# iOS & Android Accessibility Settings

## 1. Display & Text Size Vision

Test Video

| Target users | Disability level | Description |
|---|---|---|
| • Severe Vision Disability<br><br>• Mild Vision Disability<br><br>• Normal Users | ★ to ★★★★ | Makes content readable, clearly by display or text settings<br><br>Features:<br>- Bold text<br>- Larger Text<br>- Button Shapes<br>- On/Off Labels<br>- Reduce Transparency<br>- Increase Contrast<br>- Difference without Color<br>- Smart Invert<br>- Classic Invert<br>- Color Filters<br>- Reduce White Points<br>- Auto-Brightness |

Suggestions:

Blurry of vision disability (short-sighted or presbyopia) :
Improve by display & text size settings

Color Blindness :
Improve by color filters, it can be used to different colors by users who are color blind

Help to reading:
A function that inverts all colors on the display for users with vision impairments that either has trouble reading the normal user interface or experience discomfort when

staring at the default light color scheme for prolonged periods of time.

Demand level: ★★★★

## 2. VoiceOver Vision

Test Video

it will voiceover while you tap an item

| Target users | Disability level | Description |
|---|---|---|
| • Blind Person<br><br>• Severe Vision Disability | ★★★ to ★★★★★ | Definition:<br>The human is easy to read images than texts, so it also applies to presbyopia or bad vision problems<br><br>Features:<br>- VoiceOver<br>- Speaking rate<br>- Other customize setting |

Suggestions:

- Have blurry problems of vision
- It's more helpful to the elders (65+)

Help them to understand the function of an item

Demand level: ★★★

## 3. Zoom Vision

Test Video
Case Study

Use  three-fingers gesture to zoom or move the content

| Target users | Disability level | Description |
|---|---|---|
| • Severe Vision Disability<br><br>• Mild Vision Disability<br><br>• General Users | ★ to ★★★★ | Definition:<br>The user can switch zoom in / out to see more details for understanding<br>Features:<br>- Zoom<br>- Follow Focus<br>- Smart typing<br>- Keyboard Shortcut<br>- Zoom Controller<br>- Zoom Region<br>- Zoom Filter |

Suggestions:

- Read clearly for vision disability users
- If we don't support touch to zooming, it can be an option.

Demand level: ★

## 4. Magnifier Vision

Test Video

| Target users | Disability level | Description |
|---|---|---|

| | | |
|---|---|---|
| • Mild Vision Disability<br><br>• General Users | ★ to ★★★ | Use your device camera to magnify your surroundings. |

Suggestions:

Currently, we don't have a camera on the frame.

Demand level: ★

## 5. Motion Vision

Test Video

Reduce the motion effects of the User Interface

| Target users | Disability level | Description |
|---|---|---|
| • Mild Vision Disability<br><br>• General Users | ★ to ★★ | Definition:<br>To avoid the distraction from users or people who have focus disability<br><br>Features:<br>- Reduce motion<br>- Prefer Cross-fade transitions<br>- Auto-play message effects<br>- Auto-play video preview<br>- Limit frame rate |

Suggestions:

Currently, we haven't heavy motion effects on the frame.

Demand level: ★

## 6. Spoken Content Vision

Test Video
Case Study

Speak the selected content

| Target users | Disability level | Description |
| --- | --- | --- |
| • Severe Vision Disability<br><br>• Mild Vision Disability<br><br>• General Users | ★ to ★★★ | Definition:<br>To help people to understand the context, like captions or other text content. |

Suggestions:

It works through selected sentences or tap to speak. And suitable for users who have a blurry disability of vision (like: Presbyopia, Elders)

We don't have much information needed to use it. Even caption or other descriptions.

Demand level: ★★

## 7. Audio Description Vision

Test Video
Case Study

Play audio description automatically

| Target users | Disability level | Description |
| --- | --- | --- |
| • Blind Person<br><br>• Severe Vision Disability | ★★★ to ★★★★ | Definition:<br>Can play audio description automatically if apps or content was supported.<br><br>Features:<br>- Audio Descriptions |

Suggestions:

No needs to understand the context through audio description. No matter what it is. Ie: Netflix Movie, User Interface .. etc

Need to add the audio description into content, it's not suitable with our content contributors.

Demand level: ★

## 1. Hearing Devices Hearing

Test Video

Connect the hearing devices by bluetooth

| Target users | Disability level | Description |
| --- | --- | --- |
| • Severe Hearing Disability<br><br>• Mild Hearing Disability | ★★ to ★★★★ | Definition:<br>To help people who have hearing disability<br><br>Features:<br>- Pair hearing devices<br>- Hearing aid compatibility |

Suggestions:

No needs to connect the earphone with the frame

Demand level: ★★

## 2. Audio/Visual Hearing

Test Video

Control the left & right speakers to help users who have hearing disability

| Target users | Disability level | Description |
|---|---|---|
| • Severe Hearing Disability<br><br>• Mild Hearing Disability | ★★ to ★★★★ | Definition:<br>To help people who have hearing disability<br><br>Features:<br>- Mono audio<br>- Balance (Left/Right Speaker)<br>- Led flash for alert<br>- Flash on Silent |

Suggestions:

- No needs to connect speaker or earphone with the frame
- No needs to flash led light for notification

Demand level: ★★

## 3. Subtitles & Captioning Hearing

Test Video

When available, prefer closed captioning or subtitles for the deaf and hard of hearing.

| Target users | Disability level | Description |
|---|---|---|
| • Deaf<br><br>• Severe Hearing Disability | ★★ to ★★★★★ | Definition:<br>To help people who have hearing disability<br><br>Features:<br>- Closed Captions + SDH<br>- Subtitle Style |

Suggestions:

No strong needs to understand the context through subtitles.

Need to add the subtitle information into content, it's not suitable with our content contributors.

Demand level: ★★

## 1. Touch Mobility

Test Video

| Target users | Disability level | Description |
|---|---|---|
| • Mild Mobility Disability<br><br>• Normal Users | ★ to ★★ | Definition:<br>Touch screen settings<br><br>Features:<br>- AssistiveTouch<br>- Reachability<br>- 3D & Haptic Touch<br>- Touch Accommodations |

| | | |
|---|---|---|
| | | - Shake to Undo<br>- Vibration<br>- Call Audio Routing |

Suggestions:

Some regular touching screen settings.

Demand level: ★★★

## 2. Switch Control Mobility

Test Video
Case Study

Use extension devices to help users to control it.

| Target users | Disability level | Description |
|---|---|---|
| • Physical Disability<br>• Severe Mobility Disability | ★★★ to ★★★★★ | Definition:<br>To help people who have severe mobility disabilities that can use extension devices to control the computer. |

Suggestions:

- No needs to connect to extension devices to control the frame.

Demand level: ★

## 3. Voice Control Mobility

Test Video
Case Study

| Target users | Disability level | Description |
| --- | --- | --- |
| • Physical Disability<br><br>• Severe Mobility Disability<br><br>• Mild Mobility Disability<br><br>• Normal Users | ★ to ★★★★★ | Definition:<br>Allow to use voice to control the device.<br><br>Features:<br>- Voice Control<br>- Language<br>- Customise Commands<br>- Vocabulary<br>- Detail settings |

Suggestions:

Currently, we can't support voice control. Otherwise, we don't have many features to interact with voice. It could be discussed further.

Demand level: ★★

## References:


https://www.apple.com/accessibility/

https://www.microsoft.com/design/inclusive/

https://www.android.com/accessibility/

https://www.android.com/android-10/

https://www.youtube.com/watch?v=Y_8ZlUP2C5o

# Accessibility Hit-List

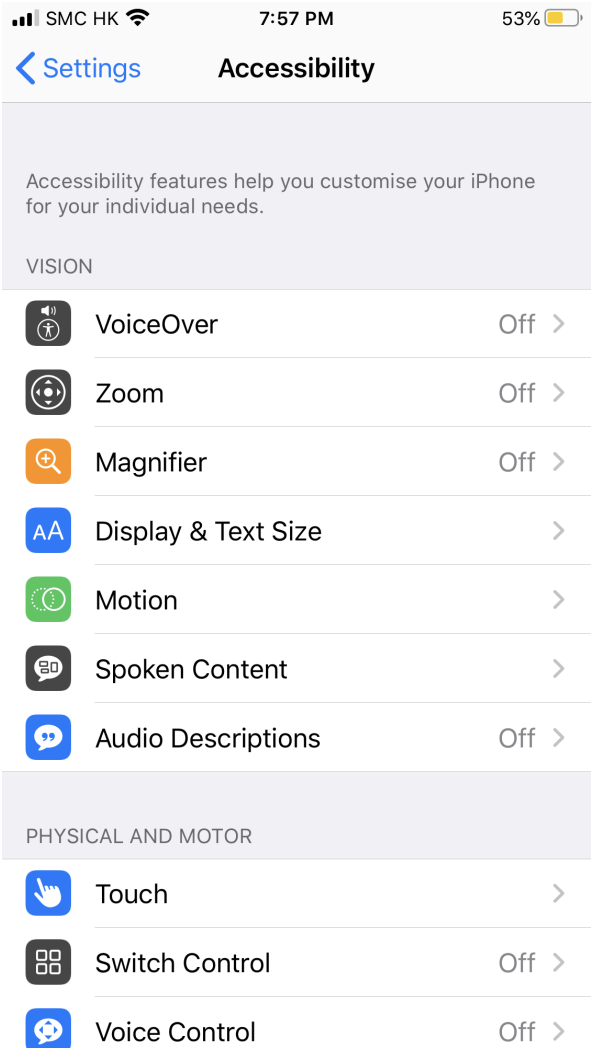
| iOS | Android | Yes | No | TBC |
|---|---|---|---|---|
| VoiceOver Vision | | | | |
| VoiceOver | TalkBack | | | • |
| Speaking rate | | | • | |
| Customize setting | | | | • |
| Zoom Vision | | | | |
| Zoom | Magnification | | | • |
| Follow Focus | | | | • |
| Smart typing | | | | • |
| Keyboard Shortcut | | | | • |
| Zoom Controller | | | | • |
| Zoom Region | | | | • |
| Zoom Filter | | | | • |
| Magnifier Vision | | | | |
| Magnifier | | | | • |
| Auto-Adjust Exposure | | | | • |
| Display & Text Size Vision | | | | |
| Bold text | | • | | |
| Larger Text | Font size | • | | |

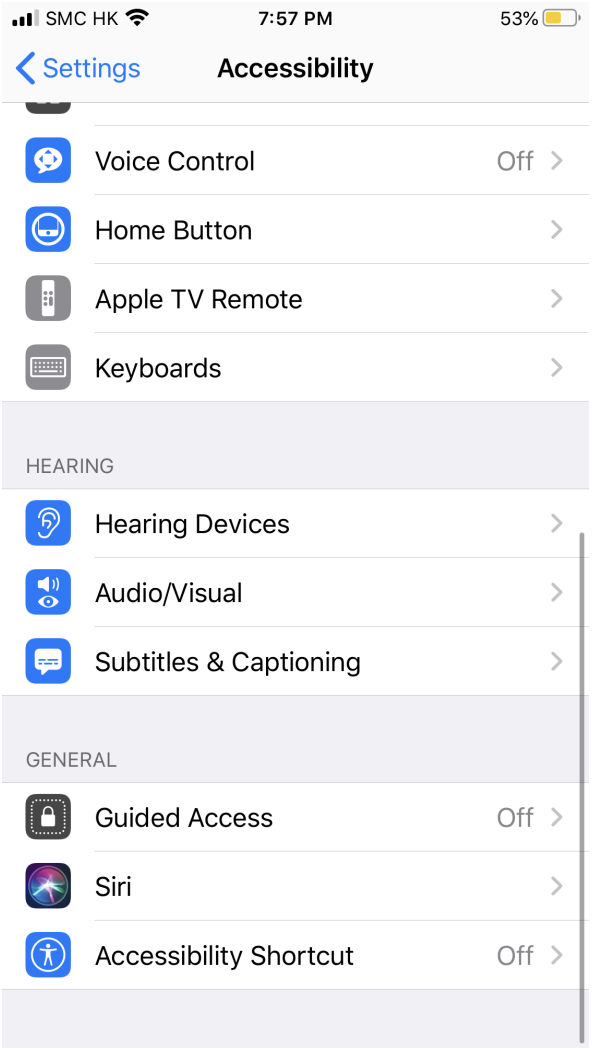
| | | | | |
|---|---|---|---|---|
| | Display size | | | • |
| Button Shapes | | | • | |
| On/Off Labels | | | • | |
| Reduce Transparency | | | • | |
| Increase Contrast | High Contrast text | • | | |
| Difference without Color | | | • | |
| Smart Invert | Dark theme | | | • |
| Classic Invert | Colour inversion | | • | |
| Color Filters | Colour correction | • | | |
| Reduce White Points | | | | • |
| Auto-Brightness | | | | • |
| | Large mouse cursor | | | • |
| Motion Vision | | | | |
| Reduce motion | Remove animations | | • | |
| Prefer Cross-fade transitions | | | • | |
| Auto-play message effects | | | • | |
| Auto-play video preview | | | • | |
| Limit frame rate | | | • | |
| Spoken Content Vision | | | | |
| Speak Selection | Select to speak | | | • |
| Speak Screen | | | | • |
| Typing Feedback | | | • | |
| Voices | Text-to-speech output - Detail settings of the select to speak | | • | |
| Speaking Rate | | | • | |
| Pronunciations | | | • | |

| | | | | |
|---|---|---|---|---|
| Audio Descriptions Vision | | | | |
| Audio Descriptions | | | | • |
| Hearing Devices Hearing | | | | |
| Pair hearing devices | | | • | |
| Hearing aid compatibility | | | • | |
| Audio/Visual Hearing | | | | |
| | Sound Amplifier | | | • |
| Mono audio | Mono audio | | | • |
| Balance | Audio balance | | | • |
| Led flash for alert | | | • | |
| Flash on Silent | | | • | |
| | Live Transcribe -<br>Capture speech from the device's microphone and displays it as text | | • | |
| Subtitle & Captioning Hearing | | | | |
| Closed Captions + SDH | Live Caption -<br>Automatically caption media<br><br>Link | | • | |
| Subtitle Style | Caption preferences | | • | |
| Mobility | | | | |
| Touch Mobility | | | | |
| AssistiveTouch | Accessibility Menu -<br>Control phone via large menu | | • | |
| Reachability | | | • | |
| 3D & Haptic Touch | | | • | |
| Touch Accommodations | Touch & hold delay | • | | |

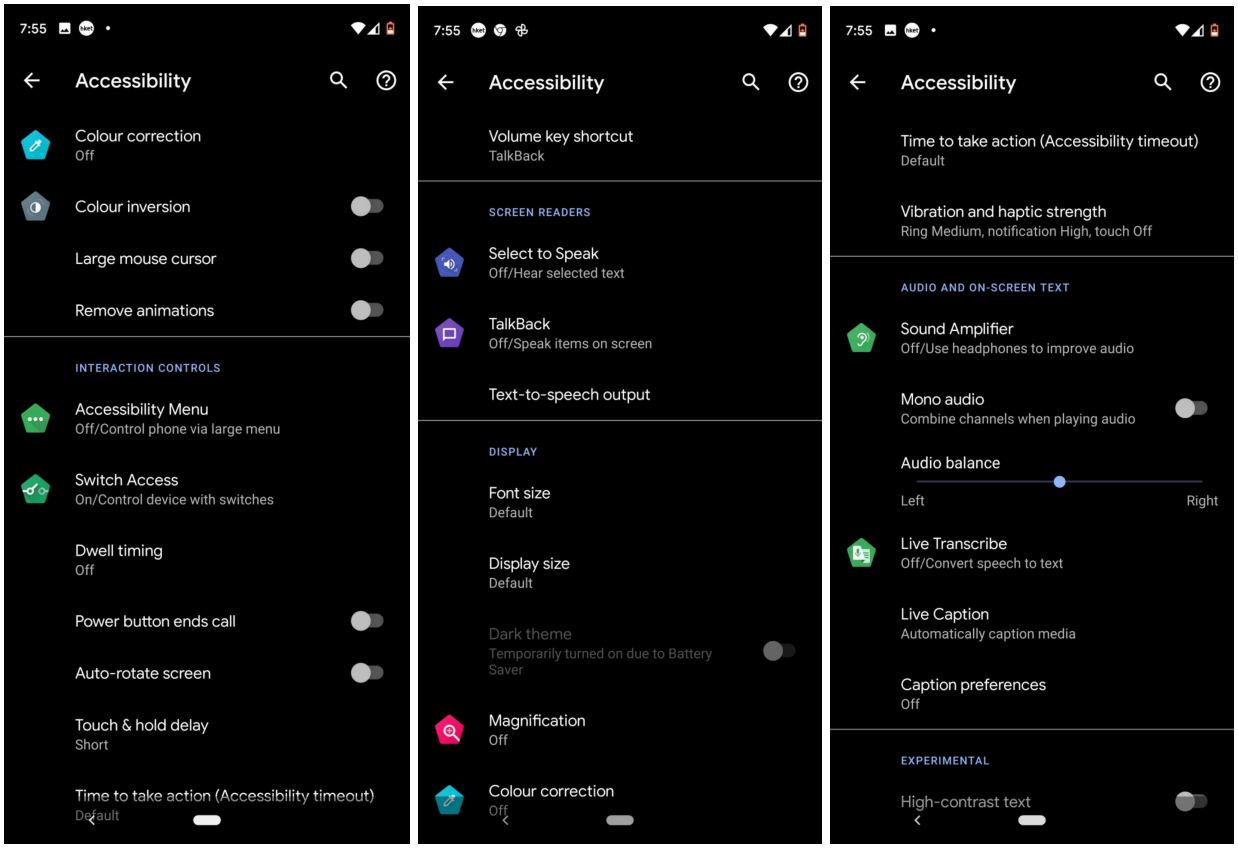
| | | | | |
|---|---|---|---|---|
| Shake to Undo | | | • | |
| Vibration | Vibration and haptic strength | | • | |
| Call Audio Routing | | | • | |
| Switch Control Mobility | Switch Access | | • | |
| Voice Control Mobility | Google Assistant | | • | |
| Home Button Mobility | | | • | |
| Apple TV Remote Mobility | | | • | |
| Keyboards Mobility | | | • | |
| | Dwell timing | | • | |
| | Power button ends call | | • | |
| | Auto-rotate screen | • | | |
| | Time to take action (Accessibility time-out) | | • | |

# iOS


SMC HK
7:57 PM
53%
Settings
Accessibility
Accessibility features help you customise your iPhone for your individual needs.
VISION
VoiceOver Off
Zoom Off
Magnifier Off
Display & Text Size
Motion
Spoken Content
Audio Descriptions Off
PHYSICAL AND MOTOR
Touch
Switch Control Off
Voice Control Off


SMC HK
7:57 PM
53%
Settings
Accessibility
Voice Control Off
Home Button
Apple TV Remote
Keyboards
HEARING
Hearing Devices
Audio/Visual
Subtitles & Captioning
GENERAL
Guided Access Off
Siri
Accessibility Shortcut Off

# Android 10


7:55
Accessibility
Colour correction
Off
Colour inversion
Large mouse cursor
Remove animations
INTERACTION CONTROLS
Accessibility Menu
Off/Control phone via large menu
Switch Access
On/Control device with switches
Dwell timing
Off
Power button ends call
Auto-rotate screen
Touch & hold delay
Short
Time to take action (Accessibility timeout)
Default
7:55
Accessibility
Volume key shortcut
TalkBack
SCREEN READERS
Select to Speak
Off/Hear selected text
TalkBack
Off/Speak items on screen
Text-to-speech output
DISPLAY
Font size
Default
Display size
Default
Dark theme
Temporarily turned on due to Battery Saver
Magnification
Off
Colour correction
Off
7:55
Accessibility
Time to take action (Accessibility timeout)
Default
Vibration and haptic strength
Ring Medium, notification High, touch Off
AUDIO AND ON-SCREEN TEXT
Sound Amplifier
Off/Use headphones to improve audio
Mono audio
Combine channels when playing audio
Audio balance
Left
Right
Live Transcribe
Off/Convert speech to text
Live Caption
Automatically caption media
Caption preferences
Off
EXPERIMENTAL
High-contrast text