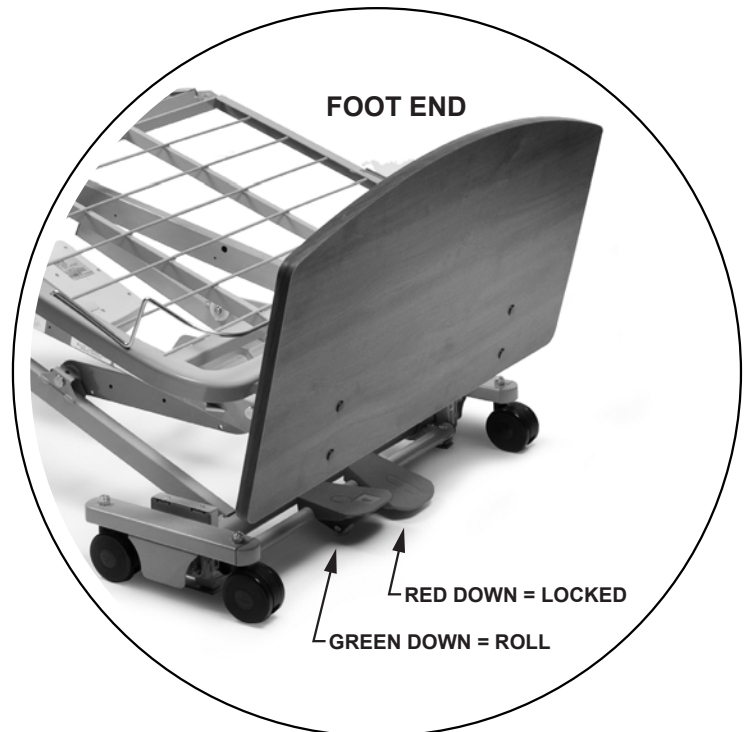
OPERATING THE CASTER PEDAL LOCK MECHANISM

LOCKED POSITION

To lock the foot end casters, step on the red pedal until the caster lock engages.

UNLOCKED POSITION

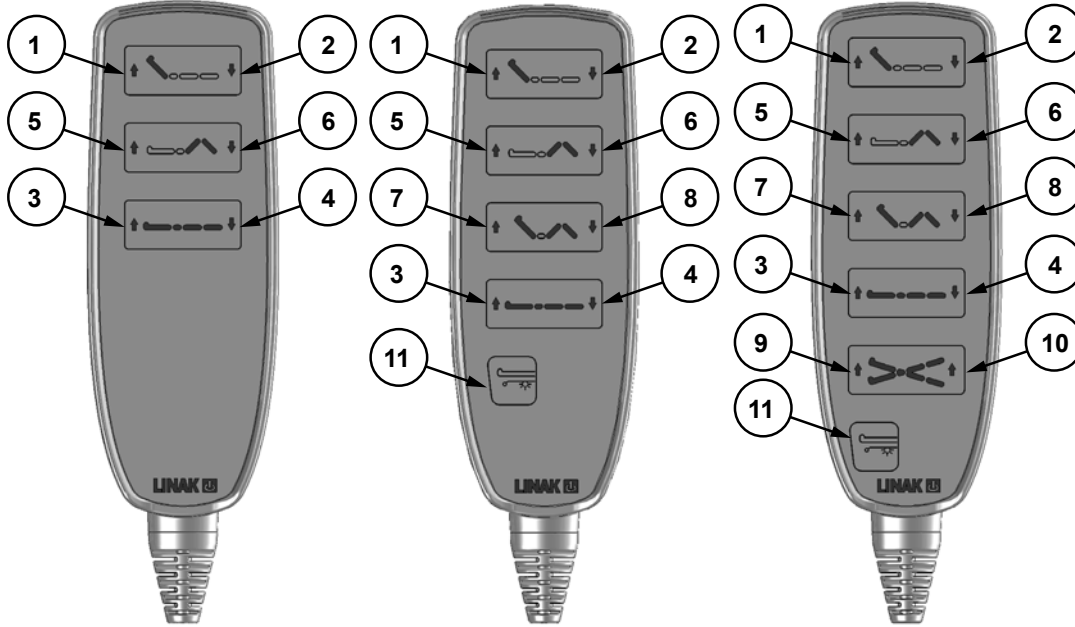
To unlock the foot end casters, step on the green release pedal until the caster lock disengages.



FOOT END of Matrix 4000 Series Bed
Shown with Pedal Lock Engaged
(RED DOWN = LOCKED POSITION)



MATRIX 4000 SERIES HAND CONTROL PENDANT OPERATION



**MATRIX 4000 WITH
STANDARD POSITIONING
HAND CONTROL PENDANT**

**MATRIX 4000 WITH
ADVANCED POSITIONING
HAND CONTROL PENDANT**

**OPTIONAL ACCESSORY:
MATRIX 4000 WITH
TRENDELENBURG /
REVERSE TRENDELENBURG
HAND CONTROL PENDANT**

HAND CONTROL PENDANT OPERATION	
BUTTON	FUNCTION
1	HEAD DECK ANGLE UP
2	HEAD DECK ANGLE DOWN
3	HI/LO UP (RAISE ENTIRE BED)
4	HI/LO DOWN (LOWER ENTIRE BED)
5	KNEE AND FOOT DECK ANGLE UP
6	KNEE AND FOOT DECK ANGLE DOWN
7	SET TO CHAIR POSITION
8	UNDO CHAIR POSITION
9	REVERSE TRENDELENBURG POSITION
10	TRENDELENBURG POSITION
11	OPTIONAL UNDERBED LIGHT

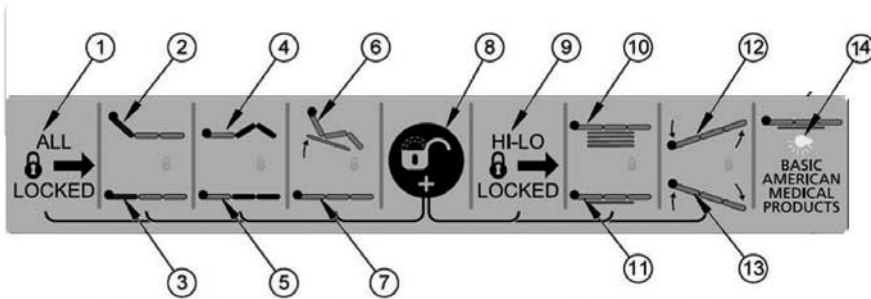
NOTE:

The MATRIX 4000 Series Hand Control Pendant can be plugged into the T-cable plugs on either side of the bed for easy access. The opposite side of the T-Cable should always have the provided cap attached for safety.

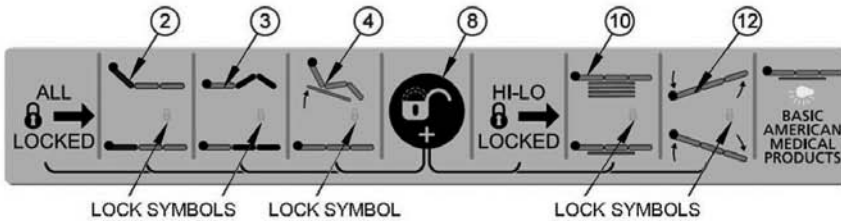
The two vertical ends of the double T-Cable run toward the foot end of the bed, with one vertical end plugging directly into the control box (or optional Underbed Light if your bed has that feature) and the other longer end runs along the tie rod and extends out the foot end and plugs into the Staff Control cable.



BED OPERATIONS - OPTIONAL STAFF CONTROL PANEL *

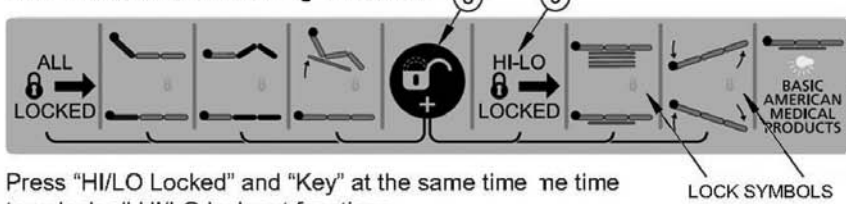


Press "Underbed Light" button (#14) to turn underbed light on or off.

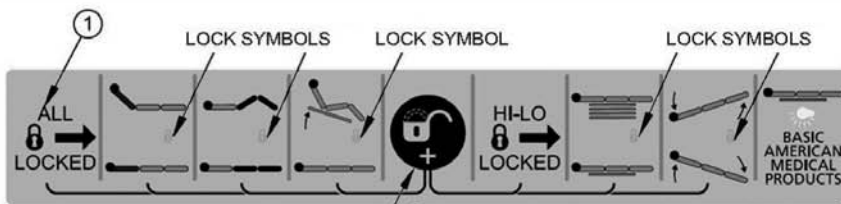


Press "Head", "Knee", or "Chair" and "Key" at the same time to unlock individual lock out functions.

Press "HI/LO Locked" to lock out "HI/LO", "Trendelenburg", and "Reverse Trendelenburg" functions.



Press "HI/LO Locked" and "Key" at the same time to unlock all HI/LO lock out functions.



Press "All Locked" and "Key" at the same time to unlock all functions.

1	ALL LOCKED BUTTON
2	HEAD DECK UP BUTTON
3	HEAD DECK DOWN BUTTON
4	KNEE & FOOT DECK UP BUTTON
5	KNEE & FOOT DECK DOWN BUTTON
6	CHAIR POSITION BUTTON
7	UNDO CHAIR POSITION BUTTON
8	KEY LOCK/UNLOCK BUTTON
9	HI/LO (T/TR) LOCKED BUTTON
10	HI/LO UP BUTTON
11	HI/LO DOWN BUTTON
12	TRENDELENBURG
13	REVERSE TRENDELENBURG
14	UNDERBED LIGHT BUTTON

LOCK OUT SINGLE FUNCTIONS

To individually lock out the "Head", "Knee", "Chair", and "HI/LO" functions, press the appropriate top icon (#2, 3, 4, 10, or 12) button and the "Key" button at the same time. An orange LED lock symbol will appear under the related icon.

To "Unlock" any of the individual functions, press the top icon (#2, 3, 4, 10, or 12) and the "Key" button (#8) simultaneously. LED lights will not show up.

LOCK OUT HI/LO FUNCTIONS

To lock out the functions for raising and lowering the entire bed and tilting the bed for Trendelenburg positions, press the "HI/LO Locked" (#9) button. Orange LED lock symbols will appear under the HI/LO and Trendelenburg icons.

To "Unlock" all HI/LO functions, press the "HI/LO Locked" button (#9) and the "Key" button (#8) simultaneously. Orange LED lights will not show up.

LOCK OUT EVERYTHING

To lock out all functions, press the "All Locked" button (#1). Orange LED lock symbols will appear under the "Head", "Knee", "Chair", "HI/LO", and "Trendelenburg/Reverse Trendelenburg" icons.

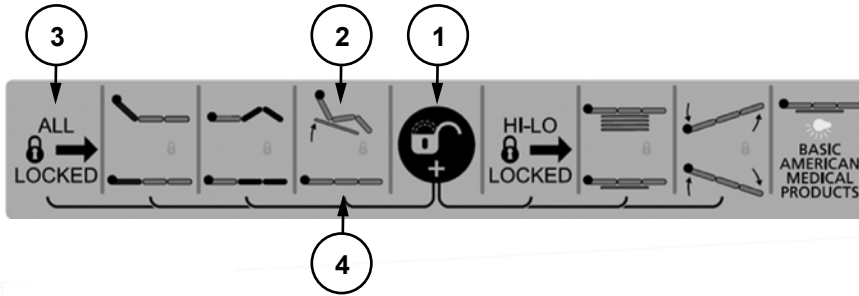
To "Unlock" all functions, press the "All Locked" button (#1) and the "Key" button (#8) simultaneously. Orange LED lights will not show up.



* *Staff Control with Advanced Positioning functions is shown above. Staff Control with Standard Positioning functions is shown at left; all standard functions operate the same as those defined above.*



BED OPERATIONS - CHAIR POSITION



1. Ensure the Chair position on the Staff Control panel is not locked out (*orange lock icon*). To unlock, press Lock icon button #1 and Chair icon button #2 (or "All Locked" button #3) simultaneously.

2. To move the bed to Chair position (*foot and knee decks angled up, head deck angled up, and head of bed tilted up*), press Chair icon button #2.

To release the chair feature and return the bed to horizontal position, press Flat Bar icon #4.

HEAD
END



FOOT
END

The Chair feature can also be operated using the Hand Control Pendant.



**MATRIX 4000 WITH
ADVANCED POSITIONING
HAND CONTROL PENDANT**

Chair position
UP and DOWN buttons

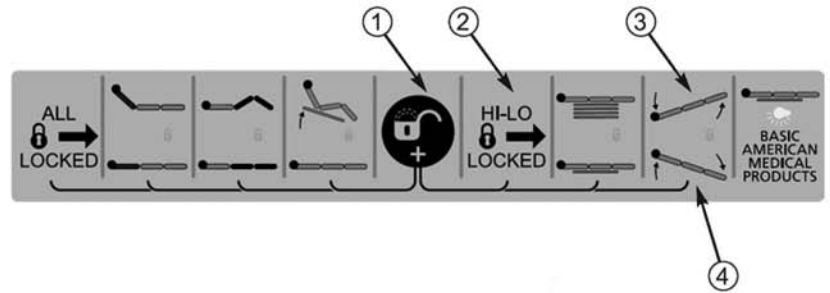


**OPTIONAL ACCESSORY:
MATRIX 4000 WITH TRENDLENBURG /
REVERSE TRENDLENBURG
HAND CONTROL PENDANT**



BED OPERATIONS - TRENDELENBURG / REVERSE TRENDELENBURG POSITION

1. Ensure the Staff Control HI/LO function is not locked out (*orange lock icon*). To unlock, simultaneously press Key 1 and HI/LO Locked button 2.
2. To move the bed to Trendelenburg position (foot end up), press button 3.
3. To move the bed to Reverse Trendelenburg position (head end up), press button 4.





SECTION C: ASSIST DEVICES

OPTIONAL PIVOTING ASSIST BAR INSTALLATION AND OPERATION

KIT ZA85500 - (Illustration shows bar positioned on left side of bed)

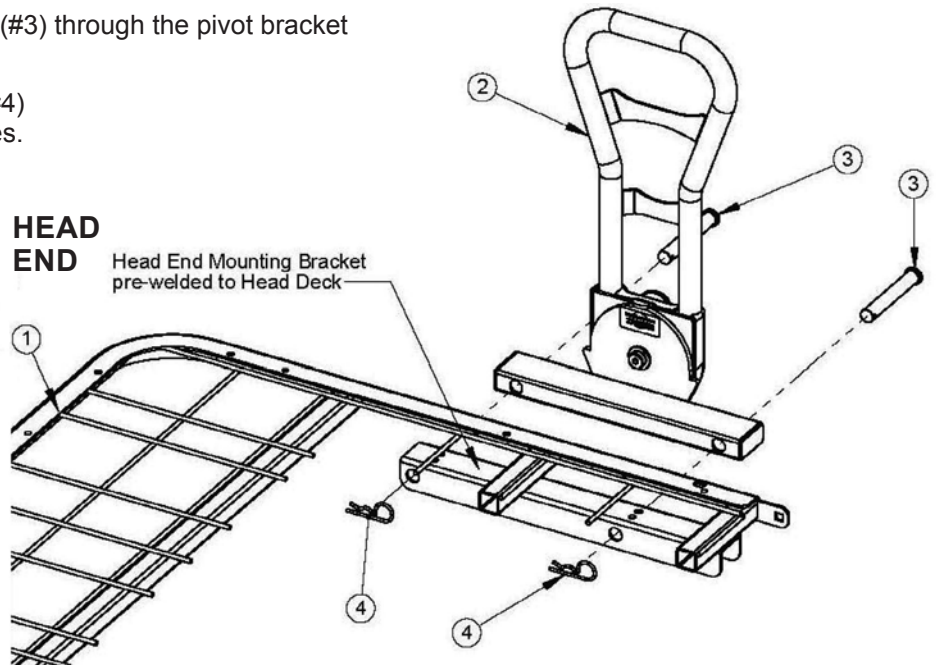
1. At the head end of the bed, position the Pivoting Assist Bar (#2) bracket over the Head Deck (#1) frame and align the two Assist Bar bracket holes with the two frame rail holes on either side of the head deck.
2. From the outside, insert the Clevis Pins (#3) through the pivot bracket and deck frame holes.
3. From the inside, insert a Hair Pin Clip (#4) through each of the clevis pin small holes.

ORDER KIT # ZA85500.

THE KIT INCLUDES ONE PIVOTING ASSIST BAR ASSEMBLY AND TWO LANYARD ASSEMBLIES WITH CLEVIS PINS AND HAIR PIN CLIPS. (A STATIONARY ASSIST BAR IS ALSO AVAILABLE AS AN OPTION - KIT # ZA85500).

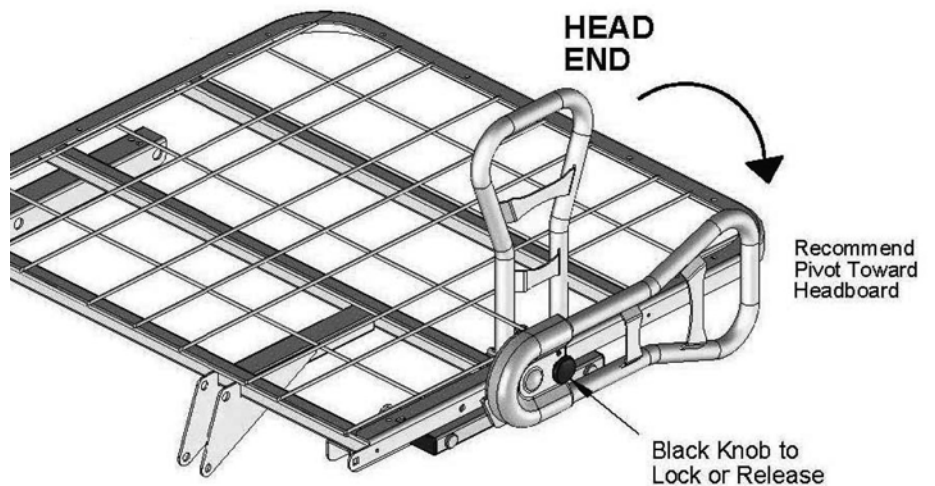
THE PIVOTING AND FIXED ASSIST BARS CAN BE POSITIONED ON EITHER THE RIGHT OR LEFT SIDE OF THE HEAD DECK.

ASSIST BARS ARE NOT INTENDED FOR USE AT THE FOOT END OF THE BED.



PIVOTING ASSIST BAR OPERATION

1. To release the pivoting assist bar from its vertical lock position, hold onto the top of the bar with one hand and slightly pull out the black knob with the outside of the pivot assembly with the other hand to release the locking mechanism. For ease of patient access, it is recommended that you pivot the rail toward the headboard until it stops and rests in place.
2. To return the assist bar to its upright locked position, grab the top of the assist bar with one hand and pivot the assembly upward until the black knob mechanism snaps into place, locking the assist bar vertically.



! TO AVOID PINCHING FINGERS, ENSURE FINGERS ARE CLEAR OF SIDES OR UNDERSIDES OF THE PIVOTING ASSEMBLY WHEN POSITIONING THE ASSIST BAR UP OR DOWN.

! TO AVOID PERSONAL INJURY, ENSURE THE PIVOTING ASSIST BAR IS ALWAYS IN THE FULL, VERTICAL, LOCKED POSITION WHENEVER RESIDENT/PATIENT IS LEFT UNATTENDED.

! POWERED AIR MATTRESS SURFACES MAY POSE A RISK OF ENTRAPMENT. PRIOR TO USE, ENSURE THE THERAPEUTIC BENEFITS OUTWEIGH THE RISK OF ENTRAPMENT.



OPTIONAL ASSIST BAR INSTALLATION—HEAD END ONLY (KIT ZA80300: INCLUDES ONE ASSIST BAR AND HARDWARE)

Installation—Bracket

With the Assist Bar (#1) bracket facing inward toward the bed as shown below, align the two large bracket holes with the two head deck mounting bracket holes.

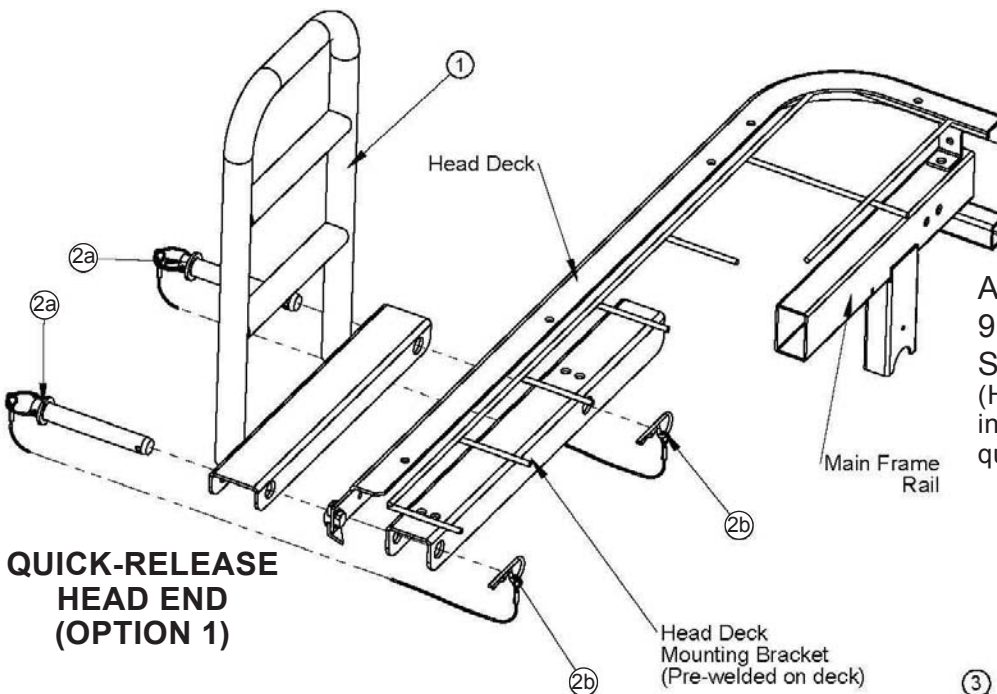
Installation—Quick-Release Head End Assist Bar (Option 1)

1. Insert the two Lanyard Assembly Clevis Pins (#2a) from the outside through the Assist Bar bracket and mounting bracket holes.

2. Insert the Hair Pins on the opposite end of the Lanyard Assemblies (#2b) into the small holes at the ends of the clevis pins.

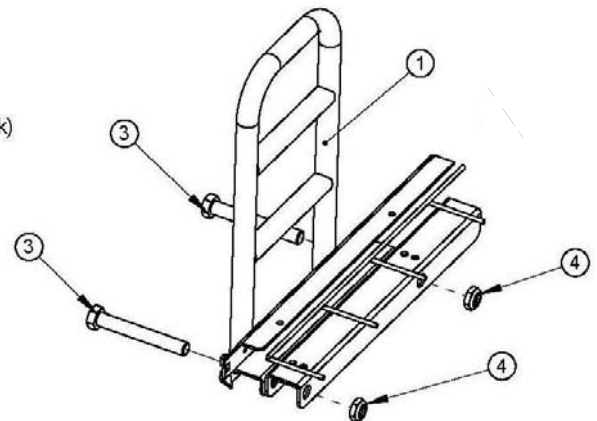
Installation—Fixed Attachment Head End Assist Bar (Option 2)

1. Insert the two cap screws (#3) from the outside through the Assist Bar bracket and mounting bracket holes.
2. Secure screws by attaching two Thin Nylon Lock Nuts (#4) and tighten using two 13/16 wrenches.



**QUICK-RELEASE
HEAD END
(OPTION 1)**

ASSIST BAR
999-0803-902G
SHOWN AT RIGHT HEAD END
(Hardware Bag 999-0803-905
includes mounting hardware for both
quick-release and fixed options)



**FIXED ATTACHMENT
HEAD END
(OPTION 2)**

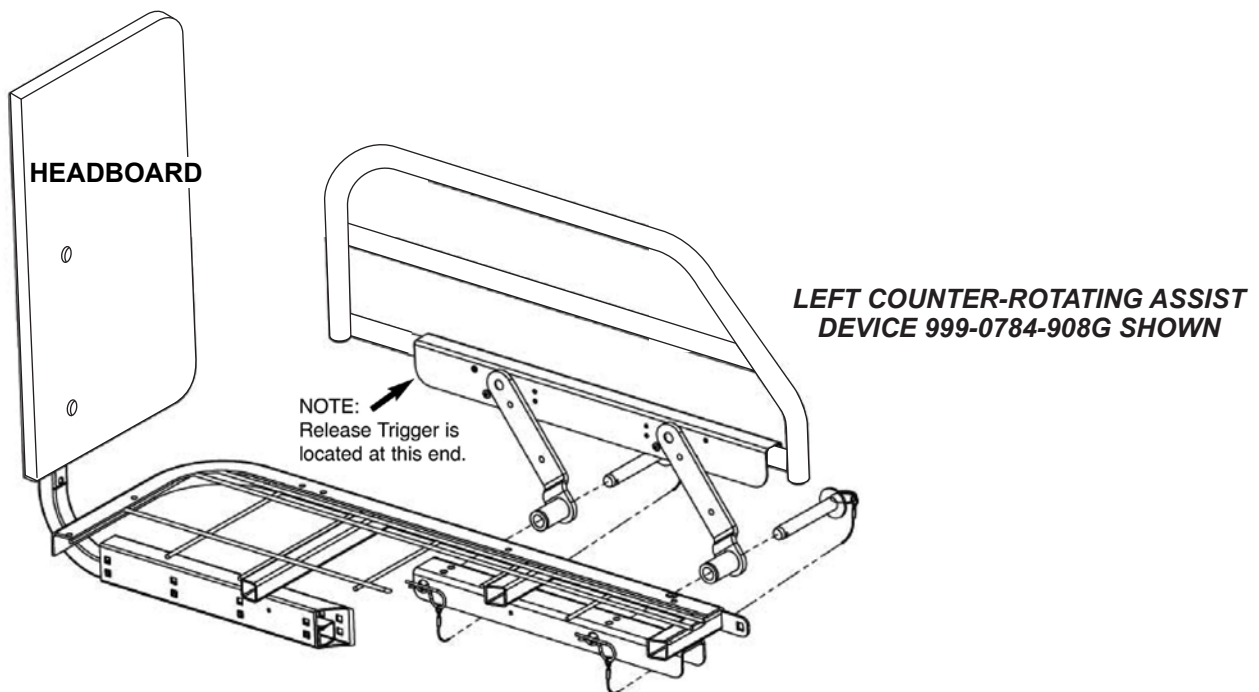


WARNING: When assessing the Risk of Entrapment, consider the bed, mattress, headboard, footboard, assist devices (i.e. rails and assist bars) and other accessories as an entire system. All bed systems are evaluated for full compliance to the FDA/CDRH “Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment” guidelines.



OPTIONAL HEAD-END HALF COUNTER-ROTATING ASSIST DEVICE KIT INSTALLATION AND OPERATION (KIT ZA78400: INCLUDES LEFT AND RIGHT ASSIST DEVICES AND HARDWARE)

1. All Counter-Rotating Assist Devices mount to the bed in a similar fashion. Left or right designations are based on patient's orientation in bed.
2. Insert the two Clevis Pins, with Circle Cotter and Lanyard Cable (#2) into the two Counter-Rotating Assist Devices as shown.
3. Attach the Counter-Rotating Assist to the bed frame brace by aligning the Assist Device and Clevis Pins to the brace holes. Slide the Clevis Pins so that they extend past the brace on the bed underside.
4. Insert the two Hair Pin Clips into the Clevis Pin holes to secure the Assist Device to the bed.
5. **IMPORTANT:** Lubricate all pivot joints as needed. Aerosol White Lithium Grease is recommended.
6. **TO OPERATE:** Depress the Release Trigger to lower or raise the Counter-Rotating Assist Device.



WARNING: The mattress support platform should always be placed in flat position when not attended.

When assessing the Risk of Entrapment, consider the bed, mattress, headboard, footboard, assist devices (i.e. rails and assist bars) and other accessories as an entire system. All bed systems are evaluated for full compliance to the FDA / CDRH "Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment" guidelines.

Assist devices are not meant for patients considered high risks for entrapment (i.e. patients with pre-existing conditions such as confusion, restlessness, lack of muscle control, altered mental status, either organic or medicinal, or a combination thereof). Additional safety measures should be considered for such high-risk patients.

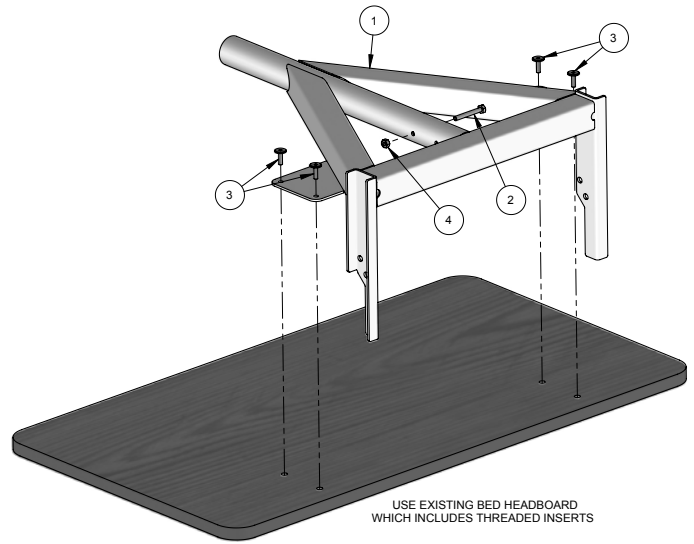


OPTIONAL TRAPEZE SUPPORT INSTALLATION

(THE TRAPEZE SUPPORT IS ATTACHED TO THE HEAD SECTION OF THE BED.)
ORDER KIT NUMBER ZA90100, FOR USE WITH TRAPEZE ZA78100

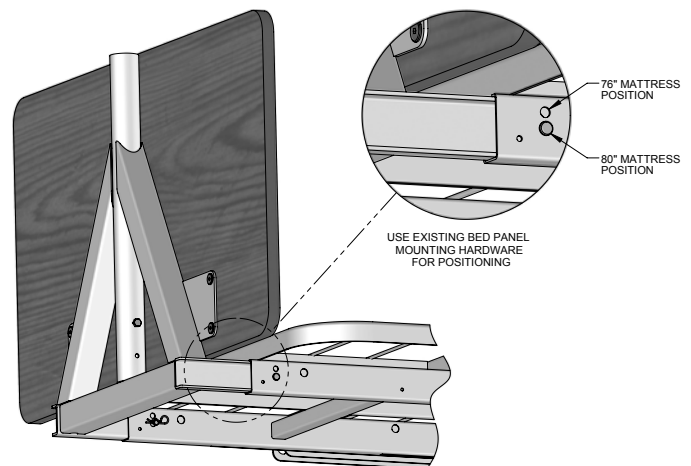


Trapeze



1. Remove the Headboard Assembly from the bed by pulling out the hair pin clips and clevis pins that attach each mounting bracket to the bed frame. Set the pins and clips aside for later use.
2. Detach the headboard panel from the mounting brackets by removing the four screws (#3) with the hex key provided. The screws (#3) will be used to attach the headboard to the Trapeze Assembly (#1). Do not remove the threaded inserts in the headboard.
3. Insert the long cap screw provided (#2) into the round vertical tube of the Trapeze Assembly (#1) and secure with the locknut (#4).
4. Assemble the headboard to the Trapeze Assembly (#1) using the previously removed screws (#3) by threading them into the headboard inserts using the hex key provided.
5. Slide the Trapeze and Headboard Assembly into the main frame tubes. Align each trapeze channel hole with the appropriate main frame tube hole (76" or 80" mattress position). Secure with the clevis pins and hair pin clips previously used to mount the headboard brackets.

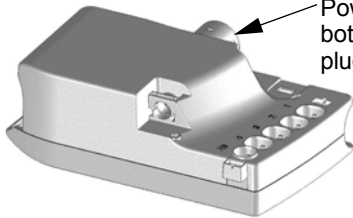
ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	999-0901-901	ASSEMBLY, TRAPEZE
2	1	100-5425-010	1/4-20 x 2" HHCS
3	4	100-5425-093	SCREW JCB-B 1/4-20 X 20MM HX FT BZ
4	1	100-6725-005	1/4-20 HEX HEAD LOCK NUT - ZI





MATRIX 4000 SERIES ELECTRICAL COMPONENTS (LINAK)

Control/Junction Box
Part # 999-0900-300SP
Quantity = 1



Power Cord (see bottom of column) plugs in here



Standard Positioning Hand Control Pendant
Part # 999-0900-301SP
Quantity = 1



Advanced Positioning Hand Control Pendant
Part # 999-0900-305SP
Quantity = 1



Optional Trendelenburg / Reverse Trendelenburg Hand Control Pendant
Part # 999-0900-306SP
Quantity = 1

Bed also includes Hand Control Pendant Holster
Part # 999-0791-000SP Quantity = 1



Head Motor/Actuator
Part # 999-0900-052SP
Quantity = 1



Double T-Cable
Part # 999-0806-200SP
Quantity = 1



Foot Motor/Actuator
Part # 999-0900-053SP
Quantity = 1



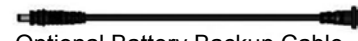
Head and HI/LO Motor/Actuator Cable
Part # 999-0806-203SP
Quantity = 3



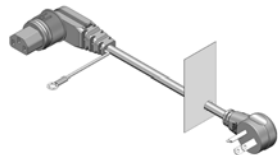
HI/LO Motor/Actuator
Part # 999-0900-051SP
Quantity = 2



Foot Motor/Actuator Cable
Part # 999-0806-202SP
Quantity = 1



Optional Battery Backup Cable
Part # 999-0831-200SP
Quantity = 1



3 Prong Power Cord
Part # 999-0775-208SP
Quantity = 1



Optional Underbed Light Adapter Cable
Part # 999-0806-212SP
Quantity = 1

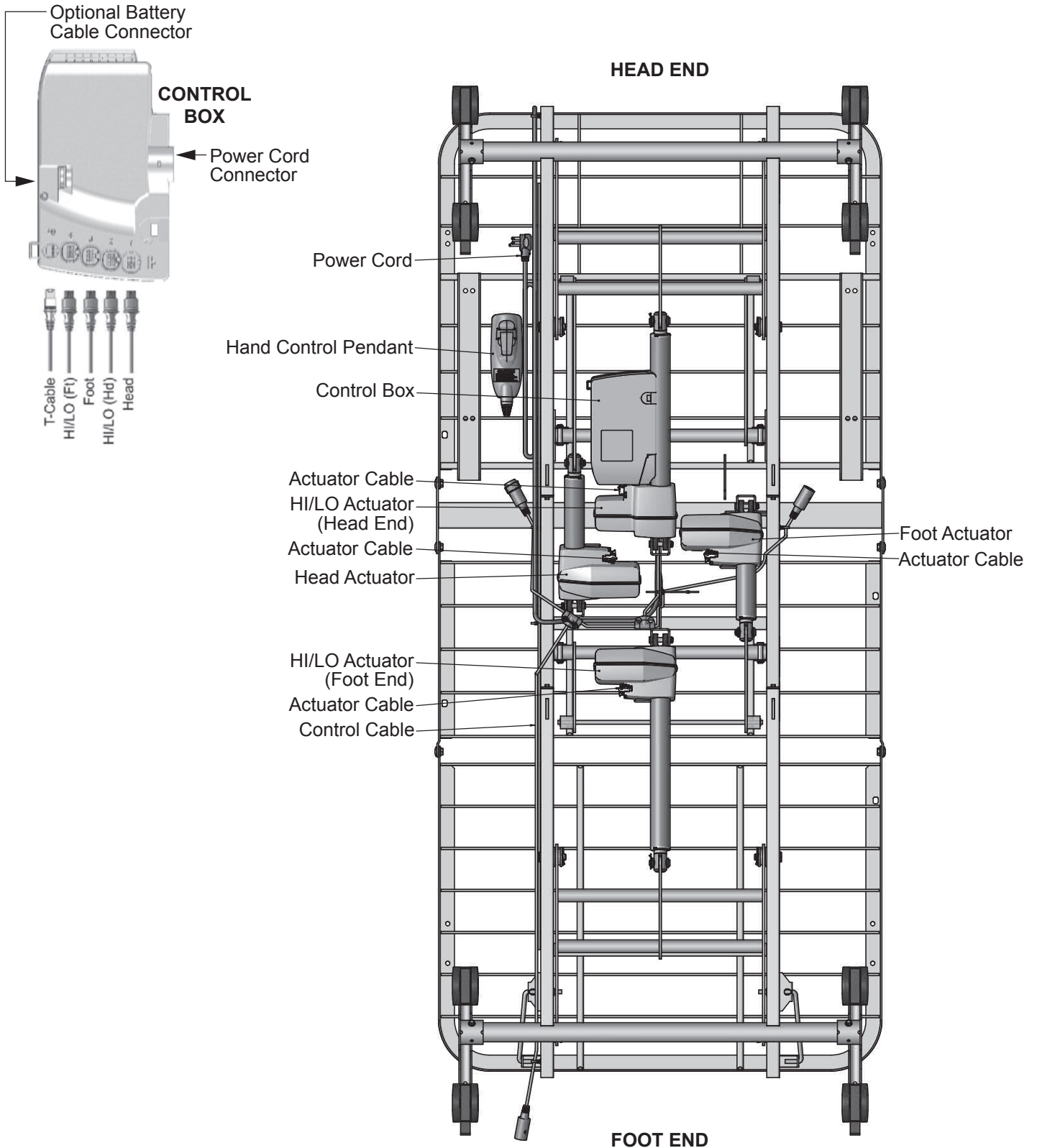


DO NOT use unauthorized parts, accessories, or adapters other than those specified / authorized by GF Health Products, Inc. DO NOT open assemblies such as the Actuators, Hand Control Pendant, or Control Box. If unauthorized personnel perform work on these components, the manufacturer's warranty becomes void. NEVER operate the bed if a Power Cord or Plug is damaged or not working properly. Contact qualified Service Personnel for examination and repair.

ALWAYS UNPLUG THE POWER CORD BEFORE PERFORMING MAINTENANCE ON THE BED.



MATRIX 4000 SERIES ELECTRICAL CABLING





SECTION D: SERVICE / REPLACEMENT PARTS
SERVICE / REPLACEMENT PART RECORD (Page 1)

Note: Refer to electrical components on page 23 for part numbers.

DECKING				
Part Number	Description	QTY	Order Date	Price
999-0900-920SP	35" Wide Deck Head/Back Deck and Hardware Pack	1 Deck		
999-0900-930SP	OR - 35" Wide Deck Foot Deck and Hardware Pack	1 Deck		
999-0900-940SP	OR - 35" Wide Deck Knee Deck and Hardware Pack	1 Deck		
999-0902-920SP	42" Wide Deck Head/Back Deck and Hardware Pack	1 Deck		
999-0902-930SP	OR - 42" Wide Deck Foot Deck and Hardware Pack	1 Deck		
999-0902-940SP	OR - 42" Wide Deck Knee Deck and Hardware Pack	1 Deck		
MOTORS (ACTUATORS)				
Part Number	Description	QTY	Order Date	Price
999-0900-051SP	HI/LO Motor (Cable attached) and Hardware Pack	1 Motor		
999-0900-052SP	OR - Head Motor (Cable attached) and Hardware Pack	1 Motor		
999-0900-053SP	OR - Foot Motor (Cable attached) and Hardware Pack	1 Motor		
CONTROL BOX AND POWER CABLES				
Part Number	Description	QTY	Order Date	Price
999-0900-300SP	Linak Control Box	1 Box		
999-0775-208SP	Detachable 3-Prong Power Cord	1 Cord		
HAND CONTROL PENDANT				
Part Number	Description	QTY	Order Date	Price
999-0900-301SP	Standard Positioning Hand Control Pendant	1 Pendant		
999-0900-305SP	Advanced Positioning Hand Control Pendant	1 Pendant		
999-0900-306SP	Optional Trendelenburg / Reverse Trendelenburg Hand Control Pendant	1 Pendant		
999-0791-000SP	Hand Control Pendant Holster (Standard for all pendants)	1 Holster		



SERVICE / REPLACEMENT PART RECORD (Page 2)

DOUBLE T-CABLE					
Part Number	Description		QTY	Order Date	Price
999-0806--200SP	Gray Double T Control Cable		1 Pack		
	Double T Cable Hardware Pack - INCLUDES . . .		1 Pkg		
Separate Hardware Pack 999-0844-993	1	Split Stem Cable Retainer (Bumper)			
	2	Push Cable Ties			
	6	Standard Cable Ties			
	1	Installation Instruction Sheet			
OPTIONAL BATTERY BACKUP CABLE AND BATTERY BACKUP PACK					
Part Number	Description		QTY	Order Date	Price
999-0831-003SP	Battery Pack (Portable or Mounted)		1 Pack		
999-0831-200SP	Battery Backup Cable (Needed for Portable Battery Pack)		1 Cable		
STAFF CONTROL					
Part Number	Description		QTY	Order Date	Price
999-0900-911SP	Standard Positioning Switch Pad with Bezel and Cables		1 Unit		
ZL90050	Standard Positioning Staff Control Service Pack Includes:		1 Pkg		
SEE PAGE 14 FOR INSTALLATION INSTRUCTIONS	1	Switch Pad with Bezel and Cables			
	1	Shroud (Cable Cover)			
	6	#6 Phillips Head Truss Screws			
	3	4" Nylon Cable Ties			
	1	Installation Instruction Sheet			
999-0900-901SP	Advanced Positioning Switch Pad with Bezel and Cables		1 Unit		
ZL90000	Advanced Positioning Staff Control Service Pack Includes:		1 Pkg		
SEE PAGE 14 FOR INSTALLATION INSTRUCTIONS	1	Switch Pad with Bezel and Cables			
	1	Shroud (Cable Cover)			
	6	#6 Phillips Head Truss Screws			
	3	4" Nylon Cable Ties			
	1	Installation Instruction Sheet			



SERVICE / REPLACEMENT PARTS - ELECTRONICS

CABLE RETENTION CLIP REMOVAL

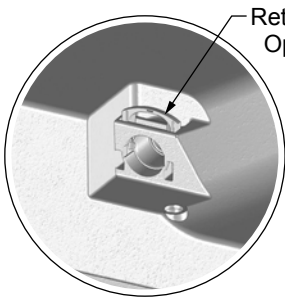
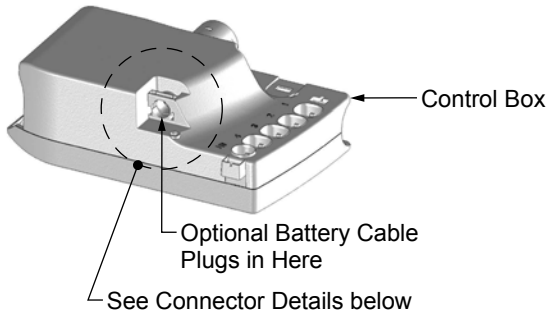
When installing or removing Control Box cables, you must first adjust the Control Box Retention Clip position to accept or release the cable connector, and then to lock it into place.

To remove a cable, first open the Retention Clip to release the cable as shown in details below, then remove the cable.

To install a cable, first open the Retention Clip, connect the cable until completely seated, then close the Retention Clip as shown in Detail C below to lock the cable in place.

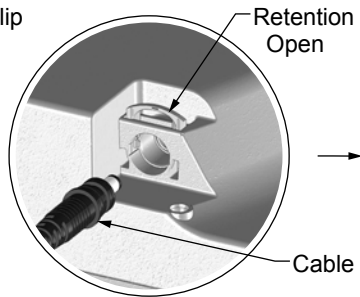
Note: Motor connectors are installed and removed by the same method: see Motor / Actuator Connector Detail, below right.

Note: Ensure cable is locked in place before proceeding.



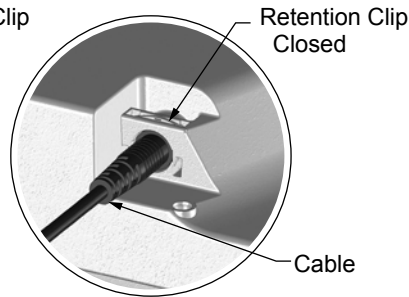
Control Box Connector with Retention Clip Open

Connector Detail A



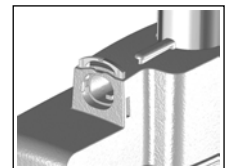
Control Box Connector with Retention Clip Open to Accept Cable

Connector Detail B

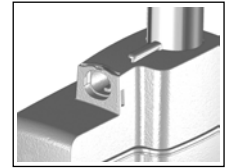


Control Box Connector with Retention Clip Closed and Cable Locked in Place

Connector Detail C



Motor Connector with Retention Clip Open



Motor Connector with Retention Clip Closed

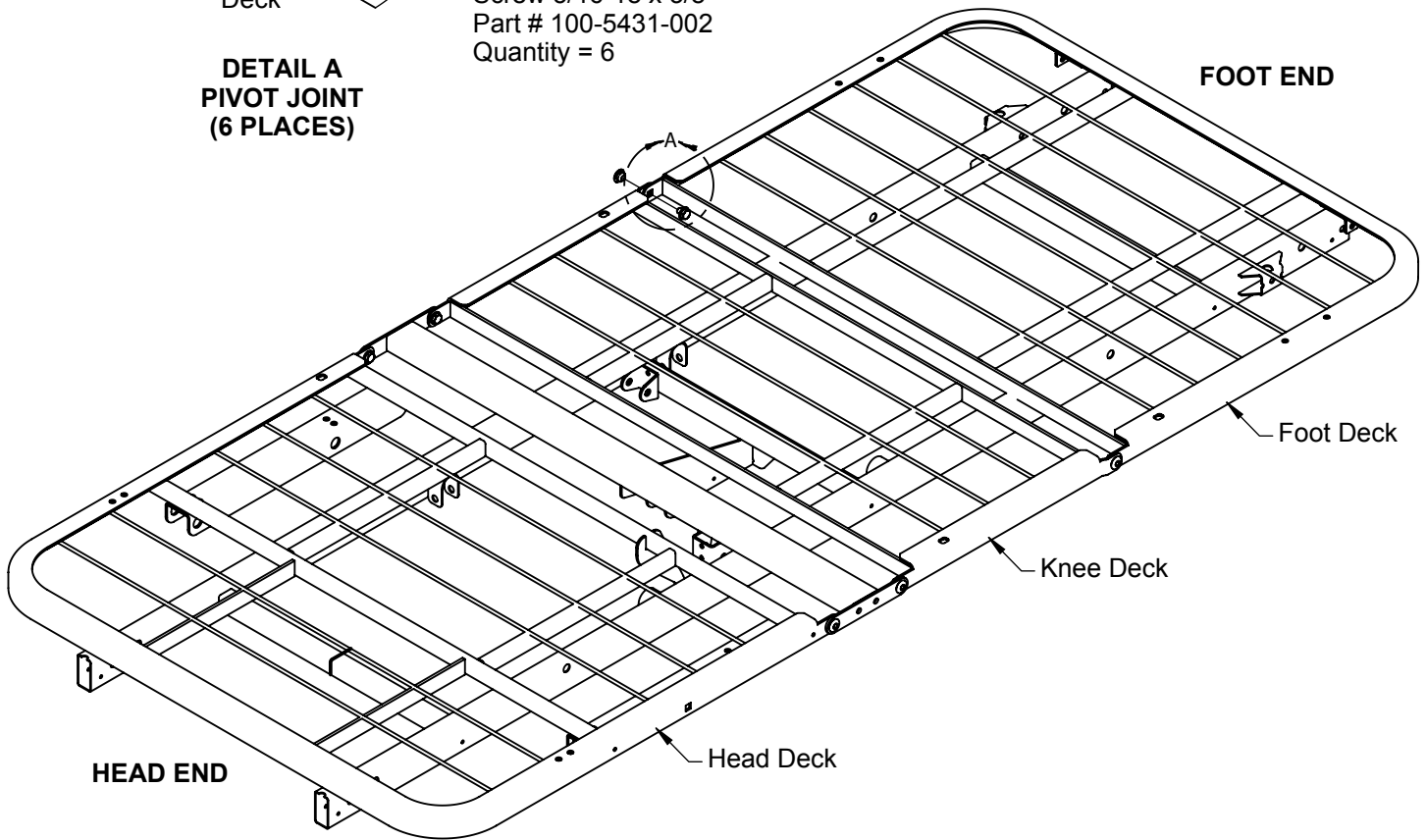
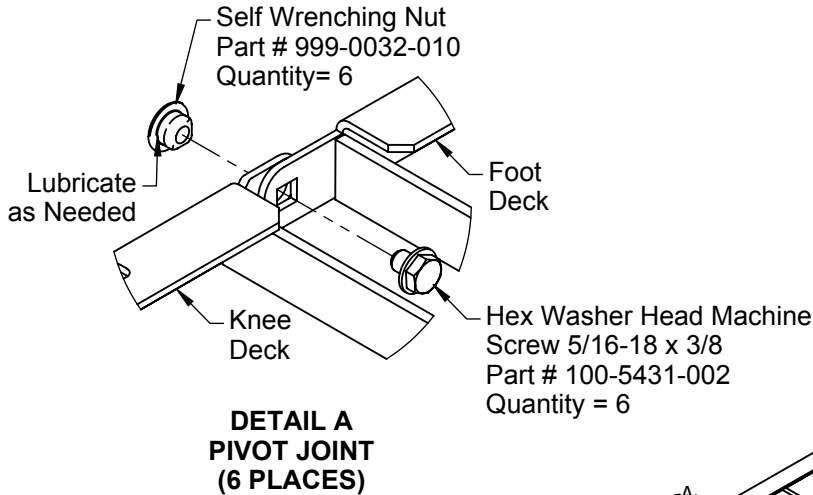
Motor/Actuator Connector Detail

- **TO ORDER A REPLACEMENT HI/LO MOTOR USE SERVICE PACK 999-0900-051SP** (Includes motor, mounting hardware, and installation instruction sheet).
- **TO ORDER A REPLACEMENT HEAD MOTOR USE SERVICE PACK 999-0900-052SP** (Includes motor, mounting hardware, and installation instruction sheet).
- **TO ORDER A REPLACEMENT FOOT MOTOR USE SERVICE PACK 999-0900-053SP** (Includes motor, mounting hardware, and installation instruction sheet).
- **TO ORDER A REPLACEMENT CONTROL BOX USE PART NO. 999-0900-300SP** (Includes control box, detachable power cord, control cable, ground wire screw, cable ties, and installation instruction sheet).
- **TO ORDER A REPLACEMENT DOUBLE T-CABLE USE SERVICE PACK 999-0806-200SP** (Includes T-Cable, cable ties, grommets, and installation instruction sheet).
- **TO ORDER A REPLACEMENT CONTROL CABLE USE PART NO. 999-0900-200SP.** (Includes cable, two cable ties, and installation instruction sheet).

WHEN ORDERING REPLACEMENT PARTS FROM CUSTOMER SERVICE, HAVE THE BED SERIAL NUMBER AVAILABLE TO CONFIRM WHETHER THE PART IS COVERED UNDER WARRANTY. (SEE PAGE 7 FOR LOCATION OF SERIAL NUMBER ID LABEL.)



SECTION E: DECK / MECHANICAL SERVICE PARTS SERVICE / REPLACEMENT PARTS DIAGRAM - DECKING



- **TO ORDER A REPLACEMENT HEAD DECK USE SERVICE PACK 999-0900-920SP (35" wide) or 999-0902-920SP (42" wide)** (includes deck, mounting hardware, and installation instruction sheet).

- **TO ORDER A REPLACEMENT KNEE DECK USE SERVICE PACK 999-0900-940SP (35" wide) or 999-0902-940SP (42" wide)** (includes deck, mounting hardware, and installation instruction sheet).

- **TO ORDER A REPLACEMENT FOOT DECK USE SERVICE PACK 999-0900-930SP (35" wide) or 999-0902-930SP (42" wide)** (includes deck, mounting hardware, and installation instruction sheet).

WHEN ORDERING REPLACEMENT PARTS FROM CUSTOMER SERVICE,
HAVE THE BED SERIAL NUMBER AVAILABLE TO CONFIRM
WHETHER THE PART IS COVERED UNDER WARRANTY.
(SEE PAGE 7 FOR LOCATION OF SERIAL NUMBER ID LABEL.)



SECTION F: TROUBLESHOOTING

NOTHING WORKS — NO POWER

! ALWAYS UNPLUG THE POWER CORD BEFORE PERFORMING MAINTENANCE ON THE BED.

1. Verify there is power in the wall outlet. Unplug the power cord from the outlet and test the outlet by plugging in a lamp or similar portable device. **OUTLET WORKS:** Move to Step 2.
2. Plug the power cord into the outlet – **NOTHING WORKS: UNPLUG THE POWER CORD** and check the power cord from the head end to the control box, ensuring it is not pinched, frayed, or damaged in any way.
 - a) **POWER CORD IS PINCHED:** With power cord unplugged, move the bed part slightly to release the pinched cord. If you can release the cord, replug the power cord into the outlet and test the bed.
 - b) **BED WORKS:** Ensure the cord is not frayed or exposed. If it is OK, you should not have to replace.
 - c) **POWER CORD IS DAMAGED:** Cut cable ties and immediately replace power cord.



IF 3-PRONG POWER CORD IS DAMAGED, REPLACE IT IMMEDIATELY!

TROUBLESHOOTING PENDANT AND DOUBLE T-CABLE: STAFF CONTROL WORKS, BUT HAND CONTROL PENDANT FUNCTION DOESN'T

1. Check panel to see if Staff Control functions are locked out; if orange lock icon illuminates then that function is locked out. Press Key and Function (e.g. Head) buttons simultaneously until orange lock icon de-illuminates. Test function. If **PENDANT STILL DOESN'T WORK:** Go to step 2.
2. Check the connections at seat pan (Hand Control Pendant to T-cable) and Staff Control cable connection to T-cable at the foot end, ensuring plugs are fully engaged. Also check T-cable connection at Control Box. If you have the optional Underbed Light feature, ensure all cables are secure. If **PENDANT STILL DOESN'T WORK:** Go to step 3.
3. UNPLUG POWER CORD FROM WALL OUTLET.
4. Unplug Hand Control Pendant plug from T-cable end on either side of Seat Pan. Unplug Staff Control cable from foot end of T-cable and unplug other end from Control Box.
5. Plug Hand Control Pendant directly into Control Box HB port, ensuring it is fully seated. Plug in power cord and test Hand Control Pendant.
 - a) **ALL BUTTONS WORK:** Replace T-cable (see page 26 for order info).
 - b) **NOTHING WORKS:** Continue Troubleshooting on next page.

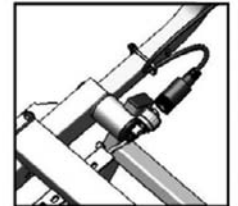
If orange lock icon lit, press key symbol and function to unlock. **A**



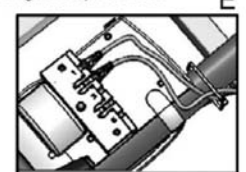
Make sure plugs at foot end are fully seated and cap locked on. **B**



Unplug Staff Control Cable from T-Cable at foot end. **C**



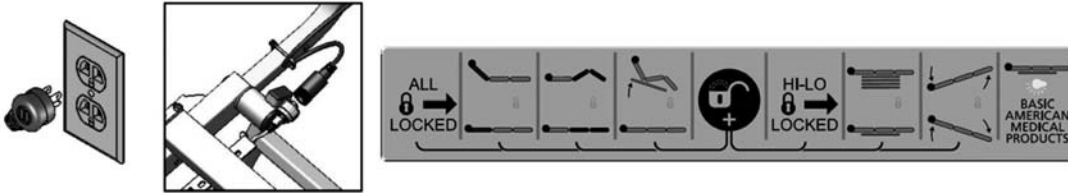
Plug Pendant Cable directly into HB port on Control Box (or into port 2 in Underbed Light Box) and test. **D**



Note: Staff Control with Advanced Positioning functions is shown in A above. Operation of Staff Control with Standard Positioning functions is identical.



TROUBLESHOOTING STAFF CONTROL: STAFF CONTROL LIGHTS BLINK; NOTHING ON STAFF CONTROL WORKS, BUT HAND CONTROL PENDANT WORKS



! ALWAYS UNPLUG THE POWER CORD BEFORE PERFORMING MAINTENANCE ON THE BED.

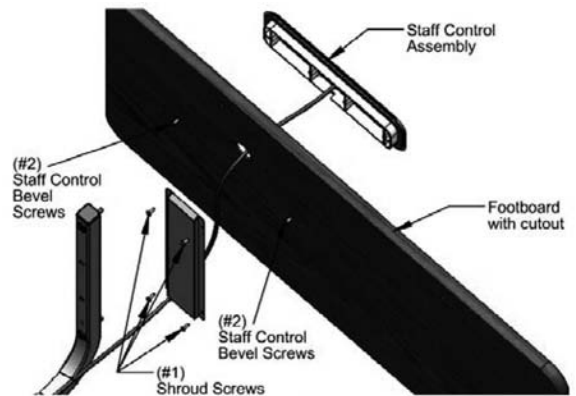
1. This could mean the Staff Control is not getting enough power from the Control Box.
2. Unplug the power cord from the wall outlet. Unplug the Staff Control Cable from the T-Cable at the foot end of the bed.
3. If you have a spare Staff Control Assembly, plug the cable into the foot end T-cable and test.

- a) **STAFF CONTROL WORKS AND LIGHTS NO LONGER BLINK:** Replace the Staff Control Assembly (see page 32 for replacement; see page 26 for order info).
- b) **STAFF CONTROL DOESN'T WORK AND LIGHTS STILL BLINK:** Continue Troubleshooting below.

Note: Staff Control with Advanced Positioning functions is shown above. Operation of Staff Control with Standard Positioning functions is identical.

TROUBLESHOOTING STAFF CONTROL: NOTHING ON STAFF CONTROL WORKS, BUT HAND CONTROL PENDANT WORKS

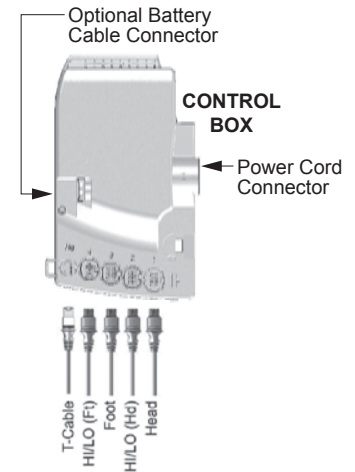
1. Check the Staff Control connections at the foot end. Is the Staff Control cable plugged securely into the T-cable? Also check if the other end of the T-cable is plugged securely into the Control Box (or Underbed Light). If the **STAFF CONTROL STILL DOESN'T WORK:** go to step 2.
2. Unplug the power cord from the wall outlet. Remove the Cable Cover (Shroud) on the inside of the footboard and locate the single terminal end that plugs directly into the back of the Staff Control Panel. Ensure it is properly seated in the panel. Plug in the power cord and test the Staff Control. If the **STAFF CONTROL STILL DOESN'T WORK:** Replace the Staff Control Assembly (see page 32 for replacement; see page 26 for order info).





TROUBLESHOOTING MOTOR CABLES AND CONTROL BOX: A: HEAD, FOOT, OR HI/LO FUNCTION NOT WORKING

1. Check plugs to ensure they are plugged into the correct ports and firmly seated (see picture at right).
2. Check all cables to ensure they are not frayed, pinched, or damaged in any way. If any cable is damaged, UNPLUG THE POWER CORD FROM THE WALL OUTLET AND REPLACE THE CABLE AND / OR THE ELECTRONIC COMPONENT.
3. **HEAD DECK NOT RISING:** Unplug power cord. Switch head and foot plugs (Ports 1 and 3). Replug power cord.
 - a) **HEAD WORKS:** Control Box head port is bad. Replace Control Box (see page 25 for order info) and press the FOOT button to test.
 - b) **HEAD DOESN'T WORK:** Replace Head Motor (see page 25 for order info).



NOTE: FOOT DOWN will not operate if bed frame is not level. Verify HI/LO is not in CHAIR or REVERSE TRENDLENBURG position.

4. **FOOT AND KNEE DECKS NOT RISING:** Unplug power cord. Switch head and foot plugs (Ports 1 and 3). Replug power cord.
 - a) **FOOT WORKS:** Control Box foot port is bad. Replace Control Box (see page 25 for order info) and press HEAD button to test.
 - b) **FOOT DOESN'T WORK:** Replace Foot Motor (see page 25 for order info).
5. **This bed has 2 motors for the HI/LO function. If one of the HI/LO motors is not moving bed up or bed down:**
 - a) Before removing any motor cables, try to re-synchronize the HI/LO function by following the steps in section "B" below. After re-synchronizing, continue with next step if the problem continues.
 - b) If bed still does not move up / down remaining horizontal:

Possibility of a bad HI/LO motor or Control box. Unplug power cord from wall. At the control box, switch the HI/LO motor cable for the potentially bad motor with the cable for the head motor (in port #1 of the Control box). Re-plug bed power cord into wall. Push Head up / down buttons on hand control. If HI/LO motor still does not run, replace that HI/LO motor. If HI/LO motor does run when pushing the head up / down buttons, try plugging the second HI/LO motor cable into the Head motor port on the Control box. If that HI/LO motor does not run, replace that HI/LO motor. If both first and second HI/LO motors work when plugged into the Head motor port, replace the Control box.

B. BED LOOKS UNLEVEL — HI/LO MOTORS ARE NOT IN SYNC

On the Hand Control Pendant, **simultaneously press and hold both** HI/LO Up and HI/LO Down buttons (Control Box should start beeping) for approximately five seconds until beeping stops. Release the buttons, then press the HI/LO Down button and hold until bed is lowered completely into the lowest height position. When both HI/LO motors reach their lowest position, HI/LO motors will automatically resynchronize.

QUICK REFERENCE

- **HI/LO AND FOOT WORKS, BUT HEAD DOES NOT:** Switch Head and Foot Motor Cable at the Control Box and test (see step 3 above).
- **HI/LO & HEAD WORKS, BUT FOOT DOES NOT:** Switch Foot and Head Motor Cable at the Control Box and test (see Step 4 above).
- **HEAD & FOOT WORKS, BUT HI/LO DOES NOT:**
 - Switch Head and Foot HI/LO Motor Cables at the Control Box and test (see Step 5 above).
 - Test to see if HI/LO Motors need to be resynchronized.



TROUBLESHOOTING — REPLACING THE STAFF CONTROL

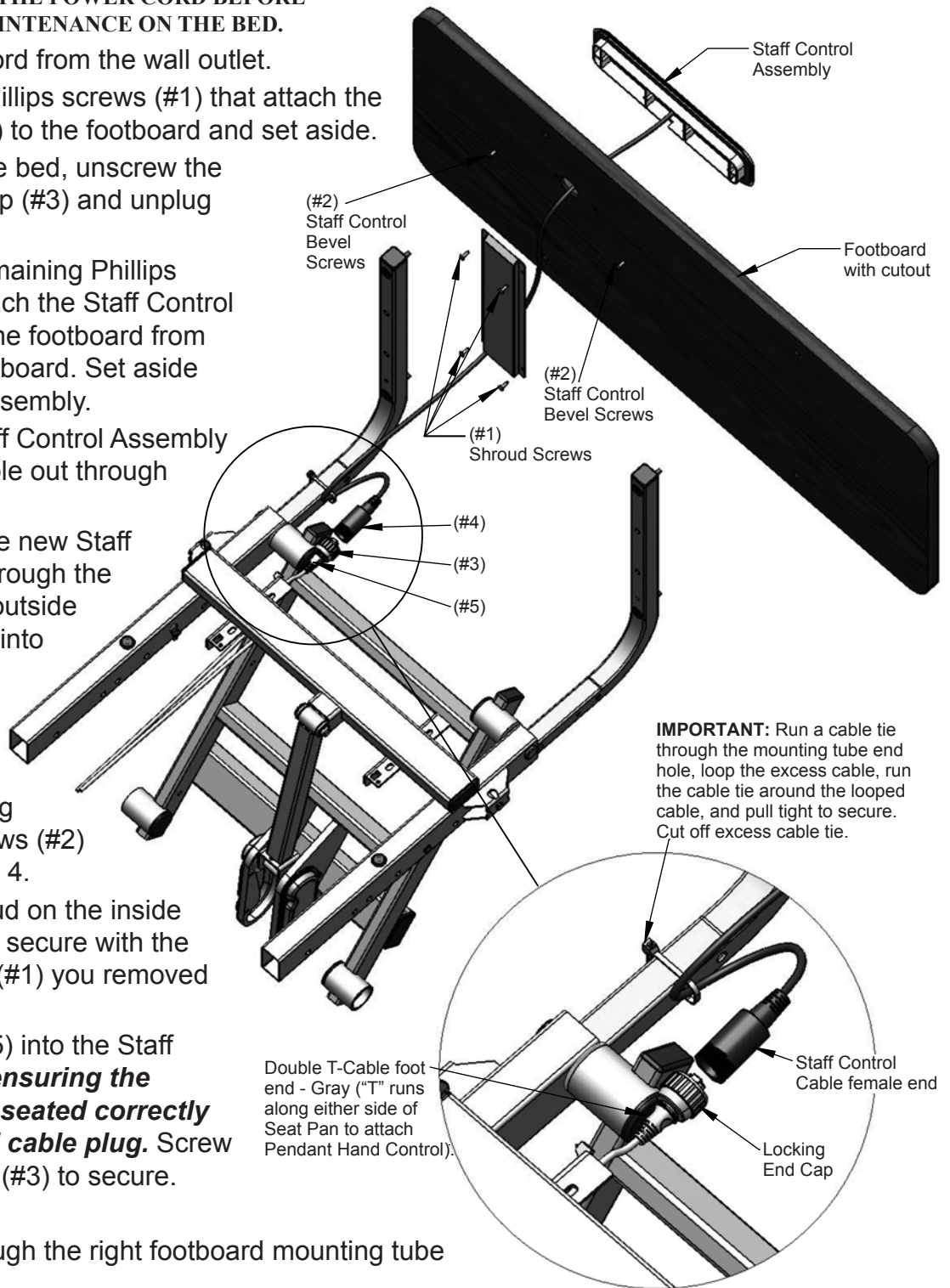


ALWAYS UNPLUG THE POWER CORD BEFORE PERFORMING MAINTENANCE ON THE BED.

1. Unplug the power cord from the wall outlet.
2. Unscrew the four Phillips screws (#1) that attach the shroud (cable cover) to the footboard and set aside.
3. At the foot end of the bed, unscrew the T-Cable retaining cap (#3) and unplug the two cables.
4. Unscrew the two remaining Phillips screws (#2) that attach the Staff Control Assembly bevel to the footboard from the inside of the footboard. Set aside screws for later reassembly.
5. Remove the old Staff Control Assembly and feed the old cable out through the large hole.
6. Feed the cable of the new Staff Control Assembly through the large hole from the outside and insert the bevel into the cutout on the outside of the footboard.
7. Secure the Staff Control by reinserting the two Phillips screws (#2) you removed in step 4.
8. Reposition the shroud on the inside of the footboard and secure with the four Phillips screws (#1) you removed in step 2.
9. Plug the T-Cable (#5) into the Staff Control cable (#4), **ensuring the phone jack plug is seated correctly in the Staff Control cable plug.** Screw on the retaining cap (#3) to secure.

Important:

10. Run a cable tie through the right footboard mounting tube large end hole.
11. Loop the excess Staff Control cable. Run the cable tie around the cable and pull tight to secure. Cut off any excess cable tie.





LIMITED WARRANTY

SCOPE OF WARRANTY

GF Health Products, Inc. (“GF”) warrants to the original purchaser only that it will replace or repair components, at GF’s sole discretion, that are defective in material or workmanship under normal use and service. All warranties are conditioned upon the proper use of the products strictly in accordance with good commercial practice and applicable GF instructions and manuals, including proper use and maintenance. To the extent that a component is warranted by a third party, GF conveys all of its rights under that warranty to the original purchaser, to the extent permitted.

This limited warranty shall only apply to defects that are reported to GF’s customer service team within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. This limited warranty is not transferable.

The warranted components and time period are set forth below:

Main Frame and welds:	fifteen years
Control Box and Actuator Motors:	four years
Hand Control Pendant, Staff Control, and Cabling	three years
Headboard and Footboard	one year
All other durable components not listed above:	two years
Subsequent service parts under warranty until the original warranty set forth above expires, or for one year, whichever is greater.	

The applicable warranty period shall commence from date of shipment to the original customer, unless there is an expiration date on the component in which case the warranty shall expire on the earlier of warranty period or the expiration date.

OBTAINING WARRANTY SERVICE

A GF Customer Service Representative must authorize warranty service. Please contact the GF Customer Service department by calling 770-368-4700, sending a fax request to 770-368-2386 or by e-mailing a request to cs@grahamfield.com. Specific directions will be provided by the Customer Service Representative. Failure to abide by the specific directions will result in denial of the warranty claim.

EXCLUSIONS

The warranty does not cover and GF shall not be liable for the following:

- 1) Defects, damage, or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
- 2) Products which are not installed, used, or properly cleaned and maintained as required in the official manual for the applicable product;
- 3) Products considered to be of a non-durable nature including, but not limited to: casters, filters, fuses, gaskets, lubricants, and charts;
- 4) Accessories or parts not provided by GF;
- 5) Charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing, in advance, by GF;
- 6) Any labor or shipping charges incurred in the replacement part installation or repair;
- 7) Costs and expenses of regular maintenance and cleaning; and
- 8) Representations and warranties made by any person or entity other than GF.



ENTIRE WARRANTY, EXCLUSIVE REMEDY AND CONSEQUENTIAL DAMAGES DISCLAIMER

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IF ANY MODEL OR SAMPLE WAS SHOWN TO THE CUSTOMER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE GENERAL TYPE AND QUALITY OF THE PRODUCT AND NOT TO REPRESENT THAT THE PRODUCT WOULD NECESSARILY CONFORM TO THE MODEL OR SAMPLE IN ALL RESPECTS.

THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS. GF SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER, OR EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS.

The warranties contained herein contain all the representations and warranties with respect to the subject matter of this document, and supersede all prior negotiations, agreements and understandings with respect thereto. The recipient of this document hereby acknowledges and represents that it has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this document.

For additional information on this product or this warranty, contact a GF Customer Service Representative.

NOTES:

- 1) Additional terms and conditions may apply.
- 2) Freight claims must be notated on the appropriate shipping documents and must be made with immediacy. International, federal and state regulations govern specific requirements for freight claims. Failure to abide by those regulations may result in a denial of the freight claim. GF will assist you in filing the freight claim.
- 3) Claims for any short shipment must be made within three (3) days of the invoice date.

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www.grahamfield.com

**If you have questions regarding a bed's warranty,
contact Basic American Medical Products at 770-368-4700.**



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