

Android's Switch Access Setup and Configuration

Starting with version 5.0 of Android, Switch Access is a system wide switch scanning utility built into the operating system. It allows a user to access an Android smartphone or tablet with one or two adaptive switches. Switch Access can be used with external switches or for demonstration with the volume up and down buttons.

This Guide configures an Android smartphone or tablet for single switch auto-scanning or two-switch step-scanning.

This user guide will address using external switches. Tapio™ will provide the interface for connecting industry standard 3.5mm adaptive switches to the Android device (smartphone or tablet). Attach Tapio to the iOS Device using an appropriate USB adapter for your device.

This guide will set up the Android device to do either auto scanning with one switch or step scanning with two switches.

Switch Access setup:

- 1) Set Tapio mode switches to emulate a keyboard
- 2) Obtain an appropriate adapter for Tapio's full size USB-A connector to the dock port of your Android device (smartphone or tablet)
- 3) Plug Tapio into your Android device.
- 4) Re-enable the on-screen keyboard.
 - a) Open the Settings app
 - b) Select Language & Input:
 - i) Android 7.0 and newer: Select **Physical keyboard > Show virtual keyboard**
 - ii) Android 6.0 and older: Select **Current keyboard > Hardware** (Show input method)

Re-enable the keyboard because Android uses a USB (or Bluetooth) keyboard as the input method for sending switch events to Switch Access. Otherwise Android thinks you have an external keyboard attached and won't bring up the on-screen keyboard for text entry. Tapio (any switch interface) should be configured to emulate a keyboard.

Switch Access configuration:

Select whether you are going to perform single switch auto-scanning or dual switch step-scanning and perform the steps in that section.

Auto-Scanning (One Switch)

To use Switch Access with a single switch, set up auto-scanning. Auto-scanning automatically moves the highlight through the items on the screen until you make a selection.

These are the settings for scanning using a single switch:

- 1) Open the Settings app
- 2) Select **Accessibility > Switch Access > Settings**
- 3) Select Auto-scan
 - a. If Auto-scan doesn't appear, tap **Scanning method** and select **Linear scanning of Row-Column**
- 4) Tap **Assign switches for scanning > Auto-scan**
- 5) When the dialog opens, press your switch
- 6) Optional: To change the amount of time spent on each item, tap **Auto-scan time** and enter a number of seconds.
- 7) Tap **OK**

Step Scanning (Two Switches)

If you have two or more switches, you can use step scanning. With step scanning, one switch moves the highlight around the screen (the "Next" switch), and the other switch selects the highlighted item (the "Select" switch).

These are the settings for step scanning:

- 1) Open your device's Settings app
- 2) Select **Accessibility > Switch Access > Settings**
 - a. Make sure that **Auto-scan** is off
- 3) Tap **Assign switches for scanning > Next**
- 4) When the dialog opens, press the switch you want to use as your "Next" switch
- 5) In the dialog, tap **OK**
- 6) Tap **Select**
- 7) When the dialog opens, press the switch you want to use as your "Select" switch
- 8) In the dialog, tap **OK**

Turn On Switch Access

After configuring your smartphone or tablet for auto- or step-scanning, turn on Switch Access:

- 1) On the Switch Access settings screen, touch the back button to return to the Switch Access screen
- 2) At the top, tap the **On/Off** switch
- 3) In the confirmation dialog, select **OK** to confirm permissions and turn on Switch Access