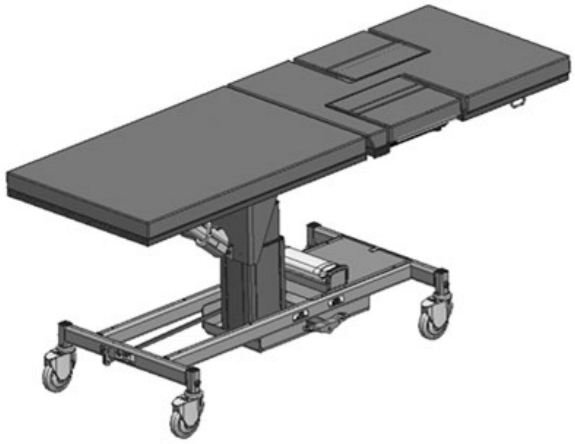
MPI

Positioned for results

Owner's Manual

EchoTable



Owner _____

Model _____

Serial # _____

Date _____

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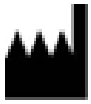
Symbols and Definitions

	Warning, follow instructions for use. Failure to comply may result in injury.
	Warning, sitting is prohibited. Failure to comply may result in injury.
Type B Applied Part	Applied Part complying with specified requirements IEC 60601-1 to provide protection against electric shock, particularly regarding allowable patient leakage current.
	Warning/Caution
Protective Earth	Any terminal which is intended for connection to an external protective conductor for protection against electric shock in case of a fault.
	In accordance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), the product must not be disposed as unsorted municipal waste but should be collected separately. Consult your instructional policies and local regulations regarding disposal. Contact your Medical Positioning, Inc. Service Representative if additional disposal details are required.
	Manufacturer
Intertek 5005653	Agency Mark

Symbols and Definitions

	Maximum Patient Weight. Indicates the maximum patient weight that may be placed on the product.
	Safe Working Load. Indicates the sum of the patient weight and accessories that may be placed on the product.

WARNING / CAUTION / NOTE Definition

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

⚠ WARNING

Identifies a situation that could result in injury to the patient or caregiver.

⚠ CAUTION

Identifies a situation that could result in equipment damage.

Note
Provides special information to make an important instruction clearer.

European Union Representative

EC REP

MDSS GmbH
Schiffgraben 41
30175 Hannover, Germany

CE

Safety Warnings & Cautions

⚠ WARNING:

Obey these safety instructions to help prevent injury and/or equipment damage:

- Read and understand all warnings in this manual and on the unit itself prior to use with a patient.
- The device should be operated by trained persons only.
- Authorized and qualified persons will be those who are approved by Medical Positioning Inc. to repair or modify the product.
- Do not modify this equipment without authorization of the manufacturer.
- Equipment should only be serviced by authorized personnel.
- The procedures in this manual are only manufacturer's suggestions. The final responsibility for patient care with respect to this device remains with the attending physician.
- Do not use in an oxygen rich environment.
- Do not leave patient unattended while using the product.
- To reduce the risk of electric shock, grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked "hospital only" or "hospital grade".
- If damage has occurred to the power cord, immediately remove the cord from service. Failure to do so could result in serious injury or death.
- The battery should be periodically inspected for damage. If damage has occurred to the battery, immediately remove the battery from service. Failure to do so could result in serious injury or death.
- Removal of secured covers may increase the risk of electrical shock. Refer servicing to qualified and approved personnel.
- The potential for electrical shock exists with electrical equipment. Failure to follow facility protocols may cause death or serious injury.
- Ensure the patient is properly secured prior to using the equipment.
- To reduce the risk of a potential injury, lock casters before using equipment.
- Once the product and patient have been properly positioned for the procedure, ensure the casters are locked and the hand controller is placed in a safe position to prevent unwanted contact and unwanted movement of the support surface.
- To reduce the risk of the product becoming unbalanced, always position the product in the lowest reasonable height when moving.

Safety Warnings & Cautions

- Verify the area around the product is free of impediments before operating to prevent injury or equipment damage.
- Keep hands and feet clear from beneath the patient surface when lowering surface height or making positioning adjustments in order to avoid possible injury.
- Keep hands clear of the fowler section hinges during operation to avoid possible injury.
- Sitting at the end of the patient surfaces can result in device instability. Do not allow a patient to sit at the head end of the patient surface.
- Protect vinyl upholstery from sharp objects and abrasion to avoid damage.
- Always read manufacturer's instructions and warnings before using any cleaning product or disinfectant. Refer to instructions located in this manual for vinyl cleaning recommendations.
- Substances such as imaging gels and alcohol will not damage the vinyl surface when immediately removed. Extended exposure for longer than a few minutes can damage the top coat and will eventually discolor vinyl.
- Do not use abrasives to clean painted surfaces.
- It is recommended that the product be cleaned between patients; please follow your facility's documented policy.
- Keep this manual available for future reference.
- If the product is used adjacent to other electrical equipment, observe the product and the other electrical equipment to ensure they operate as intended.
- Failure to latch Drop Sections may result in patient injury. Verify Drop Section is locked in position before and after use.
- Verify the head rest is secure prior to using the product.
- Verify the side rails are secure prior to using the product and after each side rail adjustment.
- Verify the stirrups are secure prior to using the product and after each stirrup adjustment.
- Do not exceed the weight capacity of the product.

Intended Use

This product is intended to be used in an environment where ultrasound and other such diagnostic equipment is present, including hospitals, outpatient facilities, and doctor's offices. The product is intended to be used by trained healthcare professionals who possess the ability to operate the product safely. The product's movements are controlled both manually and electronically via the product's hand control.

The product is not intended for use in oxygen rich environments.

Safety Features

- This product is equipped with multiple automated safety features to prevent danger or damage during use. The entire system is electrically isolated to UL/IEC 60601-1 and CAN/CSA C22.2 No. 601.1 hospital safety standards.
- The actuator assemblies are current overload protected. If overloaded, the actuators will stop and reset automatically.
- The sealed hand control operates the actuators by directing small amounts of low voltage D.C. current to the control box. All actuator drives are equipped with internal limit switches which automatically prevent over-extension.

Set Up

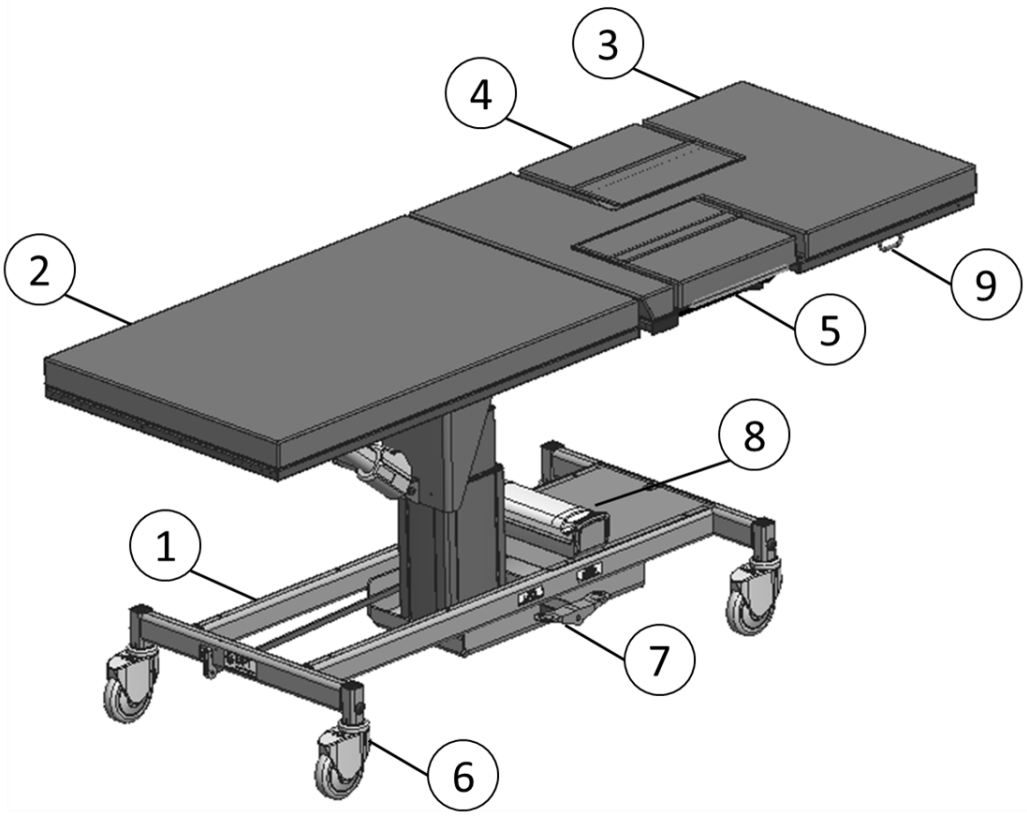
The product has been shipped in “plug and play” condition. After unpacking the product, an initial test should be performed to ensure that each function is in correct working order. After performing the test and reviewing this manual the product is ready for use.

STEP	ACTION
1	After removing padding and packaging materials locate primary power supply cord and attach to suitable grounded power outlet.
2	To test actuator function, locate the hand control and depress each button one at a time. (Depressing multiple buttons simultaneously will prevent the actuators from operating.)
3	If any function does not operate, perform the test procedures listed in the Troubleshooting Guide.

Transport Position

It is recommended that the patient surfaces be in a horizontal position if the product is used to transport patients.

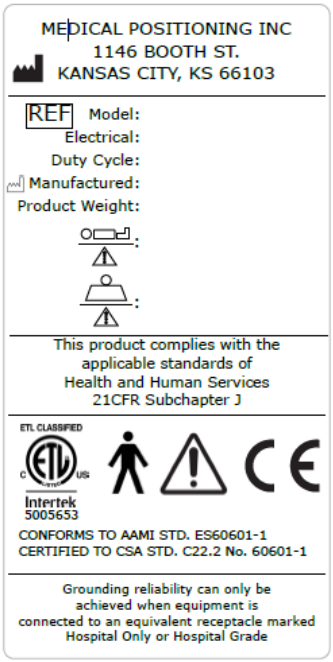
Product Illustration



Item #	Description
1	Base
2	Stationary Section
3	Fowler Section
4	Sonographer's Drop Section
5	Imaging Drop Section
6	Caster
7	Pedal
8	Battery
9	Hand Control Hook

*Optional features may be shown

Controls and Indicators

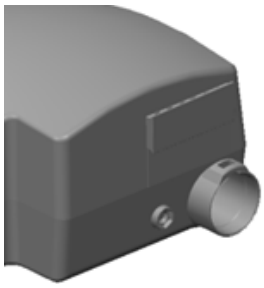
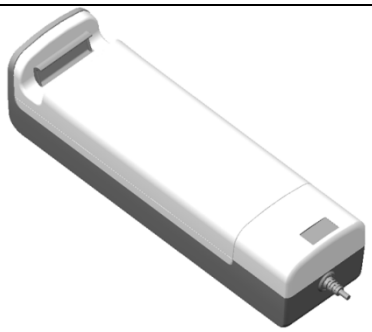
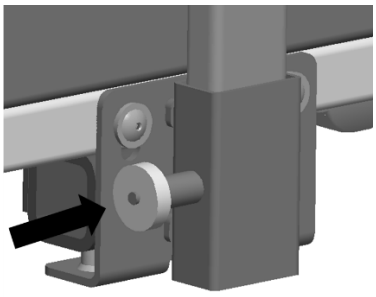
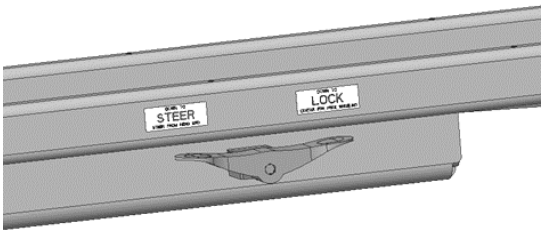
Unique Device Identification Label • Serial # • Item # • Item Description • Unique Identifier	
Certification Label	
Refer to Manual Label	

Controls and Indicators

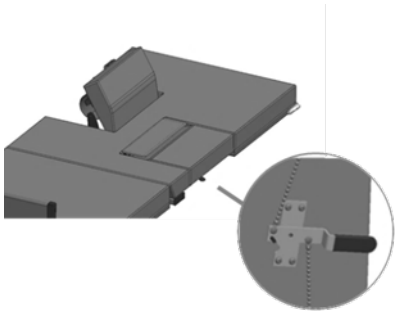
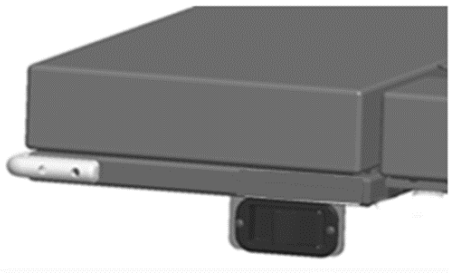
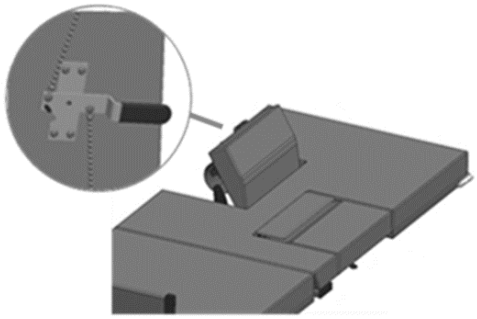
No Sitting label	
Hand Control	

Note: Hand control buttons may vary depending on table model.

Controls and Indicators

AC Input	
Battery	
Side Rail Release	
Pedals for Single Pedal Brake	

Controls and Indicators

Drop Section Release	
Drop Section Remote Release	
Back Rest Release	

Powering the Product

The product may be powered by AC power from a wall outlet or by DC power via the optional battery. The product is “on” whenever it is plugged into AC power or when a charged battery is installed. The product should not be positioned in a way that would make it difficult to remove power by unplugging the AC power cord or removing the battery.

While on DC power only the product may be turned off by pressing and holding the “off” button on the battery cradle for 3 seconds. Pressing the “on” button on the battery cradle will turn the product back on.

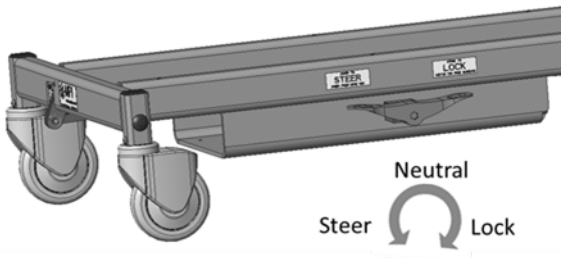
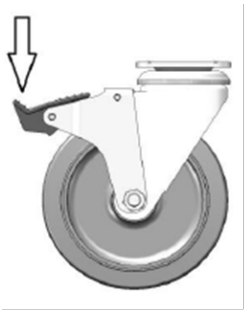
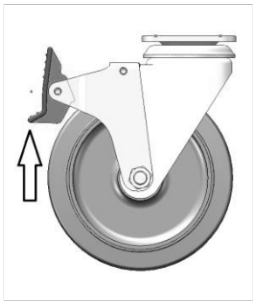
See the section “Battery Information” for indicator information and proper care for batteries.

⚠ WARNING

- To reduce the risk of electrical shock, grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “hospital only” or “hospital grade.”
- If damage has occurred to the power cord, immediately remove the cord from service. Failure to do so could result in serious injury or death.
- If damage has occurred to the battery, immediately remove the battery from service. Failure to do so could result in serious injury or death.
- The battery should be periodically inspected for damage. Replace the battery if necessary.

Locking the Casters

In the locked position casters are prevented from both rolling and swiveling.

Single Pedal Braking Pedals are located on each side of the base and are used to adjust the caster function.	
Individual Locking Casters The locking tab is located on each caster. Push down to lock, lift to unlock.	 

⚠ WARNING

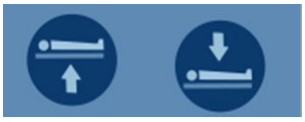
Once the product and patient have been properly positioned for the procedure, ensure the casters are locked and the hand controller is placed in a safe position to prevent unwanted contact and unwanted movement of the product surface during the procedure.

Hand Control Functions

Hand control functions will vary depending on the model purchased. Your hand control may not include all of the functions listed below.

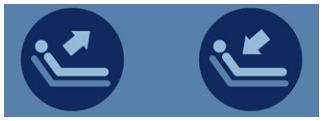
Adjusting Surface Height

The surface height may be adjusted between 24” and 34”.

Press and hold the applicable hand control function to adjust the seat height.	

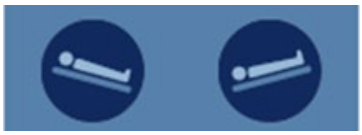
Adjusting Fowler

The fowler section may be adjusted between 0° and 65°.

Press and hold the applicable hand control function to independently adjust the fowler.	

Adjusting Trendelenburg

The table may be adjusted between 15° Trendelenburg and 15° Reverse Trendelenburg.

Press and hold the applicable hand control function to independently adjust the Trendelenburg angle.	

Memory Function

Some product configurations have the ability for the user to set memory positions. The control box can store two unique positions for buttons P1 and P2. The memory feature stores the position for height, fowler, and trend.

Set the table to the desired position. To set a memory position, press and hold the “M” button and then simultaneously press and hold either “P1” or “P2”. The green LED at the top of the hand control will flash 3 times when the memory position has been set. Setting a memory function takes approximately 3-4 seconds. The memory positions can be reset to new positions by following the instructions above.	

Hand Control Lock/Unlock

The hand control function may be locked during the procedure to prevent unwanted movement if the buttons are inadvertently depressed.

Press and hold the lock/unlock button for 3 seconds to lock functions. The green LED at the top of the hand control will light up. Press and hold the lock/unlock button for 3 seconds to unlock functions. The green LED at the top of the hand control will turn off.	

Under-bed Lights

The product may be equipped with optional under-bed lights.

Press both height up-down buttons to turn on/off the under-bed lights.	

⚠ WARNING

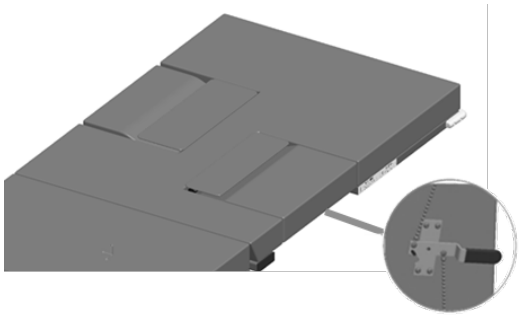
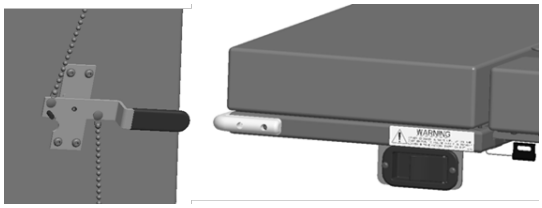
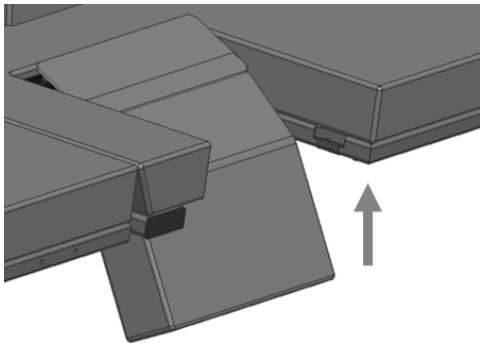
- Verify the area around the product is free of impediments before operating to prevent injury or equipment damage.

Keep hands and feet clear from beneath the patient surface when lowering surface height or making positioning adjustments in order to avoid possible injury.

Keep hands clear of the fowler section hinges during operation to avoid possible injury.

Using the Imaging Drop Section

The imaging drop section is located on the fowler section to allow ergonomic sonographer access to the patient. If equipped, the imaging drop section may also function as a patient back rest. See Sonographer Drop Section for backrest usage.

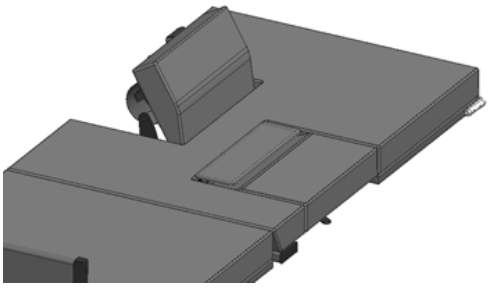
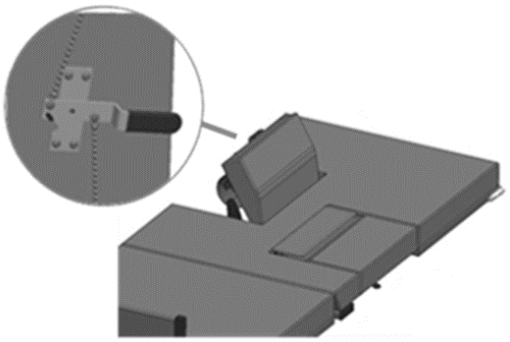
Location of Imaging Drop Section	
To open the drop section, pull the handle to release drop section latches. Or Use the remote release located on the opposite side of the support surface.	
To close the drop section, lift up on the drop section up until the latch engages.	

⚠ WARNING

- Failure to latch Drop Sections may result in patient injury. Verify Drop Sections are locked in position before and after use.

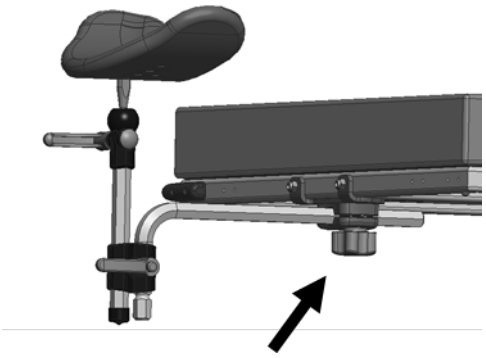
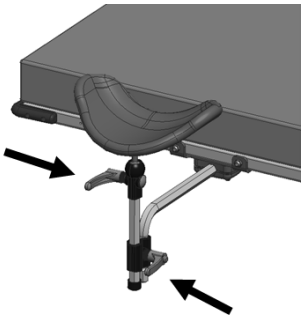
Using the Sonographer Drop Sections

The sonographer drop section allows right handed scanners to get closer to the patient. It can also be adjusted to act as a patient back rest.

To use the sonographer drop section as a back rest pull up on the drop section until it locks into position. There are two back rest positions to choose from.	
To lower from the back rest position, rotate the handle to release the back rest lock. Hold the handle while lowering the drop section until it returns to its stored position. **Note:** The release handle may be hard to rotate when the drop section is in the top backrest position. Pulling lightly on the drop section while rotating the handle will make it easier to release from the back rest position. To open the sonographer drop section for better patient access, pull the handle to release the drop section latches. The sonographer stand in the open space or sit on the table during scanning. To close the drop section, lift up on the drop section up until latches engages.	

Using the Carotid Head Rest

The product may be equipped with an optional head support to provide better access during carotid artery scanning. Prior to using the head support the mounting brackets must be installed at the head end of the product.

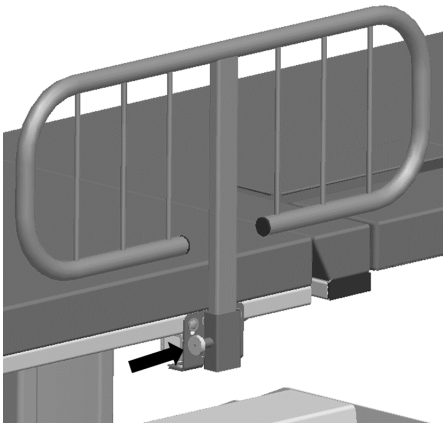
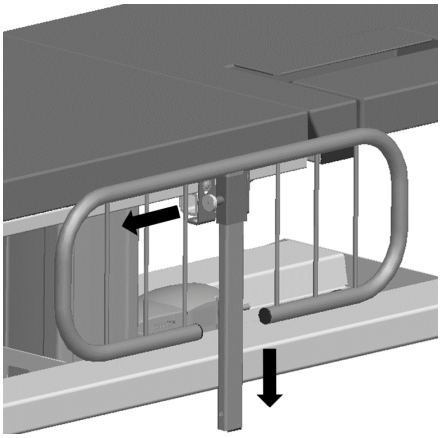
The head rest mount is located underneath the head end of the fowler section.	
Install the head rest and adjust the location. Tighten the knob on the head rest mount to secure.	
Adjust the height and orientation of the head rest using the two control knobs. Tighten to secure.	

⚠ WARNING

- Verify the head rest is secure prior to using the product.

Using the Side Rails

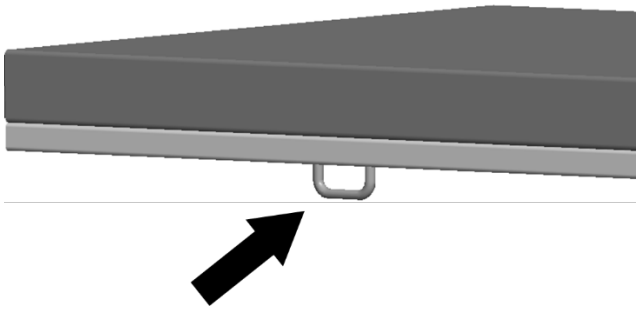
The product may be equipped with optional side rails.

The side rails must be locked in place by the locking pins.	
The side rails may be lowered or removed by pulling on the release levers.	

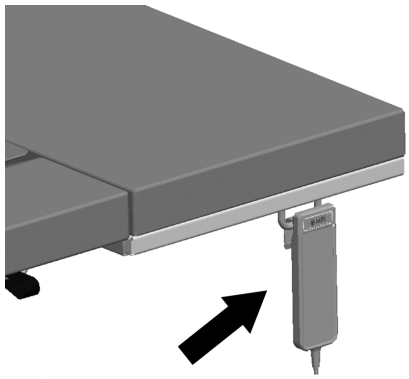
⚠ WARNING

- Verify the side rails are secure prior to using the product and after each side rail adjustment.

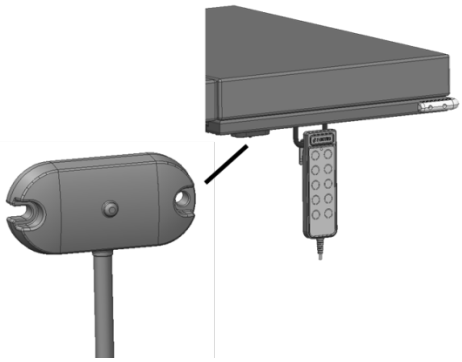
Foley Bag Clip

The product may be equipped with a hook for hanging a Foley bag.	

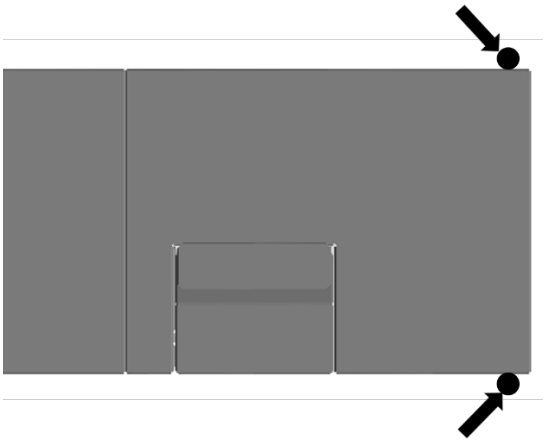
Storing the Hand Control

The hand control may be hung on the hook located underneath the support surface. The hook may be moved to the end user's preference. **Note:** If the hand control hook is moved, ensure there is no interference through the product's range of motion.	

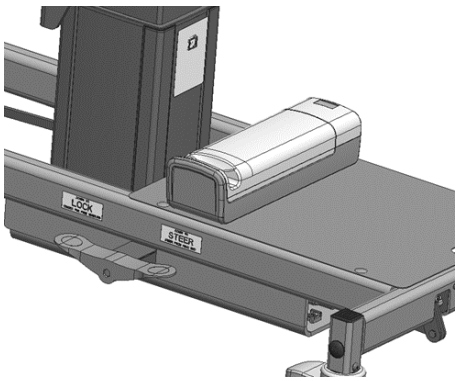
Under-bed Lights

The product may be equipped with under-bed lights.	

IV Pole and Holder

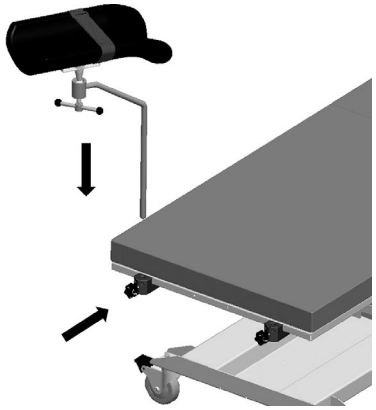
The product may be equipped with an IV pole. Place the IV pole into the mounting bracket and tighten the knob to secure the IV pole to the product. The mounting bracket may be located approximately in the locations shown.	

Optional Battery

The product may be equipped with an optional battery. The battery may be charged by plugging in the product to AC power or by removing the battery and charging it on an external charging station. To remove the battery, pull the release latch and lift the battery. **Note:** The lifting capacity of the product may be reduced while on battery power.	

Using the Stirrups

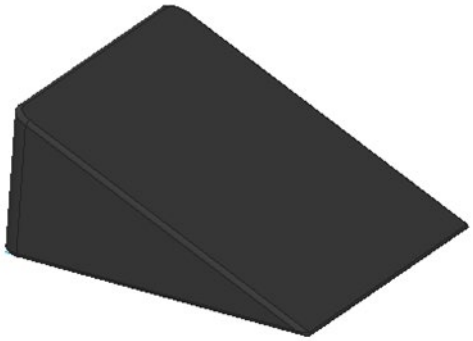
The product may be equipped with optional stirrups.

The stirrups plug into the individual receiving blocks located on the stationary section. The stirrups have infinite height adjustability.	

⚠ WARNING

Verify the stirrups are secure prior to using the product and after each stirrup adjustment.

Positioning Wedge

The positioning wedge may be used to support the patient at a desired angle.	

Pediatric Adaptor

The product may be used with a pediatric/geriatric adaptor. To install use the following steps: 1. Lower the Drop Section 2. Remove the non- pinch closure flap by grasping one side of the flap and gentle separating the hook and loop fastener. 3. Position the adaptor locator flanges within the imaging area. 4. Remove the adaptor when not needed. 5. With the drop-section lowered, align the top edge of the non-pinch closure flap, (within the access cavity) with the top edge of the support surface. 6. Press the hook and loop attachment strips together.	

Preventative Maintenance

The following Preventative Maintenance should be performed at a minimum annually. If any of these checks fail, repair or replace the part as applicable.

- Visually inspect all mechanical assemblies and moving parts on the product ensuring smooth, steady operation.
- Visually inspect all fasteners (bolts, nuts, screws, etc.) to ensure all are fully installed. Tighten as necessary.
- Visually inspect all electrical cables and wires for signs of abrasion or other damage. If damaged, replace.
- Visually inspect all electrical connections to ensure they are fully and properly connected. Reconnect as necessary.
- Visually inspect the hand control. If damaged, replace.
- Operate all latch mechanisms to ensure proper engagement of latch into receiver. Adjust if necessary.
- Operate all motors to ensure full extension, retraction and correct operation. The motors are permanently lubricated and require no additional lubrication.
- Operate the braking system to ensure proper engagement of the wheel and swivel lock mechanism. Replace as necessary.
- Operate all accessories to ensure proper attachment and operation. Tighten, adjust or replace if necessary.
- Visually inspect the battery for damage. Replace the battery if necessary.
- Unauthorized modification of this product voids any applicable warranty.

⚠ WARNING

No modification of this equipment is allowed.

Equipment should only be serviced by authorized personnel.

Removal of secured covers may increase the risk of electrical shock. Refer servicing to qualified and authorized personnel.

- The potential for electrical shock exists with electrical equipment. Failure to follow facility protocols may cause death or serious injury.

Battery Information

The rechargeable battery must be charged periodically for at least 24 hours to protect the battery from fully discharging. If the battery is not charged for an extended period of time it may lose its ability to hold a charge and will require replacement. The battery may be charged by plugging the table into AC power or by using the available external battery charger listed in the Replacement Parts and Upgrade Kits section of this manual.

If the product is being stored for an extended period of time it is recommended the battery be charged at least 24 hours every 6 months.

The battery should be charged continuously at least 24 hours under the following circumstances:

- First Operation
- Before long period storage without AC-in
- First operation after long period storage

The battery charge level is indicated by the LED on the battery cradle. The following table provides an overview of battery status:

Status	LED Indicator	Battery Level
Hi Charging	Green – Continuous On	>80%
Charging	Green – Blinking (1 sec on / 1 sec off)	<80%
Hi Battery	Green – Blinking (.5 sec on / 4 sec off)	>25%
Low Battery	Orange – Blinking (.5 sec on / 4 sec off)	<25%
Protection	LED is off	<20%
Failure	Orange – Continuous On	-

Expected Life

The expected life of the product is 7 years of normal use. Some components may have a shorter life and require replacement.

Note: See Warranty section for warranty information.

Discard the Unit

Upon reaching the end of its useful life the product may be discarded in accordance with local and federal standards. Recycle when possible.

In accordance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), the product must not be disposed as unsorted municipal waste but should be collected separately. Consult your instructional policies and local regulations regarding disposal. Contact your Medical Positioning, Inc. Service Representative if additional disposal details are required.

Cleaning

Plastic and Painted Surfaces

The painted metal and plastic surfaces can be cleaned with normal cleaners and disinfectant.

STEP	ACTION
1	Clean and/or disinfect with liquid cleaner of choice being careful to follow label instructions provided with cleaner. (Always test a small area first to determine suitability of solution)
2	Wipe the surface clean with a damp cloth after applying cleaners and disinfectant to remove excess residue buildup.

Vinyl

The vinyl upholstered surfaces can be cleaned in one of the following ways:

The preferred method of everyday cleaning is using a soft cloth or sponge with mild soap and water or disinfectant. Spills and accidents require immediate attention for best results. When caught quickly, most stains such as grease, blood and felt tip pens can be wiped right off. Mild soap and water is the preferred method; however, typical hospital-grade antiseptic wipes work as well. For more stubborn stains, a variety of concentrated and solvent type cleansers may be used without damaging the surface as long as they are thoroughly rinsed off with water.

Generally speaking, always start with the mildest cleaning agents first. Never use harsh powdered abrasive cleansers or steel wool. Products containing bleach, ammonia or alcohol should be wiped from the surface with a wet cloth after use. Residue from these products will damage vinyl surfaces.

STEP	ACTION
1	Clean and/or disinfect with liquid cleaner while being careful to follow label instructions provided with cleaner. (Always test a small area first to determine suitability of solution)
2	Wipe the surface clean with a damp cloth after applying cleaners and disinfectant to remove excess residue buildup.

Cleaning

RECOMMENDED MAXIMUM CLEANER TO WATER SOLUTIONS	
Mildest	1:1 mix of mild soap and water. Wipe surface with damp cloth with water only after cleaning.
	Straight application of common disinfectants. Wipe surface with damp cloth with water only after cleaning.
	1:1 mix of ammonia and water. Use a soft cotton cloth saturated with the cleaning material. Wipe surface with damp cloth with water only after cleaning.
	1:4 mix of bleach and water. Use a soft cotton cloth saturated with the cleaning material. Wipe surface with damp cloth with water only after cleaning.
	1:1 mix of isopropyl alcohol and water. Use a soft cotton cloth saturated with the cleaning material. Wipe surface with damp cloth with water only after cleaning.
	Straight application of isopropyl alcohol. Use a soft cotton cloth saturated with the cleaning material. Wipe surface with damp cloth with water only after cleaning.
Strongest	1:1 mix of acetone and water. Use a soft cotton cloth saturated with the cleaning material. Wipe surface with damp cloth with water only after cleaning.

This information is not a guarantee and does not relieve the user from the responsibility of proper and safe use of the product and all cleaning agents.

⚠ WARNING

It is recommended that the product be cleaned between patients; please follow your facility's documented policy.

⚠ CAUTION

- Always read manufacturer's instructions and warnings before using any cleaning product or disinfectant.

  Substances such as imaging gels and alcohol will not damage the vinyl surface when immediately removed. Studies have shown that exposure for longer than a few minutes can damage the top coat and will eventually discolor vinyl.

- Do not use abrasives to clean painted surfaces.

Service Calls

A **"Troubleshooting Guide"** is included to instruct you in the event of a malfunction. If you are experiencing any of the following symptoms, this guide may help you quickly solve the problem. If, after consulting this guide, you are still unable to operate your product please contact Medical Positioning at 1-800-593-3246. Please have the following information ready when you call:

1. Model Number or Name of Product
2. Serial Number
3. Date Received
4. Condition When Received
5. Symptom (or problem) Encountered & Result of Troubleshooting Procedure

Complaint Reporting Procedure

In the event of a product malfunction or patient injury, please immediately report the incident to:

1. _____
   (The distributor from whom the product was purchased)

2. Medical Positioning, Inc.
   1146 Booth Street
   Kansas City, KS 66103
   www.MedicalPositioning.com
   816-474-1555
   800-593-3246 (ECHO)

Troubleshooting Guide

SYMPTOM	PROBABLE CAUSE	SUGGESTION
No Actuator Function Actuator(s) Not Running.	• Power cord not plugged all the way into wall receptacle.	• Push power cord securely into receptacle.
	• Power outlet receptacle not supplying 120 VAC power.	• Check power availability or plug unit into another receptacle.
	• The power cord may be separated from the control box.	• Securely press power cord into control box.
	• Battery may be drained.	• Replace or charge battery.
	• Actuator cord may be unplugged.	• Push actuator cords securely into actuator receptacle.
	• Product was overloaded and tripped internal fuse in control box.	• Replace control box.
	• Product motion is limited at certain heights and angles.	• Return the surface to a level position to restore full range of motion
	• The product will not move when hand control buttons are pressed.	• The hand control buttons may be locked. If the green LED on the hand control is lit then press the unlock button for 3 seconds to unlock the hand control functions.
Squeaking noises during operation.	• Actuator pins are not sufficiently lubricated	• Apply WD40 or similar lubricant to actuator pins.

⚠ WARNING

Do not modify this equipment without authorization of the manufacturer.

- Removal of secured covers may increase the risk of electrical shock. Refer servicing to qualified personnel.
- The battery should be periodically inspected for damage. Replace the battery if necessary.

Product Models & Attributes

Echo Table				
ATTRIBUTE	**051/251**	**072/272**	**073/273**	**083/283**
Base Width	26”	26”	26”	26”
Base Length	48.5”	48.5”	48.5”	48.5”
Surface Width	27”	27”	27”	27”
Surface Length	79.5”	79.5”	79.5”	79.5”
Surface Height Range *To top of cushion	24” – 34”	24” – 34”	24” – 34”	24” – 34”
Fowler Range	0°-65°	0°-65°	0°-65°	0°-65°
Trendelenburg Range	N/A	N/A	-15° / 15°	-15° / 15°
# of Drop Sections	0 / 2	0 / 2	0 / 2	0 / 2
Maximum Patient Weight	500lb	500lb	500lb	500lb
Maximum Safe Working Load	535lb	535lb	535lb	535lb
Approximate Product Weight	300lb	300lb	300lb	300lb

Specifications

Environmental Conditions

ATTRIBUTE	Range for Use	Range for Storage and Transport
Ambient Temperature	+0° to 40° C	-10° to +50° C
Relative Humidity	20% to 90% @ 30°C – not condensing	20% to 90% @ 30°C – not condensing
Atmospheric Pressure	860 to 1060 hPa	860 to 1060 hPa

Upholstery

ATTRIBUTE	SPECIFICATION
Foam	California Technical Bulletin 117
Vinyl	D.O.T. FAR 25.853 and FMVSS302 Port of NY / Boston F.D. Code

Power Requirements

ATTRIBUTE	SPECIFICATION
Electrical, Product	100–240 VAC, 50/60 Hz, max 5 A
Electrical, Battery Charger	100–240 VAC, 50/60 Hz
Battery Option	24 VDC, 2.9 Ah
Duty Cycle	10%, 2 min. on / 18 min. off

- All electrical circuitry is isolated from chassis.
- Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Only” or “Hospital Grade.”
- The power cord is to be used for mains disconnection.
- Attached power supply cord set is not allowed to be diverted to other equipment.

Classifications and Standards

ATTRIBUTE	SPECIFICATION
Standards	• IEC 60601-1:2005 + A1:2012 • ANSI/AAMI ES60601-1:2005/(R)2012 and A1:2012, C1:2009/(R)2012 and A2:2010/(R)2012 • CAN/CSA-C22.2 NO. 60601-1:14 • EN 60601-1:2006 +A11:2011 +A1:2013 +AC:2014 • IEC 60601-1-2:2007 • EN/ISO 14971:2012
Protection against Electrical Shock	• Class I equipment • Type B applied part
Degree of protection against Dust and Fluid intrusion	• IPX0

Applied Parts (in accordance with IEC 60601-1)

- All padded surfaces
- Arm rests

Electromagnetic Emissions Guidance

The product use components that meet the requirements for IEC 60601-1-2. Other products that are used in the vicinity of the this product should also comply with this standard. If they do not comply, electromagnetic interference between the products could cause the products to operate incorrectly. If problems do occur, contact the product manufacturer(s).

Make sure the product operates correctly when used near other electronic devices. Portable and mobile radio frequency (RF) communications equipment can affect electrical equipment.

⚠ WARNING

- If the product is used adjacent to other electrical equipment, observe this product and the other electrical equipment to make sure they operate as intended.

Electromagnetic Compatibility

Medical electrical equipment needs special precautions regarding electromagnetic compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in this user manual.

Portable and mobile radio frequency (RF) communications equipment can affect medical electrical equipment.

Guidance and Manufacturer's Declaration - Electromagnetic Emissions		
The product is intended for use in the electromagnetic environments specified below. The customer or the user of the product should assure it is used in such an environment.		
Emissions Test	**Compliance**	**Guidance**
RF Emissions CISPR 11	Group 1 Group 2	The product 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. <1> The product must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected. <2>
RF Emissions CISPR 11	Class A	The product 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.
Harmonic Emissions IEC 61000-3-2	N/A	
Voltage Fluctuations/ Flicker Emissions IEC 61000-3-3	N/A	

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The product is intended for use in the electromagnetic environments specified below. The customer or the user of the product should assure it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Guidance**
Electrostatic Discharge IEC 61000- 4-2	± 6 kV Contact ± 8 kV Air	± 6 kV Contact ± 8 kV Air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical Fast Transient/ Burst IEC 61000-4-4	± 2 kV on power Supply Lines ± 1 kV on Input/Output Lines	± 2 kV on Power Supply Lines ± 1 kV on Input/Output Lines	Mains power quality should be that of a typical commercial or hospital environment
Surge IEC 61000-4-5	± 1 kV Differential Mode ± 2 kV Common Mode	± 1 kV Differential Mode ± 2 kV Common Mode	Mains power quality should be that of a typical commercial or hospital environment
Voltage Dips, Short Interrupts, & Variations on Power Supply Lines IEC 61000-4-11	< 5% U_T (95% dip in U_T for 0.5 cycles) < 40% U_T (60% dip in U_T for 5 cycles) < 70% U_T (30% dip in U_T for 25 cycles)	< 5% U_T (95% dip in U_T for 0.5 cycles) < 40% U_T (60% dip in U_T for 5 cycles) < 70% U_T (30% dip in U_T for 25 cycles)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the product requires continued operation during mains interruptions, it is recommended that the product be powered from an uninterruptible power supply or a battery.
Power Frequency Magnetic Fields IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level			

Specifications

Guidance and Manufacturer's Declaration - Electromagnetic Immunity			
The product is intended for use in the electromagnetic environments specified below. The customer or the user of the product should assure it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 Mhz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the product, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80 MHz to 800 MHz $d = 2,3\sqrt{P}$ 800 MHz to 2.5 GHz Where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). Filed strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	3 Vrms 80 MHz to 2.5 GHz	3 V/m	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [*V*1] V/m.

Specifications

Recommended separation distances between portable and mobile RF communications equipment and the MPI Echo Products

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

Rated maximum output power of transmitter	**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 2.5 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 meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Standard and Optional Configurations

	Echo Table	
ATTRIBUTE	**STANDARD**	**OPTIONAL**
Hand control	X	-
Hand Control Mount	X	-
Paper Roll Holder	X	-
Side Rails	-	X
Positioning Wedge	-	X
1 Function Foot Control	-	X
3 Function Foot Control	-	X
IV Pole & Holder	-	X
Battery Functionality	-	X
2nd Battery	-	X
Charger Kit	-	X
Under-bed Lights	-	X
Head Rail	-	X
Stirrups	-	X
Carotid Head Rest	-	X
Foley Bag Holder	-	X
Armboard	-	X

Replacement Parts and Upgrade Kits

The following items are replacements parts or upgrade kits for EchoTable. Some of the items below may not be suitable for all models of product.

Part Description	Part #
1 Function Foot Control Kit	15772
3 Function Foot Control Kit	15773
Multi-Function Control Kit	15774
Battery Functionality Kit	15768
Replacement Battery	15395
Wall Charger Kit	15508
Underbed Light Kit[1]	15775
IV Pole Kit	15604
Carotid Headrest Kit	15507
Head Rail Kit	15602
Stirrup Kit	15600
Armboard Kit	15552
Positioning Wedge	11943
Pediatric/Geriatric Adapter	10097
Underbed Hook Kit	15510
Sonographer Extension Kit	15767
Side Rail Kit	11685
Paper Roll Holder Kit	10098
Memory Function Upgrade	15784

[1]The Multi-Function Control Kit is required with the Under-bed Light Kit.

Replacement Hand Controls				
Table Functions	Height Only	Height-Trend	Height-Fowler	Height-Trend-Fowler
Non-Memory	15776	15777	15778	15779
Memory	15780	15781	15782	15783

Warranty

EchoTable™
1
YEAR WARRANTY

This product is fully guaranteed against defects in material and/or workmanship during the period indicated above, commencing with the manufacturing date. If a product fails due to a manufacturing defect, Medical Positioning, Inc. (MPI) will repair or authorize repairs to the product without charge, or replace the product at MPI's option.

Preventative maintenance and repairs due to accident, improper care, negligence, or other non-defect related failures are not covered by this warranty. This warranty does not apply to products that have been modified without the advance written permission of MPI.

MPI makes no other warranty, either expressed or implied, with respect to this product. MPI specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.

The remedies provided herein are the customer's sole and exclusive remedies. In no event shall MPI be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

A 30 day return policy from the date of receipt applies to new products, subject to a restocking fee and quality inspection. The product shall not be returned without prior written authorization from MPI. The customer is responsible for all shipping charges and any applicable duties or taxes.

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