

Apple iOS Device Configuration for Switch Control

Starting with iOS7, Switch Control is a system wide switch scanning capability built into the operating system. It allows a user to access an iOS Device with one or more adaptive switches. Switch Control can be used with external switches or using two built-in "switches," the camera and the touchscreen.

This Guide configures an Apple iOS Device for two switch step scanning. If you want to do single switch auto scanning just tell iOS about one switch and enable Auto Scanning.

This user guide will address using external switches. Tapio™ will provide the interface for connecting industry standard 3.5mm adaptive switches to the iOS Device (iPad, iPhone or iPod touch). Attach Tapio to the iOS Device using an appropriate camera adapter – 30-pin dock or Lightning adapter.

If you see a compatibility message when plugging in Tapio, just tap OK to dismiss the dialog box and continue.

This guide will set up the Apple iOS Device to do step scanning with two switches, switch one (SW1) for selecting, and switch two (SW2) for scanning to the next item.

The Accessibility Shortcut is a convenient method for turning a configured accessibility feature on and off. Once the shortcut is configured a triple click on the home button will toggle the accessibility feature on and off. Until you gain more experience with Apple's new accessibility features it's a good idea to only configure the accessibility Shortcut for Switch Control.

Configuration Steps

- 1) Launch the Settings app.
- 2) Select **General**.
- 3) Select **Accessibility**
- 4) Select **Accessibility Shortcut** (near the bottom)
 - a) Check Switch Control, and verify other options are un-checked.
 - b) Tap the Back arrow at the top of the screen, and return to the Accessibility section.
- 5) Select the **Switch Control** heading under the PHYSICAL and MOTOR section.

There are many settings in this section and they are based on user style preferences and scanning method specifics. For example, there are adjustments to the size of the scanning cursor and its color; whether a sound should be made or speech is used to describe an element when each is highlighted.

A significant setting under Timing is **Auto Tap**, this option will automatically do a TAP on an element when it is selected while scanning. This is a useful option, but a limitation is you must do a double tap of your adaptive switch to access the Switch Control menu. When Auto Tap is turned off when you scan to and select an element a context sensitive menu will pop-up allowing you to scan within that menu to perform many other required actions like, tap the Home button, tap the app switcher, do swipes, etc.

With Auto Tap enabled you must do a double tap of the select switch to bring up the context sensitive Switch Control menu. The double tap time is set after Auto Tap is enabled.

The configuration below is for two switch step scanning, with a backup single loop, auto scan; however, you are encouraged to read about and experiment with the different options.

- a) Set **Auto Scanning Time** to 1 (one) second
- b) Set **Loops** to 1 (one)
- c) Turn **Auto Tap** On and select 0.75-seconds
- d) Turn **Sound Effects** on
- e) Turn **Large Cursor** on

6) Next, tell your iOS Device about your **Switches**

If you haven't plugged in your Tapio and adaptive switches do so now. If you see a compatibility message, just tap OK to dismiss the dialog box and continue.

- a) Tap the Switches item and select **Add New Switches...**
- b) Select **External**, and the iOS Device will ask you to, "Activate your external switch..."
- c) Press your first adaptive switch (SW1) and a New Switch Dialog box will popup and ask you to name this switch.
- d) Enter an appropriate name and select **Save**.
- e) When the Actions screen opens under the Scanner section tell iOS that this switch will **Select Item**.
- f) Repeat steps (a) through (d) for the second switch (SW2) and when the Actions screen opens under the Scanner section tell iOS that this switch will **Move To Next Item**.

7) Activate scanning by either sliding the **Switch Control** slide-switch or triple-clicking the Home button (using the **Accessibility Shortcut** we configured previously).

When switch control first begins scanning it usually starts up in auto scanning mode until you hit the switch used for **Move to Next Item**. From that point each time you hit SW2 the highlight will move to the next item and every time you hit SW1 it will select and TAP (since we enabled **Auto Tap**) the highlighted item.

If you see an error "Switch Control Device Not Found," the iOS Device cannot see any of the previously defined adaptive switches. Either the switch interface is disconnected, not working or iOS can no longer communicate with the interface. Try unplugging and reattaching the interface. If this does not work then delete the defined switches and go through steps above and re-define your switches.