Wireless Independence Now

An Overview of Smartphone Accessibility Features

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AGENDA

• General Questions
• What is Accessibility
• iOS and Android Accessibility Features
• Assistive and Accessibility Apps
• Accessibility Resources
Questions for the Group

• What type of phone or tablet do you have?
• What do you like about your device?
• What do you not like about your device?
• How did you choose your device?
Accessibility – what does that mean?

- Wireless accessibility is the ability to access and benefit from mobile phones and tablets.

- Accessibility means that a product, device, service, or environment is available and usable to as many people as possible.
Demonstration of iOS & Android Accessibility Features
Apple Accessibility Features
# Apple Accessibility Features

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<thead>
<tr>
<th>General</th>
<th>Accessibility</th>
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<tbody>
<tr>
<td>VISION</td>
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<tr>
<td>VoiceOver</td>
<td>Off &gt;</td>
</tr>
<tr>
<td>Zoom</td>
<td>Off &gt;</td>
</tr>
<tr>
<td>Invert Colors</td>
<td>On</td>
</tr>
<tr>
<td>Grayscale</td>
<td>On</td>
</tr>
<tr>
<td>Speech</td>
<td>&gt;</td>
</tr>
<tr>
<td>Enabling Invert Colors or Grayscale will automatically disable Night Shift.</td>
<td></td>
</tr>
<tr>
<td>Larger Text</td>
<td>Off &gt;</td>
</tr>
<tr>
<td>Bold Text</td>
<td>On</td>
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<tr>
<td>Button Shapes</td>
<td>On</td>
</tr>
<tr>
<td>Increase Contrast</td>
<td>&gt;</td>
</tr>
<tr>
<td>Reduce Motion</td>
<td>Off &gt;</td>
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<tr>
<td>INTERACTION</td>
<td></td>
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<tr>
<td>Switch Control</td>
<td>Off &gt;</td>
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<tr>
<td>AssistiveTouch</td>
<td>Off &gt;</td>
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<tr>
<td>Touch Accommodations</td>
<td>Off &gt;</td>
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<tbody>
<tr>
<td>HEARING</td>
<td></td>
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<tr>
<td>Hearing Aids</td>
<td>&gt;</td>
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<tr>
<td>LED Flash for Alerts</td>
<td>&gt;</td>
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<tr>
<td>Mono Audio</td>
<td>&gt;</td>
</tr>
<tr>
<td>Phone Noise Cancellation</td>
<td>On</td>
</tr>
<tr>
<td>Noise cancellation reduces ambient noise on phone calls when you are holding the receiver to your ear.</td>
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<tr>
<td>MEDIA</td>
<td></td>
</tr>
<tr>
<td>Subtitles &amp; Captioning</td>
<td>&gt;</td>
</tr>
<tr>
<td>Audio Descriptions</td>
<td>Off &gt;</td>
</tr>
</tbody>
</table>

Double-tap the home button to bring the top of the screen into view.
Android Accessibility Features
Android Accessibility Features

- **Services**
  - TalkBack
    - Off
  - Switch Access
    - Off

- **System**
  - Captions
    - Off
  - Magnification gestures
    - On
  - Large text
    - On
  - High contrast text
    - Off

- **Display**
  - Color inversion
    - Off
  - Color correction
    - Off

- **Other Features**
  - Power button ends call
  - Auto-rotate screen
  - Speak passwords
  - Accessibility shortcut
    - On
  - Text-to-speech output
  - Touch & hold delay
    - Short
  - Other Settings
Accessibility Features Helpful for Everyone

Apple Devices (iPhone/iPad):
• Siri – Voice Control
• Accessibility Shortcut

Android Devices (LG, Samsung, HTC Phones/Tablets):
• Google Now and Ok Google – Voice Control
• Accessibility Shortcut
Apple: Siri – Voice Control

Press and hold the Home button or say, “Hey Siri!”

Image courtesy of Apple
Android: Ok Google – Voice Control

Type in the search bar on top or just say, “Ok Google!”
Apple: Accessibility Shortcut

- Guided Access: Off
- Switch Control: Off
- AssistiveTouch: Off
- Call Audio Routing: Automatic
- Home-click Speed: Default
- Reachability: Double-tap the home button to bring the top of the screen into reach.
- Accessibility Shortcut: Off

TRIPLE-CLICK THE HOME BUTTON FOR:
- VoiceOver
- Invert Colors
- Grayscale
- Zoom
- Switch Control
- AssistiveTouch
Android: Accessibility Shortcut

When this feature is turned on, you can quickly enable accessibility features in two steps:

Step 1: Press and hold the power button until you hear a sound or feel a vibration.

Step 2: Touch and hold two fingers until you hear audio confirmation.

If the device has multiple users, using this shortcut on the lock screen temporarily enables accessibility until the device is unlocked.
Accessibility Features for People who have Difficulty Seeing

**Apple Devices (iPhone/iPad):**
- VoiceOver – Screen Reader
- Zoom
- Larger Text
- Bold Text
- Invert Colors

**Android Devices (LG, Samsung, HTC, Motorola Phones/Tablets):**
- Talk Back – Screen Reader
- Magnification Gestures
- Large Text
- Color Inversion
Apple: VoiceOver – Screen Reader
Apple: Zoom, Larger Text, Invert Colors

- **Zoom**
  - Zoom magnifies the entire screen:
    - Double-tap three fingers to zoom
    - Drag three fingers to move around the screen
    - Double-tap three fingers and drag to change zoom
  - Follow Focus
  - Show Controller
  - Idle Visibility 50%

- **Larger Text**
  - Larger Accessibility Sizes
  - Apps that support Dynamic Type will adjust to your pr... Drag the slider below
  - A A A

- **Invert Colors**
  - VISION
  - VoiceOver
  - Zoom
  - Invert Colors
  - Grayscale
  - Speech
  - Larger Text
  - Bold Text
  - Button Shapes
  - Increase Contrast
  - Reduce Motion
  - On/Off Labels
Android: TalkBack – Screen Reader

When TalkBack is on, your device provides spoken feedback to help blind and low-vision users. For example, it describes what you touch, select, and activate.

[Images of Android settings and TalkBack options]
Android: Magnification Gestures

When this feature is turned on, you can zoom in and out by triple-tapping the screen.

While zoomed in, you can:
- Pan: Drag two or more fingers across the screen.
- Adjust zoom level: Pinch two or more fingers together or spread them apart.

You can also temporarily magnify what’s under your finger by triple-tapping and holding. In this magnified state, you can drag your finger to explore different parts of the screen. Lift your finger to return to your previous state.

Note: Triple-tap for magnification works everywhere except the keyboard and navigation bar.
Android: Large Text & Color Inversion

Large Text

Color Inversion

Auto-rotate screen
Speak passwords
Accessibility shortcut
Text-to-speech output
Touch & hold delay
Display
Color inversion
Color correction
Vibration Patterns

Apple Devices (iPhone):
• Vibrate on Ring
• New Vibration Pattern

Android Devices (LG, Samsung, HTC, Motorola Phones):
• Also Vibrate for Calls
Apple: Vibrate on Ring
Apple: New Vibration Pattern

Tap to create a vibration pattern.
Android: Vibrate for calls

![Android Settings](image1)

**Wireless & networks**
- Wi-Fi
- Bluetooth
- Data usage
- More

**Device**
- Display
- Sound & notification
- Apps

![Android Sound & Notification](image2)

**Sound**
- Media volume
- Alarm volume
- Ring volume
- Also vibrate for calls
- Do not disturb
- Phone ringtone
- Default notification ringtone
- Other sounds
Other accessibility features for vision loss

Apple Devices (iPhone/iPad):
• Dictation

Android Devices (LG, Samsung, HTC, Motorola Phones/Tablets):
• Dictation
• Power Button Ends Calls
• Auto-rotate screen
Apple: Dictation
Android: Dictation
Android: Power Button Ends Calls, Auto-rotate Screen & Speak Passwords
### Examples of Apps for Visual Impairments

<table>
<thead>
<tr>
<th>BrailleTouch</th>
<th>IDEAL Currency Identifier</th>
<th>Access Note</th>
<th>BARD Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Alternative text input app based on the Braille alphabet</td>
<td>• Identifies three generations of U.S. currency notes beginning in 1993</td>
<td>• Note taking app designed for people with substantial loss of vision</td>
<td>• Provides access to talking books from the NLS Braille and Audio Reading Download (BARD) site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Contains nearly 65,000 talking books, magazines, and braille music scores</td>
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Accessibility Resources

• AT&T Accessibility (download presentations) – att.com/accessibility
• AT&T Digital You – digitalyou.att.com
• AT&T for Disability and Aging for Wireline Services – Voice: 1-800-772-3140; TTY: 1-800-651-5111
• Wireless RERC – wirelessrerc.org
• LiveWell RERC – livewellrerc.org
• FCC Accessibility Clearing House – ach.fcc.gov
• Global Accessibility Reporting Initiative (GARI) – gari.info
If you have any questions, contact:

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- 404-894-7034