Chapter 5

H200 Wireless Orthosis

The Orthosis generates the electrical stimulation used to open and close your hand and move your thumb. The Orthosis has an integrated radio frequency stimulation unit and five stimulating electrodes that have been predetermined by your clinician and configured with fitting panels. See Figure 5-1.

The Orthosis responds to wireless signals from the Control Unit to turn stimulation on and off, and to adjust the stimulation intensity level.





H200° Wireless

The H200 Wireless Orthosis features: See Figure 5-2.

- A flexor support.
- An extensor wing.
- A spiral end.
- A status light.
- A stimulation light.
- Audio alerts.
- A rechargeable battery and charging port.



Figure 5-2: Orthosis features.



Orthosis Flexor Support

The flexor support is designed to support your forearm while delivering electrical stimulation to the nerves of the muscles that flex your hand. The flexor support includes two electrode bases: #4 and #5. See Figure 5-3.



Figure 5-3: Orthosis flexor support.

If you have a small wrist, your clinician may have fit an FPL panel to the Orthosis flexor support. The FPL panel fills excess space in the region of the #5 electrode base. See Figure 5-4.



Figure 5-4: Orthosis flexor support with an FPL panel.



Orthosis Extensor Wing

The extensor wing delivers electrical stimulation to the nerves of the muscles that extend your hand.

The extensor wing features:

- Two electrode bases: #1 and #2. See Figure 5-5.
- A wing release handle.
- A wing arm.





Wing Release Handle

The wing release handle is used to open the extensor wing. See Figure 5-6.

When the wing release handle and wing arm are squeezed together, the extensor wing lifts open.



Figure 5-6: Orthosis wing release handle.



Wing Arm

The wing arm is used to close the extensor wing. See Figure 5-7.

When the wing arm is pushed down, the extensor wing clicks. The extensor wing is sufficiently closed when no more clicking can be heard.



Figure 5-7: Orthosis wing arm.

Fitting Panels

If your fitting panels detach from your orthosis, please follow the directions below on how to reattach the fitting panels.

Extensor Fitting Panel

- 1. With the Orthosis wing open, align the extensor fitting panel to the extensor wing. See Figure 5-8.
- 2. Make sure the lip of the fitting panel rests outside the wing.
- 3. Grasp the extensor fitting panel and the extensor wing and gently press on the fitting panel until it clicks into place.



Figure 5-8: Reattaching the extensor fitting panel.



Flexor Fitting Panel

- 1. With the Orthosis wing open, align the flexor fitting panel to the flexor support. See Figure 5-9.
- 2. Make sure the lip of the fitting panel rests outside the edge of the flexor support.
- 3. Grasp the edge of the flexor fitting panel and the edge of the flexor support and gently press together until the fitting panel clicks into place.



Figure 5-9: Reattaching the flexor fitting panel.

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



Spiral End of the Orthosis

The spiral end of the Orthosis supports the hand. It also delivers stimulation to the nerves of the muscles that move the thumb.

The spiral end features: See Figure 5-10.

- A thenar.
- A wrist bridge.
- A trigger button.
- An Orthosis wrist strap attachment ring.
- An Orthosis wrist strap attachment bar.



Figure 5-10: Spiral end of the Orthosis.



Thenar

The thenar is for controlling thumb movement and is available in regular and large sizes. It has a snap where the thenar cloth electrode is placed. When the Orthosis is positioned correctly, the thenar cloth electrode should rest at the base of your thumb. See Figure 5-11.



Figure 5-11: The thenar (inset) and placement of the thenar.



CAUTION: Do not operate the NESS H200 Wireless System without a thenar cloth electrode in place.

H200° Wireless

Wrist Bridge

The wrist bridge wraps around the back of your wrist. See Figure 5-12.

The wrist bridge:

- Stabilizes the Orthosis on your hand.
- Supports your wrist in an extended position.
- Helps to keep your wrist extended during finger opening and closing.

The wrist bridge has a cushioned wrist insert on the underside to keep the H200 Wireless Orthosis positioned against your wrist.



Figure 5-12: The H200 Wireless Orthosis wrist bridge.



Trigger Button

The trigger button is used to turn on/pause stimulation. See Figure 5-13. The trigger button works like the trigger button on the Control Unit.

Note: If the trigger button on your Orthosis is disabled, consult your clinician.



Figure 5-13: The H200 Wireless Orthosis trigger button.

Wrist Strap Attachment Ring

The wrist strap attachment ring is for hooking the Orthosis wrist strap to the Orthosis. See Figure 5-14.



Figure 5-14: Hooking the Orthosis wrist strap to the attachment ring.



Wrist Strap Attachment Bar

The wrist strap attachment bar is for securing the Orthosis wrist strap around the wrist. See Figure 5-15.



Figure 5-15: Securing the Orthosis wrist strap.

Status Light

The status light (i) communicates system status and error messages. See Table 5-1.

Stimulation Light

The stimulation light communicates whether stimulation is on, off, or paused. See Table 5-1.

Note: The illustrations in Table 5-1 are for a left H200 Wireless Orthosis.



Left Orthosis	Display	Description	Definition
Status Light		FLASHES GREEN	System On
		FLASHES YELLOW	Low Battery
		ALTERNATELY FLASHES YELLOW and GREEN	Battery Charging
		SOLID GREEN	Battery Fully Charged; Registration Successful
		FLASHES RED	Faulty Electrode Contact
		SOLID RED	Hardware/Software Error; Charging Error
Stimulation Light		SOLID YELLOW	Stimulation Paused
		FLASHES YELLOW RAPIDLY	Stimulation On

Table 5-1: H200 Wireless Orthosis displays.

H200° Wireless

Audio Alerts

The Orthosis will beep when:

- The NESS H200 Wireless System is turned on/off.
- The Orthosis stimulation unit malfunctions.
- Stimulation is turned on/off or paused.
- There is a faulty electrode contact.
- The battery charge level is low.
- A charging error occurs.
- A charger is connected.



Rechargeable Battery and Charging Port

The Orthosis has a rechargeable battery. The charging port is located at the back of the Orthosis. See Figure 5-16.



Figure 5-16: H200 Wireless Orthosis charging port.