Focus Blue
5th Generation

Refreshable Braille Display
User Guide

Freedom Scientific Inc.

Contains Radio transmitter:

FCC ID: T7V1316

IC: 216Q-1316

MIC ID: [R]202-LSD

USA-Federal Communications Commission (FCC) Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio /TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Caution: Exposure to Radio Frequency Radiation.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada – Industry Canada (IC) Notice

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of this device.

L ' utilisation de ce dispositif est autorisée seulement aux conditions suivantes :

(1) il ne doit pas produire d'interference et

(2) l' utilisateur du dispositif doit étre pr?t ? accepter toute interference radioélectrique reçu, m?me si celle-ci est susceptible de compromettre le fonctionnement du dispositif.

Caution: Exposure to Radio Frequency Radiation.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca.

Attention: Exposition à des radiations de fréquences radio.

Cet appareil émettant des ondes radio, l'installateur doit s'assurer que l'antenne est positionnée ou orientée de telle sorte que l'appareil émette des champs RF ne dépassant pas les limites recommandées par Santé Canada pour le grand public; consultez Code de sécurité 6, disponible à Santé Canada ou sur leur site web www.hc-sc.gc.ca.

Attention

This unit has been shipped with cables that allow compliance with FCC Regulations. If replacement cables are needed in the future, contact Freedom Scientific to obtain the appropriately shielded cable.

Safety, Maintenance, and Cleaning Procedures

Do not attempt to repair Focus Blue or open its case. This product contains no user serviceable parts. Any unauthorized attempt to service or replace internal components will void the product warranty.

Keep Focus Blue away from wet areas, rain, and other sources of liquids. Do not submerge Focus Blue.

Do not store in places subject to temperature extremes such as a parked car.

Use only the power adapter that came with Focus Blue to charge its internal battery pack. Other adapters may damage the unit.

Important Notice

This device has no user-serviceable components. Any unauthorized attempt to service or replace internal components by opening the case will void the product warranty.

Table of Contents

Introduction

The Focus Blue line of refreshable braille displays provide a tactile interface to your computer or mobile device. Accessing information at your fingertips has never been easier with these compact and portable options.

The Focus Blue is available in 14, 40, or 80 refreshable braille cells and requires the use of a screen reader such as JAWS for Windows.

Features of the Focus Blue line include:

- USB or Bluetooth® connectivity to a computer
- Supports up to five Bluetooth connections
- A Cursor Router button above each braille cell
- 8-key Perkins-style braille keyboard
- Two Panning buttons, two Rocker bars, two Selector buttons, two Shift buttons, and (on the Focus 80 only) four Panning rockers
- A NAV Rocker and a NAV Mode button at each end of the display for quick navigation of files, lists, and menus
- A Menu button, conveniently centered above the Cursor Router buttons, for quick access to calendar, clock, Bluetooth connections, and more
- Built-in Scratchpad for taking notes and reading BRF books
- Micro SD Card up to 32 GB
- Status cells configurable to either end of the display
- Support for select cell phones and other mobile devices via third party screen reader applications

What's in the Box?

- 5th generation Focus Blue braille display
- AC adapter
- USB Cable
- Manual in print and braille
- Companion CD
- Warranty registration cards
- Product support insert
- Carrying case and strap

Focus Controls Overview

On the left side of the display, going from front to back, you will find a Micro SD slot which contains a Micro SD card, the Power button, and a USB-C port. The USB port allows you to connect the display to a computer using the supplied USB cable, or to the AC adapter.

The refreshable braille cells are located toward the front of the unit. A refreshable display creates braille by electronically raising and lowering different combinations of pins in each braille cell. Above each braille cell is a Cursor Router button used for moving quickly to that location.

At each end of the display's surface are NAV Rockers used for easy navigation. Positioned above each NAV Rocker is a NAV Mode button which cycles through the different navigation modes.

Positioned directly above the Cursor Router buttons, there are eight keys similar to those on a Perkins-style braille keyboard. These keys are used to enter braille text or perform commands.

Starting center to left, with the left hand:

- Dot 1: index finger
- Dot 2: middle finger
- Dot 3: ring finger
- Dot 7: little finger

Starting center to right, with the right hand:

- Dot 4: index finger
- Dot 5: middle finger
- Dot 6: ring finger
- Dot 8: little finger

Between dots 1 and 4 is a Menu button which is used to access the Focus configuration menu as well as display Focus status information during an active connection. On the front edge, directly under and in the center of the display is a **SPACEBAR**. This key is used together with the braille keys when entering commands. A command that includes the **SPACEBAR** is commonly referred to as a chorded command. For example, to perform an **L CHORD**, press **DOTS 1-2-3** with the **SPACEBAR** at the same time.

On the front edge of the display are the following controls, located from left to right. The layout of these controls is slightly different depending on what model of Focus you have.

- **Focus 14**: Left Selector button, Left Rocker bar, Left Panning button, Left Shift button, Right Shift button, Right Panning button, Right Rocker bar, and Right Selector button

- **Focus 40**: Left Panning button, Left Rocker bar, Left Selector button, Left Shift button, Right Shift button, Right Selector button, Right Rocker bar, and Right Panning button

- **Focus 80**: Left Panning button, Left Rocker bar, Left Selector button, two Left Panning rockers, Left Shift button, Right Shift button, two Right Panning rockers, Right Selector button, Right Rocker bar, and Right Panning button

Note: The following sections describe how these controls work when using the Focus Blue with JAWS. 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.

NAV Rockers and NAV Mode Buttons

The Focus NAV Rockers allow you to move quickly through files, dialog boxes, lists, and menus. Using the NAV Mode buttons, each NAV Rocker can even be set independently for added functionality. You can also completely turn the NAV Rockers off by pressing the **Left** or **Right NAV Mode** button and the **SPACEBAR together**. Perform a **Left** or **Right NAV Mode button CHORD** once more to turn them back on.

Files

In documents and web pages, the NAV Rockers are used to move by line, sentence, paragraph, or to pan backward and forward. Pressing a **NAV Mode** button cycles the corresponding NAV Rocker between Line, Sentence, Paragraph, or Display Panning mode. Pressing a **NAV Rocker** down moves downward in the text, while pressing it up moves you upward in the text. In Display Panning mode, pressing a **NAV Rocker** down one time pans right one display length, while pressing it up one time pans left one display length.

Menus

In menus, press a **NAV Rocker** down to move down through the menu or press it up to move up through the menu. Press a **NAV Mode** button to select a menu item.

Dialog Boxes

In dialog boxes, pressing a **NAV Rocker** down moves you forward through the controls, while pressing it up moves you backward through the controls. Depending on the control, the NAV Rockers function differently when a NAV Mode button is pressed.

- In list views, combo boxes, radio buttons, tree views and check box control groups: pressing a **NAV Mode** button puts the corresponding NAV Rocker in List Mode. In this mode, pressing the **NAV Rocker** lets you scroll through the items. To exit List Mode, press the **NAV Mode** button again.

- For individual check boxes or buttons, pressing the **NAV Mode** button toggles the check box state or activates the button.

Panning Buttons

The Focus Panning buttons pan left or right one display width each time they are pressed. Press the **Left Panning** button, the button with a raised double left arrow symbol, to pan left; press the **Right Panning** button, the button with a raised double right arrow symbol, to pan right. If you are using JAWS, the functions of the Panning buttons can be reversed so that pressing the **Left Panning** button causes the Focus display to pan right and pressing the **Right Panning** button causes it to pan left. To enable reverse panning, open JAWS Settings Center, search for "reverse panning", and select the Reverse Panning Buttons check box.

Rocker Bars

The Rocker bars provide movement up or down by line. Press the top of the Rocker bar to move up one line; press 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. Press both **Selector** buttons together to toggle Auto Advance on or off. Press the **Left Selector** button to decrease the Auto Advance speed or press the **Right Selector** button to increase the Auto Advance speed.

When pressed in combination with other controls, the Selector buttons perform multiple functions. For instance, pressing a **Selector** button and the top or bottom of a Rocker bar performs a page up or page down. You can also press a **Selector** button and the **Right** or **Left Panning** button to move to the top or bottom of a file.

Panning Rockers (Focus 80 only)

The four Panning rockers on the Focus 80 function as extra panning buttons. However, they move in the same way as the Rocker bars. Press up on either of the Panning rockers to pan left and press down to pan right.

Shift Buttons

The **Shift** buttons are used in conjunction with the **SPACEBAR**, braille keys, and other controls to enter commands. For example, when using JAWS, pressing **Left Shift+DOT 4** or **DOT 1** selects the next or previous line in a document.

Cursor Router Buttons

There is a Cursor Router button located above each braille cell. Press a **Cursor Router** button to move the cursor to that point, or to select a link in a web page or email message. In line mode, press a **Cursor Router** button to open a menu or select menu items.

Press and hold the **Left** or **Right Panning** button while simultaneously pressing a **Cursor Router BUTTON** to simulate a right mouse click at that location.

You can also use the Cursor Routers to select text in documents. To select with the Cursor Router buttons, press and hold the **Left Shift button**, then press the **Cursor Router** button above the text where you want to begin the selection. Release both keys. Move to where you want to end the selection, and press the **Left Shift button** plus the **Cursor Router** button at that location. Use any navigation commands to move from the beginning point to the end point of the text you are selecting, even the NAV Rockers.

Turning the Focus On or Off

The Focus automatically powers on when you connect it to USB. Otherwise, press and hold the power button for approximately two seconds to turn the display on and press and hold it for approximately three and a half seconds to turn the display off. When powered on and there is no active connection to a screen reading application, the Focus displays the time and battery charge status.

Charging the Focus

When using the Focus on battery power, you will get approximately 20 hours for typical usage. To check the battery status while the display is in use, press the **Menu** button to display the status message which includes the percentage of battery charge used. Press the **Left Selector** button to return to normal operation.

When the battery is at 20 percent, 10 percent, and 5 percent respectively, a low battery warning is displayed indicating it is time to plug in the AC adapter. You can dismiss this message by pressing a **Cursor Router** button. In addition, once the battery drops below 10 percent, dots seven and eight in the last five cells will show each percentage drop. For example, when the battery is at one percent, dot **8** in the last cell will be raised.

Use the AC adapter supplied with your unit to charge the battery. The unit takes three hours to charge using the supplied AC adapter even when the Bluetooth connection is active. Charging time will be less if the battery is not completely discharged before the display is plugged in. The Focus will also charge while connected to a computer using the USB cable, however, charging time will take longer than with the supplied AC adapter. As the Focus charges, the battery charging indicator, a circle of dots, is displayed to the right of the percentage until the unit reaches 100 percent. You can continue using the Focus while it is charging.

You can connect the Focus braille display to your Microsoft Windows or Apple Mac computer using either the supplied USB cable or wirelessly over Bluetooth. If you connect using USB, the display is powered from the computer through the USB connection cable. This also charges the internal battery. 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.

Bluetooth is a short-range wireless communications technology. Devices with Bluetooth capabilities can communicate with each other over a distance of about 10 meters (30 feet) without requiring a physical connection. To use Bluetooth, you must establish a partnership with a Bluetooth enabled computer. The majority of modern notebook computers and mobile phones as well as some models of desktop computers offer built-in Bluetooth support. However, not all computers offer this. If your computer does not have built-in Bluetooth, you will need to purchase an external USB Bluetooth adapter and install the appropriate drivers on your system to enable this functionality. Refer to the documentation that came with your Bluetooth hardware to ensure Bluetooth is properly configured on your computer.

The Focus Blue supports up to five Bluetooth connections and one USB connection. This means that you can use the Focus over USB with your desktop computer and also set up Bluetooth connections to your phone and tablet. See the Connections section of this manual for more information about managing active connections.

Installing Focus Blue Display Drivers

In Microsoft Windows, JAWS automatically installs the files necessary to use the Focus Blue during the JAWS installation. However, if you choose to use the Focus display with another screen reading application, you must install the Windows driver. Go to freedomscientific.com/Downloads/Focus/FocusBlueBrailleDisplayDriver and follow the instructions to download and install this driver.

Note: Make sure you do not connect the display to your computer until after the driver is successfully installed.

On Apple Mac computers, the VoiceOver screen reader already includes the appropriate drivers necessary to use the Focus Blue.

Configuring the USB Connection

To configure the Focus Blue braille display to operate with JAWS over USB, do the following:

Note: If you are using a third-party screen reading application, refer to the documentation that came with the software as this procedure might be different.

1. Position the Focus Blue so the front edge containing the navigational controls is facing you.

2. Locate the USB-C port on the left edge of the device.

3. Plug the smaller connector on the supplied USB cable into the port on your Focus and the larger connector into a USB port on your computer.

4. Close and then restart JAWS. In most cases, JAWS automatically detects and begins sending information to your Focus display.

While JAWS automatically detects the Focus in most cases, there are times 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.

3. Press **TAB** to move 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, and then choose Next.

5. In the Select the output port edit combo box, make sure USB is selected. Since the Focus is connected to the computer over a USB cable, this option should be selected by default.

6. Press **TAB** to move to Next and press **ENTER** .

7. Make sure the Focus is selected as the primary display.

8. Press **TAB** to move to Finish and press **ENTER** . A dialog box displays instructing you to restart JAWS for these changes to take effect. Select OK to close this message and choose okay again to close the Braille Basic Settings dialog box.

Configuring the Bluetooth Connection

In order to use the Focus Blue wirelessly over Bluetooth, you must first configure a Bluetooth partnership between the Focus and computer.

To set up a Bluetooth partnership between the Focus display and computer, do the following:

1. Press the **WINDOWS** Key , type "Bluetooth" into the Search edit box, and press **ENTER** to access your computer's Bluetooth settings.

2. Press **TAB** to move to the Bluetooth button and if it is off, press the **SPACEBAR** to turn it on.

3. Power on the Focus. The time and battery status information is displayed.

4. Press **SHIFT+TAB** to move to the Add Bluetooth or other device button and press the **SPACEBAR** . Press the SPACEBAR once more on Bluetooth.

5. Press **TAB** to move to the list of available devices.

6. Use the **ARROW** keys to select your Focus display from the list and then press **ENTER** to finish pairing the display. If the Focus was not found, make sure it is powered on.

You must now configure JAWS to use the Bluetooth connection. Note that it is not necessary to first establish a USB connection before using Bluetooth. If you have not yet set up a USB connection with the Focus display, do the following:

Note: If you are using a third-party screen reading application, refer to the documentation that came with the software as these procedures might be different.

1. Press **INSERT+J** to open the JAWS window.

2. Press **ALT+O** to open the Options menu and select Braille to open the Braille Basic Settings dialog box.

3. Press **TAB** to move 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, and then choose Next.

5. In the Select the output port edit combo box, choose Bluetooth.

6. Choose next and make sure that the Focus is selected as the primary display.

7. Select Finish and you are instructed to restart JAWS in order for these changes to take effect. Select OK to close this message and once more to close the Braille Basic Settings dialog box.

8. Quit and restart JAWS and your Focus Blue is now communicating with JAWS over Bluetooth.

If you are currently using the Focus display over USB and you want to switch the connection to use Bluetooth, do the following:

1. Press **INSERT+J** to open the JAWS window.

2. Press **ALT+O** to open the Options menu and select Braille to open the Braille Basic Settings dialog box.

3. In the Default Braille Display combo box, make sure Focus is selected then choose Modify Settings.

4. In the Select the output port edit combo box, choose Bluetooth.

5. Select OK and you are instructed to restart JAWS in order for these changes to take effect. Select OK to close this message and once more to close the Braille Basic Settings dialog box.

6. Quit and restart JAWS and your Focus Blue is now communicating with JAWS over Bluetooth.

Once JAWS is configured to communicate with the Focus Blue over Bluetooth, you can switch back and forth between the USB and Bluetooth connection. You can also configure JAWS to automatically detect the Bluetooth connection without the need to first restart the application by turning on the "Auto Detect Braille Display Using Bluetooth" option in Settings Center.

To check the battery status, press the **Menu** button to display the status message which includes the percentage of battery power remaining. The letters "BT" are also shown in the cells near the right end of the display to indicate the Bluetooth connection is active. Press the **Left Selector** button to return to normal operation.

Pairing with a Mobile Device

You can use the Focus Blue as a Bluetooth display with mobile devices that run Apple's iOS™ and Google's Android™ operating systems. For more information, refer to one of the following pages.

- freedomscientific.com/Content/Documents/Manuals/Focus/Focus-Blue-iOS-Support.htm

- freedomscientific.com/Content/Documents/Manuals/Focus/Focus-Blue-Android-Support.htm

When initially pairing the Focus Blue with another Bluetooth device, ensure the display is powered on and not connected to USB. Once paired, you can connect the USB cable and then use the procedure described in the next section, or the display's Connections menu (described later in this manual), to move between active connections.

Switching the Active Connection

If you are using the Focus display with multiple active connections, press and hold the **Menu** button and then press **DOT 1** through **DOT 5** to quickly switch to one of the five Bluetooth connections, or **DOT 8** to switch to the USB connection.

For example, if you are using the Focus display with your computer over USB and you need to review some information on your iPhone, which is your only paired Bluetooth device, press the **Menu** button along with **DOT 1** to switch to the phone connection. After performing your necessary tasks with your phone, press the **Menu** button along with **DOT 8** to switch back to the USB connection and resume Braille access to your computer.

Another quick way to switch between connected devices is to press the **Menu** button followed by **L** (**DOTS 1-2-3**). Using the above example where the Focus is paired with your iPhone and connected over USB to your computer, press the **Menu** button to display the Focus status message and then press **L** to switch between the two devices. If the status message is still displayed after switching to a connection, unlock your device so it will detect the display and activate the connection.

Using the Focus Blue with JAWS

The following sections briefly describe JAWS features that are available when the Focus display is connected to your computer. If you choose to use a different screen reader, or you are using the Focus with a mobile device, refer to the documentation that came with the software for braille features provided by the particular application.

BrailleIn

The BrailleIn™ feature allows you to use the Perkins-style braille keyboard on your Focus display to control your computer. Using the keyboard along with other Focus controls, you can perform all Windows and JAWS commands that you can do from a regular QWERTY keyboard. In addition, you can also enter text using contracted or uncontracted braille. For more information about BrailleIn, refer to the JAWS Help.

Braille Study Mode

Braille Study Mode is a training tool for teaching and learning braille. When Braille Study Mode is on, JAWS will announce the current braille character in a display cell when you press the Cursor Router button immediately above that cell. When you press the particular Cursor Router button in conjunction with the Left or Right Selector button, JAWS will announce and spell the braille word. To enable Braille Study Mode, do the following:

1. Make sure that the Focus display is connected to your computer using either a USB or Bluetooth connection.

2. Press **INSERT+V** to open Quick Settings.

3. In the Search edit box, type "study" without the quotes.

4. Press **DOWN ARROW** to move to "Study Mode" in the filtered search results in the tree view.

5. Press **SPACEBAR** to toggle this option and then choose OK to close Quick Settings. Braille Study Mode remains on until toggled off or until JAWS is restarted.

In addition, the following commands are available even when Braille Study Mode is disabled:

- Press the **Left** or **Right NAV Mode** button and a **Cursor Router** to make JAWS announce the braille character in the display cell, or
- Press the **Left** or **Right Selector** button and a **Cursor Router** to make JAWS announce and spell the braille word.

This is useful when you need a quick reminder, but you do not want to go through the process of turning on Braille Study Mode as previously described.

Note: JAWS returns to normal operation after announcing the braille character or word.

Placement of Status Cells

You can specify if the informational Status Cells are to be located on the left or right end of the display, or choose to not display them at all. The status cells are located at the left end of the display by default.

To configure the placement of the status cells, do the following:

1. Press **INSERT+F2**, and select Settings Center.

2. To apply changes to all applications, press **CTRL+SHIFT+D** to load the JAWS default settings. To apply changes to a specific application, select it from the Application combo box.

3. In the Search edit box, type "status cells" without the quotes.

4. Press **DOWN ARROW** to move to "Placement of status cells" in the filtered search results in the tree view.

5. Use the **SPACEBAR** to choose an option and then choose OK to close Settings Center.

Variable Braille Dot Firmness

Specify the firmness of the braille dots on the Focus display. There are five levels of firmness. Adjust the display to the level of firmness most suited to the sensitivity of your fingers.

To configure the dot firmness, do the following:

1. Press **INSERT+F2**, and select Settings Center.

2. To apply changes to all applications, press **CTRL+SHIFT+D** to load the JAWS default settings. To apply changes to a specific application, select it from the Application combo box.

3. In the Search edit box, type "dot firmness" without the quotes.

4. Press **DOWN ARROW** to move to "Dot Firmness" in the filtered search results in the tree view.

5. Use the **SPACEBAR** to set the level of firmness and then choose OK to close Settings Center.

Locking the Perkins-style Keyboard and Other Controls

To lock the Perkins-style keys on the top of the display along with the SPACEBAR to prevent accidentally entering unwanted text or commands, press and hold a **Cursor Router** followed by the **Left NAV Mode** button while the status message is displayed. To confirm the keyboard is locked, the Focus status line includes a padlock symbol, DOTS 2-3-4-6-7-8 and DOTS 1-3-5-6-7-8, which is displayed toward the right end of the display. To unlock the keyboard so you can once again type text or perform commands, press and hold a **Cursor Router** followed by the **Right NAV Mode** button.

Note: If the Focus is currently displaying output from a screen reader, you must first press the **Menu** button to display status information. Press a **Cursor Router** or one of the front panel controls to resume your current connection.

To lock all Focus Blue controls except the Panning Buttons, Rocker bars, and Cursor Router buttons so you have very basic braille display navigation, press and hold the **Menu** button followed by the **Left NAV Mode** button while the status message is displayed. To confirm the controls are locked, the Focus status line includes an upside down padlock symbol, dots 1-2-3-4-5-8 and dots 1-2-4-5-6-7, which is displayed toward the right end of the display. To unlock the controls to enable full braille display functionality, press and hold the **Menu** button followed by the **Right NAV Mode** button.

Note: Since this feature also locks the Menu button, you must press the **Power** button to access the Focus status message from an active connection.

The Display Configuration Menu

Pressing the **Menu** button while the Focus status message is displayed activates a menu in which you can configure various Focus Blue settings. The available menu options are described in the following sections.

When the menu first opens, you are on the Bluetooth ID. To move through the available menu items, use the **Rocker** bars or press **DOTS 4-5 CHORD** or **DOTS 1-2 CHORD**. Press the **Right Shift** button or **DOT 8** on a menu item to access its settings. To move through the available options for a setting, use the Rocker bars. To select an option and return to the main menu, press **DOT 8** or the **Right Selector** button. Press the Right Selector button once more to save your changes and close the menu. Press **Z CHORD** (**DOTS 1-3-5-6 CHORD**) or the **Left Selector** button to cancel any settings changes and close the menu.

Bluetooth ID

This displays the Bluetooth ID used by the Focus Blue to identify itself when pairing the display with a computer or mobile device. Each Focus display has its own unique Bluetooth ID. This is useful if you will be pairing the Focus with a computer in an environment where there are other Focus Blue displays with Bluetooth enabled and you want to make sure you pair the correct one.

Repeat

This option controls how fast the NAV Rockers on the display repeat when held down for a length of time, such as when you want to scroll quickly through the items in a list. The four settings are off, slow (represented by the number 1), medium (represented by the number 2), and fast (represented by the number 3). The default setting is 1.

Rest

This menu option lets you specify how long the Focus display waits after a control is pressed before it goes to sleep. You can choose to have the display go to sleep after 5, 15, 30, or 45 minutes of inactivity. The default rest time is 30 minutes.

Clock

The Clock submenu allows you to set the time, which is displayed as part of the status message.

To set the time, do the following:

1. Press the **Menu** button to access the display configuration menu.

2. Press **DOTS 4-5 CHORD** or a **Rocker** bar to navigate to Clock and press **Dot 8** or the **Right Shift** button.

3. The hours value will be selected when the Clock configuration opens. Use the **Rocker** bars to set the hour.

4. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the minutes value and use the **Rocker** bars to set the minute.

5. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the seconds on/off value and use the **Rocker** bars to toggle the seconds display on or off. When enabled, seconds are shown as part of the time on the status message.

6. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the AM/PM/24-hour value and use the **Rocker** bars to choose AM, PM, or 24-hour time.

7. Press the **Right Selector** button to save your changes and close the Clock submenu.

8. Press the **RIGHT Selector** button to exit the configuration menu.

Calendar

The Calendar allows you to set the date, which can be displayed at any time by simultaneously pressing the **Menu** button and the letter **D** (**DOTS 1-4-5**). Press a **Cursor Router** to return to normal operation.

To set the date, do the following:

1. Press the **Menu** button to access the display configuration menu.

2. Press **DOTS 4-5 CHORD** or a **Rocker** bar to navigate to Calendar and press **DOT 8** or the **Right Shift** button.

3. The day value will be selected when the Calendar configuration opens. Use the **Rocker** bars to set the day.

4. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the month value and use the **Rocker** bars to set the month.

5. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the year value and use the **Rocker** bars to set the year.

6. Press **DOTS 4-5 CHORD** or the **Right Panning** button to select the date display format value and use the **Rocker** bars to choose "yyyy/mm/dd", "mm/dd/yyyy", or "dd/mm/yyyy" for the date display.

7. Press the **Right Selector** button to save your changes and close the Calendar submenu.

8. Press the **RIGHT Selector** button to exit the configuration menu.

Firmness

This submenu allows you to specify the firmness of the braille dots when viewing Focus status information, navigating the menus, or other internal messages. There are five levels of firmness: 0 percent, 25 percent, 50 percent, 75 percent, and 100 percent. Use the **Rocker** bars to select a level and then press **DOT 8** or the **Right Selector** button. The new dot firmness setting will immediately take effect. Pressing **Z CHORD** (**DOTS 1-3-5-6 CHORD**) or the **Left Selector** button will return to the main configuration menu without saving the change.

Note: If the dot firmness value set by a screen reader is different from the value set through the Focus configuration menu, the value from the screen reader will continue to be used even when the display is no longer communicating with the application. You can reset your preferred level of firmness when the display is not being used over USB or Bluetooth with a screen reader that also controls dot firmness.

Connections

Activating this menu item displays a list of active connections. To indicate the active connection currently in use, dots 7 and 8 are displayed under the connection name.

Use the **Rocker** bars to navigate to the connection you want to use and press **DOT 8** or the **Right Selector** button to switch to it. For example, if the Focus is connected over USB to your primary computer running JAWS and you receive a text message on your iPhone that you want to read and respond to using the braille display, you can switch to the Bluetooth connection for your phone, respond to any messages, and then switch back to USB to resume braille access to your computer.

Note: Android and iOS devices must first be locked before the display is switched from USB to Bluetooth connectivity. Once the display is switched to Bluetooth, unlock your mobile device so that it will find the display and begin using it as usual. Once the connection is established, you can switch between connections without having to first lock and unlock the device.

To delete a specific connection, use the **Rocker** bars to navigate to it in the list and press **Left Shift+D** (**DOTS 1-4-5**) or **Left Shift+Right Selector**. When prompted, press **Y** (**DOTS 1-3-4-5-6**) or the **Right Selector** button to delete the connection, or **N** (**DOTS 1-3-4-5**) or the **Left Selector** button to cancel the deletion.

To delete all connections in the list, use the **Rocker** bars to navigate to "Clear connections list" and press **DOT 8** or the **Right Selector** button. When prompted, press **Y** (**DOTS 1-3-4-5-6**) or the **Right Selector** button to delete all connections, or **N** (**DOTS 1-3-4-5**) or the **Left Selector** button to cancel the deletion.

Note: If you delete the pairing for an active connection that is still in use, after confirming the deletion, you must turn the display off and back on to finish removing the connection.

Require PIN

When enabled and you are setting up a Bluetooth connection between the Focus and another device, you will be prompted to enter a PIN on the device to complete the pairing process. The Bluetooth PIN for the Focus is 0000. This option is off by default.

Language

This submenu lets you choose the language that is used for the status message, menu navigation, and when working in Scratchpad. Use the **Rocker** bars to select a language and then press **DOT 8** or the **Right Selector** button. Pressing **Z CHORD** (**DOTS 1-3-5-6 CHORD**) or the **Left Selector** button will return to the main configuration menu without saving the change.

Flash Msg Time

Flash messages are short informational messages that appear on the display for only a few seconds. For instance, Scratchpad displays flash messages in a variety of situations including when confirming a file was saved or deleted. Flash messages disappear automatically after a short time, but you can dismiss one at any time by pressing a **Cursor Router**. If you need more time to finish reading a message, press one of the **Panning** buttons to keep the message on the display longer.

By default, flash messages are displayed for three seconds. To change this, use the **Rocker** bars to select a time between 1 and 20 seconds and press **DOT 8** or the **Right Selector** button.

One-Handed Mode

The one-handed mode feature allows users who are unable to enter data using two hands to use the Focus display. To turn it on or off, use the menu item, or toggle it by pressing **LEFT SHIFT+DOTS 1-2-3-7** or **RIGHT SHIFT+DOTS 4-5-6-8**. Once enabled, one-handed operation works with Focus-specific features such as Scratchpad, or when using the Focus to interact with applications on a computer or mobile device.

In one-handed mode, enter commands or Braille characters one key at a time; or enter as many keys together as you find comfortable; then press the **SPACEBAR** when finished. For example, individually pressing **DOTS 1-2-3-5**, followed by the **SPACEBAR** types a letter **R**. If you are entering data and need to enter the Space character, press the **SPACEBAR** twice.

If you need to enter a chord combination, press the **SPACEBAR**, then the keys that make up the chord, then press the **SPACEBAR** again. For example, to go to the beginning of a file, press the **SPACEBAR**, followed by **DOTS 1-2-3**, followed once more by the **SPACEBAR**.

Scratchpad

This menu option starts the Scratchpad, which enables you to take notes as well as read braille formatted BRF files. The scratchpad can also be started by simultaneously pressing the **Menu** button and the letter **N** (**DOTS 1-3-4-5**). See the following section for more information on using this feature.

Using Scratchpad

The Focus Scratchpad enables you to create and save notes to an inserted Micro SD card. For instance, when you need to write down some information such as a phone number or email address, but you do not have immediate access to a PC or mobile device. You can also open and read braille formatted (BRF) and plain text (TXT) files.

Scratchpad offers very basic file navigation and editing functions including cut, copy, and paste. An active USB or Bluetooth connection is not required to use Scratchpad. Notes are written using the Focus display's Perkins-style keyboard and can be entered using plain text or contracted braille. If the Focus is currently connected to a computer or other device, you can even export the contents of a file you created to the edit window of the currently open application.

Starting Scratchpad

To start Scratchpad, press and hold the **Menu** button and then press **N** (**DOTS 1-3-4-5**). You are placed into a new file where you can immediately begin entering content. You can also launch Scratchpad through the Focus display's configuration menu. Pressing the **Menu button along with B** (**DOTS 1-2**) places Scratchpad in the background without closing it and resumes the currently active USB or Bluetooth connection, or displays the Focus status message. Pressing the **Menu** button along with **N** again switches back to the currently open file in Scratchpad.

Pressing **Right Shift+H** (**DOTS 1-2-5**) opens the Scratchpad help file. When you are done reviewing the help, press **Z CHORD** (**DOTS 1-3-5-6**) to close it and return to the currently open file.

Pressing the **Menu** button in Scratchpad opens a menu containing several options described in the following sections. Use the **Rocker bars** or **DOT 1** or **DOT 4 CHORD** to move through menu items and press **DOT 8** or a **Cursor Router** button to open a submenu or select an item. Use **DOTS 1-2-3 CHORD** and **DOTS 4-5-6 CHORD** to move to the top or bottom of the menu. Press the **Right Selector** button to close the menu and return to the file. Most of the menu options also offer shortcut keys.

To exit Scratchpad, press **Right Shift+X** (**DOTS 1-3-4-6**).

Creating a New File

A new file is created automatically whenever you open Scratchpad. If necessary, you may also create a new blank file by pressing **RIGHT SHIFT+N** (**DOTS 1-3-4-5**). Alternatively, you can press the **Menu** button, choose File, and then choose New. If the currently open file has not yet been saved, you are prompted to save your work. Press **Y** (**DOTS 1-3-4-5-6**) to save the current file or press **N** (**DOTS 1-3-4-5**) to discard your current changes.

When creating a new file and there is currently content on the Scratchpad clipboard copied from another file, you are asked if you want to create a file based on the clipboard contents. For example, if the clipboard contains content from a text file, you will be prompted to create a new TXT file. Pressing **Y** (**DOTS 1-3-4-5-6**) creates a new blank file that will include a TXT extension when saved. Pressing **N** (**DOTS 1-3-4-5**) creates a new blank file using an FNZ extension, which is a format specific to Scratchpad.

Saving a File

If you are saving a file for the first time, press **RIGHT SHIFT+A**. Alternatively, you can press the **Menu** button, choose File, and then choose Save As.

You are first asked if you want to save using TXT/BRF/BRL/BRA format. Note that BRA is only available if the Focus language is set to Spanish. Files saved as TXT/BRF/BRL/BRA can be opened and modified on a PC.

If you want to save using one of these formats, press **Y** (**DOTS 1-3-4-5-6**), use the **Rocker bars**, **NAV Rockers**, or **Cursor Routers** to select a format (dots 7 and 8 are used to indicate the selected format), and press **DOT 8**. After choosing the file format, type a name for your file, and then press **DOT 8**.

If you do not want to save the file in a specific format, press **N** (**DOTS 1-3-4-5**), type a name for your file, and press **DOT 8**. This saves the file with an FNZ extension. FNZ files can only be read and edited in Scratchpad. However, the contents of FNZ files can be exported to any open editing application over an active USB or Bluetooth connection.

As you work in your file, make sure to enter content in a way that matches the file type you want to save as. For instance, if you intend to save a file in TXT format, it is suggested that content be written using Computer Braille and not literary or contracted braille. This ensures the file displays correctly when opened on your computer.

Note: The file size limit for entering content is approximately 1 MB for FNZ files and approximately 10 MB for TXT, BRF, BRL, and BRA files.

If you are modifying an existing file, press **RIGHT SHIFT+S** to save your latest changes. Alternatively, you can press the **Menu** button, choose File, and then choose Save.

Files created in Scratchpad are automatically saved to the Micro SD card in a folder called Notes.

Transferring Braille Books and Text Files

Scratchpad allows you to open and read braille formatted files that use the BRF extension obtained from various services such as BARD or National Braille Press directly on your Focus display. You can also open and read plain text files that have a TXT extension or copy text files created in Scratchpad to your PC.

Note: TXT files must be saved in UTF-8 format to open correctly in Scratchpad. Several text editing applications including Notepad offer the ability to save as UTF-8.

To configure the Focus to allow you to copy files to and from the Micro SD card, make sure the unit is powered off and the supplied USB cable is connected to your PC. Next, press and hold the **Left Panning** button while simultaneously inserting the USB cable. The display powers on and the PC recognizes the Focus as a removable USB drive.

Note: If you use a screen reader such as JAWS over USB, it is recommended that you turn on speech or use a Bluetooth connection as braille currently does not work over USB when the Focus is being used as a storage device. You will also not be able to use Scratchpad while in this mode.

To transfer BRF and TXT files to the Micro SD card:

1.   On the PC, open the folder containing the files you want to copy, select the files you want, and then press CTRL+C.

2.   Navigate to and open the USB drive to display the contents of the Micro SD card.

3.   Open FSI, Focus5, Scratchpad, and then open the folder where you want to place the files and press CTRL+V. Files you want to edit should be placed into the Notes folder. Files placed into the Books folder cannot be modified.

To transfer TXT files created in Scratchpad:

1. Navigate to and open the USB drive to display the contents of the Micro SD card.

2. Open FSI, Focus5, Scratchpad, Notes, and then select the TXT files you want to copy and press CTRL+C.

3. Navigate to the folder on your PC where you want to place the files and press CTRL+V. You can now use Notepad or another text editor to access these files.

Once you have finished transferring files, press the APPLICATIONS key on your computer while focused on the USB drive, and choose Eject. Power the Focus off and back on to resume using Scratchpad as well as receiving braille output from your screen reader over USB.

Opening a File

To open a saved file, press **RIGHT SHIFT+O** (**DOTS 1-3-5**). Use the **NAV Rockers**, **Rocker bars**, or **DOT 1** or **DOT 4 CHORD** to move to a folder or file and press **DOT 8** to open the selected item. The file opens, and the cursor is returned to the last location where you were when it was previously closed. Note that files created directly in Scratchpad are always saved to the Notes folder.

Alternatively, you can press the **Menu** button, choose File, and then choose Open.

While in the list of files, you can press **DOTS 1-2-3 CHORD** or **DOTS 4-5-6 CHORD** to move to the top or bottom of the list. You can also type one or more characters to quickly locate a specific file.

Note: BRF files always open as read-only. You will not be able to enter text into these files.

Reading Files

Once a file is opened, use the following commands to navigate and read text.

- Move to next line: **DOT 4 CHORD** or **Rocker bar** down

- Move to previous line: **DOT 1 CHORD** or **Rocker bar** up

- Move to next word: **DOT 5 CHORD**

- Move to previous word: **DOT 2 CHORD**

- Move to next character: **DOT 6 CHORD**

- Move to previous character: **DOT 3 CHORD**

- Move to the beginning of the file: **L CHORD** (**DOTS 1-2-3 CHORD**)

- Move to the end of the file: **DOTS 4-5-6 CHORD**

- Backspace: **DOT 7**

- Enter (start a new line): **DOT 8**

- Display the title of the currently opened file: **LEFT SHIFT+T** (**DOTS 2-3-4-5**)

- Display the current page and number of pages in the file (requires that files include page break characters which should be available in most formatted books from services like BARD): **RIGHT SHIFT+P** (**DOTS 1-2-3-4**)

The **NAV Rockers** at either end of the display allow you to move through files by line, paragraph, or pan forward and backward. To switch between the navigation modes, press the **NAV Mode** button above each **NAV Rocker**.

Finally, you can also use the **Panning** buttons on the front of the display to move forward or backward through files.

Note: Paragraph navigation in Scratchpad looks for a blank line between blocks of text. If you open braille or text files from other sources that use a different convention for determining a paragraph, navigating by paragraphs might not work as expected.

Switching Between the Two Most Recent Files

Pressing **DOTS 2-4-6 CHORD** opens the previous document. For example, you may want to quickly switch between a book and a file where you are taking notes on what you are reading.

Deleting a File

To delete a file, press the **Menu** Button, choose File, and then choose Delete. Use the **NAV Rockers**, **Rocker bars**, or **DOT 1** or **DOT 4 CHORD** to move to a folder or file and press **DOT 8**. After you press **DOT 8** on a file, you are asked to confirm the deletion. Press **Y** (**DOTS 1-3-4-5-6**) to delete the file, or **N** (**DOTS 1-3-4-5**) to cancel.

Like opening a file, while in the files list, you can press **DOTS 1-2-3 CHORD** or **DOTS 4-5-6 CHORD** to move to the top or bottom of the list. You can also type one or more characters to quickly locate a specific file.

Editing Text

Scratchpad provides some basic text editing functions including selecting, copying, cutting, pasting, and deleting text.

Note: Editing text is only available in files that are created directly in Scratchpad or TXT, BRF, BRL, or BRA files copied to the Notes folder.

To select a block of text, position the cursor where you would like to begin the selection and press **LEFT SHIFT+M** (**DOTS 1-3-4**) to set a mark at that location. Then, move the cursor to where you want to end the selection and press **LEFT SHIFT+S** (**DOTS 2-3-4**) to select the text between the mark and the cursor location. To indicate the selected text, dots 7 and 8 are displayed under each character in the selected block. Once the text is selected, you can perform one of the following:

- Copy to clipboard: **LEFT SHIFT+C** (**DOTS 1-4**)

- Cut to clipboard: **LEFT SHIFT+X** (**DOTS 1-3-4-6**)

- Delete: **LEFT SHIFT+D** (**DOTS 1-4-5**)

Once you have set a mark using **LEFT SHIFT+M**, you can navigate to another location in your text and then press **LEFT SHIFT+G** (**DOTS 1-2-4-5**) to return to the marked location. This works in any file whether it is editable or not. Note that since marks are primarily used to begin the selection process, only one mark can be set, and it is deleted when you close the file since your current location is already saved.

To paste text from the clipboard into the currently open file, press **LEFT SHIFT+V** (**DOTS 1-2-3-6**). You can also paste the current time and date into a file. To paste the time or date, press the **Menu** button, choose Edit, and then choose Paste Time or Paste Date.

Finding Text

You can quickly locate a word or phrase in the currently open file. To search for text, press **RIGHT SHIFT+F** (**DOTS 1-2-4**). Alternatively, you can press the **Menu** button, choose Edit, and then choose Find. Type the text you want to locate, and then press **DOT 8** to begin the search.

To find the next occurrence of your search string, press **RIGHT SHIFT+DOT 4**. Alternatively, you can press the **Menu** button, choose Edit, and then choose Find Next.

To find the previous occurrence of your search string, press **RIGHT SHIFT+DOT 8 CHORD**. Alternatively, you can press the **Menu** button, choose Edit, and then choose Find Previous.

Advanced Settings

Scratchpad offers several options to help improve your experience when reading and editing. To access these settings, press the **Menu** button and then choose Advanced. Use the **SPACEBAR** to turn an option on or off and then use the **Right Selector** to save your selections and return to the previous menu. Press the **Right Selector** again to return to your file.

The following options are available:

- **Word Wrap** – When enabled, Scratchpad does not split a word that is too large to be shown on the braille display and instead shows the entire word when you pan to the next increment. This option is off by default.

- **Reverse Panning** – Turn this option on to use the **Right Panning** button to pan backward and the **Left Panning** button to pan forward through files. This option is off by default.

- **Hide Cursor** – When enabled, the cursor, which is represented by dots 7 and 8, is not displayed. If a Cursor Router is pressed while the cursor is hidden, the cursor briefly flashes at that location. By default, the cursor is always displayed.

- **Hide Dots 7 and 8** – Dots 7 and 8 are used to indicate capitalization and other special symbols. Additionally, formatted braille (BRF) books produced by some agencies in the United States such as Bookshare.org and the National Library Service use characters that include dots 7 and 8. To help reduce distraction while reading, you can enable this option to suppress dots 7 and 8 so they are not displayed as part of the text. This option is off by default.

Exporting a File

If there is currently an active USB or Bluetooth connection between the Focus and a computer or other device, you can export the contents of the currently open FNZ file to the edit window of an application on your computer. For example, you could export notes you have written in a file to Microsoft Word where you can perform more advanced editing.

If your notes are in contracted braille, you must be running a screen reader such as JAWS that supports braille input, so the contents are back translated to text in the document. The braille input settings for the screen reader must also match the braille format you are using when typing in Scratchpad. For instance, if you are typing notes in UEB, the screen reader should also be set for UEB input to ensure the text is correctly back translated.

To export a file, do the following:

1. On the computer or mobile device, make sure focus is on the document that will contain the exported text.

2. Open the file in Scratchpad that you want to export.

3. Press the Menu button and choose Export. The contents of the file appear in the document on your computer as plain text. Please note that the export process could take some time depending on the amount of information in the file. Press Z CHORD (DOTS 1-3-5-6) at any time to cancel the export process.

Note: The contents of BRF and TXT files cannot be exported.

Inserting a Micro SD Card

The Focus display comes with a pre-inserted micro SD card for use with Scratchpad. If you ever need to replace the included Micro SD card, do the following:

Note: The Focus supports Micro SD cards up to 32 GB.

1. Turn the display so the left side is facing you. The Micro SD slot is a narrow opening located to the right of the Power button under the bumper.

2. Gently press on the exposed edge of the card to eject it and then remove it from the slot.

3. Hold the new card so that the fingernail grip (the raised edge used to grab and remove the card) is pointed toward you and facing down. You will also feel a slight protrusion on the left side as well as a square cutout in the upper left corner. In addition, the printed label on the card should be facing down.

4. Insert the card into the slot until it clicks into place.

WARNING: Under no circumstances should you attempt to insert the card in any other position than as described. Damage to the card or the Focus Blue can result if the card is not properly oriented before being inserted.

Visit freedomscientific.com/Downloads/Focus/Focus5Downloads for more information on setting up the new card for use with the Scratchpad.

The Focus braille display has built-in diagnostic tests for the Cursor Router buttons, braille display, NAV Rockers, NAV Mode buttons, braille keys, Panning buttons, Rocker bars, and Selector buttons.

Before entering Diagnostics Mode, disconnect the Focus from your computer and make sure it is powered off.

Entering and Exiting Diagnostics Mode

Simultaneously, press the first two **Cursor Router** buttons farthest to the left (above cells one and two) while pressing the **Power** button. The text, "press cr key/nav/panel keys," is displayed to indicate that Diagnostics Mode has been entered.

Press the **Power** button again by itself to exit Diagnostics Mode.

Routing Button Test

The routing button test ensures that each of the Cursor Router buttons on the braille display work properly. Press any **Cursor Router** button to activate all dots in the cell below the button.

Display Test/Clean

It is necessary to disconnect the Focus Blue from your computer and make sure it is powered off before beginning this test. The display test is used to ensure that each pin on the braille display can be activated. The display test also allows you to clean the braille display. Press the **Power** button while pressing the rightmost **Cursor Router** buttons (above the last two cells) simultaneously. This action causes all cells to be activated for cleaning. Use a soft cloth moistened with isopropyl alcohol. Do not use any other substance to clean the cells.

While the Focus is in this mode, pressing down on either the **Right** or **Left NAV Rocker** deactivates all of the cells. Pressing up on either the **Left** or **Right NAV Rocker** reactivates all cells.

Pressing the **Left** or **Right NAV Mode** button causes the cells to toggle up and down. To stop this action, press the **NAV Mode** button again.

Key and Controls Test

The key and controls test ensures that each of the keys and controls operate properly. You can begin the key test after entering Diagnostics Mode by pressing any of the keys or controls listed in the table below. The braille display reflects each key that is pressed. Refer to the following table for the exact dot position for each of the keys. Press each of the keys and controls and verify that the appropriate response is displayed.

Keys	Displays
DOT 1	1
DOT 2	2
DOT 3	3
DOT 4	4
DOT 5	5
DOT 6	6
DOT 7	7
DOT 8	8
Menu	mnu
Left Shift button	kls
Right Shift button	krs
Spacebar	ksp
Left Panning button	pl
Right Panning Button	pr
Left Selector Button	sl
Right Selector Button	sr
Left NAV Mode Button	nml

Keys	Displays
Left NAV Rocker Up	nlu
Right NAV Mode button	nmr
Right NAV Rocker Up	nru
Right NAV Rocker Down	nrd
Left NAV Rocker Down	nld
Left Rocker Switch Up	rlu
Left Rocker Switch Down	rld
Right Rocker Switch Up	rru
Right Rocker Switch Down	rrd

Battery Info Mode

Before entering this mode, disconnect the Focus from your computer and make sure it is powered off. Press the **Power** button while simultaneously pressing the **Cursor Router** button above cell two. The Focus displays additional information about the internal battery.

Problem	Solution
The display will not turn on.	Charge the battery using the supplied AC adapter, or by connecting the Focus to a computer using the USB cable. The unit will always power on when connected to USB. If not connected to USB, make sure you press and hold the **Power** button for at least two seconds.
The battery is not charging or is taking longer to charge than expected.	Make sure you are charging the Focus Blue using the Freedom Scientific supplied AC adapter. The battery takes a maximum of three hours to charge using the supplied AC adapter. If you are charging the Focus using a USB connection to your computer, the battery will take longer to charge. To verify the Focus is charging correctly, press the **Menu** button to display the Focus status information.

Problem	Solution
Extra dots are appearing on the display and dots are sticking.	Clean the display by activating the Display Test diagnostic mode then use a soft cloth moistened with isopropyl alcohol to clean the cells. Refer to the Display Test/Clean section of this manual for more information.
The Focus display is not communicating with the computer.	If you are using JAWS, make sure JAWS is properly installed on your computer. If you are using a third-party screen reading application, you must install the driver from the Freedom Scientific website before you can use the display. See the section, Connecting the Focus, for more information on configuring both USB and Bluetooth.
None of the Focus controls are working except the Panning buttons, Rocker bars, and Cursor Router buttons.	Make sure the status message is displayed and then press and hold the **Menu** button followed by the **Right NAV Mode** button. Note that if a connection is active, you must first press the Power button to display the status information.

Environmental Considerations

Storage

Temperature:　　　　0° to 45° C (32 to 113 F)

Humidity:　　　　　　80% RH non-condensing

Operating

Temperature:　　　　5° to 35° C (40 to 95 F)

Humidity:　　　　　　60% RH non-condensing

Service and Support

You can contact Technical Support to receive technical assistance.

To contact by web, visit www.FreedomScientific.com/Forms/TechSupport, and complete the form to submit questions.

To contact by email, send questions to support@vispero.com.

To contact by telephone, U.S. customers can call (727) 803-8600, Monday through Friday, from 8:30 AM to 7:00 PM (Eastern Time).

When you call, please provide the following information:

- Product name
- Product serial number
- What you were doing when the problem occurred
- How you tried to solve the problem

Warranty and Registration

Congratulations on your purchase of the 5th generation Focus Blue Braille display.

The unit and its accessories come with a two-year warranty against manufacturing defects.

Note: These devices have no user-serviceable components. Any unauthorized attempt to service or replace internal components by opening the case will void the product warranty.

Please call Vispero Technical Support at (727) 803-8600 for assistance in troubleshooting any problems. If necessary, the technical support specialist will issue a Return Materials Authorization (RMA) number that must be referenced on the outside of the package containing your returned unit. The unit or its accessory will then be exchanged or repaired as needed.