



# Owner's Manual

## EP HUT™Table

Owner \_\_\_\_\_

Model \_\_\_\_\_

Serial Number \_\_\_\_\_

Date \_\_\_\_\_

# Table of Contents

---

## EP HUT™Table

---

General	
Safety Features	2
Operation EP HUT™Table	4
1. Control Box	5
2. Tilt Angle Control	6
3. Table Operation	7
4. Control Console	9
5. Hand Wand	11
6. Floor Lock	12
7. Caster Use	13
Cleaning Instructions	14
Troubleshooting Guide	16
Parts List	17
Warranty	18
Specification Sheets	
EP HUT™Table	19

# Safety Features

---

## In This Section

The EP HUT™Table is designed to be used for fluoroscopic examination and treatment requiring positioning of the patient with a C-arm imaging device. This section lists the safety features built into your EP HUT™Table.

---

## Safety Features

The EP HUT™Table is equipped with multiple automated safety features to prevent danger or damage during use.

The actuator assemblies are current overload protected. If overloaded, the actuators will stop and reset automatically. The servo motor has both electronic and mechanical stops.

The sealed, hand-held wand and/or control console operates the actuators by directing small amounts of low voltage D.C. current to the control box. All of the actuator drives are equipped with limit switches which automatically prevent over-extension.

Some models of the EP HUT™Table are equipped with total locking, sealed bearing, braking casters at all four corners. The remaining models are equipped with floor brakes.

The EP HUT™Table are recognized to the following standards:

UL 60601-1 IEC 60601-1 CAN/CSA C22.2 No. 601.1

IEC 60601-1 Classifications

- Protection against electrical shock- Class I with back-up uninterruptible power source, Type B applied parts
- Equipment not suitable for use with flammable anesthetic mixture with air or with oxygen or nitrous oxide
- Mode of operation - 1 minute operation, 9 minutes rest

Environmental

- Mains power quality should be that of a typical commercial or hospital environment
- Power frequency magnetic fields should be at levels characteristic of a typical location in a commercial or hospital environment.

Transport Conditions

- Temperature range: -40°F (-40°C) to 150°F (70°C)
- Relative Humidity range: 10% to 100%
- Atmospheric pressure range: 14.76 inHg (500 hPa) to 31.30 inHg (1060hPa)

Definition of Symbols used



Attention Consult Accompanying Documents



Type B Applied Part



Protective Earth Terminations



UPS Power On/Off



Emergency Stop Button

---

## Safety Features (Continued)

### **CAUTION::**

The UPS supplied with this equipment has an internal power source. Its outlets may still deliver current after it is unplugged, until the UPS is deactivated.

The UPS becomes active the power cord is connected to 120VAC line power and needs to be deactivated manually.

To power down the table while the UPS is activated, push the emergency stop knob (lighted red knob on base structure) in.

To power down the UPS, press and hold the power on/off button on the front of the UPS until the “on” light goes out.

Representative drawing  
Capacities and electrical vary by model.



# Operation: EP HUT™Table

---

## Introduction

The EP HUT™Table is shipped assembled and ready for use. Each function has been pre-tested to insure perfect working order on day one. A “**Troubleshooting Guide**” is included to help you in the event of a malfunction.

---

## In This Section

You will be provided with a basic understanding of the components of a EP HUT™Table. You will be instructed on the proper use of the EP HUT™Table, including:

- Tilt Angle Control
- Control Console
- Using the Hand Wand
- Floor Brake
- Proper Cleaning Instructions
- Trouble Shooting Guide
- Parts List
- Parts Diagram
- Electrical Diagram
- Warranty

## Control Box - Non-Float Models

The EP HUT™ Table has a home (horizontal) position. The table also has an emergency button that allows the table to return to nearly horizontal (-5°) or Trendelenburg (head down) positioning. The emergency stop position can be selected and/or adjusted by using the adjustment switch which is located on the control box. The control box for the EP HUT™ Table is mounted to the underside of the bed surface.

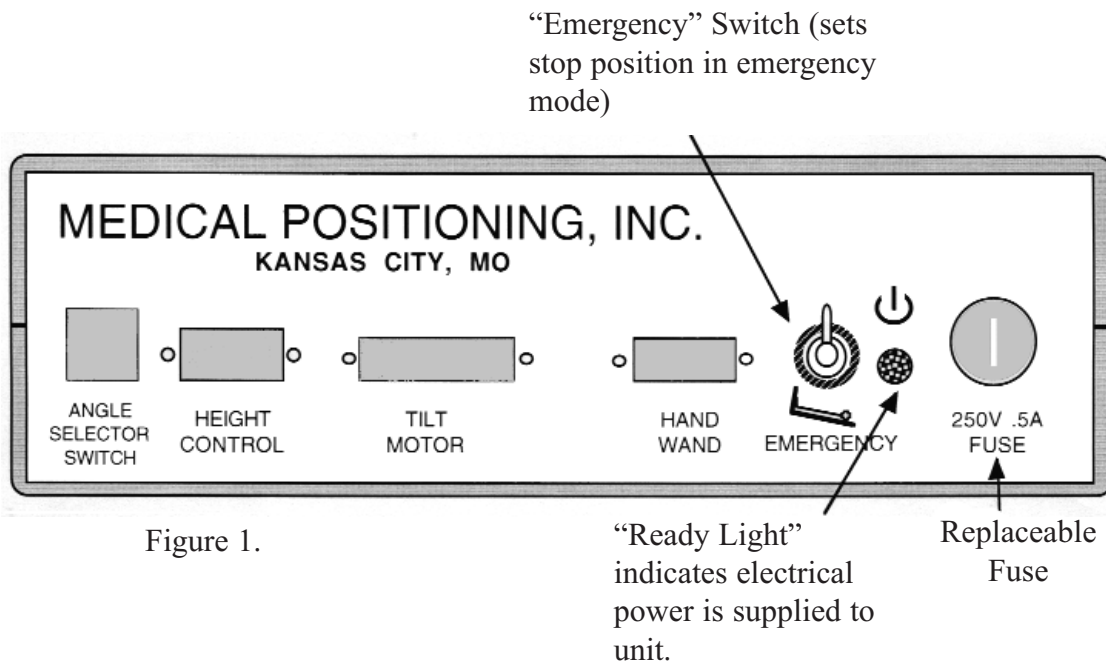


Figure 1.

### Selecting The Stopping Position When “Emergency Down” Is Used (See Figure 1.)

- | Step | Action  |
|------|---|
| 1.   | Disconnect (unplug) the electrical service to the bed.  |
| 2.   | Wait a couple of seconds after the power has been turned off until the “Ready Light” goes out.  |
| 3.   | Place the “Emergency” switch in the desired position. <u>Up</u> will cause the bed stop at the 5° Head Down position. <u>Down</u> will cause the bed stop at the 15° head-down or “Trendelenburg” position. |
| 4.   | Reconnect the electrical power.   |
| 5.   | Observe the “Ready Light” is on to confirm power is established.  |

---

## Tilt Angle Control Procedure - EP HUT™ Table

The Tilt Angle Control is connected to the control console.

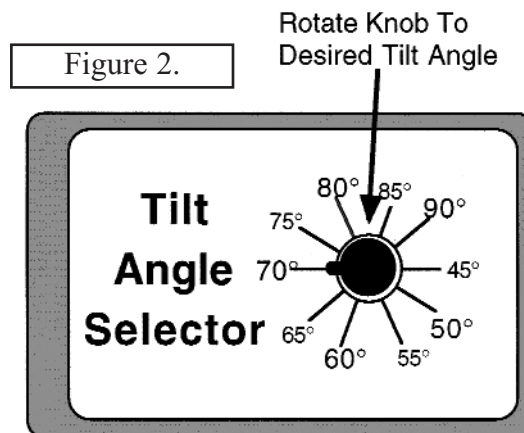
The degree of tilt that is selected on the **TILT ANGLE CONTROL** is the angle at which the bed will automatically stop when the head up button is held down. (See Figure 2.)

To reposition the bed to a greater degree of tilt angle:

<u>Step</u>	<u>Action</u>
1	Using the <b>TILT ANGLE CONTROL</b> , set the desired angle
2	<i>Press and hold</i> the <b>HEAD UP</b> button and allow the bed to stop automatically at the preselected degree of angle.

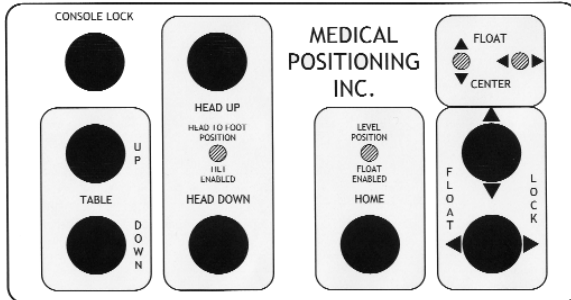
To reposition the bed to a lesser degree of tilt angle:

<u>Step</u>	<u>Action</u>
1	Using the <b>TILT ANGLE CONTROL</b> , set the desired angle
2	<i>Press and hold</i> the <b>HEAD DOWN</b> button until the head of the bed is lower than the new desired angle.
3	<i>Press and hold</i> the <b>HEAD UP</b> button and allow the bed to stop automatically at the preselected degree of angle.



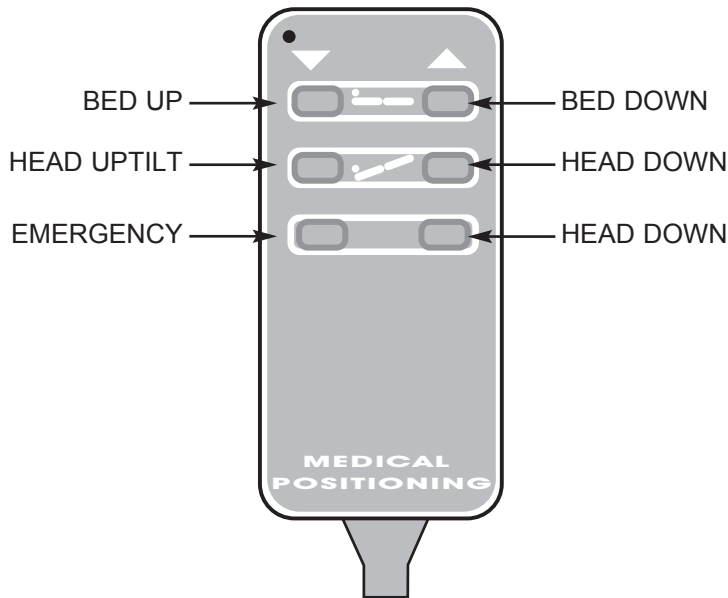
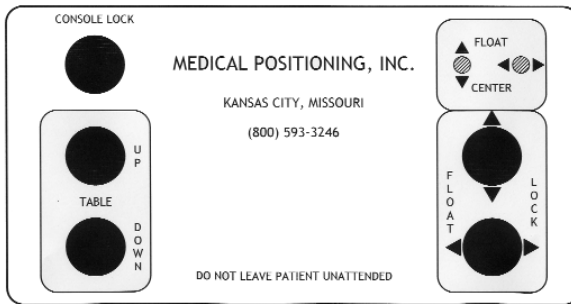
# Table Operation

EP HUT™ Tables that have 2 or 4 way float options are operated through a control console, hand wand or both depending on the functions the table can perform. Please identify the operational device(s) your table is equipped with.



## CONTROL CONSOLE

For tables with height adjustability, trendelenburg, reverse trendelenburg, head-up tilt and 4 way float- **ONLY**

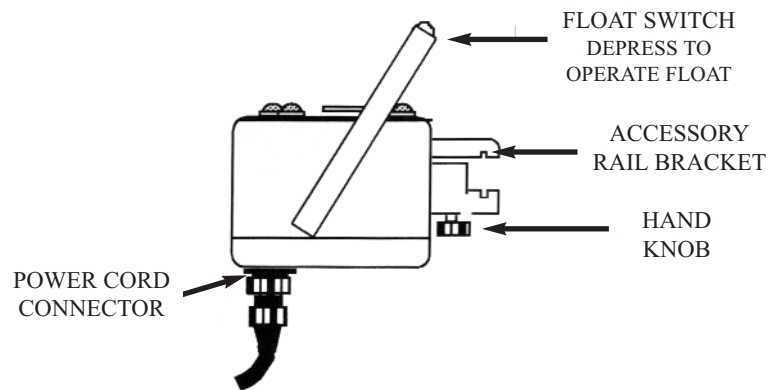


## HAND WAND

Showing all available EP HUT™ Table hand wand functions

---

## Table Operation (continued)



### **CONTROL CONSOLE MOUNTING, REMOVAL AND REPOSITIONING**

The CONTROL CONSOLE attaches to the Accessory Rail of the table. To install or remove the CONSOLE, loosen the HAND KNOB sufficiently for the ACCESSORY RAIL BRACKET to open wide enough to fit over the accessory rail of the table, being certain the accessory rail fits into the notch of the upper section of the ACCESSORY RAIL BRACKET. Tighten the HAND KNOB securely.

---

## Control Console Functions

### Table Height Adjustment

**Note: Models having both a control console and handwand, the height adjustment can be operated from the Control Console or the Hand Wand.**

To raise table: Press and hold the TABLE UP button until the desired height is achieved.

To lower table: Press and hold the TABLE DOWN button until the desired height is achieved.

### Float Lock

To lock-out X-axis (head to foot) movement: Press and release the X-Axis Lock button. The LED will illuminate, indicating it is locked and the table top can not be moved in that axis. Pressing the X-Axis button again will disengage the lock-out.

To lock out Y-axis (side to side) movement: Press and release the Y-Axis Lock button. The LED will illuminate, indicating it is locked and the table top can not be moved in that axis. Pressing the Y-Axis button again will disengage the lock-out.

### Float

To float table top: Depress and hold the Float lock button. Float the table top to the desired position and release Float lock button.

## **Control Console (for tables with height adjustability, trendelenburg, reverse trendelenburg, head-up tilt and 4 way float- *ONLY*) (continued)**

### **Float Center**

Engage the X-axis lock-out, as previously described. Using the Float Lock Button, slowly float the table top in the Y-axis until the FLOAT CENTERED LED for the Y-axis illuminates. Release the Float Lock Button, UNLOCK the X-axis lock-out and engage the Y-axis lock-out. Using the Float lock button, slowly float the table in the X-axis until the FLOAT CENTERED LED for the X-axis illuminates. Release the Float lock button. Disengage the X-axis lock-out. The float mechanisms are now centered, allowing movement in all directions.

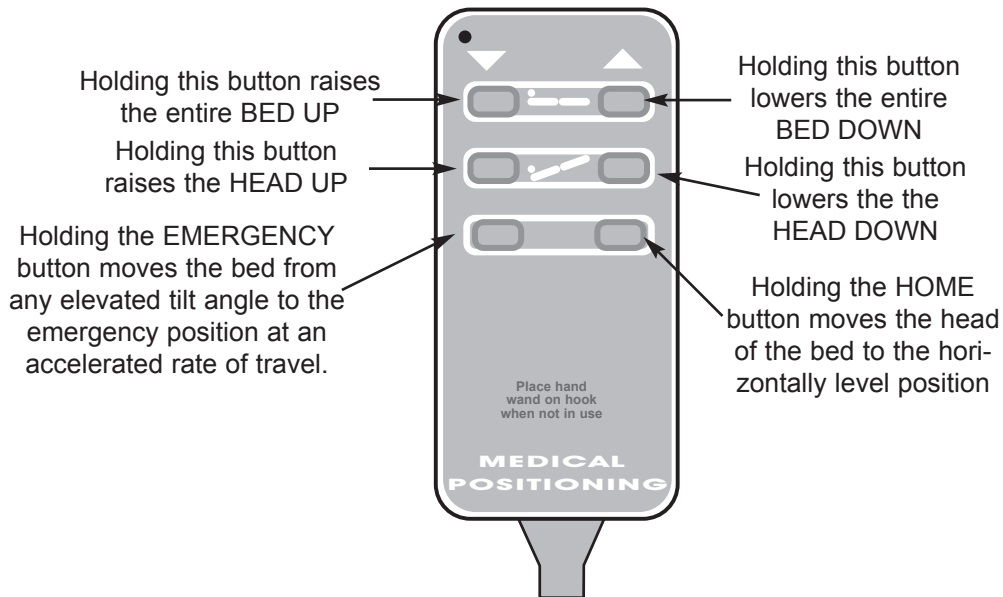
### **Tilt Enable/Disable**

(mechanically locks X-Axis (From head to foot) float mechanism)

**To Enable:** Using the Float lock button float the table top while watching the TILT ENABLED LED. Release the Float lock button when the TILT ENABLE LED stays illuminated. You can now use the Trendelenburg, Reverse Trendelenburg, Head Up Tilt, Home and Emergency Handwand functions.

**To Disable:** Press and hold the HOME button. Continue holding the HOME button until the table stops moving . It will be at the “horizontally level” position and the TABLE LEVEL LED will be illuminated. Using the Float lock button float the table top to any desired position.

## Hand Wand Procedure - EP HUT™ Table



### MOMENTARY BUTTON

(Hold down to accomplish desired movement) Pressing any of the buttons will cause the bed to respond for as long as the button remains depressed. Releasing will cause the bed to stop.

#### These Buttons Result in this Action

<b>HEAD UP</b>	Begins program to raise the head of the bed to the head up angle selected on the <b>Tilt Angle Control</b> .
<b>HEAD DOWN</b>	Begins program to lower the head of the bed.
<b>BED UP</b>	Begins program to raise the entire bed.
<b>BED DOWN</b>	Begins program to lower the entire bed.
<b>HOME</b> (Green Button)	Begins program to return the bed to horizontal, from any position at standard speed.
<b>EMERGENCY</b> (Red Button)	Moves the head of the bed from any <u>elevated</u> position to the pre selected emergency position at an accelerated rate of speed. <b>Pressing this button any time the bed is stopped will activate the emergency program. Releasing will cause the bed to stop.</b>

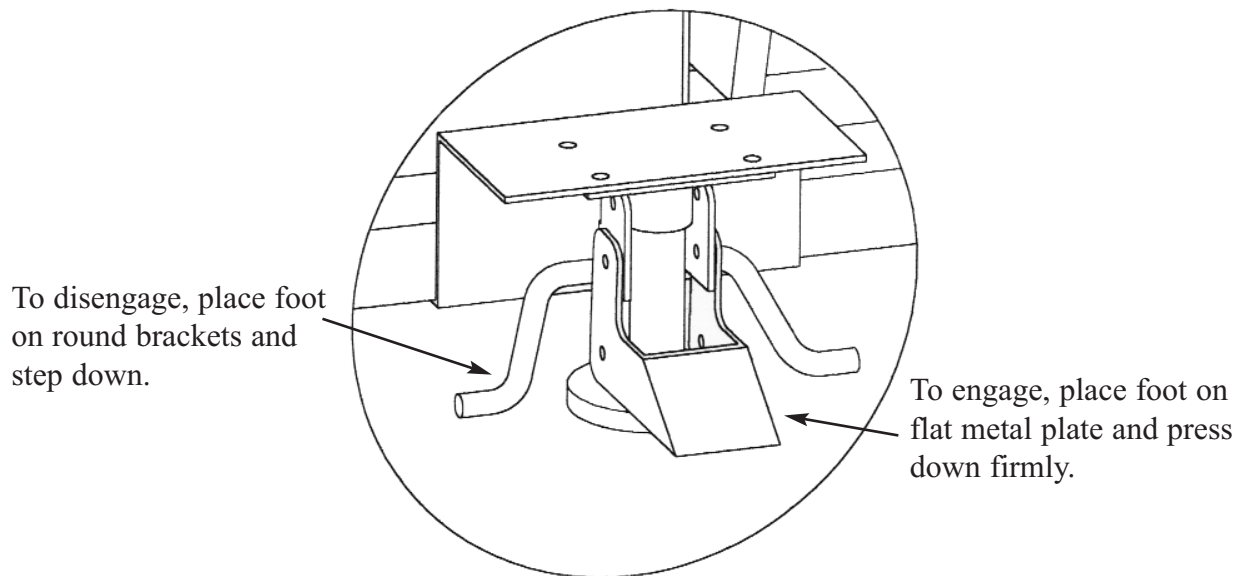
# Floor Lock Use

---

## Floor Lock Operation (when applicable)

The manual floor lock mechanisms are located at the head and foot ends of the base frame and are operated independently of each other.

<u>Step</u>	<u>Action</u>
1	When positioned, engage by placing your foot on the flat metal plate in the center of the pivotal mechanism and step down firmly.
2	To disengage, place your foot on either of the round brackets projecting from the sides of the center, flat plate and step down.



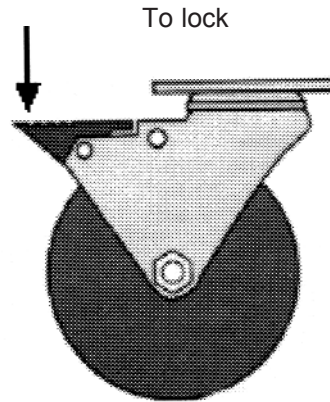
# Caster Use (when applicable)

---

## Procedure

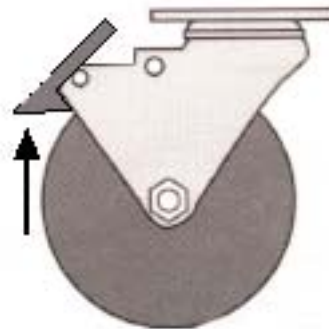
The casters included on your EP HUT™Table (model 60170) are total locking casters. When in the locked position, the caster is prevented from both rolling and swiveling. **Before beginning any procedure involving a patient, be sure the casters are in the locked position.**

- | <u>Step</u> | <u>Action</u>  |
|-------------|--|
| 1           | To lock the caster, step down on the outermost edge of the locking tab located at the top of the caster wheel. |



- |   |  |
|---|--|
| 2 | To unlock the caster lift up on the outermost edge of the tab. |
|---|--|

To release



# Cleaning Instructions

Please note that 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.

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

<u>Step</u>	<u>Action</u>
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 wet cloth after applying cleaners and disinfectant to remove excess residue build-up.

**ALWAYS READ MANUFACTURERS INSTRUCTIONS AND WARNINGS BEFORE USING ANY CLEANING PRODUCT OR DISINFECTANT.**

**The mattress and straps can be cleaned in one of the following ways:**

<u>Step</u>	<u>Action</u>
1	When caught quickly, most everyday stains like grease, blood and black felt tip pens can be wiped right off. Use mild soap and water. For more stubborn stains, a variety of concentrated and solvent type cleansers (including alcohol, naphtha and bleach) may be used without damaging the surface. (Abrasive household cleaners and steel wool should be avoided - see the guide for complete care and cleaning procedures.)
2	Everyday soil can usually be removed using a soft cloth or sponge with mild soap and water. Spills and accidents require immediate attention for best results. In many cases, stains may be cleaned simply with warm water alone. If the stain is allowed to set, more concentrated cleaners may be required.

---

## Cleaning Instructions (cont.)

**The following guide covers many of the most common staining agents. During independent laboratory testing, many were allowed to stand for up to 40 hours with excellent cleaning results.**

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 (Lysol™) should be wiped from the surface with a wet cloth after use. Residue from these products **will** damage vinyl surfaces.

<u>Step</u>	<u>Action</u>
1	Remove excess spill with damp cloth. Clean with 1:1 mix of Ivory™ soap and water. Rinse with clean water and dry.
2	Use straight application of concentrated cleaners such as Formula 409™ or Fantastik™ Spray Cleaner. Then wipe with clean cloth.
3	Use a 1:1 mix of ammonia and water or a 1:4 mix of bleach and water. Rinse with clean water and dry.
4	Use straight application of naphtha (lighter fluid). Rinse thoroughly with clean water and pat surface dry. (see note below)
5	Use 1:1 mix of isopropyl alcohol and water. If stain persists, use straight alcohol. Rinse thoroughly with clean water pat surface dry. If stains remain, use a 1:1 mix of acetone and water. Rinse with clean water and pat surface dry. (see note below)

Note: For cleaning that requires steps 4 or 5 - use a soft cotton cloth saturated with the cleaning material, rub the stain in circles 10 times. Pat dry with another soft cotton cloth and check results.

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

Formula 409™ is a trademark of the Clorox™ Company.

Fantastik™ Spray Cleaner is a trademark of the Texize Division of Dow Consumer Products, Inc.

Ivory™ is a trademark of Procter and Gamble.

Lysol™ is a trademark of Reckitt & Colman Inc.

# Troubleshooting Guide

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 EP™HUT Table, please contact Medical Positioning Incorporated at 1-800-593-3246. Please have the following information ready when you call:

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

Symptom	Probable Cause	Suggestion
No Actuator Function. Actuator(s) Not Running.	Power cord not plugged all the way in 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.
	Hand wand or control console not properly connected.	Securely press connecting cable(s) into receptacle(s).
	Circuit breaker is tripped (If Equipped)	Reset circuit breaker (small black button on side of base) by pressing in.
	Control Box Fuse Blown (If Equipped)	Observe green “Ready Light” on control box cover (Fig 1) If all above suggestions are tested and light is not illuminated, replace fuse.

# Parts List

TABLE BASE  
EP HUT w/ FLOAT TILT MECHANISM  
CARBON FIBER TOP  
FLUOROSCOPIC TOP PAD  
PATIENT RESTRAINT STRAPS  
CONTROL CONSOLE  
A/V EP CONTROL BOX  
ANGLE SELECTOR SWITCH  
HANDWAND

FRONT BASE SHROUD  
BACK LOWER SECTION COLUMN SHROUD  
FRONT LOWER SECTION COLUMN SHROUD  
FRONT MIDDLE SECTION COLUMN SHROUD  
BACK MIDDLE SECTION COLUMN SHROUD  
TOP COLUMN SHROUD  
LEFT UPPER SECTION COLUMN SHROUD  
BACK LEFT UPPER SECTION COLUMN SHROUD  
TILT MOTOR DRIVER PLATE SHROUD  
RIGHT UPPER SECTION COLUMN SHROUD  
BACK RIGHT UPPER SECTION COLUMN SHROUD  
FRONT UPPER SECTION COLUMN SHROUD  
LEFT SIDE RAIL SHROUD  
RIGHT SIDE RAIL SHROUD  
BACK SHROUD BRACKET  
FRONT SHROUD BRACKET  
FLOAT MECHANISM BACK COVER

HEIGHT COLUMN  
COLUMN CONTROL BOX  
SERVO MOTOR  
SERVO CONTROL  
GEAR BOX  
HARMONIC DRIVE

MOTOR POWER CABLE  
MOTOR FEEDBACK CABLE  
REGEN RESISTOR  
FLOAT/BRAKE CONTROL BOX  
CONSOLE CABLE  
FLOAT BRAKE CABLE  
MODIFIED POWER CABLE  
FLOOR BRAKE POWER SUPPLY

FLOOR BRAKE ACTUATORS  
REAR FLOOR BRAKE CABLE  
FRONT FLOOR BRAKE CABLE  
FLOOR BRAKE PIVOT ARMS

CASTER, FRONT  
CASTER, BACK

BALLAST BLOCK

GAS SPRING  
BALL SOCKET FOR GAS SPRING  
SAFETY CLIP FOR BALL SOCKET  
BALL MOUNTING BRACKET (FLAT)  
BALL MOUNTING BRACKET (90°)



## EP HUT™ Tables

**Lifetime - Structural Components**  
**1 Year - Electrical, Mechanical, Carbon Fiber & Vinyl Fabric**

This product is fully guaranteed against defects in material or workmanship, for the period indicated above commencing with receipt by the original end user. If a product fails due to a manufacturing defect, we will repair or authorize repairs to the product without charge or replace it at our option.

We use only the finest materials available, but even these premium quality materials will not last forever. Repairs due to normal wear, accident, improper care, or negligence, where we are not at fault, will be performed for a reasonable charge. The warranty does not apply if the product has been modified without the advance written permission of Medical Positioning or purchased in the USA for export.

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

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

Product shall not be returned to Medical Positioning, Inc. without prior written authorization from Medical Positioning, Inc. If a product is returned without prior authorization, customer is responsible for all shipping charges and any applicable duties and/or taxes. When a repair is made on site, (solely) at the request of the customer, the customer is responsible for all travel costs.

### **Medical Positioning Incorporated**

1717 Washington  
Kansas City, Missouri 64108  
(816) 474-1555  
800-593-3246  
FAX (816) 474-7755

U.S. Patents # 5,184,363  
# 5,461,739  
# 6,353,949  
Des. Patent # 347,691  
Other Patents Pending

WARR1098

# EP HUT™ Table

## Specifications for Model 60170



### FEATURES

#### Rapid Response

- 5 seconds 70° to -15° Trendelenburg emergency positioning
- 18° per second emergency positioning
- Separate home and emergency controls
- “One button” return to level
- “One button” emergency positioning
- Programmable tilt angle, 5° increments
- Two memory emergency positioning stop points

#### HUT Table

- Fully adjustable 3 belt patient restraint system
- Head up tilt - electrically adjustable to 90°
- Trendelenburg - electrically adjustable 0° - 20°
- Normal tilt rate of 6° degrees per second
- Height - electrically adjustable 32” - 42”
- Safe, slip resistant foot platform
- Motors controlled by a sealed, water resistant, low voltage, control wand with self-retracting, coiled power cord

#### Imaging Surface

- Carbon fiber construction
- 53” of edge to edge imaging area
- Attenuation .57 mm Al. equivalent
- Low attenuation
- Shaped top
- Beveled edge
- 2” low attenuation mattress pad

#### Base

- Short c-arm accessible base
- Base enclosed by stainless steel shroud
- 5 Inch, 2-way locking casters

### SPECIFICATIONS

LENGTH	83"
WIDTH	22"
WEIGHT	950 lbs.
LOAD CAP.	500 lbs. distributed load
MATTRESS	Attenuation equivalent to .13mm Al
ELECTRICAL	120VAC / 7.0amp/60Hz; leakage current of < 100µamps, UL 544 & CSA Listed

### ONE YEAR WARRANTY



### OPTIONS

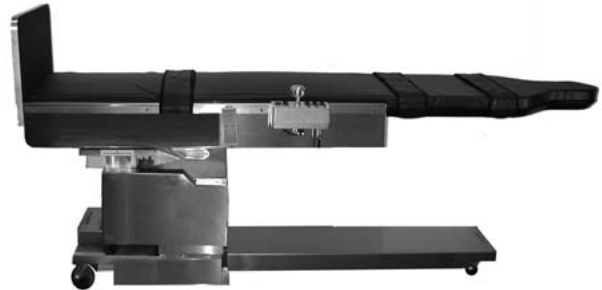
- Carbon fiber articulating arm boards and pads

# EP HUT™ Table

## Specifications for Model 60520

**Model #**

60520 - 4 way Float, Height Adjustable Table



### FEATURES

**4-Way Floating Top**

- 40" longitudinal travel
- 12" transverse travel
- Individual transverse and longitudinal locking controls
- Transverse panning in HUT or Trendelenburg

**Rapid Response**

- 5 seconds from 70° to -15° Trendelenburg emergency positioning
- 18° per second emergency positioning
- Separate home and emergency controls
- "One button" return to level
- "One button" emergency positioning
- Programmable tilt angle, 5° increments
- Two memory emergency positioning stop points

**Imaging Surface**

- 550 lb patient capacity (4 to 1 safety factor)
- 82" of total imaging area
- 40" of edge to edge imaging area
- Attenuation .57 mm Al. equivalent
- Cervical access shaped top
- Beveled edge
- 2" low attenuation mattress pad

**HUT Table**

- Fully adjustable 3 belt patient restraint system
- Head up tilt- electrically adjustable to 90°
- Trendelenburg -electrically adjustable 0° - 20°
- Normal tilt rate of 6° degrees per second
- Height - electrically adjustable 32"-44"
- Safe, slip resistant foot platform
- Motor controlled by low voltage, hand wand with self-retracting, coiled power cord
- Stainless steel accessory rail

**Base**

- C-arm accessible base
- Ergonomic/narrow base
- Base enclosed by stainless steel shroud
- 3 inch front casters, 5 inch rear casters

**Options**

- Carbon fiber articulating arm boards and pads
- Extended carbon fiber accessory rails

### SPECIFICATIONS

LENGTH	94"
WIDTH	22" at imaging area, 27 total "
WEIGHT	1250 lbs.
LOAD CAP.	550 lbs. distributed load
MATTRESS	Attenuation equivalent to .13mm Al
ELECTRICAL	120VAC / 7.0amp/60 Hz; leakage current of < 100µamps

## ONE YEAR WARRANTY

US Patents 6,353,949 B1; 5,950,262; 5,919,131; 347,691; 5,184,363; 5,461,739; 6,367,104 B1: additional patents pending  
 International Patents 195 81 706; 2,304,568

MPSS1204

MEDICAL POSITIONING

