



Use and Care Manual

M.C. Advantage - Low Bed

Bed Model: QD1000 Series



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WARNING! To avoid injury, you must read this manual before using the bed.

The information in this manual is subject to change without notice. Users must be aware that updates and amendments may be made from time to time.

IMPORTANT SAFETY PRECAUTIONS -
Read all instructions before using Bed.

 Classifications and Icons

The International Electrotechnical Commission (IEC) requires use of symbols to improve readability and increase understanding of the content.

Symbols and Marking used on the *M. C. Advantage - series* Bed



WARNING! Symbol is used to identify situations or actions that may cause severe injury or death to you or to other persons.



PROTECTIVE EARTH (GROUND)



ALTERNATING CURRENT



TYPE B APPLIED PART

IP54

ENCLOSURE PROTECTION TYPE - Limited protection against dust and splashed water.

IPX4

ENCLOSURE PROTECTION TYPE - Protection against water sprayed from all directions.



UP



DOWN



BACK DECK ELEVATION



KNEE DECK ELEVATION



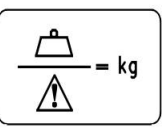
BED ELEVATION



AUTO-CONTOUR ELEVATION



FUNCTION LOCKED



SAFE WORKING LOAD
(Note: include the weight of Resident, Head and Foot Panels, Mattress, Side Rails and accessories.)



TRENDELENBURG



REVERSE TRENDELENBURG



COMFORT CHAIR



MAXIMUM PATIENT WEIGHT



QPS listing mark with "C" and "US" indicating that the product to which the mark is attached is certified to the applicable U.S. and Canadian standards.

IMPORTANT SAFETY PRECAUTIONS - continued



WARNING! For your safety, the information in this manual must be followed to minimize the risk of electric shock, fire, or to prevent property damage, personal injury, or loss of life.



WARNING! POSSIBLE INJURY OR DEATH. This bed is intended for use as an adjustable mattress deck surface. Use of this product in any way other than the intended use, could result in injury or death.



WARNING! Make sure the bed is in the lowest position when the patient is left unattended. This can reduce the severity of any injuries resulting from patient falls.



WARNING! Except for when the bed is being moved, the brakes should always be set (locked). After applying the brakes test the motion of the bed to ensure that the brakes are properly engaged. Patients use the bed for support when getting in or out of bed, and could be injured if the bed unexpectedly moves.



WARNING! Bed safe working load is 500 pounds. This is a total weight including resident/patient, mattress, bedding accessories and any other equipment or persons likely to be on the bed. Do not exceed 500 pounds safe working load. Exceeding the safe working load could result in property damage, injury or death.



WARNING! MAXIMUM PATIENT WEIGHT is 350 pounds . This is the maximum weight of a resident/patient. Exceeding the Maximum Patient Weight could result in bed instability, property damage, injury or death.

NOTE: Refer to Span Academy on the Span America website for guidance on safe patient handling during bed ingress/egress.



WARNING! When lowering the bed, ensure that no person, limbs, bedding or any foreign objects are between the bed frame and the floor. Ensure that Over-bed tables and patient lifts are safely removed.



WARNING! Ensure that no arms, hands, legs or feet are under the mattress decks when lowering them.



WARNING! POSSIBLE INJURY OR DEATH Use only the proper size mattress that will minimize the gap between the side of the mattress and the side rails. The gap must be small enough to prevent the patient from getting his/her neck caught in this zone (read the FDA Entrapment Guidelines for further information).



WARNING! POSSIBLE INJURY OR DEATH . The Mattress Stops help control the Entrapment Zone gaps between the Mattress, Side rails, the Head and Foot Boards. Improper mounting or absence of Mattress Stops could result in entrapment injury or death. Ensure the Mattress fills the entire width and length of the sleeping deck with the corners of the Mattress snugly fitted within the Mattress Stops.



CAUTION! Care must be made to ensure that the resident does not fall-on or slide-over the mattress side stops which may cause injury.

IMPORTANT SAFETY PRECAUTIONS - continued



WARNING! If a resident/patient's mental or physical condition could lead to resident/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! Patients with diminished mental awareness should not be allowed access to the pendant, as they may become entangled in the cable. Failure to do so may result in injury or death.



WARNING! Equipment not suitable for use in the presence of flammable anaesthetic mixture with air or with oxygen or nitrous oxide.



WARNING! Possible fire hazard when used with Oxygen Administering Equipment of other than the Nasal, Mask or 1/2 bed length Tent type. Oxygen Tent should not extend below the mattress support level. Remove or lock-out hand control when using oxygen administering equipment.



WARNING! Plug the bed directly into a 110-120 VAC 60 Hz properly grounded Hospital Grade outlet. Avoid use of extension cords at all times.



CAUTION! This product complies with EMC requirements of IEC 60601-1-2. Radio transmitting equipment, cellular phones or similar electronic devices, used in proximity of bed, may affect bed performance.



WARNING! Improper connection of the equipment grounding conductor can result in the risk of electrocution. DO NOT modify the plug. The plug must be plugged into a 3-prong receptacle marked "Hospital Grade" or "Hospital Only". Check with a certified electrician.



WARNING! To isolate bed circuits electrically from the supply mains on all poles simultaneously unplug the power cord from the wall outlet.



WARNING! Listen for unusual sounds and watch out for uneven running. Stop the motor immediately if anything unusual is observed.



WARNING! The Electric Components must remain dry. Care must be taken during cleaning and use to ensure that electrical components remain dry.



WARNING! Ensure that no damage is made to power supply cords by rolling the bed over them. Ensure cords are not frayed or damaged.

IMPORTANT SAFETY PRECAUTIONS - continued



WARNING! Unplug product before cleaning. Do not allow liquids to enter to enter electrical components. Clean with mild solution of antiseptic cleaner and warm water. Read and follow all label instruction on your cleaning products. Do not use solvents, alcohol, or petroleum products on the surface.



WARNING! Fluid spills on the bed electronics can result in a hazard. In the event of a spill, immediately:

- Unplug the bed from the power source and remove it from service.
- Remove the patient from the bed and clean the spill
- Remove the bed from service until the bed is tested and determined to be safe.

Failure to do so may result in personal injury or property damage.



WARNING! Do not use any replacement parts or accessories not manufactured, marketed or provided by Span Medical/MC Healthcare on any Span Medical/MC Healthcare bed. Use of unapproved replacement parts may result in injury or death.



WARNING! The side rails should always be in the up position when the patient is left unattended. Test the side rails to ensure that they are properly latched before leaving the patient.



WARNING! Only authorized / certified personnel should perform preventative maintenance. Maintenance by unauthorized personnel could result in property damage or injury.



WARNING! Follow Manufacturer instructions when mounting/assembling accessories especially the Patient Helper Bar, this bar could fall and result in injury or death.



CAUTION! This bed contains electrical components. Before disposal of bed ensure that all electrical components are removed. The components should then be sent back to the manufacturer or disposed of in accordance with local legislation.



WARNING! Use of replacement parts or accessories from other manufacturers will invalidate the warranty and could damage the bed.

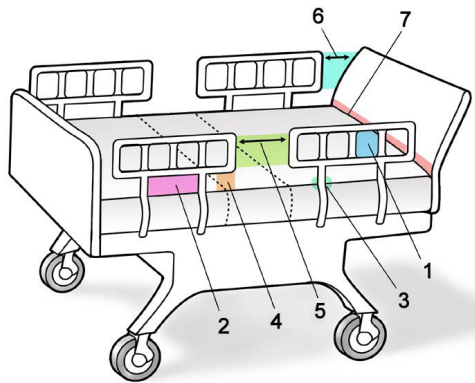
IMPORTANT SAFETY PRECAUTIONS - continued

 DANGER - RISK OF ENTRAPMENT

The U.S. Food and Drug Administration (FDA) has recently warned against the potential danger of entrapment and published safety guidelines for hospital beds. The FDA has identified seven zones in the hospital bed system where there is a potential for patient entrapment. Entrapment may occur in flat or articulated bed positions, with the rails fully raised or in intermediate positions. The seven entrapment zones are identified in the drawing below.

ENTRAPMENT ZONES:

- Zone 1: Within the Rail
- Zone 2: Between the Top of the Compressed Mattress and the Bottom of the Rail, Between the Rail Supports
- Zone 3: Between the Rail and the Mattress
- Zone 4: Between the Top of the Compressed Mattress and the bottom of the Rail, at the End of the Rail
- Zone 5: Between the Split Bed Rails
- Zone 6: Between the End of the Rail and the Side Edge of the Head or Foot Board
- Zone 7: Between the Head or Foot Board and the Mattress End



 COMPLIANCE - Entrapment Safety

The entrapment zones are a resultant of the dimensional interaction between the bed and components that are often assembled by the Healthcare Facility and not the Manufacturer.

The Healthcare Facility is responsible for compliance with the Entrapment Guidelines by matching the right components and accessories to the right bed.

To learn more about the entrapment zones, assessment methods and guidelines for compliance with the entrapment regulation visit the FDA website.

Span Medical Products Canada is available to work with customers to minimize the risk of patient entrapment.

DISCLAIMER

The *M. C. Advantage - series* low beds are intended to be used for resting and sleeping in a long term care environment. The beds are not to be used as a tool for diagnosis (determining cause of an illness), treatment (action(s) taken to change the course of an illness) or monitoring (reading and/or recording physiological parameters).

PRODUCT FEATURES AND SPECIFICATIONS

The *M. C. Advantage series* bed is designed for a safe working load of 500 pounds (227kg). Body weight should be evenly distributed over the surface of the bed. Do Not lay, sit or lean in such a way that the entire body weight is placed only on a raised head or foot section of the bed.

<i>M. C. Advantage</i> Bed	Specification
Height Floor to Mattress Support	7 7/8 – 30" travel range.
Deck Angles 1. Back elevation 2. Knee elevation	0 - 70 degrees with horizontal. 0 - 30 degrees with horizontal.
Adult Bed Length 1. Overall length 2. Sleep surface	84 1/8" inches with Boards.. 80 inches.
Youth Bed Length 1. Overall length 2. Sleep surface	81 1/4" inches with Boards. 76 inches.
Bed Width Overall width (with side rails)	40 1/2" inches.
Mattress Deck 1. Width 2. Length	35 inches. 76 or 80 inches.
Mattress Support Deck Construction	Welded steel angle frame and rod.
Mattress Stops	Steel Corner and Side Stops.
Bed End Panels	Permanent or removable mounting.
Electrical & mechanical Safety Certification	CSA C22.22 No. 601.1 (2005) UL 60601-1 (2003) CSA C22.22 No. 60601-2-38 (2003) IEC 60601-2-38 (1996) IEC 60601-1-2 (2004)
Classification	Class I, Type B.
Voltage/Hertz/Phase	120/60/1.
Maximum Input Current Rating	3.5 Amp (120V).
Cord Type / Length	2.5 Meters minimum, 3 prong hospital grade plug.
Electric Motors	Four (4) DC self lubricating Linear Actuators.
Operation	10% Maximum Duty Cycle (2 minutes on/18 minutes off)
Emergency Power back-up battery Pack	24 V DC Battery (optional).
Protection against splashing water	IPX4.
Mass of bed	160 lbs without any accessories.
Safe Working Load	227 Kg = 500 Lbs (includes the Patient, Head/foot Panels, Mattress Side Rails and accessories).
Mobility	At any height (7 7/8 - 30").
Swivel Casters	Heavy duty 3"– total locking casters.
Environment conditions OPERATING Temperature Relative Humidity Atmospheric Pressure STORAGE Temperature Relative Humidity Atmospheric Pressure	10 ° C to 40 ° C 30 % to 75 % 700 to 1060 hPa -10 ° C to +50 ° C 20 % to 90 % @ 30 ° C - not condensing 700 to 1060 hPa

PRODUCT FEATURES AND SPECIFICATIONS- continued

Pendant Function Controls	Eleven (11) function pendant.
1. Hi/Low Elevation	Up and Down buttons.
2. Back Deck	Up and Down buttons.
3. Knee Deck	Up and Down buttons.
4. Auto-contour	Up and Down buttons.
5. Comfort Chair	Up and Down buttons.
6. Under Bed Light	On/Off button
Foot End (Staff) Controller	Optional - Factory or Field Mounted.
1. Hi/Low Elevation	Individual Lock/Unlock control over all functions.
2. Back Deck	
3. Knee Deck	
4. Trendelenburg	
5. Reverse Trendelenburg	
6. Comfort Chair	
Vascular Foot Deck Ratchets	Manual elevation to help aid for cases of edema.
3/4 Length Collapsible Side Rail Model	Optional - Field Mounted. Fits 76" and 80" Sleeping Surface Decks.
Head End 1/2 Side Rail Model	Optional - Fits 76" and 80" Sleeping Surface Decks.
Three Position Assist Rail Model	Optional - Fits 76" and 80" Sleeping Surface Decks.
Frame Mounted Assist Rail Model	Optional - Fits 76" and 80" Sleeping Surface Decks.
I.V. Ports	Optional.
Trapeze- patient helper bracket and a patient helper bar.	Optional.

MC Advantage Bed Model Numbers: QD1000_series, QD1000Y_series

ACCESSORIES AND OPTIONS:

76" and 80" Span Mattresses.	Span Head End and Foot End Boards.
Head End Assist Rail Model	Three Position Assist Rail Model
Frame Mounted Assist Rail	Trapeze Patient Helper Bracket.
Foot End (Staff) Controller.	Emergency Battery Backup.
Directional Caster Lock Hinge.	Total Floor Lock.
Bed Transport Dollies.	

MANUFACTURER DISCLAIMER Specifications are subject to change without notice, Span Medical Products Canada reserves the right to continuously improve its products. Illustrations are intended to represent the product and may vary from actual models.

ASSEMBLY INSTRUCTIONS

Introduction

Your *M. C. Advantage* Bed is equipped with four actuators to operate following functions:

Bed up/down	Adjusts the height of the bed from 7-7/8" to 30".
Back up/down	Adjusts the angle of the head deck from 0° to 70°.
Knee up/down	Adjusts the angle of the knee deck from 0° to 30°.
Auto Contour	Adjusts the angle of the head and knee decks.
Comfort Chair	Adjusts the angle of the bed from 0° to 19° in the Reverse Trendelenburg Position, the angle of the Head deck to 57° and Knee Deck to 30°.
Trendelenburg	Adjusts the angle of the bed from 0° to 19°.
Reverse Trendelenburg	Adjusts the angle of the bed from 0° to 19°.

Trendelenburg and Comfort Chair functions are available on bed equipped with Foot End Controller only.

This instruction manual covers options and accessories which may not be included on your bed. Before operating your *M. C. Advantage*, be sure that you have completely read and understood the instructions and warnings contained in this manual and included with the accessories.

Unpacking Instructions - (PLEASE RECYCLE)

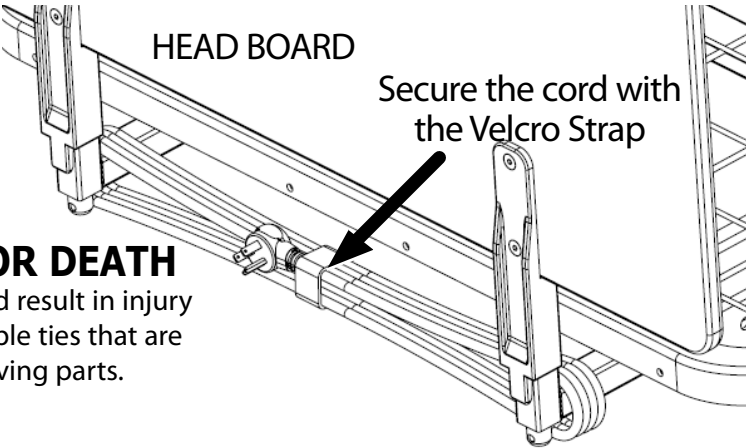
Your *M. C. Advantage* bed is shipped in a vertical position with the Head-End on the ground. If it has not been lowered flat, then two people are required to lower it gently to the ground.

Cut the "shipping ties" securing the deck to the frame. There are also ties securing wiring in place, care must be taken so that only the "shipping ties" are removed.

Remove one package attached to the frame containing the Mattress Stops and the Board Mounting Brackets. Make sure that all parts are included prior to disposing of the packaging material and immediately report any missing parts to Span Medical Products Canada Customer Service.

Power Supply Cord

To keep the power supply cord off the floor when moving or storing the bed, you need to secure the cord using the Velcro Strap as shown.



WARNING! POSSIBLE INJURY OR DEATH improper routing of the power supply cord could result in injury or death. Ensure that you do not remove any Cable ties that are intended to keep the power cord away from moving parts.

Mattress

The *M. C. Advantage* bed has been designed to minimize the risk of patient entrapment while maintaining as much patient comfort and protection as possible.

NOTE: Mattresses that are dimensionally correct still may not comply with FDA and Health Canada entrapment guidelines. In addition to the dimensions of mattresses, therapeutic considerations may be a key criterion in mattress selection, superseding entrapment concerns for resident or patient therapy and clinical benefits.

Irrespective of the mattress it is the responsibility of the healthcare facility to ensure that the bed meets entrapment guidelines at the time of use and throughout the life cycle of the product.

ASSEMBLY INSTRUCTIONS - continued

Bed Setup

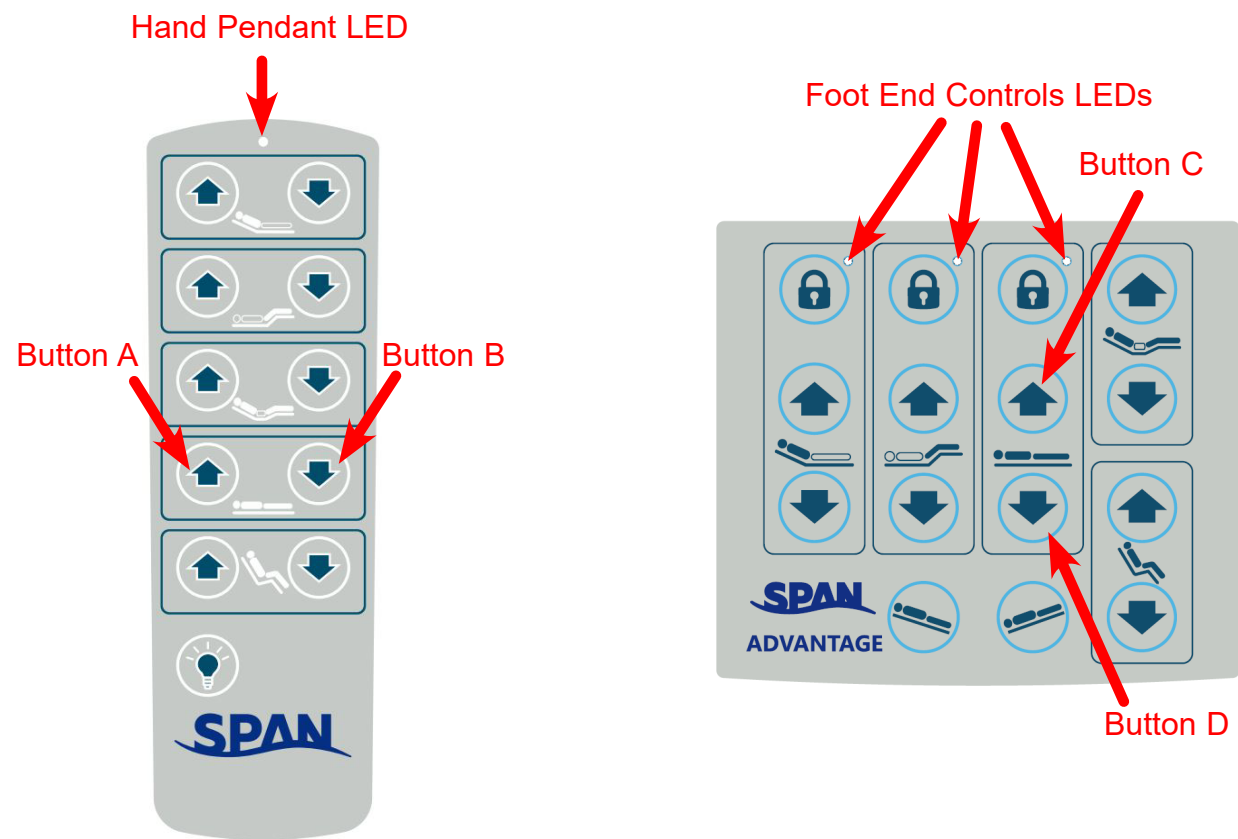
The *M. C. Advantage* bed is approved for operation in a dry environment. To operate the bed, plug the Power Supply Cord running from the patient left hand side of the frame into a three prong 120 V hospital grade wall receptacle. The Pendant is already plugged into the control box and the bed should now be operational.

 Before operating it is critical to reset the Control Box.

To reset the QD1000 Series Advantage control box:

Ensure resident/patient is **not** in the bed.

With the decks up or down **and bed horizontal** at any height (i.e., bed not in Trendelenburg or Reverse Trendelenburg), simultaneously press and hold both **HI-LO Up** and **HI-LO Down** buttons from either the Hand Pendant (buttons **A & B**) -or- from the Foot End Controls (buttons **C & D**). After approximately five seconds, decks will lower (if raised) and the bed will move to the fully lowered position (if bed is raised). Continue holding both buttons down until the Hand Pendant LED & backlight, Foot End Controls LEDs flash (if installed, underbed lights will flash as well). Flashing lights signal a successful bed reset.



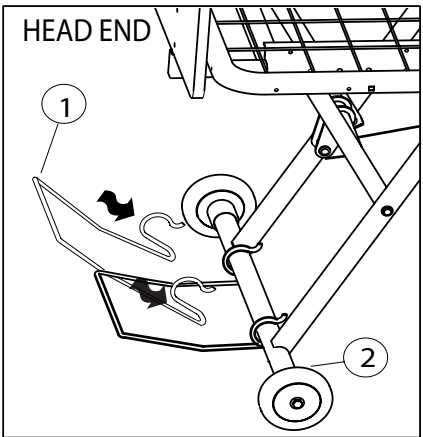
ASSEMBLY INSTRUCTIONS - continued

Assembly of Baseboard Bumper

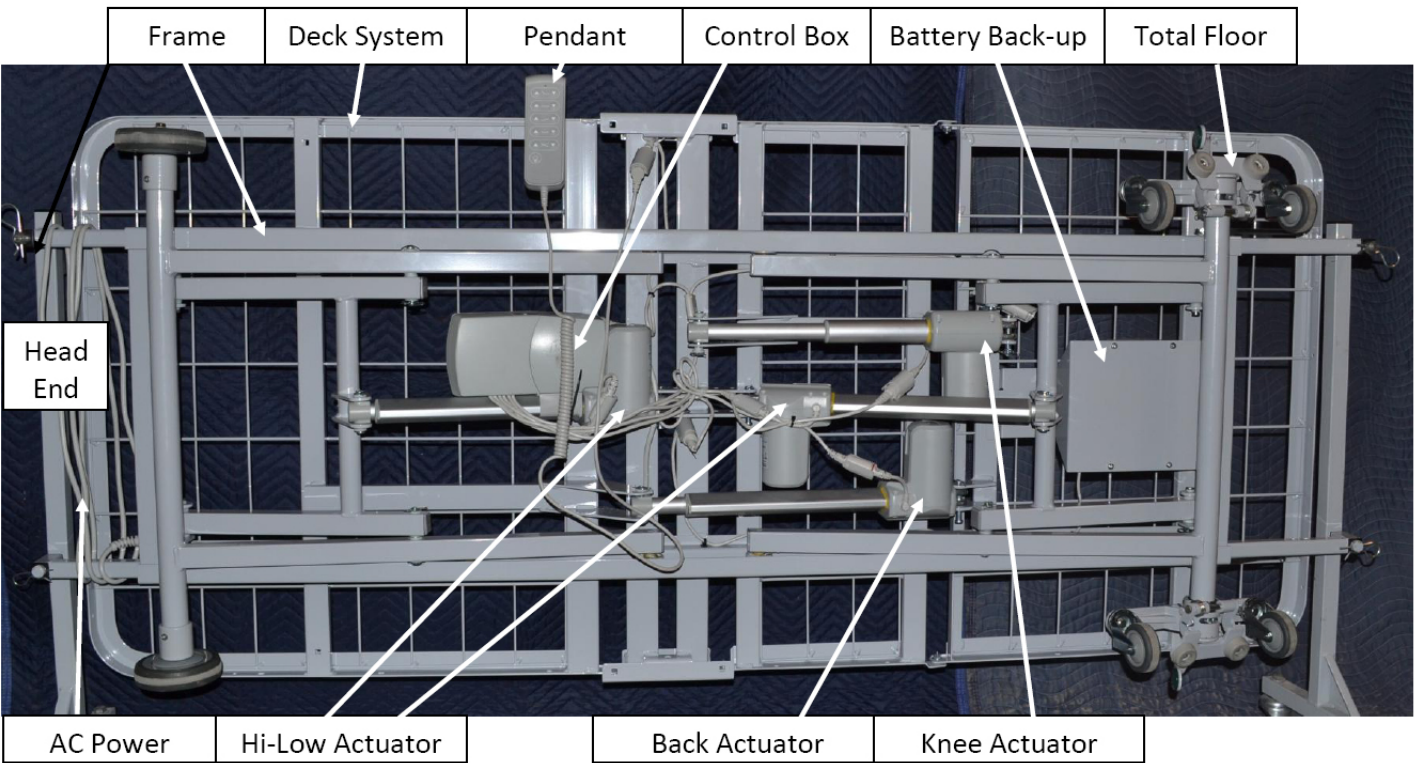
Tools Required: Rubber Mallet

Procedure:

Assemble Baseboard Bumper (1) by pressing the two end hooks over the wheel base (2) on the head end of bed as illustrated.



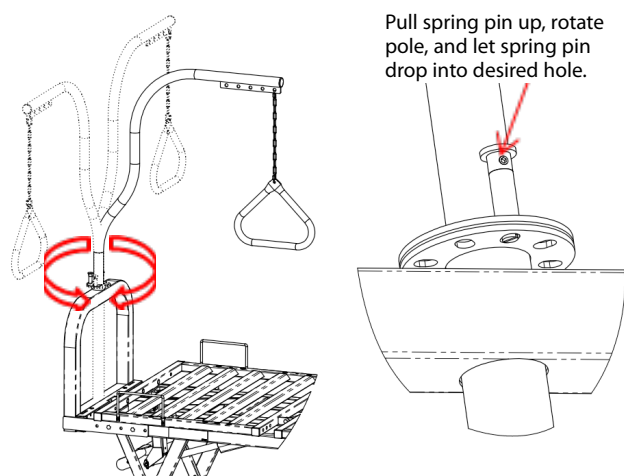
Bed Components



ASSEMBLY INSTRUCTIONS - continued

Patient Helper /Trapeze- optional

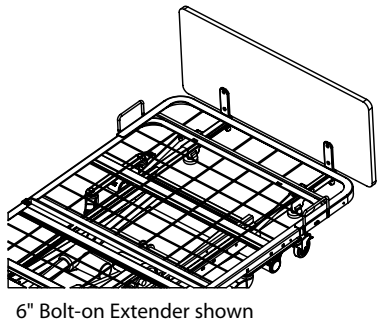
The optional patient helper consists of brackets mounted to the bed frame, mounted to the Trapeze Frame, in which the Trapeze Arm is placed. The arm can be located in five positions by use of a locking spring pin. There are two side positions for assistance entering and exiting the bed, an in-bed position for assistance with repositioning, and two storage positions. The chain is attached using a “quick link” that allows the height and position of the handle to be easily adjusted. You must follow all instructions provided with the Patient Helper/Trapeze.



WARNING! Ensure that the spring loaded Pull Pin is properly engaged to prevent the Patient Helper Pole from rotating. Failure to do so could result in serious injury.

Bed Extender - optional

The bed extender is designed to be attached at the foot end of the bed and is available in either a 4" tool-less or 6" bolt-on version. The extender attaches directly to the foot deck. If a foot board is to be used with the extender, then a set of board extender brackets are required to offset the foot board, and allow clearance for the extender. The mattress pad extends the actual sleep surface.



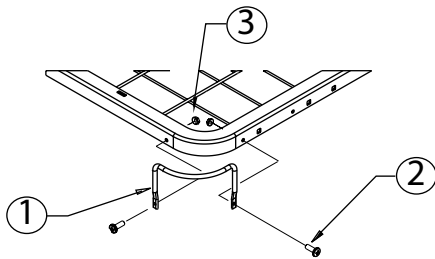
WARNING! POSSIBLE INJURY OR DEATH Use only the proper size mattress and extension pads in order to minimize the Entrapment Zone gaps. The gaps must be small enough to prevent the patient from getting his/her neck caught in this location (you must read and follow the FDA Entrapment Guidelines).

Mattress Stops Assembly

Tools Required: 5/16" and 3/8" wrenches.

Parts Included:

Item #	Qty	Part Number	Description
1	4	QS3484	CORNER MATTRESS STOP
2	8	QP2501	MACHINE SCREW #10-32 X 5/8" HEX HEAD ZP
3	8	QP2502	NUT 10-32 HEX NYLOCK ZP



Procedure:

- 1- Raise the bed to make the assembly easier.
- 2- Place one Mattress Stop (1) in one corner overlapping the pre-punched holes; as illustrated.
- 3- Place one Screw (2) through one of the holes and thread a Nut (3) onto the screw behind the deck frame. Tighten Nut finger tight . Repeat for the other hole.
- 4- Tighten the screws with a 5/16" Wrench while using a 3/8" Wrench to prevent the nut from spinning.
- 5- Repeat for the other 3 corners of the bed.
- 6- Tighten all screws.

ASSEMBLY INSTRUCTIONS - continued

Head and Foot Board Mounting Bracket Assembly

Tools Required: two 5/32" Hex-Allen-Keys.

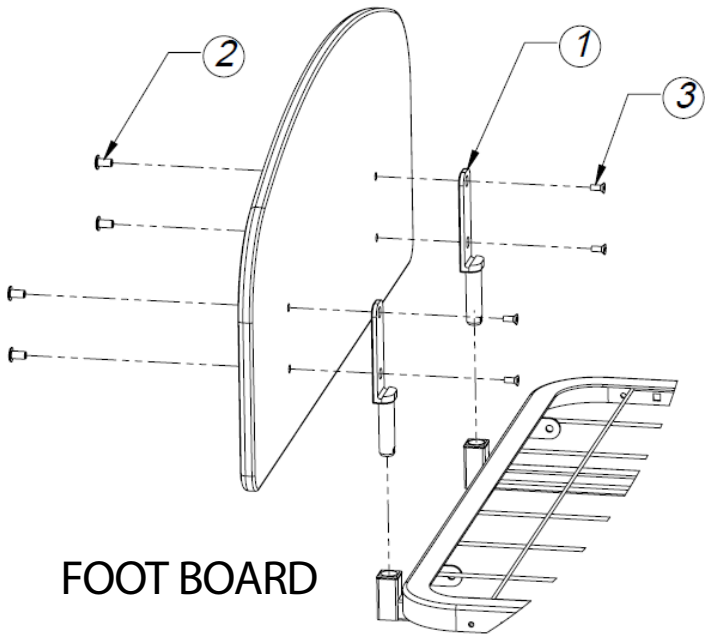
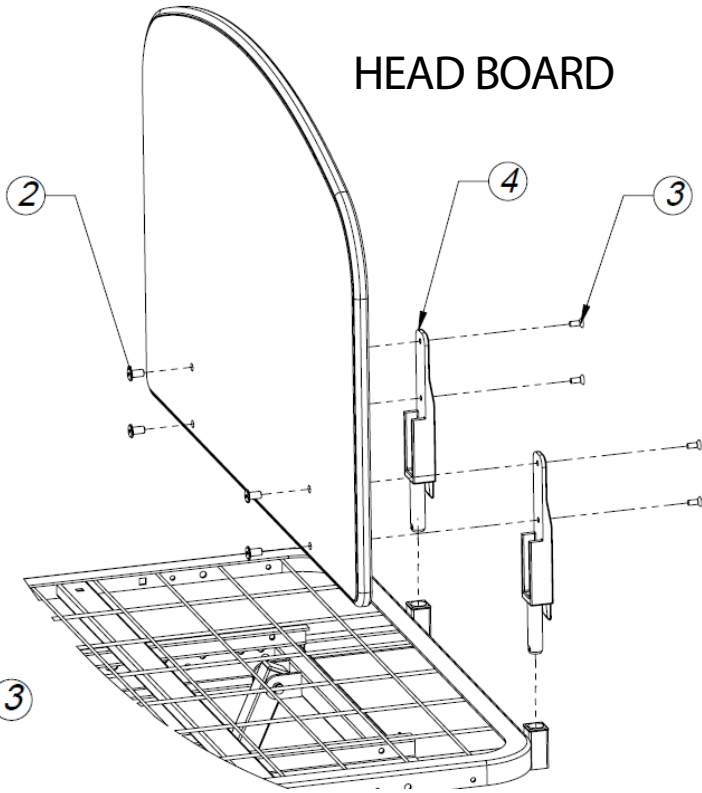
Parts (included):

Item #	Qty	Part #	Description
1	2	QP2432	Board Mounting Bracket
2	8	QP2431	NUT JCN 1/4-20- 17mm Long
3	8	QP2433	Screw 1/4-20 x 5/8 Flat Head Hex Drive Zn
4	2	QP3415	Head Board Mounting Bracket

Procedure:

HEAD BOARD

Attach the two Head Board Mounting Brackets (4) with four Screws (3) and four Nuts (2) as illustrated. Do not tighten until after inserting the mounting brackets in the bed frame posts- (see next page).

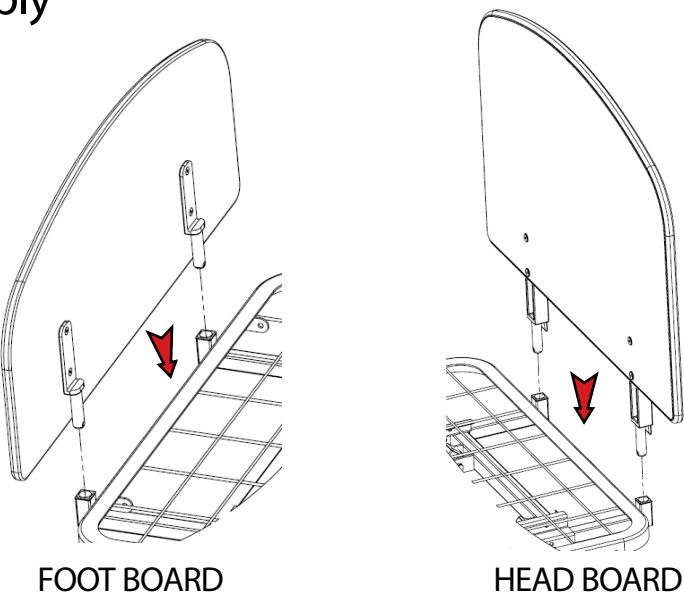


FOOT BOARD

Attach the two Board Mounting Brackets (1) with four Screws (3) and four Nuts (2) as illustrated. Do not tighten until after inserting the mounting brackets in the bed frame posts - (see next page).

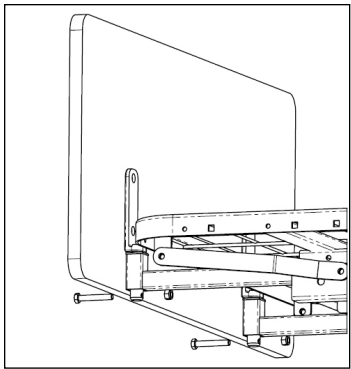
Head and Foot Board Assembly

- 1 Insert the Head and Foot Boards as illustrated with the proper Mounting Bracket orientation.
- 2 After the Boards are in place, tighten the eight Screws and JCN Nuts that were left untightened from the previous step.



ENTRAPMENT SAFETY:
These Boards and Mounting Brackets were designed such that even if they were assembled incorrectly or facing the wrong direction they will not affect the Entrapment gaps nor create any pinch points.

- 3 Attach a Screw and Nut (purchased separately) through the hole in the bottom of each Foot Board Mounting Brackets to prevent the Foot Board from being removed accidentally.



WARNING! Entrapment Safety: Use only the proper size boards and mattress to minimize the Entrapment Zone gaps. The gaps must be small enough to prevent the patient from getting his/her neck caught in this location (you must read the FDA Entrapment Guidelines).
The entrapment zones are a resultant of the dimensional interaction between the bed and components that are often assembled by the Healthcare Facility and not the Manufacturer.
The Healthcare Facility is responsible for compliance with the Entrapment Guidelines by matching the right components and accessories to the right bed.

FEC Assembly

Tools Required: Philips Screw Driver

Parts (included):

Item #	Qty	Description
1	1	Control Pad with cable attached
2	1	Rear Cover
3	1	Cable Cover
4	4	#8 Screws
5	2	#6 Screws

Position the Control Pad with the cable in the board as shown in Fig 1. with the cord coming out of the back side. (Note: The back is distinguished from the front by the blind holes located under the FEC cutout.)

Align the holes in the Rear Cover with the holes in the Control Pad with the cable clearance notch facing the bottom of the board and thread in the 4 #8 screws as shown in Fig 2.

Insert the molded strain relief on the Control Pad cable into the Cable Cover as shown in Fig 3 and shift the Cable Cover and Control Pad assembly until the holes in the Cable cover align with the pilot holes in the foot board as shown in Fig 4. NOTE: If you are having difficulty aligning the holes on the Cable Cover, the screws holding the Rear Cover on may be torqued too tightly to allow for positional adjustment of the Control Pad and Cable Cover.

Screw the Cable Cover to the board with the two #6 Screws using the Philips Screw Driver as shown in Fig 5 and tighten the #8 screws to fully secure the Control Pad in place. DO NOT OVER TIGHTEN

Plug the male Control Pad connector into the female bed connector.

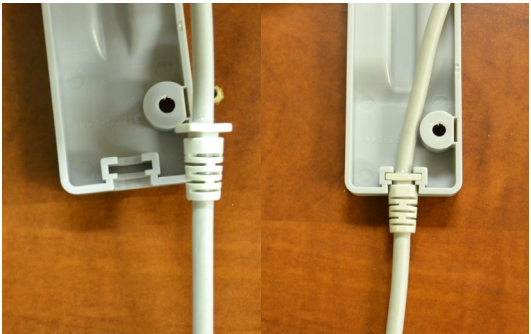


Fig 3.



Fig 4.



Fig 5.

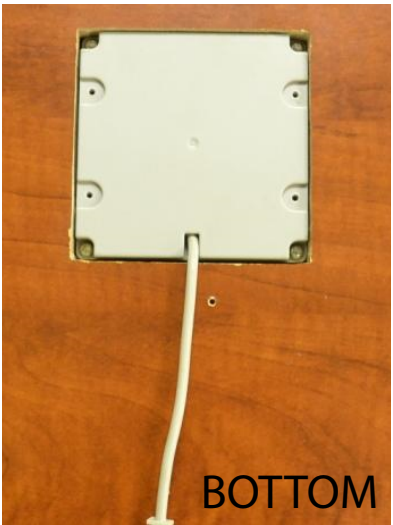


Fig 1.



Fig 2.

OPERATING INSTRUCTIONS

Side rails - All Side rails are optional.

1/2 Length Side rails

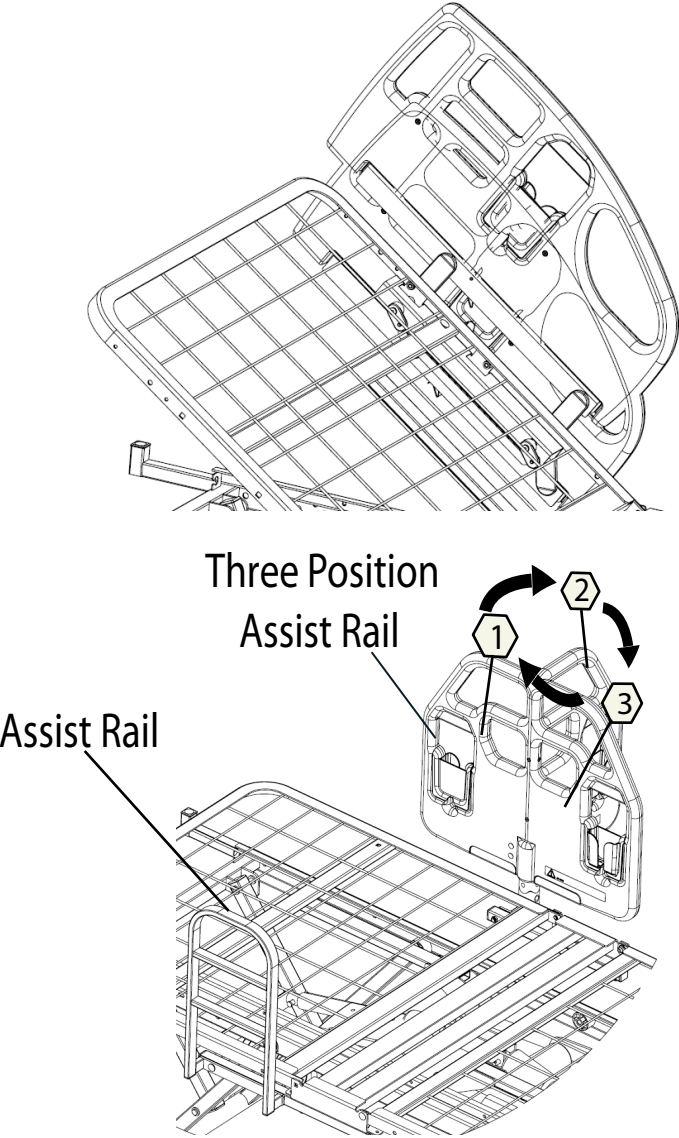
Lifting the side rail up completely will latch it into the upright position. To lower the rail, you must press the release lever which is in the middle of the lower channel (between the two arms).

Three Position Pivoting Assist Rail

The optional Pivot Assist Rail will latch in three upright positions. To rotate the Pivot Assist Rail you must press the release button located at the base of the rail - you must follow the instructions included with the rail.

Fixed Assist Rail

The optional Fixed Assist Rail fits on the left or the right hand of bed - you must follow the instructions included with the rail.



WARNING! Test the Assist Rail to ensure that it is properly latched before leaving the patient.

WARNING! To avoid potential pinching or crushing, be sure that hands and fingers are clear of the raising arms and latch mechanism when raising and lowering the 1/2 Length Side Rails.

WARNING! The side rails should always be in the up position when the patient is left untended. Test the side rails to ensure that they are properly latched before leaving the patient.

WARNING! Always evaluate patients for and guard against patient risk of side rail entrapment in accordance with medical protocols. Failure to do so could result in injury and/or death.

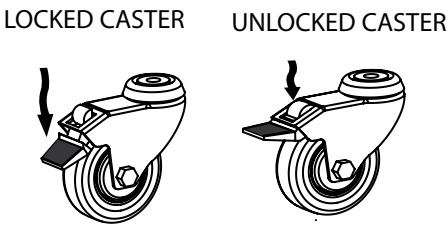
WARNING! To avoid potential pinching or catching, be sure that hands and fingers are clear of the locating holes and scallop/spline features when rotating the 3 Position Pivoting Assist Rail.

OPERATING INSTRUCTIONS

Total Lock Casters

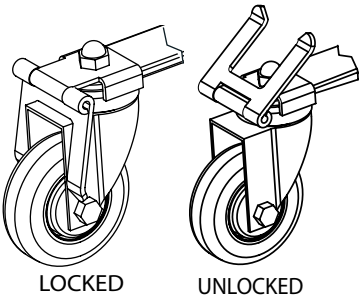
To engage the total lock casters, simply press down on the locking tab with your toe on all four casters. This will prevent any movement of the caster (rolling or swiveling). The rubber wheel gives good traction on most floor surfaces.

To release the casters and allow mobility of the bed, press down on the release lever to unlock each caster.



Directional Lock Hinge

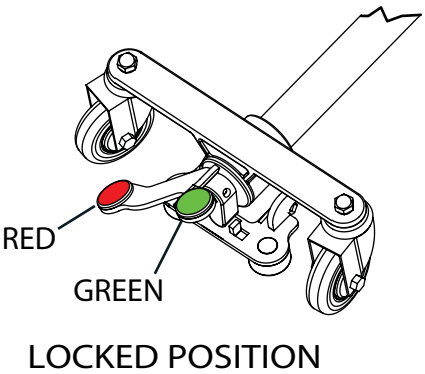
Patients tend to use the bed for support when getting in or out of bed. Patients could be injured if the bed moves sideways, to guard against this risk you must engage the "Directional Lock Hinges". Simply flip the U-shaped tab down with your toe over both casters. This will prevent any lateral movement (swiveling) of the caster. To release the casters and allow full mobility of the bed, gently flip the U-shaped tab over the square leg tube for each caster.



Total Floor Lock

The Total Floor Lock is engaged by simply stepping with the ball of your foot on the Red end of the Pedal located on the Foot end of bed as illustrated. This will immobilize the bed.

To make the bed mobile again, unlock the Total Floor Lock by stepping on the green end of the Pedal.



WARNING! When the bed is not being moved, the casters should always be locked. After applying the brakes test the motion of the bed to ensure that the brakes are properly engaged. Patients tend to use the bed for support when getting in or out of bed, and could be injured if the bed unexpectedly moves sideways.

Transporting Bed

The *M. C. Advantage* bed is designed for mobility at any height. Use the Foot Board to move the bed. Never use Side Rails, Assist Rails or other accessories to move the bed.

To prevent any damage or injury, it is recommended that two Personnel be present when moving a bed.

Before moving the bed you should check all around the perimeter of the bed to ensure that no accessories will fall or get damaged and that:

- 1 The Power Supply Cord is unplugged and the cord is safely stored off the floor .
- 2 All the head and foot brakes are released.
- 3 All accessories used on the bed are secured or removed.

WARNING! Do not roll the bed over high thresholds with the patient in the bed.

OPERATING INSTRUCTIONS

Bed Controls

The *M. C. Advantage* Bed is electrically operated using Pendant buttons as follows:

- 1

Head Deck Operation

To raise Back Section, press and hold UP button.
To lower Back Section, press and hold DOWN button.
- 2

Knee Deck Operation

To raise Knee Section, press and hold UP button.
To lower Knee Section, press and hold DOWN button.
- 3

Auto Contour Operation

To raise Back and Knee Sections, press and hold UP button.
To lower Back and Knee Sections, press and hold DOWN button.
- 4

Bed Hi/Lo Elevation

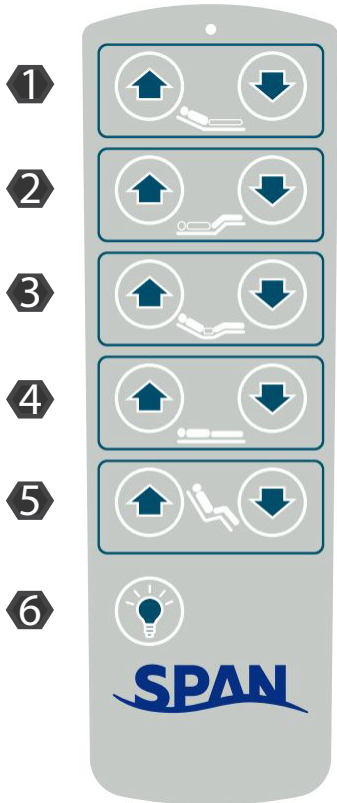
To raise Bed, press and hold UP button.
To lower Bed, press and hold DOWN button.
- 5

Comfort Chair Operation

To raise, press and hold UP button.
To lower, press and hold DOWN button.
- 6

Underbed Light (Light Kit Optional)

To turn on, press button.
To adjust brightness, press button.
To turn off, press button.



CONTROL BOX RESET: Refer to procedure on Page 10.

NOTE: Prior to Comfort Chair positioning the patient/resident should be centered in the bed side to side and head to toe (sacrum on the seat deck of the bed) with bed wheels in the locked position. Be sure the area under the bed is clear of all body parts, equipment and foreign objects. Do not stop and/or leave the bed in the Reverse Trendelenburg position while transitioning into and out of the Comfort Chair position.

Foot End (Staff) Controller

The FEC (Staff) Controller mounts flush on the Foot-Board and allows the caregiver to operate the bed or to lockout the bed functions so that they cannot be operated with the hand pendant. Comfort Chair, Trendelenburg and Reverse Trendelenburg functions are activated by the caregiver only.

To lock out a function, press the Lock/Unlock button. An illuminated LED indicates that the function is now locked out.

To unlock a function, press the Lock/Unlock button again. When the LED is not illuminated, it indicates that the function is now unlocked.

Head Deck

Knee Deck

Bed Hi/Low

Lock/Unlock

Up

Down

Auto Contour

Comfort Chair

Trendelenburg/Reverse Trendelenburg

OPERATING INSTRUCTIONS

Back-up Battery

The bed comes with an optional internal or external Battery Back-up. The Back-up Battery is for use when there is a power outage, or the bed needs to be operated where there is no power source nearby.

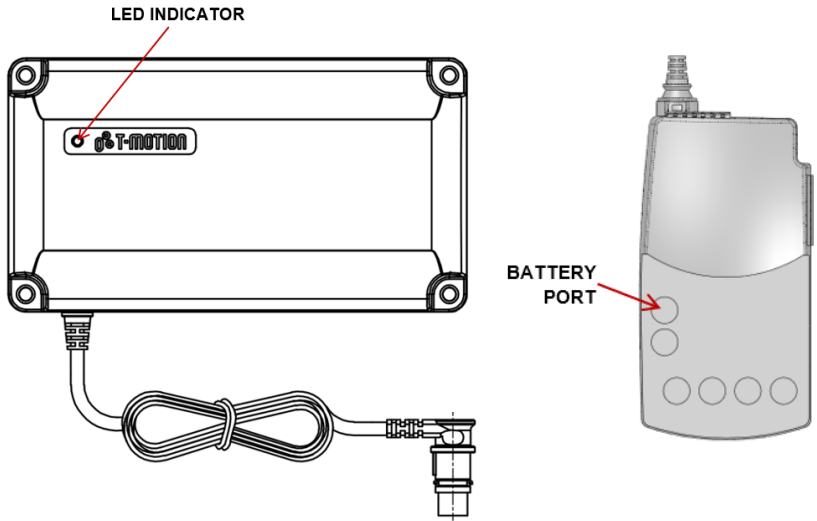
The back-up battery is replaceable. Replace only with battery provided by Span Medical Products Canada. Please contact Span Customer Service for details.

Battery Type:	Lead Acid
Input Voltage:	30VDC (29VDC min, 45VDC max)
Output Voltage:	24VDC
Duty Cycle:	10% (maximum 2 minutes ON, 18 minutes OFF)

To charge, the battery must be plugged into the bed's control box with the control box connected to AC power. Always keep battery plugged into the control box.

The LED on the battery indicates charge status as shown in the table below.

Status	Capacity	LED Colour and Mode	
When Charging (the whole system is connecting with AC power)			
Charging State	< 100%	Green	Continuously short flashing: On (1sec) / Off (1sec)
Fully Charged State	= 100%	Green	Continuously On
When Discharging (the whole system is unplugged and the battery is supplying the electricity)			
High Capacity State	25%-100%	Green	Continuously long flashing: On (0.5sec) / Off (4sec)
Low Capacity State	< 25%	Orange	Continuously long flashing: On (0.5sec) / Off (4sec)
During Over Discharge Protection			
Under protection	< 20%	LED is continuously off	



It is highly recommended to charge the battery continuously for at least 24hrs at below situations:

1. First time usage.
2. Before long term storage (or bed will not be connect with the AC power for a long period of time).
3. After long term storage (or bed has not connected with the AC power for a long period of time).

MAINTENANCE

Cleaning

The *M.C. Advantage* bed can be cleaned with warm water and a mild detergent or diluted disinfectant. Use a damp cloth or a sponge to clean all exposed surfaces of the bed. Take care not to use excessive water around the control panels and the control box.



WARNING! The *M.C. Advantage* bed was not designed to be cleaned using a high pressure wash tunnel. Never spray directly on to the actuator with a high pressure cleaner.

Preventative Maintenance

There are a number of maintenance items that shall be reviewed every 6 months to ensure proper functioning of the bed.

ALL PIVOT AND ROTATING JOINTS – All moving components of the bed, including deck joints, motor clevis joints, casters, etc., are self-lubricating and maintenance free. Preventive maintenance and inspection is recommended to assure defect-free and reliable operation. All pivot and rotating joints should be free from dirt, lint, grease, food residues and other foreign materials.

ACTUATOR OPERATION– The actuators should run smoothly and quietly throughout their range.

Normal operation over full range - The bed should move evenly through its full range of motion from low to high position and from flat to contoured with no jerking or twisting.

GRINDING, POPPING, OTHER NOISES – The bed should be fairly silent. Some motor/gear noise is normal and some settling noises are expected, but nothing loud and no squeaking. Look for abnormal wear, lubricate any joints exhibiting noise.

ACTUATOR SYSTEM - The Actuator must be maintained correctly and not tampered with.

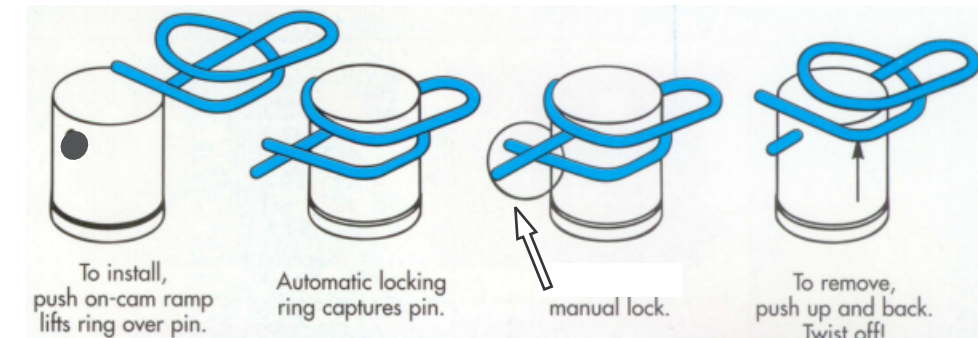
- 1- The Actuator must be cleaned at regular intervals to remove dust and dirt and inspected for mechanical damages or wear.
- 2- Inspect all attachment points, wires, piston rod, cabinet, and plug as well as check that the actuator functions correctly.
- 3- The actuator is a closed unit and requires no internal maintenance.
- 4- To ensure that the pregreased inner tube remains lubricated the actuator must only be washed down when the piston rod is fully retracted.



WARNING! The Actuator must be used and maintained correctly and not exposed to violent treatment or tampered with. If any irregularities are observed, the Actuator must be replaced immediately.

MAINTENANCE

RETAINING RINGS – All clevis pins must have retaining rings present. Replace any missing rings. All "Rue" type pins should be manually locked and visually inspected on a regular basis, as illustrated below.



NOTE: The low end of the Hi-Lo Actuator must have an "Extended Prong Style Cotter Pin". The "Rue" type pin is used on all other Clevis Pins.



WARNING! Damage to the cotter pins may occur when the bed is in its lowest position and removing patients using a patient lift and/or cleaning areas under the bed.

FASTENERS – Ensure that all fasteners are tightened and seated completely. Do not over-tighten the fasteners at the pivot points of the Decks.

CABLING – Inspect the cabling on the bed to ensure that it is all still in place with no drooping or loose wires, and that it is not interfering with any moving parts. Check for any cut, nicked or crushed wiring. Reattach any loose wires, and repair or replace any damaged wires.

POWER SUPPLY CORD – Inspect the power cord for nicks or crushed insulation. Replace if damaged with original manufacturer parts only.

CASTER LOCKING – Check to ensure that the casters swivel and roll freely when unlocked, and do not swivel or roll when the lock is engaged. Tighten, repair or replace if damaged, loose or not working properly. Note: a torque of 25-30 lb-ft (300-360 in-lb) should be applied on the 3/8" Nut.

SIDE RAILS – Check the action of the side rails. The rails should move freely through their range, latch fully when raised, and not be excessively "wobbly" when raised.

HEAD & FOOT BOARD PANELS – Inspect the wood panels for nicks, scratches and missing edging. Seal any damage that penetrates through to the wood to prevent possible water damage.

PAINT FINISH – Check the bed for any loose, missing, peeled, scraped off or flaked paint. Touch up as required.

OVERALL APPEARANCE – Inspect the bed generally. Visually inspect welds on the bed and accessories and look at any bent or cracked components. Document any concern and remove the bed from service immediately until the affected parts are replaced or the corrective action is taken.

MAINTENANCE

Preventative Maintenance Inspection Chart

The bed shall be inspected at least once every 6 months by a competent person.

This chart is included to document these inspections and will help support any future warranty claims if required.

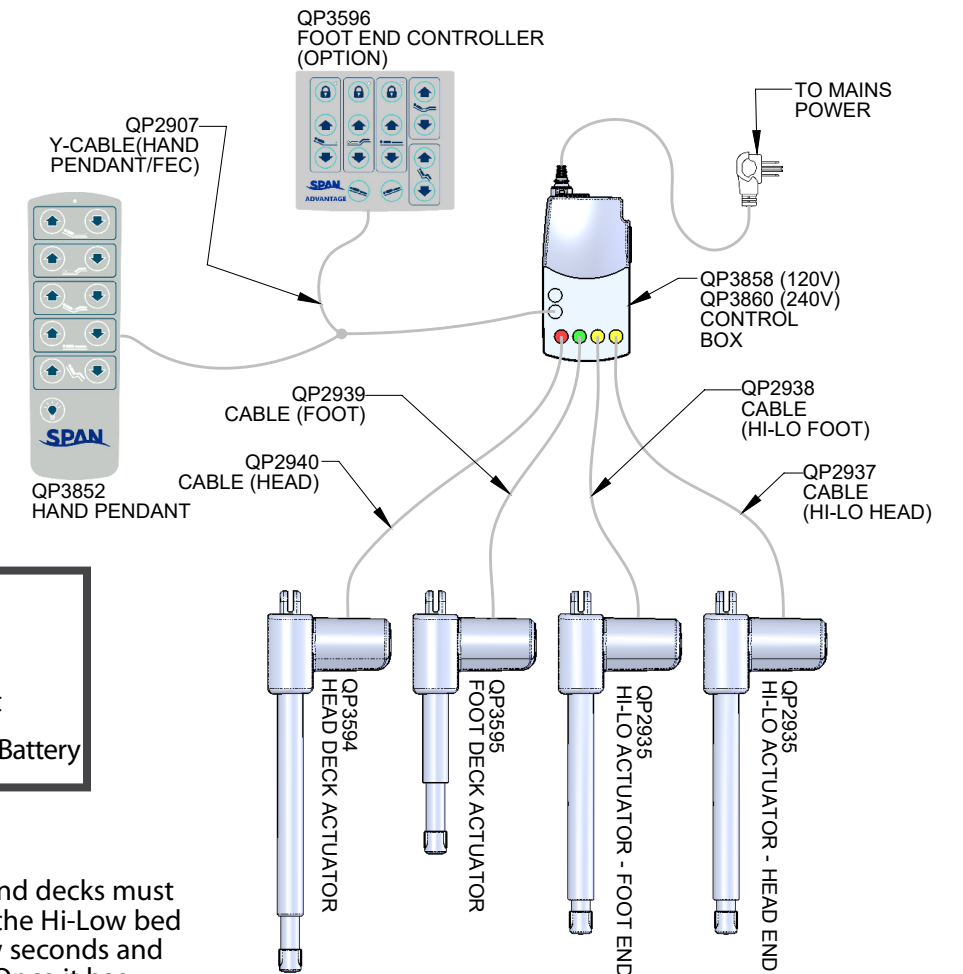
Parts that are found to be worn or defective should be replaced with new parts from Span Medical Products Canada. To identify replacement and spare parts please refer to the exploded parts diagrams in the Service Manual of the bed.

[illegible]

TROUBLESHOOTING TIPS

Before you call for Service (Always record the Serial Number of the bed)

If you are having a problem with your *M. C. Advantage* bed, please go through this troubleshooting section to see if your problem can be resolved easily. If you are still having problems, then please call our Parts and Service Department for assistance at 1-800-268-8671. Do not ship any parts back to Span Medical Products Canada without an RMA (Return Material Authorization) number, they will not be accepted, and no credit will be given.



PORTS

KNEE ACTUATOR (Green)

Hi/Lo ACTUATOR (Yellow)	Pendant
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BACK ACTUATOR (Red) Backup Battery

Prior to troubleshooting use reset function.

CONTROL BOX RESET: To begin, the bed and decks must be fully lowered and level. Press and hold the Hi-Low bed down button on the Hand Pendant for few seconds and the LED light at the top of it should blink. Once it has stopped blinking the Control Box has successfully been reset.

PROBLEM: ONE FUNCTION NOT WORKING

When only some functions work on a bed, it typically indicates that there is a problem with the pendant or one of the actuators, but not the Control Box.

1. If a Foot End (Staff) Controller is present, ensure that all of the functions are unlocked, the function should now work. If this is not the case, continue with the next step.
2. Ensure that all of the connectors are firmly seated, and then check to see if this corrects the problem.
3. Try using a different pendant, either from another bed, or a spare. If this resolves the problem then a replacement pendant is needed.
4. If the problem persists, try switching the actuator ports. Select an actuator that is working, and plug it into the port that is not working. If the function works (it may work in reverse) then the problem is with the actuator.
5. Plug the actuator that was not working into a working port and try it. If the actuator works in this port, then the problem is with the control Box.

ADVANTAGE

PROBLEM: NO MOTOR SOUND OR MOVEMENT OF ACTUATOR

When no bed functions work, it typically indicates a problem with the Control Box or the power supply cord.

1. Check to ensure that the bed is plugged into a working electrical outlet and there is no damage to the Mains Power cord.
2. On the Control Box there is a green LED light, this indicates power to the control box. Check to ensure this light is glowing when the bed is plugged in. Re-check all ports for connection, and wall socket.
3. If a foot end controller is installed, ensure that all functions are unlocked. If they are all unlocked and the bed still does not function, then plug the hand pendant directly into the control box. If the bed works, then the problem is with the foot end controller.
4. If the problem still persists, then try a working pendant from another bed, or a spare pendant. If the bed works, then the problem is with the pendant. If the bed still does not work, then the problem is most likely a faulty control box.

How to make a warranty claim:

Do not disassemble any electrical component parts.

- 1

Troubleshoot the electrical system (actuators, control box and pendant) to determine the not functioning components.. Contact Span Medical Products Canada - Parts and Service department if required.
- 2

Obtain purchasing authority from your facility with a purchase order reference number.
- 3

Have the serial number from the bed to which the claim pertains.
- 4

Communicate with Span Medical Products Canada - Warranty claims processor.
- 5

Describe the reason or cause of failure.
- 6

Order the parts required to return the bed to proper operation.
- 7

Obtain a Return Material Authorization (RMA) number for authorization to return parts. Any product returned without a valid RMA number may be refused and returned at your expense.
- 8

Receive and assemble replacement parts, ensure that the bed is functioning as intended.
- 9

Return the claimed defective parts, with RMA tags attached to each part, and the RMA number clearly marked on the packaging. Only parts with RMA tags may be returned. For health and safety of our employees we will only accept cleaned parts.

PARTS ORDER FORM

SPAN MEDICAL PRODUCTS CANADA
4658 Ontario St. Beamsville, Ontario
Canada L3J 0T9

Contact Name

Bed Serial Number(s)

Facility Name

Address

Phone:Fax:

Parts Order Date

Purchase Order #

RMA number

Part Number	Description	Quantity	Warranty Claim?

For an RMA number, call Span Medical Products Canada - Customer Support , Tel #: 1-800-268-8671.
Fax completed form to Span Medical Products Canada - Customer Support , Fax #: 1- 905-563-8680.

[illegible]

Span Medical Products Canada warrants all beds and accessories sold by Span to be free from defects in workmanship and materials under normal and proper use and service from the date of initial delivery by Span for;

Excluding the above, Span makes no and expressly excludes any warranties (expressed or implied) and shall not be liable for any loss or damage, directly or indirectly, arising from the use, installation, or maintenance of such merchandise or for indirect, special or consequential damages.

No other party is authorized to make warranties on behalf of Span.

This warranty does not apply where:

- All claims must be submitted in writing within the warranty period.

Returned RMA's are subject to inspection. It is the sole discretion of Span personnel to determine if the claim is billable or a no charge warranty replacement.

This Warranty is extended to the original purchaser of the equipment only. Shipping expenses are covered during the first year of the warranty. In subsequent years of the warranty, shipping expenses will be billed and payable by the recipient of the warranty items.