Controlling your device using switches in Android 10

Created November 2019

Switch Access enables you to control your device using one or more physical buttons.

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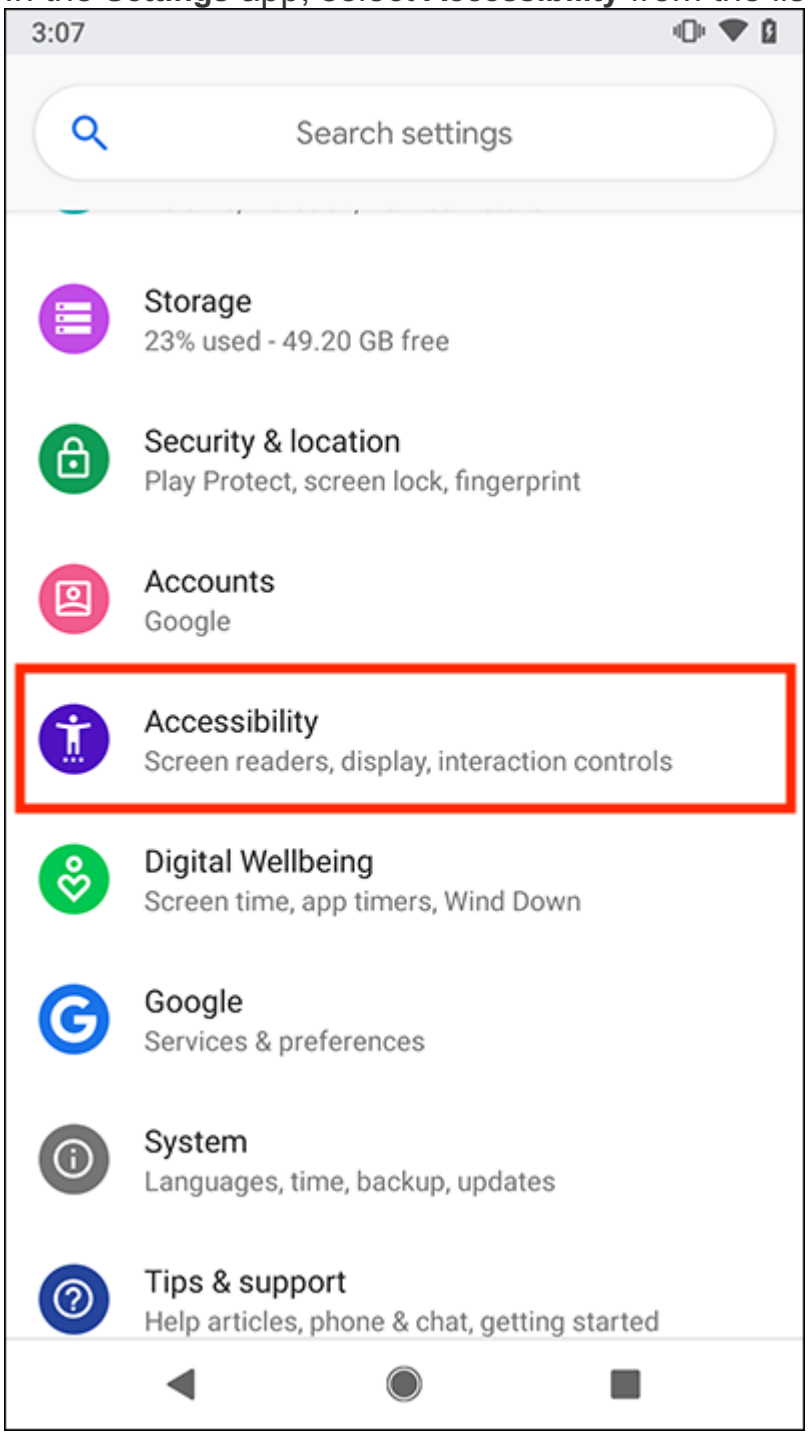
The types of switches you can use to control your device

- **An external switch**: Adaptive switches that connect via USB or Bluetooth. Adaptive switches have one or more buttons that you can assign actions.
- **An external keyboard**: Keyboards that connect via USB or Bluetooth. You can assign actions to any of the keys.
- **The buttons on your device**: You can assign actions to the up and down volume buttons on your device.

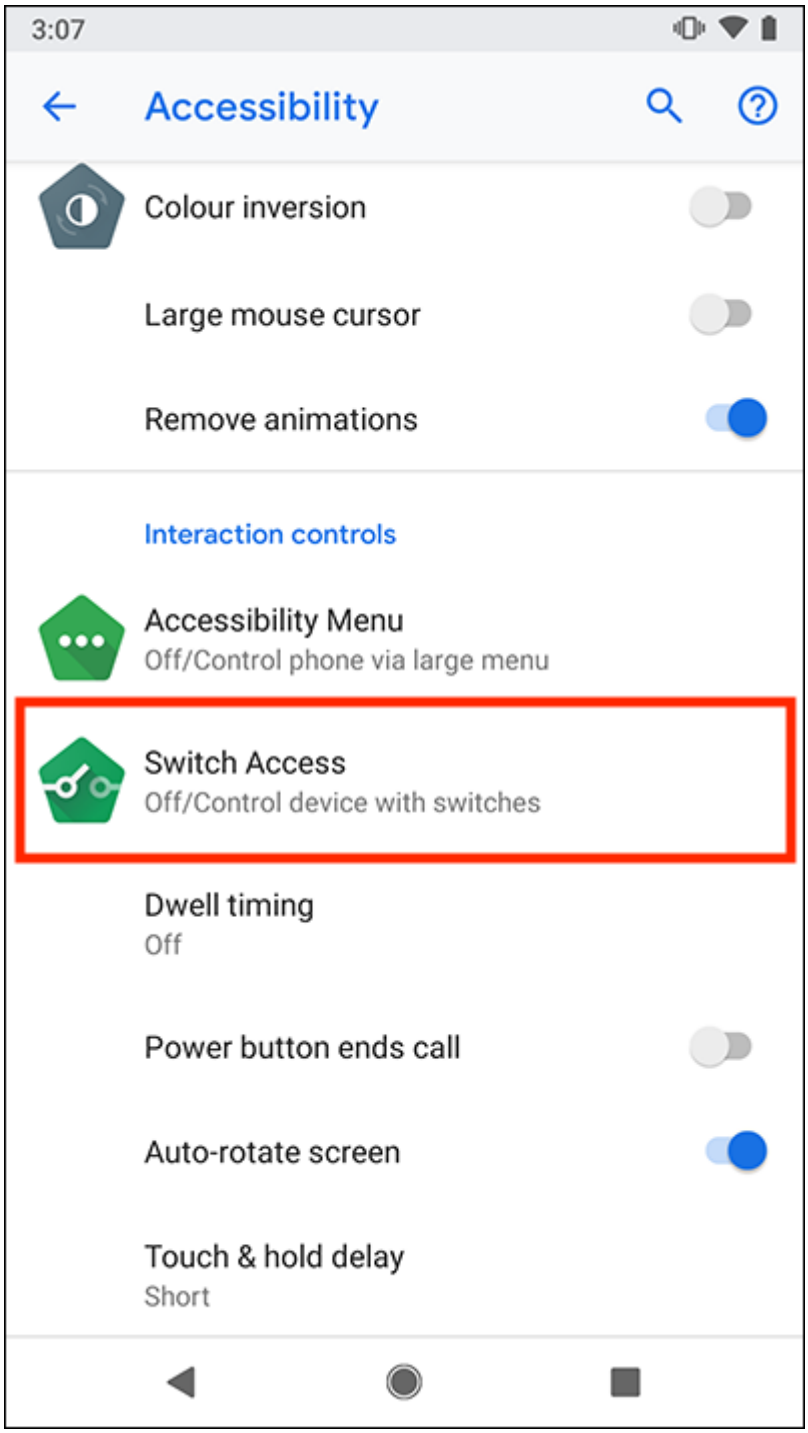
How to enable Switch Access

1. To access the Accessibility features on your Android device open the **Settings** app .

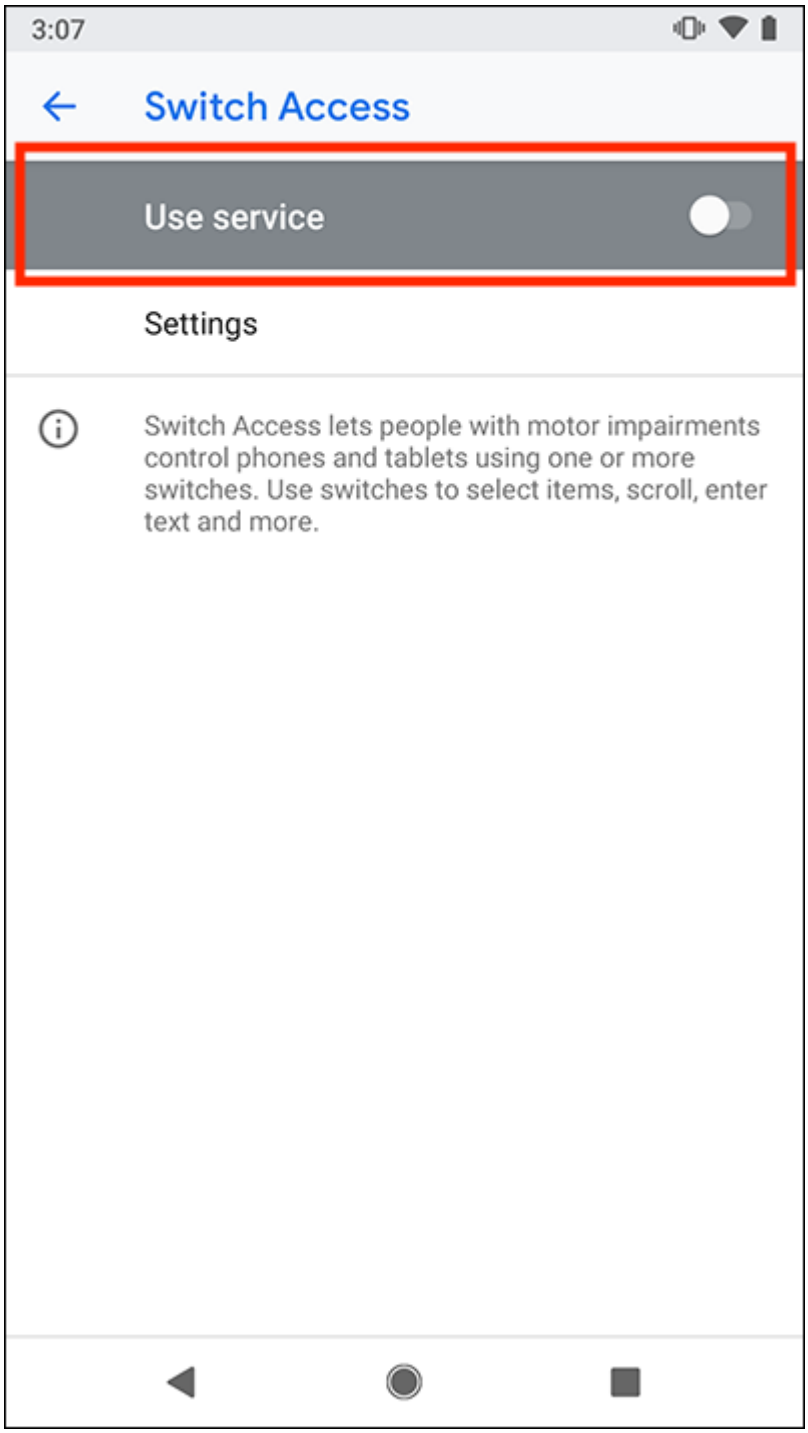
2. In the **Settings** app, select **Accessibility** from the list.



3. On the **Accessibility** screen, scroll down to the **Interaction controls** section and select **Switch Access**.

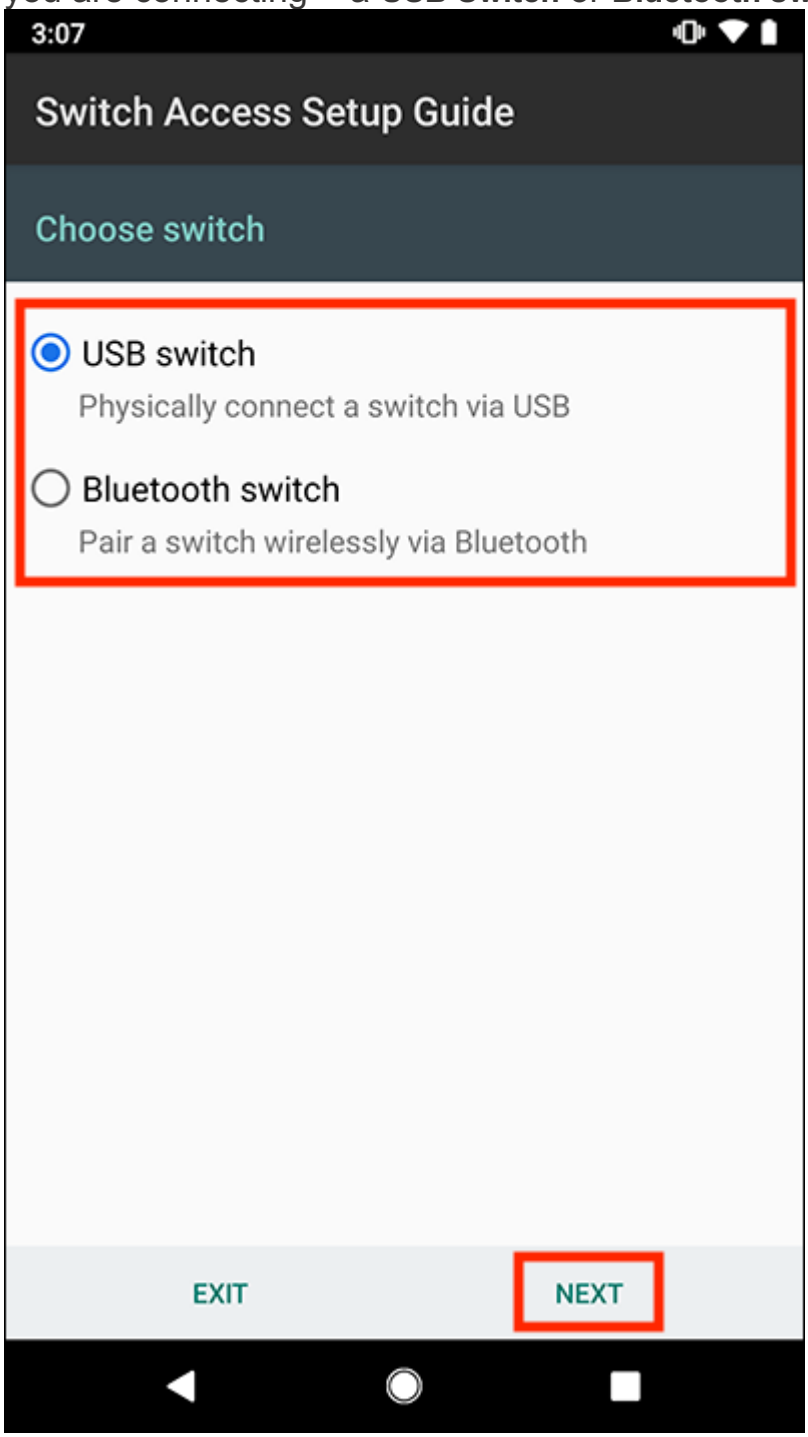


4. On the **Switch Access** screen, select **Use service** to set the toggle switch to **On.**



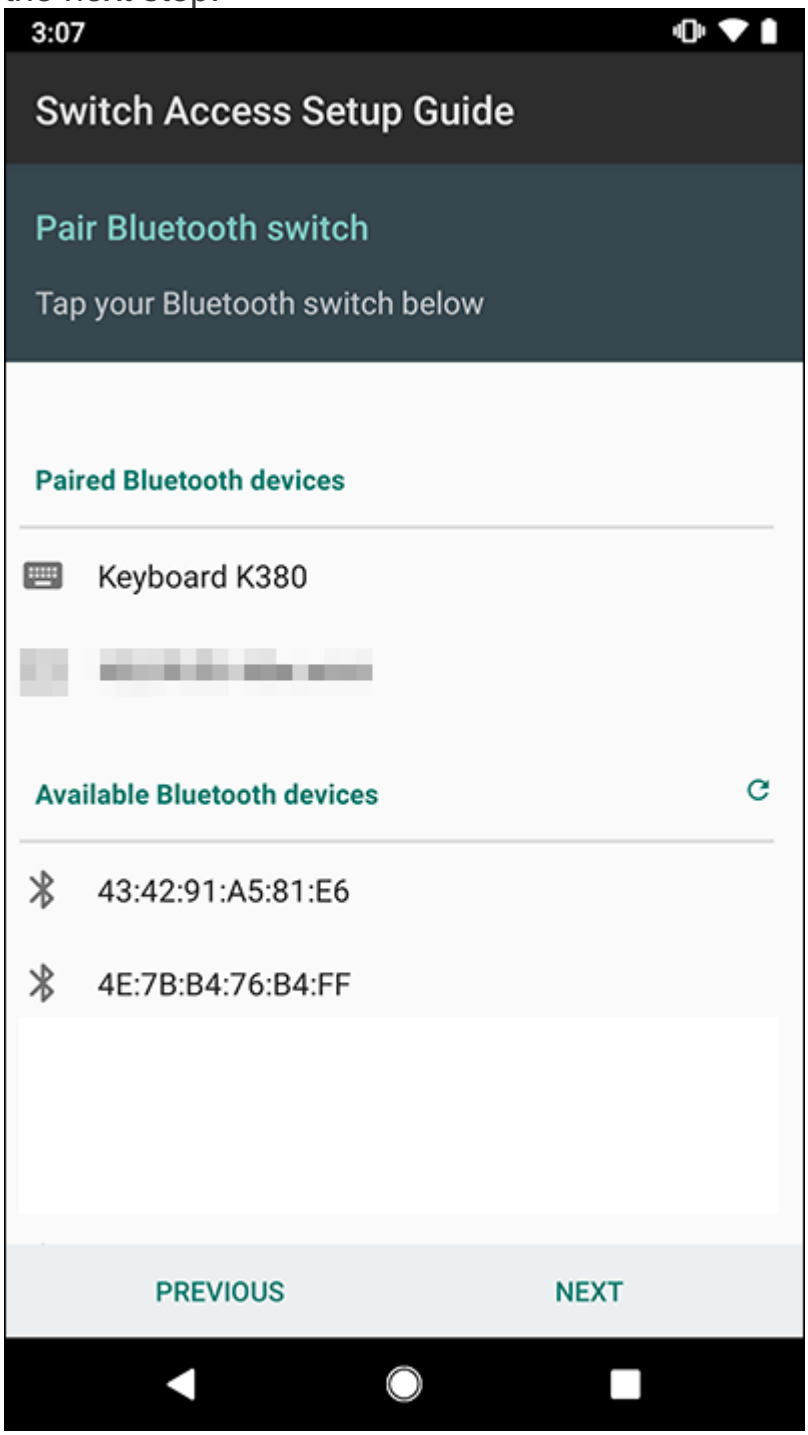
5. Switch Access needs to observe certain actions as you use your device. If you are happy to proceed, select **OK**.

6. You can now start setting up your switches. Choose which type of switch you are connecting - a **USB Switch** or **Bluetooth switch**. Select **Next**.



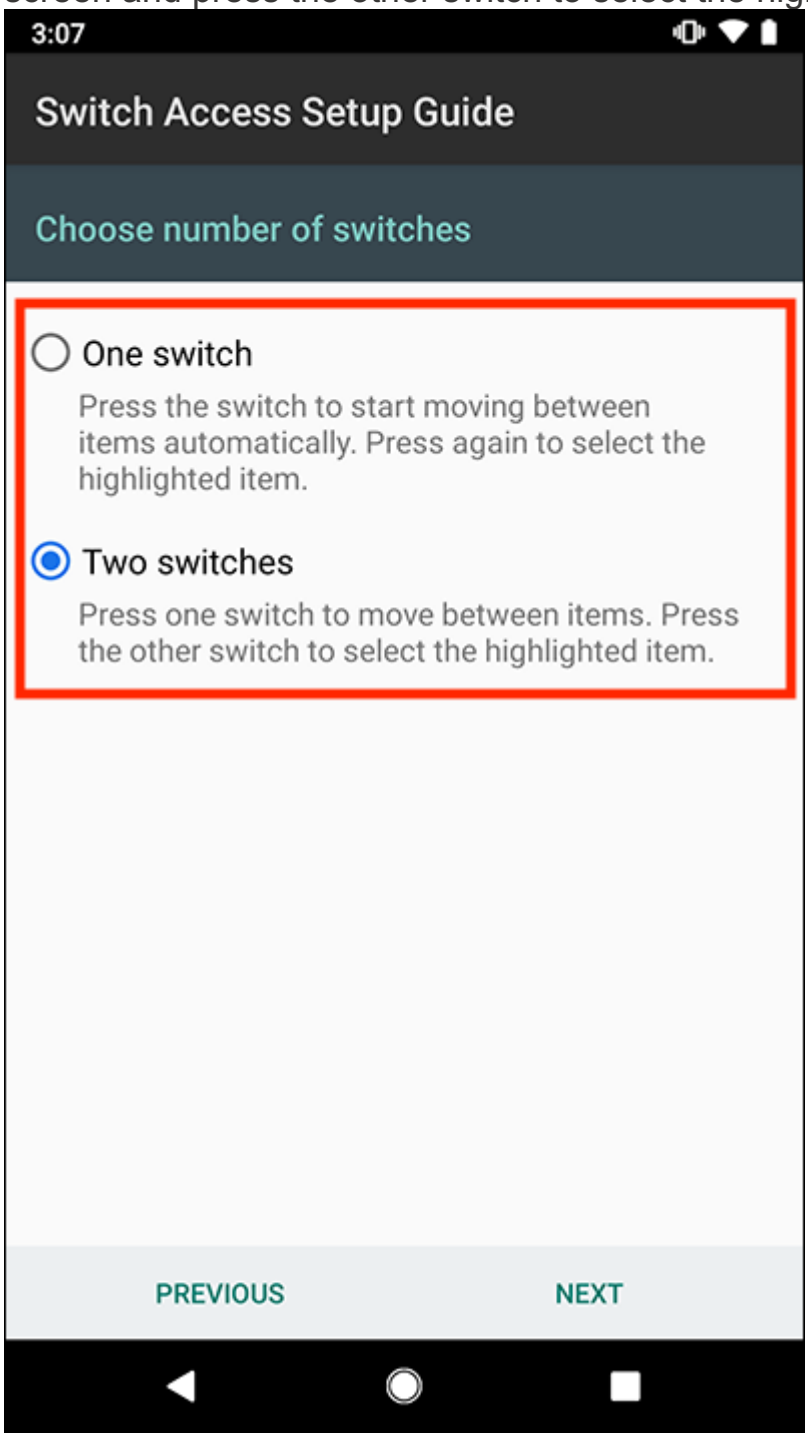
7. Select your switch from the list of connected devices and select **Next**.
8. If you are setting up a Bluetooth device, the next screen will enable you to pair it with your Android device. If you are setting up a USB device, skip to

the next step.



9. Choose the number of switches you would like to use:
   - **One switch**: Press the switch to start cycling through the items on the screen. Press the switch again to select the highlighted item.

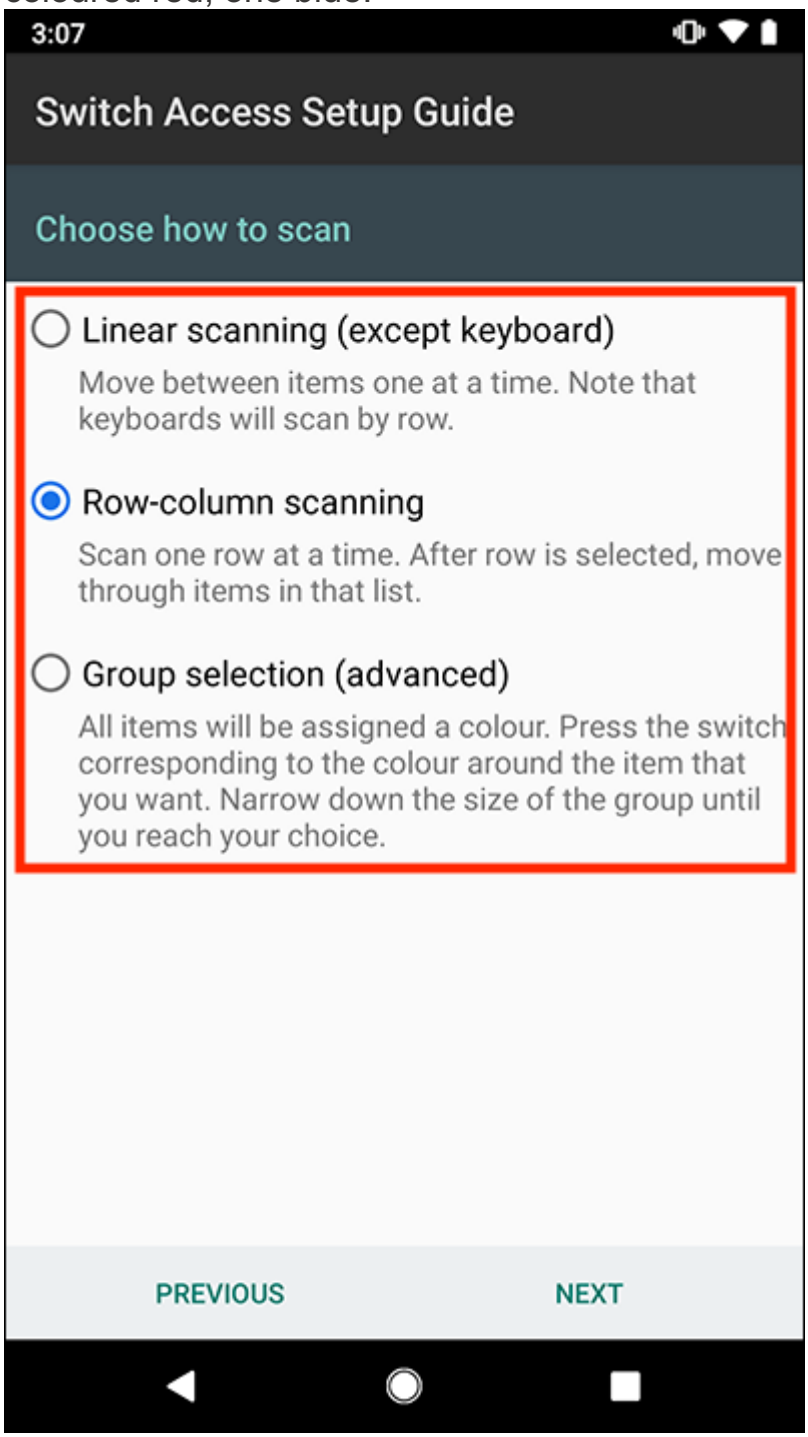
- **Two switches**: Press one switch to start cycling through the items on the screen and press the other switch to select the highlighted item



10. Select **Next**.
11. Choose your preferred scanning method. Choose from:

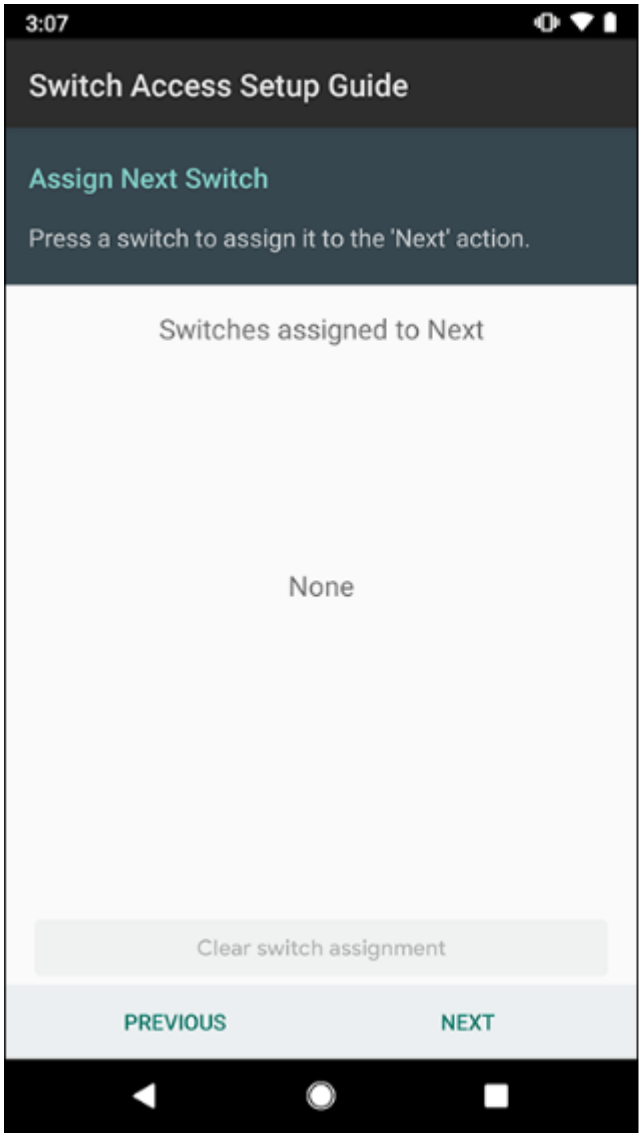
- **Linear scanning (except keyboards)**: Move between items one at a time. **Note**: Keyboards will scan by row.
- **Row-column scanning**: Cycle through rows of items, then cycle through the items within a selected row.
- **Group selection** (**Note:** this option is only available if you chose '**Two switches**' on the previous screen): Items are grouped by colour: some red,

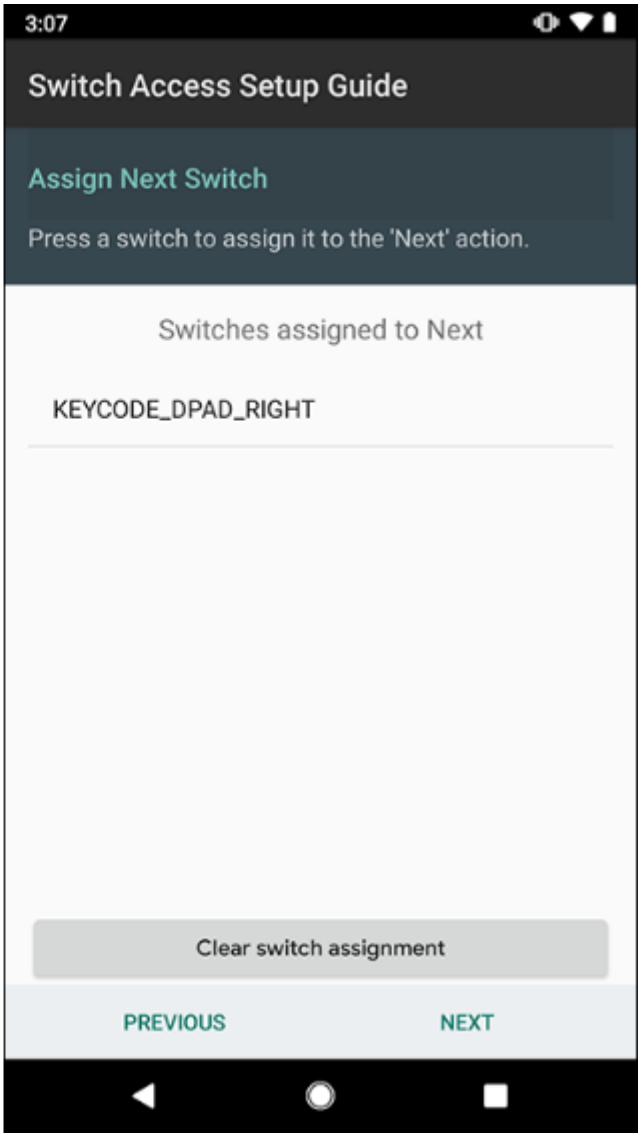
some blue. You select the colour group that contains the item you want. Each time you select a group, the items within that group are split into red and blue. Repeat until there are only two items left to choose between; one coloured red, one blue.



12. Select **Next**.
13. Next, choose the buttons or keys to assign actions to. In our example we assign actions to two switches, one switch to move to the **Next** item and

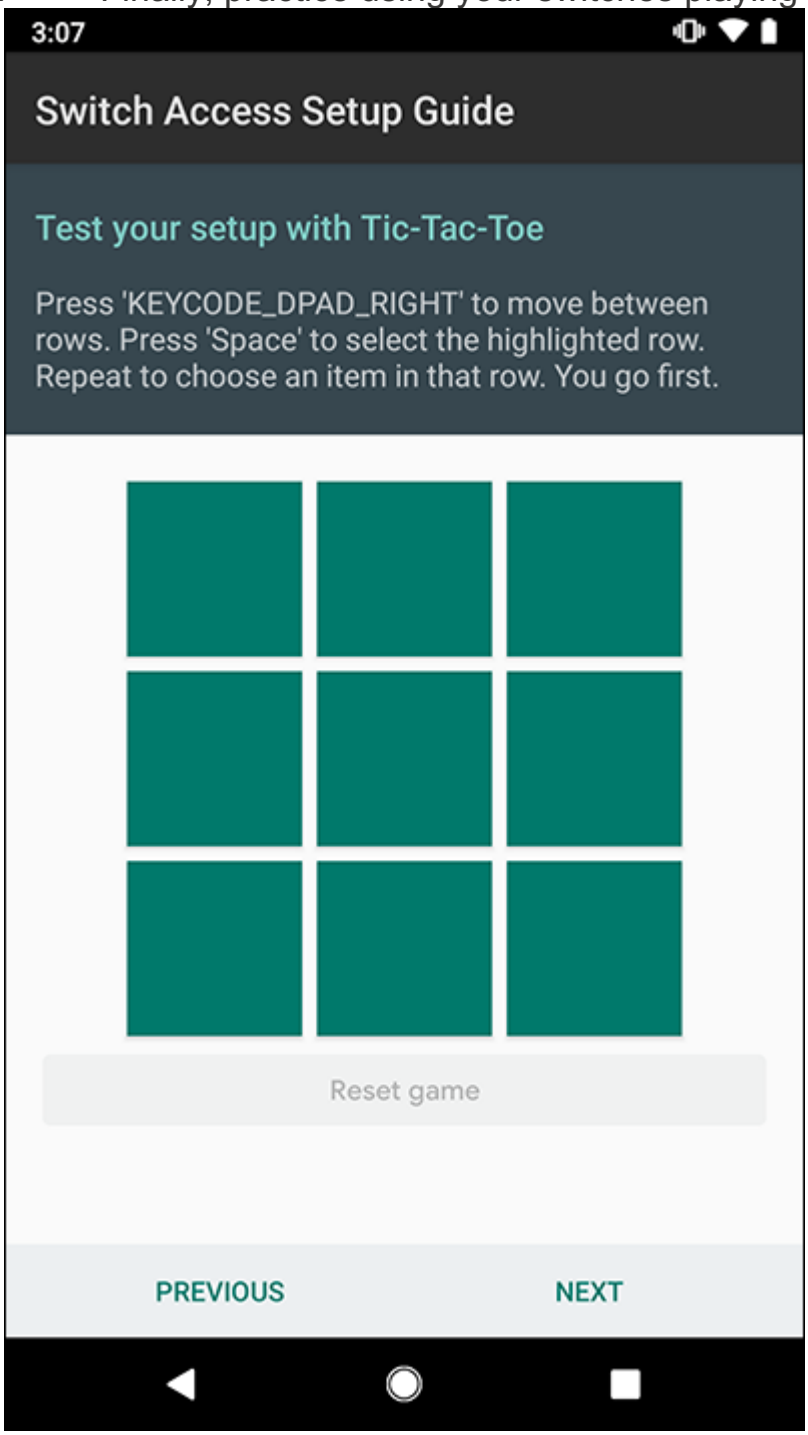
one switch to **Select** items.



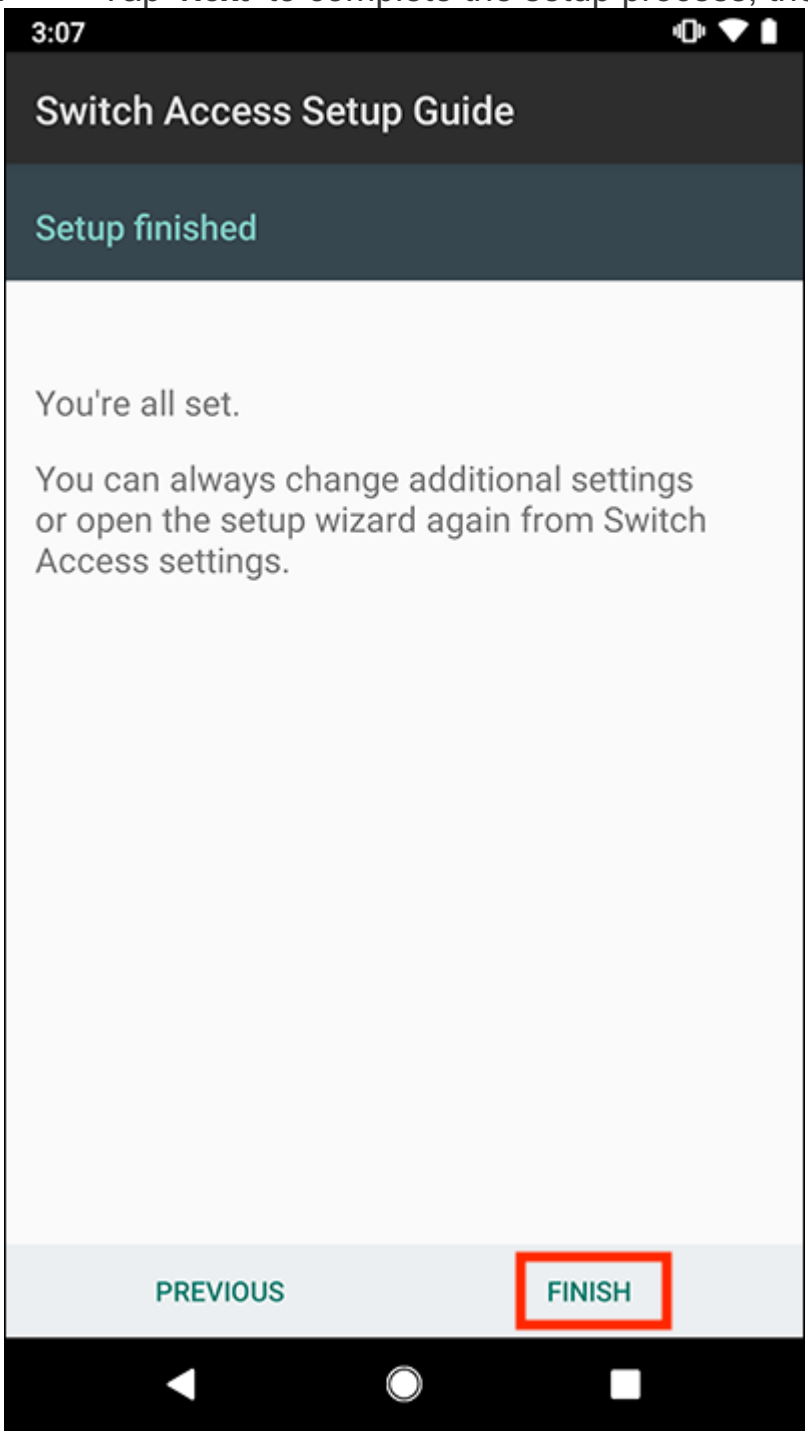


14. Select **Next**.

15. Finally, practice using your switches playing a game of tic-tac-toe.



16. Tap '**Next**' to complete the setup process, then press '**Finish**'.

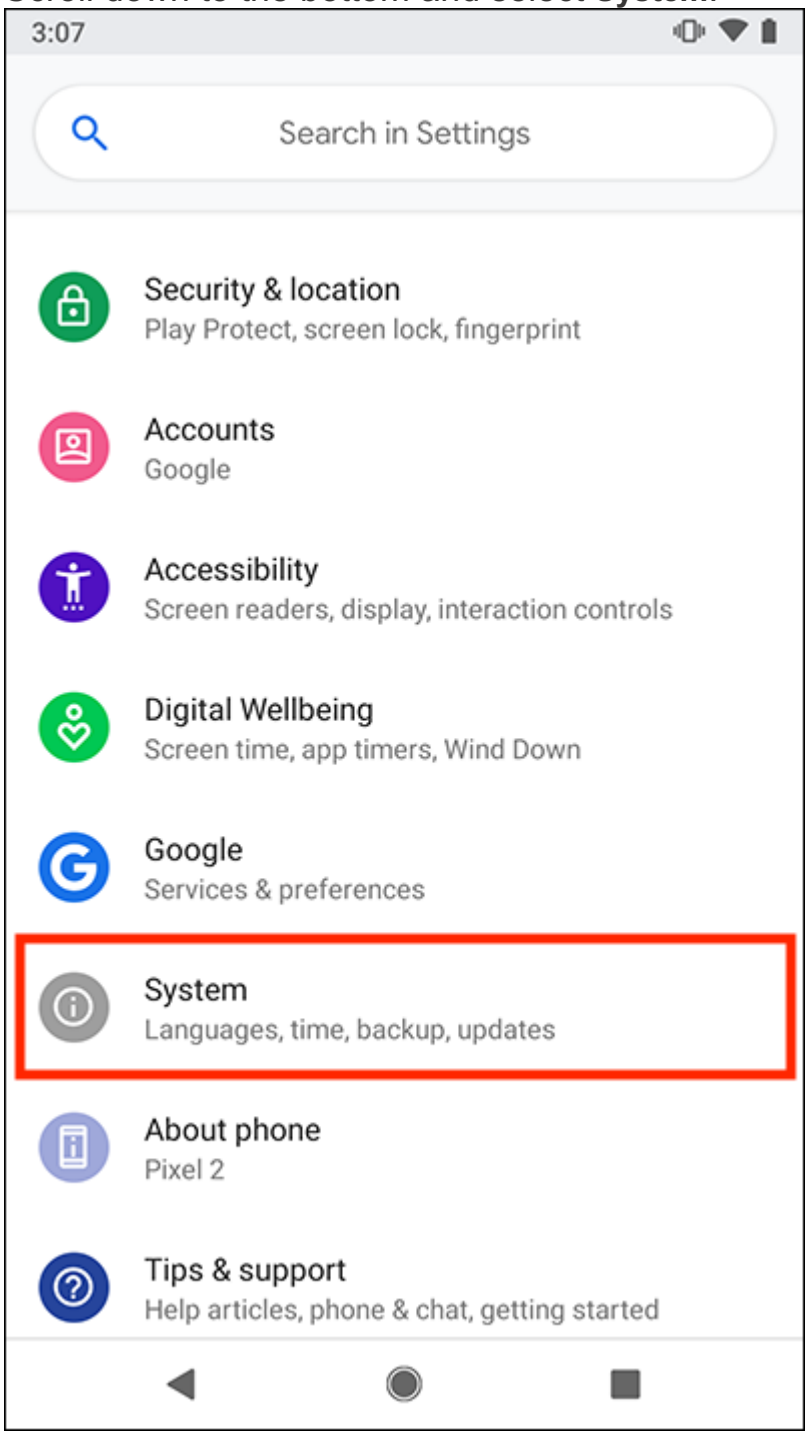


Re-enable the on-screen keyboard

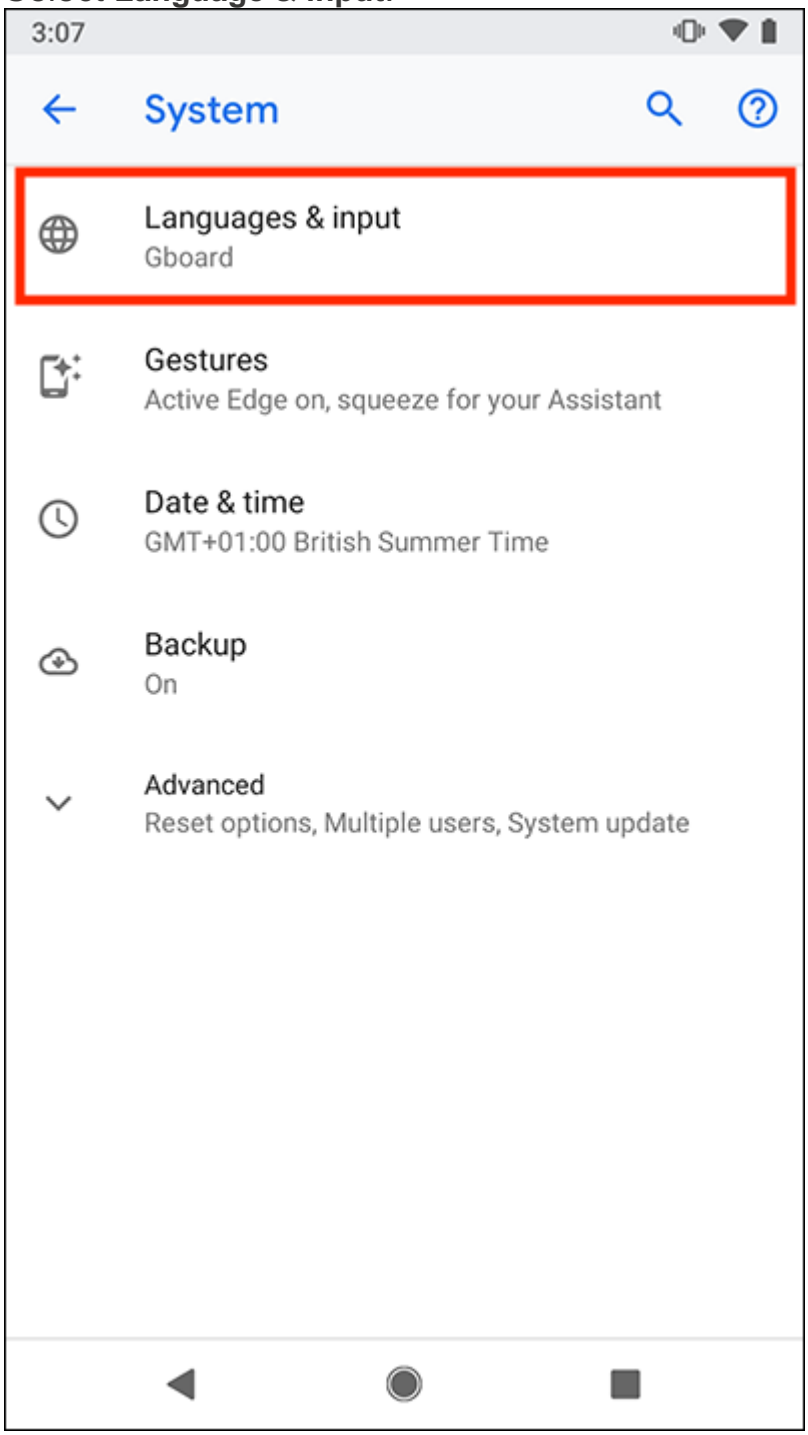
When you connect an external switch or keyboard to your device, the onscreen keyboard is hidden. To be able to use it with your switch you will need to un-hide it.

1. Open the **Settings** app .

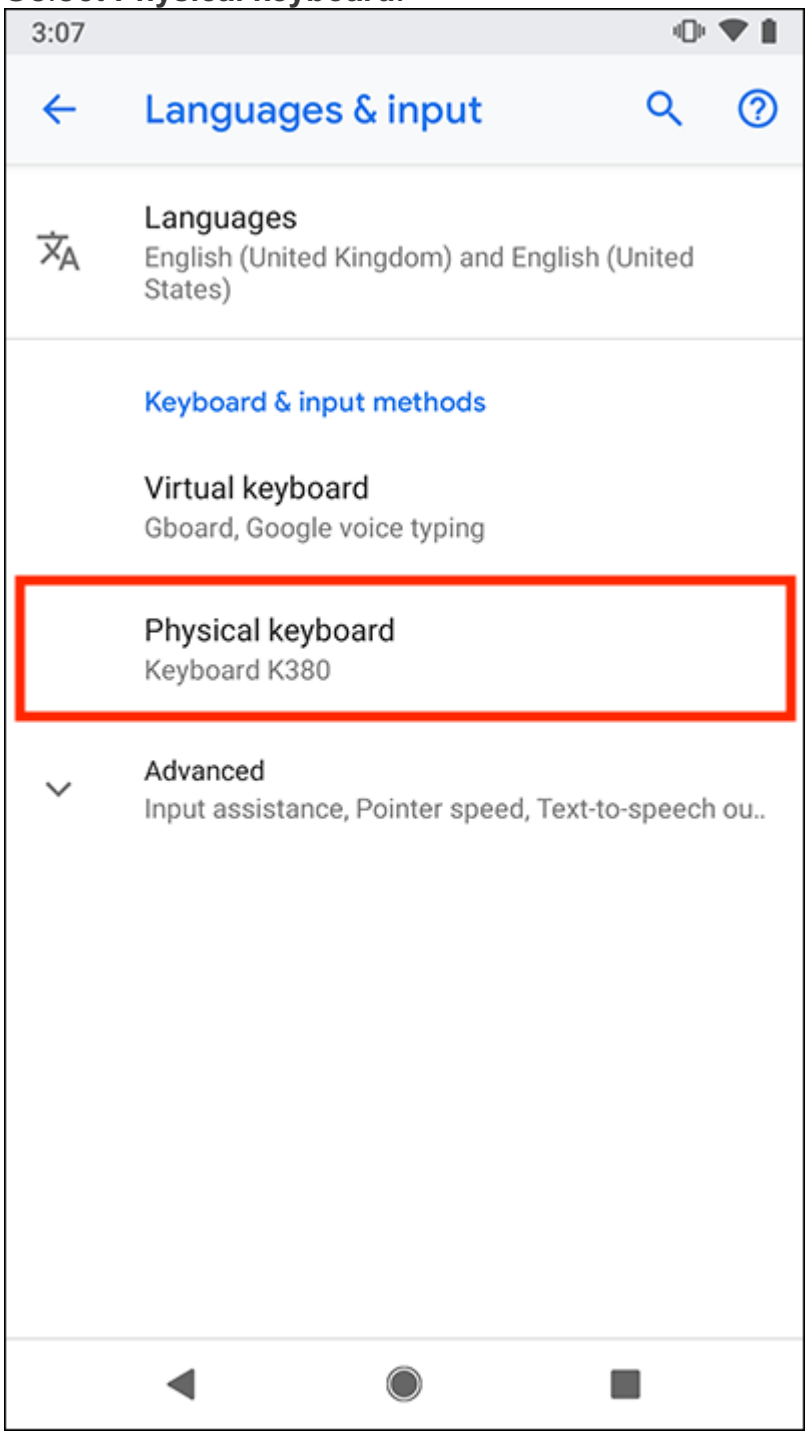
2. Scroll down to the bottom and select **System**.



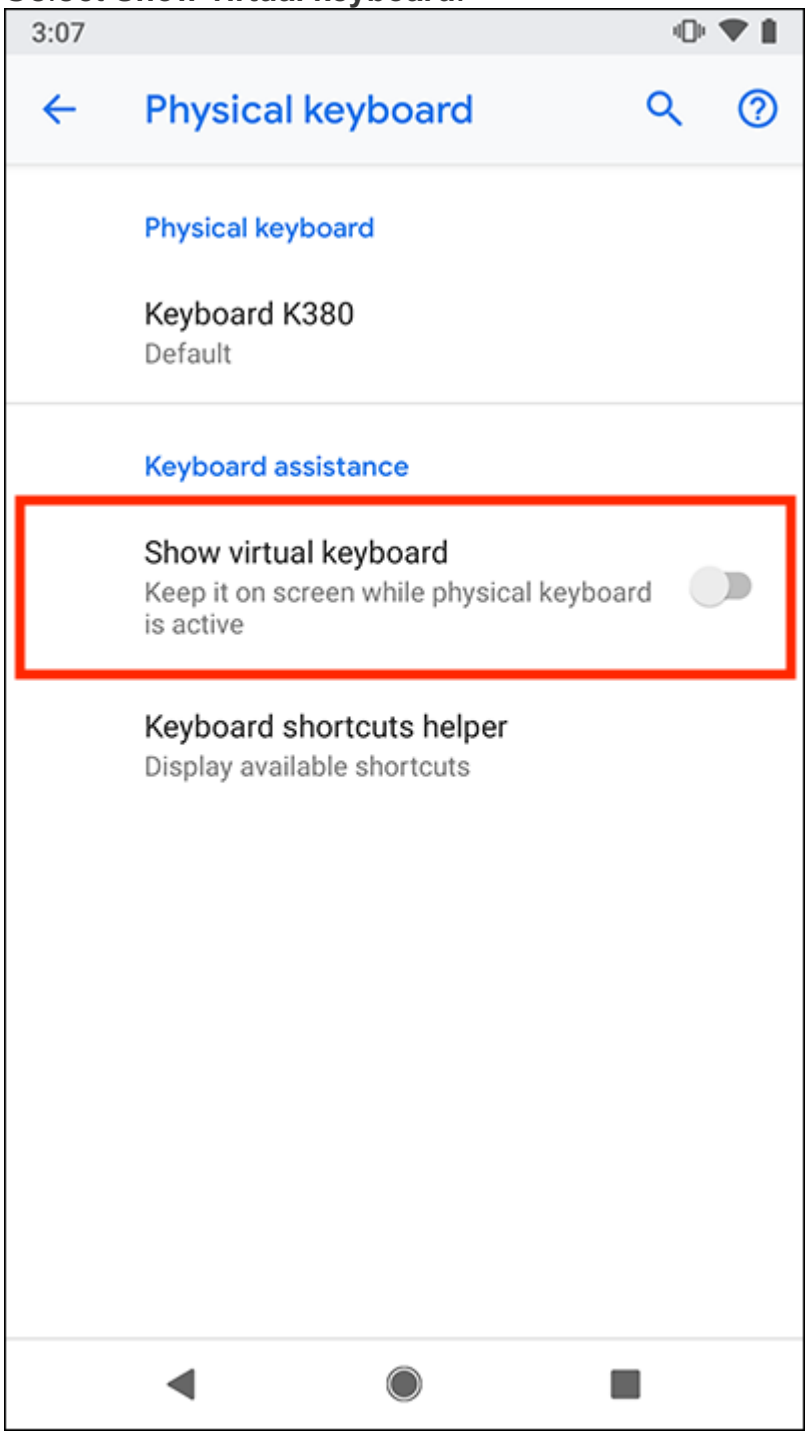
3. Select **Language & input**.



4. Select **Physical keyboard**.



5. Select **Show virtual keyboard**.



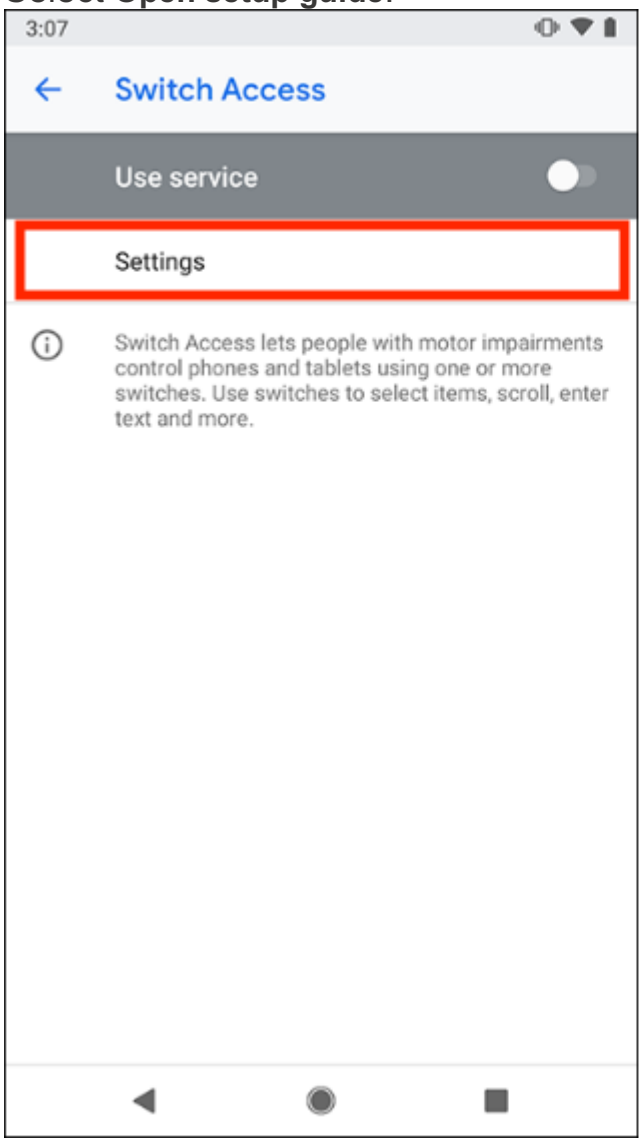
Switch Access settings

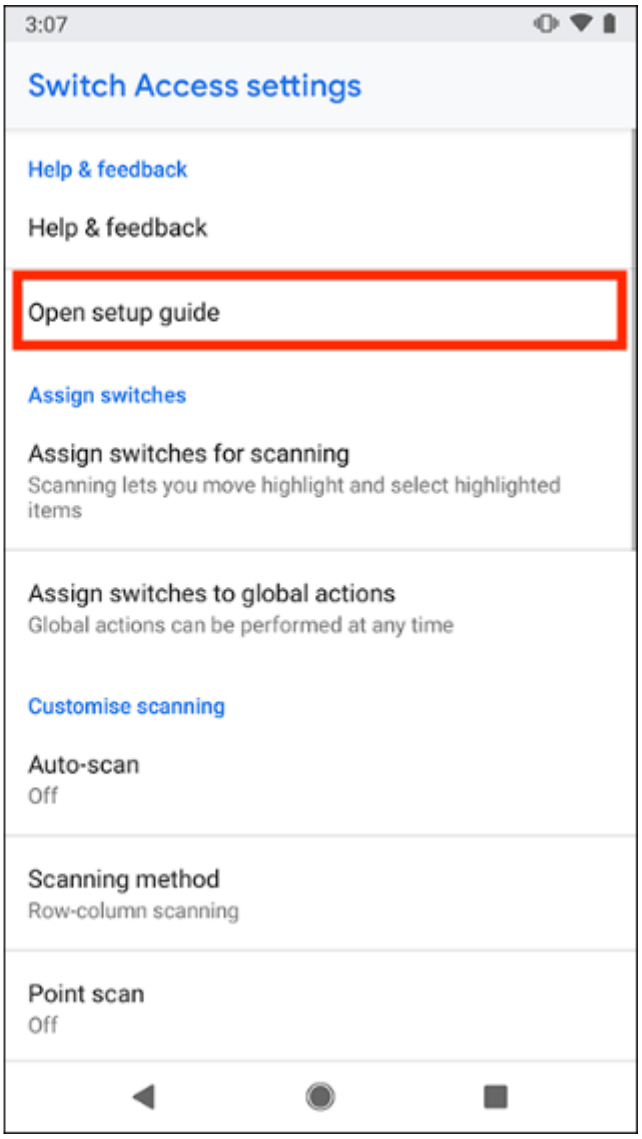
You can edit any of the settings you chose when setting up Switch Access. There are also some advanced options that you can enable.

How to repeat the setup process

To repeat the setup process:

1. Open the **Settings** app .
2. Select **Accessibility** from the list.
3. Scroll down to the **Interaction controls** section and select **Switch Access**.
4. Select **Settings**.
5. Select **Open setup guide**.



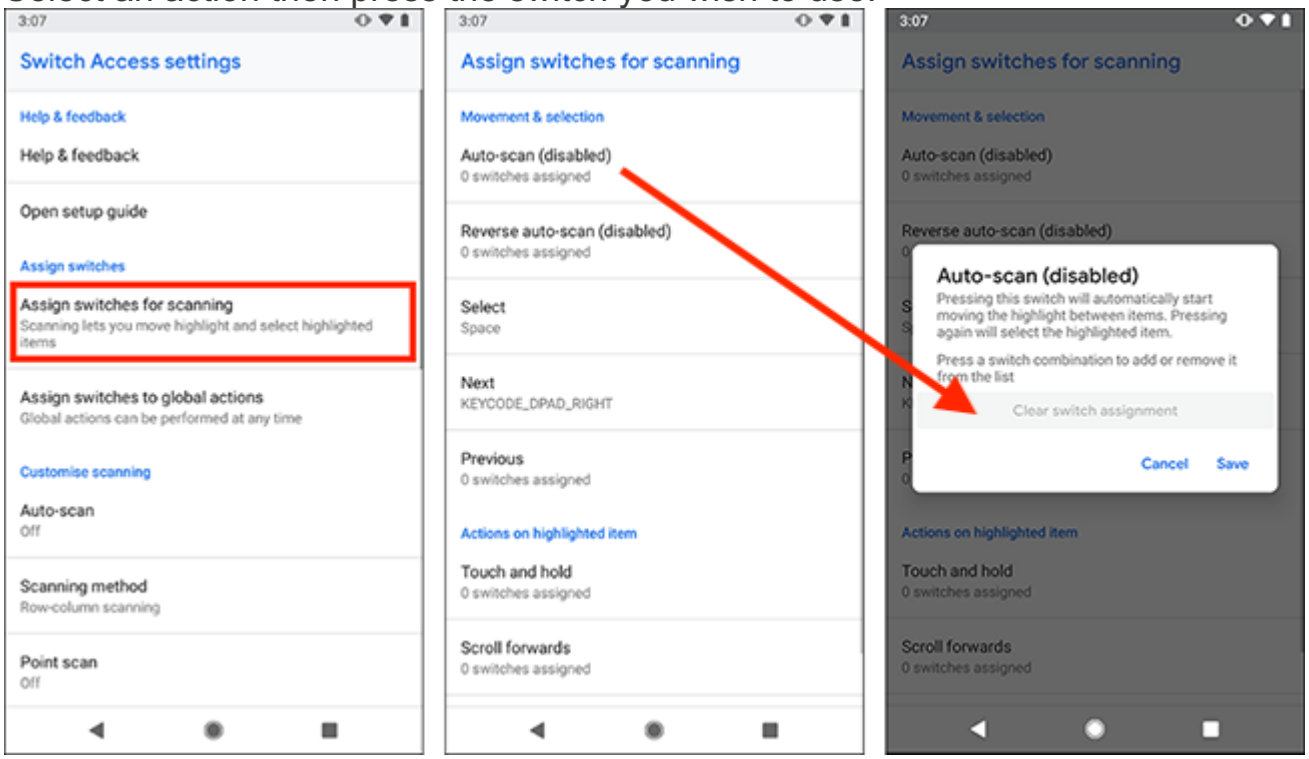


How to assign more actions to switches

1. Open the **Settings** app .
2. Select **Accessibility** from the list.
3. Scroll down to the **Interaction controls** section and select **Switch Access**.
4. Select **Settings**.
5. Under the **Assign switches** section you can edit the following settings:
   Assign switches for scanning

   Edit your switches and assign actions not covered in the setup process, such as **Previous** and **Auto-scan**.
1. Select **Assign switches for scanning**.

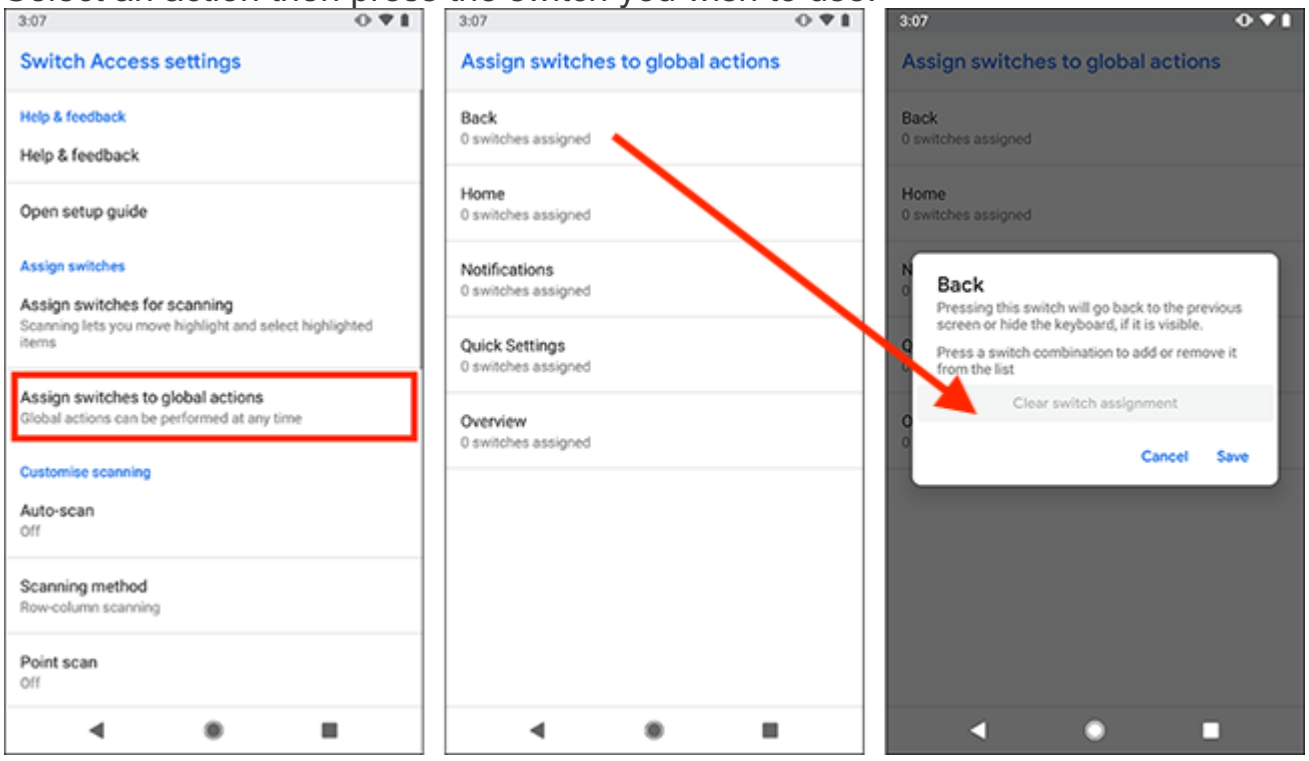
2. Select an action then press the switch you wish to use.



Assign switches to global actions

Assign switches to actions you can perform at any time such as Home and Back buttons, Notifications and Quick Settings.

1. Select **Assign switches to global actions**.
2. Select an action then press the switch you wish to use.

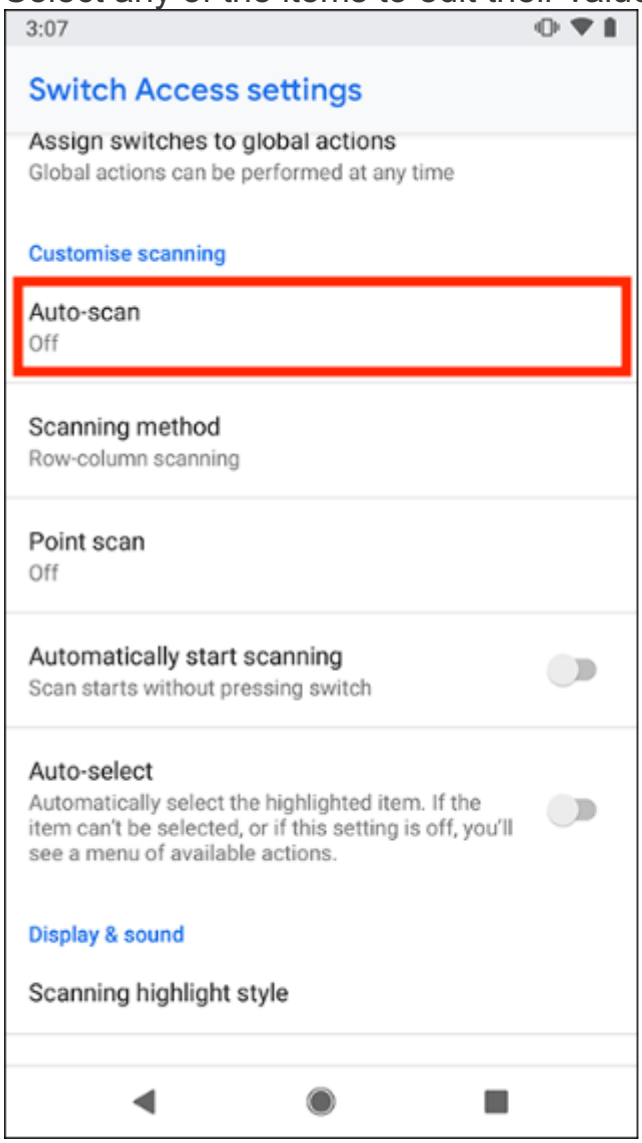


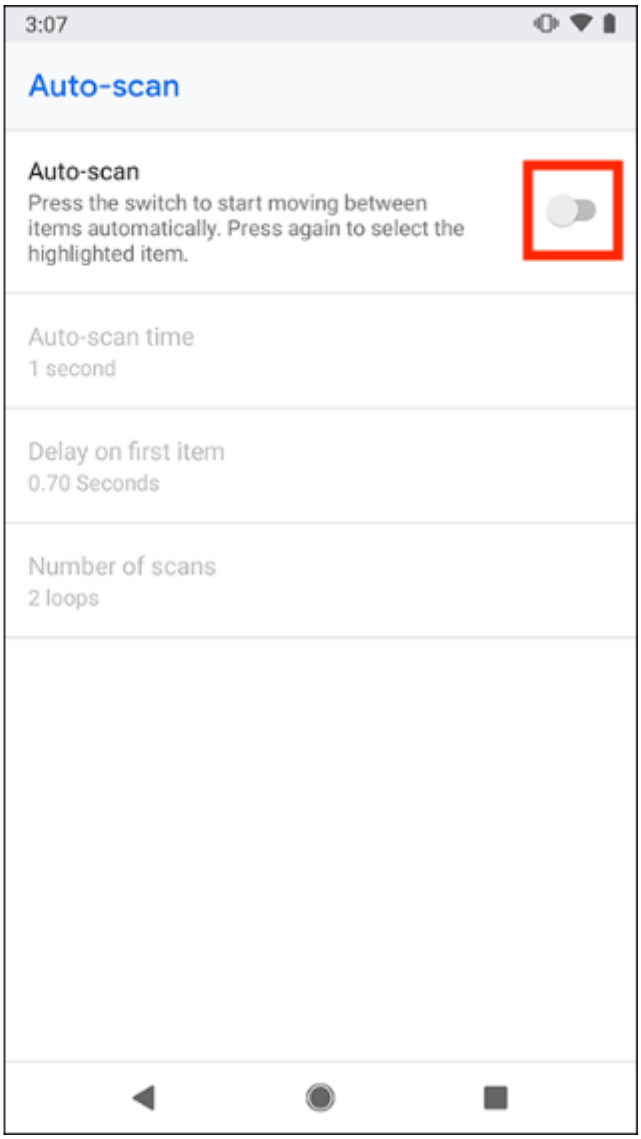
How to customise scanning

1. Open the **Settings** app .
2. Select **Accessibility** from the list.
3. Scroll down to the **Interaction controls** section and select **Switch Access**.
4. Select **Settings**.
5. Scroll down to the **Customise scanning** section.
6. You can edit the following settings:
   Auto-scan

   Enable this option to starting moving between each item on the screen when you press the assigned auto-scan switch.

1. Select **Auto scan**.
2. On the next screen, set the **Auto** scan toggle switch to **On**.
3. Select any of the items to edit their values.

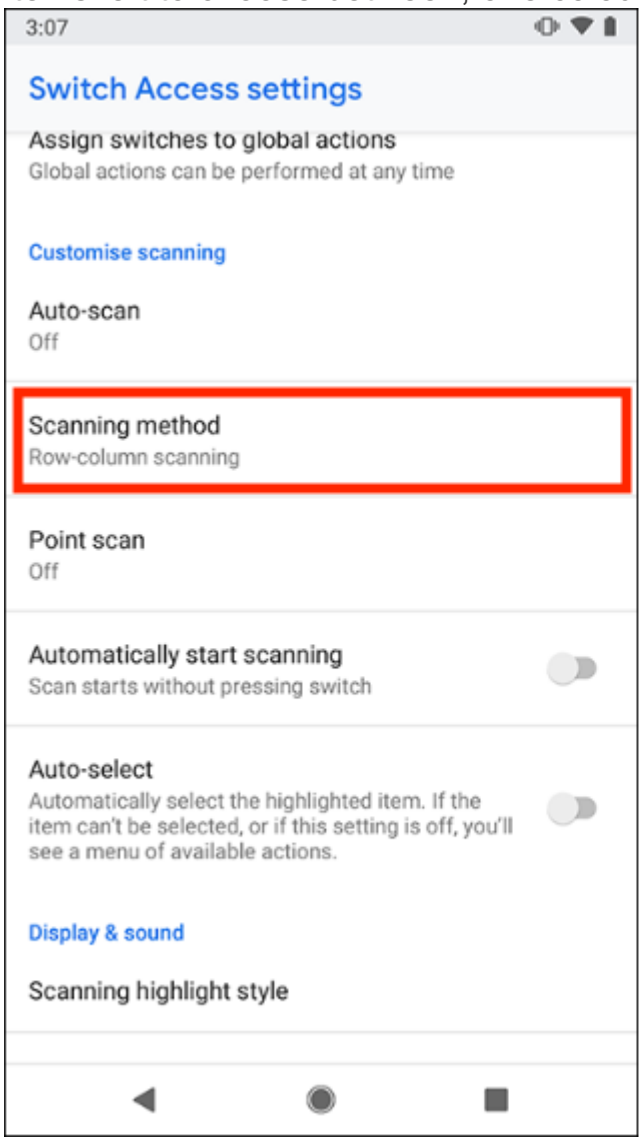


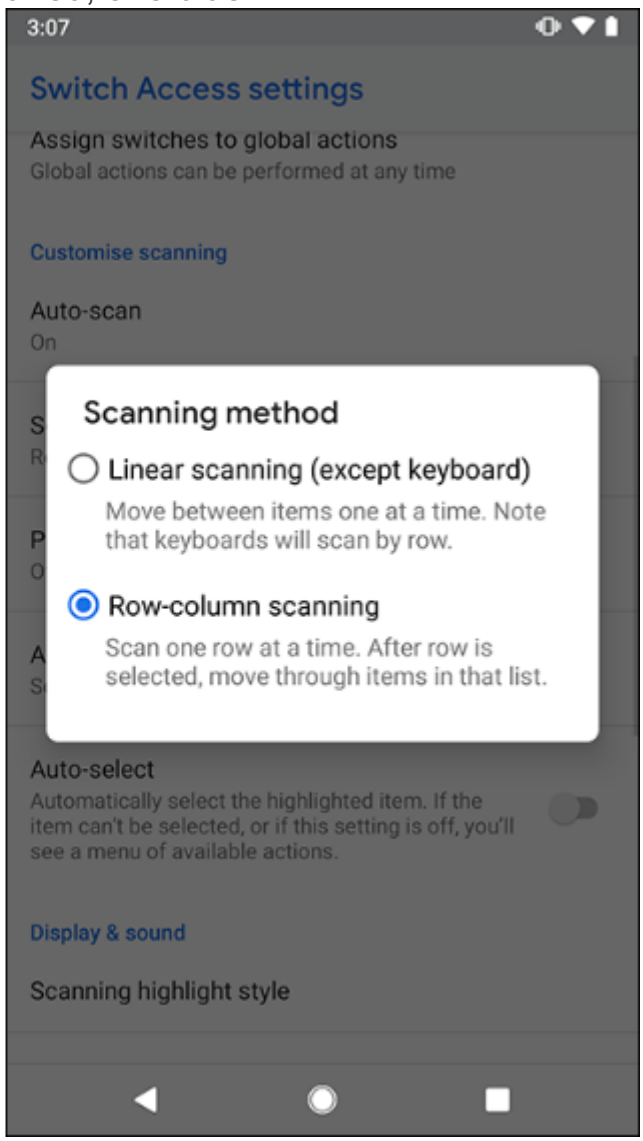


Scanning method

Select **Scanning method** and select from:

- **Linear scanning (except keyboards)**: Move between items one at a time. **Note**: Keyboards will scan by row.
- **Row-column scanning**: Cycle through rows of items, then cycle through the items within a selected row.
- **Group selection** (**Note:** this option is only available if you chose '**Two switches**' on the previous screen): Items are automatically grouped by colour: some red, some blue. You select the colour group that contains the item you want to select. Each time you select a group, the items within that group are again split into red and blue. Repeat this until there are only two items left to choose between; one coloured red, one blue.

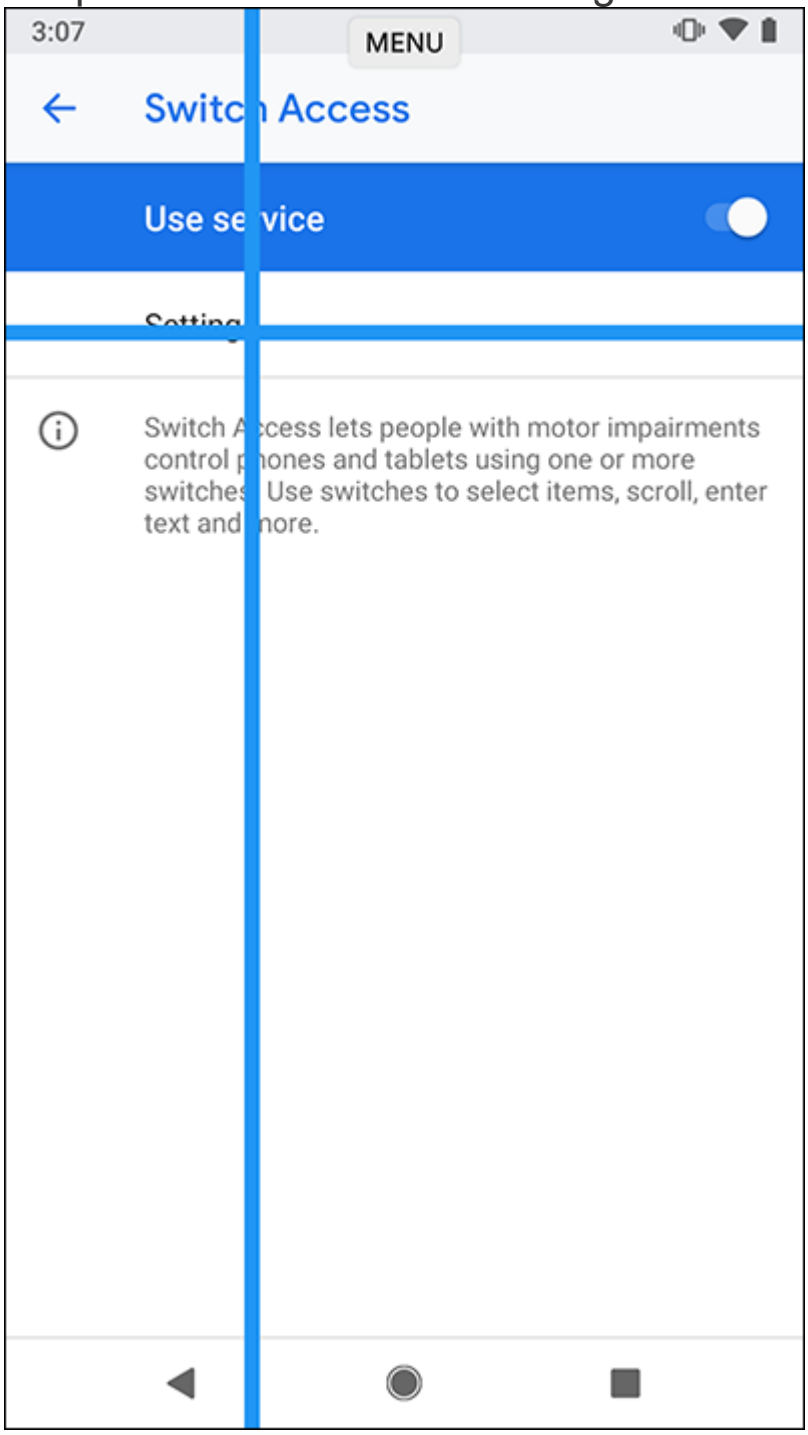




Point scan

Point scan uses moving horizontal and vertical lines to select an item. You press a switch to start and stop a horizontal line, then press a switch to start and stop a vertical line. The item under

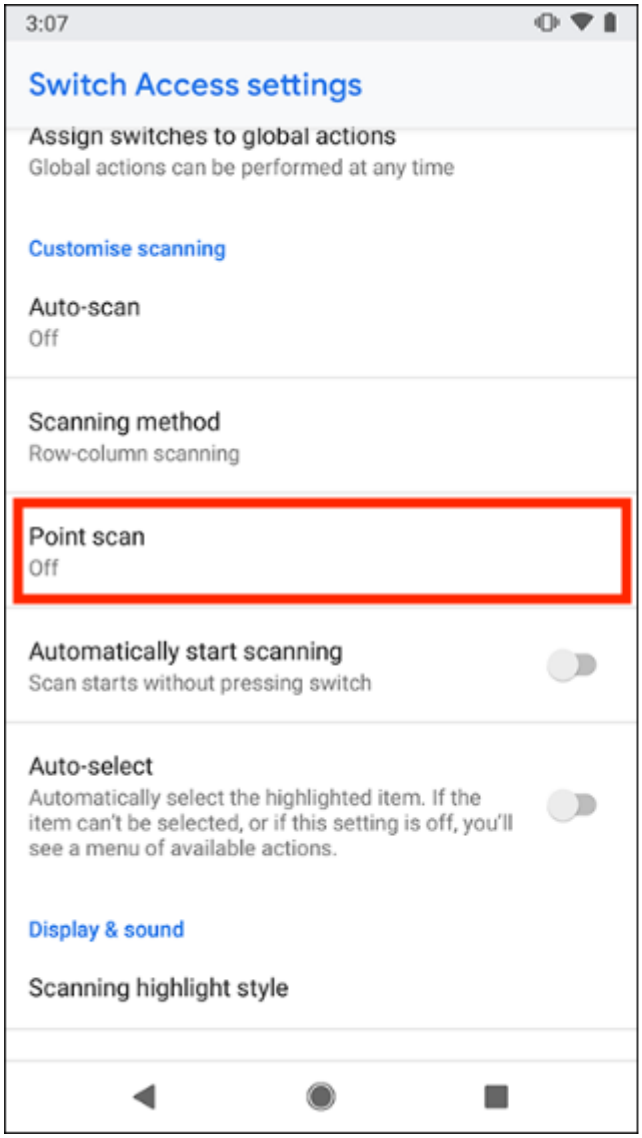
the point where the lines cross gets selected.

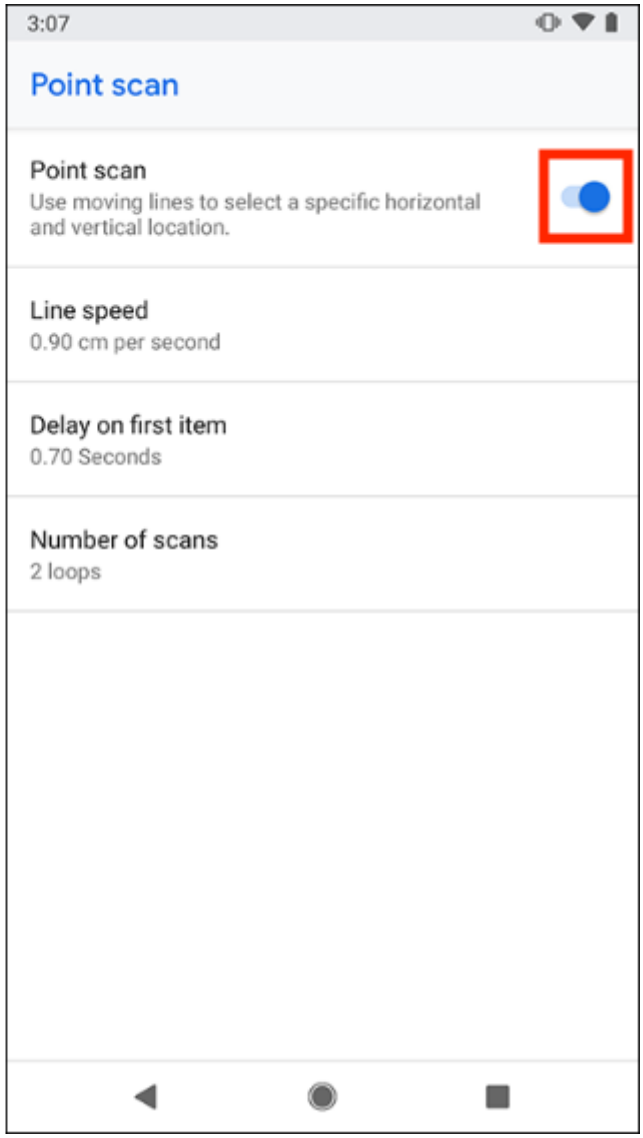


To use this scanning method:

1. Select **Point scan**.
2. Select the toggle switch to set it to **On**.
3. When you have enabled Point Scan, you can adjust values for:
   - **Line speed**
   - **Delay on first item**

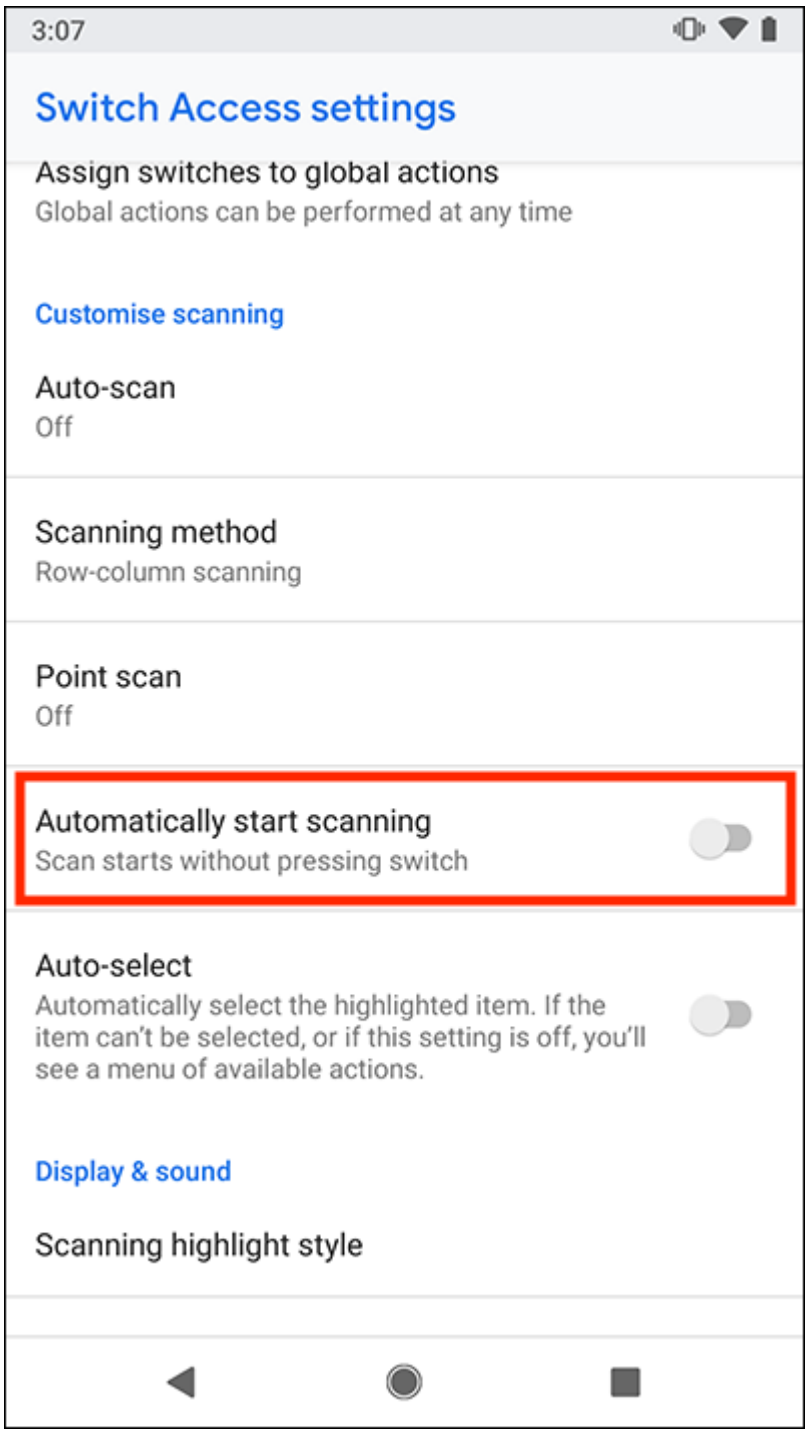
- **Number of scans**





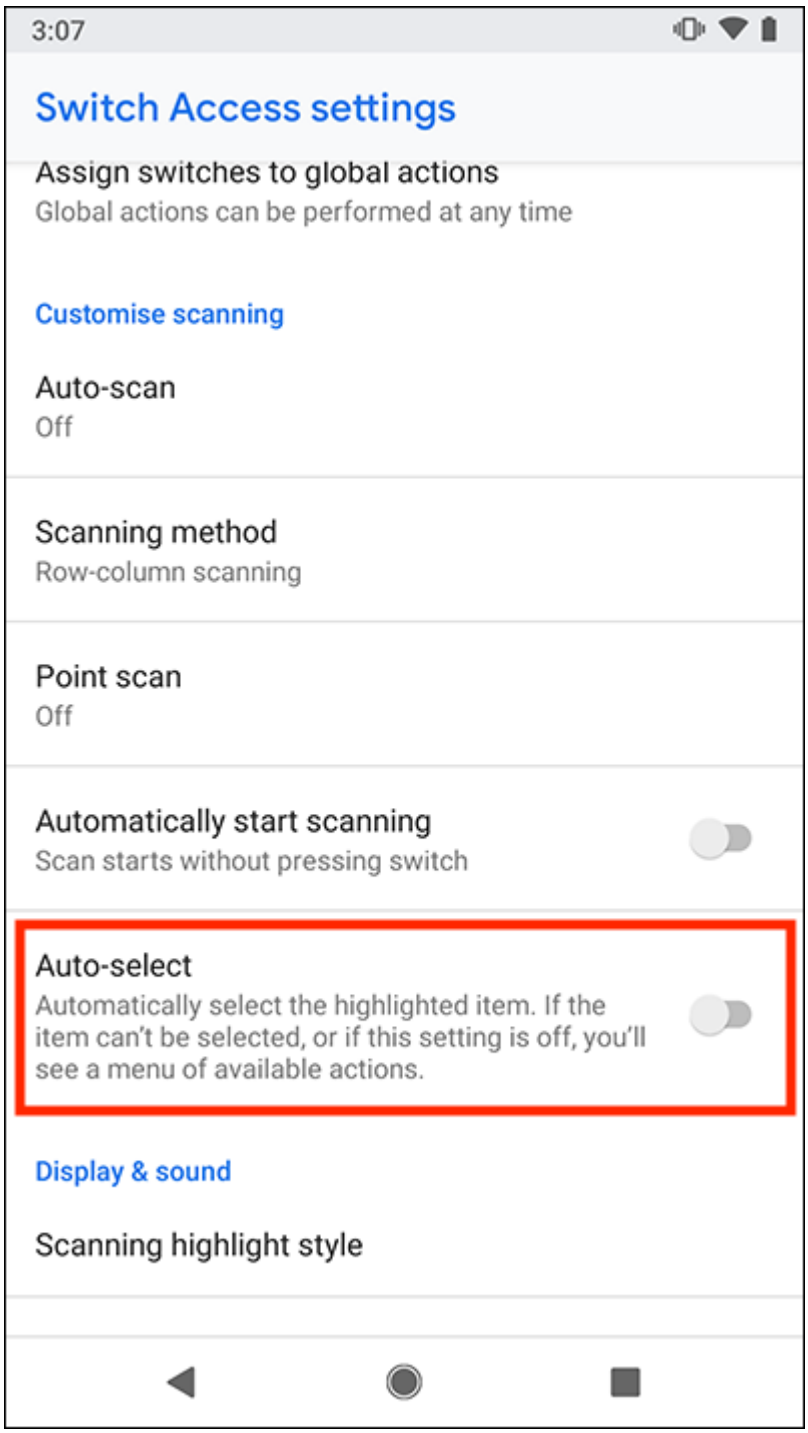
Automatically start scanning

Start scanning when you open a new screen. To enable this option, select **Automatically start scanning** to set the toggle switch to **On**.



Auto-select

The highlighted item is automatically selected. If the item can't be selected, or if this setting is off, you will see a menu of the available actions. This setting is turned **On** by default. To disable it, select **Auto**-select to set the toggle switch to **Off**.

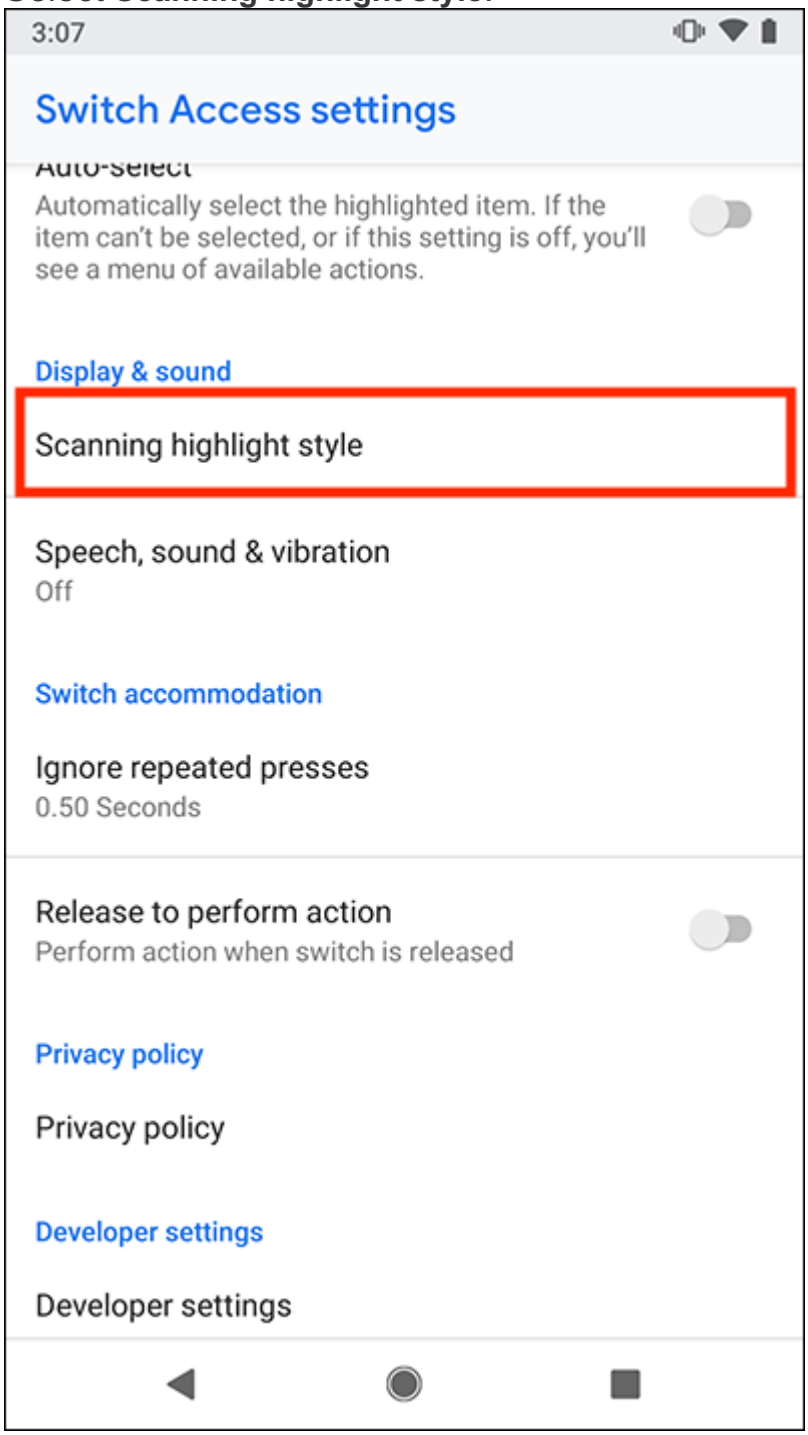


How to edit display and sound settings

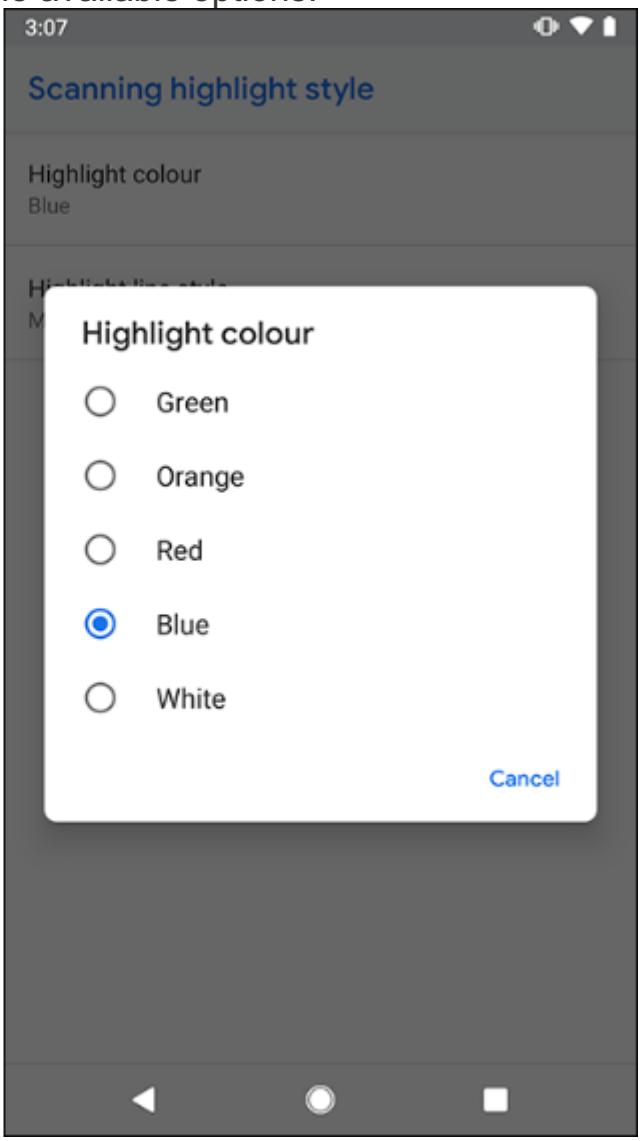
1. Open the **Settings** app .
2. Select **Accessibility** from the list.
3. Scroll down to the **Interaction controls** section and select **Switch Access**.
4. Select **Settings**.
5. Scroll down to the **Display & sound** section.
6. You can edit the following settings:
   Scanning highlight style

To change the appearance of the highlight:

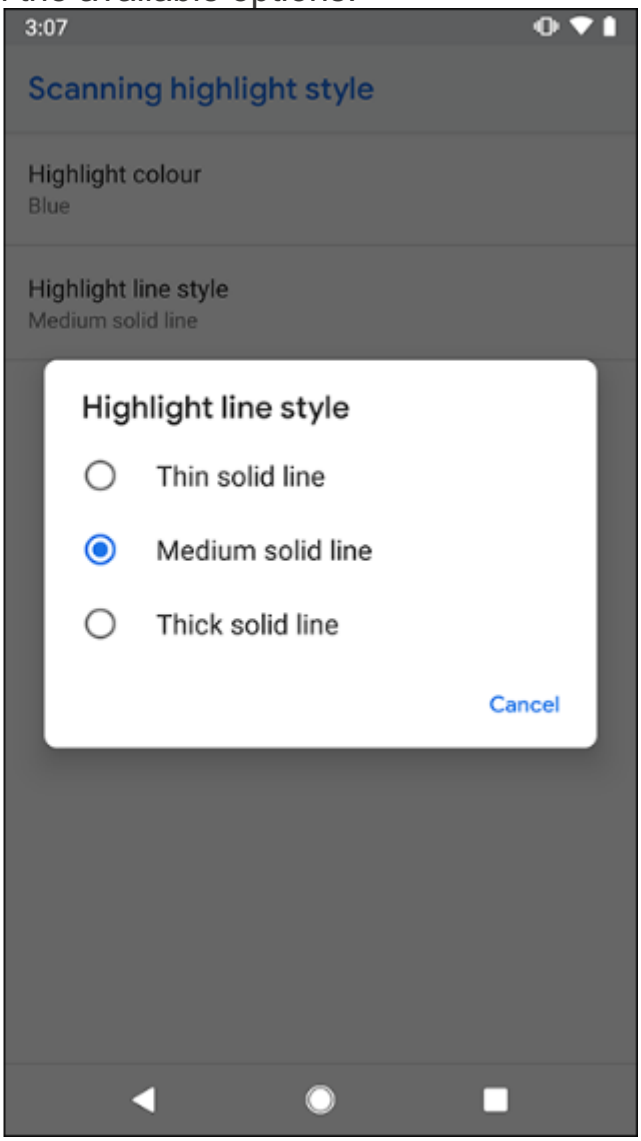
1. Select **Scanning highlight style**.



2. Select **Highlight colour** and choose from the available options.



3. Select **Highlight line style** and choose from the available options.

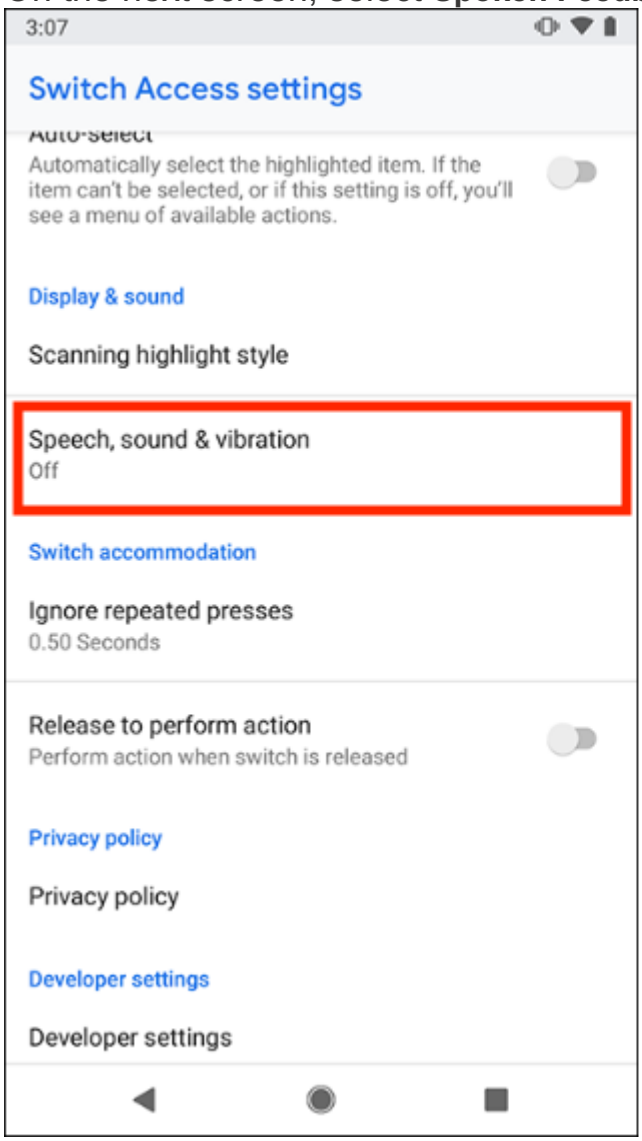


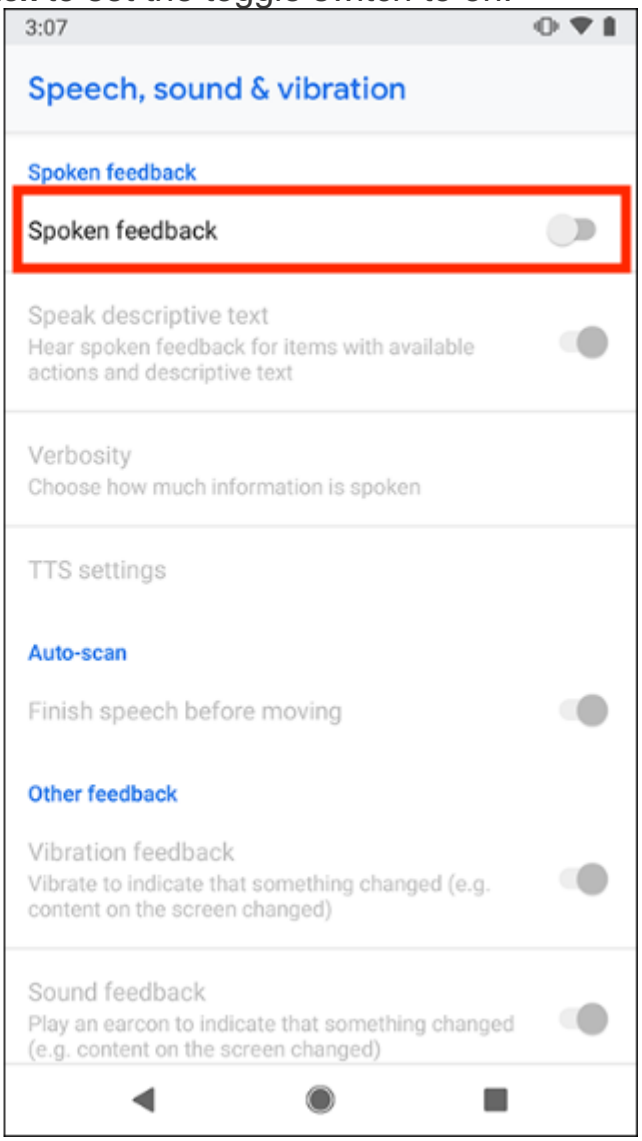
Speech, sound & vibration

If you would like to receive audio and vibration feedback when using Switch Access:

1. Select **Speech, sound & vibration**.

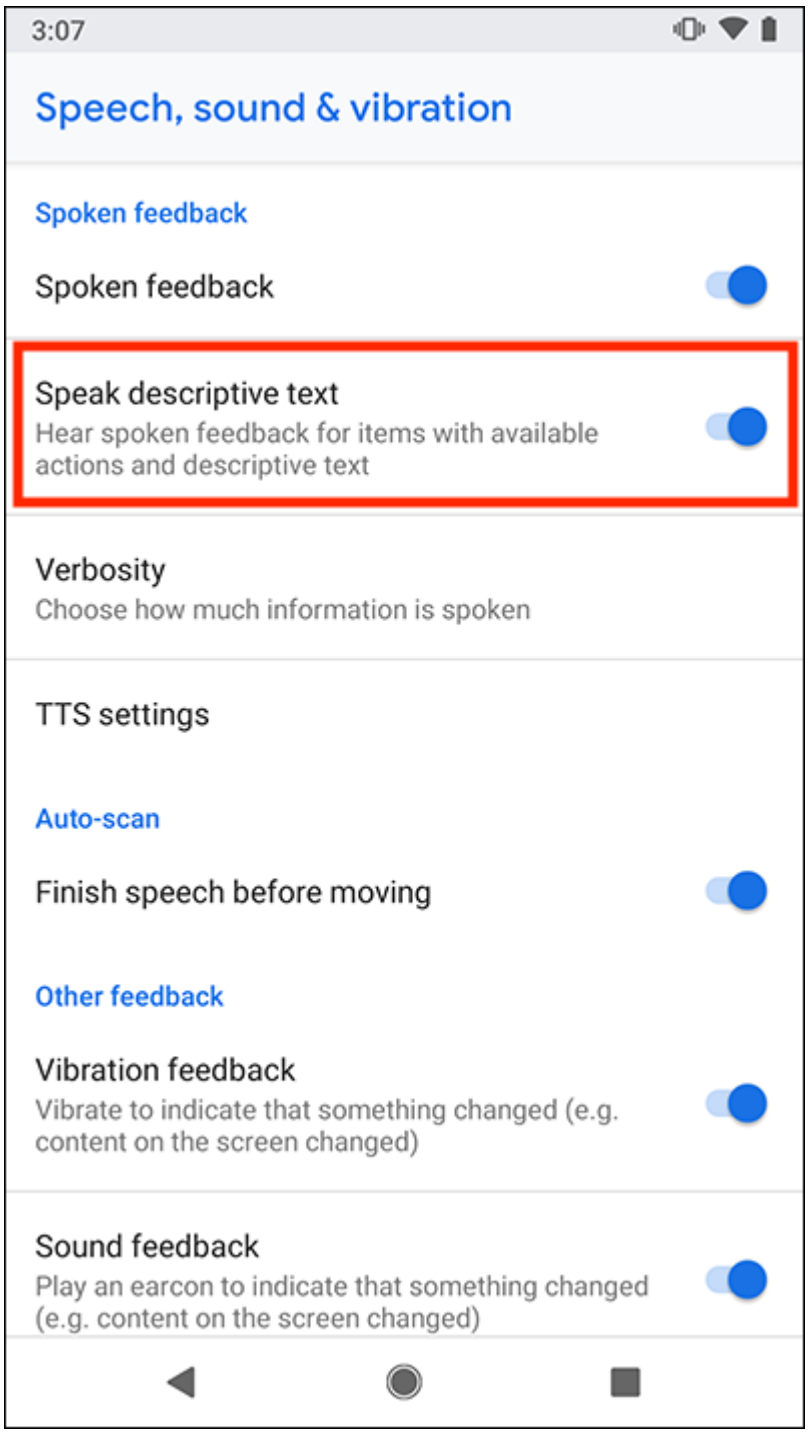
2. On the next screen, select **Spoken Feedback** to set the toggle switch to on.





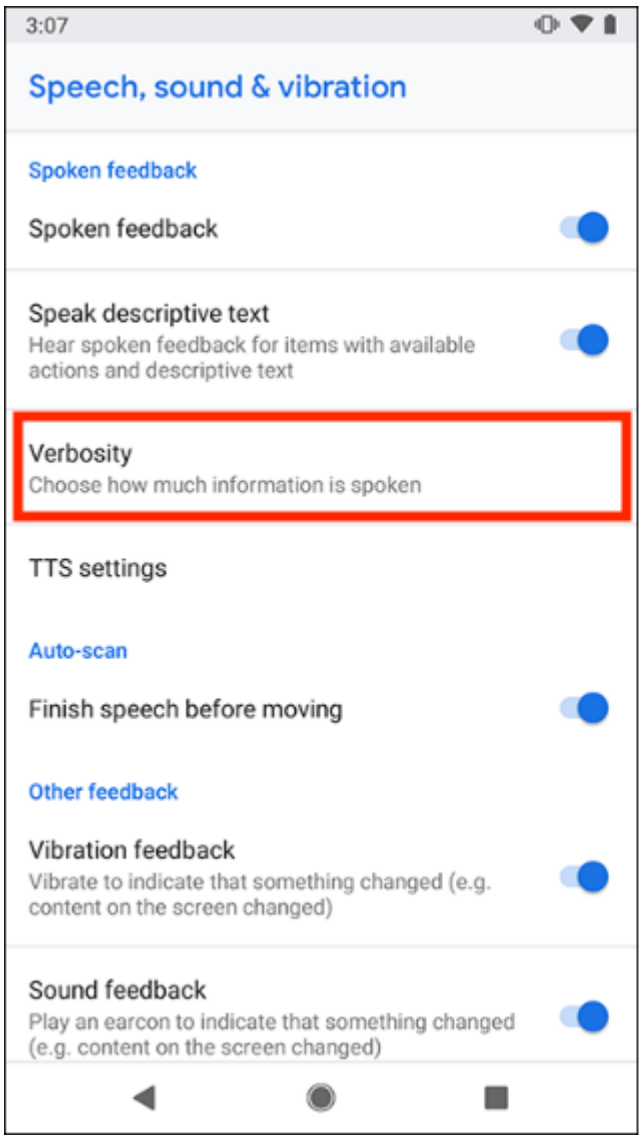
3. You can now edit the following settings:
   Spoken descriptive text

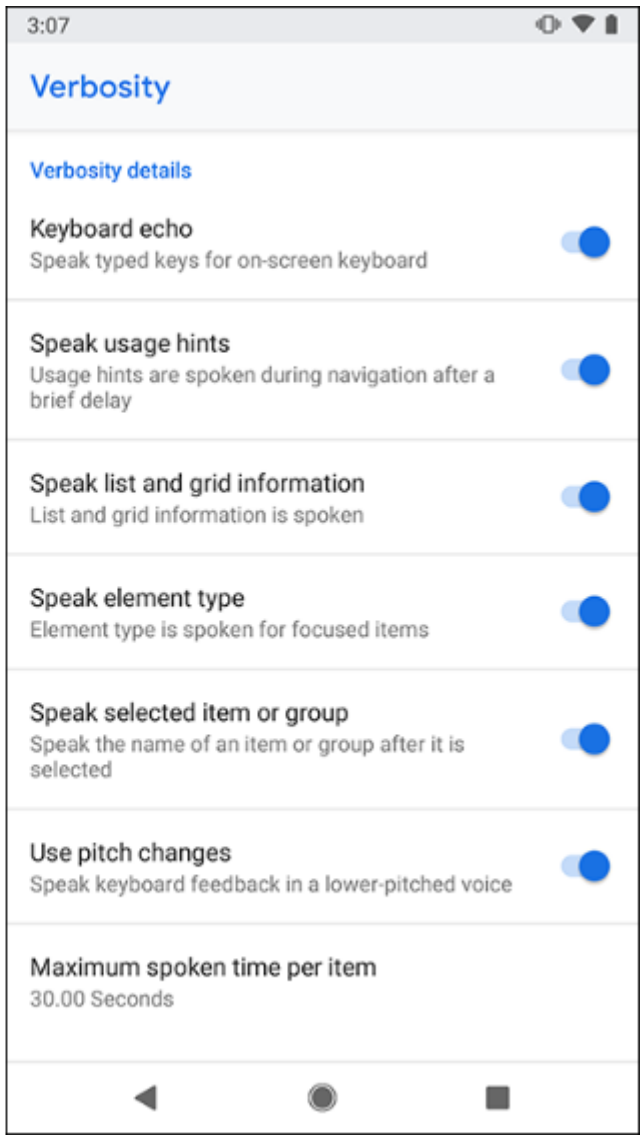
   When you select an item you hear a description of it. This setting is **On** by default. To disable it, select **Speak description text** to set the toggle switch to **Off**.



Verbosity

Verbosity is the amount of spoken feedback you receive when you make selections or navigate your device. You can customise the feedback you receive to suit your needs. Select **Verbosity**, then select any item to set the toggle switch to **On** or **Off**.



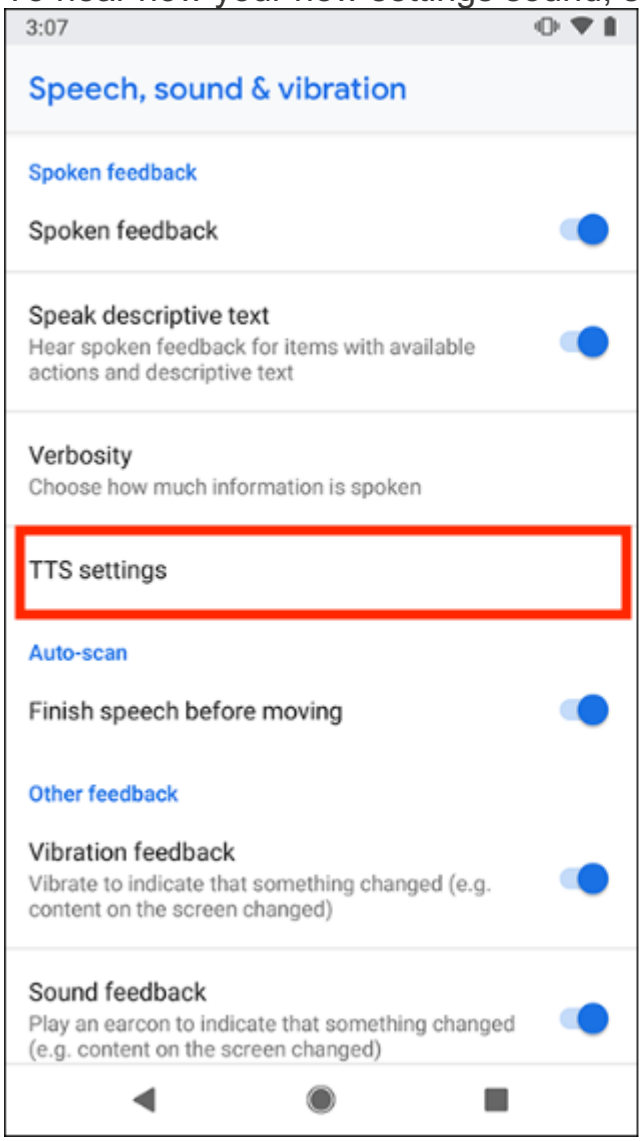


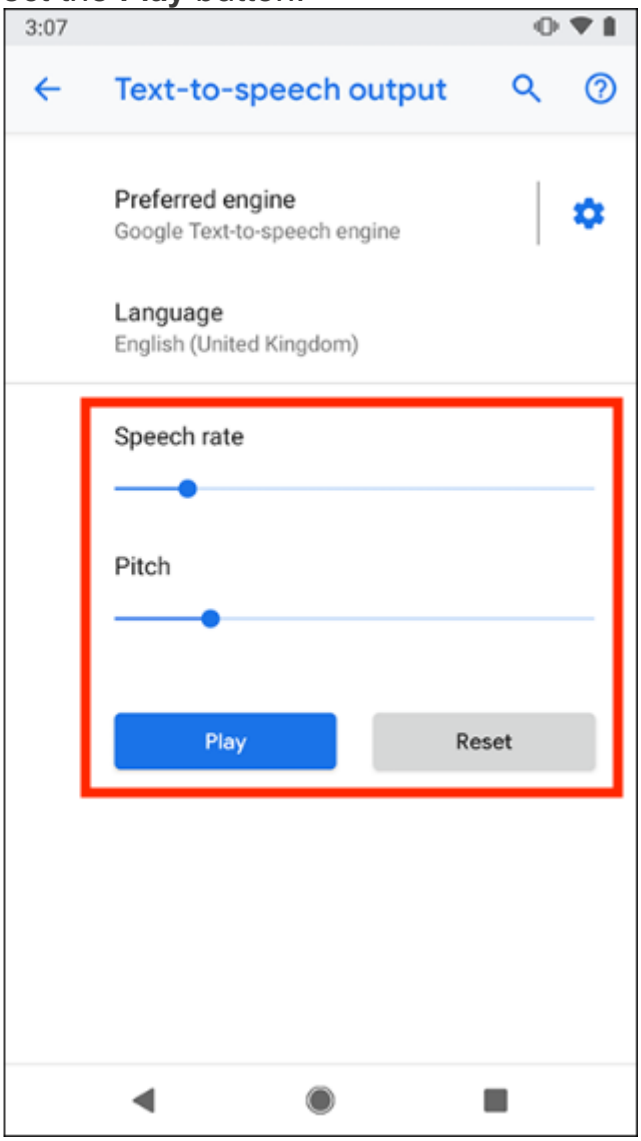
TTS settings

Text-to-speech (TTS) is the software used to convert text into spoken content. You can customise the text-to-speech voice output to make it easier to follow.

1. Select **Text-to-Speech settings**.
2. Now adjust the **Speech Rate** slider to change how fast your device reads aloud.
3. Adjust the slider for **Pitch** to alter the tone of the spoken voice.

4. To hear how your new settings sound, select the **Play** button.

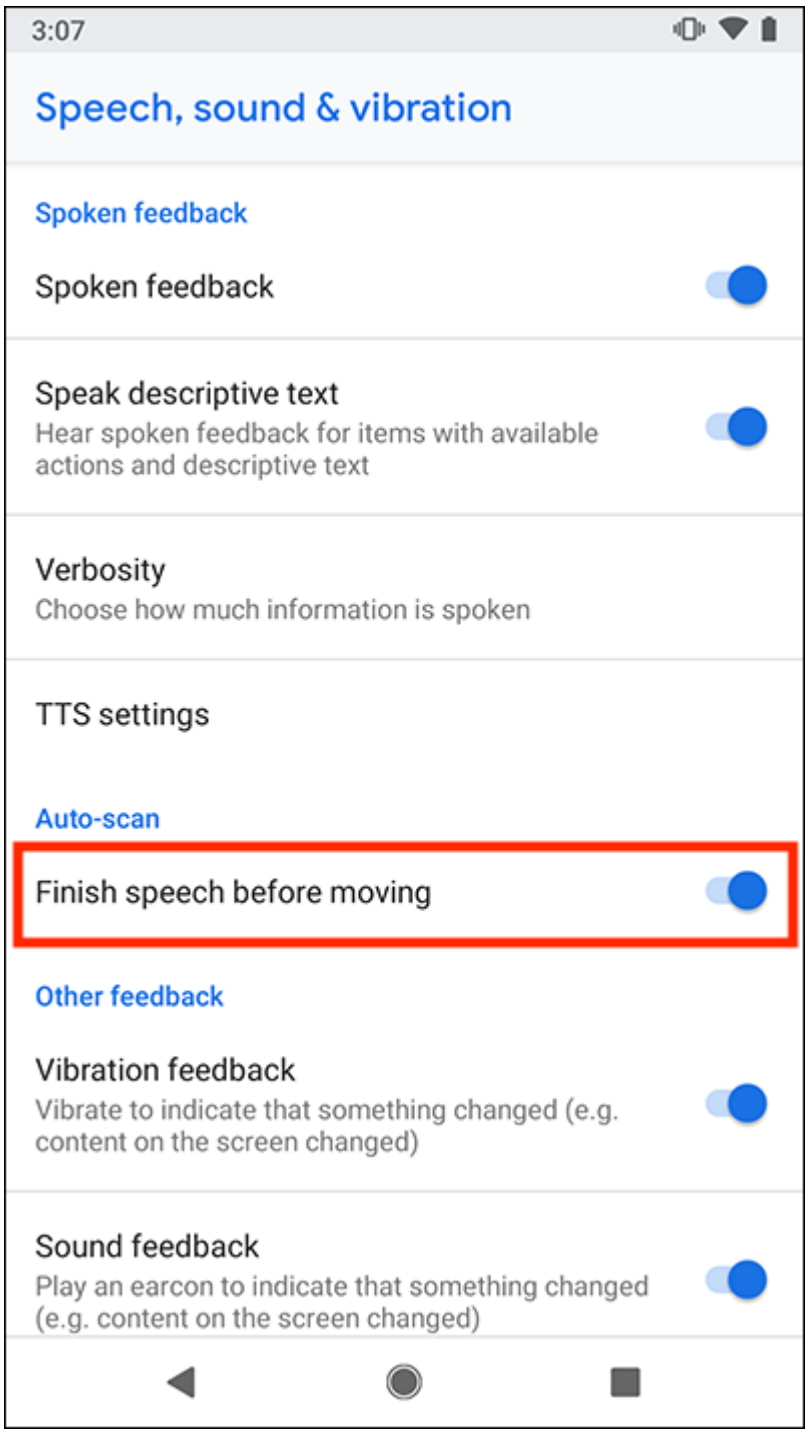




5. To return the settings to their default positions, select the **Reset** button.
6. For information about changing other **Text-to-Speech settings** see the article **How to change the text-to-speech (TTS) settings for screen readers in Android Pie** on this website.

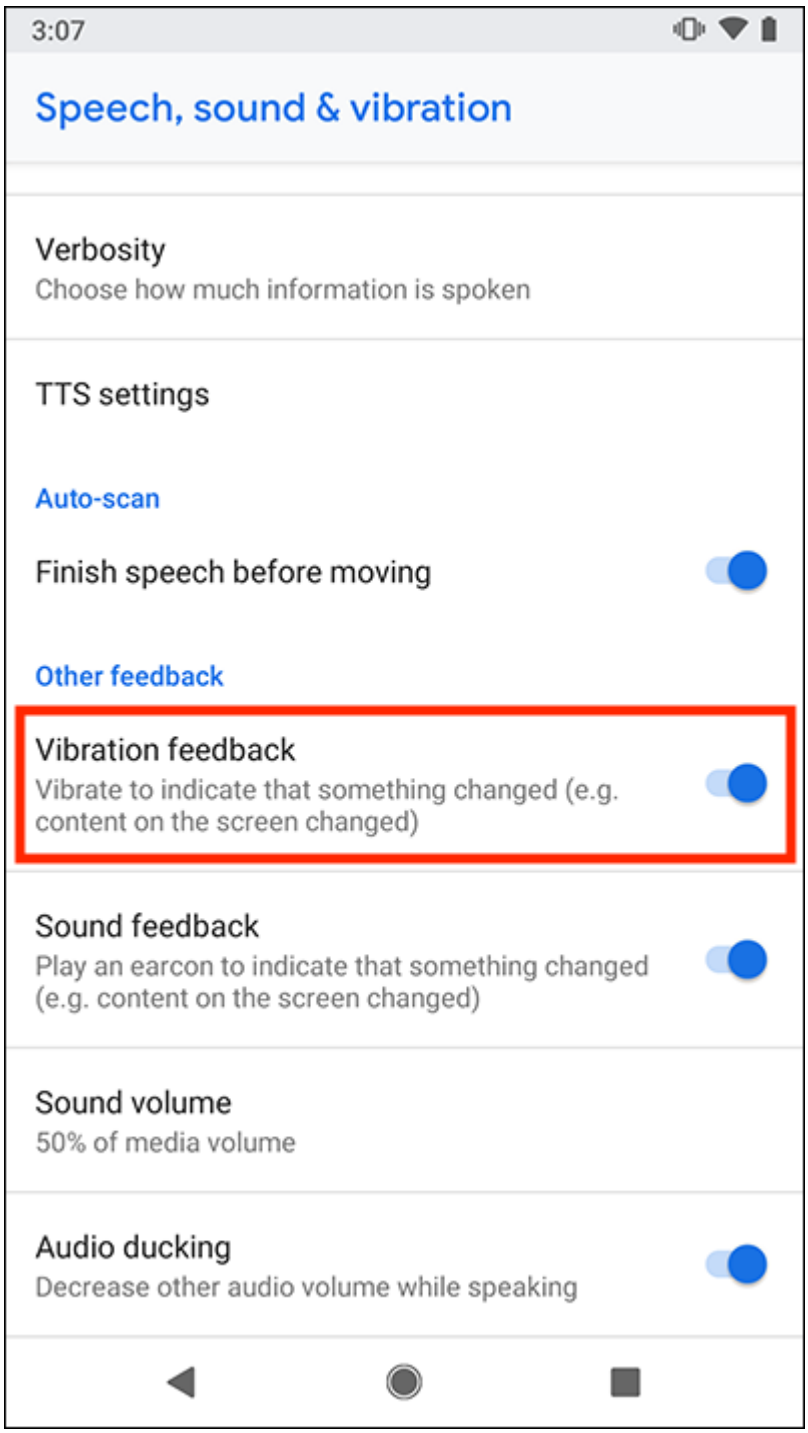
Finish speech before moving

Don't move on to the next item until speech has finished. This setting is **On** by default. To disable it, select **Speak description text** to set the toggle switch to **Off**.



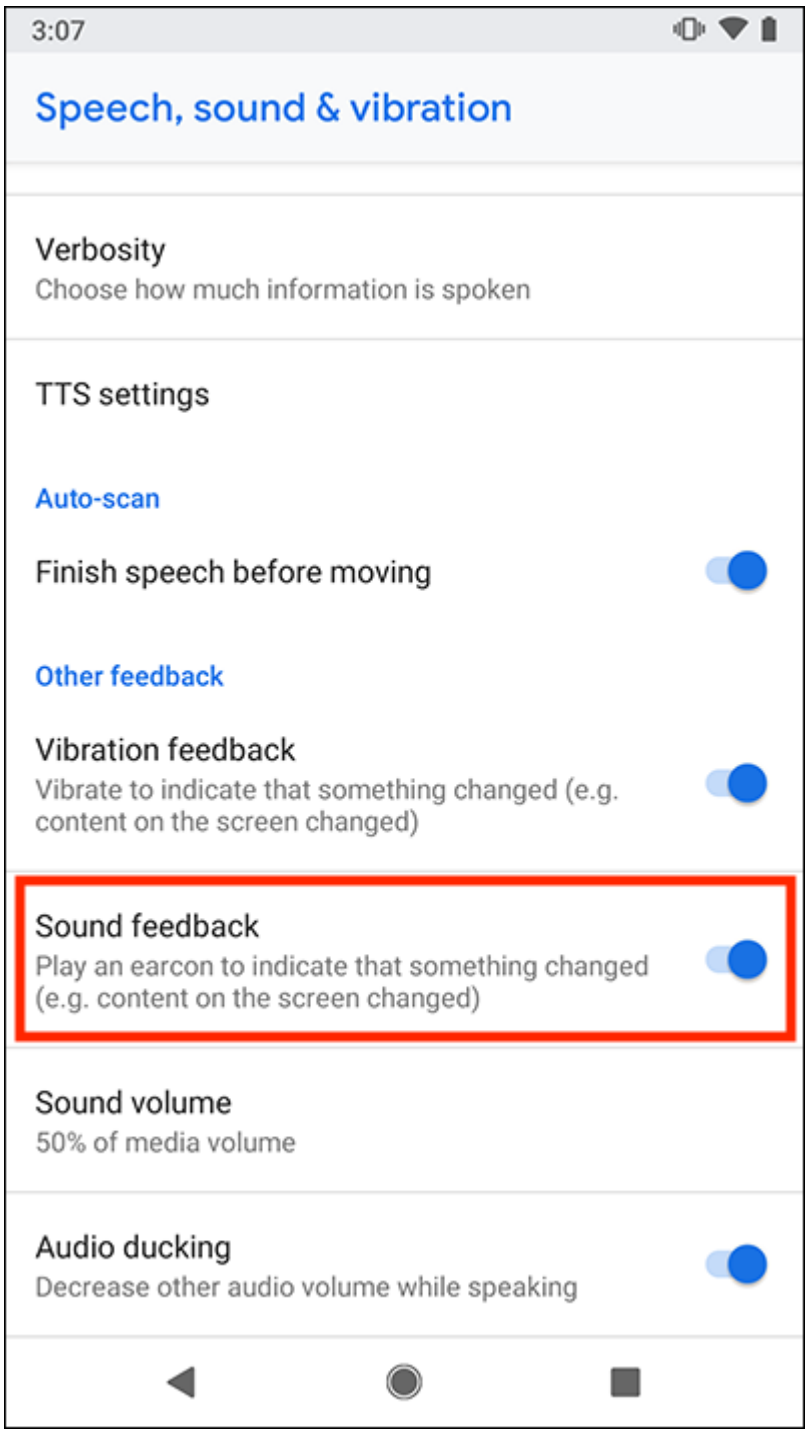
Vibration feedback

Your device will vibrate to signal that something has changed. This setting is **On** by default. To disable it, select **Vibration feedback** to set the toggle switch to **Off**.



Sound feedback

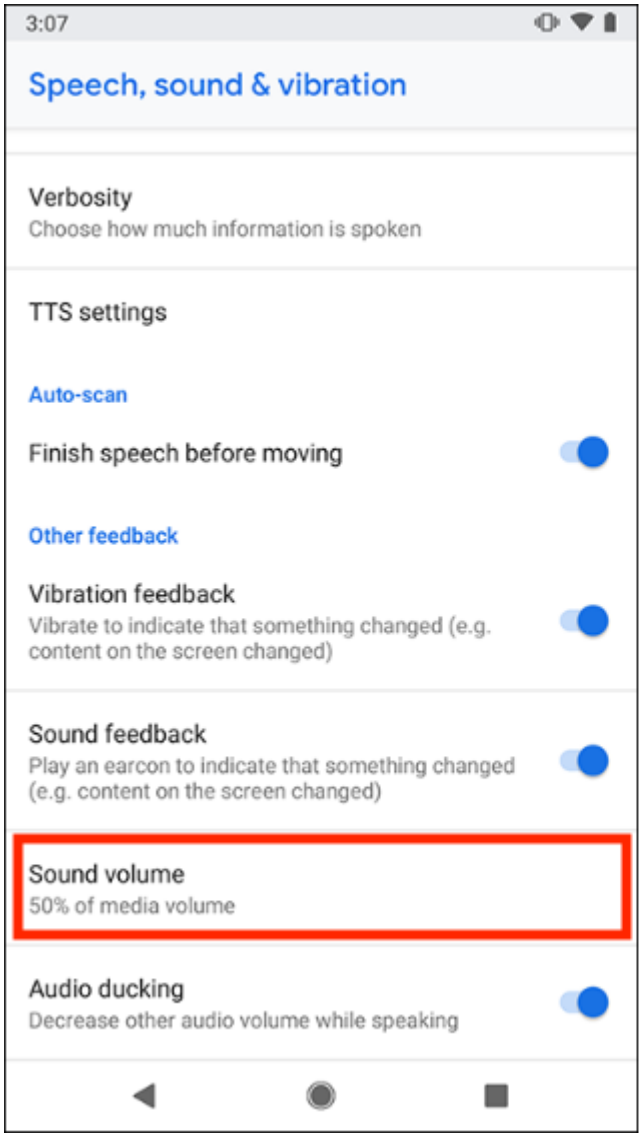
Your device plays a bleep sound to signal that something has changed. This setting is **On** by default. To disable it, select **Vibration feedback** to set the toggle switch to **Off**.

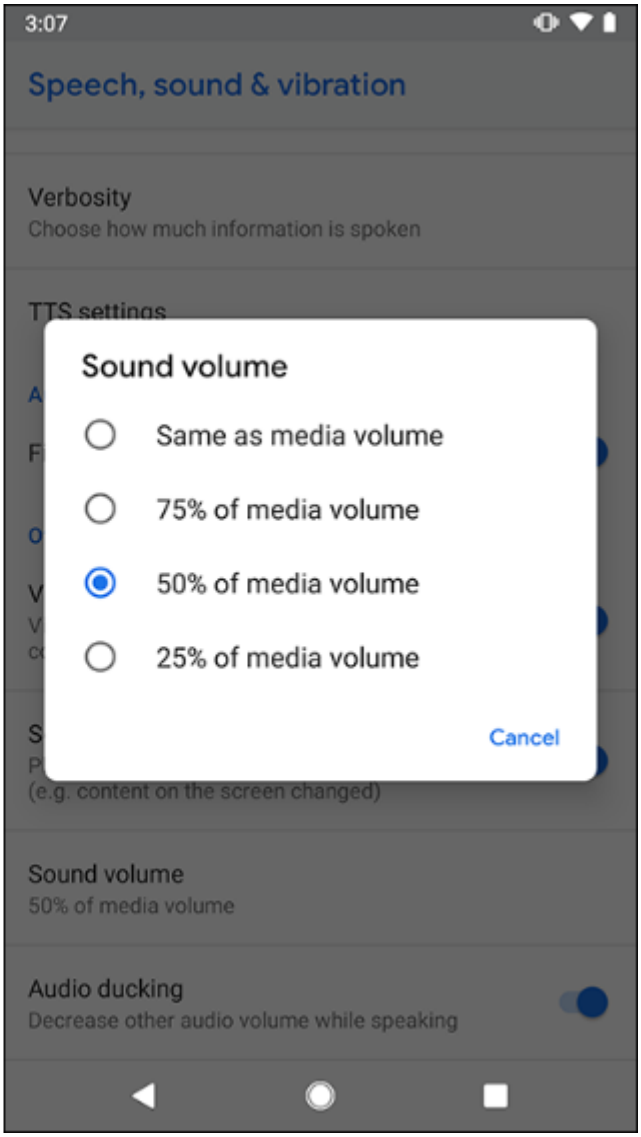


Sound volume

Set how loud the audio feedback is in comparison to other media playing on your device. Select **Sound volume** and choose from the options:

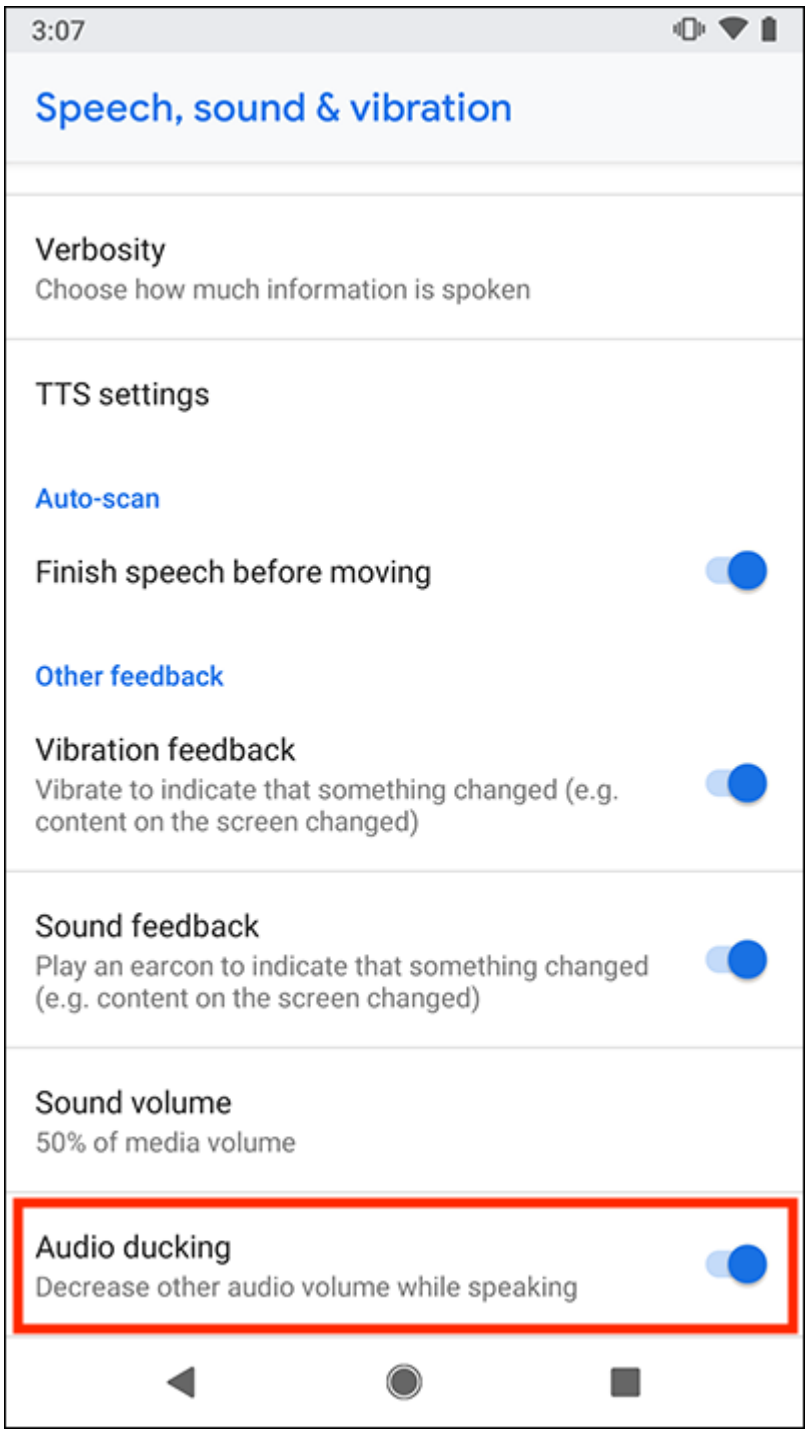
- **Match media volume**
- **75% of media volume**
- **50% of media volume**
- **25% of media volume**





Audio ducking

Decrease the volume of other media playing on your device. This setting is **On** by default. To disable it, select **Audio ducking** to set the toggle switch to **Off**.

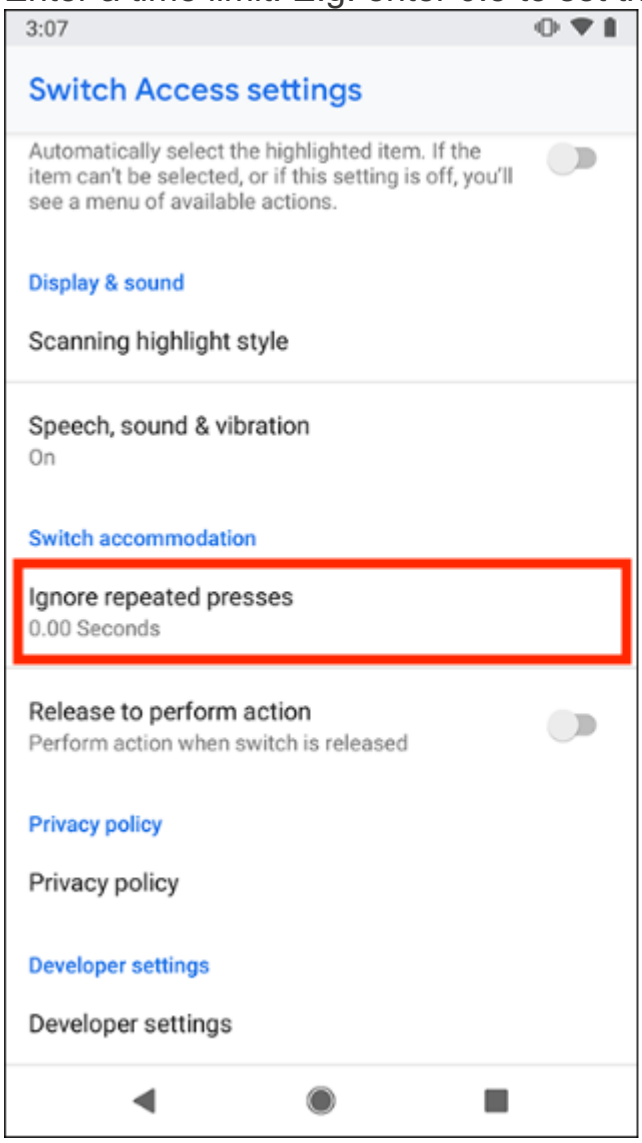


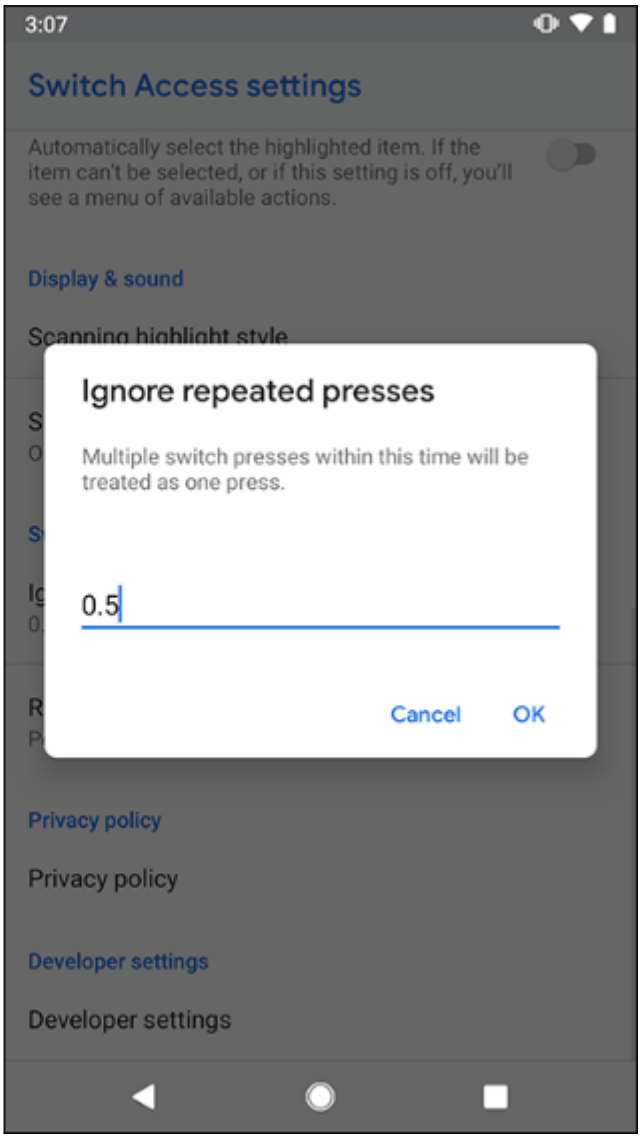
How to edit switch accommodation settings

1. Open the **Settings** app .
2. Select **Accessibility** from the list.
3. Scroll down to the **Interaction controls** section and select **Switch Access**.
4. Select **Settings**.
5. Scroll down to the **Switch accommodation** section.
6. You can edit the following settings:
   Ignore repeated presses

You can set your device to treat repeated presses as a single press if they occur within a certain amount of time.

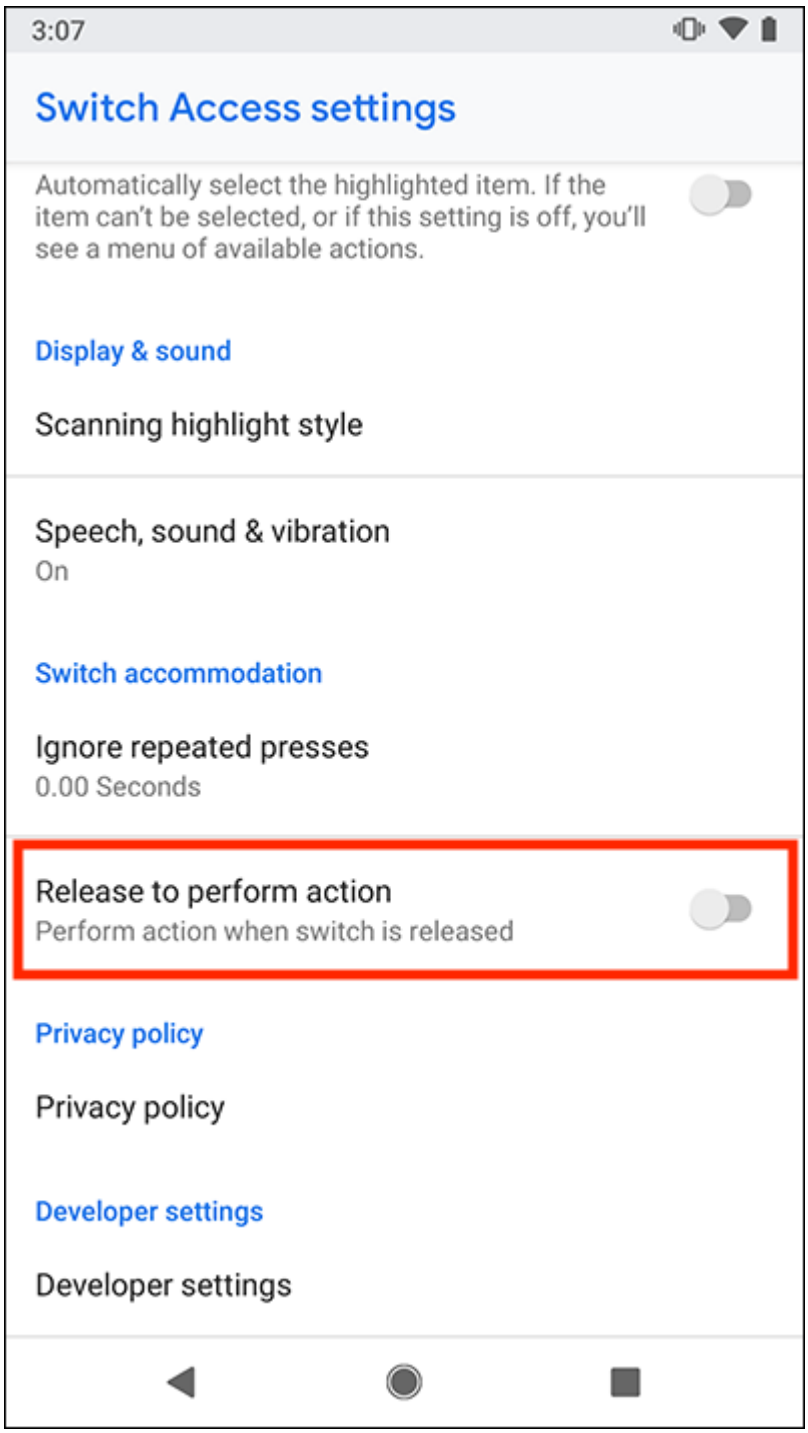
1. Select **Ignore repeated presses**.
2. Enter a time limit. E.g. enter 0.5 to set the time limit to half a second.





Release to perform action

You can choose to trigger an action when you release a switch rather than when you press it. To enable this feature, select **Release to perform action** to set the toggle switch to **On**.



Note: We have written these instructions for devices running the standard version of the Android operating system. You may find some minor presentation differences if the manufacturer has customised the theme.

More information

[Google's Switch Access guide]