iOS 13 Built-In Accessibility Quick Start Guide

Overview

This Guide explains the new and updated iOS 13 accessibility features and how to use these features on an iPhone and iPad.

How to Use Common iOS 13 Accessibility Features

How it is Organized

To access the accessibility features within iOS 13, go to Settings → Accessibility.

Within this menu, accessibility features are organized by body system/category, including Vision, Physical and Motor, Hearing, and General.

Common Features

Vision

VoiceOver

VoiceOver is a feature that allows the user to hear a description of everything on the screen. To enable this screen reader, go to Settings → Accessibility → VoiceOver and toggle on. When activated, tap once to select and read an item, double-tap to activate the selected item, and swipe three fingers to scroll. VoiceOver works with all iPhone built-in apps and many third-party apps.

Controlling your device while using VoiceOver

The following gestures are used to navigate the device when VoiceOver is turned on.

- Select an item to hear a description: tap once
- Make a selection: double tap
- Move from one element to the next: flick left or right
- Scroll: swipe up/down with three fingers
• Go home (on iPhone X or greater): swipe up with one finger from the bottom of the screen. Release when you feel the first vibration
• Turn speech on/off: double tap with three fingers

Voice
To increase or decrease the speaking rate, slide the cursor from left to right until satisfied. To change the voice, go to: VoiceOver → Speech → Voice. To change the language, go to: VoiceOver → Speech → Add New Language. Further customize screen reading settings to your preferences under the menu VoiceOver → Verbosity, to customize how pronunciation, links, images, and tables are read by VoiceOver.

Braille
To customize a Braille screen and connect to a Braille display, open VoiceOver → Braille. The input and output can be set as 6-dot, 8-dot, or contracted Braille. This feature can be accessed when VoiceOver is activated. Additionally, Nemeth is available to input mathematical equations. The user may also want to add braille input to the rotor menu so they can access their braille input method more easily from any screen. To do this, go to Settings → Accessibility → VoiceOver → Rotor → Braille Screen Input (check).

Rotor
By customizing the Rotor, an individual can track through the device more quickly. The Rotor wheel can be customized by tapping VoiceOver → Rotor. Select desired options such as Headings, Words, Lines, and Links. To activate the Rotor, place two fingers on the device and turn them to get a dial-like set of options for VoiceOver. This allows users to flick up or down to move through only the text you desire. Additional VoiceOver Features

• Text detection of images: iOS will scan images for text and read it out loud, even for pictures without associated text
• Audio descriptions of movies purchased through the iTunes store (look for the AD icon)
• VoiceOver tracks closed captions on videos
• Pronunciation Editor allows you to customize the way you want words to be pronounced

Speak Screen
Speak Screen allows everything on the screen to be read out loud. To enable this feature, go to Settings → Accessibility → Spoken Content → Speak Screen.

To activate this features during use, swipe two fingers from the top of screen downward. A small horizontal menu, such as pictured below, will appear that allows the user to control the speed, to skip forward or backward on the screen, pause/play and exit speak screen.

The voice or language of the spoken content can be changed by going to Settings → Accessibility → Spoken Content → Voices.
**Speak Selection**
The Speak Selection feature allows the user to highlight text and then a button will appear on the screen that will read the highlighted text to the user. To enable this feature, go to: **Settings → Accessibility → Spoken Content → Speak Selection**. To use this feature, select the text you wish to hear by holding a finger over the text and using the blue borders to expand or shorten your text selection, then select **Speak**, as shown in the picture below.

The voice or language of the spoken content can be changed by going to **Settings → Accessibility → Spoken Content → Voices**.

**Audio Descriptions**
When this feature is turned on, audio descriptions of videos will automatically be read if they are available. To enable Audio Descriptions, go to **Settings → Accessibility → Audio Descriptions → Audio Descriptions** (toggle on).

**Zoom**
Zoom features allow the user to magnify all or part of the device screen by going to **Settings → Accessibility → Zoom**.

**Window Zoom**
Window Zoom allows the user to view the entire screen with only a window of the screen magnified. To use Window Zoom, go to **Settings → Accessibility → Zoom → Zoom Region → Window Zoom**.
Magnification, contrast, and color scheme can be changed within the zoom window by adjusting the Magnification Zoom Level bar and the Zoom Filter menu. When Window Zoom is enabled, **drag the window around the screen with one finger**.
Follow Focus Smart Typing feature
Enabling Smart Typing moves the window so that the text is zoomed but the keyboard is not, when the user types text while Window Zoom is turned on. To enable Smart Typing, go to Settings→Accessibility→Zoom→Follow Focus (toggle on)→Smart Typing (toggle on).

Full Screen Zoom
Full screen Zoom allows the user to magnify the entire screen. To use Full Screen Zoom, go to Settings→Accessibility→Zoom→Zoom Region→Full Screen Zoom. When full screen zoom is on, any color changes will also be applied to the entire screen. To use the device with Full Screen Zoom, drag three fingers to navigate around the screen, double-tap the screen with three fingers to zoom in/out.

Show Controller feature
Additionally, users can activate the Show Controller feature (circled in the photo above). This feature can be used with Window Zoom or Full Screen Zoom. Turning this feature on creates a ball controller to navigate in the zoom window on the screen with little finger movement. To activate go to Zoom→Zoom Controller→Show Controller. When using Zoom controller, the user can initiate Full Zoom, Zoom Out, move the Zoom window around the screen, add filters to the zoom region and resize the zoom region lens.

Display Adjustments

Dark Mode
Dark mode inverts color to a dark color scheme on all iOS screen apps (it may not apply to third party apps). Some users prefer to use dark mode after dark only. The user can choose to apply dark mode at all times or set dark mode to turn on at sunset or a based on a custom schedule. To turn on Dark Mode or adjust Dark Mode settings, go to Settings→Display & Brightness→Appearance.

Night Shift
Night Shift shifts the colors of your device’s display to the warmer end of the color spectrum, which is theoretically less disruptive to sleep. Like Dark Mode, Night Shift can be set to turn on after sunset and turn off at sunrise or it can be set to a custom schedule.

Display Zoom
The display zoom feature allows the user to choose a view for their device. Zoomed view shows all controls and screen content larger, while standard view shows more content on the screen. The view will be applied across all screens, including the lock screen. To change the display view, go to Settings→Display & Brightness→View→Choose Standard or Zoomed→Device will restart to apply new settings.

Increase Contrast
The Increase Contrast feature increases contract between app foreground objects and background in order to increase legibility. To enable this feature, go to Settings→Accessibility→Display & Text Size→Increase Contrast (toggle on).

Auto Brightness
When this feature is enabled, your screen will dim or brighten depending on the surrounding lighting conditions. Go to Settings→Accessibility→Display & Text Size→Auto-Brightness (toggle on/off).
Color Filters
The Color Filters feature was created for users who are color blind or have difficulty differentiating text and other objects on the screen. The Color Filters feature displays all screens in a color scheme. Filters include grayscale, red/green filter, green/red filter, blue/yellow filter, and color tint. To activate any of these Color Filters, go to Settings ➔ Accessibility ➔ Display & Text Size ➔ Color Filters (toggle on then choose filter).

Color Inversion
Classic Color Invert reverses all colors of the display. Smart Invert reverses the colors of the display except for images, media, and some apps that use dark color styles. To enable Color Inversion, go to Settings ➔ Accessibility ➔ Display & Text Size ➔ Smart Invert or Color Invert (toggle on).

Differentiate Without Color
This feature replaces items that use color to communicate information. To turn on Differentiate Without Color, go to Settings ➔ Accessibility ➔ Display & Text Size ➔ Differentiate Without Color (toggle on).

On/Off Switch Labels
A label (I/O) can be added to toggle switches to show that a setting is on or off (in addition to the green color indicating the switch has been toggled on). To enable this feature, go to Settings ➔ Accessibility ➔ Display & Text Size ➔ On/Off Labels (toggle on/I).

Text Adjustments
Text Size
The text size feature allows the user to customize the preferred text size for applications that support Large Dynamic Type. This can be enabled by going to Settings ➔ Display & Brightness ➔ Text Size. To establish the preferred size of text, drag a finger across the slider from left to right and an example of text will be provided above to assist in choosing a size.

Bold Text
The Bold Text feature bolds all text on the device screen for better visibility. To enable this feature, go to Settings ➔ Display & Brightness ➔ Bold Text (toggle on).

Reduce Motion
Reduce motion is a feature that reduces the parallax effect. When enabled, the motion when opening apps and alerts will gently fade in and out, instead of quickly zoom in and out. To enable this feature, go to Settings ➔ Accessibility ➔ Motion ➔ Reduce Motion (toggle on).

Prefer Cross-Fade Transitions
This feature can only be enabled when the Reduce Motion feature is turned on. Prefer Cross-Fade Transitions eliminates slide effects on some app interfaces (for example within the settings menu) such that a cross-fade transition will be used to navigate between app interfaces instead of a sliding transition.

Auto-Play Message Effects
On most devices this setting will be enabled as the default setting. When Auto-Play Message effects is enabled, message effects may play as part of certain iMessages (ex. if a text message is received that
reads “Happy Birthday”, balloons will briefly cover the screen then fade). This can be turned off by going to Settings → Accessibility → Motion → Auto-Play Message Effects.

**Magnifier**

Magnifier allows you to use your device as a magnifier within your surroundings by using your device’s camera. When magnifier is enabled, the user can triple click the side button and the device screen will magnify any object at which the device’s camera is pointing. To turn on this feature, go to Settings → Accessibility → Magnifier (toggle on), then triple click the side button (or home button) to use magnifier at any time.

**Face ID & Attention**

Face ID provides intuitive and secure authentication enabled by the TrueDepth camera system, included only on iPhone X or later models. This feature is generally enabled during setup of the device. Users with physical or visual disabilities can adjust Face ID & Attention settings during or after device setup. To adjust settings after device setup, go to Settings → Accessibility → Face ID & Attention.

**Require Attention for Face ID**

Disabling this setting allows the user to unlock their device using Face ID without looking directly at the device (or with eyes closed/covered).

**Haptic on Successful Authentication**

Enabling this feature will cause a haptic to play when the user successfully uses Face ID to unlock the device, use Apple Pay, or verify purchases in iTunes or the App Store.

**Physical and Motor**

**Assistive Touch**

When AssistiveTouch is on, a floating menu button appears on the screen which offers alternate physical access options for many iOS device functions. For example, the user can tap a button on the screen to lock the device instead of pressing the side button. This can be useful to users who have difficulty touching the screen or pressing the buttons, users who access their device using an adaptive accessory, or users who have broken certain features/buttons on their device. The assistive touch menu is customizable and custom gestures for many functions can be added created. To enable and customize Assistive Touch, go to Settings → Accessibility → Touch → Assistive Touch (toggle on, modify settings below as needed). Select your preference for Single Tap, Double Tap, Long Press, 3D Touch, and Idle Opacity. For a more convenient use of this feature, go to Settings → Accessibility → Accessibility Shortcuts → tap to check Assistive Touch and then triple click anytime the side button (or home button)
to open or close this tool. You can also add this feature to your Control Center: Settings→ Control Center→ Customize Controls→ Add Accessibility Shortcuts.

Home Button
iPhone X and later models do not have a home button incorporated. However, AssistiveTouch allows you to add and customize a virtual home button (as pictured above). To use AssistiveTouch as your home button, follow the directions above to activate.

Custom Gestures
Users with difficulty making certain gestures required to navigate the phone or activate certain functions, can use AssistiveTouch to activate gestures. For example, users can zoom into a photo using one finger. To use custom gestures, turn of AssistiveTouch following the procedure above then tap the AssistiveTouch button → Custom → Select Gesture. Gestures can be added to this menu by tapping any of the + buttons under the Custom menu or through the AssistiveTouch settings menu.

Pointer Devices
Assistive Touch can be accessed using various kinds of pointer devices, such as a Bluetooth mouse, joystick, or mouse keys. To enable use of Pointer Devices with Assistive Touch, go to Settings→ Accessibility→ Touch→ Assistive Touch→Pointer Devices. Settings for interfacing the iOS device with a pointer device can be adjusted below, such as tracking speed and dwell control.

Reachability
This feature (iPhone only) allows you to navigate through your device more readily with one hand, reducing the interface screen size. To enable, go to Settings→ Accessibility→ Touch→ Reachability (toggle on). Once this feature is turned on, you can enable it by double clicking the home button (on iPhone models with a home button), or by swiping down from the bottom of the screen (on iPhone X or later model).

One Handed Typing
To enable one-handed typing, go to Settings→ General→ Keyboards→ One Handed Keyboard. Choosing a keyboard orientation will permanently make your iPhone keyboard one handed to the side you select. However, you can enable a one-handed keyboard at any time while typing. To enable one handed keyboard while typing, touch and hold 😊 or 🤔. Tap 🔄 to move the keyboard to the left.
Tap 🔄 to move the keyboard right. When you're finished typing, touch and hold 😊 or 🤔. Then tap 🔄 to bring your keyboard back to its usual setting.

**Predictive Typing**

Predictive Typing is a feature of the keyboard that will predict what word you are going to type and allow you to select that word from the menu instead of typing the entire word. It starts by predicting the most commonly used words to begin a sentence and guesses the word as you type letters. Simply touch the word you wish to have completed. It can also predict emojis that you may wish to use in place of the word you are typing. If you want to turn on word prediction, go to Settings → General → Keyboard → Predictive (toggle on).

**Dictation**

Dictation allows users to type using their voice. To enable dictation, go to Settings → General → Keyboards → Enable Dictation (toggle on). Once dictation is enabled, a microphone (pictured below) will appear on the keyboard. To dictate text, simply press the microphone and speak the text you wish to type (including any punctuation) in a natural voice/speed.

**Audio Message**

You can send audio messages to other iOS users (through iMessage). To create an audio message, open Messages as if you were sending a text message. Instead of typing your message, press and hold the audio icon (pictured below) to the right of the text box and speak your message. When you are done recording, release the button. You then have the option to play back the message to listen 🎧, delete the message 🗑️, or send the message to the recipient 📩.
Haptic Touch
Haptic Touch allows the user to adjust the amount of time required to hold down an item before activating function options (ex. hold down a photo preview within a message to open the photo or generate reaction options). To adjust Haptic Touch duration, go to Settings → Accessibility → Touch → Haptic Touch.

Touch Accommodations
For individuals with difficulty using a touch screen, several settings may be adjusted to modify how the screen responds to touch. To adjust Touch Accommodations, go to Settings → Accessibility → Touch → Touch Accommodations (toggle on). The following settings are Touch Accommodations which may be adjusted under this menu:

Hold Duration
Adjusting this setting will change the amount of time the user is required to hold the screen before the touch is recognized. By toggling the Hold Duration feature on, the user can also adjust Swipe Gesture settings (i.e., the distance the user must swipe to interact with the device via swiping, which controls many features on iPhone X or later models).

Ignore Repeat
The Ignore Repeat feature allows the user to adjust the amount of time between multiple touches in which they should be counted as a single touch. To adjust this feature, go to Touch Accommodations, go to Settings → Accessibility → Touch → Touch Accommodations → Ignore Repeat (toggle on, then adjust desired amount of time).

Shake to Undo
Shake to undo is a default feature that allows the user to undo a previous action by shaking the device. However, if you tend to shake your device by accident, you can disable this feature by going to Settings → Accessibility → Touch → Shake to Undo (toggle off).
**Call Audio Routing**

Call Audio Routing settings allow the user to choose where audio is heard during a phone call. The user can choose to route all calls to a Bluetooth headset or to speaker phone. Under this menu the user can also turn on Auto-Answer Calls. To change Call Audio Routing settings, go to Settings → Accessibility → Touch → Call Audio Routing.

**Voice Control**

Voice Control gives the user the ability to control all functions of their device using only their voice. To enable Voice Control, go to Settings → Accessibility → Voice Control → Set Up Voice Control. Settings for Voice Control can be adjusted under this menu. Voice Control requires the user to use specific commands to control the device. Apple Support has created a series of YouTube videos for using Voice Control:

- Navigating with Voice Control (https://www.youtube.com/watch?v=80AyUCjZYZM)
- Editing Text with Voice Control (https://www.youtube.com/watch?v=k-ykg3jZ9_k)

**Siri**

Siri can open apps, turn settings on/off, search the web, update your calendar, and more. Siri works with VoiceOver to read information that is on the screen. You can interact with Siri by speaking (default setting) or typing using **Type to Siri Mode**. To enable Type to Siri Mode, go to Settings → Accessibility → Siri → Type to Siri (toggle on). You can also adjust Siri settings under this menu, such as when Siri provides voice feedback.

**Switch Control**

Enabling Switch Control allows the user to use a physical switch or other accessory device to activate device functions by indirect selection/scanning. To make a selection, the user activates the switch when the desired item or item group is highlighted. When an individual item is selected, scanning stops and a new control menu appears. This menu allows the user to choose a physical action to perform, including tap, scroll, press the home button, perform a gesture (flick, drag, etc.), select a device operation (rotate screen, triple-click home, etc.) and the option to access Switch Control settings.

Three methods of using switches are item auto scanning, manual scanning, single switch step scanning, and point scanning. To add a switch or adjust switch control settings, go to Settings → Accessibility → Switch Control.

**Hearing**

**Hearing Devices**

With Made for iPhone (MFi) hearing aids, you can use your mobile device to adjust their settings, stream audio, and use your device as a remote mic wirelessly. This also allows the user to easily switch between devices as needed. Additionally, there is a Hearing Aid Mode that improves interference and audio quality with some hearing devices. To enable these features, go to Settings → Accessibility → Hearing Devices. Other hearing aids can be paired with iPhone Bluetooth settings, Settings → Bluetooth (toggle on and select the hearing device under My Devices).
**RTT/TTY**
Real time text (RTT) allows users to read text in real-time as it is being typed. RTT can be used on iPhone with iOS 13 with no additional devices needed. Teletype (TTY) machines have similar functionality to RTT but require a separate TTY device. You can use your iOS device with a TTY machine if you have a TTY adapter (can be purchased from The Apple Store [https://www.apple.com/store]).

NOTE: RTT/TTY is for iPhone only and may not be supported by all cell phone carriers.

**Audio/Visual**

**Mono Audio**
Enabling Mono Audio will cause the left and right speakers to play the same audio content. To enable Mono Audio, go to Settings → Accessibility → Audio/Visual → Mono Audio (toggle on). The sliding Balance bar below, allows the user to adjust the volume between left and right speakers.

**Phone Noise Cancellation**
Noise Cancellation decreases extraneous noise during phone calls. To enable noise cancellation, go to Settings → Accessibility → Audio/Visual → Phone Noise Cancellation (toggle on).

**LED Flash for Alerts**
Enabling LED Flash for Alerts enables users to get a visual cue, instead of audio or haptic for alerts and notifications. The user’s device screen will flash when an alert/notification is received. To enable LED Flash for Alerts, go to Settings → Accessibility → Audio/Visual → LED Flash for Alerts (toggle on).

**Subtitles & Captioning**
To enable closed captioning or subtitles for video/audio content (when available), go to Settings → Accessibility → Audio/Visual → Subtitles & Captioning → Closed Captions + SDH (toggle on). Style/size of subtitles can be changed using the menu below.

**Learning**

**Guided Access**
This feature helps you remain focused by temporarily restricting you to only a single app and control which features are available. To activate Guided Access, go to Settings → Accessibility → Guided Access (toggle on). A screen will then appear where the user has options to require a passcode to turn the lock off. You can set a time limit for the amount of time an application is locked. Alarms can also be set to alert user of time remaining and when time is up. Once Guided Access is enabled, the user can navigate to the app in which they want to work and triple click the side button (or home button) to turn Guided Access on. Users have the option of requiring a passcode to disable Guided Access. When the user enables Guided Access, they have the option to further disable various buttons or features within the app.

**Screen Time**
Screen Time allows users to track how much time they spend using their device daily and weekly, and gives a breakdown of how much screen time was spent using various functions/apps. The user can also schedule Downtime, set App Limits, and set Communication Limits. To track Screen Time and set limits on usage or communication, go to Settings → Screen Time.
Accessibility Shortcuts

Once enables, many of the accessibility features can be accessed via shortcuts. To enable shortcuts for many accessibility features under one menu, go to Settings→Accessibility→Accessibility Shortcut.

Program Manufacturer Info

For more information about Apple accessibility on mobile devices, visit the Apple Accessibility Website (https://www.apple.com/accessibility/iphone/)

To learn more about using a specific device with iOS 13, go to one of the following websites:

- Information for iPad (https://www.apple.com/ipados/)
- Information for iPhone (https://www.apple.com/ios/ios-13/)
- Information for iPod (https://www.apple.com/ipod-touch/)