

NEURONODE
OPERATOR'S MANUAL

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Revision C

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The NeuroNode is listed and registered with the FDA as a Powered Communication System and a Powered Environmental Control System and certified by the Australian Government Department of Health Therapeutic Goods Administration.

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Product design and specifications may be changed without notice.

Patent Pending.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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1.0 How It Works

The NeuroNode uses the body's bioelectrical EMG (electromyographic) signals to completely control a computer to generate speech, browse the web, listen to music, and more. It is alternative/augmentative communication (AAC) technology that is easy to use and works for conditions like ALS (Lou Gehrig's Disease), MND, SCI, or cerebral palsy.

The NeuroNode Controller Application, installed on the user's chosen iOS device, is used to set the signaling threshold while continuously graphing the EMG data stream. This smart application automatically re-calibrates to adjust to the user's strength and energy level without assistance from a caregiver or clinician.

The NeuroNode Assessment System includes an Apple iPad when requested or required. Apple's Switch Control is integrated with the iPad, giving users and therapists versatile scanning technology to enter text, generate speech, and more.



Clinical-grade EMG electrodes snap to the bottom of the NeuroNode. The electrodes are non-invasive and simply adhere to the surface of the skin, anchoring the NeuroNode directly to the muscle site.

At the core of the NeuroNode System is the NeuroNode, a wireless, non-invasive EMG switch that communicates with a computer, tablet, or mobile phone via that device's Bluetooth Smart System.

2.0 Overview of Product



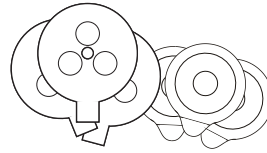
2.1 Overview of Accessories



Battery Charger



Rechargeable Batteries



Electrode Kit

Item	What it does
Leadwire Adapter Base	The Leadwires connect to the Leadwire Adapter Base of the NeuroNode. The three snap-leads on the other end of the Leadwires attach to electrodes on the user's skin.
Rechargeable Lithium-Ion Battery (4)	The NeuroNode comes with 4 rechargeable lithium-ion batteries.
Battery Charger	The lithium-ion Battery Charger allows for charging two batteries while using the previously charged batteries.
Electrode Kit	A starter electrode kit is included with the NeuroNode System. Ideally the optimal electrode type will be determined by the clinician.



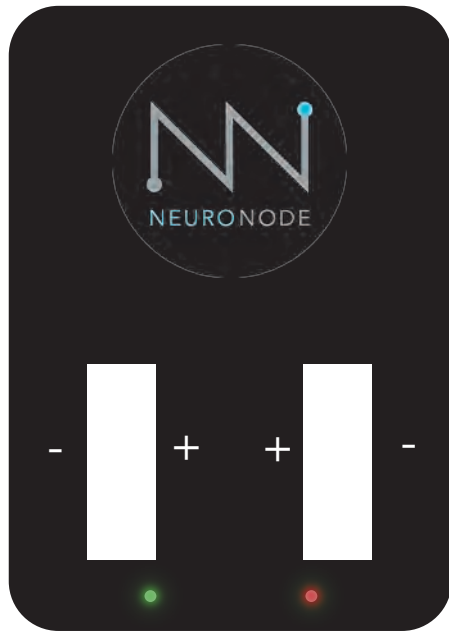
Apple iPad



Apple Switch Control

Item	What it does
Apple iPad	The NeuroNode gives the user complete control over the device without requiring extensive computer experience. Here are just a few examples of what persons with paralysis, loss of speech, or loss of motor control can do with the NeuroNode: Communicate with family, caregivers, and clinicians using text-to-speech [TTS]; send text messages and email; surf the web; watch videos and movies; listen to music, radio, and podcasts; read the news; play video games; use environmental controls; and participate in the classroom using telepresence robots and assistive technology.
Apple Switch Control	The Apple iPad comes with Apple's Switch Control word prediction and text-to-speech software. With Switch Control, NeuroNode enables users to write and have their words spoken by a choice of voices. The prediction accuracy will increase as the software learns the words and phrases that are used most often. Switch Control features include: Self-learning word prediction, history and sentence prediction, with a choice of an English, Spanish, French, German, Italian, Swedish, Norwegian, Danish or Dutch user interface.

3.0 Accessories



3.1 Charging the Battery

Using the provided cable, connect the charger to the provided wall port.

Carefully insert the rechargeable Lithium-Ion batteries into the charger. Be sure to align the positive sides of the batteries with the "+" labels on the charger.

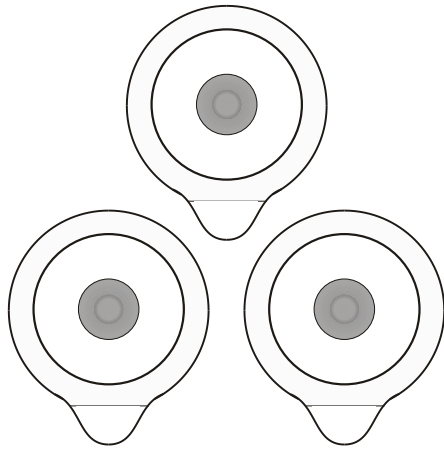
Two batteries must be inserted into the charger in order to charge.

A red light indicates charging, a green light indicates charged.

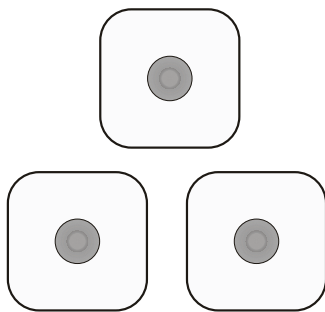


3.2 Changing the Battery

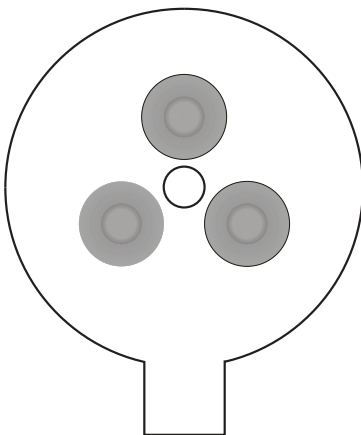
- A. Carefully remove the battery cover on the NeuroNode.
- B. If replacing the battery, gently lift the discharged battery upward and slide it out from beneath the "+" terminal spring.
- C. Place the fully charged, rechargeable lithium-ion battery beneath the "+" terminal spring, with the positive side facing up.
- D. The initiating lighting sequence should begin, indicating a powered NeuroNode. Carefully replace the battery cover on the NeuroNode to start or continue the session.



Individually Gelled Electrodes
(size will vary)



Individually Gelled Electrodes
(size will vary)



Single Adhesive Disk with 3 Snap Connectors
(non-gelled)

3.3 Electrode Options

Good skin prep and proper electrode arrangement are all-important. EMG signals measure in the millionths of a volt, and extraneous electrical signals are everywhere—from cell phones to transmission towers to fluorescent lights. Proper electrode set-up helps to ensure that the NeuroNode circuitry can tease out these unwanted signals, leaving only the EMG signal to be processed as the "switch" for the NeuroNode Application.

Use a skin prep to remove oils, dirt, and dead skin cells from the surface of the skin. At the very least, slightly abrade the Target Muscle Site with a dry towel or a washcloth. This will help to ensure good contact is made between the skin and the conducting surface of the electrodes.

! THE SINGLE ADHESIVE DISK WITH 3 SNAP CONNECTORS IS THE MOST CONVENIENT ELECTRODE INTERFACE; HOWEVER, SOME USERS WILL NEED TO USE INDIVIDUAL GELLED ELECTRODES TO PRODUCE A RELIABLE EMG SIGNAL.

! PLEASE CONTACT CONTROL BIONICS FOR ELECTRODE PART NUMBERS AND PRICING.

3.4 Leadwire Adapter Base

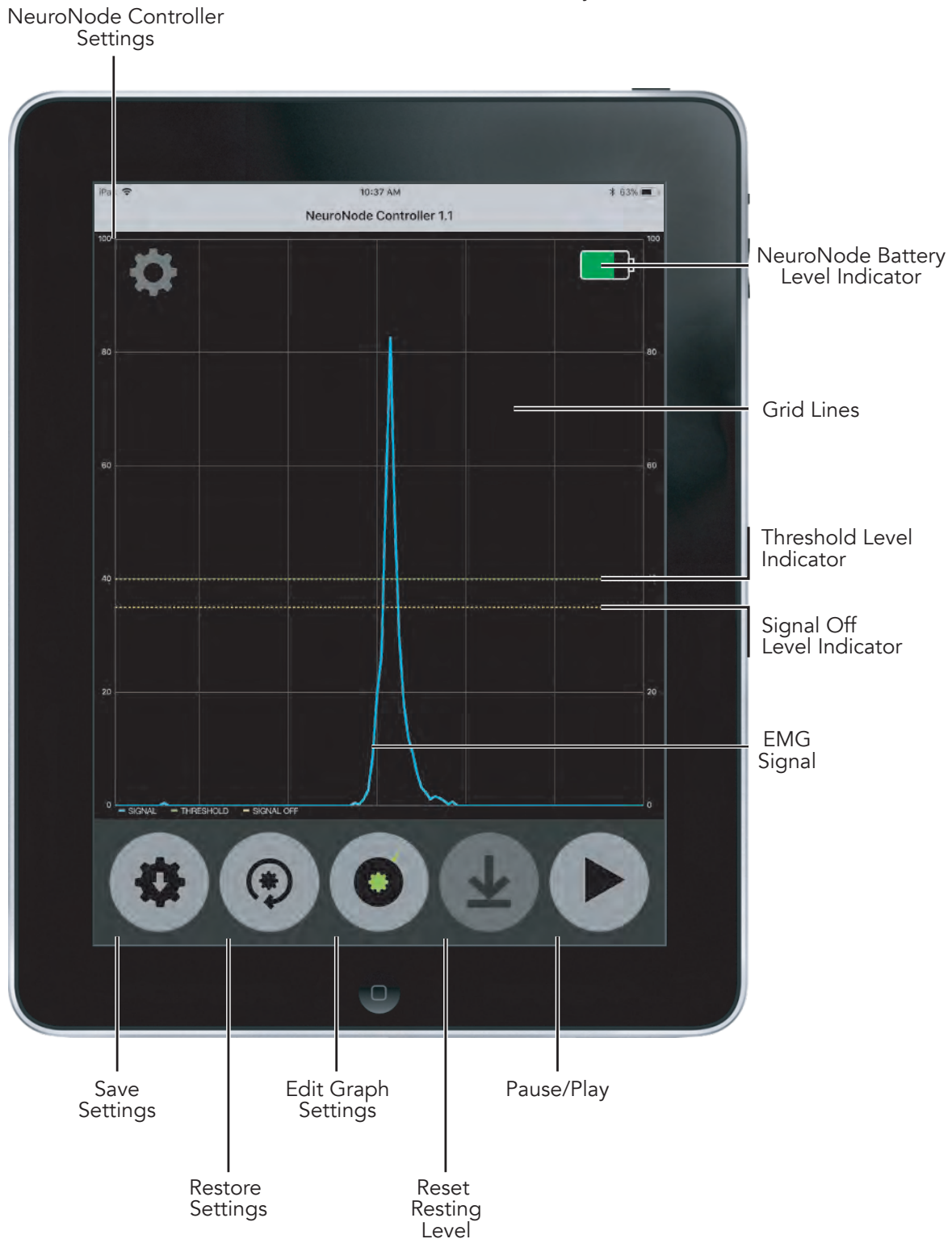
In order to use Leadwires for individual electrodes, the NeuroNode comes with a Leadwire Adapter Base. Simply orient the plastic keying points on the face of the adapter plate with the matching keying points on the bottom of the NeuroNode.

Take care that the two pieces are aligned before snapping them together.

Observe the black and white color coding of the Leadwires (two white, one black) and match them to the accompanying connectors exiting the Adapter Plate.

3.5 NeuroNode Controller Application

The NeuroNode EMG Augmented Assistive Communications (AAC) Controller Application is designed to pair with the Control Bionics NeuroNode assistive control device. The application allows the user to adjust parameters and monitor EMG signal activity to ensure optimal signal outcomes that provide efficient and effective control of an iOS device utilizing Apple's Accessibility Suite.



3.5 NeuroNode Controller Application

**Save Settings:**

Touching this button will direct the NeuroNode to store the current Switching parameters (see Display Settings) once the device's Bluetooth is turned off. On power-up, the NeuroNode will load these saved settings to be used as the working Switching parameters.

**Restore Settings:**

Touching this button will set the Application and the NeuroNode working Switching parameters to the parameters read from the NeuroNode when the Application was initially launched.

**Reset Resting Level:**

Touching this button will set a new baseline based on the user's current EMG resting level. The button is grayed-out if Auto Baseline is not turned on.

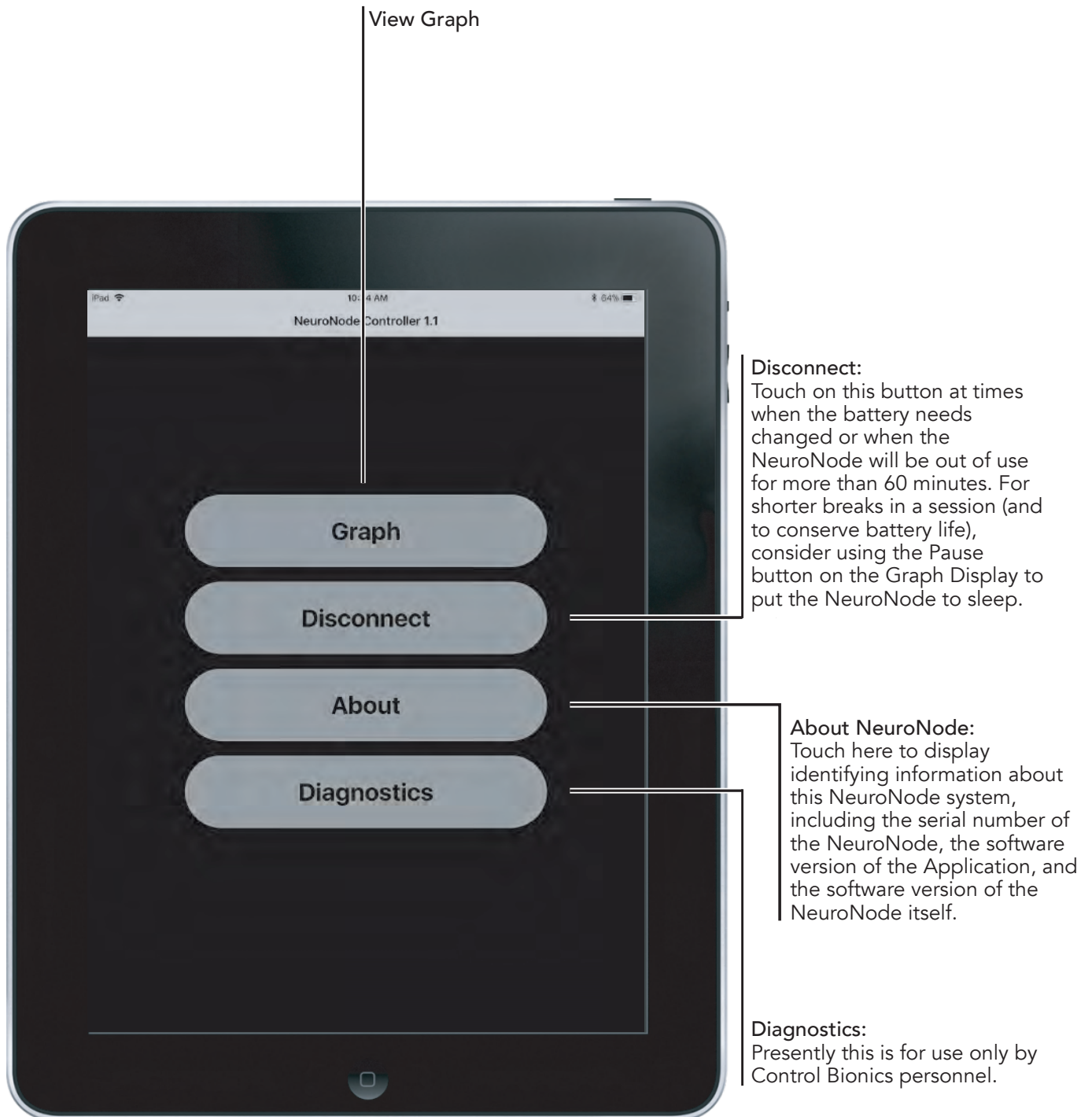
**Pause/Play:**

Touching this button will toggle the real-time EMG graph on (sweeping) and off (paused). Pausing the graph will put the NeuroNode in a low-power mode, nearly tripling its battery life. Also, when Paused, the NeuroNode will be disconnected as an input device. This can be helpful for performing maintenance or updates to the iPad that require the touchpad.

**Graph Settings:**

Refer to Section 3.5.2 to learn more about the NeuroNode Controller Graph Settings.

3.5.1 NeuroNode Controller Settings



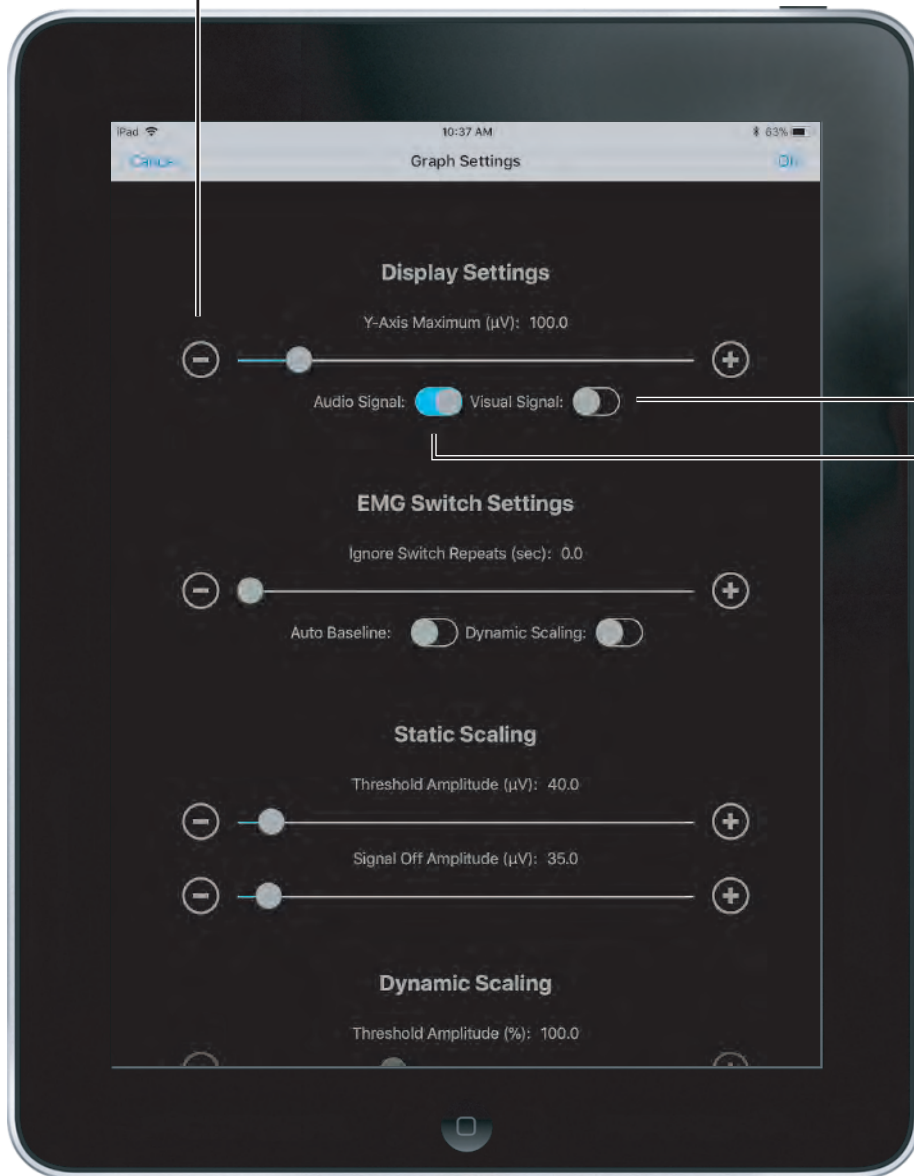
3.5.2 Graph Settings

Access the Graph Settings by selecting the Graph Settings icon in the center of the Applications Icon dock.

Continue in this section to understand the various Graph Settings options.

Y-Axis Maximum:

Sets the full-scale range of the graph. Setting this parameter to 100 microvolts, for example, will allow EMG signals of 0 to 100 microvolts to fully appear on the graph.



Visual Signal Indicator:

Directs the Application to flash the display when a Switch is made (i.e., when the signal crosses above the Threshold Amplitude).

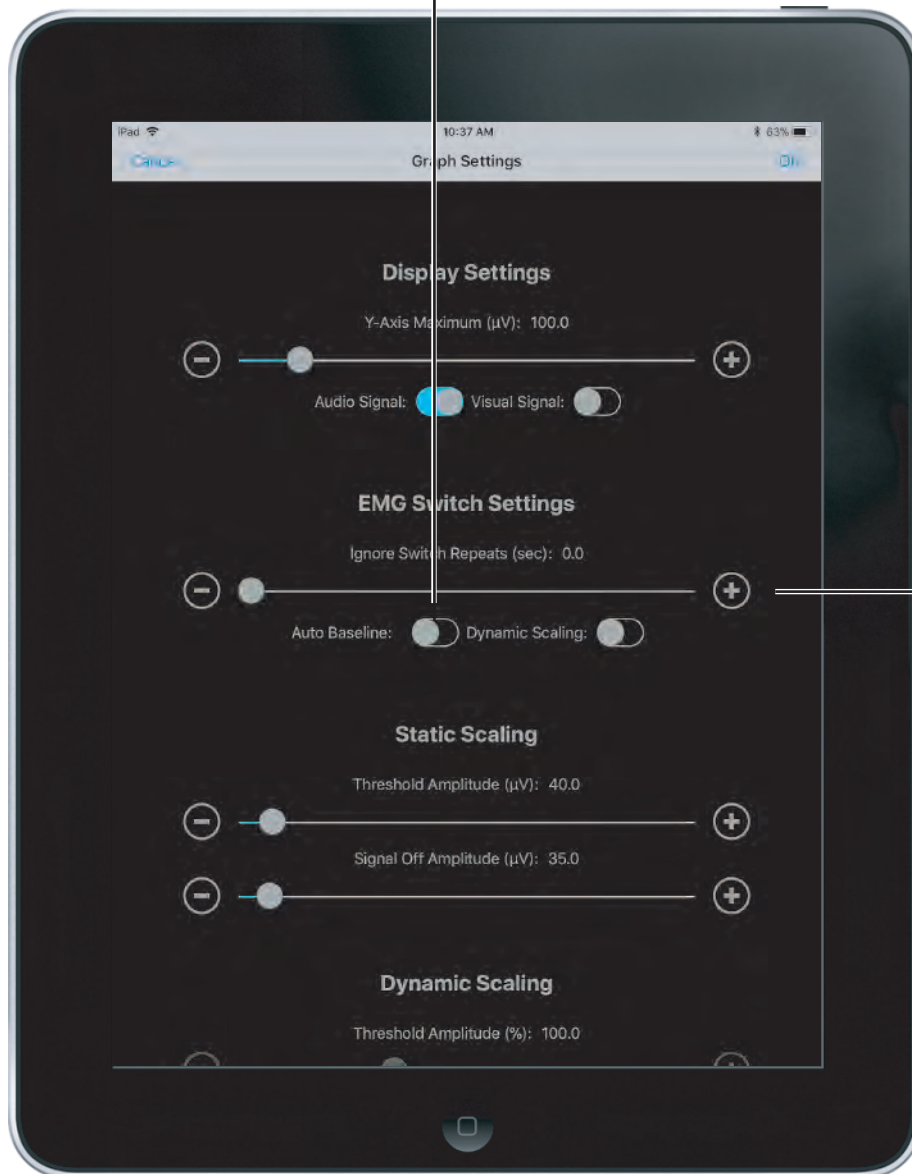
Audio Signal Indicator:

Directs the Application to beep when a Switch is made (i.e., when the signal crosses above the Threshold Amplitude).

3.5.2 Graph Settings

Auto Baseline Indicator:

Sets the NeuroNode to a mode of operation where it will set a new baseline based on the user's current resting level. If the resting level decreases, the NeuroNode will use the new resting level as the baseline.

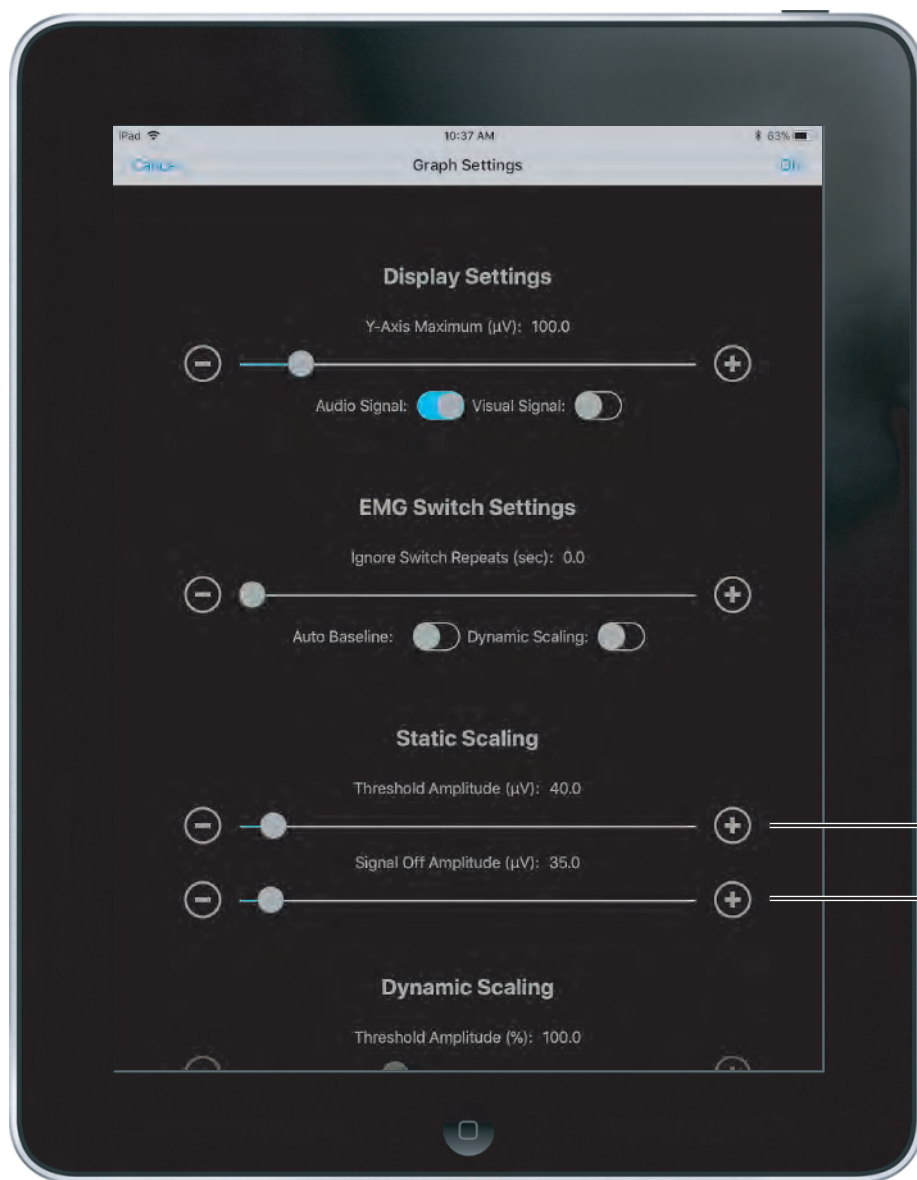


Ignore Switch Repeats:

This setting is helpful when the user is getting "false" Switches after the original Switch. These unintended Switches can be the result of fasciculation or an inability to relax after making the original Switch. Most Assistive Technology software suites have a similar setting, but the implementation details can vary. As offered by the NeuroNode Application, saving the Ignore Switch Repeats setting to the NeuroNode can provide more consistent Switching performance across multiple platforms and applications.

3.5.2 Graph Settings

Static Scaling imposes fixed criteria that the EMG signal must satisfy in order to be counted as a Switch. These criteria remain unchanged over time.

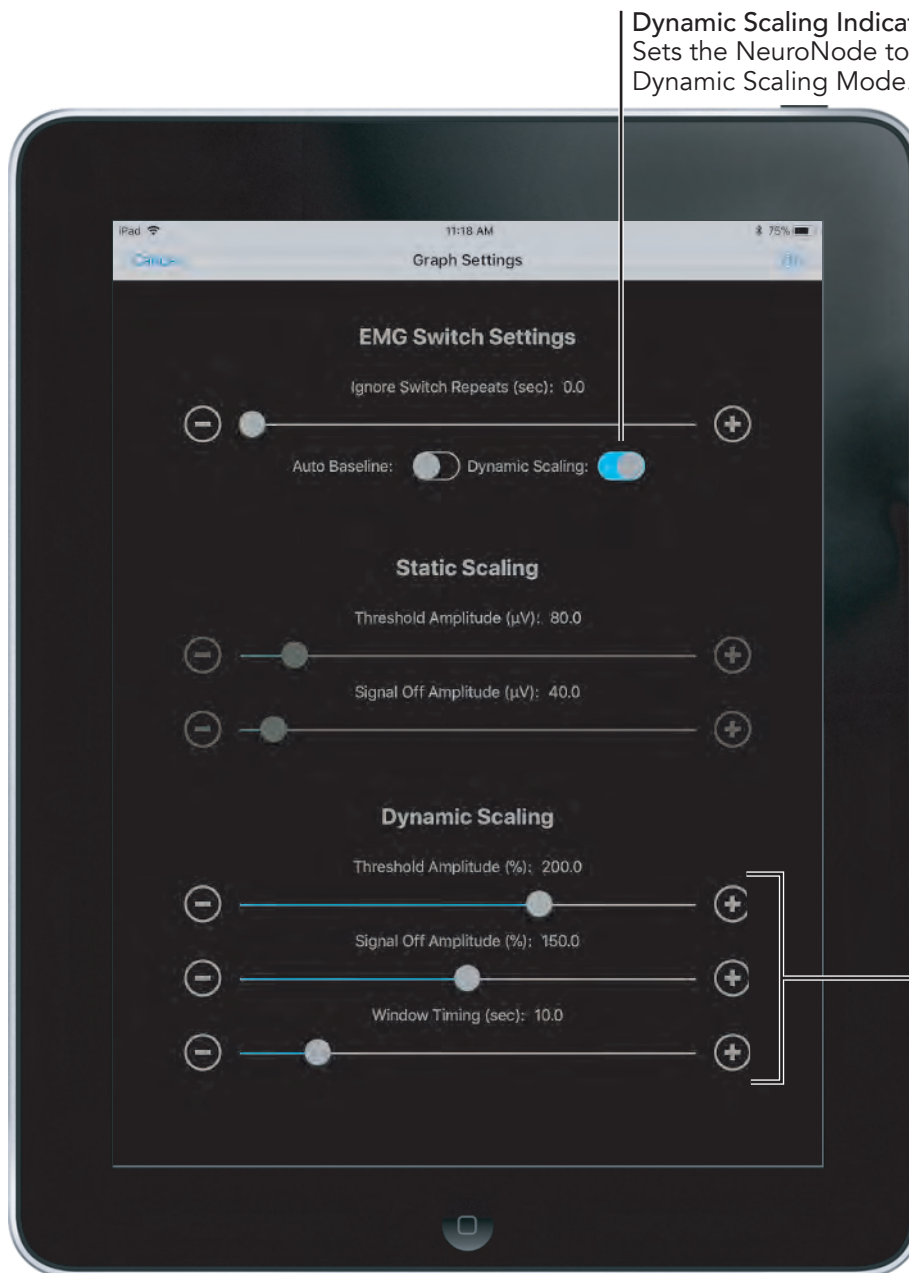


Threshold Amplitude:
Sets the EMG amplitude the signal must cross above in order to be counted as a Switch.

Signal Off Amplitude:
Sets the EMG amplitude a signal counted as a Switch must fall below before a new Switch can be counted. Setting this parameter at the same level as the Threshold Amplitude will remove Signal Off Amplitude as a Switching determiner.

3.5.2 Graph Settings

Dynamic Scaling changes the criteria over time for determining if a Switch has been made based on the user's performance. The EMG resting level and the EMG signaling level are both used in this ongoing calculation. As such, the NeuroNode will make it easier to Switch as the user fatigues, or as the electrode interface conditions change.



Dynamic Scaling Indicator:
Sets the NeuroNode to the Dynamic Scaling Mode.

Threshold Amplitude:
Sets a scale for use when in the NeuroNode's Dynamic Scaling Mode. The lower the level, the more sensitive the NeuroNode will be in allowing a Switch to be made.

Signal Off Amplitude:
Sets the level a Switch signal must drop below before another Switch is allowed. Setting this at 100% will set the Signal Off Amplitude to the user's ongoing average Resting Level. Setting this parameter at the same level as the Threshold Amplitude will remove Signal Off Amplitude as a Switching determiner.

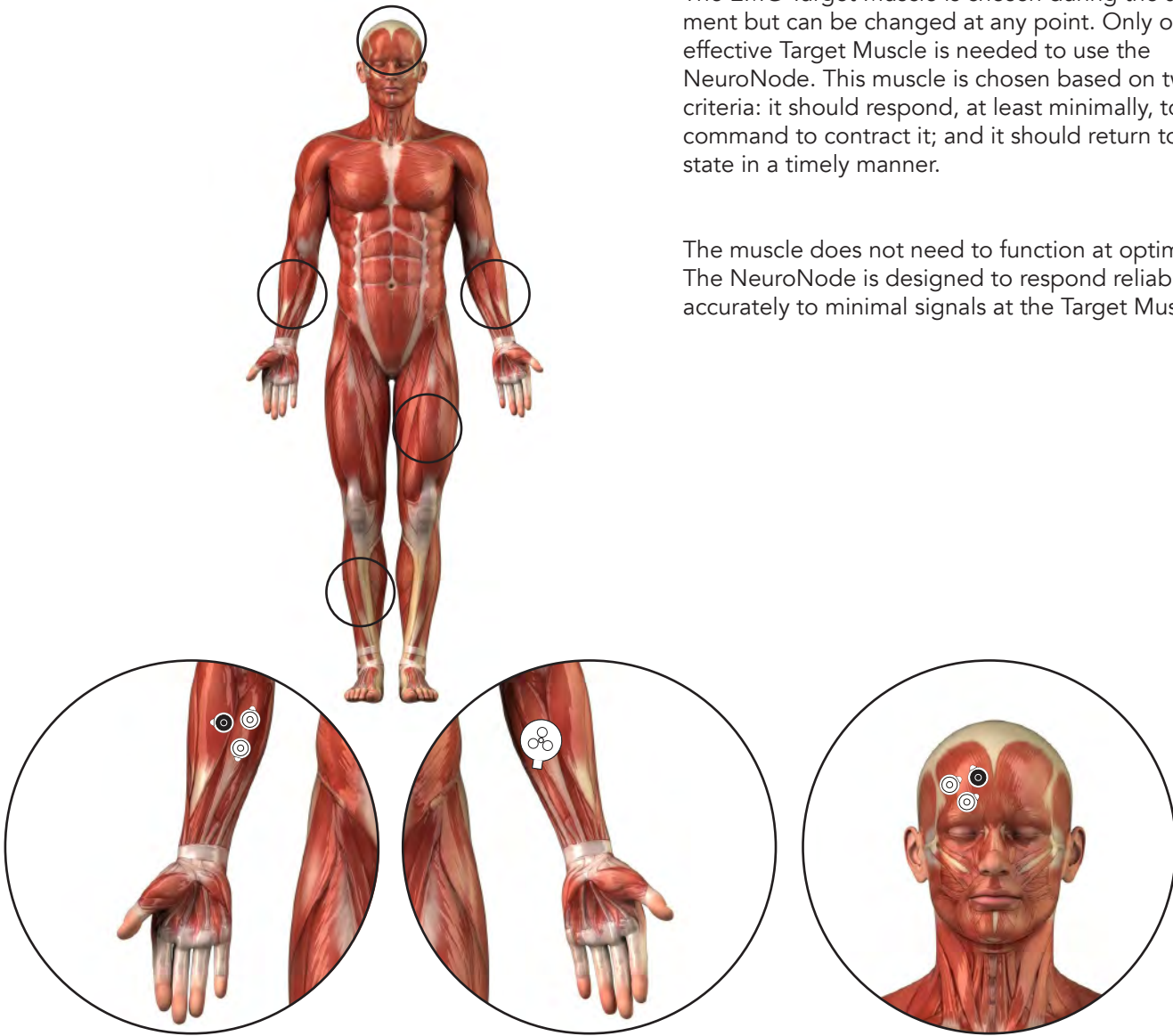
Window Timing:
The Dynamic Scaling Window slider sets the amount of signaling activity the NeuroNode will examine in order to adjust the levels for Threshold Amplitude and Signal Off. A shorter window duration will make the NeuroNode respond faster to changes in EMG signaling and resting levels. A longer duration will allow the NeuroNode to respond more accurately to long-term trends in the EMG levels.

4.0 Getting Started

4.1 Electrode Placement

The EMG Target Muscle is chosen during the assessment but can be changed at any point. Only one effective Target Muscle is needed to use the NeuroNode. This muscle is chosen based on two criteria: it should respond, at least minimally, to a command to contract it; and it should return to a resting state in a timely manner.

The muscle does not need to function at optimal levels. The NeuroNode is designed to respond reliably and accurately to minimal signals at the Target Muscle site.



4.2 Connecting the User

Although the placement of the NeuroNode does not have to be exact, there are some general guidelines for placing the device onto the muscle site.

When using a "Triple" electrode, the two active electrodes are located on the bottom of the NeuroNode, running parallel to the battery cover.

When using "Single" electrodes and the Leadwire Adapter Base, the two active electrodes (white snaps) should be placed along the length of the muscle which is being used to generate a "Switch." The reference electrode (black snap) should be placed, forming a triangle, to one side or another of the two active electrodes.

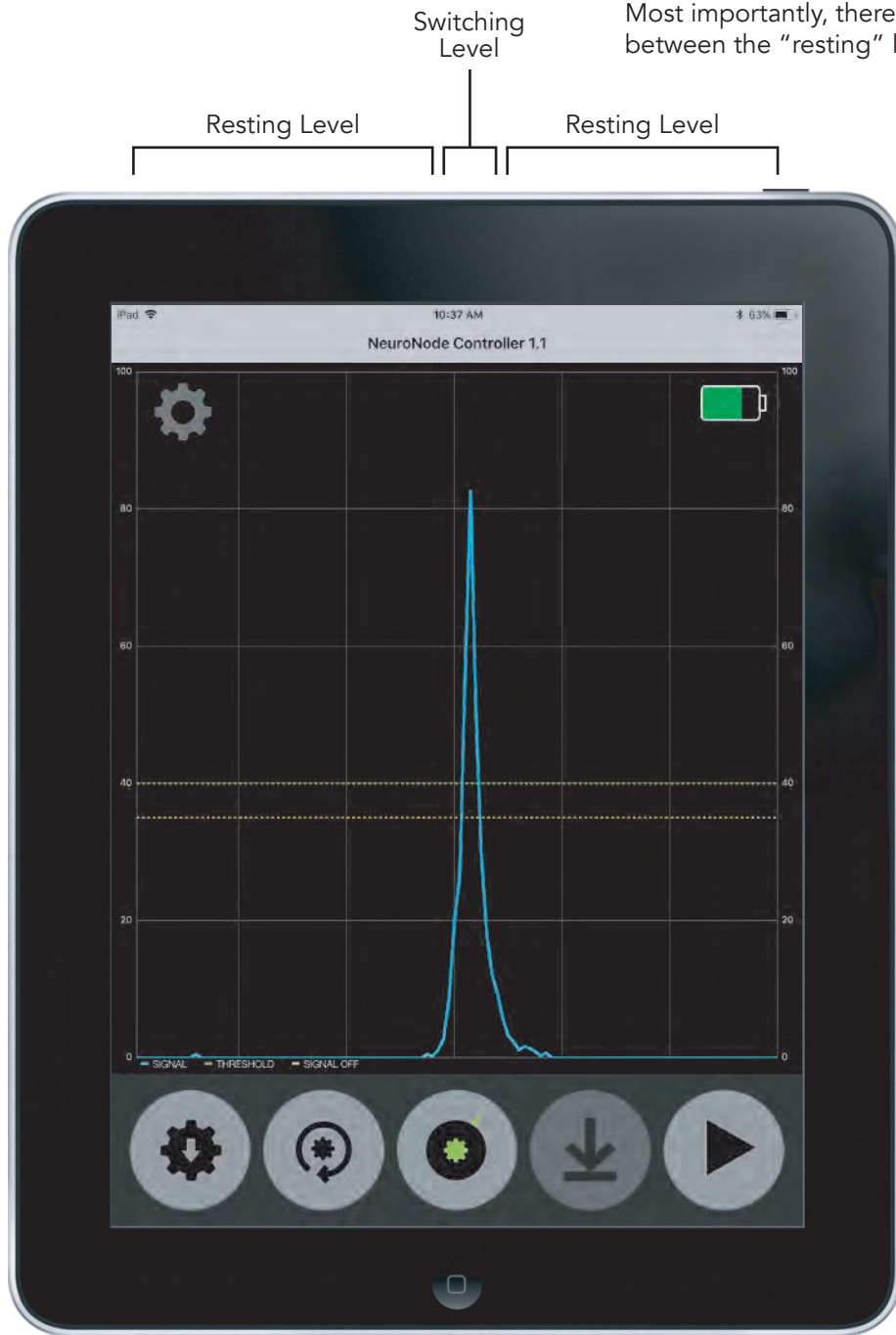


4.3. NeuroNode Fundamentals

4.3.1 Establishing a Good Signal

Before starting Switch Control, it is important to establish a good signal with the NeuroNode. This will become the user's "Switch" for selecting items on the iPad.

Most importantly, there should be a clear delineation between the "resting" level and the "switching" level.



4.3. NeuroNode Fundamentals

4.3.2 Signal Indicator

The NeuroNode is built to be a stand-alone EMG switch, capable of pairing with a variety of devices.



IF USING THE NEURONODE WITH AN iOS DEVICE, IT IS BEST TO SET THE SENSITIVITY WITHIN THE NEURONODE CONTROLLER APPLICATION.

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As a stand-alone switch, the NeuroNode has built-in indicators in order to visually cue the user at the instance of a good signal or switch.










A green light indicates an EMG signal was counted as a switch.

A blinking red light indicates the NeuroNode is Bluetooth broadcasting.

Upon powering the NeuroNode, the device will go through a launch sequence as a series of colors: red, green, blue, and white.

After passing through this launch sequence, the NeuroNode will remain on a solid color for a few seconds. This color indicates the set Threshold level. See the guide below to determine the signal level that correlates to the indicated color.



 10 Microvolts	 Dynamic Scaling
 20 Microvolts	 Custom Static Scaling
 50 Microvolts	 EMG Signal Made
 100 Microvolts	 Bluetooth Broadcasting
 200 Microvolts	

4.3.3 Battery Management Signal Indicator

The NeuroNode Signal Indicator light will start blinking yellow when the battery voltage drops below 3.5 Volts, indicating that the battery should be replaced within 10-15 minutes. The NeuroNode will remain usable and continue blinking yellow until the battery voltage falls to 3.4 Volts.

When the NeuroNode battery voltage drops below 3.4 Volts, the Signal Indicator light will remain solid yellow and the device will no longer be usable.

4.3. NeuroNode Fundamentals



4.3.4 Manually Changing the Threshold

In order to manually set the user's Threshold, follow these steps:

1. Ensure the device Bluetooth is "OFF."
2. Power on the NeuroNode by inserting the battery or performing a power cycle with the provided collar stay.



TO INITIATE A POWER CYCLE, INSERT AND THEN REMOVE THE COLLAR STAY, OR SHIM, FROM IN BETWEEN THE BATTERY TOP AND THE "+" TERMINAL SPRING.

3. Upon performing a power cycle on the NeuroNode, the device will go through a launch sequence as a series of colors: green, blue, red and white. After passing through this launch sequence, the NeuroNode will remain on a solid color for a few seconds. This color indicates the set Threshold level. Use the provided push-pin tool to cycle through the threshold colors (indicated in section 4.3.2) until the desired sensitivity is reached.

4. Attach the NeuroNode to the electrodes.

5. Attach the electrodes to the user's skin.

6. Test the user's signaling ability using the signal indicator light.



IF THE SIGNAL INDICATOR IS ALWAYS GREEN, SET THE THRESHOLD TO A HIGHER SCALE.



IF THE SIGNAL INDICATOR NEVER TURNS GREEN, SET THE THRESHOLD TO A LOWER SCALE.

7. Turn on the device Bluetooth.

4.4 Turning Switch Control On and Off

Turn Switch Control on and off following the steps in this section.

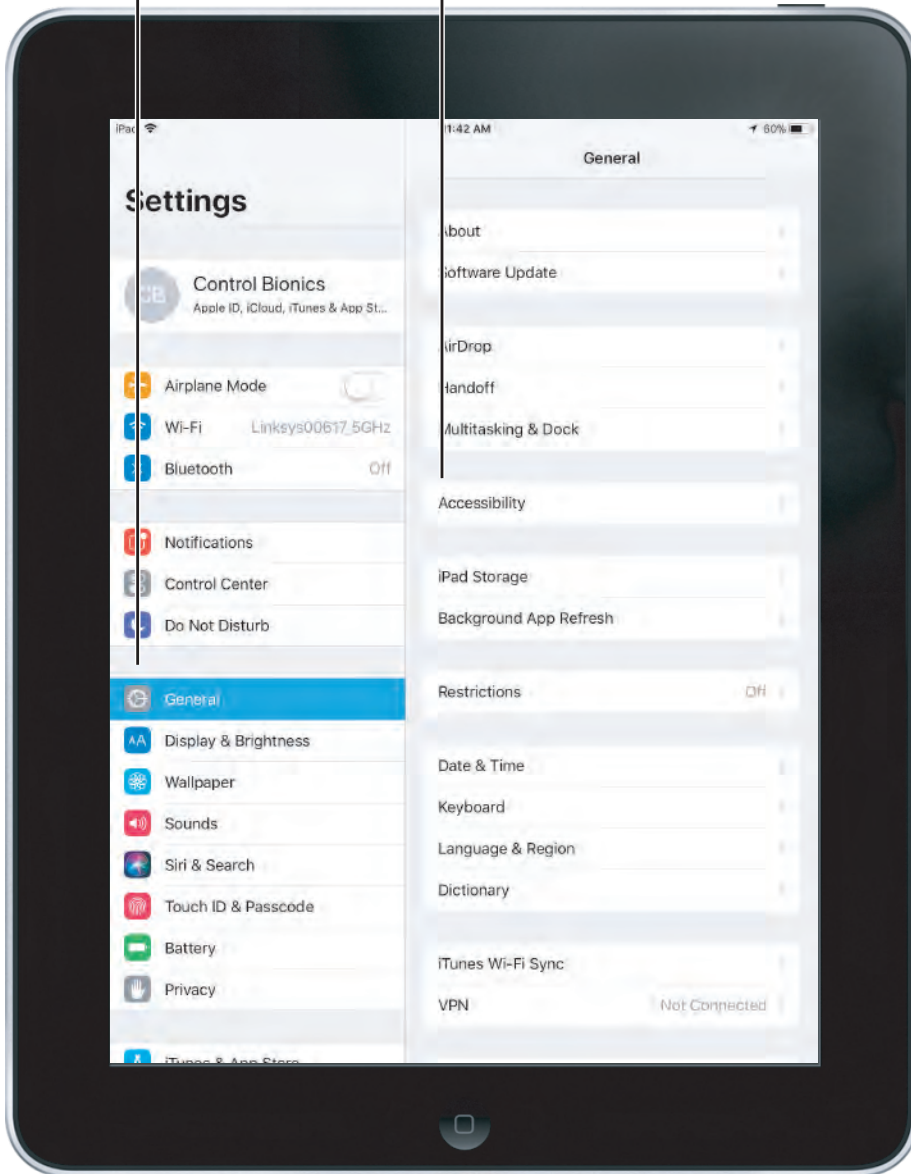
Step 1:
Select the Settings icon
on the iPad.



4.4 Turning Switch Control On and Off

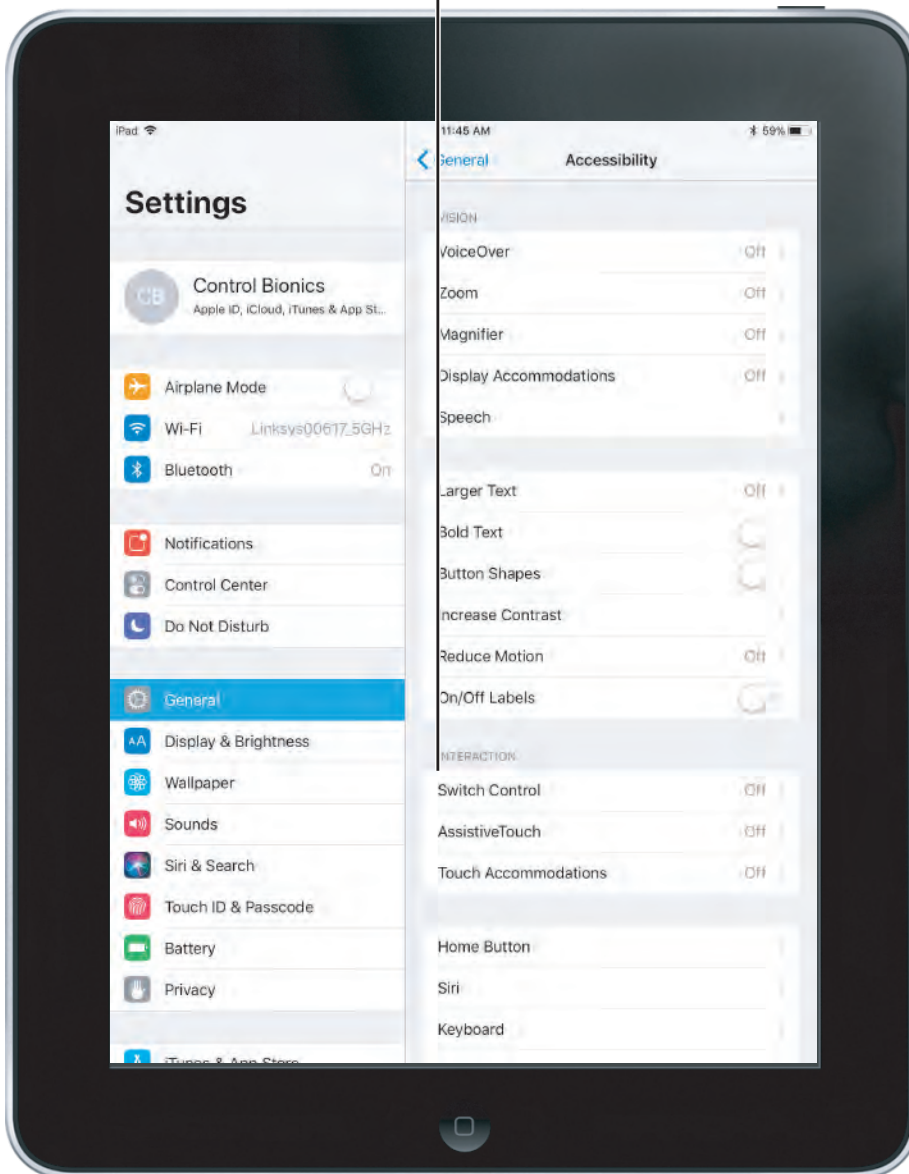
Step 2:
Select the General
tab within Settings

Step 3:
Select the Accessibility
Settings within the
General tab



4.4 Turning Switch Control On and Off

Step 4:
Select Switch Control
within the Accessibility
tab

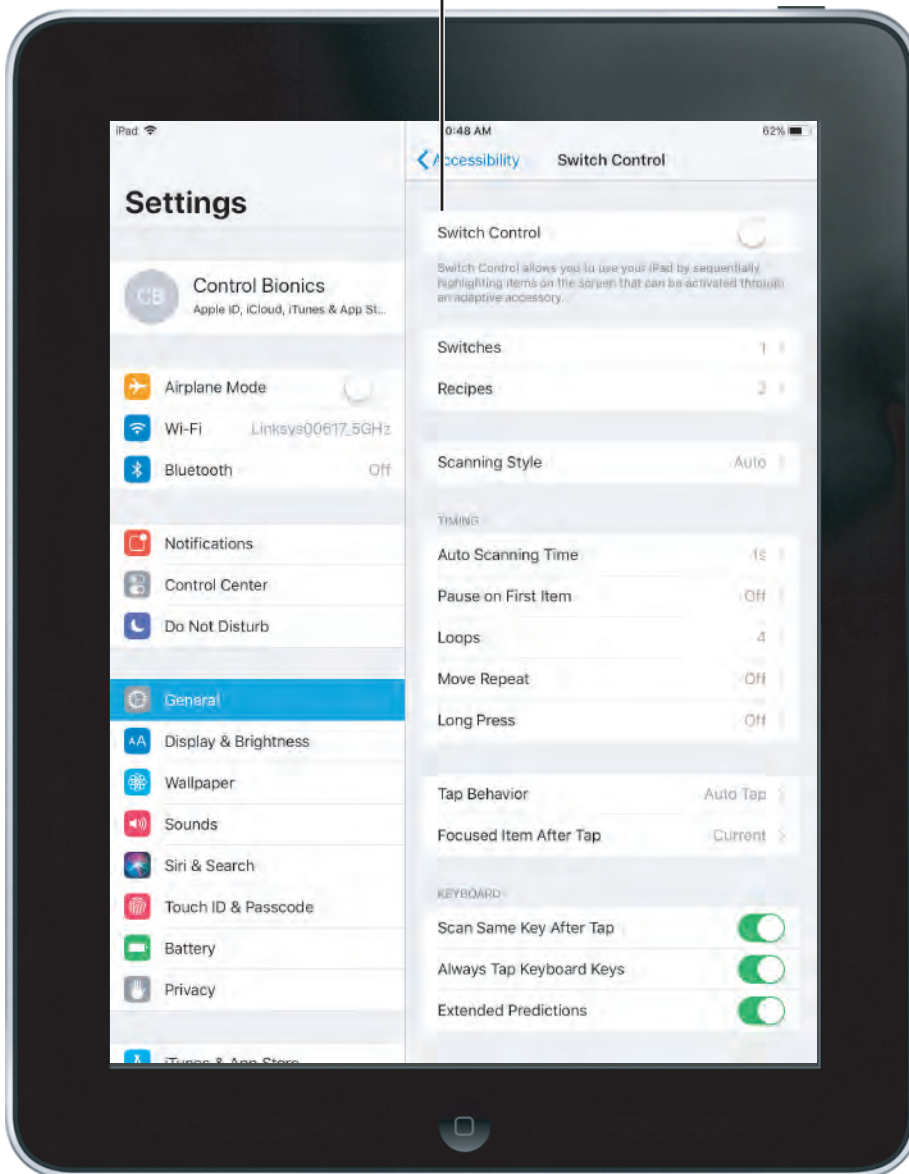


4.4 Turning Switch Control On and Off

A green Switch Control switch indicates Switch Control is on. A gray Switch Control switch indicates that Switch Control is off.

If the iPad was provided by Control Bionics, pressing the iPad's Home Button three times in quick succession will turn Switch Control on and off.

Step 5:
Tap on the Switch Control switch to turn on Switch Control

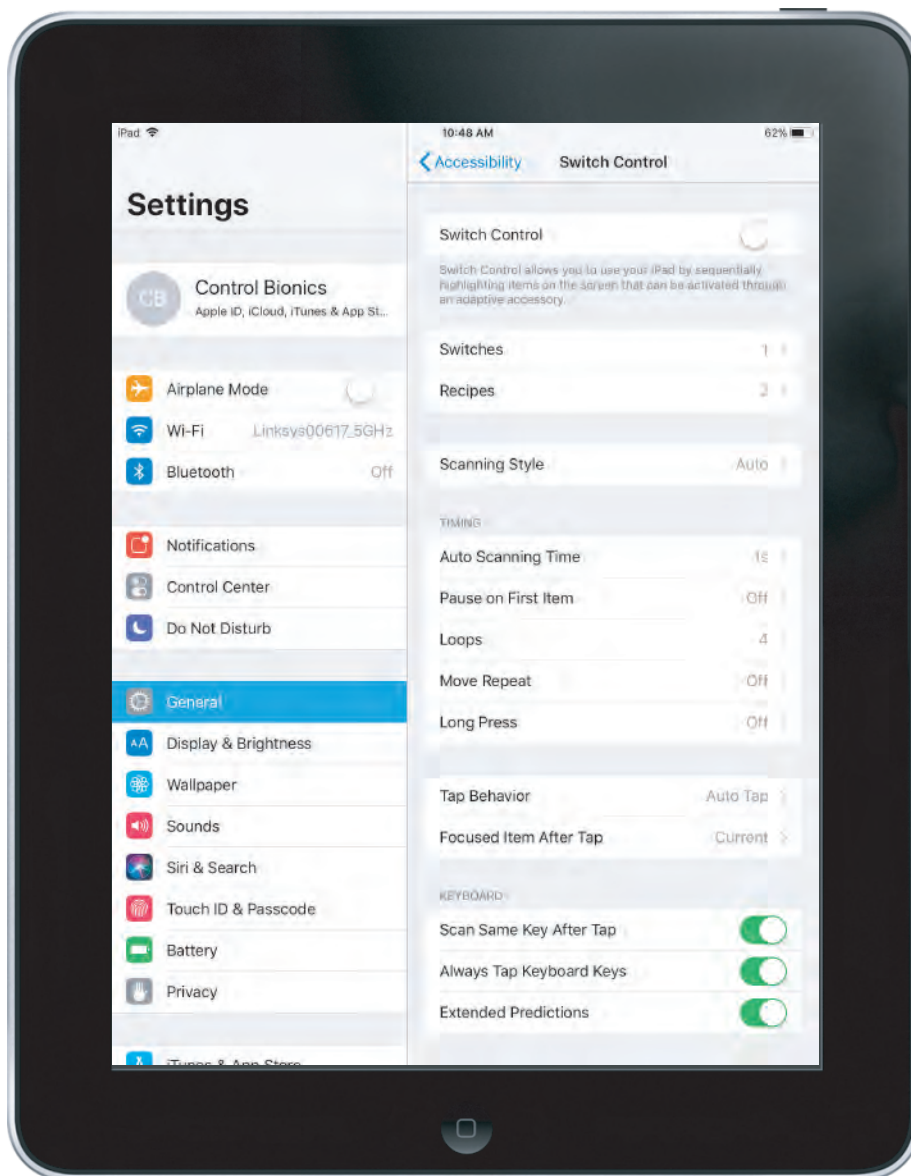


5.0 Accessibility Settings

5.1 Accessing Accessibility Settings

To access Apple's Switch Control and Accessibility settings, follow steps 1-4 outlined in section 4.4.

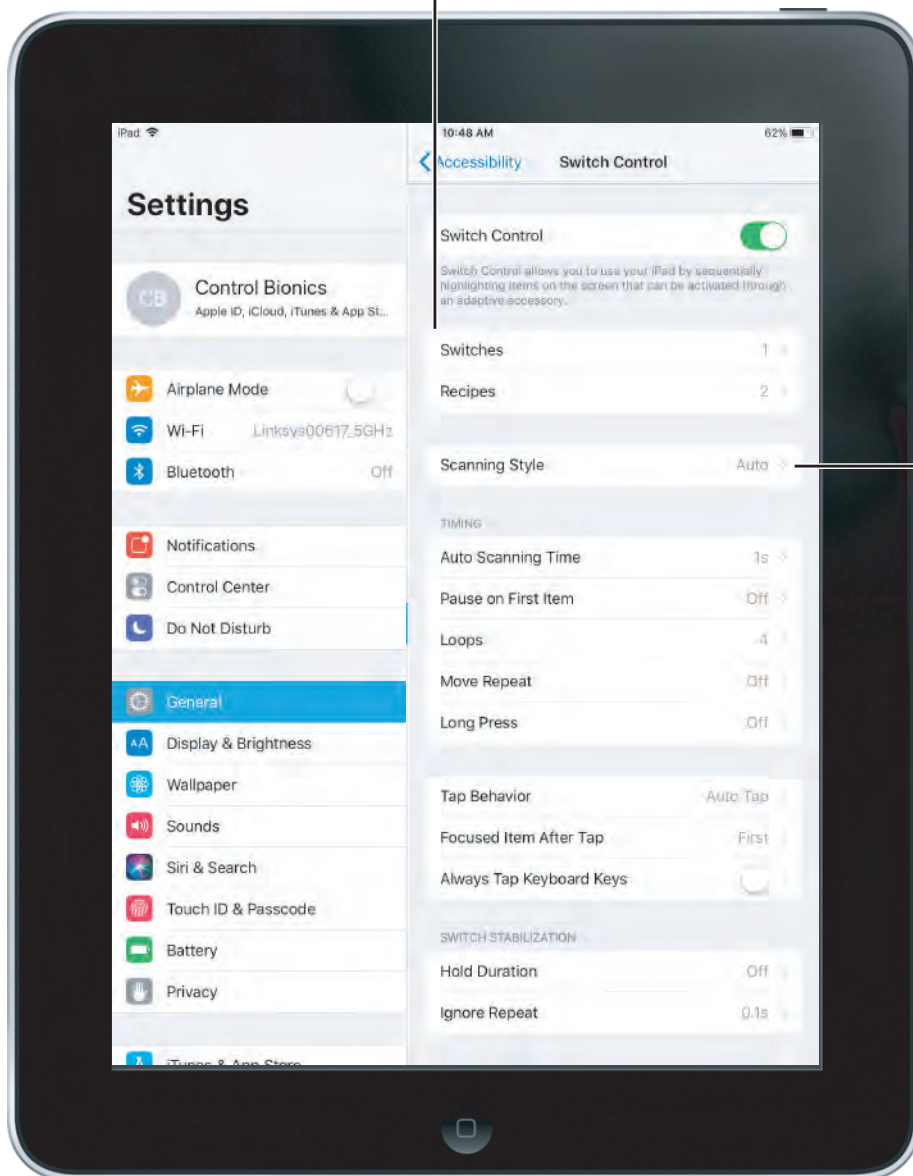
Continue in this section to understand the various settings listed within this Accessibility Menu.



5.2 Switch Control Settings

Switches:

Switch Control can be configured with multiple switches. For the NeuroNode the Switch Action should be Select Item.



Scanning Style:

Auto Scanning - this selection moves the focus while scanning after a set duration.

Manual Scanning - this selection requires a switch to be made in order to move focus, and another switch to be made in order to select an item.

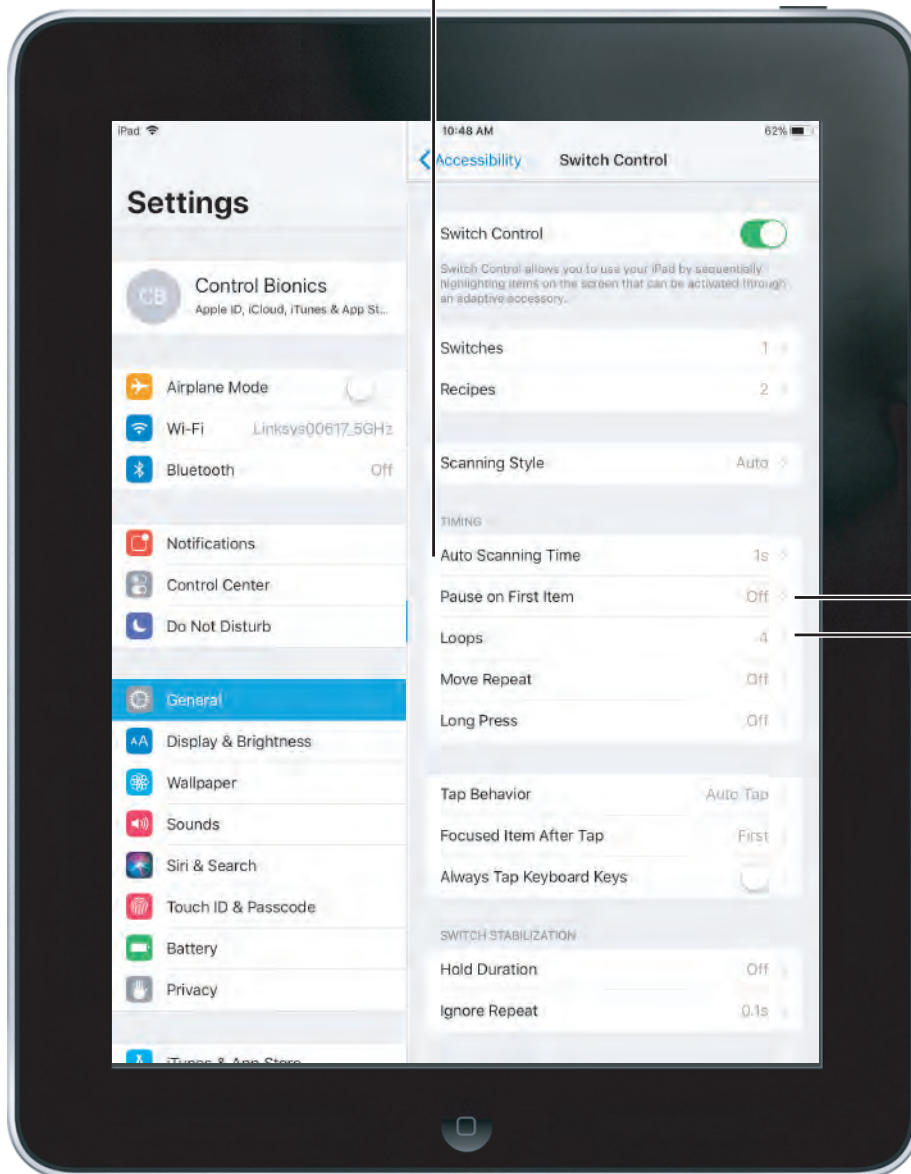
Single Switch Scanning - this selection requires a switch to be made in order to move focus. If no action is taken after a set duration, the item with focus is automatically selected.

For the NeuroNode the Scanning Style should be "Auto Scanning."

5.2 Switch Control Settings

Auto Scanning Time:

The number of seconds, up to 25, it takes to step from one item to another in a panel when using Auto Scanning Style.



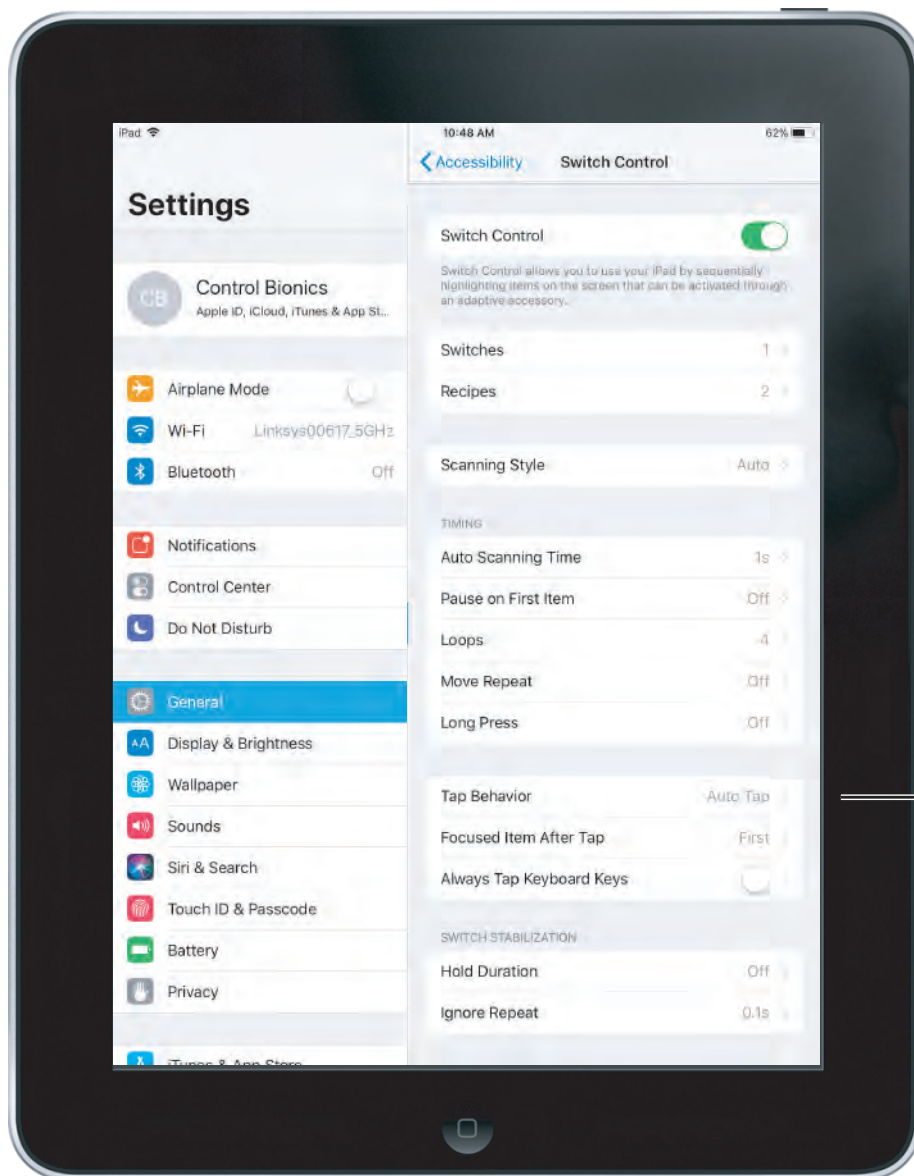
Pause on First Item:

The number of seconds, up to 8, that auto scanning stays on the first item in a panel, group, or user interface.

Loops:

This sets the number of times Switch Control repeats a scan.

5.2 Switch Control Settings

**Tap Behavior:**

This setting adjusts what happens when a switch is activated to select an item.

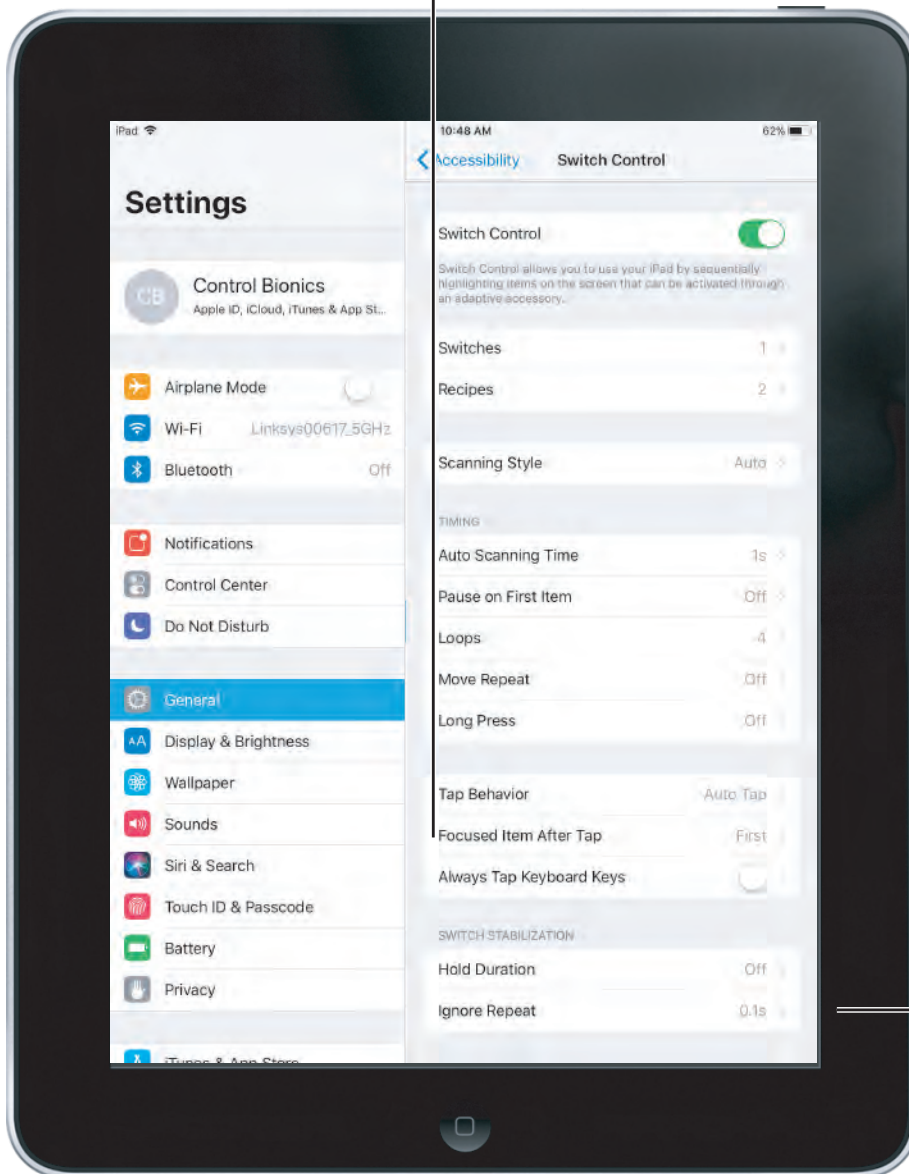
Default - the default setting will show the Scanner Menu upon selecting an item.

Auto Tap - this setting will automatically select the item unless another switch is made during the set duration, at which time the Scanner Menu will appear.

Always Tap - this setting will automatically select the highlighted item instead of showing the Scanner Menu. This setting only works while scanning in Item Mode and puts the Scanner Menu at the end of the scan.

5.2 Switch Control Settings

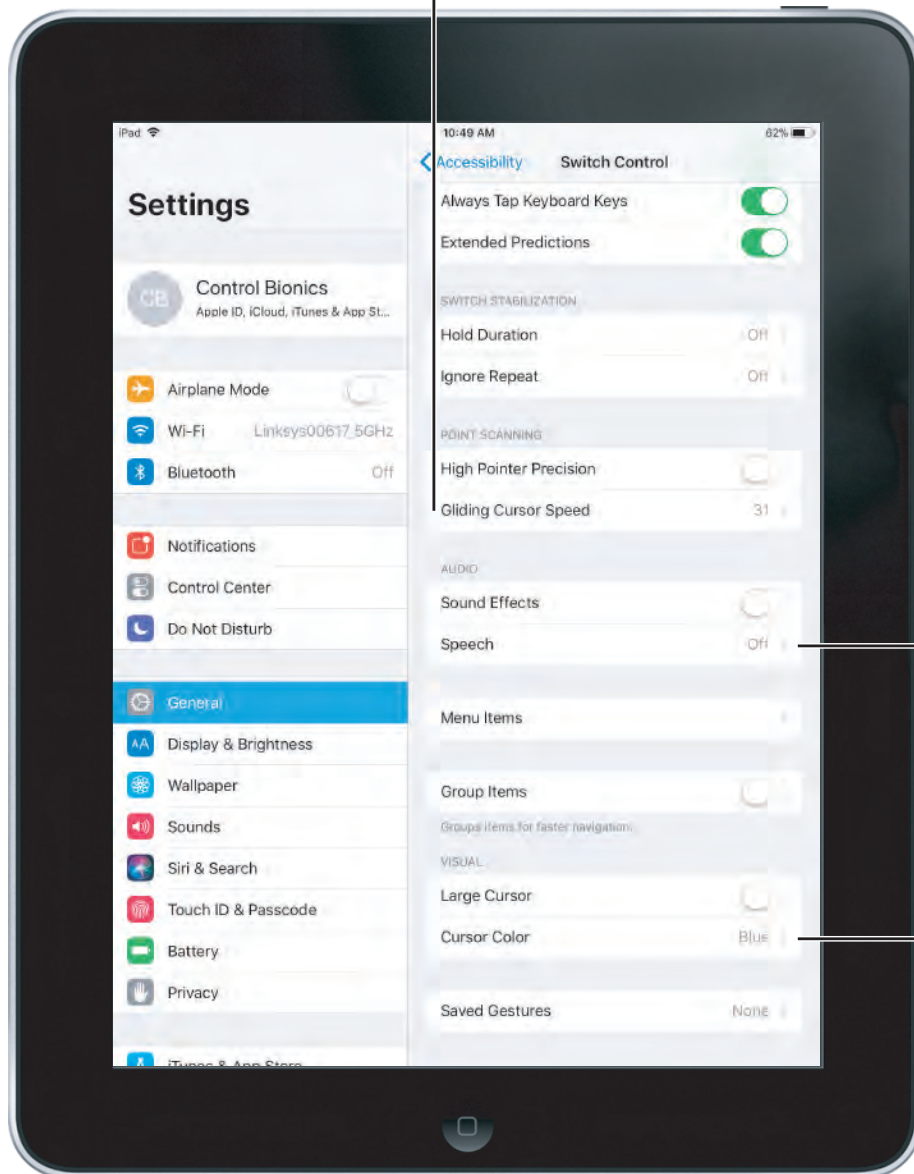
Focused Item After Tap:
This setting determines where the scan restarts after an item is selected, either the "First Item" (i.e., the beginning of the scan) or at the "Current Item."



Ignore Repeat:
The number of seconds, up to 10, during which repeated pressing of a switch is ignored.

5.2 Switch Control Settings

Gliding Cursor Speed:
The speed, from 1 (slow) to 100 (fast), at which the gliding cursor moves across the screen.
Use this setting to adjust the speed while in Point Mode.



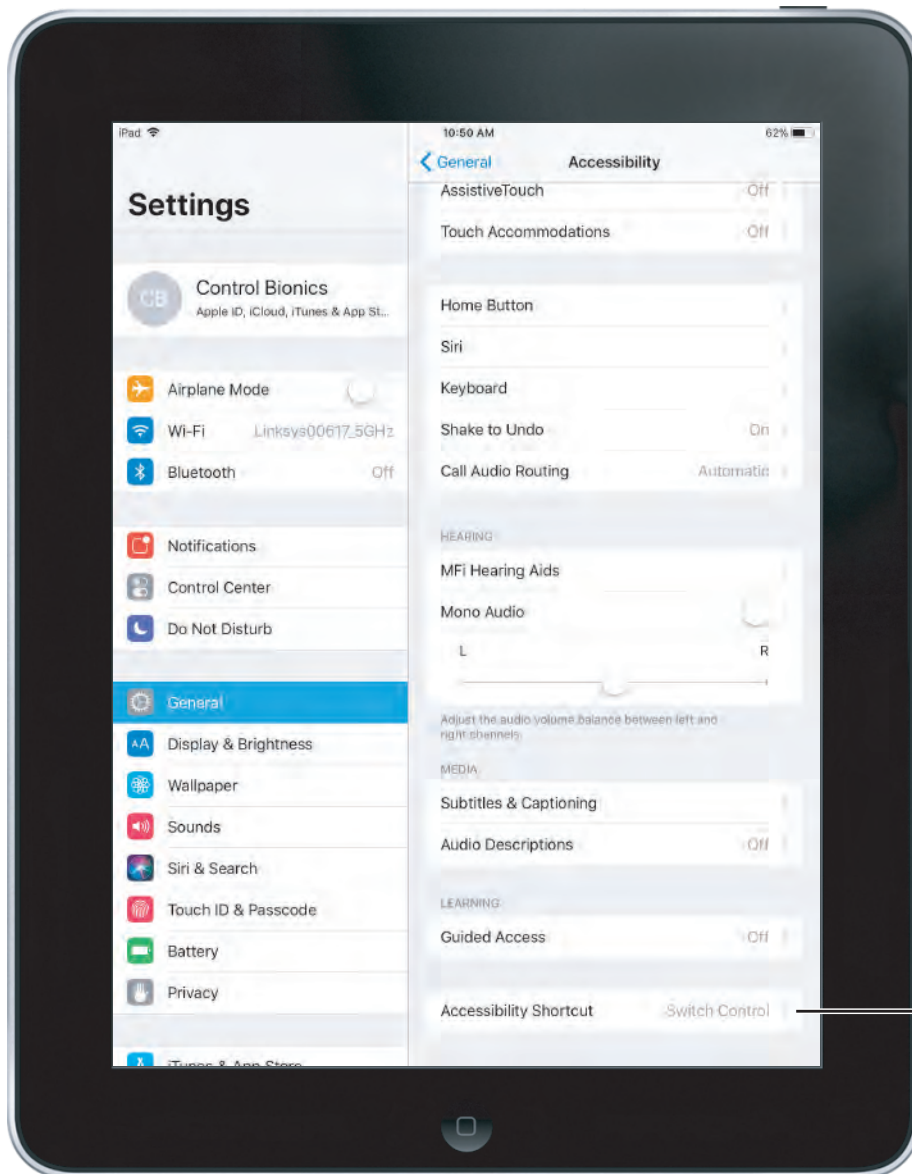
Speech:
This switch turns on/off Audio cues during scanning.

Cursor Color:
This setting controls the color of the gliding cursor in Point Mode or the color of the grouped items in Item Mode.

5.3 Setting an Accessibility Shortcut

Setting an Accessibility Shortcut provides a quick, efficient way to turn Switch Control On and Off without entering the system settings.

In order to do this, open the Accessibility Settings by following steps 1-3 in Section 4.4 and then follow the instructions below.

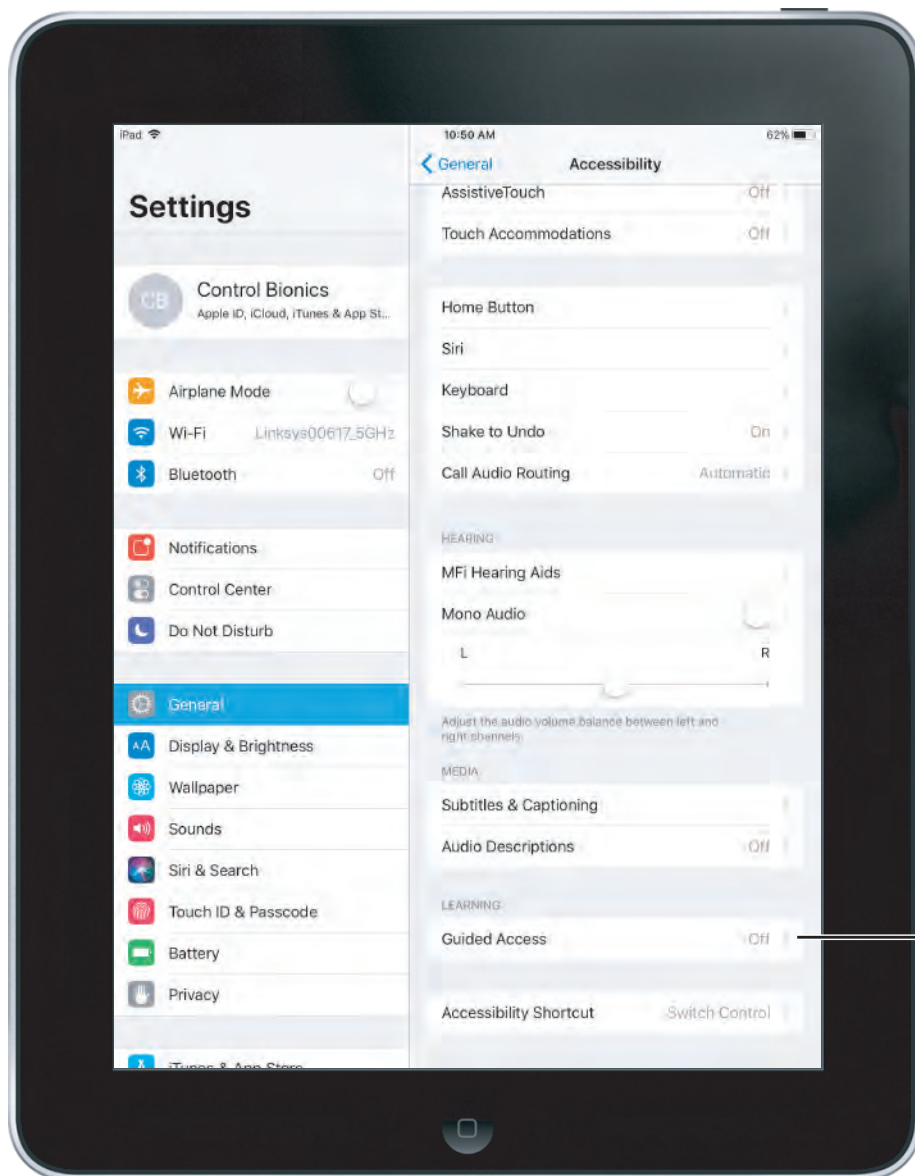


Accessibility Shortcut: Select the Accessibility Shortcut and then select "Switch Control." This allows the user to turn Switch Control On and Off by pressing the Home Button three times in quick succession.

5.4 Setting Up Guided Access

Guided Access can limit an iOS device to a single Application and allow the user to control which Application features are available.

With Guided Access the user is able to temporarily restrict an iOS device to a single Application and, more importantly, to disable areas of the screen where an accidental gesture or selection may cause an unwanted action.



Guided Access:
Follow steps 1-3 in Section 4.4 then select Guided Access to turn Guided Access on and off.

5.5 Changing from Point Mode to Item Mode

The default Switch Control scanning mode is Item Mode.

Item Mode highlights items or groups on the screen one at a time.

Point Mode allows selection of an item on the screen by pinpointing it with scanning crosshairs.

Follow the steps in this section to change from one scanning mode to the other.

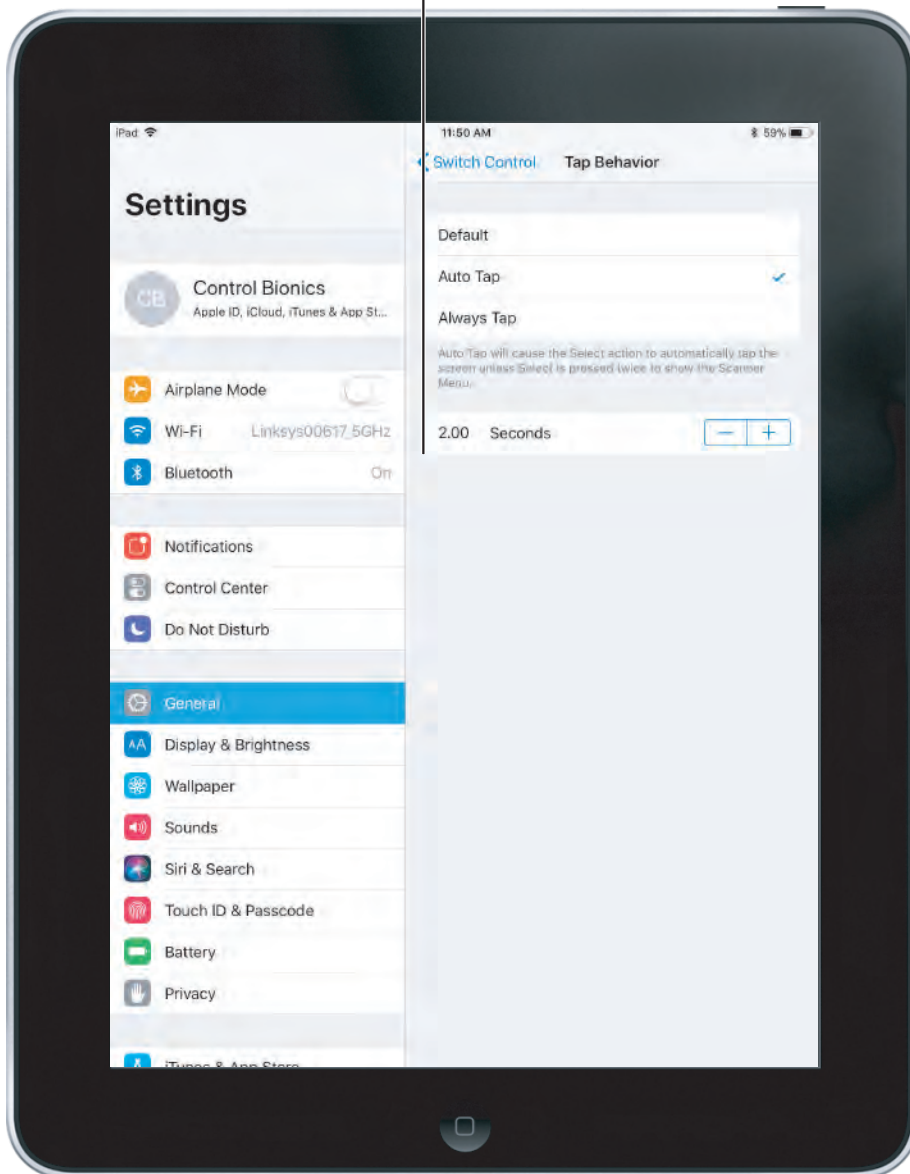


5.5 Changing from Point Mode to Item Mode

In order to access the Scanner Menu, first adjust the timing parameters within the Switch Control Tap Behavior Settings.

To access Switch Control Tap Behavior settings, follow steps 1-4 outlined in section 4.4, then select Tap Behavior.

Step 1:
The default Control Bionics setting is Auto Tap set to 0.20 seconds. Adjust this timing to 2.00 seconds.



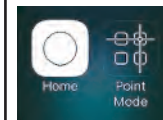
5.5 Changing from Point Mode to Item Mode

Step 2:

Scan to and select any item on the iPad. Once an item is selected, make another switch within 2 seconds to display the Scanner Menu.

**Step 3:**

Scan to and select Item Mode. If in Item Mode, scan to and select Point Mode.

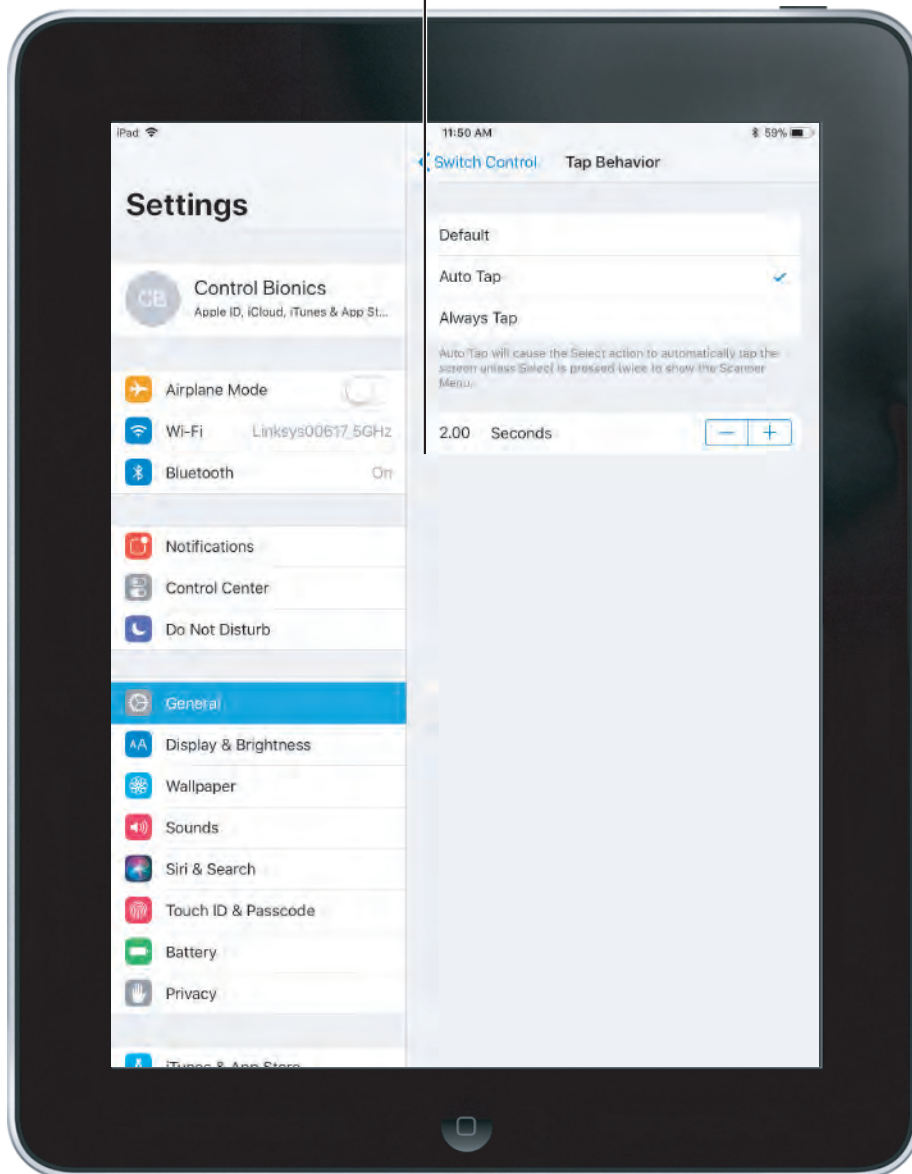


5.5 Changing from Point Mode to Item Mode

In order to increase overall speed, it may be helpful to return the Switch Control Tap Behavior settings back to their original settings.

To access Switch Control Tap Behavior settings, follow steps 1-4 outlined in section 4.4, then select Tap Behavior.

Step 4:
The default Control Bionics setting is Auto Tap. Adjust this timing back to 0.20 seconds.



6.0 Trouble Shooting


6.1 NeuroNode Reset and Re-Pair Guide

In some circumstances it may be necessary to restart and re-pair the NeuroNode to the device. In order to do so, follow these steps:

1. Turn off Switch Control.
2. Remove the NeuroNode battery.
3. Swipe close the NeuroNode Application.



TO SWIPE CLOSE AN APPLICATION, DOUBLE CLICK THE HOME BUTTON AND SWIPE UP ON THE APPLICATION.

4. Go to Settings – Bluetooth.
5. If applicable, click on the  next to the NeuroNode device and select “Forget This Device.”
6. Turn off Bluetooth.
7. Upon performing a power cycle on the NeuroNode, the device will go through a launch sequence as a series of colors: red, green, blue, and white. During this 5 second launch sequence use the provided push pin to hold down the Threshold Button until a blue light begins to flash on the Signal Indicator.

See section 6.2 for detailed instructions on performing a power cycle.

8. After the blue light stops flashing, the launch sequence should begin again, after which a solid light will indicate the current threshold setting.
9. Turn on the device Bluetooth.
10. Ensure the NeuroNode is listed in the Bluetooth “OTHER DEVICES” list.



DO NOT PAIR THE NEURONODE WHILE IN BLUETOOTH PREFERENCES.

11. Launch the NeuroNode Controller Application and select “Connect to the NeuroNode.”
12. Upon receiving a NeuroNode Pairing request, select “Pair.”

6.2 NeuroNode Power Cycle Guide

If the NeuroNode Controller Application has been accidentally closed while using the NeuroNode, or if the NeuroNode has traveled outside of the iPad's Bluetooth range while the NeuroNode Controller Application is running it may be necessary to perform a power cycle or temporarily shim the battery. In order to do this, follow these steps:

1. In the NeuroNode Controller Application Settings, select "Disconnect."
2. Carefully remove the battery cover on the NeuroNode.
3. To initiate a power cycle, insert and then remove the collar stay, or shimming tool, from in between the battery top and the "+" terminal spring.
5. The initiating lighting sequence should begin, indicating a repowered NeuroNode. Carefully replace the battery cover on the NeuroNode.
6. Return to the NeuroNode Controller Application and select "Connect to NeuroNode."



6.3 NeuroNode Battery Changing Guide

As time passes, it will be necessary to change the NeuroNode battery.

A low battery will be indicated on the Signal Indicator by a yellow flashing light, at which point the user has approximately 15 minutes to change the battery. During this 15 minutes the NeuroNode will still be usable.

If the battery voltage is too low for use in the NeuroNode, it will be indicated on the Signal Indicator by a solid yellow light. The NeuroNode will not be usable while this light is displayed.

In order to ensure this does not disrupt the user's connection, follow these steps:

1. In the NeuroNode Controller Application Settings select "Disconnect."
2. Carefully remove the battery cover on the NeuroNode.
3. Gently lift the discharged battery upward and slide it out from beneath the "+" terminal spring.
4. Place a fully charged lithium-ion battery beneath the "+" terminal spring, with the positive side facing up.
5. The initiating lighting sequence should begin, indicating a powered NeuroNode. Carefully replace the battery cover on the NeuroNode to start or continue the session.
6. Return to the NeuroNode Controller Application and select "Connect to NeuroNode."

6.4 Ending a NeuroNode Session

At times it will be helpful to pause or end a current NeuroNode session in order to resume at a later time. In order to ensure this does not disrupt the user's connection, follow these steps:

1. In the NeuroNode Controller Application Settings, select "Disconnect."
2. Carefully remove the battery cover on the NeuroNode.
3. Gently lift the discharged battery upward and slide it out from beneath the "+" terminal spring.
4. Carefully replace the battery cover on the NeuroNode.

6.5 Resuming a NeuroNode Session

In order to resume a NeuroNode session, follow these steps:

1. Carefully remove the battery cover on the NeuroNode.
2. Place a fully charged, lithium-ion battery beneath the "+" terminal spring, with the positive side facing up.
3. The initiating lighting sequence should begin, indicating a powered NeuroNode. Carefully replace the battery cover on the NeuroNode to start or continue the session.
4. Return to the NeuroNode Controller Application and select "Connect to NeuroNode."

6.6 Pause/Play a NeuroNode Session

At times it will be helpful to temporarily Pause a NeuroNode session. This may be useful when the user is being repositioned or transferred. This setting is also useful when a caregiver or a Control Bionics Team member is adjusting the user's Switch Control settings.

If pausing a session for more than an hour, it is recommended you follow the procedure for Ending a NeuroNode Session, section 6.4.

To enable Play/Pause on the NeuroNode Controller Application simply press the Play/Pause button.



WHILE IN PAUSE MODE, SWITCH CONTROL WILL NOT RESPOND TO THE NEURONODE.

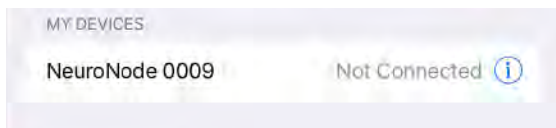
6.7 Pairing the NeuroNode to a New Device

In order to disconnect the NeuroNode from the iPad and pair the NeuroNode to a different device, follow these steps:

1. Turn off Switch Control.
2. Remove the NeuroNode battery.
3. Close the NeuroNode Application.



TO SWIPE CLOSE AN APPLICATION, DOUBLE CLICK THE HOME BUTTON AND SWIPE UP ON THE APPLICATION.



4. Go to Settings – Bluetooth.

5. If applicable, click on the (i) next to the NeuroNode device and select “Forget This Device.”

6. Turn off Bluetooth.

7. Upon performing a power cycle on the NeuroNode, the device will go through a launch sequence as a series of colors: red, green, blue, and white. During this 5 second launch sequence use the provided push pin to hold down the Threshold Button until a blue light begins to flash on the Signal Indicator.

See section 6.2 for detailed instructions on performing a power cycle.

8. After the blue light stops flashing, the launch sequence should begin again, after which a solid light will indicate the current threshold setting.

9. Consult the new device’s instructions for pairing the NeuroNode as a Bluetooth input device and utilizing the NeuroNode as a switch within the device’s application.



PLEASE CONTACT US AT 1-513-453-4848 FOR ANY ASSISTANCE.