



**PedAlert™ 100**

**&**

**PedAlert™ 120**

**Operator's Manual**

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*Notice: The manufacturer reserves the right to make changes to the device and Operator's Manual without obligation to notify any person or organization of the revision or change.*



Dear Customer:

Congratulations on your purchase of PedAlert™. ORBITEC has enjoyed working with physical therapists and physicians to develop this simple but important biofeedback device for lower limb rehabilitation. ORBITEC is dedicated to providing advanced instrumented rehabilitation equipment to make clinical and related rehabilitation efforts more efficient and effective.

Should you have comments or suggestions for improvements on our products or service, please contact us.

Sincerely,

A handwritten signature in cursive script that reads "Thomas M. Crabb".

Thomas M. Crabb  
President/CFO

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### ***Warning***

#### ***Read all directions before use!***

ORBITEC is NOT responsible for any damages that occur as a result of misuse of this device.

If the patient feels any pain or discomfort while using the device he/she should stop using the device immediately and consult his/her physician.

This device is to be used only under the supervision of a physician or a therapist.

# 1. GENERAL INFORMATION

## **Caution**

*If the patient has a hearing loss, particularly in the higher frequency range, and cannot easily hear the alarm, we do not recommend the use of this device.*



- Cast Boot
- Sensor Sole
- Control Box
- 9V Battery
- Operator's Manual
- Warranty

## **Specifications**

|                     |   |
|---------------------|---|
| Control Box Size:   | 3" X 2" X 1" (LxWxD)  |
| Weight:             | 12 ounces (with battery)  |
| Power Requirements: | Standard 9V battery   |
| Weight Settings:    | Small - toe touch up to 75 lbs.<br>Large - toe touch up to 100 lbs. |
| Warning Tone:       | 80+ dB at 6 feet<br>Frequency = 3 kHz                               |

## 2. OPERATION

To ensure best results in your use of PedAlert, follow these steps.

2. 1 Assemble the PedAlert.
2. 2 “Warm up” the device by stepping at least 25 times before calibration.
2. 3 Strap PedAlert over the patient’s shoe, cast, or prosthetic.
2. 4 Set the weight threshold, placing the patient’s lower limb on a scale in a manner most similar to the gait used during the rehabilitation process.  
*Please note that this step requires the use of a scale.*
2. 5 Monitor PedAlert usage.
2. 6 Understand operational warnings.

Each of these steps will be detailed in the following pages.

***Helpful note*** for best results

For best results the therapist should step at least 25 times wearing the device, to allow sensor to “warm up.” Then place PedAlert on the patient’s foot and calibrate.

## 2.1. Assemble the PedAlert

1. Make sure wiring is connected to control box shown in Figure 1. Attach control box to either side of the boot.



**Figure 1. The wire needs to be firmly connected for proper operation.**

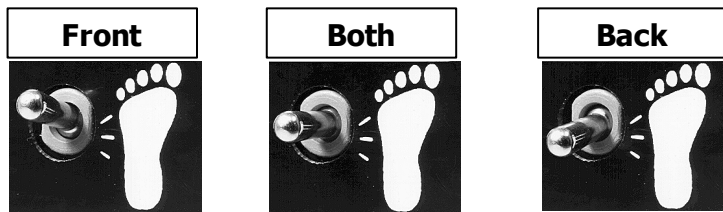
2. Turn system ON using On/Off switch shown in Figure 2. The light will blink about once per second upon proper connection and adequate battery power levels. If not blinking refer to Section 3 - Maintenance and Troubleshooting.



**Figure 2. On/Off switch and warning tone volume are set with the same control.**

3. Turn down the weight threshold control until you hear the warning tone. Then set the volume level and check to assure the patient can hear the warning tone. Once the volume is set to an acceptable audible level, the patient should not lower the level.
4. For PedAlert 120, set desired setting for front monitor, back monitor, or front and back (both) monitor as shown in Figure 3.

If the switch is set to either "front" or "back" sensor, the total limb load will not be monitored. If the switch is set to "both," the total limb load on the foot will be monitored.



**Figure 3. PedAlert 120 users can set the force monitoring section of the device to front only, front and back (both), or back only.**

## **2.2. "Warm Up" Device**

For best results when setting the weight threshold, the therapist should step at least 25 times wearing the device to allow sensor to "warm up."

## **2.3. Strap PedAlert Over Patient's Shoe**

1. Slip foot into boot. For best results, the patient should wear a flat, soft-soled shoe.
2. Assure proper placement of foot within boot as shown in Figure 4.

3. Tighten Velcro™ straps.
4. Verify control box is securely attached. Refer to Figure 4.



**Figure 4. User must assure proper placement of foot in boot and securely attach electronics module to the boot prior to use.**

***Helpful note*** for maximum accuracy



- The therapist should step at least 25 times wearing the device, to allow sensor to “warm up” before calibration.
- The device should be set using the patient’s foot, not the therapist’s.
- Patient should be wearing the same shoe to be worn during therapy, preferably a flat, soft-soled shoe.
- Patient should place the lower limb on a scale in a manner similar to the gait used during the rehabilitation process.

## 2.4. Set the Weight Threshold

1. The patient should step onto scale, gradually placing more weight until the prescribed weight threshold is met.
2. While holding the load at or below the prescribed weight threshold, set the weight threshold knob so the warning tone is activated. See Figure 5.
3. NOTE: Turning the knob counter-clockwise reduces the weight threshold. Turning the knob clockwise increases the weight threshold.



**Figure 5. The weight threshold knob adjusts the force required to activate the warning tone.**

## 2.5. Monitor PedAlert Usage

1. The volume should be maintained so that the patient can hear the alarm.
2. The light should blink about once per second, which signals proper connections and power levels.
3. Monitor patient to make sure that the gait and the limb load applied are the same as when setting the weight threshold.
4. DO NOT change the weight threshold unless instructed to do so by a physician.



### **3. MAINTENANCE AND TROUBLESHOOTING**

The only maintenance needed for PedAlert is to keep the unit clean and occasionally to change the battery.

#### **3.1. Keeping PedAlert Clean**

Wipe the cast boot and control box with a damp cloth, use a mild soap if necessary.

#### **3.2. Changing the Battery**

1. Remove control box from boot and disconnect sensor cable.
2. Use your thumb to press inward and slide the cover from the control box case (see Figure 6).
3. Gently remove the old battery and replace it with a new 9V battery.
4. Be sure that the battery snaps firmly into place. Replace the cover on the control box case by sliding it closed, and snapping into position when finished. Care must be taken to route the wires so they are not pinched when closing cover.



**Figure 6. A standard 9V battery is easily replaceable.**

### 3.3. Troubleshooting

| <b>Problem</b>   | <b>You should . . .</b>  |
|--|--|
| Red light is not flashing  | <ol style="list-style-type: none"> <li>1. Check that power switch is on.</li> <li>2. Check boot cable connections.</li> <li>3. Check battery connections.</li> <li>4. Battery may need replacement.</li> </ol>   |
| Warning tone beeps on and off repeatedly when no weight is applied | <ol style="list-style-type: none"> <li>1. Check battery and replace if necessary.</li> <li>2. See Sections 2.3 – 2.4.</li> </ol>   |
| Warning tone is on continuously                                    | <ol style="list-style-type: none"> <li>1. Turn knob clockwise until beeping stops.</li> <li>2. Replace the battery.</li> </ol>   |
| Weight is applied and the warning tone does not sound              | <ol style="list-style-type: none"> <li>1. Check the volume control knob; turn up if necessary.</li> <li>2. Check weight threshold level setting; test at lower threshold setting.</li> </ol> <p style="text-align: center;"><b>For Model 120 Only</b></p> <p>Check the front/back position switch for proper location; test in "both" setting.</p> |
| Doesn't maintain the set weight threshold                          | <ol style="list-style-type: none"> <li>1. Check weight threshold setting procedure. See Section 2.4 and Helpful Note on page 6.</li> <li>2. Sensor may be defective or worn-out. See next page.</li> </ol>   |

## **4. SERVICE AND REPLACEMENT OF PARTS**

For service call 1-800-338-2010 to receive support and instructions. Do not return the unit to ORBITEC without authorization. Please include your Return Authorization (RA) number with the returned unit and on all correspondence.

**Return Address:**  
ORBITEC  
1212 Fourier Drive  
Madison WI 53717  
USA

Call us at 1-800-338-2010.

**NOTE: the sensor portion of this product has a finite lifetime. With normal use the sensor must be replaced every two to three years. A new sensor will provide more reliable and consistent feedback. Call for a price quote.**

**1-800-338-2010**

## **5. LIMITED WARRANTY AND LIABILITY**

ORBITEC warrants to the original purchaser that the PedAlert™ product, and component parts thereof, will be free from defects in workmanship and materials for a period of one year from the date of purchase.

**To obtain warranty coverage in the USA, this product must be registered by completing and mailing the enclosed warranty registration card.**

Warranty covers only defects in workmanship and materials in normal use and does not cover damage resulting from negligent handling, misuse, or lack of reasonable care. **This warranty is in lieu of any other warranty either expressed or implied.**

ORBITEC will, without charge, repair or replace at its option, defective product or component parts accompanied by proof-of-purchase date in the form of a sales receipt.

ORBITEC shall not be liable for any consequential damages including, without limitation, damages resulting from improper use of this equipment or limb load applications during use that vary from those used during initial setting.

ORBITEC warrants products sold only in the USA, its overseas territories and Canada.

This device should not be used outside of instructed and intended use.

**For More Information**

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