# MPI_tag_blue

Owner’s Manual





Owner \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Model \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Serial # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Table of Contents**

[Symbols and Definitions 4](#_Toc104299275)

[Safety Warnings & Cautions 6](#_Toc104299276)

[Intended Use 8](#_Toc104299277)

[Safety Features 8](#_Toc104299278)

[Set Up 9](#_Toc104299279)

[Transport Position 9](#_Toc104299280)

[Product Illustration 10](#_Toc104299281)

[Controls and Indicators 11](#_Toc104299282)

[Use Instructions 15](#_Toc104299283)

[Powering the Product 15](#_Toc104299284)

[Locking the Casters 16](#_Toc104299285)

[Hand Control Functions 17](#_Toc104299286)

[Adjusting Surface Height 17](#_Toc104299287)

[Adjusting Fowler 17](#_Toc104299288)

[Adjusting Trendelenburg 17](#_Toc104299289)

[Memory Function 18](#_Toc104299290)

[Hand Control Lock/Unlock 18](#_Toc104299291)

[Under-bed Lights 19](#_Toc104299292)

[Using the Carotid Head Rest 22](#_Toc104299293)

[Using the Safety Handrails 23](#_Toc104299294)

[Using the Swing Safety Handrails 24](#_Toc104299295)

[Foley Bag Clip 25](#_Toc104299296)

[Storing the Hand Control 25](#_Toc104299297)

[Under-bed Lights 25](#_Toc104299298)

[IV Pole and Holder 26](#_Toc104299299)

[Optional Battery 26](#_Toc104299300)

[Using the Stirrups 27](#_Toc104299301)

[Positioning Wedge 28](#_Toc104299302)

[Pediatric Adaptor 28](#_Toc104299303)

[Preventative Maintenance 29](#_Toc104299304)

[Battery Information 30](#_Toc104299305)

[Expected Life 31](#_Toc104299306)

[Discard the Unit 31](#_Toc104299307)

[Cleaning 32](#_Toc104299308)

[Service Calls 34](#_Toc104299309)

[Troubleshooting Guide 35](#_Toc104299310)

[Specifications 36](#_Toc104299311)

[Warranty 46](#_Toc104299312)

[Return Policy 47](#_Toc104299313)

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. |
|  | Applied Part complying with specified requirements IEC 60601-1 to provide protection against electric shock, particularly regarding allowable patient leakage current. |
|  | Warning/Caution |
|  | 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 |
|  | Agency Mark |

|  |  |
| --- | --- |
|  | 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.

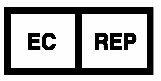
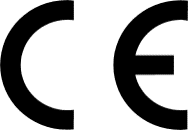
* CAUTION

Identifies a situation that could result in equipment damage.

**Note**

Provides special information to make an important instruction clearer.

**European Union Representative**



MDSS GmbH

Schiffgraben 41

30175 Hannover, Germany

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.
* 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 safety handrails are secure prior to using the product and after each handrail 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

Diagram

Description automatically generated

|  |  |
| --- | --- |
| Item # | Description |
| 1 | Base |
| 2 | Stationary Section |
| 3 | Fowler Section |
| 4 | Sonographer 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 |  |

|  |  |
| --- | --- |
| No Sitting label |  |
| Hand Control |  |

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

|  |  |
| --- | --- |
| AC Input |  |
| Battery |  |
| Safety Handrail Release |  |
| Swing Safety Handrail Release |  |

|  |  |
| --- | --- |
| Pedal for Single Pedal Brake |  |
| Drop Section Release |  |
| Drop Section Remote Release |  |
| Back Rest Release |  |

Use Instructions

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 stands 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 Safety Handrails

The product may be equipped with optional Safety Handrails.

|  |  |
| --- | --- |
| The safety handrails must be locked in place by the locking pins. |  |
| The safety handrails may be lowered or removed by pulling on the release levers. |  |

* WARNING
* Verify the safety handrails are secure prior to using the product and after each handrail adjustment.

Using the Swing Safety Handrails

The product may be equipped with the optional Swing Safety Handrail.

|  |  |
| --- | --- |
| The safety handrails are stored under the support surface when not in use and automatically locked by the spring-loaded locking pin. | A picture containing text, sky  Description automatically generated |
| The safety handrails must be locked in the up and down positions by the locking pin. | A picture containing sky  Description automatically generated |
| The safety handrails may be upright or stored by pulling the release plunger and rotating the safety handrail up or downward. | A close-up of a magnifying glass  Description automatically generated with medium confidence |

* WARNING
* Verify the safety handrails are secure prior to using the product and after each handrail 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.

|  |  |
| --- | --- |
| weee_symbol | 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. |

| **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](http://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.

Specifications

**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 | 28” | 28” | 28” | 28” |
| 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 |

**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 |

**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% UT  (95% dip in  UT for 0.5 cycles)  < 40% UT  (60% dip in  UT for 5 cycles)  < 70% UT  (30% dip in  UT for 25 cycles) | < 5% UT  (95% dip in  UT for 0.5 cycles)  < 40% UT  (60% dip in  UT for 5 cycles)  < 70% UT  (30% dip in  UT 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 UT is the a.c. mains voltage prior to application of the test level | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **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  Radiated RF IEC 61000-4-3 | 3 Vrms  150 kHz to 80 Mhz  3 Vrms  80 MHz to 2.5 GHz | 3 Vrms  3 V/m | 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**      80 MHz to 800 MHz    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: |
| 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. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **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** | **80 MHz to 800 MHz** | **800 MHz to 2.5 GHz** |
| 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 | - |
| Safety Handrails | - | 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 Kit1 | 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 |
| Safety Handrail Kit | 15648 |
| Swing Safety Handrail Kit | 16153 |
| Paper Roll Holder Kit | 10098 |
| Memory Function Upgrade | 15784 |

1The 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

**Warranty**

EchoTable™

**3**

**YEAR WARRANTY**

Medical Positioning, Inc. (“MPI”) warrants and represents that this product will be free from material and workmanship defects during the period indicated above (the “Warranty Period”), commencing with tender of delivery as defined in Uniform Commercial Code § 2-503, irrespective of any inspection period and provided that the product is maintained and operated in accordance with MPI’s specifications.

If the product fails due to a manufacturing defect, MPI will, at its sole expense and discretion, repair the product, authorize repairs to the product, or replace the product. MPI will ship any replacement products or parts using standard shipping rates; if the customer requires expedited shipping of replacement products or parts, the customer is responsible for paying shipping costs above standard rates.

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

OTHER THAN AS SET FORTH HEREIN, MPI MAKES NO WARRANTY WHATSOEVER, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THIS PRODUCT. MPI SPECIFICALLY DISCLAIMS THE (a) IMPLIED WARRANTY OF MERCHANTABILITY; (b) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; AND (c) WARRANTY AGAINST INFRINGEMENT OF ANY PATENT, COPYRIGHT, TRADEMARK, TRADE SECRET OR OTHER PROPRIETARY RIGHTS OF A THIRD PARTY; WHETHER ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE.

This warranty is nontransferable. The remedies provided under this warranty are the customer’s sole and exclusive remedies. In no event will MPI be liable for any direct, indirect, special, incidental, consequential damages or lost profits or income whether based on contract, tort, or any other legal theory.

**Medical Positioning, Inc.**

1146 Booth Street

Kansas City, Kansas 66103

(816) 474-1555

(800) 593-3246

Fax (816) 474-7755

WAR069-B

Return Policy

MPI accepts returns of unused products within 30 days from the date of delivery, irrespective of any inspection period. Returns are subject to a 30% restocking fee, any applicable duties or taxes and quality inspection. No product may be returned without prior written authorization from MPI. The customer is responsible for all shipping charges and any applicable duties or taxes incurred in connection with a return.

WAR093-A