

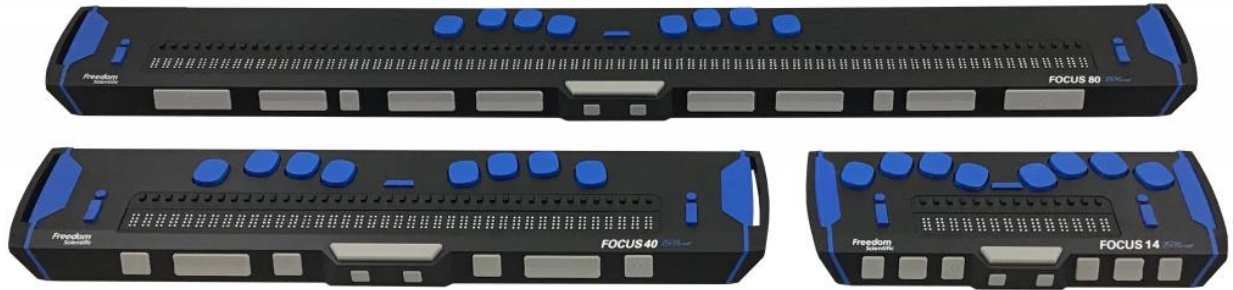
# Focus Blue Refreshable Braille Display Teacher's Companion

This companion has been designed as a guide to assist you when teaching students how to use the Focus Blue Refreshable Braille Display. It covers:

- [An introduction of the Focus Blue](#)
- [Layout and controls](#)
- [Using the Controls](#)
- [Connecting to computers and mobile devices](#)
- [Important terminology](#)
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- [Inputting text and executing commands](#)
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## What Is the Focus Blue?

The Focus Blue line of refreshable braille displays provide a tactile interface to your computer or mobile device. When used together with a screen reader such as JAWS® for Windows, these compact solutions enhance your reading and writing experience by placing a wealth of information at your fingertips. The Focus is available in 14, 40, and 80 refreshable braille cells, so you can take braille wherever you go.



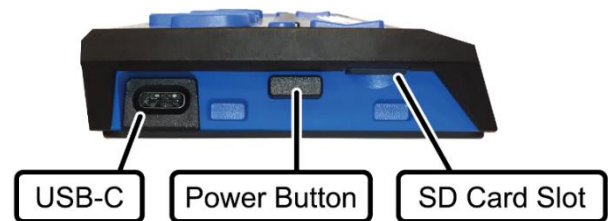
The Focus Blue contains a Perkins-style keyboard, front-panel controls, and a multitude of features designed to enhance learning both in and out of the classroom.

## Focus Blue Layout and Controls

The layout of the Focus Blue is divided into the left edge, top, and front edge.

### Left Edge

On the left from front to back, you'll find the power button and a standard micro USB port. This port allows you to connect the Focus to a computer using the supplied USB cable or to the AC adapter for charging the device.

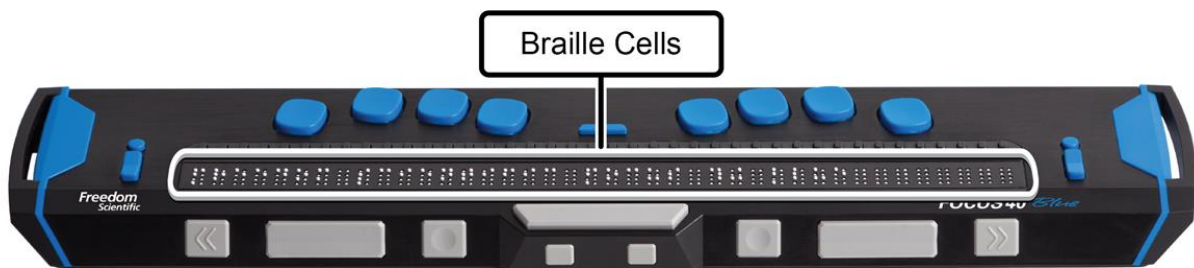


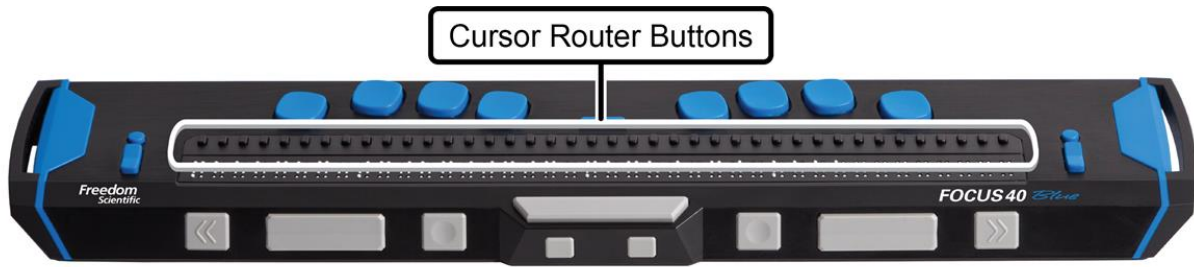
### Top (Surface Deck)

The top (surface deck) of the unit contains several controls.

#### Braille Cells and Cursor Router Buttons

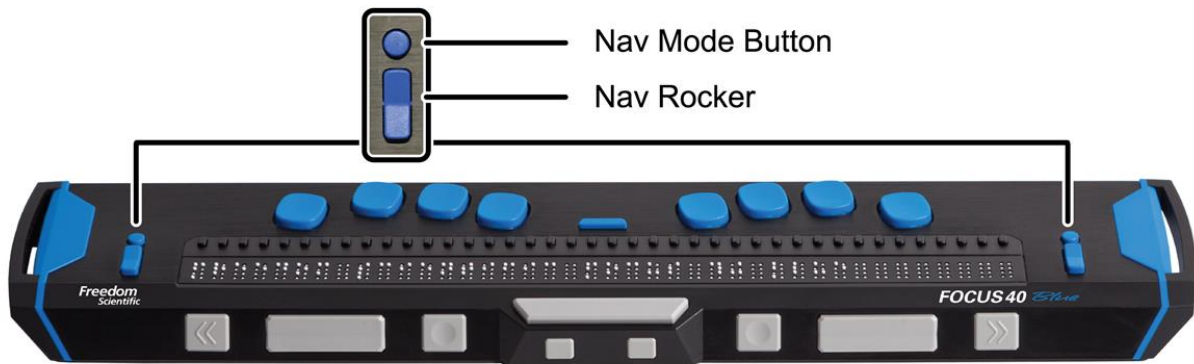
- The refreshable braille cells are located toward the front of the unit with a cursor router button above each braille cell.





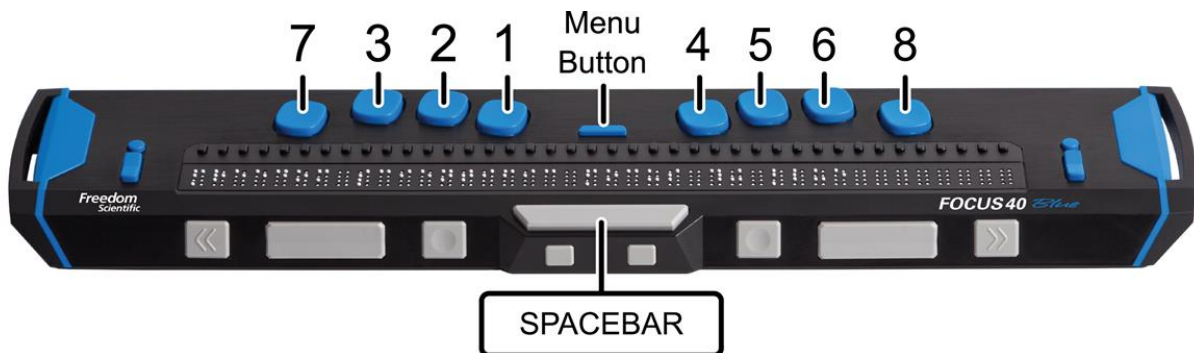
### Nav Rockers and Nav Mode Buttons

- At each end of the display are NAV Rockers used for navigation.
- Positioned above each NAV Rocker is a mode button which cycles through the different navigation modes.



### Perkins-style Keyboard, Spacebar, and Menu Button

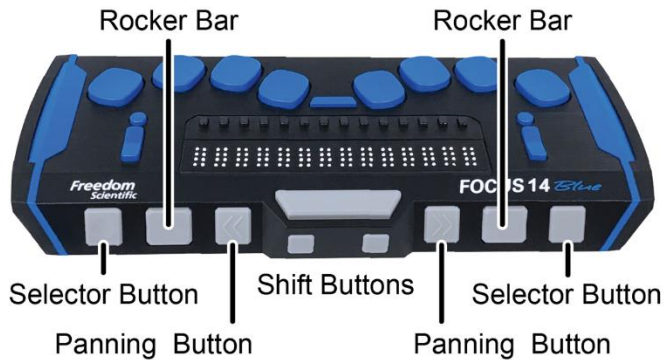
- Positioned directly above the cursor router buttons are eight keys similar to those on a Perkins-style braille keyboard.
- The eight braille keys from left to right are: 7 (backspace), dot 3, dot 2, dot 1, dot 4, dot 5, dot 6, and 8 (enter). These keys are used to enter commands.
- The spacebar is located on the front edge directly beneath the braille entry keys and is used to enter a blank space when inputting text or pressed simultaneously with the braille keys when entering commands.



## Front Edge

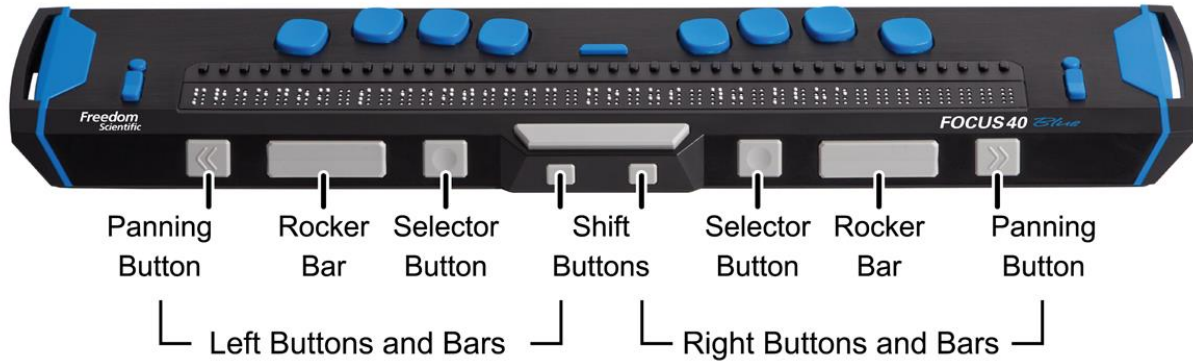
The front edge of the Focus Blue contains several controls, located from left to right.

### Focus 14



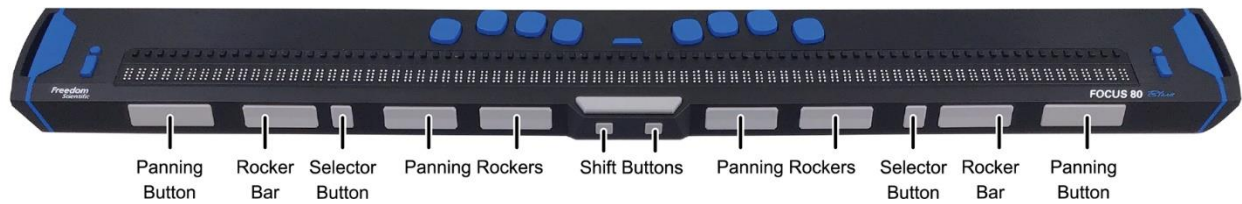
- Left selector button
- Left rocker bar
- Left panning button
- Left SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Right SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Right panning button
- Right rocker bar
- Right selector button

## Focus 40



- Left panning button
- Left rocker bar
- Left selector button
- Left SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Right SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Right selector button
- Right rocker bar
- Right panning button

## Focus 80



- Left panning button
- Left rocker bar
- Left selector button
- Two left panning rockers
- Left SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Right SHIFT key (used in conjunction with the SPACEBAR, braille keys, and other controls to enter commands)
- Two right panning rockers
- Right selector button
- Right rocker bar
- Right panning button

**Note:** If you choose to use the Focus display with a third-party screen reading application on a computer or mobile device, refer to the documentation that came with the software as the functions of these controls may be different from how they work with JAWS.

## Using the Controls

### NAV Rockers and Mode Buttons

The Focus NAV Rockers allow you to quickly navigate through files, dialog boxes, lists, and menus. In a file, you can move by line, sentence, paragraph, and pan backward and forward through prior or consecutive text. When in a dialog box, you can Move between and interact with the available controls. Use them to also navigate up or down through the options in a menu.

Switch between the four navigation modes by pressing the **MODE button** located directly above each NAV Rocker.

### Panning Buttons

The Focus panning buttons pan left or right one display width at a time (14, 40, or 80 cells). Press the panning button on the left front edge of the Focus, the button with a raised double left arrow symbol, to pan left; press the panning button on the right front edge of the Focus, the button with a raised double right arrow symbol, to pan right. The functions of the panning buttons can be reversed so that pressing the left panning button will pan right and pressing the right panning button will pan left. Please refer to help for the JAWS Keyboard Manager for details on modifying these and other control assignments.

### Rocker Bars

The rocker bars provide movement up or down by line. Press the top of the rocker bar to move up one line and the bottom of the rocker bar to move down one line. The rocker bars, in combination with the panning buttons, move to the beginning or end of the line on which the cursor is positioned. Press a panning button and the top of a rocker bar to move to the start of the line. Press a panning button and the bottom of a rocker bar to move to the end of the line.

### Selector Buttons

Used by themselves, the concave-shaped selector buttons control Auto Advance. When pressed in combination with other controls, the selector buttons perform multiple functions. Please see the Focus Blue documentation linked at the end of this companion for more details.

## Cursor Router Buttons

Press a Cursor router button to move the cursor to the corresponding braille cell. This action also selects a link in a Web page or e-mail message. Please see the Focus Blue documentation for more details.

## Connect the Focus Blue

You can connect the Focus Blue to a computer via USB or Bluetooth, or to a mobile device via Bluetooth for use while in the classroom, at home, or while on-the-go.

### Connect to a Windows Computer Via USB

If you connect using USB, the display is powered from the computer through the USB connection cable, which also charges the internal battery.

To connect the Focus Blue to a Windows computer via USB:

1. Position the Focus Blue so the front edge containing the navigational controls is facing you.
2. Locate the micro USB-C port on the left edge of the device.
3. Plug the smaller connector on the USB cable into the port on your Focus and the larger connector into a USB port on your computer. As soon as you connect the USB cable to the computer, the Focus immediately turns on.

When the USB cable is removed, the Focus turns off. Pressing the power button while connected to USB causes the focus to display the model, firmware version, battery status, and the connection type in the last three cells. Pressing a cursor router button returns the display to normal operation.

When you plug the Focus into your computer using a USB cable, Windows should detect the display and install the necessary drivers so you can begin using it right away. There are times, however, when you may need to configure it manually.

To do this:

1. Press **INSERT+J** to open the JAWS window.
2. Press **ALT+O** to open the Options menu and press **L** to open the Braille Basic Settings dialog box. If JAWS is set to run in the system tray, press



**INSERT+J** to open the JAWS context menu, **O** for Options, then **L** to open the braille settings.

3. TAB to the Add Braille Display button and press **ENTER**.
4. In the list of braille displays, choose Focus and press the **SPACEBAR** to select it. You can press **F** to move to it quickly.
5. Tab to Next and press **ENTER**.
6. In the Select the output port edit combo box, make sure USB is selected. Since the Focus is connected to the computer via a USB cable, this option should be selected by default.
7. Tab to next and press **ENTER**.
8. make sure the Focus is selected as the primary display.
9. Tab to Finish and press **ENTER**. A dialog box will be displayed instructing you to restart JAWS for these changes to take effect. Enter on OK to close this message and choose okay again to close the Braille Basic Settings dialog box.

## Connect to a Windows Computer Via Bluetooth

To use the Focus Blue with JAWS wirelessly over Bluetooth, you must first configure a Bluetooth partnership between the Focus and your computer. To do this:

1. Move quickly to your computer's Bluetooth settings by pressing the **WINDOWS** key and typing the word "Bluetooth" in the Search edit box.
2. Press **SPACE** to enable Bluetooth.
3. Make sure your braille display is powered on.
4. Press **SHIFT+TAB** to navigate back up to the Add Device button and press **SPACE** to activate it.
5. Press **ENTER** on the device you wish to add.
6. When prompted for the pin code to connect the Focus, enter 0000 on your computer keyboard. Tab to the Connect button and press **ENTER**.

7. Your Focus Blue is now paired with your computer wirelessly over Bluetooth.

## Connect to a MAC Via USB

You can connect the Focus Blue to a Mac and use it with the VoiceOver screen reader. To connect to a Mac via USB:

1. Position the Focus Blue so the front edge containing the navigational controls is facing you.
2. Locate the micro USB-C port on the left edge of the device.
3. Plug the smaller connector on the USB cable into the port on your Focus and the larger connector into a USB port on your computer. As soon as you connect the USB cable to the computer, the Focus immediately turns on.

When the USB cable is removed, the Focus turns off. Pressing the power button while connected to USB causes the focus to display the model, firmware version, battery status, and the connection type in the last three cells. Pressing a cursor router button returns the display to normal operation.

## Connect to a Mac Via Bluetooth

You can pair the Focus Blue braille display to your Mac and use it with the VoiceOver screen reader. Only one Bluetooth braille display can be paired at a time.

To pair the Focus Blue Braille Display with a Mac:

1. When VoiceOver is on, open VoiceOver Utility by pressing **VO+F8**.
2. Select the Braille category.
3. Select Displays.
4. Choose the Add button.
5. Select the Focus Blue braille display from the list.
6. Choose Select.

You may be asked to provide a pairing passcode (such as 0000 or 1234, two common default codes). Check the documentation that came with your Focus Blue for the passcode.

## Connect to a Chromebook Via USB

The Focus Blue can be connected to a Chromebook for added accessibility. To connect via USB:

1. Plug your Focus Blue into a USB port on your Chromebook.
2. Your Chromebook will automatically detect the device and turn on the ChromeVox screen reader if it's not already on.

## Connect to a Chromebook Via Bluetooth

You can connect the Focus Blue with a Chromebook for added accessibility using the Chromevox screen reader. To pair using Bluetooth:

Begin by establishing a partnership between your Chromebook and the Focus Blue.

1. At the bottom right, select the time.
2. Select Bluetooth.
3. If Bluetooth is off, turn it on.
4. Select the accessory you want to connect to.
5. Follow the onscreen instructions to finish connecting.

To pair the Focus Blue:

1. Select Search
2. + o + then o.
3. Follow the on-screen instructions.

## Connect to an iOS Device Via Bluetooth

When you connect the Focus Blue to your iOS device, screen content will be presented in braille, and you can navigate and interact with your device using the keys on the braille display. Complete the following steps to establish a connection between the Focus Blue Braille Display and an Apple iOS device.

1. Power on the Focus Blue.
2. On the iOS device, open Settings, then Bluetooth, and make sure Bluetooth is on.

3. Double tap the Back button to return to Settings, scroll to and double tap on Accessibility.
4. Double tap VoiceOver to open the VoiceOver settings.
5. Scroll to and double tap Braille to open the Braille settings. The iOS device will start searching for a braille display.
6. Swipe down to Braille Device. You'll receive a message letting you know the iOS device is searching for the braille display. The words "Focus Blue" will be displayed on the iOS device when it is found.
7. Double tap the Focus name on the iOS device to open the pairing screen. On the iOS device, type the code 0000 then double tap the Pair button, located in the upper right corner, to establish the connection.

Once the Focus has been paired, if you power on the display before taking the iOS device out of standby, the display will automatically connect. Remember to lock the iOS device before turning off the Focus to ensure that braille auto detection works properly the next time you want to use braille.

## Connect to an Android Device Via Bluetooth

BrailleBack is an app that lets you connect a supported refreshable braille display to your Android device via Bluetooth. Screen content will be presented in braille, and you can navigate and interact with your device using the keys on the braille display. You can also input text using the braille keyboard.

BrailleBack works together with the TalkBack app to provide a combined braille and speech experience.

Before you begin, download the BrailleBack app from Google Play and activate it. It is not installed or active by default. To do this,

1. Go to Settings
2. Select Accessibility
3. Select BrailleBack and turn it on.

Make sure your Focus Blue is in pairing mode, and pair it to your Android device. To do this:

1. Power on the Focus Blue.
2. On the Android device, open APPS, Settings, then go to Bluetooth, and make sure Bluetooth is on.
3. Double tap Search for devices. A message will be displayed on your Android device indicating it is Searching. The Focus name will show in the list of Available devices when it is found.
4. Once the display is found, swipe to the edit field and type the pairing code 0000 then double tap the OK button to establish the connection.

Once the Focus has been paired, if you power on the display before taking the Android device out of standby, the display will automatically connect. Remember to lock the device before turning off the Focus to ensure that braille auto detection works properly the next time you want to use braille.

## Focus Blue Terminology

- **Refreshable Braille Display** – A hardware device that provides tactile access to on-screen information on a computer or mobile device. This is accomplished by electronically raising and lowering different combinations of pins in braille cells to form braille characters. This information changes continually as the cursor is moved to different parts of the screen, causing the braille to “refresh.”
- **Chord** – A command consisting of one or more Focus braille keys pressed simultaneously with the spacebar
- **Status cells** – Designated cells on a refreshable braille display designed to provide the user information such as: line number, column number, or the currently active JAWS screen reader cursor. You can specify whether you want status cells to be located on the left end of the display, the right end, or not at all. The focus contains four status cells, which, by default, are situated on the left end of the display.
- **Flash messages** – Messages that appear on the Focus Braille display for a limited amount of time which is 5 seconds by default. These include error messages, a low battery indicator message, or user-requested messages.

- **BrailleIn** – A feature that allows you to use the Perkins-style keyboard on your Focus Blue to control your computer using both Windows and application-specific commands. You can also input contracted and uncontracted braille when typing text.
- **Braille Viewer** – The JAWS Braille Viewer provides on-screen textual representation of the output received on a refreshable braille display. The application is designed to simulate a braille display and operates whether a braille display is in use. The main purpose of Braille Viewer is to assist sighted instructors or testers who do not read braille or may not have access to a braille display.
- **Perkins-Style Keyboard** – A keyboard on the Focus Braille Display that is configured like the keyboard used to write braille on the Perkins Braille writer. The keyboard on a refreshable braille display differs slightly in terms of buttons, consisting of the six dots that make up a braille cell, a spacebar, a backspace key, an enter key, and two shift keys.
- **Braille Study Mode** – A training tool for teaching and learning braille. When Braille Study Mode is on, pressing the cursor routing button located above a specific braille cell prompts JAWS to announce the current braille character. Press the Cursor router button in conjunction with the left or right selector button for JAWS to announce and spell the braille word.

## Where to Begin with Your Student

**Note:** Always operate the focus with clean hands as oils, dirt, or moisture can damage the device or cause it to not work properly.

Once the Focus is connected:

1. Begin by orienting your student to the layout and controls of the device.
2. Familiarize your student with relevant terminology (see the terminology section above.)
3. Go over features of the Focus Blue so your student will understand the purpose of using the device.
4. Let your student practice reading documents and web pages to get used to reading refreshable braille.

5. Show your student how to connect the Focus to the computer using the USB cable.
6. Provide instruction on powering the device on and off.
7. Show your student how to charge the battery either while connected to the computer or using the AC adapter.

## Inputting Text and Executing Commands

You can use the computer keyboard or the Perkins style keyboard on the Focus to input text and execute commands.

No special settings are required for using the computer keyboard.

The BrailleIn feature allows you to use the Perkins-style keyboard for input.

### Configuring BrailleIn

You can use the BrailleIn feature to input information into your computer by typing contracted or uncontracted braille via the Perkins-style keyboard on the Focus Blue Braille Display. When you use contracted braille, the input is immediately translated back as normal text.

Contracted braille input is off by default. To turn it on:

1. Press **INSERT+F2** to run the JAWS Manager dialog and select Settings Center.
2. In the Search edit box, type "Contracted Braille Translation" without the quotes.
3. Press **DOWN ARROW** to move to Contracted Braille Translation in the filtered search results.
4. Press **SPACEBAR** to cycle through the different settings in the Contracted Braille Translation combo box.
5. Available settings are Off, Output Only, and Input and Output. When set to Off, you cannot read or type in contracted braille using your braille display. When set to Output Only, you can read contracted braille on your braille display, but you can only type in computer braille using the Perkins-style keyboard on your braille display. When set to Input and Output, you can both read and type in contracted braille using your braille display. The default setting is Off.

## Navigation Commands

Use this abbreviated list of Focus Blue keyboard commands to help your student begin navigating text.

Description	Command
Say Prior Character	DOT 3 CHORD
Next Character	DOT 6 CHORD
Say Current Character	DOTS 3-6 CHORD
Say Prior Word	DOT 2 CHORD
Say Next Word	DOT 5 CHORD
Say Current Word	DOTS 2-5 CHORD
Say Prior Line	DOT 1 CHORD or LEFT ROCKER BAR UP
Say Next Line	DOT 4 CHORD or LEFT ROCKER BAR DOWN
Say Current Line	C CHORD
Say Prior Sentence	LEFT SHIFT+RIGHT ROCKER BAR UP
Say Next Sentence	LEFT SHIFT+RIGHT ROCKER BAR DOWN
Say Current Sentence	LEFT SHIFT+RIGHT SHIFT+C
Say Prior Paragraph	RIGHT SHIFT+LEFT ROCKER BAR UP
Say Next Paragraph	RIGHT SHIFT+LEFT ROCKER BAR DOWN
Say Current Paragraph	LEFT SHIFT+RIGHT SHIFT+DOTS 2-3-5-6-7-8
Move to Top of File	L CHORD
Move to Bottom of File	DOTS 4-5-6 CHORD



## Braille Study Mode

Braille Study Mode can be used to help students learn braille while they read and write documents, compose emails, and navigate web pages. To enable Braille Study Mode:

1. Press **INSERT+V** to open Quick Settings.
2. Begin typing the word "study" until Study Mode appears.
3. Press SPACE to turn Study Mode on.  
Braille Study Mode remains on until it is turned off or until you restart JAWS.  
**Note:** JAWS returns to normal operation after announcing the braille character or word.

## Scratchpad

- The Scratchpad enables you to create and save notes to an inserted micro SD card. You can also access braille formatted BRF files available from various services.
- The Scratchpad offers basic file navigation and editing functions including: cut, copy, and paste. An active USB or Bluetooth connection is not required to use the Scratchpad. Notes are written using the Perkins-style keyboard and can be entered using contracted or uncontracted braille. If the Focus is currently connected to a computer or other device, you can also export the contents of a file you created to the edit window of the currently open application such as a word processor.

## Starting the Scratchpad

To start the Scratchpad:

1. Press **MENU+N** (DOTS 1-3-4-5). You are placed into a new file where you can immediately begin entering content.
2. Press **MENU+B** (DOTS 1-2) to place the Scratchpad in the background without closing it. This resumes the currently active USB or Bluetooth connection, or displays the Focus status message. 3. Press **MENU+N** to switch back to the currently open file in the Scratchpad.

3. Press the **Menu** button in the Scratchpad to open a menu containing file management, editing, and export options. Use the menus to perform tasks such as creating new files, saving existing files, copying and pasting information, and exporting files from the Scratchpad to your computer.
4. To completely close the Scratchpad, press **RIGHT SHIFT+X (DOTS 1-3-4-6)**.

For more detailed instructions, See the resources section to access a direct link to the Focus User Guide.

## Braille Viewer

Braille Viewer provides on-screen textual representation of the output received on a refreshable braille display. To run Braille Viewer:

1. Press **INSERT+J** to navigate to the JAWS window.
2. Press **ALT+U** to access the Utilities menu, then **V** to access the Braille and Text Viewer submenu.
3. Press **ENTER** on Enable Braille Viewer to toggle it on.
4. Follow the same steps to toggle Braille Viewer off.
5. Alternatively, use the Braille Viewer layered command, which changed in the 2021 update of JAWS and Fusion. Instead of pressing the previous command, **INSERT+SPACEBAR, V**, then **B**, press **INSERT+SPACEBAR, B**, then **B** to toggle Braille Viewer on/off.

## Cleaning the Focus Blue

Even when students operate the Focus Blue with clean hands, dirt, oils, and other substances accumulate on the braille pins as the Focus Blue is used. When cleaning the Focus, use a soft microfiber cloth moistened with 99% isopropyl alcohol. Do not use any other substance to clean the cells. To clean the display:

1. Wipe pins and the flat surface of the display.
2. Lower the braille pins by pressing the **RIGHT NAV ROCKER** down.
3. Wipe the flat surface once more.
4. Press **RIGHT NAV ROCKER** up to raise the pins again.

5. Repeat the process several times. The pins and flat surface will feel clean after several repetitions.
6. Be sure to move to a clean spot on the cloth every couple of wipes. Wipe down the braille keys, other controls, and all surfaces.

## Important Resources

Resource	Description
<a href="#">Focus User's Guide</a>	Further instruction on the Focus Blue is available via the online Focus User Guide.
<a href="#">Access at Your Fingertips, the Focus Blue Braille Displays</a>	Watch or listen to this on-demand webinar for demonstrations of the topics covered in this document.
<a href="#">YouTube Training channel</a>	Check out our YouTube Training channel for regularly posted demonstration videos where you'll also find additional content on the Focus Blue.
<a href="#">Focus 40 Blue Controls and Layout</a>	Watch this YouTube video for an overview of the layout of Focus Blue buttons, keys, and controls.
<a href="#">Focus Blue Training</a>	Access information from the Focus Training page
<a href="#">JAWS Basic Training</a>	<p>Want to learn more about using JAWS? Our newly updated JAWS Basic Training will provide all the resources you need to help your students master important tasks.</p> <p>The JAWS Basic Training is available in DAISY (Digital Accessible Information System) format and contains both text and audio. You can access the training books using FSReader, the DAISY reader included with JAWS, or with any hardware or software DAISY player.</p>
<a href="#">FSReader training video</a>	New to FSReader? Check out our FSReader training video.