Troubleshooting

Using the Tester
The Tester is used to troubleshoot if there is a disconnection in one of the FS Cuffs or a faulty RF Stim Unit. The Tester provides audio feedback when connected to the NESS L300 Plus System and stimulation is applied.

Testing the L300 FS Cuff in Training Mode
1. Connect the Tester to the L300 FS Cuff plug holes. See Figure 11-1.

![Figure 11-1: Tester connected to the L300 FS Cuff.](image)

2. Press the L300 Plus Control Unit on/off button to turn on the system.
3. Press and hold the mode button until the L300 Plus Control Unit beeps, the mode button starts FLASHING YELLOW SLOWLY, and (“t” for training) alternates with the intensity level in the digital display. When stimulation is on, the mode button will FLASH YELLOW RAPIDLY.
4. You should hear a buzzing when stimulation is on and no buzzing when stimulation is off.
Testing the L300 FS Cuff in Gait Mode

1. Connect the Tester to the L300 FS Cuff.

2. Press the L300 Plus Control Unit on/off button to turn on the system.

3. Press the mode button briefly to enter gait mode. The L300 Plus Control Unit will beep and the mode button will FLASH YELLOW SLOWLY (indicating that stimulation is off). When stimulation is on, the mode button will FLASH YELLOW RAPIDLY.

4. Press and release the pressure sensor on the Intelli-Sense Gait Sensor. You should hear a buzzing when you release pressure from the pressure sensor and no buzzing when you press on the pressure sensor.

If either of the above tests elicits an error indication, test using the advanced testing procedures.

Advanced Testing

If stimulation is not delivered to the patient’s leg, a “faulty electrode contact” error may appear. Recheck that the electrode base snaps are secured to the plug holes of the L300 FS Cuff and that the L300 RF Stim Unit is fully snapped into the L300 FS Cuff cradle. Then use the Tester to differentiate among problems in the L300 RF Stim Unit, L300 FS Cuff, and L300 electrode bases. Follow the steps below:

Step 1: Test the L300 FS Cuff:

1. Connect the Tester to the L300 FS Cuff.

2. Apply stimulation using the stimulation test button or the Clinician’s Programmer. The minimum intensity required to produce a sound is 10 mA.

3. If the circuit is intact in the L300 FS Cuff and the L300 RF Stim Unit is working properly, the Tester will buzz.

4. If the Tester buzzes but the patient was not feeling stimulation while the L300 FS Cuff was donned, the problem may be in the L300 electrode bases. Replace the L300 electrode bases and L300 electrodes.

5. If the Tester does not buzz, then proceed to Step 2.
Step 2: Test the L300 RF Stim Unit:

1. Remove the L300 RF Stim Unit from the cradle. See Figure 11-2.

![Figure 11-2: Removing the L300 RF Stim Unit.](image)

2. Connect the Tester to the electrical sockets on the back of the L300 RF Stim Unit. See Figure 11-3. The connectors on the Tester and the sockets on the L300 RF Stim Unit are color coded.

![Figure 11-3: Tester connected to the L300 RF Stim Unit.](image)

3. Apply stimulation using the stimulation test button or the Clinician’s Programmer. The minimum intensity required to produce a sound is 10 mA.

4. If the Tester buzzes, the L300 RF Stim Unit is working. The problem may be in the L300 FS Cuff. Replace the L300 FS Cuff and connect the L300 RF Stim Unit to the new L300 FS Cuff. Retest the L300 FS Cuff.

5. If the Tester does not buzz, the L300 RF Stim Unit may be faulty. Replace the L300 RF Stim Unit or contact the Bioness Client Relations Department at (800) 211-9136, Option 3.
Testing the Thigh FS Cuff in Training Mode

1. Connect the Tester to the proximal snap on the Thigh FS Cuff proximal panel and to the proximal snap on the Thigh FS Cuff distal panel. See Figure 11-4.

   ![Figure 11-4: Tester connected to the Thigh FS Cuff.]

2. Press the L300 Plus Control Unit on/off button to turn on the system.

3. Press and hold the mode button until the L300 Plus Control Unit beeps, the mode button starts FLASHING YELLOW SLOWLY, and ("t" for training) alternates with the intensity level in the digital display. When stimulation is on, the mode button will FLASH YELLOW RAPIDLY.

4. You should hear a buzzing when stimulation is on and no buzzing when stimulation is off.

Testing the Thigh FS Cuff in Gait Mode

1. Connect the Tester to the proximal snap on the Thigh FS Cuff proximal panel and to the proximal snap on the Thigh FS Cuff distal panel. See Figure 11-4.

2. Press the L300 Plus Control Unit on/off button to turn on the system.

3. Press the mode button briefly to enter gait mode. The L300 Plus Control Unit will beep and the mode button will FLASH YELLOW SLOWLY (indicating that stimulation is off). When stimulation is on, the mode button will FLASH YELLOW RAPIDLY.

4. Press and release the pressure sensor on the Intelli-Sense Gait Sensor. You should hear a buzzing when you release pressure from the pressure sensor and no buzzing when you press on the pressure sensor.

If either of the above tests elicits an error indication, test using the advanced testing procedures.
Advanced Testing

If stimulation is not delivered to the patient’s leg, a “faulty electrode contact” error may appear. Recheck that the Thigh RF Stim Unit is fully snapped into the cradle of the Thigh FS Cuff. Then follow the steps below:

**Step 1: Test the Thigh FS Cuff:**

1. Connect the Tester to the Thigh FS Cuff. See Figure 11-4.
2. Apply stimulation using the stimulation test button or the Clinician’s Programmer. The minimum intensity required to produce a sound is 10 mA.
3. If the circuit is intact in the Thigh FS Cuff and the Thigh RF Stim Unit is working properly, the Tester will buzz.
4. If the Tester buzzes but the patient was not feeling stimulation while the Thigh FS Cuff was donned, the problem may be in the electrodes. Replace the electrodes.
5. If the Tester does not buzz, then proceed to Step 2.

**Step 2: Test the Thigh RF Stim Unit:**

1. Remove the Thigh RF Stim Unit from the Thigh FS Cuff cradle. See Figure 11-5.

![Figure 11-5: Removing the Thigh RF Stim Unit.](image-url)
2. Connect the Tester to the electrical sockets on the back of the Thigh RF Stim Unit. See Figure 11-6. The connectors on the Tester and the electrical sockets on the Thigh RF Stim Unit are color coded.

![Figure 11-6: Tester connected to the Thigh RF Stim Unit.](image)

3. Apply stimulation using the L300 Plus Control Unit in clinician mode or by using the Clinician’s Programmer. The minimum intensity required to produce a sound is 10 mA.

4. If the Tester buzzes, the Thigh RF Stim Unit is working. The problem may be in the Thigh FS Cuff. Replace the Thigh FS Cuff. Then connect the Thigh RF Stim Unit to the new Thigh FS Cuff, and retest the Thigh FS Cuff.

5. If the Tester does not buzz, the Thigh RF Stim Unit may be faulty. Replace the Thigh RF Stim Unit or contact the Bioness Client Relations Department at (800) 211-9136, Option 3.
Frequently Asked Questions

If you have any questions or concerns, please contact the Bioness Client Relations Department at (800) 211-9136, Option 3.

Our clinic owns multiple NESS L300 Plus Systems. How can we identify which components belong to which system?

- Each NESS L300 Plus System has an alphanumeric System Identification (ID) Number (for example, A123) printed on the back of the L300 Plus Control Unit, L300 RF Stim Unit, Thigh RF Stim Unit, and Intelli-Sense Gait Sensor. The System ID Numbers on all four components must match for the system to work. Check the ID numbers before use to see if they match.

The buttons in the L300 Plus Intelli-Gait Software used to create a new patient record or adjust the settings for a current patient are grayed out and nonfunctional.

- The Clinician’s Programmer and the L300 Plus Control Unit are not communicating. Both must be connected to the Configuration Cradle to communicate. Turn off the L300 Plus Control Unit or place it in standby mode. Then reconnect the Configuration Cradle communication connector cable to the L300 Plus Control Unit and the Clinician’s Programmer.

I connected the L300 Plus Control Unit to the Configuration Cradle and a message appeared on the Clinician’s Programmer. The message says that the date and time in the L300 Plus Control Unit differ from those in the Clinician’s Programmer.

- The clocks on the L300 Plus Control Unit and Clinician’s Programmer must be synchronized for the Gait Log and Training Log to record accurately.
  - If the date and time settings of the Clinician’s Programmer are correct, update the L300 Plus System clock.
  - If the date and time settings of the Clinician’s Programmer are not correct, press Exit to close the L300 Plus Intelli-Gait Software and open the PDA settings screen. (See the PDA manufacturer’s instructions.) Use the stylus to adjust the Clinician’s Programmer time zone, clock, and date. Press Ok to save the settings. Log back into the L300 Plus Intelli-Gait Software, reconnect the L300 Plus Control Unit, and update the L300 Plus System clock to match the Clinician’s Programmer clock.
I connected the L300 Plus Control Unit to the Configuration Cradle. A message appeared on the Clinician’s Programmer. The message says that a new patient was found and asks if I would like to add the patient record to the database.

- Select Yes, if you want to add that patient record to the database so that you may review or make changes to the patient’s settings. If not, select No to return to the Patient List. If you want to copy a different patient record onto the L300 Plus Control Unit, then, with the L300 Plus Control Unit still connected to the Configuration Cradle, open another patient record or set up a new patient record for use with the L300 Plus Control Unit. **Note:** If you open another patient record while the L300 Plus Control Unit is connected, the data on the L300 Plus System will be permanently overwritten by the record that is opened.

When I connected the L300 Plus Control Unit to the Configuration Cradle, a message appeared on the Clinician’s Programmer saying that the parameters are inconsistent.

- A different Clinician’s Programmer was last used to update the patient’s system.
  - Press System to overwrite the data on the Clinician’s Programmer with the data on the L300 Plus Control Unit (preferred when patients have been using the L300 Plus Control Unit settings and are returning for a follow-up evaluation).
  - Press Database to overwrite the parameters on the L300 Plus Control Unit with the parameters on the Clinician’s Programmer.
  - Press Ignore to leave the parameters on the Clinician’s Programmer and the L300 Plus Control Unit unchanged.

When charging the L300 Plus System, how will I know when the batteries are fully charged?

- When the L300 Plus Control Unit is fully charged, a horizontal GREEN line will appear in the L300 Plus Control Unit digital display.
- When the L300 and Thigh RF Stim Units are fully charged, the status light on the RF Stim Units will be SOLID GREEN.
- Charging takes approximately three hours. After the components are fully charged, keep the components connected to the system charger set until ready to use.

After I fully charged the L300 Plus Control Unit and RF Stim Units, I disconnected the system charger set and then immediately reconnected it. The charging icons displayed again on the L300 Plus Control Unit and RF Stim Units. Do I need to repeat the charging process?

- If you recently charged your system and the fully charged icons were displayed, your system is still fully charged. You do not have to repeat the charging process.
If I charge the L300 Plus System every day, will I harm the batteries?

- No. Daily charging will not affect the lifespan or functionality of the batteries. Daily charging is recommended.

While charging the L300 Plus Control Unit and RF Stim Units, 🚭 "E" appears in the digital display.

- An error occurred while charging. Reconnect the system charger set. If the problem persists, contact the Bioness Client Relations Department, Option 3.

The L300 Plus Control Unit (or one of the RF Stim Units) does not light up when the system is turned on.

- The component battery needs to be charged. Charge the system. If the problem persists, contact the Bioness Client Relations Department, Option 3.

How will I know when the Intelli-Sense Gait Sensor battery charge level is low?

- An Intelli-Sense Gait Sensor battery will last for approximately six months, and then it will need to be replaced. When the battery charge level is low, the Intelli-Sense Gait Sensor indicator on the L300 Plus Control Unit will FLASH YELLOW and the L300 Plus Control Unit will emit an audio alert. The audio alert will become more persistent as the battery weakens.

Stimulation works in training mode but not in gait mode. When I turn on gait mode I hear a beep. The Intelli-Sense Gait Sensor and the RF communication indicators on the L300 Plus Control Unit FLASH RED.

- The Intelli-Sense Gait Sensor and the RF Stim Units are not communicating. The Intelli-Sense Gait Sensor is probably hibernating. Apply pressure to the pressure sensor. If pressure does not resolve the problem, the battery may be depleted or the Intelli-Sense Gait Sensor may be faulty. If no wire damage is apparent, replace the Intelli-Sense Gait Sensor battery and try again.
When I turn on the L300 Plus Control Unit, it beeps. One of the RF Stim Unit indicators and the RF communication indicator on the L300 Plus Control Unit is FLASHING RED. The RF Stim Unit indicators are not lit.

- The RF Stim Unit battery is likely discharged, preventing the L300 Plus Control Unit and the RF Stim Unit from communicating. Turn off the L300 Plus Control Unit, and charge the system fully. Then, disconnect the system charger set and turn on the L300 Plus Control Unit. The L300 Plus Control Unit on/off button and the status light on both RF Stim Units should FLASH GREEN. Communication should be restored.

I hear a beep, and one of the RF Stim Unit indicators on the L300 Plus Control Unit is FLASHING RED.

- If the patient feels stimulation but the intensity level seems weaker than usual and knee or ankle movement is unsatisfactory, electrode contact may be compromised.
  - Turn off the L300 Plus Control Unit and remove the affected FS Cuff.
  - Thoroughly cleanse the skin where the electrode(s) touch.
  - Remove and replace any worn L300 hydrogel electrodes. Press firmly on the new L300 hydrogel electrodes until they are securely attached to the L300 hydrogel electrode bases. Then, remove the covers.
  - Remove and rewet any cloth electrodes. Saturate them with water, and then blot the snap side before reattaching them.
  - Replace the electrodes every two weeks.

- If the patient does not feel stimulation:
  - Turn off the L300 Plus Control Unit and remove the affected FS Cuff.
  - Make sure the L300 electrode bases or large cloth electrode, if appropriate, is snapped into the plug holes of the L300 FS Cuff, especially if using a personal panel.
  - If L300 hydrogel electrodes are being used, confirm that the covers have been removed.
  - Remove and rewet any cloth electrodes, if they are dry.
  - Make sure the RF Stim Unit is properly snapped into the cradle of the FS Cuff. Press firmly near the upper edges of the RF Stim Unit until it is flush with the cradle.
  - If using a fitting cable, check that the cable is correctly connected to both plug holes of the L300 FS Cuff and to both L300 electrode bases.
  - Use the Tester to test the electrical flow.
An electrode or base is frayed, peeling, damaged, or falling off the FS Cuff.
- Replace any worn or damaged electrodes or electrode bases.

A component indicator is SOLID RED and the L300 Plus Control Unit is beeping.
- The component is malfunctioning. Turn off the L300 Plus Control Unit and turn it back on. If the problem persists, then stop using the NESS L300 Plus System and contact the Bioness Client Relations Department, Option 3.

A component indicator is FLASHING YELLOW.
- The component battery charge level is low. Charge or replace the battery.

The patient’s ankle or knee is not moving satisfactorily, and the L300 Plus System is not indicating any errors.
- Turn off the L300 Plus Control Unit and reposition the appropriate FS Cuff. Test the new position using the stimulation test button on the L300 Plus Control Unit. Make sure the FS Cuff strap(s) is snug and the FS Cuff is secure.

Stimulation is inconsistent when the patient is walking, but the L300 Plus System is not indicating any errors.
- Have the patient stop walking and shift weight from side to side. If the problem persists, check for proper placement of the Intelli-Sense Gait Sensor pressure sensor. Reposition the pressure sensor slightly forward in the shoe, or loosen the shoelace, if it is tight. Also, check the Intelli-Sense Gait Sensor wires for wear or fraying, and check the Intelli-Sense Gait Sensor transmitter and pressure sensor for damage.

The skin is irritated or has a skin reaction where the electrodes or FS Cuff adheres.
- Stop using the NESS L300 Plus System immediately and contact the Bioness Client Relations Department, Option 3. Resume use only when the skin is completely healed. Give patients the NESS L300 Plus Skin Care Guidelines and a skin conditioning protocol.

I received a replacement component and was told I need to register it. Why is registration important, and how do I register a component?
- A replacement L300 Plus Control Unit, L300 RF Stim Unit, Thigh RF Stim Unit, or Intelli-Sense Gait Sensor needs to be electronically registered to the existing L300 Plus System components to communicate wirelessly. To electronically register a replacement component, see the L300 Plus User’s Guide.
I tried the registration procedure and saw a immediately, but I never saw the ALTERNATING GREEN arches in the digital display. The replacement component is not working.

- Clinician mode may have been started instead of the registration process. Clinician mode is started by pressing the minus and on/off buttons on the L300 Plus Control Unit. Registration is started with the L300 Plus Control Unit off, and by pressing the minus and mode buttons on the L300 Plus Control Unit. Turn off the L300 Plus Control Unit, and press the minus and mode buttons to restart the registration process.

**How can I verify that current is flowing through the L300 Plus System?**

- Connect the Tester to the L300 RF Stim Unit and the L300 FS Cuff plug holes, or the ends of the fitting cable, depending on the setup. The Tester will buzz when stimulation intensity is at least 10 mA. Repeat for the Thigh RF Stim Unit and Thigh FS Cuff.

**What else can I use the Tester for?**

- The Tester can be used as an educational tool, to demonstrate when stimulation is on in the various stimulation modes.
## Troubleshooting Quick Reference Table

<table>
<thead>
<tr>
<th>L300 Plus Control Unit</th>
<th>Solution</th>
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</thead>
<tbody>
<tr>
<td>Will not turn on.</td>
<td>• Charge the L300 Plus Control Unit.</td>
</tr>
<tr>
<td></td>
<td>• Change the battery, and charge the L300 Plus Control Unit.</td>
</tr>
<tr>
<td></td>
<td>• Replace the L300 Plus Control Unit.</td>
</tr>
<tr>
<td>Component malfunction.</td>
<td>Replace the L300 Plus Control Unit.</td>
</tr>
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<table>
<thead>
<tr>
<th>L300 and Thigh RF Stim Units</th>
<th>Solution</th>
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<tbody>
<tr>
<td>Will not turn on.</td>
<td>• Charge the RF Stim Unit.</td>
</tr>
<tr>
<td></td>
<td>• Contact the Bioness Client Relations Department, Option 3, to replace the battery.</td>
</tr>
<tr>
<td></td>
<td>• Replace the RF Stim Unit.</td>
</tr>
<tr>
<td>Component malfunction.</td>
<td>Replace the RF Stim Unit.</td>
</tr>
</tbody>
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<tr>
<th>Intelli-Sense Gait Sensor</th>
<th>Solution</th>
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<tbody>
<tr>
<td>RF communication error.</td>
<td>• Press and release the pressure sensor while in gait mode to activate the Intelli-Sense Gait Sensor.</td>
</tr>
<tr>
<td></td>
<td>• Change the battery, and press the pressure sensor to activate the Intelli-Sense Gait Sensor.</td>
</tr>
<tr>
<td></td>
<td>• Replace the Intelli-Sense Gait Sensor and register it.</td>
</tr>
<tr>
<td>Will not function.</td>
<td>• Change the battery, and press the pressure sensor to activate the Intelli-Sense Gait Sensor.</td>
</tr>
<tr>
<td></td>
<td>• Replace the Intelli-Sense Gait Sensor and register it.</td>
</tr>
<tr>
<td>Functioning but not reliably.</td>
<td>• Relocate the pressure sensor to the correct placement under the heel.</td>
</tr>
<tr>
<td></td>
<td>• Replace the Gait Sensor pad, if it appears worn.</td>
</tr>
<tr>
<td></td>
<td>• Replace the Intelli-Sense Gait Sensor and register it.</td>
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<tr>
<th>L300 and Thigh FS Cuffs</th>
<th>Solution</th>
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If you need technical or clinical assistance, please contact the Bioness Client Relations Department at (800) 211-9136, Option 3.
| The L300 Plus Control Unit is displaying a faulty electrode connection. | • Ensure good contact of the electrodes to the skin (and L300 electrode bases).  
• Ensure that the FS Cuff connections are intact. |
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<tr>
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<tbody>
<tr>
<td>An electrode is damaged or peeling off.</td>
<td>Replace the electrode.</td>
</tr>
<tr>
<td>An L300 electrode base is damaged.</td>
<td>Replace the L300 electrode base.</td>
</tr>
<tr>
<td>An FS Cuff strap is frayed or damaged.</td>
<td>Replace the FS Cuff strap.</td>
</tr>
<tr>
<td>An FS Cuff is damaged.</td>
<td>Replace the FS Cuff.</td>
</tr>
</tbody>
</table>
| Stimulation is not as effective as usual. | • Try repositioning the FS Cuff.  
• Wet the cloth electrodes, if they are dry.  
• Change the electrodes. |
| **Clinician’s Programmer** | **Solution** |
| Will not turn on. | • Charge the Clinician’s Programmer.  
• Change the battery, and charge the Clinician’s Programmer.  
• Press the Clinician’s Programmer reset button.  
• Replace the Clinician’s Programmer. |
| Lost the L300 Plus Intelli-Gait Software application/data. | Contact the Bioness Client Relations Department, Option 3. |
| Will not communicate with the L300 Plus Control Unit. | • Reconnect the Configuration Cradle to the Clinician’s Programmer and L300 Plus Control Unit.  
• Contact the Bioness Client Relations Department, Option 3. |