# **Complete guide to Narrator**

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Narrator is a screen-reading app built into Windows 10. This guide describes how to use Narrator with Windows on desktop PCs so you can start using apps, browsing the web, and more. It's written for people who use a screen reader regularly.

Below the table of contents, there's a section about what's new in Narrator.

#### Note

You can <u>download a previous version of this guide in braille</u> (US English non-UEB grade 2 braille). To obtain additional languages or grades, contact the <u>Disability Answer Desk</u>.

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## What's new

Here's what's new in the latest version of Narrator:

#### Standard keyboard layout

We wanted to make it easier for you to learn and use Narrator, so we've introduced a new Standard keyboard layout. The updated layout is more like the keyboard layout you may have experienced in other screen readers.

Some of the new commands include updates to Narrator's page, paragraph, line, word and character commands. You'll also notice new commands like Narrator Find, list of links, list of headings, and list of landmarks. For some commands, you can now use the numeric keypad. You can explore all the new and updated commands in <u>Appendix B: Narrator keyboard</u> <u>commands and touch gestures</u>. Find scan mode commands in <u>Chapter 3: Using scan mode</u>.

#### Note

Your keyboard will default to the Standard layout. If you want to change this, go to **Settings > Ease of Access > Narrator**, and choose the **Legacy** layout. You can also get to your Narrator settings by pressing **Windows logo key + Ctrl + N**. New Narrator commands will not be available in the Legacy keyboard layout if keystrokes for legacy commands conflict with those used in new Narrator features.

#### **Narrator key**

You can now choose what modifier key you want to use in Narrator commands. Both the Caps lock and Insert keys serve as your Narrator key by default. You can use either of these keys in any command that uses the Narrator key. The Narrator key is referred to as simply "Narrator" in commands. You can change your Narrator key in Narrator settings.

#### **Updated Change View commands**

Change View commands are now mapped to the **Narrator** + **Page up** and **Page down** keys. You can also use Change View by pressing **Narrator** + **Ctrl** + **Up arrow** and **Down arrow**.

#### **Dialog reading**

Narrator now automatically reads the text at the top of most dialog windows when they're displayed. For example, when you exit an app without saving content, Narrator will read the dialog asking if you want to save your content.

#### Improvements to scan mode

Scan mode's Primary and Secondary Action commands have changed. Primary Action can be executed by pressing **Enter** or **Spacebar**. You can complete Secondary Action by simply adding a Shift key to each of those keys (**Shift + Enter** or **Shift + Spacebar**). You'll notice this change regardless of the keyboard layout you select.

In addition, several new scan mode keyboard commands have been added that allow you to select text. You can learn more about them in <u>Chapter 3: Using scan mode</u>.

#### Learn Narrator with QuickStart

QuickStart is a learning experience Windows that teaches you the basics of using Narrator. It launches automatically when you start Narrator. To stop QuickStart from launching automatically, select the check box next to **Don't show this guide again**. You can access the QuickStart guide anytime by selecting the **Learn Narrator basics with QuickStart** link in your Narrator settings.

# **Give feedback**

Your feedback helps make Narrator better. When Narrator is turned on, press **Narrator** + **Alt** + **F** to open the Feedback Hub to provide feedback about Narrator. You can also leave comments on the <u>Microsoft Accessibility User Voice</u> website. Additionally, for technical support for Narrator or other Microsoft assistive technology, contact the <u>Microsoft Disability</u> <u>Answer Desk</u>.

If you want to provide Microsoft with additional diagnostic and performance data, press **Windows logo key** + **Ctrl** + **N** to open Narrator settings, turn on the toggle under Help make Narrator better, and then restart Narrator.

# **Chapter 1: Introducing Narrator**

This chapter provides an overview of Narrator and how to start and stop it.

Narrator lets you use your PC without a mouse to complete common tasks if you're blind or have low vision. It reads and interacts with things on the screen, like text and buttons. Use Narrator to read and write email, browse the internet, and work with documents.

Specific commands let you navigate Windows, the web, and apps. Navigation is available using headings, links, landmarks, and more. You can read text (including punctuation) by page, paragraph, line, word, and character, as well as determine characteristics like font and text color. Efficiently review tables with row and column navigation.

Narrator also has a navigation and reading mode, which you'll learn more about in <u>Chapter</u> <u>3: Using scan mode</u>. Use it to get around Windows 10 using just the up and down arrows on your keyboard. You can also use a braille display to navigate your PC and read text, which you'll learn more about in <u>Chapter 8: Using Narrator with braille</u>.

You can also customize the speaking rate, pitch, and volume of the voice that Narrator uses, and install other text-to-speech voices.

# Three ways to start and stop Narrator

- Press Windows logo key + Ctrl + Enter together to start Narrator. Press these keys again to stop Narrator. If you're using a previous version of Windows, press Windows Logo Key + Enter together to start and stop Narrator. On many keyboards, the Windows logo key is located on the bottom row of keys, to the left or right of the Alt key.
- Press **Windows logo key** + **Ctrl** + **N** to open Narrator settings, and then turn on the toggle under **Use Narrator**.
- Press **Ctrl** + **Alt** + **Del** to go to your sign-in screen, select the **Ease of access** button in the lower-right corner, then turn on the toggle under **Narrator**.

#### Start Narrator automatically before or after you sign in to your PC

- 1. Press Windows logo key + Ctrl + N to open Narrator settings.
- 2. To start Narrator automatically after you sign in, select the check box next to **Start Narrator after sign-in**.

3. To start Narrator automatically before sign-in for all users, select the check box next to **Start Narrator before sign-in for everyone**. This is recommended if you want to use a serial braille display before sign-in.

# **Chapter 2: Narrator basics**

This chapter explains Narrator keyboard navigation. This includes how to get around the screen, find and open apps, and change what Narrator reads. It also explains the basic details of adjusting Narrator speech rate, volume, and how to stop speech.

Scan mode gives you even more navigation options. We'll cover that in <u>Chapter 3: Using</u> <u>scan mode</u>.

# **Basic keyboard navigation in Windows**

#### Tab, arrow, and Enter keys

In Windows, use the Tab or arrow keys to move around apps and webpages. When you get to something you want to use, like a link, press Enter. You can also use the Tab, arrow, and Enter keys to move between and interact with things like check boxes and buttons.

#### **Function keys**

Some keyboards also have function keys located above the number keys at the top of the keyboard. Function keys, like F1, can be used for navigation in some apps.

On certain keyboards, some function keys are programmed to do hardware-related actions, such as adjusting volume. If your keyboard has an Fn (function) key, you must press the Fn key and the function key together to use the function key for other actions.

#### Narrator key

You can choose what modifier key you want to use in Narrator commands. Both the Caps lock and Insert keys serve as your Narrator key by default. You can use either of these keys in any command that uses the Narrator key. The Narrator key is referred to as simply "Narrator" in commands. You can change your Narrator key in Narrator settings.

#### Note

If you're using a Japanese 106 keyboard, Insert and NonConvert are your default Narrator keys.

#### **Explore your keyboard**

Input learning tells you what keys you're pressing on your keyboard, and the Narrator command associated with them. Turn on input learning by pressing **Narrator** + **1** (the number 1 key). Turn it off by pressing **Narrator** + **1** twice.

#### Stop Narrator from reading

To stop Narrator from reading at any time, press the **Ctrl** key.

#### Make Narrator speak louder or faster

You can change the volume or how fast Narrator speaks. To change Narrator volume, press:

- Narrator + Ctrl + Plus sign (+) or Narrator + Ctrl + Add (numeric keypad) to increase volume
- Narrator + Ctrl + Minus sign (-) or Narrator + Ctrl + Subtract (numeric keypad) to decrease volume

To change the rate at which Narrator speaks, press **Narrator** + **Plus sign** (+) or **Narrator** + **Minus sign** (-).

#### Windows keyboard shortcuts

Windows and Windows apps have keyboard shortcuts that you can use alongside Narrator commands. For example, press the **Windows logo key** to open the Start menu, or, to open action center, press the **Windows logo key** + **A**.

For a list of the keyboard shortcuts you can use in Windows, see <u>Keyboard shortcuts in</u> <u>Windows</u>. For a list of keyboard shortcuts in Windows apps, see <u>Keyboard shortcuts in apps</u>. For a list of keyboard shortcuts in other Windows assistive technologies, see <u>Windows</u> <u>keyboard shortcuts for accessibility</u>.

#### Learn Narrator with QuickStart

QuickStart is a new learning experience in the latest version of Windows that teaches you the basics of using Narrator. It launches automatically when you start Narrator. To stop QuickStart from launching automatically, select the check box next to **Don't show this guide again**. You can access the QuickStart guide anytime by selecting the **Learn Narrator basics with QuickStart** link in your Narrator settings.

#### Get around apps and webpages

For web browsing, Narrator works best with Microsoft Edge.

#### Find and open apps

To quickly find an app in Windows 10, press the **Windows logo key** on your keyboard to open the Start menu and place focus in the search box. Then, type the name of the app that you're looking for, use the arrow keys to select it in the list of search results, and press the **Enter** key to open it.

#### Switch between apps

To switch between open apps on your PC, hold down the **Alt** key and then press the **Tab** key. Narrator will speak the name of open apps as you cycle through them. When you find the app that you want to use, release both keys.

Anytime you want to know which app or Window has focus, press **Narrator** + **T** to read the title of the window that has focus. To read the title and contents of the window that has focus, press **Narrator** + **W**.

# Chapter 3: Using scan mode

This chapter describes a navigation and reading mode called scan mode. Scan mode lets you navigate apps, email, and webpages using the arrow keys. You'll also be able to use common keyboard shortcuts to read text and jump directly to headings, links, tables, and landmarks.

# Scan mode basics

To turn scan mode on and off, press Narrator + Spacebar.

When scan mode is turned on, use the Up arrow key and Down arrow key to navigate apps and webpages. Press Enter or Spacebar to activate an item that you want to use, such as a button in an app, a link in a webpage, or a text box.

Scan mode turns on automatically when you use Microsoft Edge to browse the web. It also turns on automatically when you open any Windows app where you turned it on before.

If you turn scan mode off for an app, it will remain off for that app until you turn it on again. Scan mode automatically turns off in edit fields so you can enter text. Press up or down arrow again to leave the edit field and resume scan mode.

# Scan mode commands

When scan mode is turned on, use the following keys to navigate apps and webpages.

#### Note

If you are hearing silent stops in scan mode, this may be because Narrator is stopping at a punctuation mark. You can increase your punctuation verbosity by pressing **Narrator + Alt + Plus sign (+)** or **Minus sign (-)**.

Press these keys	To do this
Narrator + Spacebar	Toggle scan mode
Enter Spacebar	Primary action
Shift + Enter Shift + Spacebar	Secondary action

Home	Move to and read the first character of a line
End	Move to and read the last character of a line
Р	Read next paragraph
Shift + P	Read previous paragraph
Ctrl + Down arrow	Read next line
Ctrl + Up arrow	Read previous line
Ctrl + Right arrow	Read next word
Ctrl + Left arrow	Read previous word
Right arrow	Read next character
Left arrow	Read previous character
Ctrl + Home	Move to and read the first line of text
Ctrl + End	Move to and read the last line of text
Down arrow	Jump to next text or item
Up arrow	Jump to previous text or item
1	Jump to next heading at level 1
Shift + 1	Jump to previous heading at level 1
2	Jump to next heading at level 2
Shift + 2	Jump to previous heading at level 2
3	Jump to next heading at level 3
Shift + 3	Jump to previous heading at level 3
	1

4	Jump to next heading at level 4
Shift + 4	Jump to previous heading at level 4
5	Jump to next heading at level 5
Shift + 5	Jump to previous heading at level 5
6	Jump to next heading at level 6
Shift + 6	Jump to previous heading at level 6
7	Jump to next heading at level 7
Shift + 7	Jump to previous heading at level 7
8	Jump to next heading at level 8
Shift + 8	Jump to previous heading at level 8
9	Jump to next heading at level 9
Shift + 9	Jump to previous heading at level 9
В	Jump to next button
Shift + B	Jump to previous button
С	Jump to next combo box
Shift + C	Jump to previous combo box
D	Jump to next landmark
Shift + D	Jump to previous landmark
E	Jump to next edit box
Shift + E	Jump to previous edit box
	1

F	Jump to next form field
Shift + F	Jump to previous form field
Н	Jump to next heading
Shift + H	Jump to previous heading
l	Jump to next item
Shift + I	Jump to previous item
К	Jump to next link
Shift + K	Jump to previous link
R	Jump to next radio button
Shift + R	Jump to previous radio button
Т	Jump to next table
Shift + T	Jump to previous table
X	Jump to next check box
Shift + X	Jump to previous check box

#### Selecting text in scan mode

Use these commands when you're copying text from content areas like websites or email.

#### Press these keys

#### To do this

Shift + Right arrow	Select current character
Shift + Left arrow	Select previous character
Ctrl + Shift + Right arrow	Select current word

Ctrl + Shift + Left arrow	Select previous word
Shift + Down arrow	Select current line
Shift + Up arrow	Select previous line
Ctrl + Shift + Down arrow	Select current paragraph
Ctrl + Shift + Up arrow	Select previous paragraph
Shift + Home	Select to beginning of line
Shift + End	Select to end of line
Ctrl + Shift + Home	Select to beginning of document
Ctrl + Shift + End	Select to end of document
Shift + Page down	Select current page
Shift + Page up	Select previous page
F9	Mark the beginning or end of a block of text
F10	Select all text between a mark and the current point
Ctrl + C	Copy selection
Ctrl + X	Cut selection
Ctrl + V	Paste selection
Ctrl + A	Select all
Narrator + Shift + Down arrow	Read selection
Narrator + Shift + Down arrow twice quickly	Spell selection

# **Chapter 4: Reading text**

This chapter explains a few ways you can start reading text with Narrator. You can also get detail on the formatting of the text you're reading.

The first and simplest way to read with Narrator is to use the arrow keys to navigate text if you're interacting with a document in a word processor, such as Microsoft Word. You can also use scan mode to read text. To turn on scan mode, press **Narrator + Spacebar**. Then use the up and down arrow keys to read by paragraph and the left and right arrow keys to read by character. To learn more about scan mode, go to <u>Chapter 3</u>: <u>Using scan mode</u>.

When you want more control over what text you read, Narrator provides a series of textreading commands to help navigate and read text. Below are some basics to get you started. To view all reading commands, go to <u>Appendix B: Narrator keyboard commands</u> <u>and touch gestures</u>.

- To stop reading, press **Ctrl**.
- To read window title, press Narrator + T.
- To read a window, press Narrator + W.

# Work with paragraphs, lines, words, and characters

Narrator provides ways to read text by page, paragraph, line, word, and character.

#### **Read from current location**

- To read the current item, press **Narrator + Tab**.
- To read from where your cursor is, press Narrator + R.
- To start reading a document from the beginning, press Narrator + Ctrl + R or Narrator + Down arrow.
- To read text from the beginning to where your cursor is, press **Narrator + Shift + J** or **Narrator + Alt + Home**.

#### To read text line by line

- To read the current line, press **Narrator + I** or **Narrator + Up arrow**.
- To read the next line, Narrator + O.
- To read the previous line, **Narrator + U**.

#### To read by word

- To read the current word, press **Narrator** + **K** or **Narrator** + **Ctrl** + **5** (numeric keypad). If you press **Narrator** + **K** twice, Narrator will spell the word.
- To read the next word, press Narrator + L or Narrator + Ctrl + Right arrow.
- To read the previous word, press Narrator + J or Narrator + Ctrl + Left arrow.

#### To read by character

- To read the current character, press Narrator + Comma (,) or 5 (numeric keypad).
- To read the next character, press **Narrator + Period (.)**.
- To read the previous character, press **Narrator + M**.

#### To read by page

- To read the current page, press Narrator + Ctrl + I.
- To read the next page, press Narrator + Ctrl + O.
- To read the previous page, press Narrator + Ctrl + U.

#### To read by paragraph

- To read the current paragraph, press Narrator + Ctrl + K.
- To read the next paragraph, press **Narrator + Ctrl + L**.
- To read the previous paragraph, press Narrator + Ctrl + J.

#### Тір

If an app doesn't support text reading commands, Narrator will say "not on explorable text." In this case, use scan mode to navigate and read text.

# Get more detail on text

Narrator provides different levels of detail about the characteristics of text, known as verbosity. To change the level of verbosity, press **Narrator + V** or **Narrator + Shift + V** until you hear the level that you want.

• Verbosity level 0. Hear only text.

- **Verbosity level 1.** Hear basics such as heading levels, and errors in documents such as spelling and grammar. This is the default level.
- **Verbosity level 2.** Hear formatting frequently found on webpages and in email, such as bullet styles, text bold, underline, italic, subscript, superscript, and color.
- **Verbosity level 3.** Hear additional annotations, such as document headers and footers.
- **Verbosity level 4.** Hear extended formatting, such as font name, size, and other list styles.
- **Verbosity level 5.** Hear layout and animation information, such as the type of animation, whether a paragraph starts with an indent or not, and more.

#### Get details on formatting

Narrator provides details about formatting, such as font name, font size, and text alignment. To hear formatting attributes, press **Narrator + F**. To hear the next group of formatting attributes, press **Narrator + F** again. To hear the previous group of formatting attributes, press **Narrator + Shift + F**.

Formatting information is separated into the following groups:

- **Font information.** Font name, weight, size, italic, underline, underline color, strikethrough, background color, foreground color.
- **Advanced font information.** Hyperlink, style, bullet style, subscript, superscript, capitalization style, outline style, overline color, language.
- **Object color and outline information.** Fill type (none, color, gradient, picture, or pattern), fill color, outline color, outline thickness.
- **Paragraph spacing Information.** Line spacing, before paragraph spacing, after paragraph spacing.
- **Page margin information.** Top margin, bottom margin, leading margin, trailing margin.
- **Alignment information** Horizontal text alignment, text flow direction, indentation first line, indentation leading, indentation trailing.
- **Visual effects information.** Animation style, visual effects (reflection, glow, soft edges, and bevel).
- **Object layout information.** Center point, size, rotation.
- **Annotation information.** Annotations such as spelling and grammar suggestions and comments.

#### **Hear punctuation**

Narrator gives you control over how much punctuation you hear when reading text. To change how punctuation is read out, press:

- Narrator + Alt + Subtract (numeric keypad)
- Narrator + Alt + Minus sign (-)
- Narrator + Alt + Add (numeric keypad)
- Narrator + Alt + Plus sign (+)

You can select from the following levels of description:

- **Default.** Hear little to no punctuation. Natural pauses will indicate items such as commas and periods.
- Math. Hear most mathematical symbols.
- **Some.** Hear most conversational punctuation, such as commas and periods.
- Most. Hear additional symbols, such as parentheses.
- All. Hear all punctuation, including all special symbols.

# **Read text in other languages**

When reading text in a different language, Narrator will automatically select the text-tospeech (TTS) voice for that language if it's installed. To learn more about installing additional TTS voices, go to <u>Appendix A: Supported languages and voices</u>.

If the TTS voice for a language isn't installed, Narrator will state the name of the language and read the text using the default TTS voice.

# **Chapter 5: Narrator views**

The different views in Narrator include items, characters, words, lines, paragraphs, headings, links, form fields, tables, landmarks, and suggestions. To change views, you can use the following commands:

- Narrator + Page up and Narrator + Page down
- Narrator + Ctrl + Up arrow and Narrator + Ctrl + Down arrow

To navigate by the view that you've selected, press **Narrator + Left arrow** or **Narrator + Right arrow**. Sometimes, you'll need to press **Narrator + Enter** to use an element, like links or suggestions.

<u>Landmarks</u> and <u>Suggestions</u> are two important ways you can navigate and get more information about a page or app.

#### Tip

Views are especially useful when you're navigating by touch. Learn more about using touch with Narrator in <u>Chapter 6: Using Narrator with touch</u>.

# Landmarks

Landmarks group similar elements on your screen so you easily navigate to them. Some webpages and apps, like Microsoft Store in Windows 10, have landmarks. Some Windows features like the Start menu also have landmarks.

Landmarks can comprise navigation elements like links, text, controls like buttons or check boxes, and more. To move to the main landmark, press **Narrator + N**. To get a list of landmarks for a page or app, press **Narrator + F5**. For more ways to work with landmarks, go to <u>Chapter 3: Using scan mode</u>.

# Suggestions

Suggestions are available when you enter information in a text box in some apps and parts of Windows. For example, when you enter text in the search box after pressing the Windows logo key, suggestions are provided as you type.

When a suggestion is available, Narrator indicates it by playing a sound and voice message. A Narrator view is available to navigate suggestions, but generally, you'll also be able to press the **Up arrow** and **Down arrow** keys to move through suggestions, and **Enter** to select one.

# **Chapter 6: Using Narrator with touch**

This chapter provides details about how to use Narrator with touch on supported desktop Windows PCs, and describes some basic Windows touch gestures.

# **Starting and stopping Narrator**

To start Narrator on a Windows device that doesn't have a keyboard, press the Start button and the Volume Up button together on your device. Press these buttons again to stop Narrator.

# **Touch gestures**

You can use gestures to interact with Narrator and your device.

To explore and hear items on a screen, drag one finger around the screen. When you hear an item that you want to use, double-tap the screen with one finger to activate it. To move through items on the screen, flick left and right with one finger.

If you want to move by characters, words, lines, or links, flick up or down to change the Narrator view. For example, to hear an item spelled out, flick up until you hear Narrator say "characters." Then flick left and right to move through that item a letter at a time.

The following are important gestures to help you get started:

- To change Narrator views, flick up and down with one finger.
- To scroll, flick up, down, left or right with two fingers.
- To show context menus, double-tap with two fingers.
- To change verbosity, tap once with three fingers.
- To read continuously from the current position, swipe down with three fingers.
- To tab forward or backward, flick left or right with three fingers.
- To show the Narrator command list, triple tap with four fingers.
- To open Action Center, swipe in from the right side of the screen.
- To open Task View to switch between apps and multiple desktops, swipe in from the left side of the screen.

For a complete list of touch gestures, see <u>Appendix B: Narrator keyboard commands and</u> touch gestures.

# Typing by touch

When in an editing area, such as a text box, a touch keyboard will appear in the lower part of the screen and Narrator will play a sound to indicate that a keyboard has appeared. To enter text, double-tap the characters you want to enter.

To enter text more quickly, select the **Start** button, then select **Settings**, select **Ease of Access**, and then select **Narrator**. Then, select the check box next to **On the touch keyboard**, **activate keys when I lift my finger** to enter characters as soon as you lift your finger off the character.

# **Chapter 7: Customizing Narrator**

This chapter outlines how to customize Narrator so it works best for you, including changing how Narrator starts, how much feedback you hear when typing, whether the audio from other apps is decreased when Narrator is running, and changing Narrator commands to keyboard shortcuts of your choice. This chapter also provides details about how to use third-party text-to-speech (TTS) software to add more voices to Narrator.

You can find most of these options in your Narrator settings by pressing **Windows logo key + Ctrl + N**. Some options are in legacy settings, which can be found by pressing **Alt + Tab** after Narrator launches and selecting the Narrator settings window.

# **General settings (Use Narrator)**

• Turn on the shortcut to launch Narrator. Start and stop Narrator using the Windows logo key + Ctrl + Enter on a keyboard, or the Windows button + Volume up button on a touch device.

# **Choose when to start Narrator**

- **Start Narrator after sign-in.** Narrator will start automatically when you sign in to your PC.
- Start Narrator before sign-in for everyone. Narrator will run on your PC before anyone signs in.

# Sync settings

Select the **Use current settings before sign-in** button if you want anyone who uses your PC to use your Narrator settings. This is recommended if you use a serial braille display.

# Personalize Narrator's voice

- **Choose a voice.** Choose from different available Narrator voices in your language. Narrator voices average a maximum of approximately 400 words per minute. However, the English voices Microsoft David, Microsoft Zira, and Microsoft Mark offer a rate of approximately 800 words per minute.
- Learn how to add more voices. Narrator can be used with SAPI 5-based speech synthesizers. Once installed, voices will appear in the list of voices for you to choose. Third-party providers include Harpo Software, CereProc, NextUp, Eloquence, and Vocalizer Expressive. Learn more about adding voices in <u>Appendix A: Supported</u> <u>languages and voices</u>.

#### Note

The options above are provided for informational purposes only. Microsoft does not endorse any particular third-party software, nor can it offer any support for their installation and use. For help with any of these products, please contact the original manufacturer.

- **Speed.** Control the speed at which Narrator speaks.
- Pitch. Adjust the pitch of Narrator voice.
- Volume. Adjust the volume at which Narrator speaks.
- Select Narrator audio output device. Narrator lets you choose your default audio device.
- Emphasize formatted text. Narrator's voice will put more emphasis on formatted text.
- **Turn on intonation pauses.** Intonation pauses are punctuation pauses that make speech sound more natural. This is only available for some voices.
- Lower the volume of other apps. The audio volume from other apps is lowered so you can hear Narrator better.

## Change how much content you hear

- **Hear characters as you type.** Characters are announced immediately after you type them. This setting can also be toggled by pressing **Narrator + 2**.
- Hear words you type. Typed words are announced immediately after you type them.
- **Read out Narrator errors.** Narrator announces errors such as "no next landmark" or "no next item."
- **Hear audio cues.** Narrator plays a sound when you do things like perform a Narrator command or when suggestions are available.
- Hear interaction hints. Narrator announces how to interact with controls like buttons.
- **Change the level of detail Narrator provides about text.** Options include: Text only, Headers and errors, Basic formatting, Other annotations, Extended formatting, Layout and animation info
- Change the level of context Narrator provides for buttons and other controls. Options include: No context, Sounds only, Immediate context, Immediate context name and type, Full context of new control, and Full context of old and new controls.
- Adjust order of context reading for buttons and other controls. Choose if you want Narrator to read context either before or after the current item. You can also use the following keyboard shortcuts:
  - To hear the current context at any time, press Narrator + forward slash (/).

- To change the level of context that's read, press Narrator + Alt + forward slash (/).
- To change whether context is read before or after the current item, press Narrator
   + Ctrl + forward slash (/).

# **Choose keyboard settings**

- **Select keyboard layout.** Narrator's Standard layout is more like the keyboard layouts you may have experienced in other screen readers. If you want to use Narrator's original keyboard layout, choose the Legacy keyboard. Learn the commands for each keyboard in <u>Appendix B: Narrator keyboard layouts and touch gestures</u>.
- Select Narrator modifier key. You can choose if you want to use Caps lock, Insert, or both keys in Narrator commands. Both the Caps lock and Insert keys serve as your Narrator key by default. You can use either of these keys in any command that uses the Narrator key.

#### Note

If you're using a Japanese 106 keyboard, Insert and NonConvert are your default Narrator keys.

- Lock the Narrator key. You don't have to press the Narrator key (Caps lock or Insert) to enter a command. For example, to read the next word, press L instead of Narrator + L. You can also lock the Narrator key by pressing Narrator + Z.
- Activate keys on the touch keyboard when you lift your finger. Characters are entered as soon as you lift your finger off the touch keyboard.

#### **Customize a Narrator keyboard shortcut**

Customize Narrator keyboard shortcuts to allow for improved control and usability:

- 1. Choose the command to customize.
- 2. Select Change command keyboard shortcut.
- 3. In the **Type a keyboard shortcut** window, type the keyboard shortcut you want to use on your keyboard. Use any combination of modifier keys (Control, Shift, Alt, Caps lock, or the Windows logo key) together with a non-modifier key. Use function and numeric keypad keys without any modifiers.

Select **Restore default** to return all commands back to their default settings. To find this setting, press **Alt + Tab** after Narrator launches, select the Narrator Settings window, and choose **Commands**.

# **Use Narrator cursor**

- Show the Narrator cursor on the screen. The Narrator cursor is highlighted with a blue focus box.
- Have the text insertion point to follow the Narrator cursor. When this is turned on, Narrator will move the text insertion point when navigating by views such as characters and words.
- **Narrator cursor follows keyboard focus.** When this is turned on, the Narrator cursor and the system cursor will be synchronized when possible.
- **Read and interact with the screen using the mouse.** When this is turned on, Narrator reads what is under the mouse cursor. Use the numeric keypad to move the mouse.
- Select the Narrator cursor movement mode. Two modes are available: normal and advanced. Normal mode allows Narrator to move between various items such as links, tables, and other elements. Advanced mode lets you use the four arrow keys to move the Narrator cursor through a programmatic representation of an application. To find this setting, press Alt + Tab after Narrator launches, select the Narrator Settings window, and choose Navigation.

## Use braille (preview)

To use a braille display with Narrator, select the **Download and install braille** button. Go to <u>Appendix C: Supported braille displays</u> for more info.

# Help make Narrator better

Turn on the toggle to send diagnostic and performance data as you use Narrator. To give feedback on Narrator, press **Narrator + Alt + F**.

# **Chapter 8: Using Narrator with braille**

This chapter provides information about how to use a braille display with Narrator. It includes info about how to install braille on your PC, navigate your PC, and read text. Narrator supports braille displays from several manufacturers. To learn more about what braille displays are supported, including specific key commands for each display, see <u>Appendix C: Supported braille displays</u>.

#### Note

Narrator braille is currently in preview, and your feedback can help make it better. When Narrator is running, press **Narrator + Alt + F** to open the Feedback Hub. You can also leave comments on the Microsoft Accessibility User Voice website. For help with Narrator braille, <u>contact the Disability Answer Desk</u>.

# Install braille

Narrator works with braille displays that use a USB or serial port. To use your braille display with Narrator, download and install braille:

- 1. Press the **Windows logo key** + **Ctrl** + **N** to open Narrator settings.
- 2. Under **Use braille (preview)**, select **Download and install braille**. (This will take some time. Windows will also ask if you're sure that you want to allow Windows to make changes to your PC.)
- 3. When download and installation is complete, select **Enable braille**.
- 4. Next, add your braille display. Select **Add a braille display** and then choose your braille display manufacturer and connection type (USB or serial port).

# Using your braille display with other screen readers

If you already use your braille display with another screen reader, or Narrator doesn't work immediately with your braille display, you may need to change the driver Windows uses to communicate with your display. To do this, press **Windows logo key** + **Ctrl** + **N** to open Narrator settings, and select an option under **Change your braille display driver**. The driver used by Narrator is preceded by "(Narrator)." Note

You only need to change your driver if a different driver is installed for your braille display. If you're not sure, contact your braille display manufacturer.

# **Uninstalling braille**

To remove Narrator braille from your PC:

- 1. Press Windows logo key + I to open Settings.
- 2. Select Apps, choose Apps & features, and then select Manage optional features.
- 3. Select Accessibility Braille support, and then choose Uninstall.

# **Change braille settings**

Different settings let you customize how you use braille with Narrator. To get to them, press the **Windows logo key** + **Ctrl** + **N** to open Narrator settings. Then, under **Use braille** (preview) choose from the following options:

- Language for input and output
- Table type for input and output (grade 1, grade 2, or 8 dot computer braille)
- Notification timeout
- How the cursor is displayed and if you want the cursor to blink on your braille display

If you want to use a serial braille display before you sign-in to your PC, select **Use current settings before sign-in** after choosing your preferred settings.

### **Core Narrator commands**

Most braille displays can perform 12 Narrator commands to navigate and interact with apps. And supported displays with a braille keyboard can use it for entering text, or performing familiar single-letter scan mode commands. These 12 core commands are listed in the table below.

Narrator command	Keyboard equivalent	Description
Primary action	Narrator + Enter	Often described as "click."
Secondary action	Shift + Enter in scan mode	Often "select" or "expand" depending on the control.
Display context menu	Shift+F10	Shows a menu of additional actions.
Pan braille right	N/A	Displays the next set of characters from the current line. At end, performs Braille next.

Narrator command	Keyboard equivalent	Description
Pan braille left	N/A	Displays the previous set of characters from the current line. At beginning, performs Braille previous.
Braille Next*	Narrator + Right	Displays the next item in the current navigation mode.
Braille Previous*	Narrator + Left	Displays the previous item in the current navigation mode.
Braille home*	Home in scan mode	Go to beginning of line.
Braille end*	End in scan mode	Go to end of line.
Braille first*	Ctrl + Home in scan mode	Go to first line.
Braille last*	Ctrl + End in scan mode	Go to last line.
Select navigation mode	Narrator + Up/Down	Perform this command, then use braille next/previous to choose a new navigation mode and perform primary action to select the new mode.

Note that braille next, previous, home, end, first, and last all change with the current navigation mode. For example, with a navigation mode of paragraph:

- Next/previous will navigate to the next/previous paragraph
- Home/end will navigate to the beginning/end of the current paragraph
- First/last will navigate to the first/last paragraph.

You can find the mapping for a specific braille display in <u>Appendix C: Supported braille</u> <u>displays</u>.

# **Braille keyboard commands**

If your braille display has a braille keyboard, you can use it to enter text or do the following commands. The command to toggle the keyboard is **Space + Dots 1-3**.

Braille dots	
--------------	--

Narrator command

1-2-3-4 or 1-2-3-4-7	Go to the next or previous paragraph
1-2-5 or 1-2-5-7	Go to the next or previous heading
2-3-4-5 or 2-3-4-5-7	Go to the next or previous table
1-3 or 1-3-7	Go to the next or previous link
2-4 or 2-4-7	Go to the next or previous item
1-4-5 or 1-4-5-7	Go to the next or previous landmark
1-2-4 or 1-2-4-7	Go to the next or previous form field
1-2 or 1-2-7	Go to the next or previous button
1-4 or 1-4-7	Go to the next or previous combo box
1-5 or 1-5-7	Go to the next or previous edit field
1-2-3-5 or 1-2-3-5-7	Go to the next or previous radio button
1-3-4-6 or 1-3-4-6-7	Go to the next or previous check box
1-6 or 1-6-7	Go to the next or previous heading level 1
1-2-6 or 1-2-6-7	Go to the next or previous heading level 2
1-4-6 or 1-4-6-7	Go to the next or previous heading level 3
1-4-5-6 or 1-4-5-6-7	Go to the next or previous heading level 4
1-5-6 or 1-5-6-7	Go to the next or previous heading level 5
1-2-4-6 or 1-2-4-6-7	Go to the next or previous heading level 6
1-2-4-5-6 or 1-2-4-5-6-7	Go to the next or previous heading level 7

Braille dots	Narrator command
1-2-5-6 or 1-2-5-6-7	Go to the next or previous heading level 8
2-4-6 or 2-4-6-7	Go to the next or previous heading level 9
Space + 1-2-3	Turn on input learning, press twice to turn off

Use the following commands for keyboard input.

Braille dots	Keyboard input
Space + 4-5	Tab key
Space + 1-2	Shift + Tab key
Space + 2-3-4-5	Alt + Tab key
Space + 2-4-5-6	Windows logo key
Space + 1-2-3-5	Windows logo key + Tab key
Space + Routing Key 1 through 12	F1 through F12 keys
7	Backspace key
8	Enter key
Space + 2-6	Escape key
Space + 3	Cursor left key
Space + 6	Cursor right key
Space + 1	Cursor up key
Space + 4	Cursor down key

Braille dots	Keyboard input
Space + 2-3	Page up key
Space + 5-6	Page down key
Space + 2	Home key
Space + 5	End key
Space + 3-5	Insert key
Space + 2-5-6	Delete key

The following commands allow you to enter and hold a modifier key followed by another letter or key.

Braille dots	Keyboard input
Space + 1-8	Hold Windows logo key
Space + 2-8	Hold Alt key
Space + 3-8	Hold Ctrl key
Space + 4-8	Hold Shift key
Space + 5-8	Hold AltGr key
Space + 6-8	Hold Caps lock key
Space + 7-8	Release all modifier keys

# Using touch cursors on your braille display

If your braille display has touch cursors you can use them to do certain actions.

#### Working with interactive elements

When the displayed content is an interactive element, tap any touch cursor above that content to do its primary action. Tap two adjacent touch cursors above the content to do its secondary action if one is available.

When the displayed content displayed isn't text, tap two nonadjacent touch cursors above the content to display a context menu if one is available.

#### **Editing text**

Use the following touch cursor commands when editing text:

- To move the text insertion point to a specific character, tap the touch cursor above the corresponding cell. You can also tap the touch cursor above a cell representing a character or its preceding modifier (such as a capital or a number). Caret representation will be on the cell after the modifier.
- To move the text insertion point to the last character on the display, tap the touch cursor above a blank cell at the end of the display.
- To do a secondary action, tap on two adjacent touch cursors on a corresponding character.
- To show a context menu, tap two nonadjacent touch cursors above the character closest to the center of the two nonadjacent touch cursors.

#### Note

Some displays don't support simultaneous pressing of two touch cursors. Therefore, there are additional commands for each display. To learn more about specific key commands for each display, see <u>Appendix C: Supported braille displays</u>.

# Appendix A: Supported languages and voices

The following table explains what languages and text-to-speech (TTS) voices are available in the latest version of Windows.

Language, country, or region	Male TTS voice	Female TTS voice
Arabic	Not applicable	Hoda
Arabic (Saudi Arabia)	Naayf	Not applicable
Bulgarian	Ivan	Not applicable
Catalan	Not applicable	Herena
Chinese (Simplified)	Kangkang	Huihui, Yaoyao
Cantonese (Traditional, Hong Kong SAR)	Danny	Tracy
Chinese (Traditional, Taiwan)	Zhiwei	Yating, Hanhan
Croatian	Matej	Not applicable
Czech (Czech Republic)	Jakub	Not applicable
Danish	Not applicable	Helle
Dutch	Frank	Not applicable
English (Australia)	James	Catherine
English (Canada)	Richard	Linda
English (Great Britain)	George	Hazel, Susan
English (India)	Ravi	Heera
English (Ireland)	Sean	Not applicable

Language, country, or region	Male TTS voice	Female TTS voice
English (United States)	David, Mark	Zira
Finnish	Not applicable	Heidi
Flemish (Belgian Dutch)	Bart	Not applicable
French (Canada)	Claude	Caroline
French (France)	Paul	Hortence, Julie
German (Germany)	Stefan	Hedda, Katja
German (Switzerland)	Karsten	Not applicable
Greek	Stefanos	Not applicable
Hebrew	Asaf	Not applicable
Hindi (India)	Hemant	Kalpana
Hungarian (Hungary)	Szabolcs	Not applicable
Indonesian (Indonesia)	Andika	Not applicable
Italian	Cosimo	Elsa
Japanese	Ichiro	Ayumi, Haruka
Malay	Rizwan	Not applicable
Norwegian	Jon	Not applicable
Polish (Poland)	Adam	Paulina
Portuguese (Brazil)	Daniel	Maria
Portuguese (Portugal)	Not applicable	Helia

Language, country, or region	Male TTS voice	Female TTS voice
Romanian (Romania)	Andrei	Not applicable
Russian (Russia)	Pavel	Irina
Slovak (Slovakia)	Filip	Not applicable
Slovenian	Lado	Not applicable
Korean	Not applicable	Heami
Spanish (Spain)	Pablo	Helena, Laura
Spanish (Mexico)	Raul	Sabina
Swedish	Bengt	Not applicable
Tamil	Valluvar	Not applicable
Thai (Thailand)	Pattara	Not applicable
Turkish	Tolga	Not applicable
Vietnamese	An	Not applicable

## Add a TTS voice to your PC

To use one of these voices, add it to your PC:

- 1. Select the **Start** button, then select **Settings** > **Time & Language** > **Language**.
- 2. Select **Add a language** and search for the language you want to add. Languages that have a TTS voice available have a Narrator (Text-to-speech) icon next to them. Choose a language that has a TTS voice available, and select **Next**.
- 3. Select the check boxes to indicate if you want to read Windows in that language (Windows display language), let Windows recognize speech or handwriting in that language, and more. Then, select **Install**.
- 4. Select the new language, then select **Options**. If needed, select the **Download** buttons under **Language pack** and **Speech**.

Once the language is downloaded, go to **Settings** > **Ease of Access** > **Narrator**. Under **Choose a voice**, select the voice you want to use.

# Appendix B: Narrator keyboard commands and touch gestures

This appendix lists the <u>keyboard commands</u> and <u>touch gestures</u> available in the latest version of Windows.

To view a list of all other keyboard shortcuts in Windows, see <u>Keyboard shortcuts in</u> <u>Windows</u>. To view a list of keyboard shortcuts in Windows apps, see <u>Keyboard shortcuts in</u> <u>apps</u>.

## Narrator key

You can now choose what modifier key you want to use in Narrator commands. Both the Caps lock and Insert keys serve as your Narrator key by default. You can use either of these keys in any command that uses the Narrator key. The Narrator key is referred to as simply "Narrator" in commands. You can change your Narrator key in Narrator settings.

#### Note

If you're using a Japanese 106 keyboard, Insert and NonConvert are your default Narrator keys.

## Narrator keyboard commands

Narrator has two possible keyboard layouts: <u>Standard</u> and <u>Legacy</u>. Commands for each are listed below.

#### Note

Scan mode commands are listed in Chapter 3: Using scan mode.

#### Standard keyboard layout

#### **General commands**

Press these keys	To do this
Windows + Ctrl + Enter	Start or stop Narrator
Narrator + Esc	Exit Narrator
Narrator + 1	Toggle input learning
Narrator + Right arrow	Move to next item
Narrator + Left arrow	Move to previous item
Narrator + Page up	Change view
Ctrl + Narrator + Up arrow	

Narrator + Page down		
Ctrl + Narrator + Down arrow		
Narrator + F1	Show commands list	
Narrator + F2	Show commands for current item	
Narrator + Enter	Do primary action	
Narrator + Ctrl + Enter	Toggle search mode	
Narrator + F12	Read current time and date	
Narrator + Ctrl + D	Describe image using an online service	
Narrator + Alt + F	Provide Narrator feedback	
Narrator + Z	Lock Narrator key	
Narrator + Ctrl + F12	Toggle developer mode	
Narrator + 3	Pass keys to application	
Narrator + Alt + M	Toggle mouse mode	

#### Adjust speech

Press	these	keys
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Ctrl + Narrator + Plus sign (+) Ctrl + Narrator + Add (numeric keypad)	Increase voice volume
Ctrl + Narrator + Minus sign (-) Ctrl + Narrator + Subtract (numeric keypad)	Decrease voice volume
Narrator + Plus sign (+)	Increase voice speed
Narrator + Minus sign (-)	Decrease voice speed
Alt + Narrator + Subtract (numeric keypad) Alt + Narrator + Minus sign (-) Alt + Narrator + Add (numeric keypad) Alt + Narrator + Plus sign (+)	Change punctuation reading mode
Narrator + V	Increase verbosity mode
Shift + Narrator + V	Decrease verbosity mode
Narrator + 2	Toggle character reading
Narrator + Forward slash (/)	Read context

Press these keys	To do this
Alt + Narrator + Forward slash (/)	Set read context verbosity
Ctrl + Narrator + Forward slash (/)	Change read context order

#### Read and work with text

Press these keys

Ctrl	Stop reading
Narrator + Tab Narrator + 5 (numeric keypad)	Read item
Narrator + Tab twice quickly Narrator + 5 twice quickly (numeric keypad) Narrator + K twice quickly Narrator + Ctrl + 5 twice quickly (numeric keypad)	Read item spelled out
Narrator + 0	Read item advanced
Narrator + T	Read window title
Narrator + W	Read window
Narrator + X	Repeat phrase
Narrator + R	Read from cursor
Ctrl + Narrator + R Narrator + Down arrow	Start reading document
Narrator + C	Read document
Shift + Narrator + J Narrator + Alt + Home	Read text from start to cursor
Ctrl + Narrator + U	Read previous page

Press	these	keys
-------	-------	------

Ctrl + Narrator + I	Read current page	
Ctrl + Narrator + O	Read next page	
Ctrl + Narrator + J	Read previous paragraph	
Ctrl + Narrator + K	Read current paragraph	
Ctrl + Narrator + L	Read next paragraph	
Narrator + U	Read previous line	
Narrator + I Narrator + Up arrow	Read current line	
Narrator + O	Read next line	
Narrator + J Ctrl + Narrator + Left arrow	Read previous word	
Narrator + K Ctrl + Narrator + 5 (numeric keypad)	Read current word	
Narrator + L Ctrl + Narrator + Right arrow	Read next word	
Narrator + M	Read previous character	
Narrator + Comma (,) 5 (numeric keypad)	Read current character	
Narrator + Period (.)	Read next character	
Narrator + F	Read next group of formatting information	
Shift + Narrator + F	Read previous group of formatting information	

Press	these	keys
-------	-------	------

To do this

Narrator + B Ctrl + Narrator + Home	Move to beginning of text
Narrator + E Ctrl + Narrator + End	Move to end of text
Narrator + Shift + Down arrow	Read selection
Narrator + Shift + Down arrow twice quickly	Spell selection

#### Navigate tables

Press these keys

Ctrl + Alt + Home	Jump to first cell in table
Ctrl + Alt + End	Jump to last cell in table
Ctrl + Alt + Right arrow	Jump to next cell in row
Ctrl + Alt + Left arrow	Jump to previous cell in row
Ctrl + Alt + Down arrow	Jump to next cell in column
Ctrl + Alt + Up arrow	Jump to previous cell in column
Ctrl + Shift + Alt + Left arrow	Read current row header
Ctrl + Shift + Alt + Up arrow	Read current column header
Ctrl + Shift + Alt + Right arrow	Read current row
Ctrl + Shift + Alt + Down arrow	Read current column
Ctrl + Shift + Alt + Forward slash (\) Ctrl + Shift + Alt + 5 (numeric keypad)	Read which row and column Narrator is in
Ctrl + Alt + Page up	Jump to table cell

Press	these	keys
-------	-------	------

Ctrl + Alt + Page down Jump to cell contents

#### Narrator focus commands Press these keys

	-	
То	do	this

Narrator + Home	Move to first item in window
Narrator + End	Move to last item in window
Narrator + Backspace	Go back one item
Narrator + N	Move to main landmark
Narrator + Open square bracket ([) Narrator + Subtract (numeric keypad)	Move Narrator cursor to system cursor
Narrator + Single quote (') Narrator + Add (numeric keypad)	Set focus to item
Narrator + A	Jump to linked item
Shift + Narrator + A	Jump to annotated content
Alt + Narrator + Up arrow	Navigate to parent (when structural navigation is provided)
Alt + Narrator + Right arrow	Navigate to next sibling (when structural navigation is provided)
Alt + Narrator + Left arrow	Navigate to previous sibling (when structural navigation is provided)
Alt + Narrator + Down arrow	Navigate to first child (when structural navigation is provided)

#### Press these keys

To do this

Narrator + F7	List of links
Narrator + F5	List of landmarks
Narrator + F6	List of headings
Narrator + Ctrl + F	Narrator Find
Narrator + F3	Continue Find forward
Narrator + Shift + F3	Continue Find backward

#### Numeric keypad commands Press these keys

Press these keys	To do this
Narrator + Home	Move to first item in window
Narrator + End	Move to last item in window
Narrator + Alt + Home	Read text from start to cursor
Ctrl + Narrator + Home	Move to beginning of text
Ctrl + Narrator + End	Move to end of text
Narrator + Left arrow	Move to previous item
Narrator + Right arrow	Move to next item
Narrator + 5 (numeric keypad)	Read item
Narrator + 5 twice quickly (numeric keypad) Narrator + Ctrl + 5 twice quickly (numeric keypad)	Read item spelled out
Narrator + Up arrow	Read current line
Narrator + Down arrow	Start reading document

Ctrl + Narrator + Left arrow	Read previous word
Ctrl + Narrator + 5 (numeric keypad)	Read current word
Ctrl + Narrator + Right arrow	Read next word
5 (numeric keypad)	Read current character
Narrator + Page up Ctrl + Narrator + Up arrow	Change view
Narrator + Subtract (numeric keypad)	Move Narrator cursor to system cursor
Narrator + Add (numeric keypad)	Set focus to item
Ctrl + Narrator + Add (numeric keypad)	Increase voice volume
Ctrl + Narrator + Subtract (numeric keypad)	Decrease voice volume
Alt + Narrator + Add Alt + Narrator + Subtract	Change punctuation reading mode
Narrator + Enter	Do primary action
Narrator + Shift + Enter	Toggle search mode

#### Legacy keyboard layout General commands

Press these keys	To do this
Windows logo key + Ctrl + N	Open Narrator settings
Windows logo key + Ctrl + Enter	Start or stop Narrator
Narrator + Esc	Stop Narrator
Narrator + 1	Toggle input learning
Narrator + Right arrow	Move to next item

Narrator + Left arrow	Move to previous item
Narrator + Up or Down arrow	Change view
Narrator + F1	Show commands list
Narrator + F2	Show commands for current item
Narrator + Enter	Do primary action
Narrator + Shift + Enter	Toggle search mode
Narrator + C	Read current time and date
Narrator + Shift + D	Describe image using an online service
Narrator + E Narrator + Alt + F	Provide Narrator feedback
Narrator + Z	Lock Narrator key
Narrator + Shift + F12	Toggle developer mode
Narrator + X	Pass keys to application
Narrator + Num lock	Turn mouse mode on or off
Press Caps lock twice in quick succession	Turn Caps lock on or off

#### Adjust speech

Press these keys	To do this
Narrator + Page Up	Increase voice volume
Narrator + Page Down	Decrease voice volume
Narrator + Plus sign (+) Narrator + Add (numeric keypad)	Increase voice speed

Narrator + Minus sign (-) Narrator + Subtract (numeric keypad)	Decrease voice speed
Narrator + Alt + Plus sign (+) Narrator + Alt + Minus sign (-) Narrator + Alt + Add (numeric keypad) Narrator + Alt + Subtract (numeric keypad)	Change punctuation reading mode
Narrator + A Narrator + Ctrl + Plus sign (+) Narrator + Ctrl + Add (numeric keypad)	Increase verbosity mode
Narrator + Ctrl + Minus sign (-) Narrator + Ctrl + Subtract (numeric keypad)	Decrease verbosity mode
Narrator + F12	Toggle character reading
Narrator + Forward slash (/)	Read context
Alt + Narrator + Forward slash (/)	Change how much context is read (verbosity)
Ctrl + Narrator + Forward slash (/)	Change read context order

#### Read and work with text

Press these keys

Ctrl	Stop reading
Narrator + D	Read item
Narrator + S	Read item spelled out
Narrator + 0 (zero)	Read item advanced
Narrator + T	Read window title
Narrator + W	Read window
Narrator + V	Repeat phrase

Narrator + R	Read from cursor
Narrator + M	Start reading document
Narrator + H	Read document
Narrator + Close square bracket (])	Read text from start to cursor
Narrator + Shift + U	Read previous page
Narrator + Ctrl + U	Read current page
Narrator + U	Read next page
Narrator + Shift + I	Read previous paragraph
Narrator + Ctrl + I	Read current paragraph
Narrator + I	Read next paragraph
Narrator + Shift + O	Read previous line
Narrator + Ctrl + O	Read current line
Narrator + O	Read next line
Narrator + Shift + P	Read previous word
Narrator + Ctrl + P	Read current word
Narrator + P	Read next word
Narrator + Shift + Open square bracket ([)	Read previous character
Narrator + Ctrl + Open square bracket ([)	Read current character
Narrator + Open square bracket ([)	Read next character
Narrator + F	Read next group of formatting information

Shift + Narrator + F	Read previous group of formatting information
Narrator + Y	Move to beginning of text
Narrator + B	Move to end of text
Narrator + J	Jump to next heading
Narrator + Shift + J	Jump to previous heading
Narrator + L	Jump to next link
Narrator + Shift + L	Jump to previous link
Narrator + Shift + Down Arrow	Read current selection

#### Navigate tables Press these kevs

Press these keys	To do this
Narrator + F3	Jump to next cell in row
Narrator + Shift + F3	Jump to previous cell in row
Narrator + F4	Jump to next cell in column
Narrator + Shift + F4	Jump to previous cell in column
Narrator + F10	Read current row header
Narrator + F9	Read current column header
Narrator + F8	Read current row
Narrator + F7	Read current column
Narrator + F5	Read which row and column Narrator is in
Narrator + F6	Jump to table cell

Narrator + Shift + F6	Jump to cell contents
Narrator + K	Jump to next table
Narrator + Shift + K	Jump to previous table

#### Narrator focus commands Press these keys

To do this

Narrator + Home	Move to first item in window
Narrator + End	Move to last item in window
Narrator + Backspace	Go back one item
Narrator + N	Move to main landmark
Narrator + G	Move Narrator cursor to system cursor
Narrator + tilde (~)	Set focus to item
Narrator + Insert	Jump to linked item
Narrator + Shift + Insert	Jump to annotated content
Ctrl + Narrator + Up arrow	Navigate to parent (when structural navigation is provided)
Ctrl + Narrator + Right arrow	Navigate to next sibling (when structural navigation is provided)
Ctrl + Narrator + Left arrow	Navigate to previous sibling (when structural navigation is provided)
Ctrl + Narrator + Down arrow	Navigate to first child (when structural navigation is provided)
Narrator + Q	Move to last item in containing area

# Narrator touch gestures

Use this gesture	To do this
Touch or drag a single finger	Read what's under your finger
Double-tap or hold with one finger and then tap anywhere on the screen with a second finger	Activate primary action
Triple-tap or hold with one finger and then double-tap anywhere on the screen with a second finger	Activate secondary action
Hold with one finger and then tap anywhere on the screen with two fingers	Start dragging or extra key options
Flick left or right with one finger	Move to next or previous item
Flick up or down with one finger	Change view
Tap once with two fingers	Stop Narrator from reading
Tap once with three fingers	Change verbosity mode
Tap once with four fingers	Show Narrator commands for the current item
Double-tap with two fingers	Show context menu
Double-tap with three fingers	Read text attributes
Double-tap with four fingers	Open search mode
Tap three times with four fingers	Show all Narrator commands
Swipe left, right, up, or down with two fingers	Scroll
Swipe left or right with three fingers	Tab forward or backward
Swipe up with three fingers	Read current window
Swipe down with three fingers	Start reading on explorable text

Swipe up or down with four fingers	Turn semantic zoom on or off where supported
Swipe left or right with four fingers	Move Narrator cursor to beginning or end of unit

# **Appendix C: Supported braille displays**

Narrator supports the following braille displays. To learn more about braille support in Narrator, see <u>Chapter 8: Using Narrator with braille</u>.

Choose a link in the table below to see supported commands for supported displays.

Manufacturer	Supported displays
<u>Albatross</u>	All models
	ABT [3nn] and Delphi [4nn] (large)     ABT [3nn] and Delphi [4nn] (cmall)
	<ul> <li>ABT [3nn] and Delphi [4nn] (small)</li> <li>BC640, BC624</li> </ul>
<u>Alva</u>	Optelec Easylink 12 Touch
	• Satellite [5nn] (large)
	• Satellite [5nn] (small)
	Voyager Protocol Converter
<u>B2G</u>	All models
	All models (default)
	All models (with Vario keys)
	VarioConnect / HWG BrailleConnect
	• Conny
	DM 80 Plus
<u>Baum</u>	• Inka
	Orbit Reader
	Vario Pro
	Pronto!
	PocketVario
	APH Refreshabraille
	SuperVario / HWG Brailliant

	<ul> <li>VarioUltra</li> <li>Vario 40</li> <li>Vario 80</li> </ul>
<u>BrailleLite</u>	<ul><li>BrailleLite 18</li><li>BrailleLite 40, M20, and M40</li></ul>
<u>BrailleMemo</u>	<ul><li>BrailleMemo Pocket</li><li>BrailleMemo Smart</li></ul>
<u>BrailleNote</u>	All models
<u>Cebra</u>	All models
<u>CombiBraille</u>	All models
<u>EcoBraille</u>	All models
<u>EuroBraille</u>	<ul> <li>AzerBraille, Clio, NoteBraille, PupiBraille, Scriba</li> <li>Esys 80</li> <li>Esys 40, 64</li> <li>Esys 12, 24</li> <li>Esytime</li> <li>Iris</li> </ul>
<u>Freedom Scientific</u>	<ul> <li>Focus 1 and Focus 2 40</li> <li>Focus 2 80</li> <li>Focus Blue</li> <li>PAC Mate</li> </ul>
<u>HandyTech</u>	<ul><li>Active Braille 40</li><li>Actilino</li><li>Active Star 40</li></ul>

	Basic Braille
	Bookworm
	Braillino
	Braille Star 40
	Braille Star 80
	Connect Braille 40
	Easy Braille
	Modular Connect 88
	• Modular
	Modular Evolution 64
	Modular Evolution 88
	Braille Wave
	MobiLine
<u>Hedo</u>	ProfiLine
	Smart Beetle
	Braille Edge
<u>HIMS</u>	Braille Sense with Two Scroll Keys
	Braille Sense with QWERTY keyboard
	Braille Sense with Four Scroll Keys
	SyncBraille
<u>HumanWare</u>	• Brailliant BI (32, 40)
	• Brailliant B 80
	With braille keyboard
Iris	With PC keyboard
	Unrecognized Model (all keys defined)
MDV	Models with Function Keys
	Models with Function Keys and Status Cells

	Models with a Keyboard
<u>Metec</u>	<ul> <li>All models</li> <li>BD I with 3 Keys and Status Cells</li> <li>BD I with 6 Keys</li> <li>BD I with 6 Keys and Status Cells</li> </ul>
<u>MiniBraille</u>	All models
MultiBraille	All models
<u>NinePoint</u>	All models
Papenmeier	<ul> <li>BrailleX 2D Lite (plus)</li> <li>BrailleX 2D Screen Soft</li> <li>BrailleX Compact 486</li> <li>BrailleX Compact/Tiny</li> <li>BrailleX EL2D-40</li> <li>BrailleX EL2D-66</li> <li>BrailleX EL2D-80</li> <li>BrailleX EL2D-80s</li> <li>BrailleX EL4D-80s</li> <li>BrailleX EL40c</li> <li>BrailleX EL40c</li> <li>BrailleX EL40s</li> <li>BrailleX EL60c</li> <li>BrailleX EL66s</li> <li>BrailleX EL80c</li> <li>BrailleX EL80c</li> <li>BrailleX EL80-II</li> <li>BrailleX EL80s</li> <li>BrailleX EL80s</li> <li>BrailleX EL80s</li> <li>BrailleX EL80s</li> <li>BrailleX EL80s</li> <li>BrailleX EL802</li> </ul>

	BrailleX Elba 32
	BrailleX Elba (Trio 20)
	BrailleX Elba (Trio 32)
	BrailleX IB 80 CR Soft
	BrailleX Live
	BrailleX Trio
<u>Pegasus</u>	All models
	Braille Displays
<u>Seika</u>	Note Takers
	Navigator 20
	Navigator 40
TCI	Navigator 80
<u>TSI</u>	• Power Braille 40
	• Power Braille 65
	Power Braille 80
<u>Voyager</u>	All models
	Braille Pen 2