

RAIZE

from Hosmer



**PRODUCT
MANUAL**

Fillauer
COMPANIES

CONTENTS

| | |
|--|----|
| Functions of the Raize Ankle Foot System | 4 |
| Indications | 4 |
| Contraindications | 4 |
| Safety Precautions | 5 |
| Technical Specifications | 6 |
| System Components | 7 |
| Foot Shell Installation | 9 |
| Setup and Installation | 10 |
| Connect to the Raize. | 11 |
| Troubleshooting for the Bluetooth/USB connection | 12 |
| Control Mode Adjustment for Key Fob and CPU Pod | 19 |
| Battery Charging. | 21 |
| Service Intervals | 22 |
| Replacing The Key Fob. | 22 |
| Maintenance and Care | 23 |
| Database Backup and Restore. | 24 |
| Frequently Asked Questions. | 26 |

FUNCTIONS OF THE RAIZE ANKLE FOOT SYSTEM

The Raize is a unique microprocessor ankle and foot system in a low profile, lightweight design. Its plantar flexion and dorsiflexion range reduces damaging forces on the residual limb and greatly enhances stability on slopes and slippery surfaces. By simply pressing a button the wearer can control rollover resistance, lock or unlock the ankle, and adjust the heel height as needed.

FEATURES & BENEFITS

- Microprocessor controlled hydraulic ankle and composite foot system
- Adjustable heel height and lock via control pod or remote fob
- Adjustable plantar flexion and dorsiflexion range and resistance simulates natural ankle movement and reduces shock
- Remote ankle lock for driving and donning shoes and socks
- Intuitive computer interface

INDICATIONS

- Patients who can benefit from reduced shear force on the residual limb as provided by hydraulic/microprocessor control of the ankle and accommodation of various terrain
- Patients who can benefit from an adjustable dorsiflexion stop which allows proper alignment for various heel heights
- K3 activity level patients
- Patients with the ability to understand and comply with basic microprocessor controlled device instructions and daily battery charging functions similar to a wireless phone or computer

CONTRAINDICATIONS

- Patient with component build height requirements less than 3.75 in.
- Patients weighing more than 220 lbs.
- Patients engaging in K4 activity level, high impact activities

- Patients working in or exposed to conditions that would subject the Raize Foot Ankle System consistently to water, dust, grit, or strong electrical fields (as described in the technical specification section).

NOTE: As of present the Raize Foot Ankle System is not intended for patients with hip disarticulations and may not be compatible with microprocessor knees..

SAFETY PRECAUTIONS

Just like your wireless phone, the Raize Foot Ankle System has sensitive electronic components. You must be careful not to expose the Raize foot and its components to:

- Water
- Strong electrical fields
- Dusty and dirty environments
- High impact activities such as running, jumping, and kicking
- Intense vibration

CAUTIONS

- The Raize is controlled by sensors that detect movement and position of the foot which open and close the hydraulic valve allowing the ankle to move. It is very important for the wearer to become familiar with movements other than normal walking that will cause the Raize to lock and unlock.
- **Put the Raize Foot Ankle/Foot in Lock mode for driving.**
- Low battery charge below 10% will cause the Raize to switch to a preset resistance or completely lock depending on how this mode is set in the graphical user interface. The ankle will warn the user by vibrating and flashing the LEDs on the CPU pod. In safe mode, the automatic functions are disabled.
- All fittings and adjustments should be done with the end user seated or in a supported standing position.
- Discontinue use of the foot if a loss of resistance is detected and contact Hosmer.
- When adjusting the ankle make small incremental changes. Large changes can result in unpredictable performance and create a fall hazard.
- Impacts to the battery case, CPU Pod, and foot are to be avoided and can result in damage or abnormal function.
- All plugs, covers, and cables should be checked daily to ensure that they are secured. Failure to do so may cause a malfunction. If damage is observed to covers, cables, or plugs, discontinue use and call your prosthetist.

- Charge the battery with the supplied charger or a replacement supplied by Hosmer. Use of unapproved chargers may damage the battery, render it useless, or create a fire hazard.
- Lithium-ion batteries contain hazardous materials. Do not incinerate. Do not dispose of in commercial or residential garbage. Please recycle.
- As with all electrical devices, do not use the Raize where a high concentration of flammable gas is present.

TECHNICAL SPECIFICATIONS

NORTH AMERICA AND INTERNATIONAL (EXCLUDING EUROPE)

Hosmer Dorrance Corp.
561 Division Street
Campbell, CA 95008
(800) 827-0070

EUROPE

Centri
Box 760, Kung Hans Väg 2
192 68 Sollentuna, Sweden
Phone: +46 8 505 332 00

PHYSICAL PROPERTIES (WEIGHT, BUILD HEIGHT, AND RANGE OF MOTION)

Frame construction: Titanium, steel, and aluminum
Patient weight: 220 lbs. (100 kg) (pending)
Foot weight: 1.62 lbs. (735 g) to 1.76 lbs. (797 g) less foot shell*
Build height: 3.50 in. to 3.75 in.*

* Depending on foot size

BATTERY SPECS (VOLTAGE, CAPACITY, TYPE, AND CHARGE TIME)

Rechargeable lithium-ion battery (2200 mAh)
Nominal output voltage: 7.4 V
Charge voltage: 8.4 V
Charging time: 4 hours at 90% discharge

BATTERY CHARGER SPECS (VOLTAGE, CAPACITY, TYPE, CHARGE TIME)

Input voltage: 100–240 VAC

Input current: 0.1 A

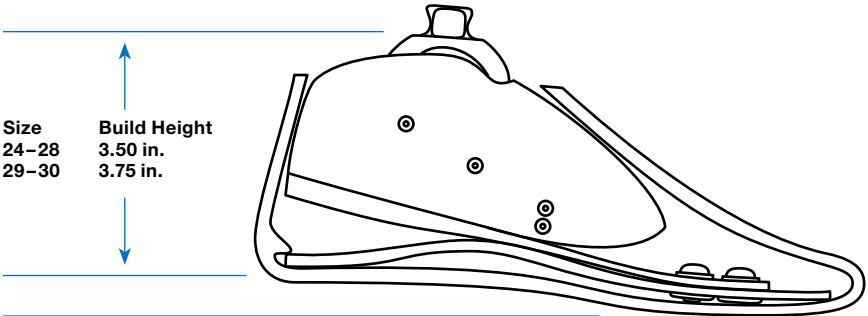
Input frequency: 50–60 Hz

Output current: 0.5 A

Input connector: Standard type A

Output connector: 5.5 mm x 2.5 mm x 8.0 mm male barrel plug

Output voltage: 8.4 V



Heel Height Adjustment
Dorsiflexion up to 10 degrees
Plantar flexion up to 18 degrees

| Size | Max Heel |
|-------|------------------|
| 24–26 | 1.75 in. (44 mm) |
| 27–28 | 2.00 in. (51 mm) |
| 29–30 | 2.25 in. (57 mm) |

SYSTEM COMPONENTS

RAIZE FOOT ANKLE SYSTEM / PART NUMBERS BY FOOT SIZE

Kit includes: Ankle/Foot, Software, Control Unit, Remote Fob, Battery, Charger, USB Cable, and Spectra Sock.

| | | 24 cm | 25 cm | 26 cm | 27 cm | 28 cm | 29 cm | 30 cm |
|--------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| 100–130 lbs. | 45–59 kg | 62869 | 62872 | 62876 | 62880 | 62884 | 62917 | * |
| 131–160 lbs. | 60–72 kg | 62870 | 62873 | 62877 | 62881 | 62885 | 62918 | 62921 |
| 161–190 lbs. | 73–86 kg | 62871 | 62874 | 62878 | 62882 | 62886 | 62919 | 62922 |
| 191–220 lbs. | 87–100 kg | * | 62875 | 62879 | 62883 | 62916 | 62920 | 62923 |

* Contact your distributor for recommendations.

MCV FOOT SHELL

XX XX 13 CC 3 Micro Coated Vinyl Foot Shell

Example: 45 24 13 13 3 = Left, Size 24, Color 13

To order, select the side (left or right) and foot length (24–30 cm) from the chart below. Then, choose the color (CC 03, 09, or 13).

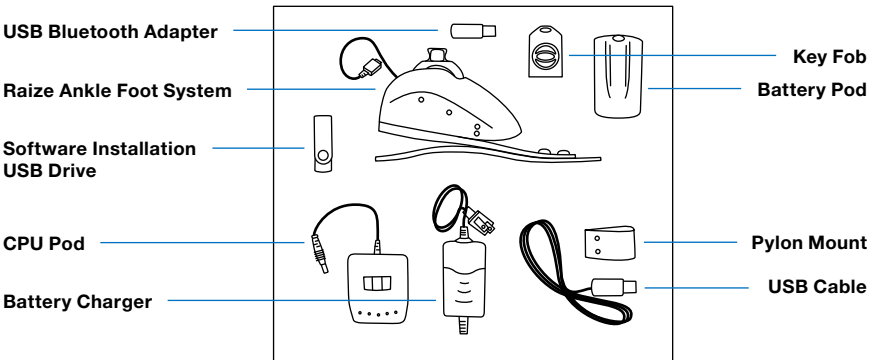
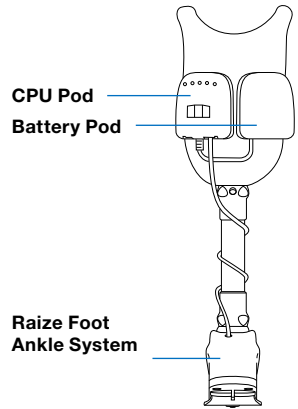
| | 24 cm | 25 cm | 26 cm | 27 cm | 28 cm | 29 cm | 30 cm |
|-------|-------|-------|-------|-------|-------|-------|-------|
| Left | 45 24 | 45 25 | 45 26 | 45 27 | 45 28 | 45 29 | 45 30 |
| Right | 46 24 | 46 25 | 46 26 | 46 27 | 46 28 | 46 29 | 46 30 |

Custom colors are available as a special order with three weeks lead time. Please contact Fillauer Customer Service for more details.



ACCESSORIES

- 62897 CPU Pod
- 62898 Battery Pod
- 63005 Pylon Mount
- 62899 Software Installation USB Drive
- 62900 Instructions
- 62901 Quick Start Guide
- 62889 Lamination Dummy, CPU Pod
- 62902 Lamination Dummy, Battery Pod
- 62986 Battery Charger
- 62903 Sock
- 100-40-2030 Heel Wedge
- 62904 Key Fob
- 62905 USB Cable
- 62989 USB Bluetooth® 4.0 Adapter



FOOT SHELL INSTALLATION

HEEL WEDGE INSTALLATION

The heel stiffness and heel deflection of the Raize foot are affected by alignment and the position of the heel wedge. To install the heel wedge, slide the wedge into the split in the lower foot plate so that the thin side is under the heel and the thicker rounded side is on top of the lower foot plate. Some rubbing alcohol or talc will help the wedge slide into position. Slide it forward so the front edge of the wedge is in contact with the upper spring element and lower foot plate creating a bumper between the two. This is the initial position for the wedge during setup and alignment. Secure the wedge temporarily by placing the black rubber band just behind the wedge or by wrapping some electrical tape around the heel just behind the wedge to keep it from sliding back.

FOOT SHELL INSTALLATION AND REMOVAL

The Raize foot system has a unique foot shell that is flexible, durable, and cosmetically appealing. Using care in the installation and removal process will allow it to maintain its integrity.

NOTE: Never use a sharp tool such as a screwdriver to install or remove the foot shell.

INSTALL

- Pull the Spectra Sock firmly over the foot.
- Initially insert forefoot into the shell as far as possible.
- Rotate the foot side to side to allow the foot shell to slide onto the heel.
- Push the foot shell up onto the heel, using a shoehorn if necessary, allowing the heel to slide under the locking wedge.
- Make sure the foot plate is securely under the heel lock; if not, the foot may come out of the foot shell.

REMOVE

- Place the foot so that the heel is hanging over the bench.
- Apply a downward force to the shell at the heel to dislodge the foot plate. If it does not dislodge, try slightly rotating a shoehorn around the heel should also dislodge the foot plate.

NOTE: Delicate electronics below ankle cover; handle with care and do not pry!

SETUP AND INSTALLATION

INITIAL ALIGNMENT

- Standard prosthetic bench alignment techniques are used for initial setup of the Raize foot.
- In the sagittal plane the interface bisection line should bisect the proximal pyramid adapter.
- In the frontal plane the interface bisection line should bisect the proximal pyramid adapter.
- As with other feet, the top of the proximal pyramid should be level at 0° plantar/dorsiflexion initially.

BILATERAL PATIENTS

When setting up a bilateral patient, it is recommended that you perform the setup procedure one leg at a time. This will allow the patient to walk on one Raize while continuing to wear the current prosthesis on the other side until you are both satisfied with the settings. The settings on this Raize will guide you on the setup on the other side, but in most cases the setting will need to be fine tuned on both sides for optimal function.

INITIAL SETUP

- Using the supplied charger, fully charge the battery before the patient arrives for initial fitting and setup.
- The red indicator light will turn green when charging is complete.
- Secure the battery pod and CPU pod to the prosthesis.
- Connect the cable from the Raize foot to the CPU pod. The cable is keyed, but has a mark on the connector for alignment. The arrow on the connector should be installed into the case with the lights and buttons showing.
- Connect the power cable from the CPU pod to the battery pod.


NOTE: The USB connection will not supply power to the unit or charge the battery.

SOFTWARE INSTALLATION

- Install the Raize software onto a Windows based PC.
- See the instructions included with the software for proper installation.

IMPORTANT: The Raize software must be installed on the computer first before you connect the ankle.


CONNECT TO THE RAIZE

The Raize software can connect to the foot using either USB or Bluetooth, but only one method can be used at the same time. If no devices are detected, a crossed out USB symbol  will be displayed on the software program. The software program features will be identical when connecting with USB or Bluetooth. Using Bluetooth allows the Prosthetist to set up the Raize foot on the patient without being bound to a computer.


SOFTWARE CONNECTION PROCEDURE

- Start the computer program.
- Connect the CPU pod to the foot and connect the battery to the CPU Pod. The unit should beep twice and all LEDs should turn off.

USB CABLE CONNECTION OPTION

- Using the supplied USB cable, connect the CPU pod to your computer.
- Verify the USB symbol  is displayed.
- Click the connect button on the software program

BLUETOOTH CONNECTION OPTION

- Connect the USB Bluetooth adapter to your computer and verify green light flashes about once per second. If the flashing green light is not observed, disconnect the USB adapter and connect it to the computer again.
Note: If this is the first time connecting the device to your computer it may take a minute to install the driver.
- Verify the USB Bluetooth symbol  is displayed on the software program.
- To connect using Bluetooth, the foot must be in discovery mode. The foot is in discovery mode the first 30 seconds after the battery is connected or if the center button on the CPU pod is pressed and held for 3 seconds until the CPU pod beeps once.
- Click the connect button on the software program.



TROUBLESHOOTING FOR THE BLUETOOTH/USB CONNECTION

THE SOFTWARE PROGRAM WILL NOT CONNECT TO THE FOOT


Make sure the Bluetooth adapter is not connected if you are trying to connect to the foot using USB. Only one device at a time can be used.

Did the foot startup properly? The foot should beep twice and then all the LEDs should turn off. If this did not happen, the foot will likely not connect to the GUI via USB or Bluetooth.

Is the USB cable connected (assumes the Bluetooth adapter is not connected)?

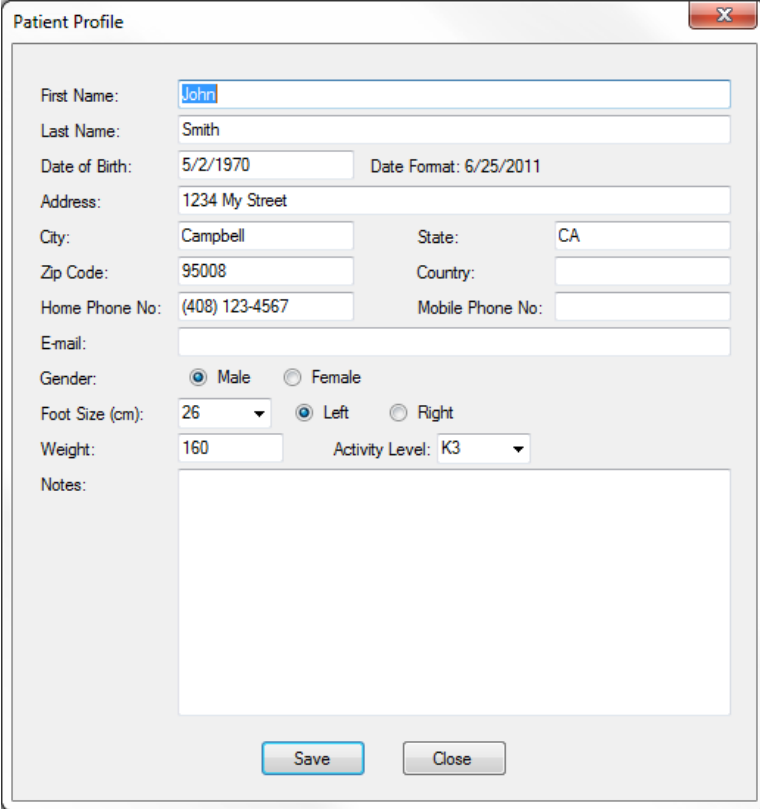
- If so can you see the USB symbol highlighted (no longer crossed out)?
- If the USB symbol is highlighted , then the foot should be able to connect to the computer.
- If the USB symbol is crossed out , it will not connect.

For Bluetooth (assumes that USB cable is not connected to the CPU Pod).

- Does the Raize foot have Bluetooth? Only feet that have Bluetooth enabled will be able to connect using Bluetooth. To verify this, check under Tools, Raize Information and check Bluetooth has been enabled.
- Is the Bluetooth adapter connected to the computer?
 - If so, is the Bluetooth symbol  displayed in the software program?
 - Check to see if the green light on the Bluetooth adapter flashes approximately once per second.
 - If the flashing green light is not observed, unplug the Bluetooth adapter and try plugging it back into the computer.
- Is the foot in discovery mode? There are two ways to put the foot into discovery mode.
 - Plugging the battery in, the foot will remain in discovery mode for 30 seconds.
 - If the battery has been plugged in for longer than 30 seconds, press and hold the center button on the CPU Pod for three second, the CPU Pod will beep once, and the foot will go back into discovery mode for 30 seconds.
- Once the foot is in discovery mode, press the connect button on the software program.

NEW PATIENT

If this is a new patient, go to **File** on the menu bar, then select **New Patient**, or on the toolbar select the **New Patient** button and fill in the following patient profile:

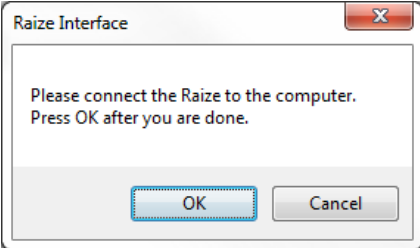


The image shows a 'Patient Profile' dialog box with the following fields and values:

| | | | |
|-----------------|--|---|-----------|
| First Name: | John | | |
| Last Name: | Smith | | |
| Date of Birth: | 5/2/1970 | Date Format: | 6/25/2011 |
| Address: | 1234 My Street | | |
| City: | Campbell | State: | CA |
| Zip Code: | 95008 | Country: | |
| Home Phone No.: | (408) 123-4567 | Mobile Phone No.: | |
| E-mail: | | | |
| Gender: | <input checked="" type="radio"/> Male <input type="radio"/> Female | | |
| Foot Size (cm): | 26 | <input checked="" type="radio"/> Left <input type="radio"/> Right | |
| Weight: | 160 | Activity Level: | K3 |
| Notes: | <div style="border: 1px solid gray; height: 100px;"></div> | | |

Buttons: Save, Close

Press **Continue** and the following message will appear:



The image shows a 'Raize Interface' dialog box with the following text:

Please connect the Raize to the computer.
Press OK after you are done.

Buttons: OK, Cancel

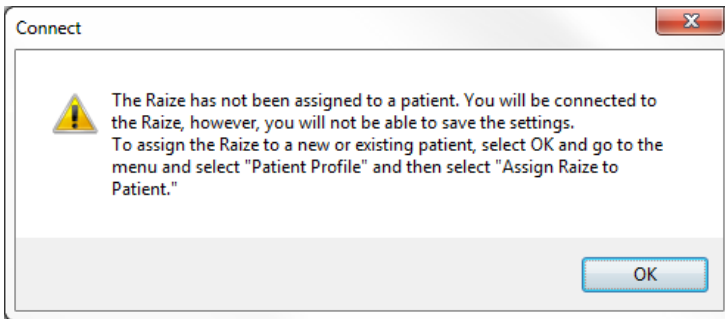
Follow the directions for attaching the ankle and press **Connect**. Go to **Software Adjustment**.

EXISTING PATIENT

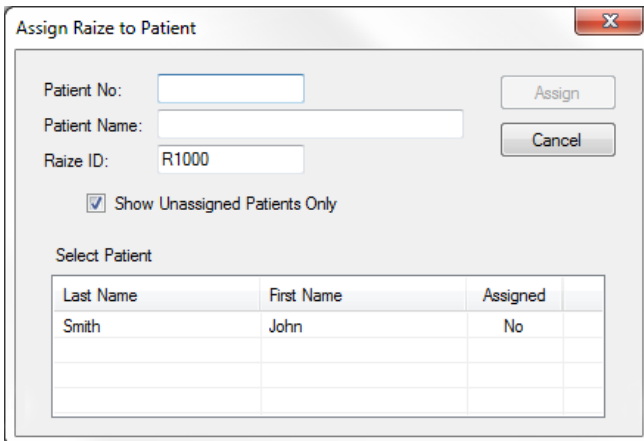
If it is a current Raize user, the program will automatically detect this and bring up the patient's existing information, providing that patient was previously set up on that computer. On the menu bar, go to **Tools**, then select **Connect**, or on the toolbar, select the **Connect** button. Once the connection is completed, go to **Software Adjustment**.

EXISTING PATIENT WITH REPLACEMENT ANKLE

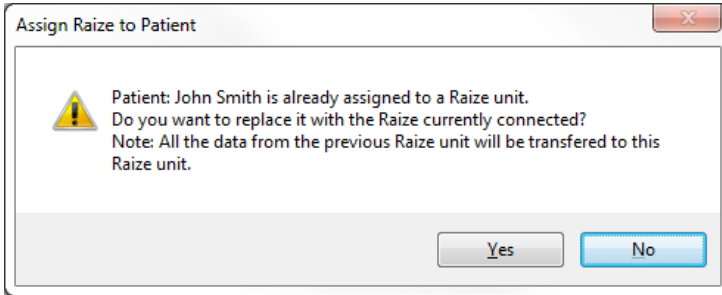
1. If the Raize foot is a replacement unit, connect the ankle to the computer. Start the Raize software. On the menu bar, go to **Tools** then select **Connect**; or on the toolbar, select the **Connect** button. You will see the following message:



2. Press **OK**. On the menu, go to **Patient Profile**, then select **Assign Ankle to Patient**:



- By default, only patients that have not been assigned an ankle will be shown on the list. Uncheck **Show Unassigned Patients Only**. This will display all the patients. Select the appropriate patient and press Assign. The following warning message will appear:

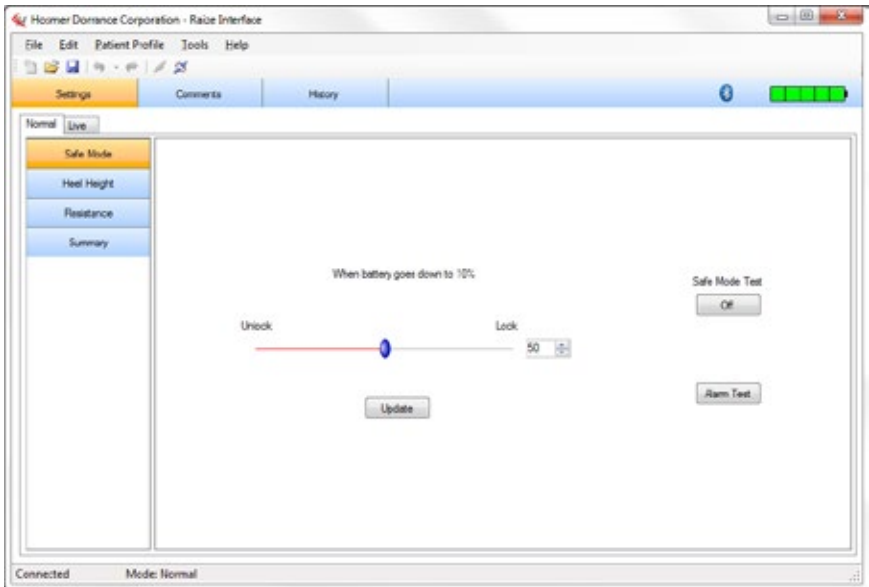


- Press **Yes** to continue. All Raize data history and the patient data will now be included with new ankle.

SOFTWARE ADJUSTMENT

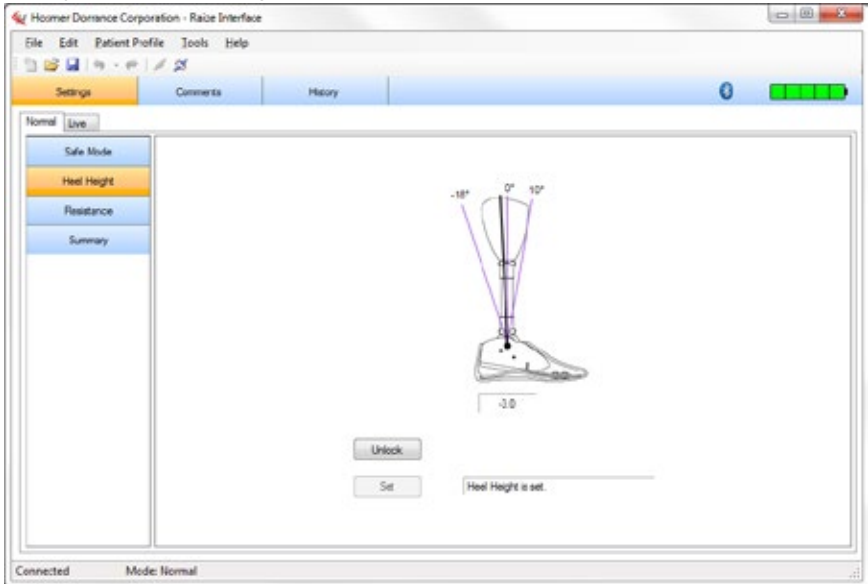
NOTE: During the initial setup, it is recommended that the patient utilize an auxiliary means of support such as parallel bars or assistive aids such as a walker or cane as a safety precaution.

- Begin with the safe mode screen. This screen is used to demonstrate the default settings for a low battery condition.



2. The **Safe Mode** tab sets the default resistance level for low battery conditions (approximately 10%) and allows demonstration of the warnings when this condition occurs. This means that if you set the default resistance at 45, then the hydraulics work at 45% of the hydraulic's maximum capacity. Set the safe mode button and walk the patient supported. Setting the resistance to "100" will lock the ankle when the battery is low. Repeat until the optimal setting is achieved. Click the **Update** button.

Next go to the **Heel Height** tab



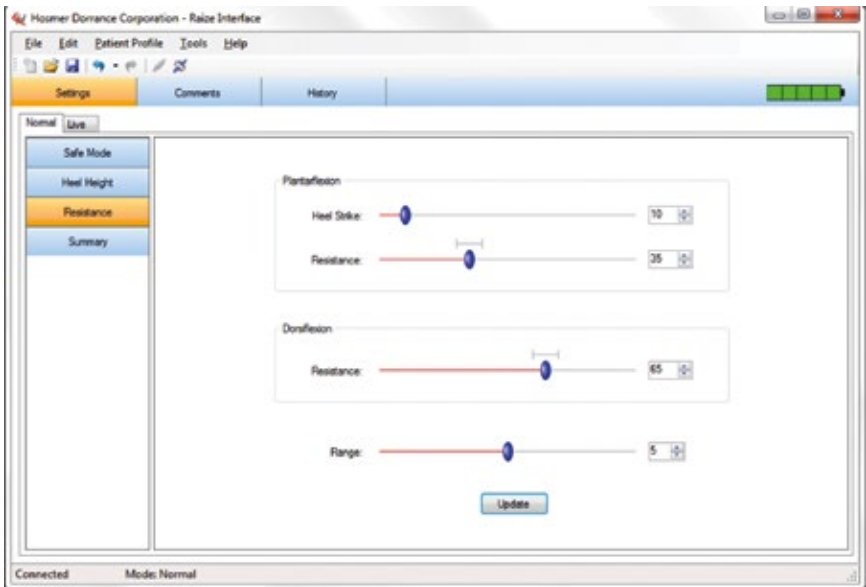
3. The patient should be wearing the shoes that they wear most often on both feet for this setup procedure. If the patient plans to use several different heel height shoes, you should select the shoes that have the average heel height for the initial heel height setup as described below. This is to maintain the maximum range of motion in the ankle for all heel heights.
4. For support during this procedure, ask the patient to hold onto the gait bars or walker for balance. Inform the patient that you are going to unlock the ankle and that it will be loose until the heel height is set.
5. Click on the **Unlock** button on the computer screen.
6. Bring the pylon to neutral (90 degrees to floor) as indicated by the computer screen by asking the patient to flex or extend their knee.
7. Click on the **Set** button when the pylon is neutral (0). This will set the Raize ankle at the center of its range of motion.
8. At this time, you may need to readjust the plantar flexion and dorsiflexion of the foot. Using the set screws on the lower pylon attachment, adjust the pylon so that it is at 90 degrees to the floor.

- Continuing in the heel height adjustment screen and ensuring the patient is holding onto parallel bars or other clinical walking support for balance, press the unlock button again. Have the patient move the pylon to approximately 3 degrees of dorsiflexion. This is the initial setting for the heel height/dorsiflexion stop.

In order to change the heel height to accommodate other shoes or provide more or less plantar/dorsiflexion, the patient may use the key fob remote (refer to Key Fob Remote Instructions).

RESISTANCE

- Go to the **Resistance** tab on the left side of the screen:



- Set the **Plantar Flexion** and **Dorsiflexion** resistance and click the **Update** button.
- The **Plantar Flexion-Heel Strike** setting is the initial resistance of the heel as it meets the ground and is loaded. Most patients prefer this setting from 0 to 5.
- The **Plantar Flexion Resistance** setting controls the rate at which the heel further compresses and the foot contacts the ground. Higher values will reduce “foot slap” but may also cause the patient to feel as if they are “riding the heel” to midstance. Average values are between 30 and 55.
- The **Dorsiflexion Resistance** setting controls the rate of dorsiflexion or anterior progression. Higher values may cause the patient to feel as if they have to push the prosthesis to midstance.

6. Have the patient walk in parallel bars or other clinical walking support and repeat the process until the patient is comfortable walking unassisted. Average values are between 45 and 75.
7. Set the **Range**. The **Range** setting is a limit setting for the remote key fob. As you move the **Range**, the gray bars above the resistance settings will grow or shrink to indicate how much adjustment will be available via the remote key fob. Most patients find an adjustment range of 3 to 5 acceptable.
8. Have the patient walk in parallel bars or supported. Make any dynamic software adjustment as needed until the patient is comfortable walking on level ground. This process may need to be done repeatedly with adjustments to the resistance. Most patients prefer settings of 1 to 3 of dorsiflexion.
NOTE: Numeric settings are not a direct representation of the degrees of dorsiflexion due to variances in heel heights. For example, the reading may show "6" while an actual measurement with a goniometer might indicate 10° of dorsiflexion.
9. Train the patient on how to enter and set the various functions using both the key fob and the buttons on the CPU pod (see key fob documentation included).
10. When reversing direction on a hill, instruct the patient to bring the toe to neutral before proceeding in the opposite direction.
11. Have the patient walk on stairs and evaluate function. It is important for the patient to have both the heel and forefoot contact on each stairstep on descent. On ascent, the toe should be firmly in the center of each stairstep. After climbing stairs or a hill, the patient may need to take a full stride with the Raize and compress the heel for it to return to the dorsiflexion stop point.

LIVE MODE

The Raize interface software features a live mode that allows the prosthetist to graphically observe the change in the hydraulic settings as the Raize goes through swing, plantar flexion and dorsiflexion. Live Mode may also be useful as a diagnostic tool for Hosmer's technical support staff.

To enable Live Mode, ensure the Raize is connected via the Bluetooth or USB connection. Place the Raize in walk mode (not in locked or free motion modes).

1. In the Raize interface software, select the **Live** tab.
2. As the patient walks, you will be able to observe the ankle state (swing, plantar flexion, and dorsiflexion), the hydraulic resistance changes, and the joint angle as reported by the hall effect sensor.
3. To exit Live Mode, simply click on the **Normal** tab and resume adjustment or save settings and exit.

CONTROL MODE ADJUSTMENT FOR KEY FOB AND CPU POD

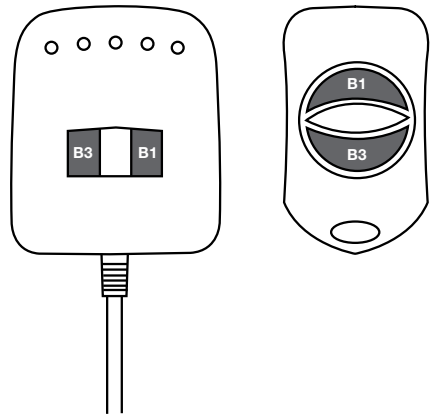
POWER

The foot is always on when the battery is plugged in and the battery is charged.

KEY FOB AND CPU POD FUNCTIONS

If the key fob or CPU pod has been idle for a period of time they must be activated to perform any functions.

To activate, hold the **B1** and **B3** buttons for 1 second to activate. The CPU pod will beep and vibrate to confirm.

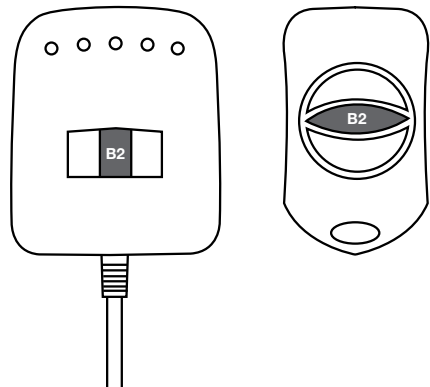


HEEL HEIGHT

Caution: During the adjustment of the heel height, the ankle will provide very little resistance and the patient should make sure they are balanced with the other leg or are holding onto something for balance while adjusting the heel height/dorsiflexion stop.

Heel Height Adjustment: Press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. (LEDs will stay lit as long as you are in the adjustment mode.)

Next, hold the **B2** button for 3 seconds. The CPU pod will beep twice and vibrate twice to indicate that the Raize is in the heel height adjustment mode. Move the pylon to the neutral position with the knee slightly flexed. (The center LED will light up and a constant tone will be heard when the pylon is in the current set position). Tap button **B2** once to set the new height. The Pod will beep once and lights will go out to indicate the heel height is set.

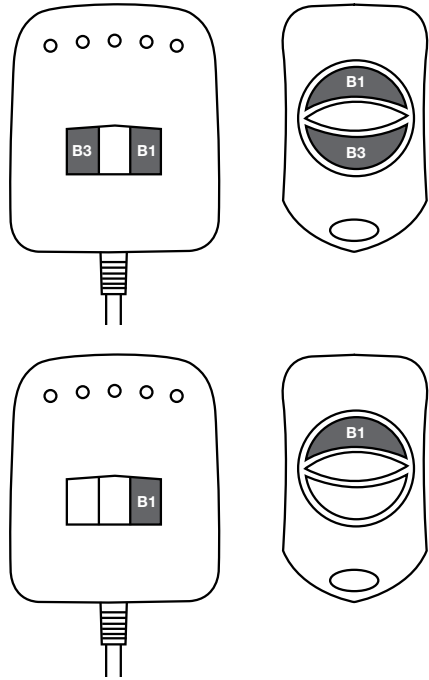


CHANGE RESISTANCE

Press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. LEDs will stay lit as long as you are in the adjustment mode.

Next, tap the **B1** button to increase resistance. Tap the **B3** button to decrease resistance. For each tap, the resistance will increment or decrease by one unit. This adjustment changes plantar flexion and dorsiflexion resistance together. The CPU pod will respond with a beep and vibration each time the button is pushed until it reaches its maximum range of resistance adjustment. Press button **B2** once quickly to exit the adjustment mode.

NOTE: When battery is unplugged, the resistance settings will revert to the prosthetist selected values.



LOCKED MODE

Can be set to any angle and will remain fixed until returned to normal mode.

Lock Mode: Press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. LEDs will stay lit as long as you are in the adjustment mode.

Next, press and hold **B1** for 3 seconds. The CPU pod will confirm with two beeps and vibrations.

To exit the lock mode, press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. LEDs will stay lit as long as you are in the adjustment mode.

Next, press to button **B2** once quickly to exit the lock mode. The Pod will beep once and lights will go out to indicate that you are back to the normal function mode.

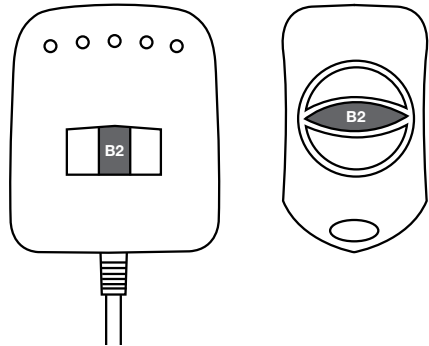
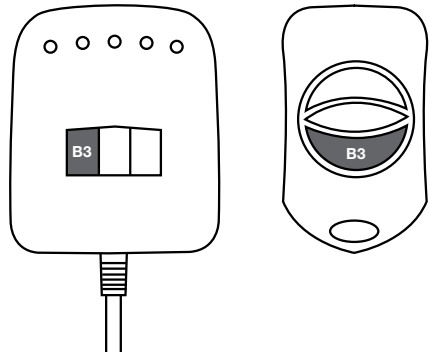
UNLOCKED MODE

NOTE: Eliminates dorsi stop but maintains resistance

To enter Unlocked Mode, press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. LEDs will stay lit as long as you are in the adjustment mode.

Press and hold the **B3** button for 3 seconds. The CPU pod will confirm with two beeps and vibrations.

1. To exit the unlock mode, press and hold the **B1** and **B3** buttons for 1 second to activate adjustment mode. LEDs will stay lit as long as you are in the adjustment mode.
2. Next, press button **B2** once quickly to exit the unlock mode. The Pod will beep once and lights will go out to indicate the you are back to the normal function mode.



LED LIGHT INDICATORS

When the key fob is in the active mode, the LED lights on the CPU pod will indicate the state of the battery charge.

| | 5 lights | 4 lights | 3 lights | 2 lights | 1 light | 1 light blinking |
|--------|----------|----------|----------|----------|---------|-------------------------|
| Charge | Full | 80% | 60% | 40% | 20% | min. charge / safe mode |

BATTERY CHARGING

CHARGE LEVEL INDICATION

Refer to LED Light Indicators chart located under the section titled Charge Mode Adjustment for Key Fob and CPU Fob.

CHARGING

Caution! Never charge the battery while it is on the patient.

To increase battery life it is better to charge the battery daily than to wait until it has drawn down to safe mode. Lithium-ion batteries do not suffer from memory effect.

When the battery has reached a low state of charge, it will warn you with 3 beeps and 3 vibrations. When it beeps and vibrates 3 more times, it has 70 seconds left until entering safe mode.

When the Raize is powered up after being disconnected from the battery, it will default back to initial GUI setting.

SERVICE INTERVALS

BATTERY REPLACEMENT

Replace the battery every 2 years or after 2 million cycles, whichever comes first.

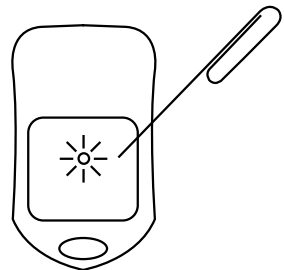
ANKLE SERVICE INTERVAL

The Raize should be checked by your prosthetist every 6 months to 1 year depending on activity level.

REPLACING THE KEY FOB

CREATE A UNIQUE ADDRESS FOR THE KEY FOB

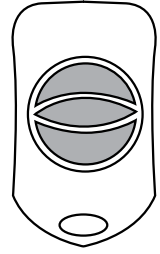
1. Press and release the **Code** button by inserting a paper clip in the pin hole on the back of the key fob labeled Add (a blue light will start to blink).



2. Independently press all three control buttons (**B1**, **B2**, and **B3**) to associate all of them with this code.

NOTE: If no function buttons are pressed, then no buttons will be associated with the code and the key fob will have no function.

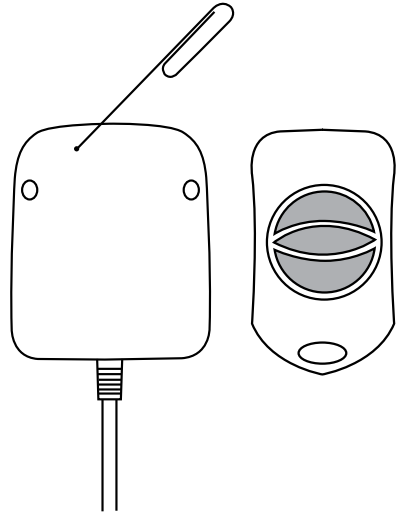
3. Press and release the **Code** button again to finish configuration. After 17 seconds the key fob will automatically exit configuration and the blue light will stop blinking. Each key fob has the ability to generate hundreds of unique combinations. Once the key fob address is changed from the factory default address, it can never be changed back to the default address even if the battery in the key fob is removed.



ACCEPT NEW KEY FOB ADDRESS TO CPU POD

1. Press the small button on the back side of the board, through the CPU pod to enable learn mode (a paper clip or small pin will work).
2. Independently press each of the three key fob control buttons to accept the key fob.

The decoder on the backside of the CPU pod can accept up to 40 different key fob codes. Once pressed, the CPU pod decoder is in Learn mode and waits to learn the new key fob code. The key fob will be in Learn mode for 17 seconds unless the button is pressed a second time which will take it out of **Learn** mode. Once the CPU pod decoder has been put on **Learn** mode it will not accept the default decoder, but can accept the code again in **Learn** mode. To clear the accepted code, press and hold the button for 10 seconds.



MAINTENANCE AND CARE

Periodically gently wipe the foot, battery pod, and CPU pod with a soft, damp cloth. Do not use compressed air. Never dip the parts in any type of liquid.

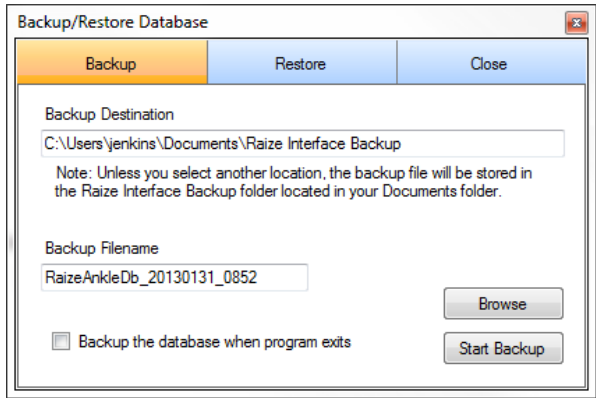
DATABASE BACKUP AND RESTORE

BACKING UP THE DATABASE

Go to the menu and select **Tools**, then **Backup/Restore Database**. Select **Backup**:

BACKUP DESTINATION

At first use, the program creates a folder in your **Documents** folder called **Raize Interface Backup**. The program will use this as the default backup location unless you specify a different location. You can choose a different location by pressing the **Browse** button. The location you choose will be stored.



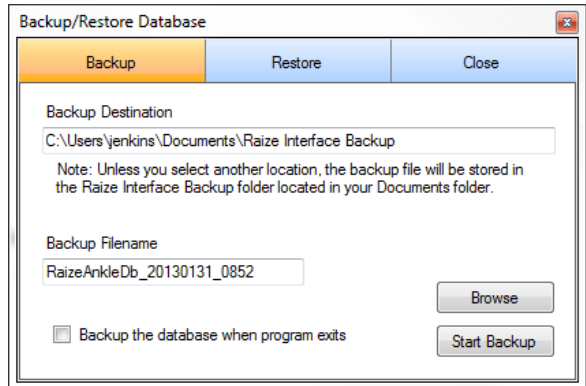
BACKUP FILENAME

Backup will create its own backup filename for the backup created. Press the **Start Backup** button to begin the backup.

Warning: Do not rename the backup filenames or you will render them useless.

RESTORING THE DATABASE

Go to the menu bar and select **Tools**, then **Backup/Restore Database**. Select **Restore**. **Warning:** Restoring a database will overwrite the current database used by the program.

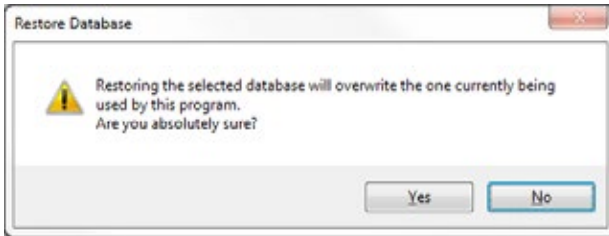


RESTORE FROM

This location will either be the default folder called **Raize Interface Backup** located in your **Documents** folder or the location chosen during the last backup. You can choose a different location by pressing the Browse button. The location you choose will be stored.

BACKUP LIST

The list is in ascending order. Select the backup you want to restore. The date and time of the backup will be displayed in the **Backup Created** textbox.



1. Press the **Start Restore** button to begin the restore. This overwrite warning message will appear.
2. Press the **Yes** button to continue.

FREQUENTLY ASKED QUESTIONS

CAN THE RAIZE BE USED FOR SPORTS?

The Raize cannot be used for sports that involve high impacts. Low impact sports like golf are okay.

WHAT HAPPENS IF THE RAIZE RUNS OUT OF POWER?

The Raize will warn the user by vibrating and flashing the lights on the CPU pod three times when it is low on power. It will then go into the default safe mode which is predetermined by the prosthetist when the initial setup is done. This typically will either lock the foot at the predetermined shank angle or leave the foot unlocked at a preset resistance. In safe mode and while there is still some power (up to 2 hours), the ankle can still be locked and unlocked (normal mode is still excluded).

CAN THE PATIENT CHANGE RESISTANCE ON-THE-GO TO ACCOMMODATE DIFFERENT ACTIVITIES?

Yes. First, unlock the key fob or CPU fob by holding the outer (but not the center) buttons for at least one second. Then use the outer buttons to change resistance up or down. On the CPU pod, the left button decreases resistance and on the key fob the lower button (towards the hole) decreases resistance. The opposite outer button on either device will increase resistance. Alter the resistance one click at a time and test the results.

WILL IT HARM THE BATTERY TO CHARGE IT FREQUENTLY?

No. The Raize battery is lithium-ion and comes with a dedicated smart charger. It will not harm the battery to charge it when it is convenient. We recommend charging the battery frequently rather than running it down completely.

CAUTION! The battery should only be charged with the included charger. Failure to do so could result in damage to the battery and/or Raize. Also, do not charge the battery while wearing the Raize.

WHAT IF THE KEY FOB IS LOST?

The CPU pod attached to the socket has a three button key pad that can be used for all normal functions. A new key fob can be ordered from Hosmer and keyed to the unit.

IS IT NORMAL FOR THE ANKLE TO SLOWLY DORSIFLEX WHEN LOCKED?

Yes. Some amount of movement or “creep” is normal. If you notice that the creep is increasing over time this is a sign that the Raize may need to be checked by Hosmer.

WHAT SHOULD I DO IF THE RAIZE MAKES A POPPING OR SNAPPING NOISE?

This may be caused by the heel wedge sticking and releasing from the spring elements. To correct the issue, remove the wedge and coat it with a small amount of talc. The wedge should then be secured in position with super glue.

HOW SHOULD THE RAIZE BE STORED IF NOT IN USE FOR AN EXTENDED PERIOD?

First, disconnect the battery. Charge the battery fully (storing the battery in a low charge state can damage it). Store the system in a clean, dry place. All patient information and Raize data is stored in the program’s database. It is highly recommended that you periodically back up the database.



Fillauer LLC

2710 Amnicola Hwy
Chattanooga, TN 37406
800.251.6398
423.624.0946
www.fillauer.com

Hosmer

561 Division Street
Campbell, CA 95008
800.827.0070
408.379.5151
www.hosmer.com

Centri

Kung Hans Väg 2
192 68 Sollentuna, Sweden
+46 8 505 332 00
Fax +46 8 505 332 05
www.centri.se



M061/01-08-14