



# User-Service Manual

## Joerns® Bed Frames

### ACX Active Care Bed

To avoid injury, read user's manual before using.



## Important Precautions

- ⚠ Warning: Possible Injury Or Death.** This product is intended for use as an adjustable mattress support platform that contours for patient comfort with adjustable height for patient and caregiver convenience. Use of this product in a manner for which it was not designed could result in unproven or unsafe configuration, potentially resulting in injury or death.
- ⚠ Warning: Possible Injury.** The intended users of this product are healthcare employees and patients (use of patient controls only) need to be an adult who are at least fifteen years in age and have the physical strength and cognitive skills to operate and control the product. Follow facility safety protocols if an intended user does not have the physical strength or cognitive skills to operate and control the product safely.
- ⚠ Warning: Possible Injury.** Before adjusting bed, ensure that area under and near bed perimeter is free of people and obstructions. Failure to do so could result in injury.
- ⚠ Warning: Possible Injury.** Keep bed in lowest position except when providing care (bathing, clothing changes, etc.). Bed should be at lowest convenient height for entry or exit. Failure to do so could result in injury.
- ⚠ Warning: Possible Injury Or Death.** Floor locks increase bed stability and patient safety. Floor and caster swivel locks must be locked prior to any patient transfer or patient use of the bed. Failure to do so could result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** Patients may become entangled in pendant cord. Patients with reduced mental acuity should not be allowed access to pendant. Unsupervised use of pendant could result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** Bed safe working load is 600 pounds. This is total weight counting patient, mattress, bedding and any other equipment or persons likely to be on bed. Do not exceed 600-pound safe working load. Exceeding the safe working load could result in property damage, injury or death.
- ⚠ Warning:** Bed is intended for adults use. Intended adult patients include those having a physical size equal to or more than 146cm (57.5in), a mass equal to or more than 40kg ( 88lbs) and a body mass index (BMI) equal to or more than 17. Patients that do not meet this criterion, should be assessed according to the patient's physical and mental condition and initiate an appropriate individual care plan to address entrapment risk prior to using the bed.
- ⚠ Warning: Possible Fire Hazard.** Use nasal mask or ½ bed tent oxygen administering equipment. Oxygen tent should not extend below mattress support platform. Pendant should not be placed in an oxygen-enriched environment such as an oxygen tent. Use of electrical circuits in an oxygen-enriched environment could result in a fire hazard.
- ⚠ Warning: Possible Shock Hazard.** Unplug power cord from wall outlet before performing any maintenance, cleaning, or service to the bed. Failure to do so could result in injury or death. **Note:** In case of unexpected movement, disconnect or switch off battery and unplug bed from any outlet.
- ⚠ Warning: Possible Shock Hazard.** Injury may result from improper routing of the power cord. Always follow the proper factory-installed routing configuration. Failure to do so could result in injury or death. Do not position the device where access to mains connection cannot be disconnected.
- ⚠ Warning: Possible Injury Or Death.** Use a mattress that is properly sized to fit mattress support platform, which will remain centered on mattress support platform relative to State and Federal guidelines. Length and width should match mattress support platform. Use of an improperly fitted mattress could result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** If a patient's mental or physical condition could lead to patient entrapment, the mattress support platform should be left in the flat position when unattended. Failure to do so could result in injury or death.
- ⚠ Warning: Possible Injury or Death.** An optimal bed system assessment should be conducted on each patient by a qualified clinician or medical provider to ensure maximum safety of the patient. The assessment should be conducted within the context of, and in compliance with, the state and federal guidelines related to the use of restraints and bed system entrapment guidance, including the Clinical Guidance for the Assessment and Implementation of Side Rails published by the Hospital Bed Safety Workgroup of the U.S. Food and Drug Administration. Further information can be obtained at the following web address: <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/HospitalBeds/default.htm>.
- ⚠ Warning: Possible Injury Or Death.** Use a properly sized mattress in order to minimize the gap between the side of mattress and Side Rails/Assist Devices. This gap must be small enough to prevent patient from getting his/her head or neck caught in this location. Make sure that raising or lowering bed, or contouring the mattress support platform, does not create any hazardous gaps. Excessive gaps may result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** Do not use any Side Rails/Assist Devices until you verify they are locked in place. Failure to lock assist devices may result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** Do not use any replacement parts not manufactured, marketed, or provided by Joerns Healthcare on any Joerns bed. Use of unapproved replacement parts may result in injury or death.
- ⚠ Warning: Possible Injury Or Death.** If using accessories not manufactured, marketed, or provided by Joerns Healthcare for Joerns® beds, consult with the manufacturer for compatibility and limitations prior to use. Failure to do so may result in injury or death.

- ⚠ Warning: Possible Shock Hazard.** Bed power cord has a hospital-grade, 3-prong grounded plug. Grounding reliability can only be achieved when equipment is connected to an equivalent receptacle marked "hospital-grade". If external grounding conductor is in doubt, operate bed from backup battery. Failure to do so could result in injury.
- ⚠ Warning: Possible Equipment Damage Or Injury To Staff Members.** Service and repair must only be performed by qualified, authorized Joerns Healthcare personnel (call 800-26-0270).
- ⚠ Warning: Explosion Hazard.** Do not use in the presence of flammable anesthetics, gas or vapors. Failure to heed this warning could result in equipment damage, injury or death.
- ⚠ Caution:** Stay clear of underneath the bed when adjusting or moving the bed.
- ⚠ Caution:** Mattress support platform is not grounded, nor does it have a potential equalization connection point. To prevent injury to patient connected to intravascular or intracardial medical equipment, alternate measure must be implemented to equalize the potential between mattress support platform and medical equipment.
- ⚠ Warning:** To reduce the risk of injury, ensure the mattress support platform is horizontal and in the lowest position with the side rails fully raised and locked when moving the bed with a patient in it. For best maneuverability, push the bed from the head end.
- To avoid injury to the patient and/or user, do not attempt to move the bed laterally with the steer engaged. The wheel cannot swivel.
- ⚠ Warning:** The bed should not be used adjacent to, or stacked with, other equipment due to the risk of electronic interference. If adjacent or stacked use is necessary, the bed should be observed to verify normal operation in the configuration in which it will be used.
- ⚠ Warning:** Using non-approved cables and accessories may negatively affect the EMC performance.
- ⚠ Warning:** Mobile RF communication equipment can affect Medical Electrical Equipment.
- ⚠ Warning:** Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.
- ⚠ Warning:** External equipment intended for connection to signal inputs, signal outputs or other connectors shall comply with the relevant product standard. In addition, all such combinations – Medical Electrical Systems – shall comply with the safety requirements stated in the general standard IEC 60601-1. Any equipment not complying with the leakage current requirements in IEC 60601-1 shall be kept outside the patient environment i.e. at least 5 ft (1.5 m) from the patient support or shall be supplied via a separation transformer to reduce the leakage currents.

Any person who connects external equipment to signal inputs, signal outputs or other connectors has formed a Medical Electrical System and is therefore responsible for the system to comply with the requirements. If in doubt, contact qualified medical technician or your local representative.

- ⚠ Caution:** Particular precaution must be considered during exposure to strong emission source such as High Frequency surgical equipment and similar devices. Do not route High Frequency cables on or near device. If in doubt, contact a qualified technician.
- ⚠ Warning: Possible Injury or Death.** Make sure mattress support platform width and length are adjusted to match mattress and all casters are locked during patient transfers.
- ⚠ Caution:** To avoid damage to the side rail mechanisms, do not move the bed using the side rails. Use the handles integrated in the head and foot panels to move the bed.
- ⚠ Caution:** Before transporting bed, unplug bed from power source, wrap power cord around cord storage hooks on bed frame below head panel and hang pendant from head panel. Failure to do so could result in power cord, pendant cord, or bed damage, thereby creating a potential hazard.
- ⚠ Caution:** Drainage bag loops are not intended for use as tie downs.

There are no known contraindications for this device.

The Joerns' ACX bed is intended for use within institutional healthcare environments 3 (ie: rehabilitational care). Joerns Healthcare recommends compliance to the regulations and guidelines specified to your locality.

When assessing the risk for entrapment, you need to consider your bed, mattress, Head/Foot Panels, Side Rails/ Assist Device and other accessories, as a system. It is also extremely important to review the patient's physical and mental condition and initiate an appropriate individual care plan to address entrapment risk. All Joerns bed systems are evaluated for compliance to the FDA/CDRH "Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment." For more information, call Customer Care, 800-826-0270.

## Save These Instructions

Thank you and congratulations for choosing Joerns ACX bed. Joerns beds are developed with safety, comfort and convenience of both patients and caregivers in mind.

Advanced ergonomic design will provide years of reliable service in your facility.

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### Bed System Entrapment Information

In April 1999, the U.S. Food and Drug Administration (FDA) in partnership with representatives from the hospital and post-acute bed industry, including Joerns Healthcare, national healthcare organizations, resident advocacy groups, and other federal agencies formed the Hospital Bed Safety Workgroup (HBSW). The workgroup's goal is to improve the safety of bed frames for patients and residents in all health care settings who are most vulnerable to the risk of entrapment. The efforts of the FDA and the HBSW culminated in the FDA's release of recommended guidelines intended to reduce the risk of entrapment, including dimensional limits for critical gaps and spaces between bed system components and clinical guidance for assessment and implementation of bed side rails in various health care settings.

Entrapment zones involve the relationship of bed components often directly assembled by the healthcare facility rather than the manufacturer. Therefore, compliance is the responsibility of the facility.

As the leading manufacturer of long-term care beds and a frontrunner in addressing this critical issue, Joerns Healthcare can offer you the expertise, assistance and products to bring your facility into compliance.

### Joerns Compliance Solutions

Matching the right bed components in order to meet regulatory guidelines can be complex.









That is why Joerns offers a wide array of compliance options. We assist customers in selecting compliant accessories recommended for their specific bed model.

#### For More Information

To learn more about compliance options with Joerns products, visit our website at [www.joerns.com](http://www.joerns.com), or contact our Customer Care reps at 800-826-0270 and ask for free informational publications.

To learn more about entrapment zones, assessment methods and guidelines concerning entrapment, contact Joerns Healthcare at 800-826-0270 or consult the FDA website: <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/HospitalBeds/default.htm>.

#### I.D. Label Symbol Definition

	Attention/Warning (Note: Background: yellow edge : black, symbol : black)		Refer To Instruction Manual (Note: background: blue, symbol: white on bed label)
	Safe Working Load		Type B Applied Parts, user controls, mattress, support platform
	Maximum Patient Weight		The disposal of electronics should not be mixed with general household waste.
	Protective Earth (ground)		

## Features and Specifications

### Standard Features

- Fully adjustable mattress support platform with independent back and knee movement, up/down adjustments including AdvancedCare positioning for Trendelenburg and Reverse Trendelenburg, Auto Contour, Comfort Chair and Gravity Assist positioning
- 35" wide mattress support platform sections easily expand to 42" and 48" wide
- Mattress support platform expands from 80" to 84" and 88" length
- Height adjustable from 10" to 31"
- Side Rails on head and foot sections lower for easy patient access
- Pendant control for all bed functions
- Staff Control with lockouts and backlighting located in the foot panel and side rails
- In-rail back section angle indicators
- Central brake and steer lock
- Emergency manual and electronic CPR release for mattress support platform
- Emergency battery backup system
- Transportability at any height
- Antimicrobial plastic surfaces
- Removable pan-style mattress support platform for ease of maintenance and cleaning
- Drainage bag loops
- Under bed light
- Integrated USB port
- Integrated IV pole holder (½")
- Integrated pump holder (in the foot panel)
- Auxiliary power outlet on select models

### Electrical Specifications

**Power:** 120 VAC North America

**Frequency:** 60 Hz North America

**Current Rating:** 5.0 Amps North America

**Classification:** Class I, Type B

**Mode of Operation:** 10% Maximum Duty Cycle  
2 minutes on/18 minutes off

**Circuit Protection:** Auto Reset Current Sensor

**Patient Touch Current Leakage:** <100 microamps

**Aux Outlet:** 10 Amps

**Note:** Actuators operate on a 24V DC system

### Certified To:

ANSI/AAMI ES60601-1

IEC 60601-1

IEC 60601-2-52

**In Accordance With:** CAN/CSA C22.2 No. 60601-1

### Models Included:

ACXBED.....Base Model

ACXBED-PRM.....Premium Model

## Accessories And Options

- Integrated bed exit alarm
- Integrated patient weigh scale for weight monitoring
- Nurse call integration
- Safety Stop protection for obstructions
- Trapeze/Patient Helper Bar
- Joerns Therapeutic Support Surfaces
- IV Rod
- Floor Mat

## Environmental Conditions

### Operating Conditions:

Ambient Temperature: +50°F to +104°F

Relative Humidity: 30% to 75% Non-Condensing

Atmospheric Pressure: 700 hPa to 1060 hPa

Protected Against Splashing Water: IPX4

### Storage and Shipping Conditions:

Ambient Temperature: -40°F to +158°F

Relative Humidity: 15% to 93% Non-Condensing

Atmospheric Pressure: 500 hPa to 1060 hPa

### Bed Identification Numbers

When ordering parts or when contacting Joerns Customer Care Department, please include the bed's model and serial numbers, found on the identification labels. The identification labels are located on bed frame at the head end of the bed on the main frame.

## Mechanical Specifications

### Description:

### Dimensions:

Overall Dimensions .....	89.7"L x 39.7"W x 10"H
Minimum Sleep Surface .....	80"L x 35.0"W x 7.0"H
Weight .....	Premium 466 lbs. (Base 418 lbs.)
Maximum Back Angle .....	70° to horizontal
Maximum Knee Angle .....	35° to horizontal
Trendelenburg/Reverse Trendelenburg.....	14°
Minimum Height Mattress Support Surface	
Base Bed.....	10.00"
Maximum Height Mattress Support Surface	
Base Bed .....	31.5"
Caster Diameter .....	5"
Safe Working Load .....	600 lbs.
Maximum Patient Weight.....	550 lbs.
Suggested Foam Mattress Height.....	6"

## Recommended Mattress Size

Width/Length	80 inch L	84 inch L	88 inch L
35 inch W	35" x 80"	35" x 84"	35" x 88"
42 inch W	42" x 80"	42" x 84"	42" x 88"
48 inch W	48" x 80"	48" x 84"	48" x 88"



## Assembly

### Installation Of Head and Foot Panels

1. Raise the bed to a comfortable working height.

**Notice:** Make sure the power cord is unplugged from the power outlet and the control unit battery switch is in the OFF position prior to disconnecting/connecting any foot panel cables. Failure to ensure bed is not powered when disconnecting/connecting the foot panel cables may result in damage to the bed's electronic controls.

2. Confirm that the bed's power cord is not connected to the power outlet. Confirm that the control unit battery switch is in the OFF position.
3. Insert head and foot panel supports into their respective receptacles in the frame (Figure 1).
4. Connect cables exiting the bottom of the foot panel to the appropriate cables on the bed frame (Figure 2).
5. Check that the battery switch is in the ON position.
6. Plug in main power cord (grey) when ready to operate the bed. Plug in auxiliary outlet power cord (black) if equipped.
7. Power cord is the main disconnect device. To disconnect the mains, unplug power cord. Backup battery powers the actuators when cord is unplugged.
8. Whenever bed is cleaned or serviced, it should be unplugged from wall power. The battery can still power the bed, so functions should be locked to keep bed from accidentally operating. **Note:** To avoid electric shock, always plug bed into properly grounded hospital-grade receptacle.
9. Battery backup is not user-serviceable. If replacement is required, contact Joerns Healthcare Technical Support at 800-826-0270.

#### Head Panel Removal:

1. Head panel easily removes by lifting straight up (Figure 1).
2. Head panel pins fit tightly in respective frame receptacles. This may cause binding during removal and replacement.
3. To minimize binding, grasp head panel at both lower corners and lift evenly.



Figure 1



Figure 2

#### Foot Panel Removal:

**Notice:** Make sure the power cord is unplugged from the power outlet and the control unit battery switch is in the OFF position prior to disconnecting/connecting any foot panel cables. Failure to ensure bed is not powered when disconnecting/connecting the foot panel cables may result in damage to the bed's electronic controls.

1. Make sure the battery switch is in the OFF position.
2. Unplug the bed from the power outlet.
3. Briefly push any pendant or staff control button in order to de-energize the control system completely prior to disconnecting/connecting any other cables.
4. Disconnect foot panel cable (Figure 2).
5. Foot panel pins fit tightly in respective frame receptacles. This may cause binding during removal and replacement.
6. To minimize binding, grasp foot panel at both lower corners and lift evenly.

## Bed Operation

### Quick Start Set Up

1. Plug bed into grounded hospital-grade receptacle
2. Place all linens and accessories on bed
3. Zero the bed scale (See scale section)
4. Lock casters by engaging the caster brake lever
5. Lower bed to appropriate transfer height
6. Bed is now ready for patient use

### Initial Start Up

After positioning bed, always engage caster brake lever. Bed should be allowed to reach room temperature before plugging power cord into grounded hospital-grade receptacle.

**⚠ Warning:** It is important to always **engage the caster brake lever** to prevent unintended bed movement.

### Patient Transfer

Lock casters by engaging the caster brake lever and make sure mattress support platform is extended to the proper size for the patient. Lower side rails as needed and lower patient in a carefully controlled manner, onto the bed.

**⚠ Warning:** It is important to **always engage the caster brake lever** to prevent unintended bed movement.

## Bed Controls

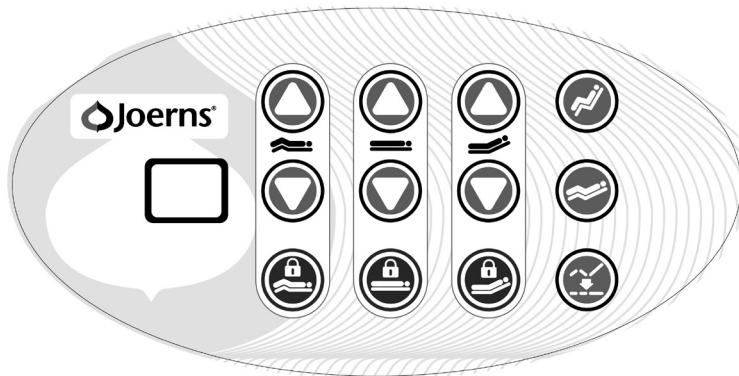
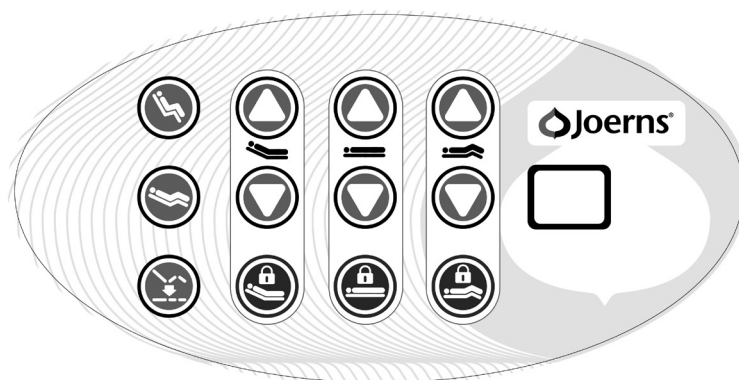
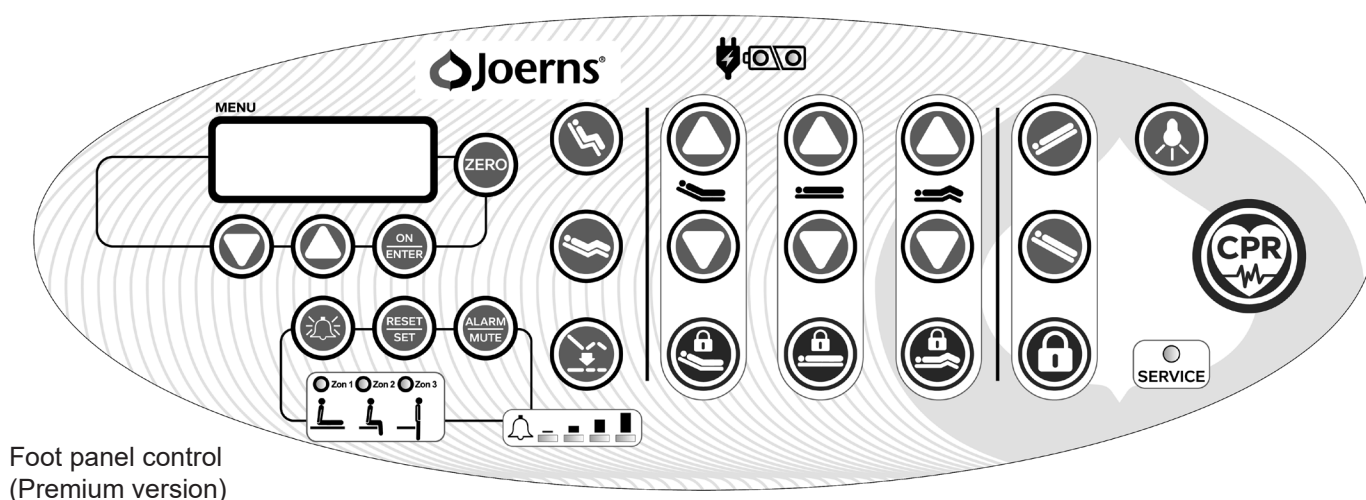
### Staff Control Panel Operation

**⚠ Warning: Possible Injury Or Death.** Use staff control at the foot panel or in the side rails to deactivate bed when patient movement or inadvertent activation of bed functions by patient or staff member could result in personal injury.

The staff control panel at the foot panel and outside of side rails allows caregiver to operate the bed from multiple locations.

Caregivers can use the control panels to adjust all mattress support platform sections to desired positions. The caregiver can also individually lock out all functions on both the pendant and staff control.

1. To lock out a function, press the applicable “Lock” graphic on the panel and push the function to confirm lock out. Illuminated amber LED indicates that function is now locked out.
2. To unlock function, press the appropriate “Lock” graphic on the panel and push the function to confirm unlock. Amber LED is no longer illuminated, signaling that function is now operable.





### Head Angle Adjustment



**Function:** The head angle adjustment buttons allow the head section to move up or down.

**Operation:** Press and hold to move the head section to the desired angle. The degree of head section angle will be displayed in the control panel window located on the head end caregiver side rails.

**Note:** When operating the head angle adjustment, the base of the head section slides in regression towards the head end of the bed. This action lengthens the pelvic section of the bed and helps prevent compression of the abdomen.

### Bed Deck Height Adjustment



**Function:** The bed deck height adjustment buttons allow the bed's height to be adjusted

**Operation:** To move the bed deck up or down, press and hold the appropriate button on the control panel with the symbol depicted.

### Knee Adjustment



**Function:** The knee adjustment buttons allow the knee section to be adjusted.

**Operation:** To move the knee section up or down, press and hold the appropriate button with the symbol as depicted.

### Comfort Chair



**Function:** Comfort Chair positioning provides synchronized movement of the head section, knee section and Reverse Trendelenburg in one button operation.

**Operation:** Press and hold to move the bed into a chair position.

**Note:** When operating the Comfort Chair button, the base of the head section slides in regression towards the head end of the bed. This action lengthens the pelvic section of the bed and helps prevent compression of the abdomen.

### Contour



**Function:** Contour positioning provides synchronized movement of the head section and knee section in one button operation.

**Operation:** Press and hold to move the bed into a contour position.

### AutoTransfer Height



**Function:** AutoTransfer Height positioning provides synchronized movement of the head section and knee section in one button operation to achieve a horizontally flat bed deck at a comfortable transfer height.

**Operation:** Press and hold to lower both head and knee to flat position and place bed at transfer height.

### Programmable Transfer Height

#### To Change Pre-Set Transfer Height:

Place bed at new desired transfer height using the Up or Down buttons - Simultaneously press and hold 'Transfer Height' + 'Head Section Lock' buttons for 5 seconds to confirm setting at new height.

PUSH Simultaneously  + 

#### To Change back to Default Pre-Set Height (12"):

Simultaneously Press and Hold 'Transfer Height' + 'Bed Height Lock' buttons for 5 seconds to re-set the Default Height back to 12".

PUSH Simultaneously  + 

### Trendelenburg



**Function:** The Trendelenburg button allows the bed to be positioned in a head down/foot up position.

**Operation:** Press and hold to move the bed deck to the desired angle, digitally displayed briefly in the control panel window.

**Gravity Assist:** Gravity Assist limits the head down angle to 4°. The caregiver can select the 4° Gravity Assist mode for patient safety and positioning. See Gravity Assist section.

**Note:** To reverse the Trendelenburg angle, press the Reverse Trendelenburg button. When reversing the bed deck angle (toward reverse Trendelenburg), it will automatically pause at the 0° horizontal position. To continue in the same direction, continue to press and hold button to move bed to the appropriate position.

**⚠ Caution:** The Trendelenburg positions should only be set under clinical advisement.

### Reverse Trendelenburg



**Function:** The Reverse Trendelenburg button allows the bed to be positioned in a foot down/ head up position. Reverse Trendelenburg position is achievable between 0° and 14°.

**Operation:** Press and hold to move the bed deck to the desired angle, digitally displayed briefly in the control panel window.

**Note:** To reverse the reverse Trendelenburg angle, press the Trendelenburg button. When reversing the bed deck angle (toward Trendelenburg), it will automatically pause at the 0° horizontal position. To continue in the same direction, continue to press and hold the button to move bed to the appropriate position.

**⚠ Caution:** The Trendelenburg positions should only be set under clinical advisement.

### Gravity Assist Mode

**Function:** The bed will ship set to 4° Gravity Assist mode. This mode limits the head down angle to 4°. The caregiver can select the 14° Trendelenburg mode and 4° Gravity Assist mode to enable Trendelenburg functionality.

**Operation:** Simultaneously, press and hold Trendelenburg and Reverse Trendelenburg buttons for 5 seconds on the Staff Control Panel. Trendelenburg/

Reverse Trendelenburg lock icon will begin flashing indicating that the system is in angle selection mode. For Gravity Assist, press bed down button to select 4° Gravity Assist mode. For Trendelenburg, press bed up button to select full 14° Trendelenburg mode.

### Under Bed Floor Lighting



**Function:** Under bed floor lighting provides illumination to the area beneath the bed. The bed exit alarm will also automatically turn the light on.

**Operation:** Press and release the appropriate button to turn the light on/off.

### Brake

**Function:** The brake locks casters to prevent bed frame movement.

**Operation:** Move bed frame into position and step down on the brake pedal until fully engaged. To release, push pedal up until horizontal or in free-steer position to unlock all casters.

**Note:** When engaging lock, ensure that the brake is fully engaged before leaving the bed unattended.

### Steer

**Function:** The steer will lock a foot end (identified by yellow cap) caster into straight alignment for easier bed navigation.

**Operation:** Push up on the brake pedal until fully engaged. To release, step down on the pedal until horizontal or neutral in Free-Steer position to unlock all casters.

### CPR



**Function:** The CPR button lowers the head of bed angle and knee to flat, then lowers the deck height.

**Operation:** Press and hold to flatten the head of bed and knee. Once the knee and head sections are flat, the bed deck will lower. If the button is released, the bed will stop. Press and hold the button until the desired position is reached.

**Note:** When the bed is on battery power, the mattress support platform can be flattened and returned to a predetermined height within 30 seconds. However, it is suggested to use manual CPR release function to expedite lowering the head section. See Manual CPR Release Function for operational details.

### Nurse Call Button



**Function:** The Nurse Call button sends a signal to the nurse call system when pressed.

Please note this feature will only communicate when properly connected to a nurse call system.

**Operation:** Press and release to send a signal to the nurse call system.

### Function Lockout



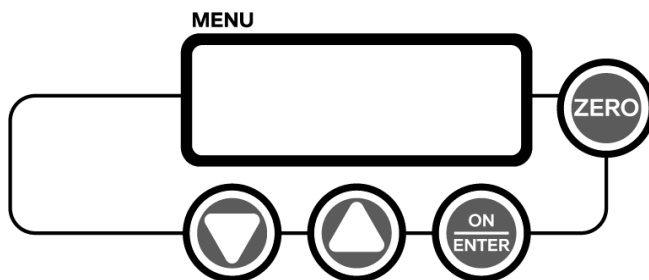
**Function:** The Function Lockout button disables operation of one or more bed functions.

**Operation:** Press and release the Lock button under the Head, Bed Deck, and Knee section buttons to lockout individual controls. To release the lockout, press and release the same button again. This function can be enabled or disabled from either the side rail or foot panel control panels.

### Patient Weigh Scale (Premium Model Only)

The patient scale monitors and records the weight and weight change of a patient.

The scale menu allows adjustment to settings within the scale program including kg/lb units, previous weight lookup and servicing options.

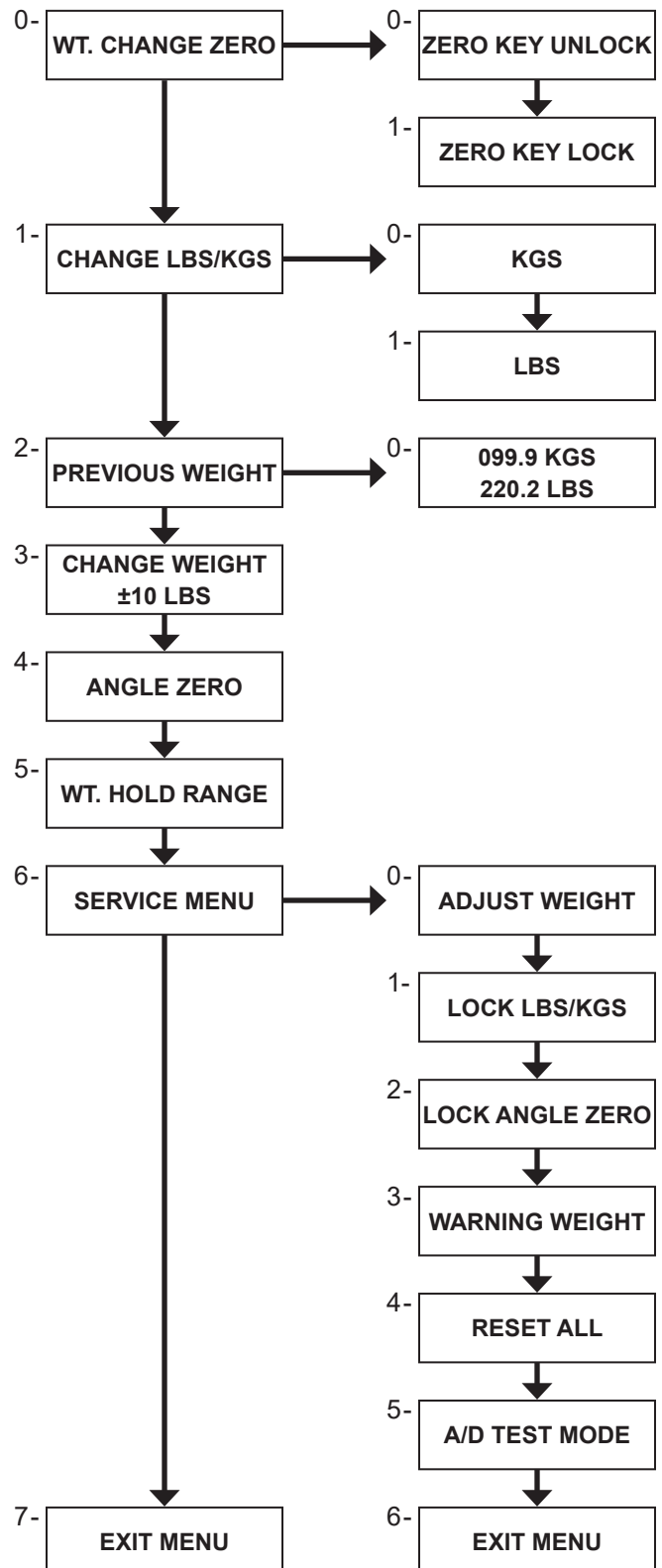


#### Menu Options:

1. Press On/Enter button to view menu, then arrows to select.
2. Lbs/Kgs Mode: Select "Change lbs/kgs" to view patient's weight in either lbs or kgs.
3. Change Weight Mode: To monitor patient's weight relative to zero, select the "Change Weight" to view weight variation.
4. Previous Weight: To recall previous weight, select "Previous Weight" to view last weight measured.

### Patient Scale Menu Options

Main menu and sub-levels of the scale system.



## Patient Scale Display and Function (New Patient)

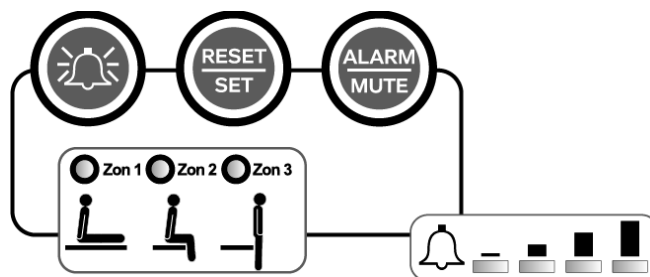
**Note:** With bed mattress, pillow and linens in-place, perform the following set up prior to placing the patient on the bed.


1. Press and hold the Zero button until countdown begins, then release. Display counts down from 5-0 seconds, visually resetting the weight to zero (0.0 lbs). **Note:** The bed is now ready to place patient on mattress.
2. Place patient on bed and allow for the displayed weight in the window to remain constant. A symbol “^” under the displayed weight of the new patient will appear indicating a stabilized value has been recorded; at this moment, the value will be saved and locked into the scale memory automatically. The bed exit alarm can now be set.
3. Check patient's data:
  - a. Patient's Weight: Press and release the On/Enter button to display patient weight.
  - b. Patient's Weight Change: Press and release On/Enter button twice to display options. Press and release the scale Up and Down buttons to scroll through the menu, find “Change Weight” and the patient's weight change is displayed.

### To exit menu:

Press and release the scale UP and DOWN buttons to scroll through menu. Select “Exit Menu,” then press and release the On/Enter button. Upon exiting the menu, patient's weight will be displayed again briefly.

## Bed Exit Alarm System (Premium Model Only)



1. With patient in bed, press and release the Reset/Set button and scroll through the zones to select the appropriate sensitivity (zone 1, 2 or 3). An indicator light will illuminate next to the selected zone.
2.  Select the appropriate audio volume level by pressing the Alarm button as needed to scroll through the options (mute, low, med and high). An indicator light will be seen showing the selected level is activated, including the mute mode (in this mode, the exit alarm will only activate through the nurse call system if connected).
3. The alarm can be muted by pressing and releasing the Alarm/Mute button. The button's light color will change to red indicating that the audio is off, but the exit alarm remains active if connected to the nurse call system.

**Note:** Zone 1 can be disabled:

1. Press and hold the Reset/Set button + Contour button for 5 seconds to disable/enable zone 1.



- a. Zone 1 LED will flash once to signify the zone is disabled
  - b. Zone 1 LED will flash twice to signify the zone is enabled
2. When zone 1 is disabled, only zone 2 + Zone 3 will be available for patient monitoring.

## Battery Backup System

The bed is equipped with a battery backup system, which allows the electrically operated functions to be used when the bed is disconnected from the main power source. The bed transitions between main power and battery power automatically. To charge the battery, connect the power cord to a grounded hospital-grade receptacle. The bed should be plugged in as often as possible to maximize battery life.

If the bed is not used for a long period of time, it is recommended that the battery be charged at least 24 hours before operating on battery power.

**Note:** Keep the bed plugged into a main power receptacle for optimum performance and higher adjustment speeds.

Bed adjustments will be slower when the power cord is unplugged and the bed is powered from its battery backup system.



Illuminates when plugged in



Illuminates when unplugged and fully charged



Illuminates when battery charge is low

**Note:** If battery backup is not working as expected, check the battery switch is in the ON position.

## Manual Bed Controls

Certain features of the bed can be controlled manually.

### Side Rails

The standard split side rails have two positions: up and down. When the side rail is raised to its up position, it will automatically lock in place.

#### Side Rail Operation

**Note:** The side rail will only lock in the in the up position.

**From the up position to lower position (Figure 3):** While holding the upper hand-hold of the side rail, pull the green lever up to release and lower the side rail (there is no lock in the down position).

**From the lower position to the up position (Figure 4):** while holding the upper hand-hold of the side rail, lift the side rail to the up position, the lever will automatically click into its locked position.



Figure 3



Figure 4



## Manual CPR Release Function

The emergency CPR release handles are positioned in the pelvic area on both sides of the bed. The manual release function returns the bed's head section to a fully down position in the event of an emergency resuscitation.

### Operation:

To manually lower the head section in an emergency, pull one of the red release handles marked "CPR" (Figure 5) and push down on the head section as needed.

**Note:** If manual CPR is utilized, the side rail will display the last head of bed angle position. To reset the display, press and hold the Head Down button on the caregiver side rail control panel.

**⚠ Warning:** The head section will lower quickly – keep fingers clear to avoid pinching.

Alternatively, the CPR function can be activated electrically from the foot panel control panel. Press and hold the red CPR button to move the bed into the desired height. If the button is released, the bed will stop. Press and hold the button until the desired position is reached.

## Integrated Length and Width Expansion (Mattress Support Platform)

The length of the bed deck is extendable from 80" to 84" and 88". The width of the bed deck is expandable from 35" to 42" and 48".

### To Extend Length:

1. Pull up on the extension lock at the foot-end of the bed to release lock in current position (lock is spring loaded so if when released, lock will reengage) (Figure 6).
2. Firmly grasp the metallic frame of the foot panel and gently pull out. Extension lock can be released and will reengage at the pre-designated length of 84". To confirm proper lock engagement, gently attempt to move the foot panel back and forth to ensure extension lock is engaged. Repeat step for 88" extension. When expanded to 84" & 88", remember to expand the panel on the foot section to match sleeping deck with bed frame length.



Figure 5



Figure 6



Figure 7

3. When extending the foot panel, raise the foot section with the staff control to more easily adjust.
4. Pull black knob in the center of the foot section to disengage lock (Figure 7). Grasp the metallic end of the foot section and pull toward foot panel. Extension knob can be released and will lock into place at the pre-designated length of 84" & 88"

**Note:** Do not extend Bed Frame by grabbing the foot panel.

### To Expand Width:

The expansion lock for each side is located on the first bar of every deck section toward the head end (Figure 8).

1. Push up on the expansion lock to release lock in current position (lock is spring loaded so if when released, lock will reengage) (Figure 9).
2. With lock released grasp the deck extension and gently pull out. Extension lock can be released and will reengage at the pre-designated length of 42".
3. Push and pull on the extension to ensure it is secured. Repeat the above steps on the remaining extension sections.
4. Repeat step for 48" expansion.

**Note:** Expand starting from the head section down to avoid expansion obstruction of the foot end rails on the last bed deck extension.

### Foot Section Leg Lift Adjustment

The foot section angle is adjustable when the knee section of the mattress support surface is elevated.

#### To Elevate Foot Section

With the knee section elevated, grasp the outer edges of the foot section, raise to the desired position (Figure 10). Once the desired position has been reached, gently allow the foot panel to lower and lock in place.

#### To Lower Foot Section

Grasp the outer edges of the foot section, lift upwards slowly to release. Then, slowly lower the foot section until firmly returned to its original position resting on the main frame.

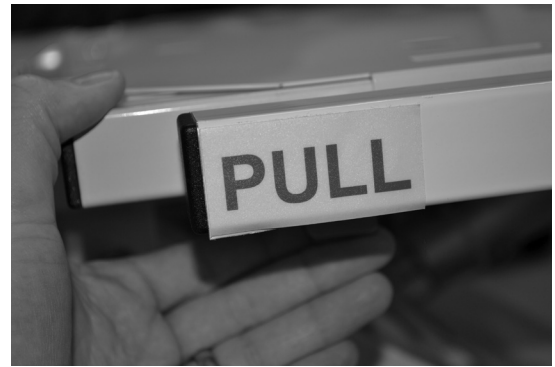


Figure 8



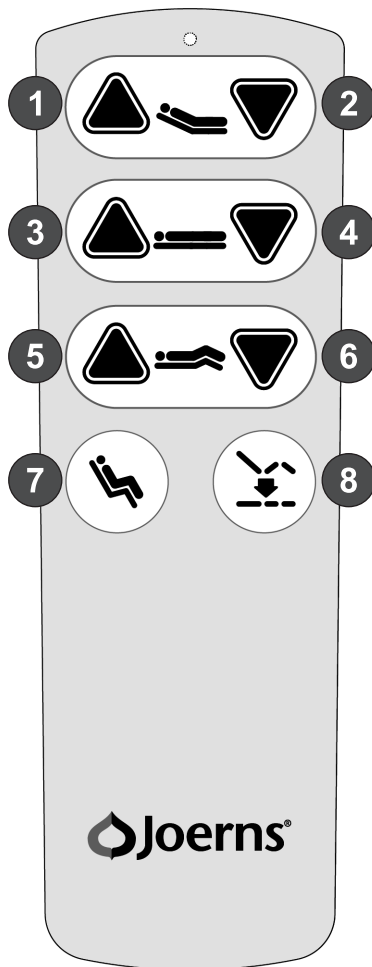
Figure 9



Figure 10

## Patient Pendant Operation

The patient pendant allows the patient to operate the bed. Operation is performed the same as side rail and foot panel controls. Patient and caregiver can use the pendant to adjust all mattress support platform sections to desired positions.



1. Push button to raise back
2. Push button to lower back
3. Push button to raise bed
4. Push button to lower bed
5. Push button to raise knee
6. Push button to lower knee
7. Push button for Comfort Chair
8. Push button to lower both head and knee to flat and place bed at transfer height

## Additional Features

### Nurse Call Connectivity



To connect bed to a nurse call system, a standard 37 pin connection and ¼" jack are located at the head end of the bed below the mattress support platform (Figure 11). When connected, bed will send an alarm signal to the nurse call station if Nurse Call button is pressed on the patient control panel or the patient control hand pendant. In addition, the nurse call station will be signaled if bed exit alarm is triggered (See scale section for operation).



Figure 11

### Safety Stop System (Premium Model Only)

The bed is equipped with a safety stop system to avoid injury or damage due to obstructions from objects placed under the bed frame. The bed is designed to detect when contact is made with an object while lowering.

#### Operation:

When lowering the bed, if an item is obstructing the Hi/Lo operation, the bed will stop lowering. Once the obstruction is contacted, the bed will stop and raise approximately 1.5 inches to free any potential obstruction.

### Integrated USB port

Integrated USB ports located on each of the patient side rail controls provide power to USB enabled portable electronic devices (Figure 12). To utilize the USB port, slide the port cover to open position and insert a USB cable into port. Connect cable to electronic device such as a phone or music player.

### Integrated Pump Holder

The foot panel of the bed features an integrated pump holder designed to easily attach most air mattress pumps, sequential compression devices (SCDs), and other equipment designed to be hung on a bed frame (Figure 14).

### Auxiliary Power Outlet (Select Models)

The bed is equipped with an auxiliary power outlet (Figure 13). The outlet receives power through a dedicated power cord. If the auxiliary power outlet is not powering a device, check that the power cord is plugged into a power source and that the fuse (located next to the power outlet) does not need to be replaced.

### Trapeze/Patient Helper Accessory

The optional trapeze/patient helper has a limited safe working load (SWL) intended for patient repositioning in bed for all patients within the patient weight range specified. Refer to Patient Helper Bar label for specific SWL. The trapeze handle height can be adjusted by shortening the handle length. To shorten the handle length, grasp the handle and position at the desired height, then adjust the strap to the appropriate length on the patient helper bar.

The trapeze has three handle positions:

1. Centered (Figure 14): Positions the trapeze handle above the patient's upper torso to provide assistance during positioning.
2. Off set (Figure 15): Positions the trapeze handle and patient helper bar to the side of the bed for assistance during egress.
3. Left and Right location: The trapeze bar can be installed on the left or right side per patient need.

**⚠ Caution:** The Patient Helper Bar is not designed to take the full weight of a patient, only to assist with repositioning on the mattress or during egress from the bed.

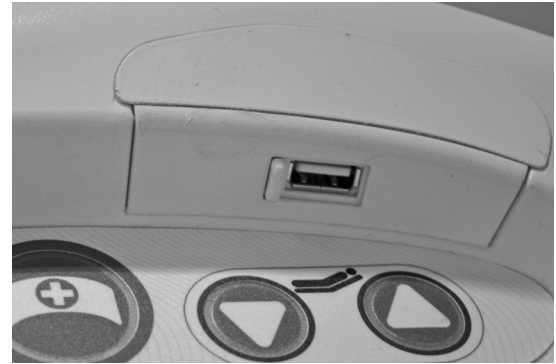


Figure 12



Figure 13



Figure 14



Figure 15

## Cleaning Procedures

Eye protection must be worn at all times during the cleaning and disinfection process.

It is recommended that you clean and disinfect the bed between patient use and regularly during extended patient stays. Refer to your facility's cleaning and disinfection policies, and follow the guidelines below.

**⚠ Caution:** Avoid the use of running water and/or pouring disinfectant liquids during the cleaning process of the bed frame sections.

### Recommended Clinical Disinfection Liquids

1. Quaternary Ammonium Disinfectant
2. Activated Hydrogen Peroxide
3. Sodium Hypochlorite (bleach) 1:10 ratio with water

**Note:** Specific disinfectants may be required by individual clinical facilities.

**⚠ Caution:** Make sure to follow manufacturers' instructions when mixing and using cleaning/disinfecting products for optimal results.

**⚠ Warning:** Prior to the commencement of any disinfection process, make sure the power cord is disconnected.

**⚠ Warning:** Wear appropriate protective gloves, safety glasses and other personal protective equipment at all times during the cleaning/disinfection process.

### Disinfecting

Use of a microfiber washcloth is recommended during the cleaning and disinfection process. For the removal of stubborn stains, use a soft bristle brush.

### Rinsing

Avoid the use of running water or pressurized spray. Always rinse with a clean microfiber washcloth.

**⚠ Caution:** Allow for sufficient drying time before any reintroduction of the bed frame into a clinical environment.

**⚠ Caution:** Always use caution to avoid the potential of cross contamination.

## Antimicrobial Plastic Surfaces

The surfaces of the side rails and foot panels are embedded with Nano Ag antimicrobial granules to inhibit the growth and potential colonization of mold, bacteria and/or fungus (example: *Staphylococcus aureus*). The synthetic antimicrobial granules (1% by weight) are directly mixed into the thermoplastic polymer compound during production, so the potential for bacteria to exist on the treated material is dramatically reduced.

## Preventative Maintenance

### Inspection and Maintenance

**⚠ Warning:** Disconnect power cord(s) from wall outlet before cleaning.

**⚠ Warning:** Do not use power wash or high pressure cleaner on any bed part.

**⚠ Warning:** Lock casters when cleaning, inspecting or performing any maintenance of the bed. Lower all mattress support platform sections unless necessary for service access. Lock all functions on staff control. Disconnect power and pendant cords.

**Notice:** Make sure the power cord is unplugged from the power outlet and the control unit battery switch is in the OFF position prior to disconnecting/connecting any foot panel cables. Failure to ensure bed is not powered when disconnecting/connecting the foot panel cables may result in damage to the bed's electronic controls.

To ensure maximum life of your bed, follow all warnings and cautions within this manual and maintain your bed with care, as outlined below. The maintenance required will be dictated by your bed's usage and care, which should be inspected every six months.



### To Optimize Bed Longevity:

- Keep bed clean.
- Observe bed usage and operation and report any discrepancies or problems to Joerns Healthcare Technical Support at 800.826.0270.
- Check for loose bolts, nuts or pins, and report problems. After a week of use, check all bolts for any looseness, and make sure all pins are in their normal location and fastened.
- Check structural parts for any cracking (especially welds), bending or hole enlargement.
- Check wiring for proper connections and damage (fraying, kinking or deterioration). Report any damage to Joerns Healthcare Technical Support at 800.826.0270.
- Check actuators for correct mounting at attachment points and ensure all related pins are mounted securely and properly to frame. Actuators are not serviceable.

If any discrepancies are noted during inspection, they must be corrected before continuing bed use. Major service and repair must only be performed by authorized Joerns Healthcare Technical Support, which you may contact at 800.826.0270.

### Storage

Store in a clean dry area.

Plug bed power cord into grounded hospital-grade electrical outlet. Backup batteries, if equipped, maintain the longest life if kept charged and are not allowed to fully discharge.

Failure to keep bed plugged in, will discharge backup batteries and shorten their life.

### Lubrication Servicing

#### Recommended Lubricants

Lubricant: Super Lube® Multi-Purpose Aerosol.  
Grease: Use Super Lube® synthetic grease or equivalent.

#### Oiling Points

Keep pins and bolts oiled.  
Oil hinge points.

#### Grease Points For Mattress Support Platform

Grease Side and Foot Extensions.

### Waste Disposal

Disposal of product and components should be compliant with local procedures. Incorrect disposal of this equipment and its component parts, particularly actuators, batteries and other electrical devices, may produce substances that are hazardous to the environments. To minimize these hazards, dispose of product and components according to local municipality guidelines.

## Troubleshooting

### Pendant and Staff Control Troubleshooting

Problem	Solution
If movement does not occur when Pendant or Staff button is pushed	<ol style="list-style-type: none"> <li>1. Function may be locked. Check staff control function lockout.</li> <li>2. Adjustment may already be at maximum or minimum level.</li> <li>3. Bed is not plugged into wall power outlet and battery has discharged. Plug bed into wall outlet.</li> <li>4. Pendant cord may be damaged. Check cord for damage. If cord is damaged, discontinue bed usage until cord is replaced.</li> </ol>
If adjustment only partially occurs, stops and beeps	<ol style="list-style-type: none"> <li>1. Battery may be low. Plug bed into power source.</li> <li>2. Bed may be overloaded or constrained from moving. Determine load and check for obstructions.</li> <li>3. If a safety stop occurs while raising the bed, it may have lowered onto an obstruction. Raise bed to check and clear obstruction. Release Bed Down button. Lower the bed to confirm operation. If problems persist, contact Joerns Healthcare Technical Support at 800.826.0270.</li> </ol>
Bed not responding to staff control	<ol style="list-style-type: none"> <li>1. Check lockout status.</li> <li>2. Check connection is fully inserted with cable secured.</li> <li>3. Check the bed is plugged into power source and control box green light is illuminated.</li> <li>4. Unplug bed for 60 seconds and plug back in.</li> <li>5. If these steps fail to resolve the problem, call Technical Support at 800.826.0270.</li> </ol>
All lockouts indicators flashing	<ol style="list-style-type: none"> <li>1. Push and hold Hi-Lo up and down on staff control or pendant simultaneously until flashing stops (No more than 15 seconds).</li> <li>2. Unplug bed for 60 seconds and plug back in.</li> <li>3. If these steps fail to resolve the problem, call Technical Support at 800.826.0270.</li> </ol>
Knee Lockout indicator flashes when attempting articulation	<ol style="list-style-type: none"> <li>1. Bed is in a reverse Trendelenburg or Comfort Chair position, level bed to enable knee operation.</li> <li>2. Lower or raise Hi-Lo to end of travel.</li> <li>3. If these steps fail to resolve the problem, call Technical Support at 800.826.0270.</li> </ol>

Problem	Possible Cause	What to Do
Bed movement with all casters locked.	1. Braking mechanisms may be worn on one or more casters.	1. Remove bed from use and contact Joerns Healthcare Technical Support at 800.826.0270.
Scale System display is blank after scale button is pushed.	1. Bed power cord may be unplugged and integral battery backup has become drained of power. 2. Unit is defective.	1. Plug in power cord. 2. Contact Joerns Healthcare Technical Support at 800.826.0270.
Scale system gives suspect readings.	1. Foot panel cable connection is loose. 2. Scale System may need calibration. 3. Bed may be lowered onto an obstruction.	1. Check for tight connection. 2. Refer to calibration section of this manual. 3. Raise bed to ensure no obstruction is present.
Mattress support platform sections do not extend.	1. Latch handles not fully disengaged. 2. Binding.	1. While actuating the latch handle, try to extend the mattress support platform extension. Refer to width or length extension section of this manual. 2. Wider support platform sections may require two hands to apply equal pull force. Contact Joerns Healthcare Technical Support at 800.826.0270.
Mattress support platform sections do not contour.	1. Pendant or staff control operation. 2. Staff control function lockout may have been activated. 3. Unit may be defective or damaged.	1. Refer to pendant or staff control Troubleshooting above. 2. Refer to staff control section of this manual: Staff Control function lockout button to be unlocked. 3. Remove bed from use and contact Joerns Healthcare Technical Support at 800.826.0270.
Actuator push tube will only move inwards and not outwards.	1. Unit may be defective or damaged. Possible synchronization problems.	1. Remove bed from use and contact Joerns Healthcare Technical Support at 800.826.0270.
Actuator motor makes sound, but push tube does not move.	1. Unit may be defective or damaged.	1. Remove bed from use and contact Joerns Healthcare Technical Support at 800.826.0270.
Actuator runs too slowly or does not give full power.	1. Bed may not be plugged in and is running on integrated battery backup with low charge. 2. Unit may be defective or damaged.	1. Plug in power cord and note any change in performance. 2. Remove bed from use and contact Joerns Healthcare Technical Support at 800.826.0270.

## Appendix A: Electromagnetic Compatibility (EMC) Information

Manufacturer's Declaration –Electromagnetic Emissions		
The Joerns ACX bed is intended for use in the electromagnetic environment (for professional healthcare) specified below. The customer or the user of the Joerns ACX bed should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment-guidance (for professional healthcare environment)
RF emissions CISPR 11	Group 1	The Joerns ACX bed uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.  The Joerns ACX bed is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class A	
Harmonic emissions IEC 61000-3-2	Not Applicable	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Not Applicable	


Recommended separation distance between portable and mobile RF communications equipment and the Joerns ACX Bed			
The Joerns ACX Bed is intended for use in an electromagnetic environment (for professional healthcare) in which radiated RF disturbances are controlled. The customer or the user of the Joerns ACX Bed can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Joerns ACX Bed as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter  W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=1,2\sqrt{P}$	80 MHz to 800 MHz $d=1,2\sqrt{P}$	800 MHz to 2,7 GHz $d=2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance $d$ in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
<b>Note 1:</b> At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
<b>Note 2:</b> These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			

## Guidance and Manufacturer's Declaration - Electromagnetic Immunity:

The Joerns ACX Bed is intended for use in the electromagnetic environment (for professional healthcare) specified below. The customer or the user of the Joerns ACX Bed should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment-Guidance (for professional healthcare environment)
Electrostatic discharge (ESD) IEC 61000-4-2	Contact: $\pm 8$ kV  Air: $\pm 2$ kV, $\pm 4$ kV, $\pm 8$ kV, $\pm 15$ kV	Contact: $\pm 8$ kV  Air: $\pm 2$ kV, $\pm 4$ kV, $\pm 8$ kV, $\pm 15$ kV	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	$\pm 2$ kV for power supply lines  $\pm 1$ kV for input/output lines	$\pm 2$ kV for power supply lines  Not applicable	Mains power quality should be that of a typical professional healthcare environment.
Surge IEC 61000-4-5	$\pm 0.5$ kV, $\pm 1$ kV line(s) to line(s)  $\pm 0.5$ kV, $\pm 1$ kV, $\pm 2$ kV line(s) to earth	$\pm 0.5$ kV, $\pm 1$ kV line(s) to line(s)  $\pm 0.5$ kV, $\pm 1$ kV, $\pm 2$ kV line(s) to earth	Mains power quality should be that of a typical professional healthcare environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Voltage Dips:  0% $U_T$ ; 0,5 cycle 0% $U_T$ ; 1 cycle 70% $U_T$ ; 25/30 cycles  Voltage Interruptions:  0% $U_T$ ; 250/300 cycle	Voltage Dips:  0% $U_T$ ; 0,5 cycle 0% $U_T$ ; 1 cycle 70% $U_T$ ; 30 cycles  Voltage Interruptions:  0% $U_T$ ; 300 cycle	Mains power quality should be that of a typical professional healthcare environment. If the user of the Joerns ACX Bed requires continued operation during power mains interruptions, it is recommended that the Joerns ACX Bed be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz)  Magnetic Field IEC 61000-4-8	30 A/m  50 Hz or 60 Hz	30 A/m  60 Hz	The Joerns ACX Bed power frequency magnetic fields should be at levels characteristic of a typical location in a typical professional healthcare environment.
<b>Note:</b> $U_T$ is the a.c. mains voltage prior to application of the test level.			



Guidance and Manufacturer's Declaration – Electromagnetic Immunity			
The Joerns ACX Bed is intended for use in the electromagnetic environment (for professional healthcare) specified below. The customer or the user of the Joerns ACX Bed should assure that it is used in such and environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Conducted RF IEC 61000-4-6	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM bands between 0,15 MHz – 80 MHz  80% AM at 1 kHz	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM bands between 0,15 MHz – 80 MHz  80% AM at 1 kHz	Portable and mobile RF communications equipment should be used no closer to any part of the Joerns ACX Bed including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	3 V/m 80 MHz – 2,7 GHz 80% AM at 1 kHz	3 V/m 80 MHz – 2,7 GHz 80% AM at 1 kHz	<p>Recommended separation distance</p> $d=1,2\sqrt{P}$ $d=1,2\sqrt{P} \text{ 80 MHz to 800 MHz}$ $d=2,3\sqrt{P} \text{ 800 MHz to 2,7 GHz}$ <p>Where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> is the recommended separation distance in metres (m).</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p><b>Note 1:</b> At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p><b>Note 2:</b> These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			

**Guidance and Manufacturer's Declaration - Electromagnetic Immunity:**

**Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment**

The Joerns ACX Bed is intended for use in the electromagnetic environment (for professional healthcare) specified below. The customer or the user of the Joerns ACX Bed should assure that it is used in such an environment.

Test Frequency (MHz)	Band a) (MHz)	Service a)	Modulation b)	Maximum Power (W)	Distance (m)	Immunity Test Level (V/m)	Compliance Level (V/m) (for professional healthcare)
385	385-390	TETRA 400	Pulse modulation b) 18 Hz	1,8	0,3	27	27
450	430-470	GMRS 460, FRS 460	FM c) ±5 kHz deviation 1 kHz sine	2	0,3	28	28
710 745 780	704-787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0,2	0,3	9	9
810 870 930	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation b) 18 Hz	2	0,3	28	28
1720 1845 1970	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation b) 217 Hz	2	0,3	28	28
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0,3	28	28
5240 5500 5785	5100-5800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0,2	0,3	9	9

**Note:** If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

- a) For some services, only the uplink frequencies are included.  
b) The carrier shall be modulated using a 50 % duty cycle square wave signal.  
c) As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.



## Joerns Healthcare Warranty Program for Joerns® ACX Bed

Joerns ACX beds are guaranteed for a period of one year from the date of delivery, against defects in materials and workmanship, under normal use and service.

This one-year warranty includes all mechanical and electrical components.

Steel structural components on beds are covered under warranty for a period of 10 years from the date of delivery.

Welds are covered under warranty<sup>1</sup> for the lifetime of the product.

Damage caused by use in unsuitable environmental conditions, abuse or failure to maintain the product in accordance with user and service instructions is not covered.

Any alteration, modification, or repair unless performed by or authorized in writing by Joerns Healthcare, will void this warranty.

### Parts

Joerns beds contain various parts that wear from normal use. These parts, such as DC batteries, are not covered under the one-year warranty, but are covered for 90 days after date of delivery. A parts list is available upon request.

<sup>1</sup> Weld lifetime defined as 20 years.

Joerns Healthcare's obligation under this warranty is limited to supplying replacement parts, servicing or replacing, at its option, any product which is found by Joerns Healthcare to be defective.

Warranty replacement parts are covered by the terms of this warranty until the product's original one-year warranty period expires.

When requested by Joerns Healthcare, parts must be returned for inspection at the customer's expense. Credit will be issued only after inspection.

### Service

Most service requests can be handled by the facility Maintenance Department with assistance from the Joerns Healthcare Product Service Department.

Most parts requested can be shipped next day air at the customer's expense.

Should a technician be required, one will be provided by Joerns Healthcare, at our discretion. Only the Joerns Healthcare Product Service Department can dispatch authorized technicians.

This warranty is extended to the original purchaser of the equipment.

For service, maintenance, warranty and any questions regarding this product, please contact

Joerns Healthcare  
2100 Design Road  
Arlington, TX 76014  
800.826.0270

### Manufactured for:

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