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iOS Switch Control

The iOS operating system includes a comprehensive switch control method which allows you to interact with your entire device using switches.

How to Pair a Switchbox with an iPad

The process of pairing a switchbox with an iOS 9 device is the same as previous operating systems.

Go to settings, turn on Bluetooth and turn on your switchbox.

Tap on the device that matches your Switchbox’s serial number, or on the device that you identify to be your switch interface.

Setting a switch control shortcut.

Go to General > Accessibility, then scroll to the very last option. Tap Accessibility Shortcut and choose switch tapping on the iPad’s home button.

How to use iOS Switch Control

After pairing your switchbox with your iDevice, choose general settings on the left tab, and tap accessibility on the right.

Then scroll down, and tap “Switch Control”. It is the first option under the heading “Interaction”. 
The first option you will see will be to slide “Switch Control” to on. Before doing this, you will need to add at least one switch. Staying in this area, find and tap “Switches”, and then “Add New Switch”. You will be shown 3 options – External, Screen, Camera.
Switch Control

Types of Switch

Types of Switch: External
If you have already set up your switchbox and have a switch plugged in then tap external switch.

When instructed to activate your external switch, simply tap your switch button. You will be asked to name your switch.

After this you will need to choose a switch action. (See switch actions).

Types of Switch: Screen
The only option is full screen, this is a lot like Touch Anywhere access from Therapy Box apps. Tap “Full Screen” then choose a switch action to be carried out whenever you touch anywhere on the screen. (See switch actions).

Types of Switch: Camera
The camera can track your face to see if it turns left or right. You can therefore assign two switch actions on the camera – one for a left turn of the head, and one for a right. (See Switch actions).

Switch Actions
After activating a new switch you will be asked to set a switch action. The options are listed below:

Scanner Actions
Select Item: When you activate your switch, whatever is highlighted on your screen will be selected. If you only have one switch, use this alongside auto scan.

Scanner Menu: When you activate your switch, the scanner menu will open, to access settings for Switch Control.

Resume Auto Scanning: Restart the auto scan feature if it stops (you can also set auto scan such that it never stops; see Switch Options.

Move to next item / Move to previous item: When you activate your switch, the next (or previous) actionable item will be highlighted. If you want to use two or more switches and turn off auto scan, then one of your switches will need to be set to Move to next item.

Stop Scanning: Turns off the auto scan feature.
System

**Tap:** When you activate your switch, whatever is highlighted on your screen will be tapped (some items when selected by switch will give more than one option – Tap, Home, Scroll, etc. – tapping takes away these options, but is faster generally).

**App Switcher:** Opens the App Switcher, so you can move from one app to another one that’s open in the iPad background.

**Home Button:** Activating the switch works the same way as hitting the home button on the side of the iPad.

**Notification Centre:** Opens the notification Centre

**Increase /Decrease Volume**

**Siri:** Opens Siri for voice control
Recipes

If you anticipate wanting to perform complex actions (turning pages in iBooks, for example) repeatedly. Give the recipe a name then choose one of your switches. Give this switch an action (in the above example, you might want to name your recipe “Turn pages” and set one switch with Right to Left swipe, and a second switch with left to right swipe. When the recipe is turned on, the iPad will stop scanning, and the switch buttons will only work to perform the actions described in the recipe.

You can set a switch as an “Exit Recipe” button, to go back to scanning as normal. Alternatively, you can set a timeout period. This is a length of time where, if a user doesn’t tap any switch, the iPad automatically leaves the recipe and starts scanning as normal again.

Switch Options & Settings

You can customise your switch access to make it easier or faster to use.

Scanning style: Auto Scan automatically highlights options, in sequence, for a set amount of time. If you are only using one switch, turn on auto-scan and choose Select Item as your Switch Action. If you have one switch set to select item, and at least one more set to Move to Next Item, then you can choose Manual Scanning, so that the highlighter won’t move on automatically. Single Switch Step Scanning is when the highlighter moves on with each
Switch Control

tap of the switch. If the switch isn’t tapped within a certain amount of time, then whatever item is highlighted at the time is selected.

**Auto Scan Options**

**Timing:** contains all the settings to change the speed of Auto Scanning. **Auto Scanning Time** sets for how long the auto scan highlights each actionable item before moving onto the next one. **Pause on first item** causes the auto scan feature to dwell on the first actionable item a little longer than the ones that follow. **Loops** sets the number of times the auto scan feature highlights each actionable item before turning off. **Move Repeat** delays the move to the next highlighted action while a switch is pressed. **Long Press** allows a user to assign a second action to a single switch, turn it on then go back to switches, choose a switch to which you’d like to set a second action then tap on the “Long Press” option to set a new, different action.

**Manual Scan Options**

**Auto hide** allows you to set a time that the iPad will wait before the highlighter disappears from the screen (it will be unhidden by a switch tap). **Move Repeat** delays the move to the next highlighted action while a switch is pressed. **Long Press** allows a user to assign a second action to a single switch, turn it on then go back to switches, choose a switch to which you’d like to set a second action then tap on the “Long Press” option to set a new, different action.
### Single Switch Step actions

**Dwell time** is the amount of time the app waits for another tap of the switch before it selects the highlighted option. **Auto hide** allows you to set a time that the iPad will wait before the highlighter disappears from the screen (it will be unhidden by a switch tap). **Move Repeat** delays the move to the next highlighted action while a switch is pressed. **Long Press** allows a user to assign a second action to a single switch, turn it on then go back to switches, choose a switch to which you’d like to set a second action then tap on the “Long Press” option to set a new, different action.

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### Tap Behaviour

**Tap behaviour** lets you set how the scanner interacts with the iPad. There’s a number of different actions a direct touch user can make on an iPad at any time as well as simply tapping on a button (Gestures such as swiping, tapping on the home button to leave an app, scroll up or down, and so on). By default when you make a switch selection, you will be shown a menu of all these options, of which tap is just one. If you expect to use tap more than anything else, set the tap behaviour to **Auto-Tap**; the iPad will assume you want to tap on the button you’ve selected, unless you tap the switch a second time within a pre-arranged time period, at which point it will show the full menu of possible actions. **Always Tap** is a new setting in which selecting a button *always* results in a tap. The iPad will add a scanning menu in the bottom corner which is highlighted at the end of a scanning cycle, and which users can choose if they want to perform a non-tap gesture.

**Always Tap Keyboard Keys** can be turned on to make typing faster.
**Switch Stabilisation**

This is a pair of settings for users who might accidentally activate their switch before they are ready. **Hold duration** allows a user to set a length of time for which they must press their switch before they activate it. **Ignore Repeat** is a setting where if the switch is pressed twice in quick succession, only the first switch activation is recognised.

![Switch Stabilisation Settings](image)

**Point Scanning**

Point scanning is a different way to scan an iPad screen. A highlighter bar will move from left to right across the screen and users tap when the button they want to use is highlighted. The bar then moves from top to bottom down the screen, and users tap their switches to create a crosshair. The iPad taps on the point where the horizontal and vertical scanning bars overlap.

**Gliding Cursor Speed** changes the speed at which the gliding cursor moves across the screen. The gliding cursor is the bar that moves from left to right, then top to bottom across the screen – it does this when the iDevice does not recognise any actionable items on the screen to highlight or if Point scanning mode is turned on.

![Point Scanning Settings](image)

**Audio Settings**

**Audio** allows a user to turn **Sound Effects** on or off – when sound effects are turned on the iDevice makes a clicking sound every time a new actionable item is highlighted. **Speech** – which reads aloud any highlighted items – can also be turned on or off (NB: some highlighted items cannot be read aloud). You can choose from a range of voices to speak out for you, and can adjust the speaking rate to make it faster or slower.

![Audio Settings](image)
Switch Control

**Menu**

*Menu items* allows you to remove items from the scanning menu that you’re never going to use (for example, some people are unlikely to want to use point scanning ever, so they can remove this option from their scanning menu).

**Group**

*Group items* is an on/off setting. When it is turned off, each button is highlighted individually, in turn. When it is turned on, buttons are grouped together and highlighted, once you select a group, then the highlighter starts scanning individual items from within that group.

**Visual settings**

*Visual* settings help visually impaired users. The *large cursor* thickens the line around a highlighted area. *Cursor Colour* allows users to pick a colour of their choice for the line that indicates a highlighted area.

*Saved Gestures* allow a user to record custom gestures and make them accessible through the menu that appears when a user selects an item with auto-tap turned off.