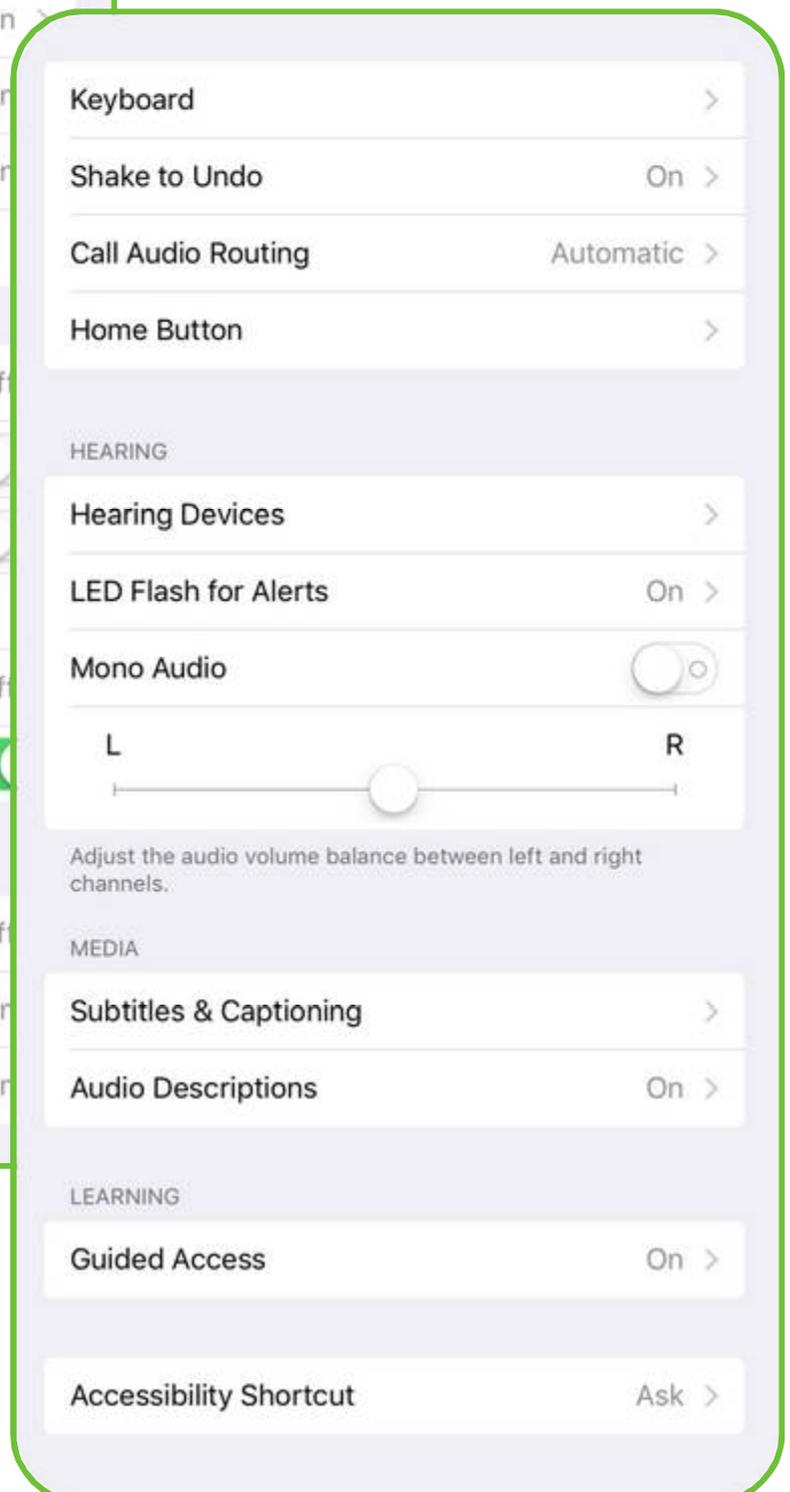
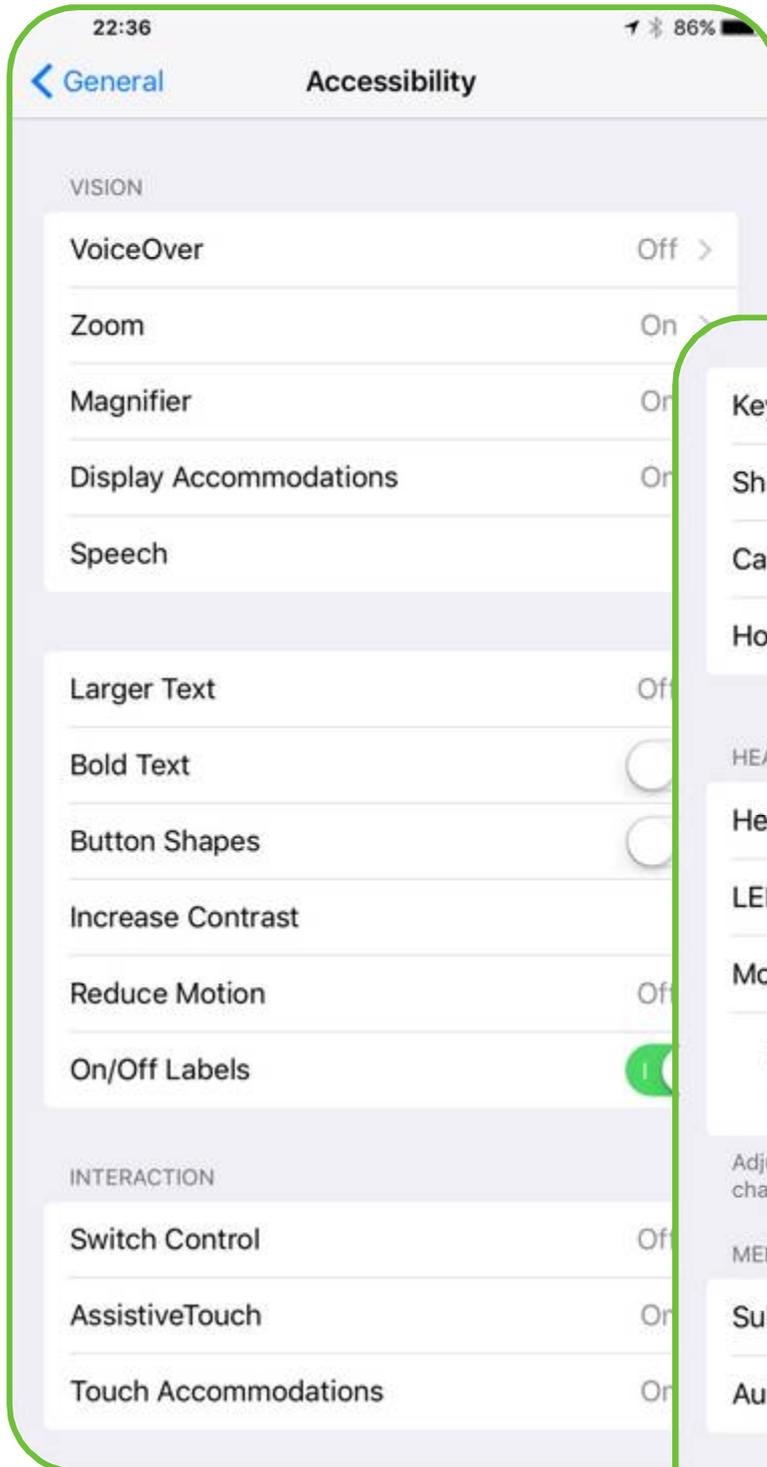


# iPad Accessibility

[www.apple.com/uk/accessibility](http://www.apple.com/uk/accessibility)



## Vision

### Tools for visual disabilities



### VoiceOver

<http://www.imore.com/how-use-voiceover-iphone-and-ipad>

- Describes items on the screen
- A black outline encloses the item selected and VoiceOver speaks its name or describes it.
- Touch the screen or drag a finger over it to hear about the items on the screen.
- Plays a sound when screen changes and speaks the first item on the screen.
- Announces when the display changes to landscape or portrait orientation. Also says where the home button is located or when the screen becomes dimmed or locked.

A good example of how this works well is when using the camera as the camera settings and orientation is described to the user. It also recognises faces and tells the user how many faces will be in the photo or if they are smiling! [www.apple.com/uk/accessibility](http://www.apple.com/uk/accessibility) *A Picture Can Say a Thousand Words* - Video

VoiceOver changes the way that the iPad interface reacts to different user interactions

- Tap once = black outline surrounds the item and it is read aloud
- Tap twice = select an item (only when it is already selected as above)
- Scroll two fingers = scroll to top of page
- Swipe three fingers = scroll (across or up/down)

You can change the **Speaking Rate** using a slider and also the following:

#### **Use Pitch Change**

Changes pitch from high to low when reading items in a group

#### **Verbosity**

You can control how much information is read out such as:

- Speak Hints
- Emoji Suffix

#### **Speech**

You can change the voice used or pronunciation of certain words

#### **Braille**

Change the settings for Braille input once this is selected using the rotor.

#### **Audio**

- Sound Effects
  - Plays sound effects to indicate screen changes
- Audio Ducking
  - Lowers the volume of other audio content when VoiceOver speaks.

## **Rotor**

- Choose the rotor options that you want to appear when using the rotor to change settings in VoiceOver>Rotor
- To use the rotor, when VoiceOver is enabled, rotate two fingers on the screen as if you're turning a dial.
- Keep rotating your fingers to hear more options.
- After you choose an option, flick your finger up or down on the screen to flip between sub settings within the option chosen.



Options can be changed for **Typing Style**, **Phonetic Feedback**, **Typing Feedback**, **Modifier Keys** (keys on hardware keyboard to activate VoiceOver), **Always Speak Notifications**, **Navigate Images**, **Large Cursor**, **Double Tap Timeout**.



## **Zoom** - Window zoom or full screen

When turned on:

- Three finger double tap zooms the whole screen or a region of the screen if this is selected in **Zoom Region** option
- Three finger double tap and drag controls the level of zoom
- Three finger drag moves around the screen

When turned on, the zoom controller allows choice to:

- Zoom Out
- Change Zoom Option (full size/lens)
- Resize Lens
- Choose Filter (vision options for the zoom area)
- Increase/decrease zoom

*This can be actioned by triple tapping three fingers or turning on **Show Controller***



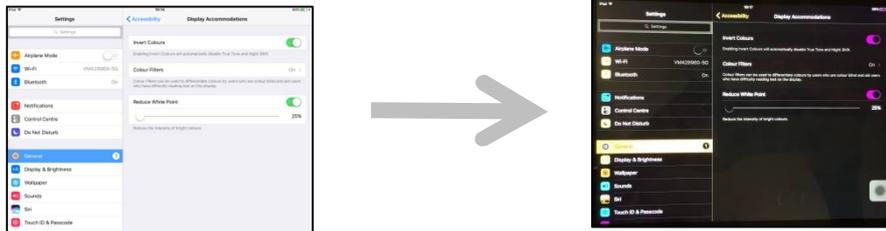
## **Magnifier**

When switched on this feature uses the iPad's camera to magnify things. Activated by triple clicking the **Home** button



## Display Accommodations

**Invert Colours** – changes the colour of the iPad screen – white on black instead of the reverse for people with sight difficulties.



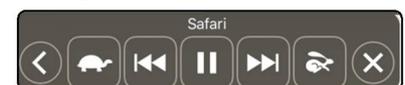
**Colour Filters** – provides different colour filters to change the appearance of the screen for people who are colour blind or who have difficulty distinguishing text on the screen

**Reduce White Point** – slider to control the intensity of bright colours



## Speech

1. Speak Selection
  - Switch on in accessibility settings
  - Works when using browser, texting or text based apps
  - Highlight the text and 'Speak' or 'Speak Sentence' will appear on the menu
  - Select this option and the highlighted text will be read out
2. Speak Screen
  - Switch on in accessibility settings
  - Works when using browser, texting or text based apps.
  - Swipe down with two fingers from the top of the screen and the contents of the screen will be read out. You can also start Speak Screen using Siri. Just bring up Siri and say "Speak Screen" and your device will start reading the current screen.
  - A menu will give options to adjust the speed of the speech and to pause or jump ahead or back

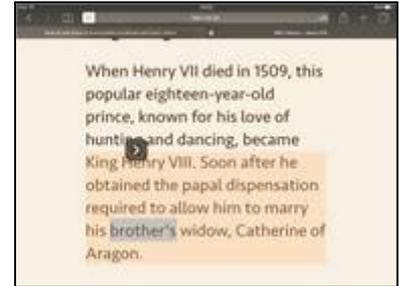


### 3. Highlight Content

- When turned on it will work with the previous features to highlight or underline text as it is read out (Words, Sentences or both)

### 4. Typing Feedback

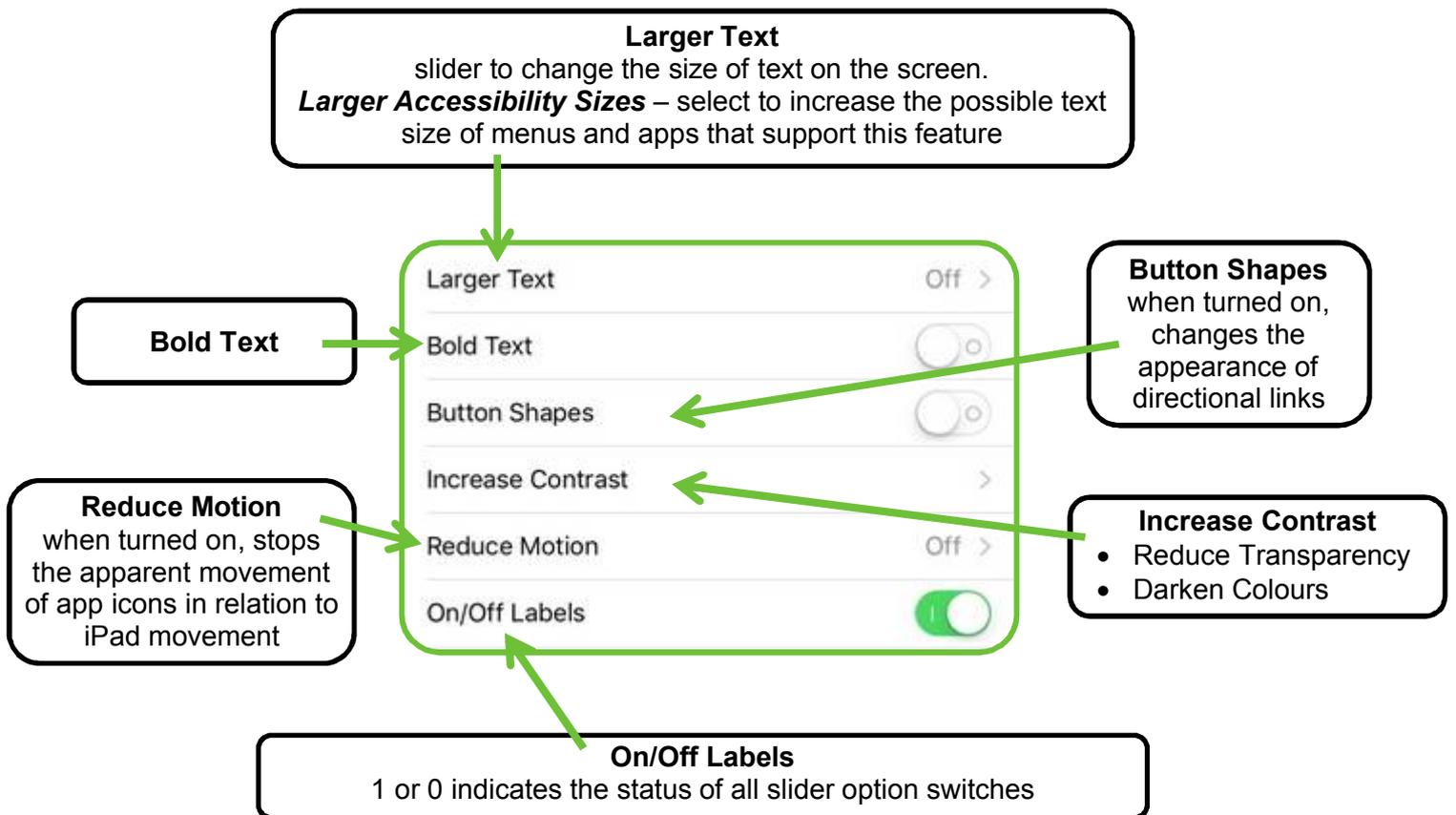
- Character – when turned on it reads out all letters typed into text messages, text documents, browser search/address bar, etc.
- Character Hints – as above but with police phonetic alphabet word support
- The above features can be set with a specified delay after typing
- Speak Auto-text – only speaks words that are corrected
- Hold to Speak Predictions – speaks predictive text words when tapped and held.



5. Voices can be downloaded and selected. Tap and hold to make default.

6. Speaking Rate – speed up or slow down

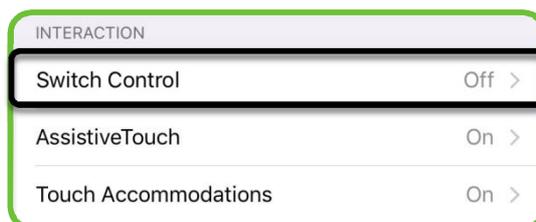
7. Pronunciations – add any mispronounced words and spell phonetically to get correct pronunciation



## Interaction

**Switch Control** can be set up to operate via three different sources

- **External**
- **Screen**
- **Camera**



NB: Make sure **Assistive Touch** is switched off or the **Switch** option will be greyed out

Each new switch source added can be set to control different sets of behaviours.

**Recipes** – temporarily assigning a specialised action to a switch instead of its normal action. Recipes can be used to perform an action that may be app-specific. For example: you can emulate a page swipe to turn pages in the Kindle app or tap the screen to play Flappy Bird (or any other game that requires fast tapping). You can also program more complicated things like a series of gestures.

**Scanning Style** – Auto Scanning (focus automatically moves around screen items – must use with a single switch) , Manual Scanning (focus moves in response to a switch click) or Single Step Scanning options (move from screen item to screen item and if you pause on an item for longer than a set time, that element will be activated).

### Timing

- **Auto Scanning Time** - the speed at which the scanning cursor moves around the screen
- **Pause on First Item** – set an extra delay on the first scanning item
- **Loops** - the number of times that the scan will cycle through before stopping
- **Move Repeat** and **Long Press**
- **Focused Item after Tap** – where the focus is after a tap is enacted
- **Always Tap Keyboard Keys**
- **Tap Behaviour** - Auto Tap prevents the full menu from appearing on each tap - items are immediately activated/ selected when the switch is pressed and the menu is only made visible if the user then presses again within a set time period after the first press.

### Switch Stabilization

- **Hold Duration** - the length of time that a user will hold their switch down before the iPad interprets it as a switch press (can be useful to prevent accidental quick repeated presses).
- **Ignore Repeat** (prevents repeat presses of the same selection) and **Head Movement Sensitivity** - both can be adjusted to suit preferences.

### Point Scanning

- **Gliding Cursor** – the setting for Point Scanning where the iPad defaults to whenever it cannot see relevant hotspots in an app

### Audio

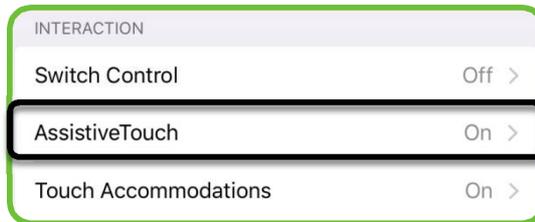
- **Sound Effects** - an audible click that accompanies the moving cursor
- **Speech** - an option for auditory scanning which reads out scanned items on menus and the VoiceOver cues programmed into different apps (Speaking Rate can be adjusted)
- **Menu Items** – choose which items appear in the switch selection menus upon switch presses
- **Group Items** - causes the scan to first select a group of items to enable faster scanning of the screen

### Visual

- **Large Cursor** - makes the visual scanning cursor thicker and easier to see. The cursor colour can also be changed if needed or desired.

[www.ablenetinc.com/resources/consumer-technology-as-at/](http://www.ablenetinc.com/resources/consumer-technology-as-at/)

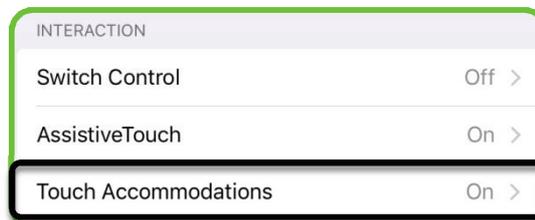
[www.janefarrall.com/how-do-i-use-a-switch-with-an-ipad-ios-7-overview/](http://www.janefarrall.com/how-do-i-use-a-switch-with-an-ipad-ios-7-overview/)



**Assistive Touch** – places a button permanently on the screen that allows a custom menu of icons to be set up and to appear in the middle of the screen when the button is touched. Triple click the Home button to turn off.



**Create New Gesture** – allows the user to create and record a custom gesture that can be placed on the menu and activated when needed (ie: swipe up/down gesture can be recorded then put on the menu to be used when needed to swipe up/down on a web page if the user finds this action difficult).



**Touch Accommodations** – allows an adjustment to the response to touches

**Hold Duration** – allows the time to be set for how long a touch needs to be held for the touch to be recognised. A count down timer circles to indicate the time left before the touch is recognised (when time is set above 30 seconds). *NB: This will only recognise the first touch at the end of the time set not the last touch point. If trying to support an inaccurate touch/dragging hand, try Tap Assistance settings instead (below).*

**Ignore Repeat** - allows the time between touches to be set so that multiple touches are ignored.

**Tap Assistance** – Use Initial or Final Touch Location for when a gesture will be recognised.

- A time limit can be set so that the tap/selection is only registered if the finger is raised from the screen before the timer ends.
- If a different gesture is required such as a swipe, this can be performed after the timer ends.

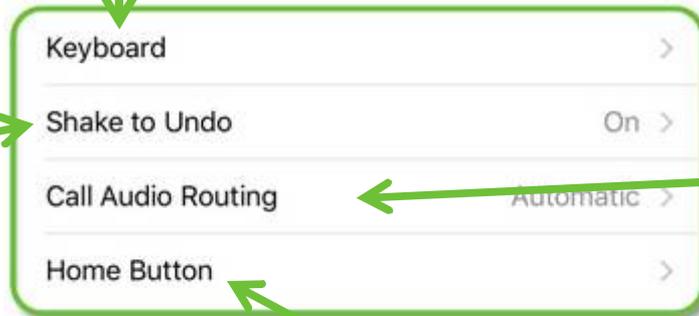
## Keyboard

### Show Lowercase Keys

**Key Repeat** – select to allow or deselect to disallow multiple input with single key press. Adjust the times for the interval between key repeats and the delay until key repeats.

**Sticky Keys** – turn on, toggle with shift key x 5 presses and choose to play sound

**Slow keys** – allows the time to be set between when a key is pressed and when it is recognised



**Shake to Undo**  
turn on or off to enable or disable this function

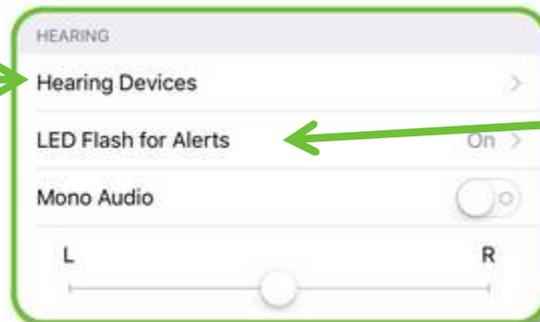
**Call Audio Routing**  
direct where sound will be heard during ..

**Home Button**  
set speed to double or triple click the home button (Default, Slow or Slowest). Can also set to just rest finger and not press.

## Hearing

### Hearing Devices

Select and 'pair' with a compatible hearing device (Bluetooth enabled or MFi – made for iDevices aids)  
Use **Hearing Aid Mode** to improve the quality of the sound with some hearing aids



**LED Flash for Alerts**  
turn on to flash a light when alerts occur.

## Media

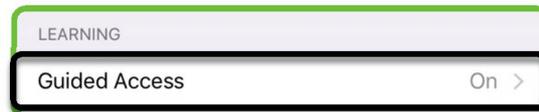


**Subtitles and Captioning** turn on for captions and subtitles and choose the preferred style

### Audio Descriptions

You can turn on audio descriptions of movies, TV shows, or music by default. You can also turn on audio descriptions and subtitles for a particular video while watching (if available for the video) by opening the Audio & Subtitles menu using the audio icon and selecting the audio option.

## Learning



### Guided Access

If you need to prevent a user escaping the current app and moving onto YouTube when you are not looking there is a way to control this. This is called Guided Access where the device can be locked into an app with the home button disabled.

1. Open "Settings" and tap on "General"
2. Navigate to "Accessibility" and under the Learning section tap on "Guided Access"
3. Flip the switch to ON, then tap "Set Passcode" to set a password you'll use to escape out of Guided Access mode. You can also enable Touch ID to use your normal Touch ID fingerprint to escape in the same way.



Now that Guided Access is configured, you can use it to lock the device into any app you want.

1. Launch any app as usual, then triple-click the Home button to summon the Guided Access Screen.



2. Set the Guided Access rules and circle areas on the screen that you want to be disabled to the user
3. Set Hardware Options (bottom left of the Guided Access screen):
  - o Sleep/Wake Button as Off
  - o Volume Button as On/Off
  - o Motion as On
  - o Keyboards as On
4. Tap “Start” in the top right hand corner of the screen to enter Guided Access mode

The iPad is now effectively locked into the current application, and pressing the Home button will no longer leave the app.

To escape out of this mode:

1. Triple-click the Home button and enter the passcode chosen during setup of Guided Access to unlock the device
2. Tap “End” in the top left of the screen to exit Guided Access mode.

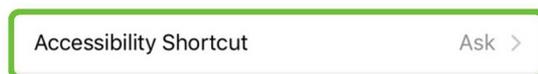
### ***Time Limit***

To set up audible alerts for when a time limit has been reached, select **Time Limits** on the main **Guided Access** settings screen (in **Accessibility**) to configure time limit sounds. If you do not change the **Sound** and **Speak** settings no sounds will play and Guided Access’s time limit will end silently.

- The **Sound** option allows you to select a sound that will play when the time limit is reached.
- The **Speak** option will speak the remaining time aloud when you enable it (eg: 30 seconds left). A notification will also appear by default on the screen.

To use the time limit you will need to enable guided access by pressing the **Home** button three times (as above) to enable Guided Access for the app that is running.

- Tap the **Options** button in the bottom-left corner of the Guided Access screen that appears and enable the **Time Limit** option.
- Tap **Done** and tap the **Start** option at the top-right corner of the screen to put the device into Guided Access mode and apply your time limit.



**Accessibility Shortcut** – *select the accessibility feature to action when home button is triple clicked.*

## Safari Browser Reader

### Reader view available on websites



- Select four lines to left of address bar
- Removes all unnecessary images, links, etc.
- AA icon to the right of the address bar provides a menu to change font, text size or contrasting text-background colours



Similar features are available on PC Internet Browsers such as Mozilla Firefox.

## Siri

Siri is the name of Apple's personal digital assistant. Siri is voice control that talks back to the user, understands relationships and context, and has a personality. The user can ask Siri questions, or ask Siri to do things and Siri will assist. Siri's built in dictation feature can be used to enter text using voice.

The user can place Siri in an always listening mode by going into Settings > Siri and enabling Hey Siri. The user can then just say "Hey Siri" to start Siri (this only works when the device is plugged in to a power source, as it drains the battery).

"Hey Siri" can be used in combination with Speak Screen. The user can say "Hey Siri, Speak Screen" and it should start reading the text and describing the onscreen controls.

## Links

<http://www.apple.com/uk/accessibility/iphone/>  
<http://www.imore.com/accessibility-iphone-ipad>

## Ways to Display an iPad onto a Larger Screen (Television, Projector/Whiteboard,etc)



	VGA or HDMI Adapter	Apple TV	Reflector 2
	Connect directly from your device to a projector's video cable	Connect an Apple TV to your projector and use device's AirPlay feature to mirror the screen	Install software on your projector-connected computer and use device's AirPlay feature to mirror the screen
<b>Web link</b>	<a href="http://www.apple.com/uk">www.apple.com/uk</a>	<a href="http://www.apple.com/uk/tv">www.apple.com/uk/tv</a>	<a href="http://www.airsquirrels.com">www.airsquirrels.com</a>
<b>Price</b>	£29	3 <sup>rd</sup> Generation £50 4 <sup>th</sup> Generation £139-£179	£14.99 single licence Discounts for multiple licences
<b>Free trial</b>	No	No	Yes with watermark
<b>Wireless/Mobile</b>	No	Yes	Yes
<b>Requires a Mac or Windows Computer</b>	No	No	Yes
<b>See your fingers or gestures</b>	No	No	No
<b>Built-in screen recording</b>	No	No	Yes
<b>Works with iPad 1 &amp; older iPod touch</b>	No	No	No
<b>Can be password-protected</b>	Not necessary	Yes	Yes
<b>Works with all apps</b>	No	No	No
<b>Multiple devices at once</b>	No	No	Yes
<b>Mirrors non Apple devices</b>	No	No	Yes Android Chrome
<b>Notes</b>	Often falls off iPad and needs to be reconnected	May require an HDMI to VGA adapter for your projector. Network must allow Airplay Newer Apple TV capable of peer-to-peer connections	Mac OS X 10.7.5 or later / Windows Vista or later Network must allow Airplay
None of these solutions allow for control of your device from an interactive whiteboard. <a href="http://www.learninginhand.com/ways">www.learninginhand.com/ways</a>			