

NLS Braille eReader Zoomax

User Guide

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1 Physical Description

The NLS eReader has a 20-cell braille display; an eight-key, Perkins-style keyboard; three Space keys; six display keys; four system keys; and five navigation keys.

1.1 Top

The top surface of the device includes the braille display and the braille keyboard. Orient the device with the braille cells closest to you. Behind each cell, you will find a small round Cursor Routing button. You can use the routing buttons to move the braille cursor when reading and entering text and to activate items in a menu.

At each end of the braille display is three display keys. You can think of these as being arranged like a braille cell with keys d1, d2, and d3 downward on the left and d4, d5, and d6 downward on the right. Combinations of these keys are an alternate way of entering keyboard commands.

Behind the cells is the braille keyboard. The braille keyboard has the traditional six braille input keys, a Backspace key (Dot 7) at the left end, an Enter key (Dot 8) at the right end, and a Space key. These keys are referred to as B1 through B8, and BS, respectively.

1.2 Front Edge

Along the front edge of the device (closest to you) is a slanted front panel with eleven controls. The two outermost small round keys on each end are the System keys. They are referred to as S1 through S4, with S1 and S2 on the left and S3 and S4 on the right.

The S keys perform the following functions:

- S1: Main Menu
- S2: Menu of current application
- S3: Context Menu
- S4: Book Reader, open current book at last reading position

Moving inward are two large rectangular keys. These are referred to as BL and BR. In most cases, they are both functionally equivalent to the Space key on the braille keyboard, meaning that either of them can be used with a letter to execute a keyboard command that requires use of a Space key. The only time this is not the case is when reading a book. While reading, BL and BR function as alternative panning keys, allowing you, if you prefer it, to use your thumbs to move forward or backward through a book.

In the center of the slanted front panel are five navigation keys. Starting from the left and going clockwise they are N-Left, N-Up, N-Right, and N-Down, with N-Center in the middle. N-Up and N-Down are used to move between items in a menu or a list. The four directional keys can be used to move through a book.

At the bottom of the slanted front panel, at each end, is a hole for attaching a lanyard. The matching holes are near the front corners of the left and right sides.

1.3 Left Side

On the left side of the device, from front to back, is the lanyard attachment point, followed by the SD Card slot. There are braille letters, sd, above the SD Card slot.

1.4 Right Side

On the right side, from front to back is the lanyard attachment point. Behind that is the small, round Power On button followed by the small, round Power Off button. Braille letters, on, are above the Power On button and braille letters, off, are above the Power Off button.

Next is the USB-C port, used to connect the eReader to a computer or the AC adapter. The last port on the right side is the USB-A port, used to connect an NLS cartridge with the provided cable, or a USB flash drive to the eReader. Braille letters, usb, are centered above these two ports with the braille letter, c, above the USB-C port and the braille letter, a, above the USB-A port.

1.5 Back Edge

The back edge has no keys or buttons.

1.6 Bottom

On the bottom of the device are four rubber feet, one in each corner; and a sticker with print information about the device.

2 Getting Started

2.1 Unpacking

The package contains the following items:

- eReader 20-cell braille display
- USB-A to NLS cartridge cable
- AC adapter with USB-A to USB-C cable
- Braille Getting Started Guide
- Print Getting Started Guide
- Braille User Guide
- Lanyard

2.2 Charging the Battery

Prior to using your eReader, make sure it is charged completely. The charging cable is the longer cable included with the eReader. To charge the battery, connect the smaller end of the charging cable (the USB-C connector) into the USB-C port located on the right side of the eReader, just behind the power buttons. It doesn't matter which direction the cable is oriented when you plug it in. This port will accept it either way.

Connect the larger end of the charging cable (USB-A connector) to the included AC adapter. Plug the AC adapter into a power outlet. The unit takes about three hours to fully charge. You can use the unit for about 10 hours before it will need to be charged. If at any time you would like to know how much battery power is available, navigate to the Battery item on the Main Menu or press the braille number sign, dots 3-4-5-6 together with Space. The battery level will appear on the display. Press the Enter key (dot 8) or N-Center to dismiss this message.

2.3 Powering On and Off

On the right side of the eReader, just behind the lanyard attachment point, you will find the small, round Power On button. Once your device is charged, press the Power On button to turn on your eReader. You will hear a sequence of three ascending tones and the word "starting" will briefly appear, followed by the words "NLS eReader Zoomax." Then the word "starting" will reappear with a tactile loading animation while the unit is coming on. When ready to use, you will hear another sequence of three ascending tones and you will see the words "Book Reader" on the display. You will be at the top of the Main Menu and your device is ready to use.

To turn the unit off, press the Power Off button which is just behind the Power On button. You will hear a sequence of descending tones and the Off Menu will appear. Press a cursor routing button over Power Off. The display will show the words "power off" and incrementing numbers will indicate the shut down progress.

Alternatively, from the Main Menu, press the J-Down key or the letter p to reach the Power off menu item, then press Enter. You will see a short menu, Yes—power off and No—do not power off. To power off, press Enter (dot 8) or J-Center when the Yes—power off item is displayed.

2.4 Suspend Mode

To preserve the battery, the eReader will go into Suspend mode after ten minutes of inactivity. You can change this amount of time in settings. You can also manually put your eReader into Suspend mode by selecting Suspend from the Main Menu or by tapping the Power Off button on the right side of the unit and pressing a Cursor Routing button over the word "Suspend" on the display. To wake the unit from Suspend, press the Power On button. After 2.5 hours in Suspend mode, the unit will turn itself completely off.

2.5 Braille Keyboard

The braille keyboard is used to write text in a search box or to enter text such as BARD login credentials or a Wi-Fi password. There are numerous shortcuts that are composed of a braille character on the keyboard together with a Space key.

There is one Space key between dots 1 and 4. There are two additional keys on either side of the navigation keys on the front of the device. These are referred to as BL and BR. In most cases, they are both functionally equivalent to the Space key on the braille keyboard, meaning that either of them can be used with a letter to execute a keyboard command that requires use of a Space key. The only time this is not the case is when reading a book. While reading, BL and BR function as alternative panning keys.

The shortcuts that are paired with a Space key are often referred to as "chords." So, on this device, for example, the letter m with a Space key, a keyboard shortcut that will take you to the Main Menu, may be referred to as an m-chord.

Some of the keyboard shortcuts, such as f (dots 1-2-4) for find text while reading a book, are specific to the current activity. While others, such as Space with l (dots 1-2-3), goes to the top of a menu, list, or document anywhere. the Context Menu, s3, can be used from almost anywhere on the device.

2.6 Main Menu

The Main Menu contains the following nine items:

- Book Reader
- BARD
- File Manager
- Settings
- Device Info
- Battery
- Help
- Suspend
- Power Off

Press the Up or Down navigation key to move to the menu item of your choice, then press Enter (dot 8) or a cursor routing button to activate it. If, at any time, you would like more information about a menu item, press the Right navigation key and additional text describing the menu item will be displayed. You can return to the Main Menu at any time by pressing s1, or a Space key with the letter m (dots 1-3-4).

2.7 Navigating Menus

The primary way to move among the many options on the eReader is through a series of menus. Many of the items on the Main Menu will take you to a lower level menu. When the eReader first shows a menu, the first item of the menu will be visible on the braille display. Moving down with D3 or N-Down will take you to the rest of the items on the menu.

There are additional features in all menus to assist you with orientation and quick navigation. From the top item of a menu, arrow up and you will find the Quick Menu. The Quick Menu has an abbreviated menu name, such as mm: for Main Menu, followed by single letters. You can activate any one of these letters by pressing the cursor routing button over the letter and it will open that menu item. For example, the Quick Menu at the top of the Main Menu says "mm: b b f s d b h s p." If you were to press the routing button above the letter "s," the Settings Menu would open. When the Quick Menu is visible, arrowing to the right will provide a list of what each item stands for.

If you arrow up from the Quick Menu, you will see the name of the menu you are viewing. On the Main menu, this is where you can also see the version number of the currently loaded software.

2.8 Context Menu

The Context Menu is a special menu that can be accessed from almost everywhere in your device. It offers useful contextual functions that are relevant to what you're currently doing on your eReader. It is similar to a context menu on a PC. If you're looking for a specific action, or you just forgot the command, chances are you will find it in the Context Menu.

To activate the Context Menu, press s3, the small, round key on the front just to the right of BR. A menu will open and offer you a list of actions you can perform at that particular moment. Use the Up or Down navigation keys to move through this menu until you find what you are looking for, then press Enter (dot 8) or a cursor routing button. Otherwise, press Space with e (dots 1-5) to close the Context Menu.

2.9 First Letter Navigation

Most of the time, you can jump to an item in a menu or list by typing the first letter of that item. Doing so will automatically move the display to the first item starting with that letter. Typing the same letter twice will bring you to the second item starting with that letter, and so on. For example, if you are in the Main Menu and you wish to reach Settings, type the letter s on the keyboard.

2.10 Panning Text

When a line of text is longer than 20 characters, you will need to move the display left or right to read the rest of the text. This movement is called panning, and it is accomplished in several ways:

- Use D2 and D5, the middle keys on either end of the display;
- Use the N-Left and N-Right keys on the front; or
- While reading a book, use the large rectangular keys, BL and BR on the front.

The method you choose to use will depend largely on the size of your hands and which method you find the most comfortable.

2.11 Global Keyboard Commands

Below is a list of the most commonly used commands on the eReader:

Main Menu: s1 or Space with m (dots 1-3-4)

Go to top of menu, list, or document: Space with dots 1-2-3

Go to bottom of menu, list, or document: Space with dots 4-5-6

Escape or Back: Space with e (dots 1-5)

Switch braille grade: Space with g (dots 1-2-4-5)

Battery level: Space with # (dots 3-4-5-6)

Context Menu: s3

3 Book Reader

The first item on the Main Menu is Book Reader. This application is used to read books and magazines. These items can be downloaded from BARD or loaded into the eReader from external media such as an NLS cartridge, a USB flash drive or an SD card. It supports the following file types: .brf, .txt, .rtf, .docx, .pdf, .html, and pef. It is compatible with .zip files if the zip file contains material in supported file types.

From the Main Menu, press the Up or Down navigation key until you reach Book Reader or press b until you reach Book Reader, then press Enter (dot 8) or a cursor routing button to open it.

3.1 Book Reader Menu

The Book Reader Menu contains four items:

- Current book
- Book list
- Recent books
- Exit

3.1.1 Current Book

Activating Current Book will open the most recent book that you were reading. If the message, "book is empty" appears, it means that either there are no books on the device or you haven't opened any of the books that are there.

You can also open the most recent book you were reading by pressing S4 at any time. This will open the book at the exact spot where you left off.

3.1.2 Book list

All available books and magazines on your device are listed in the Book List of the Book Reader. They are organized by their location. When you activate Book List, you will see "Internal Files." You may also see "USB drive," or "SD card," if you have either of those inserted into your device.

To read one of these books, simply press Enter (dot 8) or a cursor routing button. For other actions, press S3 for the Content Menu. Here you will see: Get Info which will list details of the book; Delete which will delete the book from your device; and Search which lets you search for books or magazines on the device.

3.1.3 Recent Books

Recent Books will display a list of the five most recent titles you have read. Pressing S3 from here will allow you to Read Book, Close Book which removes it from your recent books list, or Delete Book.

3.1.4 Exit

The final item on the Book Reader Menu is Exit. You can select this item to close the Book Reader and return to the Main Menu. If you prefer, at any time, you can press S1 or Space with the letter m (dots 1-3-4) to return to the Main Menu.

3.2 Book Navigation

There are often several different key combinations to move the braille display through the text of a book. Whichever one you choose to use is a matter of personal preference.

There are three ways to move continuously through the text of a book:

- D2 and D5, the middle keys on either end of the display;
- N-Left and N-Right keys on the front; or
- BL and BR, the large rectangular keys on the front.

3.2.1 Navigating by Line, Paragraph, Page, and Volume

If, at any point, you would like to move through the book by line, there are two ways to do this:

- D1 and D3, the top and bottom display key on the left end of the display; and
- N-Up and N-Down keys on the front.

When navigating by line, you can choose whether your display moves straight down or goes back to the left margin. So, for example, if your display is currently showing cells 21-40 of a line and you move down by line, if "straight down" is in effect, then you will move to cells 21-40 of the next line. If "left margin" is in effect, you will move to cells 1-20 of the next line. You can toggle this setting with k (dots 1-3). When pressed, this command will briefly display its current setting.

To go to a specific line, use the letter l (dots 1-2-3) or d1-d2-d3. The number of the line you are currently on will appear. Just type in the number of the line that you would like to move to.

When you access an NLS braille book, in most cases, all of the volumes of the book will be loaded. You can move forward or back by paragraph, page, or volume by using the following keys:

- dot 1: previous paragraph
- dot 2 or d1-d2: previous page
- dot 3 or d4-d5: previous volume
- dot 4: next paragraph
- dot 5 or d2-d3: next page
- dot 6 or d5-d6: next volume

To go to a specific paragraph, page, or volume, use the following keys. In each case, the current number of the item will be shown. Type in the desired number.

- ch (dots 1-6 or d1-d6) go to paragraph number
- p (dots 1-2-3-4 or d1-d2-d3-d4) go to page number
- v (dots 1-2-3-6 or d1-d2-d3-d6) go to volume number

In the case of pages, the number you enter may not correspond with the actual pages of the book. This command is counting pages from the beginning of the book. Often, page 1 is several pages into the book.

Another way to reach a specific line, paragraph, page, article, volume, or bookmark is to use the Context Menu. Press S3 and arrow down to Goto, press Enter and you will see the list of goto options. Select the one you wish to use. You will see the current number. Just type in your desired value and press Enter.

At any time, you can use the cursor routing buttons to move to specific points in the book. Each cursor routing button will take you to a point in increments of 5 percent. For example, Cursor routing button 1 will take you to a point 5 percent of the way through the book. Cursor routing button 8 will take you to a point 40 percent through the book, and so forth.

3.2.2 Navigating through a Magazine by Article

NLS magazines have special article separators and your eReader is aware of these so you can use them for navigation. You can move forward or back by article by using the following keys:

- > with dots 7 (dots 3-4-5-7) go back by article
- > with dot 8 (3-4-5-8) go forward by article

To go to a specific article number, use the > (dots 3-4-5 or d3-d4-d5) command. The current article number will be shown. Type in the desired article number.

3.2.3 Autoscroll

The eReader's autoscroll feature allows you to read a book without having to continuously press keys. The braille display will advance automatically at a rate that you control. To turn on this feature, press / (dots 3-4) when inside a book. Press / again to stop autoscroll and return to manual panning.

You can change the autoscroll speed while autoscrolling inside a book. To slow down the autoscroll speed, press / with dot 7 (dots 3-4-7). To make autoscroll go faster, press / with dot 8 (dots 3-4-8). Each increase or decrease of autoscroll speed changes the rate by one-quarter of a second per line. The unit will remember your last setting. When you begin autoscrolling again, it will start at the last speed you used.

3.2.4 Get Current Position

You can use the Where am I command whenever you want to know your current position within a book. To activate the Where am I command, press the braille wh-sign (dots 1-5-6).

The display will show the current volume number, page number, line number from top of page, and character number from left margin. The Where am I? display will look something like this:

v3 p34 l22 c0

3.2.5 Go to the Beginning or End of a Book

You can easily go to the beginning or end of a book using keyboard commands. To go to the beginning of a book, press Space with dots 1-2-3. To go to the end of a book, press Space with dots 4-5-6.

Alternatively, you can select top or bottom from the Context Menu or you can use d1-d4 to go to the top and d3-d6 to go to the bottom.

3.2.6 Search for Text

To search for text within a book, press f (dots 1-2-4). You will be prompted to enter the text you wish to find. Enter the text, then press Enter. The found text will be placed at the beginning of the display. If the text of the book is being displayed in contracted braille, type your search text in contracted braille. If text of your book is uncontracted, then your search string should be in uncontracted braille.

To find a previous instance of the searched-for text, press f with dot 7 (dots 1-2-4-7) and to find the next instance of the searched-for text, press f with dot 8 (dots 1-2-4-7). To see a list of the search results, press f with dots 7 and 8 (dots 1 2 4 7 8). The list will show how many results, and the volume, page, line, and percentage through the book of each.

3.3 Book Information

You can display additional information about the book you are currently reading by pressing i (dots 2-4). Use the Up and Down navigation keys to move through the list of available book information elements (title, author, description, date, language, subject, publisher, and bookmarks). Use your preferred panning keys to move through the text of each item on the list as needed.

3.4 Bookmarks

The eReader allows you to place bookmarks in reading material for quick return to a particular position.

3.4.1 Setting a Bookmark

To add a bookmark, press b (dots 1-2). A message "bookmark stored" will be displayed. Press a cursor routing button on OK to dismiss it.

3.4.2 Go to Bookmark

While reading a book, you can go to a specific bookmark by opening the context Menu with S3 and press Enter on Bookmarks. A list of the bookmarks you have set will be displayed. Press Enter on the one you wish to go to and the reading position will be taken to that point.

You can move among your bookmarks. Press b with dot 7 (dots 1-2-7) to move to the previous bookmark; press b with dot 8 (dots 1-2-8) to move to the next bookmark.

3.4.3 Remove Bookmark

To remove a saved bookmark, press b with dots 7 and 8 (dots 1-2-7-8).

FCC Statement

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.