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Note.

The equipment described herein has been certified to comply with the limits for Class B computing device, pursuant to Subpart J of 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 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.
Warning.

Only peripherals (computer input/output devices, terminals, etc.) certified to comply with class B limits may be attached to the system. Operation with non-certified peripherals is likely to result in interference to radio and TV reception. Connection to the system's serial communication port requires the use of a shielded cable (not supplied by Xerox Imaging Systems, Inc.).
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Preface.

Welcome to The Reading Edge™, Xerox Imaging Systems' versatile reading machine for people who are blind or visually impaired.

The Reading Edge combines Xerox Imaging Systems' (X.I.S.) exclusive Optical Character Recognition (O.C.R.) technology with a high-quality speech synthesizer in a lightweight, stand-alone system.

Before going on to find out more about The Reading Edge, please read this preface. It describes how this user's guide is organized, and discusses when and where to call if you need help.

How this User's Guide is Organized.

This document provides detailed instructions for using The Reading Edge. The user's guide comprises six chapters and three appendices.

Chapter 1, "Overview," is an introduction to The Reading Edge. The chapter describes many of the system's features and briefly describes how scanning works.

Chapter 2, "Learning About The Reading Edge," lists the system dimensions and brings you on a brief tour of the unit.

Chapter 3, "Using The Reading Edge," describes how to use the system. The chapter begins with the basics of document scanning and reading and then moves on to more advanced usage information.
Chapter 4, "The Six Keypad Levels," discusses The Reading Edge's six keypad levels and provides details on keypad commands.

Chapter 5, "Using the Serial Connector," explains how to use The Reading Edge's serial connector for special applications, such as communicating with computers and using The Reading Edge as a stand-alone speech synthesizer.

Chapter 6, "Tips and Techniques," provides helpful information to aid you in using The Reading Edge.

Appendix A, "Error Messages," discusses the error messages you might encounter while using The Reading Edge. The appendix explains each message and discusses what you can do to remedy the problem.

Appendix B, "Braille Quick Reference," provides a summary of the Braille Dot key combinations for creating letters and numbers.

Appendix C, "System Defaults," lists all default settings for The Reading Edge.

The guide also includes printed diagrams of the four keypad levels. These diagrams are in a pocket on the inside front cover.
When and Where to Call if You Need Help.

Should you experience a problem with The Reading Edge that you cannot resolve, contact X.I.S. Customer Support. The Customer Support number is:

1.800.248.6550.

If any of the following circumstances occur, unplug the unit immediately and contact Customer Support:

- Any part of the unit feels extremely hot.
- The unit has been dropped or damaged.
- The power cord is damaged or frayed.

When you call Customer Support, be prepared to provide your machine’s serial number. This number is on a label at the rear of the system. The serial number is in print and Braille in the bottom right corner of the label.
Factors to Consider Before Calling Customer Support.

Before calling Customer Support, review the following list of nine questions. This list might help you resolve a problem without placing a call. Each question is followed by a chapter of the user's guide to which you can refer for more information.

1. Is the power cord plugged in? Is the cord attached securely to The Reading Edge? (Chapter 2.)

2. If the system powers up, but you do not hear speech, is the memory card plugged firmly into its slot? (Chapter 2.)

3. Is the keypad attached to its jack inside the keypad storage compartment? (Chapter 2.)

4. Is the volume knob set such that the volume is too low? (Chapter 2.)

5. Is the speaking speed knob set such that The Reading Edge is speaking too fast or too slow? (Chapter 2.)

6. If the system has no power when you flip the power switch, has the Circuit Breaker button popped out. (Chapter 2.)

7. If you hear the Page Appears to be Blank message, are you placing the text side face down on the glass? (Chapter 3.)

8. If you are trying to communicate with another device, is the serial cable securely attached to both devices? (Chapter 5.)
If you have answered these questions to your satisfaction and still cannot get your unit to function properly, call X.I.S. Customer Support.

Upgrading to Future Versions.

To upgrade your current version of The Reading Edge to a new version, follow these steps:

1. Turn off and unplug the machine.

2. Carefully remove the memory card from the slot on the right hand side of the machine by pulling the end of the card, firmly and evenly, out from the slot and away from the machine.

3. Holding the new memory card, with your thumb on the Braille end, insert the other end of the new card into the slot. Gently push the card into the slot as far as it will go.

This completes the upgrade to a new version.

End of Preface.
Chapter One. Overview.

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What Is The Reading Edge?

The Reading Edge™ is the first fully integrated, stand-alone reading machine for people who are blind or visually impaired.

The Reading Edge combines advanced speech synthesis, intelligent character recognition, and a Bookedge scanner in one lightweight, portable machine.

With The Reading Edge, you are not anchored to a desk or table. You can carry the system to the office, to school, wherever you need instant access to the printed word.

The Reading Edge is also so easy to install that you can be reading within minutes of unpacking.

Everything You Need in One Machine.

The Reading Edge combines everything you need to scan and read in a fast, easy-to-use machine that weighs only 24.5 pounds.

The Reading Edge features a 300 dots per inch (D.P.I.), bi-directional scanner. No matter how you position a page on the scanner glass, The Reading Edge recognizes the page orientation and adjusts for it automatically.
All the programmed instructions for the system are in a memory card that plugs into the unit. The memory card is described on page 2-7. You can change languages or upgrade to new releases simply by changing this card.

Although it is only the size of a credit card, The Reading Edge memory card is durable. It cannot be damaged through normal day-to-day usage.

The Reading Edge's keypad comprises 18 keys and six keypad levels: Reading, Setup, Braille Editing, Editing, Communications Setup, and Disk Management. The level that you use most often, the Reading keypad, is accessible immediately when you turn on the system.

No matter which keypad level you are on, The Reading Edge's spoken help can identify each key and describe what it does.

You can use The Reading Edge's serial connector to connect the unit to a variety of computers, including IBM PC compatible, Macintosh, and UNIX systems. After you connect the devices, you can send and receive both text and images.

**Practical Features.**

In The Reading Edge, Xerox Imaging Systems (X.I.S.) blends its renowned reading machine technology with practical features.

For example, when you place it on a flat surface, The Reading Edge slopes at a 15-degree angle from front to back. This angle makes scanning bound documents easier and more accurate.
The Reading Edge has a storage compartment for its detachable keypad. On this keypad, the basic keys for using the system are large, color coded, and easy to reach.

The Reading Edge's color-coded volume and speaking speed knobs are toward the front of the system and are easy to identify. You can distinguish the knobs by the feel of their perimeter ridges and by how they feel when you turn them.

The Reading Edge makes scanning books and other bound documents easy. The system's Bookedge™ design holds bound documents in place to ensure proper recognition. In addition, The Reading Edge automatically recognizes the top of a page, so you can easily switch between left and right hand pages.

The Reading Edge also has small touches that make it a pleasure to use. The unit has guides and dimples for locating jacks and receptacles easily. The front of the system also has five ridges that help hold books in place during scanning.

A SPARC processor gives The Reading Edge unmatched speed. Text recognition takes less time, so you spend more time reading and less time waiting.

**Improved Optical Character Recognition**

The current version of the Reading Edge provides three major advances in optical character recognition over earlier versions:

- Improved recognition of large and small text fonts.
- Improved page layout analysis for better identification of headers, footers, and captions.
Improved page recomposition for a closer match between scanned text and spoken text.

**Improved Table Reading Performance**

Table reading performance is improved over earlier versions. Now you can scan and read block tables, where the table rows and columns are separated by horizontal and vertical lines. The Reading Edge reads all of the lines of text in a block, and automatically moves from left to right across a row of blocks.

You can also move up and down in each table column, and across and back in each table row.

**Improved Page Tilt Correction**

Page tilt correction has been improved over earlier versions. The Reading Edge automatically corrects pages with up to 10 degrees of tilt during scanning. If a page is tilted more than 10 degrees you hear the message:

*The last page recognized was very tilted.*

If you hear this message you can simply adjust the page to reduce the angle of tilt.

**Newsprint Filter**

The Reading Edge automatically detects and filters newsprint, providing more accurate scanning than previously possible.
Automatic Fax and Dot Matrix Detection

The Reading Edge automatically detects and adjusts for both faxed material and material printed on a dot matrix printer.

End of Chapter 1, Section 1.
Chapter 1. Section 2.

A Brief Look at How Scanning Works.

The Reading Edge works somewhat like a photocopy machine; however, instead of printing a copy of a page, The Reading Edge reads the page aloud.

When you scan a page, The Reading Edge converts the image of the page to data. The O.C.R. software analyzes the image data and converts the data to text. The Reading Edge's speech synthesizer then reads the text aloud, either immediately or when you instruct it to do so.

The Reading Edge automatically saves all scanned text in its memory. The text remains stored until you erase or overwrite it by filling memory. When memory is almost full, you hear an advance warning that the oldest text in memory will be replaced by new text.

Now that you know about the features of The Reading Edge, you can go on to Chapter 2, "Learning About The Reading Edge." This chapter describes the location of system features.
Chapter 2. Learning About The Reading Edge.

Chapter 2. Section 1. Overview.

This chapter provides a detailed physical description of The Reading Edge. The chapter provides the system dimensions and discusses the location of important features.

End of Chapter 2, Section 1.
Chapter 2. Section 2.
A Tour of The Reading Edge.

This section guides you through a brief tour of The Reading Edge.

System Dimensions.

The Reading Edge is 19.5 inches (50 centimeters) wide by 15 inches (38 centimeters) deep.

With the unit flat on a desk or table, The Reading Edge's front face is 7.5 inches (19 centimeters) high, slanting to three inches at the rear. The unit weighs 24.5 pounds (11 kilograms).

Exploring Your System.

Before you use The Reading Edge, you should familiarize yourself with system features. This section describes the location and purpose of these features.

Unless otherwise specified, the description assumes that you are looking at the system from the front.

Which Side is the Front and Which is the Back?

The Reading Edge's unique design helps you distinguish the front from the back. When you place the unit on a level surface, it slopes downward such that the front of the unit appears higher than the back.
The upper section of front face has an embossed product label with raised Braille dots. The front also has five vertical ridges that are a quarter inch wide and a little over two inches tall. They help to support the book being scanned. These ridges are slightly left of center on the front face.

The back face of The Reading Edge also has a label. Looking at the system from the back, note that this label is at the center of the unit.

The serial number is in print and Braille in the lower right corner of the label.

Top of the Unit.

The top of the unit comprises the following parts:

- Cover.

- Scanner glass.

- Thumb grooves.

The following paragraphs describe the location and purpose of these parts. The paragraphs assume that you are looking at the system from the front.

Cover.

The cover rests on the top surface of the unit. The cover protects the scanner glass from damage and dust and helps hold documents in place during scanning.
The Reading Edge cover has a crease, or lip, on its front edge and is hinged at the back. The cover's bottom face is lined with a soft foam sheet. This sheet provides a background for scanning.

To lift the cover, grasp its front edge and push it toward the rear of the unit.

Scanner Glass.

The scanner glass is the surface on which you place pages for scanning. It is the rectangular plate of clear glass measuring 11.7 by 9 inches. The glass is beneath the cover, and is oriented toward the front left side.

Thumb Grooves.

The Reading Edge has two thumb grooves that help you grip the unit when you carry it. These grooves are the oblong cutouts on both sides of the top surface.

Front of the Unit.

The front of The Reading Edge comprises the following parts:

    Speaker grill.
    Headphone jack.
    Tape recorder jack.
    Keypad compartment.
The following paragraphs describe the location and purpose of these parts. The description proceeds from left to right and assumes that you are looking at the system from the front.

Speaker Grill.

The Reading Edge speaker is inside the speaker grill. This grill is in the bottom left corner of the front face. It is the rounded surface with tiny square holes.

Headphone Jack and Tape Recorder Jack.

You can use the stereo headphone jack to plug in a set of headphones for private listening. The tape recorder jack enables you to connect a tape recorder to The Reading Edge. You can also connect an additional speaker to this jack.

The headphone jack is directly above two vertical ridges, or guides, on the front face. These guides are a little over an inch tall. They are to the right of the five large vertical ridges at the center of the system.

The tape recorder jack is about half an inch to the right of the headphone recorder jack. The tape recorder jack is above a single guide to the right of the two headphone jack guides.

Tip: To remember which jack is which, think of the two headphone jack guides as stereo headphones.

The headphone jack accepts a standard one eighth inch headphone plug, which is the same plug used for most portable stereos.
The tape recorder jack is a standard, one eighth inch socket, the same socket found on many portable cassette players. You can buy a connecting wire at most electronics stores.

To use a tape recorder, connect the tape recorder jack on The Reading Edge with the audio in or microphone jack on the tape recorder. Then, switch the tape recorder to Record and begin using The Reading Edge.

Keypad Compartment.

The 18 button keypad is the means by which you control the system. The keypad is inside a compartment in the bottom right corner of the unit. This compartment is over five inches wide and about three inches high.

A 19 inch coiled wire connects the keypad with a jack at the rear of the compartment. A magnet at the top of the compartment holds the keypad in place.

**Note**: Do not place the memory card, floppy disks, or tapes near the storage compartment because the magnet might damage these items.

To remove the keypad, place your thumb in the space between the top of the keypad and the front surface of the unit. Apply slight downward pressure with your thumb. The keypad drops out into your hand.

For complete information about the keypad, refer to Chapter 4, "The Six Keypad levels."
Right Side of the Unit.

The right side of The Reading Edge comprises the following parts:

- Volume knob.
- Speaking speed knob.
- Memory card.

The following paragraphs describe the location and purpose of these parts. The description assumes that you are looking at the system from the front. It proceeds from the front to back on the right side.

Tip: A thin line runs across the right and left sides of the unit, about two inches below the cover. You can use the line as a guide for locating parts. Most parts are below the line.

Volume Knob.

The **volume knob** enables you to control how loud The Reading Edge speaks. The volume knob is the first of the two knobs on the right side. The other knob is the speaking speed knob.

Tip: You can distinguish the two knobs by the slight difference in their perimeter ridges. You can also distinguish them by how they feel when you turn them. The volume knob turns smoothly. The speaking speed knob clicks from position to position.
You can change the volume at any time. You do not need to interrupt reading or scanning first. To reduce the volume, turn the volume knob counterclockwise, that is, toward you. To increase the volume, turn the knob away from you.

**Speaking Speed Knob.**

The **speaking speed knob** enables you to control the rate at which The Reading Edge speaks. You can change the speaking speed from a minimum speed of 50 words per minute to a maximum of 550.

From 50 words per minute to 100, you can change the speed in increments of 10. From 125 words per minute to 550, you can change the speed in increments of 25.

The speaking speed knob is the second of the two knobs on the right side, in other words, the knob farthest from you. The other knob is the volume knob.

You do **not** need to interrupt reading or scanning to change the speaking speed. To increase the speed up to as high as 550 words per minute, turn the speaking speed knob clockwise, that is, away from you. To decrease the speed to as low as 50 words per minute, turn the knob toward you.

**Note:** If you turn the speaking speed knob beyond the maximum speed, the speed circles around back to the minimum speed. To get back to higher speeds, turn the speed counter clockwise.
Memory Card.

The Reading Edge memory card contains all the programmed instructions for controlling the system. The memory card fits inside a slot toward the rear of right side of the system. The slot is about three inches from the right rear corner. The slot is below two large dimples. To locate these dimples, place your fingers directly under the volume and speaking speed knobs. Then, slide your fingers toward the rear of the system.

The memory card is made of hard plastic and is about the size of a credit card. The top surface has a Braille label with the language and software version. The label is opposite the end that you plug into the slot. The end without the label has 88 tiny female receptacles that mate with the pins inside the slot.

Do not remove the memory card except to change languages or install new software releases. If you need to remove the card for one of these reasons, turn the system off and gently pull the card toward you.

To reinsert the card, grasp the Braille end with the Braille facing upward. Then, gently slide the card into the slot. The card should click into place easily.
Rear of the Unit.

The rear of the unit comprises the following parts:

- Serial connector.
- Stand.
- Ventilation slots.

The following paragraphs describe the location and purpose of these parts. The description assumes that you are looking at the system from the rear.

Serial Connector.

The Reading Edge has an R. S. 232 D.C.E. (Data Communications Equipment) serial connector. This oblong, 25 pin connector is for the male end of a serial cable. The serial connector is five inches from the rear left corner of the system.

For information about serial communication, refer to Chapter 5, "Using the Serial Connector."

Stand.

You use the stand to raise the rear of the unit to the same height as the front.

The stand is beneath the system at the rear. To extend the stand, lift the back end of the system and pull the stand toward you gently.
Ventilation slots.

The ventilation slots provide cooling for the unit.

Left Side of the Unit.

The left side of The Reading Edge comprises the following parts:

- Circuit breaker reset button.
- Power cord receptacle.
- Power cord.
- Power switch.

The following paragraphs describe the location and purpose of these parts. The description assumes that you are looking at the system from the front.

Circuit Breaker Reset Button.

With the circuit breaker reset button, you can reset The Reading Edge after a power surge causes the circuit breaker to shut the system down.

Similar to a fuse, the 1.5 amp circuit breaker is an internal switch that protects The Reading Edge from receiving too much electricity.

The circuit breaker reset button is a small round piece with a ridged perimeter. The button is on the bottom left side of the unit, next to the power cord receptacle. This receptacle is described below.
When the circuit breaker shuts the system off, a small round post pops out of the center of the circuit breaker reset button. To reset the system, press the post back in.

Power Cord Receptacle.

The power cord receptacle receives the female end of the power cord.

The power cord receptacle is the square, three prong opening on the lower left side, behind the speaker.

Power Cord.

The nine foot power cord connects The Reading Edge with an electrical outlet. The female end of the power cord connects to the power cord receptacle. The male end connects to the electrical outlet.

Power Switch.

The power switch turns The Reading Edge on or off.

The power switch is the rectangular button near the top left corner of the speaker grill. The switch is about an inch and a half in from the corner that extends out over the grill.

To start The Reading Edge, you press down the front end of the power switch, that is, the end closest to you.
This ends your tour of The Reading Edge and its features. For information about using the system, proceed to Chapter 3, "Using The Reading Edge."

End of Chapter 2, Section 2.
End of Chapter 2.
Chapter 3.
Using The Reading Edge.

Chapter 3. Section 1.
Overview.

This chapter describes how to use The Reading Edge. The chapter covers the following topics:

- Before You Begin Using the System. (Section 3.2.)
- Learning the Basics. (Section 3.3.)
- Moving Beyond the Basics. (Section 3.4.)

End of Chapter 3, Section 1.
Chapter 3. Section 2.
Before You Begin Using the System.

This section points out basic concepts about using The Reading Edge. It briefly describes the six keypad levels and how the keypad is organized. The section also describes how the system's memory works.

The Keypad Operating Levels.

The Reading Edge keypad is actually six keypads in one; that is, the keypad comprises six separate operating levels:

- Reading
- Setup
- Braille Editing
- Editing
- Communications
- Disk Management

Each operating level contains a family of related commands.

The Reading level includes all the commands you need to scan, read, and navigate through text. The Reading level is the default keypad level. The Reading Edge always begins at this level.

On the Setup level of the keypad, you can customize The Reading Edge to suit your needs. For example, you can change the reading and message voices.
The **Braille Editing level** provides basic text editing functions. It combines navigation keys with keys for creating Grade 1 and Grade 2 Braille characters. You can use it to edit footnotes, document names, text in memory, and pronunciation memory.

The Editing level is for users who decide not to use the Braille keypad. You can use it to edit footnotes, document names, text in memory, and pronunciation memory.

The Communication **setup** level enables you to control how The Reading Edge communicates with computers through its serial connector.

The **Disk Management** level lets you load, erase, and store files on an external floppy disk and to locate documents in storage memory.

For complete information about the keypad levels, refer to Chapter 4, "The Six Keypad Levels."

**The Keypad Layout.**

The Reading Edge keypad comprises 18 keys in four horizontal rows. The keypad includes four large keys and 14 small keys.

The top row of the keypad is the row of four small keys along the edge to which the cable is connected. A large key spans the top row and the row beneath it. The top row should be the row farthest from you.

The bottom of the keypad is the row of keys that is closest to you. This row includes three large keys.
The four largest keys on the keypad perform the same functions on the Reading, Setup, and Communication levels.

The Select Keypad key is the large key in the upper left corner, spanning the first two rows of small keys. To move from level to level on the keypad, you press this key while holding down the Shift key, which is the middle key on the bottom row.

The Start and Stop Scanning key is the far left key in the bottom row. You press this key to start scanning. To stop scanning, press this key while holding down the Shift key, the middle key in the bottom row.

The bottom middle key is the Stop and Continue Reading or Shift key. You use this key to stop or start speaking.

Notes: Throughout this user's guide, the Start and Stop Scanning key is called the Scanning key. In addition, the Stop and Continue Reading or Shift key is referred to as the Reading key or Shift key, depending on the context.

When pressed along with a menu key (in other words, a key that has multiple choices), the Shift key reverses the order of the choices. The Shift also initiates a second function on some keys. For example, pressing the Shift key and the Last Word or Row key moves the cursor backward by row in a document.

The Help key is the far right key on the bottom row. When you tap this key followed by a second key, the system identifies the second key. For example, when you tap the Help key and then the bottom left key on the Reading level, the system says:

Start and stop scanning.
When you tap the Help key and then hold a second key down, the Help system explains the second key's purpose. For example, when you tap the Help key and then hold down the Scanning key, the system says:

*Press this key to start scanning. If scanning and recognition is in progress, you can cancel the current scan by using this key with the Shift key. If the scanner is idle, using this key with the Shift key appends the page scanned to the previous page, enabling you to scan pages too large for the scanner glass.*

When you press and hold the Help key by itself, The Reading Edge provides system status information and the information about the current keypad level.

**Understanding Storage Memory.**

Before you begin using The Reading Edge, you should understand the system's storage memory.

The Reading Edge keeps scanned and received text in storage memory. This memory holds between 50 and 100 pages. It also stores other information such as user-defined setup options. The Reading Edge does not store TIFF images.

You can erase text, whole or in part, at any time. When storage memory is almost full, you receive a message warning you that the most recent text will overwrite the oldest text in memory.

*Note:* You can protect documents from being overwritten when memory reaches capacity. Refer to Chapter 4, "The Six Keypad Levels," for instructions.
Locating Pages in Memory.

When you turn The Reading Edge on, the position in memory depends on your first actions with the system.

If you scan or receive text first, The Reading Edge's Speak Immediately feature activates. With this feature, the system begins reading the new text as soon as it has recognized or received part of the text.

Note: For Speak Immediately to work, do not press any of the keys before speaking begins.

As it speaks, The Reading Edge simultaneously finishes recognizing or receiving text and stores this new text after the last text currently in memory. It continues reading the next text until it reaches the end of the text.

Last Position in Memory Saved.

When you turn off The Reading Edge, the system marks your place in storage memory. At the beginning of the next session, you can start on the same page. If you scan a page at the beginning of a session, that page assumes the current position in memory.

To return to the stored position in memory, first choose the Go to Mark option on the Mark Text Key, which is on the Reading level. Next, press the Mark 4 key, that is, the top right key on the keypad.
You can use the movement keys to locate other documents in memory. The movement keys are the small keys in the top two rows of the Reading and the two Editing levels. You can use these keys to move by:

- Word or Row.
- Line or Column.
- Sentence or Paragraph.
- Page or Document.

The keys in the top row enable you to move backward in memory. The keys in the second row enable you to move forward in memory.

For complete information about the movement keys, refer to Chapter 4, "The Six Keypad Levels."

**End of Chapter 3, Section 2.**
Chapter 3. Section 3.
Learning the Basics.

This section discusses the basics of using The Reading Edge, including how to scan, read, and erase text.

The Reading Edge reads virtually any printed text, including typeset, typewritten, laser-printed, and photocopied materials. The unit recognizes almost every type style in sizes from 8 to 72 points.

The Reading Edge is a bi-directional scanner, so it recognizes a page regardless of how you position the page on the scanner glass.

You can scan and read pages in portrait and landscape style. Portrait means that the text on the page is vertically oriented, spanning the width of the page. Landscape means the text is horizontally oriented, spanning the length of the page.

Although the scanner glass measures 11.7 by 9 inches, you can scan and read portrait pages that are longer than the glass. To scan and recognize such pages, you use the stitching function. For complete information about stitching, refer to "Scanning Long Pages," in Section 3.4.

Scanning and Reading a Page.

Use the following steps to scan and read a page of text. These steps assume that you have turned The Reading Edge on and have not yet changed the system's default settings.
Step 1. Place the page on the scanner glass.

Lift the cover and place the page you want to read face down on the scanner glass.

As long as the page is not tilted more than 10 degrees, the Reading Edge will recognize the page regardless of where you position it on the glass.

Step 2. Close the cover.

Close the cover carefully to avoid skewing the page.

Step 3. Start scanning and reading.

Press the Scanning key, which is the far left key in the row of keys at the bottom of the keypad. You then hear a humming sound as the scanner bar moves beneath the glass. Occasionally, you hear a sequence of pulses before the bar moves across the page. These sounds are normal. They indicate that the scanner is calibrating.

The Reading Edge pauses while it recognizes the page. It then begins reading when it has recognized part of the page.

Note: To cancel scanning, hold down the Shift key and press the Scanning key. The Shift key is to the right of the Scanning key. The scanner bar stops moving, and you hear the following message:

Page canceled.
If you want the system to start reading as soon as it can, do not press another key before speaking starts. Pressing any key at this point shuts off the Speak Immediately feature.

If you do inadvertently press some other key, pressing the Reading key will turn Speak Immediately back on. This is indicated by a low beep, rapidly followed by a high beep.

To interrupt speaking once it starts, press the Reading key, which is to the right of the Scanning key.

If the system is speaking, it beeps once to indicate that it has finished recognizing the page. If it is not speaking when it completes recognition, The Reading Edge says:

*Ready for next page.*

In either case, you can scan another page.

You can initiate a new scan after the current scan is finished, but before recognition is complete. Simply place a new page of text on the scanner glass, then press the Scanning key. You hear:

*Page queued for scanning.*

The system stores the keystroke, and as soon as recognition is complete, the new scan begins.
If you press the Scanning key before the scanner bar stops moving, you hear the following message:

*Please wait for scanning to stop before pressing scan again; or use Shift Scan to cancel.*

Wait until the scan is complete, or cancel the current scan by holding down Shift and pressing the Scanning key.

If the scanner bar is on the right side of the unit, and you do not initiate a scan for five minutes, the bar automatically moves to the left side to calibrate before the next scan. A single beep now replaces the message:

*Scanner moving to calibration side.*

However, you can still hear the message by pressing the Status key while the scanner bar is moving.

**Erasing a Page.**

Use the following steps to erase a page.

**Step 1. Select the Erase key.**

Press the Erase key three times. The Erase key is the fifth key from the left in the third row of the Reading level.

The Reading Edge says:

*Erase current page. Please confirm with top right key.*
Step 2. Confirm the erasure.

Press the far right key in the top row to confirm your choice. The Reading Edge says:

Done.

To cancel the erasure, press any key but the top right key.

End of Chapter 3, Section 3.
Chapter 3. Section 4.  
Moving Beyond the Basics.

This section describes techniques you can use once you understand basic scanning and reading. These techniques include:

- Scanning bound documents.
- Scanning long pages.
- Naming a document.
- Creating a new document.
- Changing the brightness level.

Scanning Bound Documents.

The Reading Edge makes scanning books and other bound documents easy. The system's Bookedge™ design holds bound documents in place to ensure proper recognition. In addition, The Reading Edge automatically recognizes the top of a page, so you can easily switch between left and right hand pages.

Use the following steps to scan a bound document:

Step 1: Position the document for scanning.

Lift the cover and place the document face down. The spine of the bound document should be flush against the front edge; that is, the spine should be facing you.

Step 2. Lower the cover.

Lower the cover to hold the document in place.
Step 3. Start scanning and reading.

Press the Scanning key, which is the far left key in the row of large keys at the bottom of the keypad.

You then hear a humming sound as the scanner bar moves beneath the glass. Occasionally, you hear a sequence of pulses before the bar moves across the page. These sounds are normal. They indicate that the scanner is calibrating.

The Reading Edge pauses while it recognizes the page. It then begins reading when it has recognized part of the page.

Note: To cancel scanning, hold down the Shift key, and press the Scanning key. The Shift key is to the right of the Scanning key. The scanner bar stops moving, and you hear the following message:

Page canceled.

If you want the system to start reading as soon as it can, do not press another key before speaking starts. Pressing any key at this point shuts off the Speak Immediately feature.

If you do inadvertently press some other key, pressing the Reading key will turn Speak Immediately back on. This is indicated by a low beep, rapidly followed by a high beep.

To interrupt speaking once it starts, press the Reading key, which is to the right of the Scanning key.
If the system is speaking, it beeps once to indicate that it has finished recognizing the page. If it is not speaking when it completes recognition, The Reading Edge says:

*Ready for next page.*

In either case, you can scan another page.

**Step 4. Continue scanning.**

Lift the cover and flip the document around to the opposite page. Lower the cover and press the Scanning key again.

Continue to alternate from page to page. The system continues reading while you scan pages.

**Scanning Long Pages.**

The Reading Edge's scanner glass is 11.7 inches long, so some pages that you place on the glass might be longer than the glass itself.

With long pages, such as legal-sized paper, the system requires more than one pass to scan the entire page. In such cases you must append, or stitch, the bottom of the page to the top part, which is already in memory.

**Note:** You cannot stitch landscape pages; that is, pages on which the text is horizontally oriented, spanning the length of the page.

Use the following steps to stitch long documents:
Step 1. Place the page on the scanner glass.

Lift the cover and place the page you want to read face down on the scanner glass.

As long as the page is not skewed, The Reading Edge will recognize the page regardless of where you position it on the glass.

Note: The system recognizes long pages properly regardless of whether you start scanning at the top or bottom of the page. The following procedures assume that you are starting at the top.

Step 2: Close the cover.

Close the cover carefully so you do not skew the page.

Step 3. Start scanning and reading.

Press the Scanning key, which is the far left key in the row of keys at the bottom of the keypad. You then hear a hummin sound as the scanner bar moves beneath the glass. Occasionally, you hear a sequence of pulses before the bar moves across the page. These sounds are normal.

The Reading Edge pauses while it recognizes the page. It then begins reading when it has recognized part of the page.

Note: To cancel scanning, hold down the Shift key and press the Scanning key. The Shift key is to the right of the Scanning key. The scanner bar stops moving, and you hear the following message:

Page canceled.
If you want the system to start reading as soon as it can, do not press another key before speaking starts. Pressing any key at this point shuts off the Speak Immediately feature.

If you do inadvertently press some other key, pressing the Reading key will turn Speak Immediately back on. This is indicated by a low beep, rapidly followed by a high beep.

To interrupt speaking once it starts, press the Reading key, which is to the right of the Scanning key.

If The Reading Edge is speaking, it beeps once to alert you that it has finished recognizing the page. If it is not speaking when it completes recognition, The Reading Edge says:

*Ready for next page.*

**Step 4. Adjust the document on the glass.**

Lift the cover and move the page up on the glass. The bottom edge of the page must be flush with the right or left edge of the scanner glass.

**Step 5. Scan the rest of the text.**

Press the Shift key and then the Scanning key to append the remaining text on the page to the text already in memory. The Reading Edge says:

*Scanning more of the same page.*

The system recognizes the rest of the page.
Note: Do not press the Shift and Scanning keys until you hear the beep or the "Ready for Next Page" message. Pressing these keys before the beep or message cancels scanning.

Creating a New Document.

Creating new documents is an important part of managing storage memory. The following subsections describe how to start and name a new document.

Starting a Document.

Use the following procedures to start a new document.

Step 1. Mark the Document

Press the Mark key four times. The Mark key is the fourth key from the left in the third row of the Reading level.

The Reading Edge says:

*Start new document with next input. Please confirm with top right key.*

Step 2. Confirm the mark.

Press the key in the top right corner of the keypad. The Reading Edge says:

*Done.*
To cancel the new document, press any key except the top right key. The Reading Edge says:

Canceled.

Naming a Document.

For each new document, The Reading Edge automatically assigns the name "Untitled" followed by a number. You can specify another name at any time, however.

To name a document, you use the Braille editing, or Dot, keys on the Braille Editing level. These keys include the six small keys in the third row and the middle key on the bottom row.

Use the following steps to name a document.

Step 1. Move to the Editing Level of the Keypad.

Press the Shift and Select Keypad keys until The Reading Edge says:

Braille Editing keypad.

The Select Keypad key is the large key in the upper left corner of the keypad.

Step 2. Indicate the item you want to edit.

Press the Edit Selection key, the far left key in the row of large keys at the bottom, until you hear the following message:

Editing keypad will edit the current document name.
Step 3. Type a name into memory.

Press a combination of the Braille editing keys to name the page. The name can be up to 20 characters long.

For example, to name a series of pages Doc 1, you would use the following key sequence:

- Third, fourth, and fifth keys (Dots 1, 4, and 5), for the letter D.
- First, third, and fifth keys (Dots 3, 1, and 5), for the letter O.
- Third and fourth keys (Dots 1 and 4), for the letter C.
- Middle key on the bottom row, for a blank space.
- First, fourth, fifth, and sixth keys (Dots 3, 4, 5, and 6), for the number sign.
- Third key, (Dot 1), for the number 1.

Step 4. Check the pronunciation. (Optional.)

Press the Shift and Select Keypad keys until The Reading Edge says:

*Reading keypad.*

*Updating text. Please do not power off.*

Press and hold the Help key until The Reading Edge speaks the new document name.
Changing the Brightness Level to Improve Recognition.

The ideal page for scanning is white with clearly separated black characters and no smudges or dirt. Everyday documents can be far from ideal, however, so changing the brightness level is a way to accommodate these documents.

The Reading Edge offers you 16 brightness levels. Levels 1 through 7 darken light or thin characters. Levels 9 through 16 lighten thick characters or characters that are close to each other. Level 8 is the factory default setting. It is appropriate for most documents.

How Can You Tell if a Page is Too Dark or Too Light?

You can encounter two types of scanning errors if a page is too light or too dark.

If a page is too light, the printed characters break apart to form other incorrect characters.

For example, the lower-case m usually breaks apart into three lower-case i's. The upper-case W usually breaks apart into two or three slashes. If you are experiencing these kinds of problems, try scanning the page with a lower brightness setting.

If a page is too dark, the printed letters run together, forming new characters, or more frequently, forming unrecognizable characters that The Reading Edge speaks as garbled text.
For example, the lower-case letters \( r \) and \( n \) frequently run together to form a lower-case \( m \). The lower-case letters \( r, v, \) and \( i \) run together to form an upper-case \( M \). Scanning dark pages also produces many tilde characters, which represent unrecognizable characters.

If The Reading Edge is consistently speaking garbled text or tildes, make sure that the page is not skewed on the scanner glass. If the problem persists, the page you are scanning may be too dark. In such a case, choose a higher brightness setting.

Changing the Brightness Setting.
Use the following steps to change the brightness level.

Step 1. Move to the Setup level of the keypad.

Press the Shift key and Select Keypad keys until The Reading Edge says:

Setup keypad.

The Shift key is the middle key in the bottom row. The Select Keypad key is the large key in the upper left corner of the keypad.

Step 2. Choose the Brightness Setting.

Press the Brightness key, the far right key in the third row, until you hear the setting you want to use.

Pressing the Brightness key by itself moves the setting higher; pressing the key while holding down the Shift key lowers the setting.
Note: If you press the Brightness key while you are at level 16 (darkest), the system proceeds to level 1 (lightest). If you are at level 1 and press Shift and Brightness keys, the system moves to level 16.

End of Chapter 3, Section 4.
End of Chapter 3.
Chapter 4.
The Six Keypad Levels.

Chapter 4. Section 1.
Overview.

This chapter discusses The Reading Edge™ keypad. The chapter provides detailed information about all the options available on the six keypad levels: Reading, Setup, Braille Editing, Editing, Communication Setup, and Disk Management. The chapter includes a section for each of these levels.

This chapter does not discuss the four largest keys on the keypad. Refer to Chapter 3, "Using The Reading Edge," for information about these keys.

Note that the term power on default setting (or, in short, default), appears throughout the chapter. The term refers to the settings that are active when you first turn on The Reading Edge.

The Reading, Setup, and Communication Setup levels have keys with default settings. These are the settings when you receive your Reading Edge. You can modify these settings at any time, and they will become your power on default settings. You can restore the original default settings at any time.

On the Reading, Setup, and Communication Setup levels, you can change, save, and restore settings, including the default settings. For more information, refer to Sections 4.2 and 4.4.

You use the Shift and Select Keypad keys to move forward from level to level on the keypad.
For example, hold down the Shift key and press Select Keypad to proceed from the Reading level to the Setup level.

To move in reverse order from level to level, press the Select Keypad key.

End of Chapter 4, Section 1.
Chapter 4. Section 2.
The Reading Level.

The Reading level of the keypad provides keys to read scanned text or text received through the serial connector. Whenever you turn on The Reading Edge, it begins on the Reading level.

You can save the settings for three Reading level keys:
- Columns.
- Select Input.
- Punctuation.

You save these settings by using the Setup level, described in Section 3 of this chapter.

To hear the status of all the options on the Reading level (except punctuation), press and hold the Help key by itself. The system also reads the name and current page number of your document.

The following paragraphs describe the small keys on the Reading level. The descriptions proceed row by row, moving left to right across the keypad.

If you press one of the Last keys, which are the top four keys on the Reading level, the system reads the current word, line sentence, or page, depending on your choice.

If you press a Last key twice, rapidly, the system reads the previous word, line, sentence, or page.
Top Row, First Key. Last Word or Row.
Press the Last Word or Row key to read the current word. Pressing the key again moves the text position backward by one word.

Press and hold down the Last Word or Row key to move the text position backward rapidly word by word. As the position changes, low beeps indicate new words, and high beeps indicate new lines.

When used with the Shift key, the Last Word or Row key moves the position backward within a table column. That is, you move up the column.

Top Row, Second Key. Last Line or Column.
Press the Last Line or Column key to read the current line of text. Pressing the key again moves the text position backward by one line.

Press and hold down the Last Line or Column key down to move the position backward rapidly, line by line. As the position changes, low beeps indicate new lines, and high beeps indicate new columns.

When used with the Shift key, the Last Line or Column key moves the position backward by column. If you are in a ruled table, you will move to the left within the same row.

Top Row, Third Key. Last Sentence or Paragraph.
Press the Last Sentence or Paragraph key to read the current sentence. Pressing the key again moves the text position backward by one sentence.
Press and hold the Last Sentence or Paragraph key to move the text position backward rapidly sentence by sentence. As the position changes, low beeps indicate new sentences, and high beeps indicate new paragraphs.

When used with the Shift key, the Last Sentence or Paragraph key moves the text position backward by paragraph.

Top Row, Fourth Key. Last Page or Document.
Press the Last Page or Document key to read the current page. Pressing the key again moves the text position backward by one page.

Press and hold the Last Page or Document key to move the text position backward rapidly page by page. As the position changes, high beeps indicate new pages. A low beep indicates that you have reached the beginning of the document.

When used with the Shift key, the Last Page or Document key moves the position back by document.

Second Row, First Key. Next Word or Row.
The Next Word or Row key enables you to read the next word in the text. Pressing the key again moves the text position ahead by one word and speaks the word.

When you press and hold the Next Word or Row key, The Reading Edge speaks the text word by word. As the text position changes, each word is spoken individually.
When used with the Shift key, the Next Word or Row key moves the text position to the next entry within a table column. That is, you move down the column.

**Second Row, Second Key. Next Line or Column.**

The Next Line or Column key enables you to read the next line in the text. Pressing the key again moves the text position ahead by one line.

Press and hold the Next Line or Column key to move the text position ahead rapidly line by line. As the position changes, low beeps indicate new lines, and high beeps indicate new columns.

When used with the Shift key, the Next Line or Column key moves the text position to the next entry in a row, that is, ahead by column. If you are within a ruled table, you will move to the right within the same row.

**Second Row, Third Key. Next Sentence or Paragraph.**

By pressing the Next Sentence or Paragraph key, you can read the next sentence in the text. Pressing the key again moves the text position ahead by one sentence.

Press and hold the Next Sentence or Paragraph key to move the text position forward rapidly sentence by sentence. As the position changes, low beeps indicate new sentences, and high beeps indicate new paragraphs.

When used with the Shift key, the Next Sentence or Paragraph key moves the text position ahead by one paragraph.
Second Row, Fourth Key. Next Page or Document.
Press the Next Page or Document key to read the next page. Pressing the key a second time moves the text position ahead by one page.

Press and hold the Next Page or Document key to move the text position ahead rapidly page by page. As the position changes, high beeps indicate new pages. A low beep indicates that you have reached the end of the document.

When used with the Shift key, the Next Page or Document key moves the text position ahead by one document.

Third Row, First Key. Spell.
Use the Spell key to read text character by character. When you first press the Spell key, the text position moves to the beginning of the current word. The Reading Edge then speaks the first character. From that point on, when you press the Spell key, the system speaks each successive character.

When you press and hold the Spell key, The Reading Edge spells an entire word aloud. As the text position changes, the word space indicates a new word.

Third Row, Second Key. Punctuation On/Off.
With the Punctuation key, you can choose whether to speak punctuation marks in the text. The default setting is Do Not Say Punctuation.

You can save this setting. To do so, use the Setup level, described in Section 3 of this chapter.
Third Row, Third Key. Columns.

You use the Columns key to set the number of columns to scan. With Variable Column Page Scanning, The Reading Edge detects the number of columns automatically.

Choose One Column Page Scanning to scan a document with a single column or to read across a multiple column document (such as an unruled table).

A ruled table has vertical and horizontal lines separating each item in the table. You should scan it in Variable Column mode. If you do not know which type of table it is, scan it first in Variable Column mode. If the order in which it is read does not seem correct, scan it again in One Column mode.

Variable Column Page Scanning is the default setting.

You can save this setting. To do so, use the Setup level, described in Section 3 of this chapter.

Third Row, Fourth Key. Mark Text.

The Mark Text key enables you to place and recall electronic bookmarks in the text. You use the Mark Text key along with the movement keys in the top two rows of the keypad.

You can mark up to eight places in the text, one for each of eight movement keys. You can also use the Mark Text key to transmit blocks of text through the serial connector.
The Mark Text key provides the following six choices:

Set Mark.
Go to Mark.
Start New Document with Next Input.
Send the Text Between the Mark and the Cursor.
Transmit End of File Character.
Protect the Current Document.

The following paragraphs explain these six choices.

Choice 1. Set Mark.

Choosing Set Mark enables you to place an electronic bookmark in the text. This bookmark remains in place only while the system is on.

Use the following steps to place a mark.

Step 1. Press the Mark Text key twice, or until The Reading Edge says:

Set mark. Please select mark with one of top 8 keys.

Step 2. Press any one of the keys in the top two rows of the keypad.

You can assign a different mark to each of these keys. The Reading Edge assigns a mark number according to the key you press. The top four keys are marks one through four. The keys in the second row are marks five through eight.
You can change a marked key as many times as you want. The newest mark automatically replaces the existing mark.

Choice 2. Go To Mark.

Choosing Go To Mark enables you to go to previously set marks.

Use the following steps to move to a mark.

Step 1. Press the Mark Text key three times, or until The Reading Edge says:

   Go to mark.

Step 2. Press one of the keys to which you have assigned a mark. For example, when you press the third key, the system says:

   Going to mark 3.


You can select Start New Document with Next Input to create a new document with the next input from the scanner or serial connector.

Use the following steps to start a new document with the next input.

Step 1. Press the Mark Text key four times, or until The Reading Edge says:

   Start new document with next input. Please confirm with top right key.
Step 2. Press the key in the top right corner of the keypad.

Choice 4. Send the Text Between the Mark and the Cursor.

With this choice you can send a portion of the text in memory, for example, a sentence, to another device. For more information, refer to "Sending Selected Text" in Chapter 5, "Using the Serial Connector."

Choice 5. Transmit End of File Character.

Choosing Send End of File Character enables you to transmit the ASCII character or characters that indicate the end of a document. For more information, refer to the Section 4.5 of this chapter.


Ordinarily, when memory is full, the oldest text is replaced by new text. With the Protect the Current Document option, you can prevent a document from being overwritten when memory reaches its capacity.

You can protect any document in memory at any time. After you have protected a document, you can erase it only by choosing Erase Current Document while you are in the protected document.

Use the following steps to protect a document.

Step 1. Move the text position to the document you want to protect.
Page 4.12.

Step 2. Press the Mark Text key five times, or until The Reading Edge says:

*Protect the current document. Please confirm with top right key.*

Step 3. Press the key in the top right corner of the keypad.

The document is now protected from erasure.

Third Row, Fifth Key. Erase Text.

Press the Erase Text key to erase text from memory.

**Note:** When you choose an Erase Text option, you must confirm the choice by pressing the top right key on the keypad.

The Erase Text key provides the following four choices:

- Erase All Text.
- Erase Current Document.
- Erase Current Page.
- Erase Current Column.

Choice 1. Erase All Text.

Choose Erase All Text to delete all text in memory, except protected text. You can erase protected text only by choosing Erase Current Document while you are in the protected text.
Choice 2. Erase Current Document.

Choose Erase Document to delete the current document.


Use this option to erase the current page.

Choice 4. Erase Current Column.

Use Erase Column to delete a column of text in a multi-column page.

Third Row, Sixth Key. Select Input.

You use the Select Input key to choose a means of bringing text into The Reading Edge's memory.

The Select Input key provides the following five choices:

- Scan Text.
- Fast Scan of a Simple Page.
- Scan Newspaper print.
- Receive TIFF Image.
- Receive from Screen Reader.
- Receive Text.

You can save these settings. To do so, use the Setup level, described in Section 3 of this chapter.

The following paragraphs describe these choices.
Choice 1. Scan Text.

Choose Scan Text to scan text into The Reading Edge's memory. The Reading Edge automatically recognizes both dot matrix and fax documents that contain scanned text. For more information about scanning, refer to Chapter 3, "Using The Reading Edge."

Choice 2. Fast Scan of a Simple Page.

Fast scanning is the fastest way to scan pages that meet the following criteria:

- Single-column pages.
- Portrait pages.
- No dot matrix, newspaper, or fax text.
- No lists, tables, or graphics.

When you select the Fast Scan option, The Reading Edge ignores your default settings, and uses these settings:

- Single column input.
- Portrait page orientation.

When you stop using the Fast Scan option, your default settings are again in effect.

Choice 3. Scan Newspaper Print.

This option provides improved recognition of newspaper text. It searches for text characters on the newspaper page and ignores everything else.
We recommend that you have someone cut articles out of the newspaper before you try to scan them into The Reading Edge. This can improve the speed and accuracy of the reading of the newspaper text.


Choose Receive TIFF Image to receive TIFF images through the serial connector and recognize them as text. The Reading Edge automatically recognizes both dot matrix and fax documents that contain TIFF images.

The Reading Edge uses the XMODEM protocol to receive TIFF images. Your communication program on the sending computer should support that option.

Note: The Reading Edge accepts only TIFF images with a resolution of 300 dots per inch (D.P. I.) or less. Three hundred D. P. I. is the recommended size.

Choice 5. Receive from Screen Reader.

Choose this option to use The Reading Edge as a speech synthesizer. In other words, The Reading Edge provides speech synthesis to a personal computer that has screen reader or communications software, but does not have a speech board.

To use The Reading Edge as a speech synthesizer, you must connect the system to the computer through both devices' serial connectors. In addition, the communication parameters must be the same for both devices.
Note: The Receive from Screen Reader option disables all other system functions. For example, when this option is active, The Reading Edge does not save text in memory.

Only the Select Input key works when the Receive from Screen Reader option is active. The personal computer controls all functions.


Choose Receive Text to bring ASCII text into The Reading Edge through the serial connector.

Note: When receiving text or images from another device, ensure that The Reading Edge's communication parameters match those of the sending device. For information, refer to Chapter 5, "Using the Serial Connector."

End of Chapter 4, Section 4.2.
Chapter 4. Section 3.
The Setup Level.

On the Setup level of the keypad, you can customize The Reading Edge to suit your needs. For example, you can change the reading voice, the voice inflection, and the scanning brightness level.

You can save the settings for these keys:

Brightness level.
Orientation.
Remove Halftones.

The following paragraphs describe the small keys on the Setup level. The paragraphs proceed row by row, moving left to right across the keypad.

Top Row. First Key. Reading Voice.
You press the Reading Voice key to choose the voice The Reading Edge uses to read text aloud. You can change the reading voice at any time and then save that voice as the power on default.

When you scan English documents, you can choose from the following nine reading voices:

   Paul, (the default).
   Harry.
   Frank.
   Dennis.
When you scan documents in languages other than English, you can choose one of the following five reading voices:

- Male.
- Female.
- Deep Male.
- Child.
- Other.


Press the this key to choose the voice The Reading Edge uses to speak system messages.

You can choose from the same nine voices available through the Reading Voice key. You can change the message voice at any time and save that voice as the default. The default voice is Betty.
Top Row. Third Key. Emphasis Voice.

The Emphasis Voice key enables you to choose a reading voice for bold, underlined, and italicized text. You can choose any of the nine voices available from the Reading Voice and Message Voice keys.

You can change emphasis voice at any time and save that voice as the default. The default setting is Perfect Paul.

If you prefer to hear the same voice for regular and emphasized text, change the emphasis voice setting to the same voice as the reading voice setting.

Top Row. Fourth Key. Not in Use.

Second Row. First Key. Reading Inflection.

Press the Reading Inflection key to select the reading voice tone. You can vary the voice tone in 25-percent increments up to 200 percent. Normal inflection is 100 percent. A tone of 0 percent produces a monotonous voice. Two hundred percent produces an animated voice.

You can change the reading inflection at any time and save that tone as the default. The default is 100 percent.


Choose the Message Inflection key to select the message voice. You can vary the tone in 25-percent increments up to 200 percent. Normal inflection is 100 percent. A tone of 0 percent produces a monotonous voice tone. Two hundred percent produces an animated voice tone.
You can change the message inflection at any time and save that tone as the default. The default is 100 percent.

Second Row, Third Key. Not in Use.

Second Row, Fourth Key. Not in Use.

Third Row. First Key. Save or Restore Settings.
Press this key to save or restore Setup level settings. You can save four different combinations of settings, numbered 1 through 4. The confirmation key you press indicates the number of the setting.

Setting 1 is the default setting. In other words, when you turn it on, the system automatically uses any change you make to Setting 1.

This key is also on the Communication Setup level. However, you cannot use the key on the Setup level to save or restore settings on the Communication Setup level, and vice versa. That is, The Reading Edge saves communications settings separately from the other settings.

On the Setup and Communication Setup levels, the Save or Restore Settings key provides the following four choices:

Use Current Settings.
Save Current Settings.
Restore Old Settings.
Restore Factory Settings.
The following paragraphs explain these four choices.

Choice 1. Use Current Settings.

When you choose the Use Current Settings option, The Reading Edge uses the current settings until you choose other settings or turn the unit off. This setting is the default.

Choice 2. Save Current Settings.

Choose Save Current Settings to save your current settings so that they are still available the next time you start The Reading Edge.

When you save settings on the Setup or Communications keypad, you receive a message reminding you that you can use the top left key to save the settings as the default. You hear:

_Save current reader settings. Please select setting with one of top four keys. Top left is the power-on default._

Choice 3. Restore Old Settings.

With the Restore Old Settings choice, you can restore four different combinations of settings, numbered 1 through 4.

If you have never saved settings, The Reading Edge uses its default settings.


Choosing Restore Factory Settings restores the original default settings.
Use this key to turn the Startup Message on and off.

You can save this setting.

Third Row. Third Key. Key Click On/Off.
With this key you can choose whether to hear a clicking sound with every key stroke. Unless you save this setting, it remains active only until you turn The Reading Edge off.

Use this key to adjust The Reading Edge for the orientation of text on a page. The Page Orientation key offers three choices:

- Automatic.
- Portrait.
- Landscape.

You can save these settings using the Save or Restore key.

The following paragraphs describe these choices.

Choice 1. Automatic.

With this option, The Reading Edge assesses the page orientation automatically. This setting is the default.

Tip: When the Automatic setting is active, The Reading Edge requires more time to recognize a page.
If you consistently scan pages with the same page orientation, consider using either the Portrait or Landscape option to reduce the time the system requires to recognize pages.

Choice 2. Portrait.

Choose this option to scan pages on which the text is vertically oriented; that is, the text is printed across the width of the page.

Choice 3. Landscape.

Choose this option to scan pages on which the text is horizontally oriented; that is, the text is printed across the length of the page.

Third Row. Fifth Key. Remove Halftones On/Off.

You use the Remove Halftones key to avoid processing halftone images and complex line art on pages to be scanned. Removing halftones saves time because the system does not try to decipher page elements with no words.

To scan and read text with very large point sizes, you must first press the Remove Halftones On/Off key twice to select Do Not Remove Halftones When Scanning.

The default setting is Remove Halftones When Scanning.

You can save these settings using the Save or Restore key.

Third Row. Sixth Key. Brightness Level.

You use this key to control the brightness level at which a document is scanned.
The Reading Edge offers you 16 brightness levels. Levels 1 through 7 darken light or thin characters. Levels 9 through 16 lighten thick characters or characters that are close to each other. The average setting, level 8, is appropriate for most material.

Pressing the brightness key by itself moves the setting higher; pressing the key while holding down the Shift key lowers the setting.

**Note:** If you press the brightness key while you are at level 16, the system proceeds to level 1. If you are at level 1 and press Shift and Brightness keys, the system moves to level 16.

You can save these settings using the Save or Restore key.

**End of Chapter 4, Section 4.3.**
Chapter 4. Section 4.
The Braille Editing Level.

The Braille Editing level of the keypad provides basic text editing through a combination of the Reading level movement keys and Braille editing keys.

This section discusses the Braille editing keys. The section does not discuss the movement keys in the top two rows of the Editing level. These keys are described in Section 4.5, "The Editing Level," in the section titled, "Using the Edit Selection Key" on page 4-30.

Using the Braille Editing Keys.

The Braille keypad comprises the six keys in the third row and the bottom middle key. You can use combinations of the keys in the third row to create Grade 1 and Grade 2 Braille characters and contractions. You can also use these same keys with the bottom middle key to edit text.

The keys in the third row are labeled from left to right as Dots 3, 2, 1, 4, 5, and 6. The bottom middle key is known as the Space or Special Function Shift key. This key is the Reading and Shift keys on the other keypad levels.

The following paragraphs describe the Braille keypad. The descriptions proceed row by row, moving left to right across the keypad.

Note: You can edit or create letters and numbers using the Dot keys and dot key combinations described in Appendix B.
Third Row. First Key. Dot 3.
Pressing this key creates an apostrophe in the text. To delete backward by character, press Dot 3 while holding down the Special Function Shift key.

Use the Dot 2 key to type the vowel combination EA.

Third Row. Third Key. Dot 1.
Pressing the Dot 1 key creates the letter A in the text. To backspace by character, press Dot 1 while holding down the Special Function Shift key.

Pressing the Dot 4 key creates an accent mark in the text. To move the text position forward by character, press the Dot 4 key while holding down the Special Function Shift key. To create a new line, hold down the Special Function Shift key and press the Dot 4 and Dot 6 keys.

Third Row. Fifth Key. Dot 5.
Pressing Dot 5 denotes a contraction at the start of a word.

Third Row. Sixth Key. Dot 6.
Press Dot 6 to capitalize a letter. To capitalize an entire word, press the Dot 6 key twice. To create a new line, hold down the Special Function Shift key and press the Dot 4 and Dot 6 keys.
To insert a letter sign, hold down the Dot 5 and Dot 6 keys. For example, you might use letter signs to create alphanumeric lists within a document.

End of Chapter 4, Section 4.
Chapter 4. Section 5.
The Editing Level

The Editing level is for users who opt not to use the Braille Editing keypad. At the Editing level, you can edit footnotes, document names, text in memory, and pronunciation memory.

You use the movement keys in the top two rows of this keypad to reach the text you want to edit. Then, you add or modify text with the editing keys in the third row of the keypad.

This section discusses the editing keys and describes the Edit Selection key, the key you use to select what to edit. The movement keys are described in Chapter 4, Section 2, of The Reading Edge User's Guide.

Using the Editing Level Keys.

The Editing keypad comprises the six keys in the third row, as well as the bottom left and bottom middle keys.

Third Row. First Key. Spell.
The Spell key functions exactly as it does on the Reading level.

Use the Spell key to move forward through the text, letter by letter. Use the Spell and Shift keys together to move backward through the text, letter by letter.
Third Row. Second Key. Letters A through H.

Use this key to type letters A through H. Press the key until the system speaks the letter you want. For example, press the key three times for the letter C.

**Note:** Whenever you choose a letter, digit, space, or character on the Editing keypad, you must confirm your choice by pressing the key in the top right corner.

To type a capital letter, confirm by pressing the key in the top left corner of the keypad.

Third Row. Third Key. Letters I through Q.

Press this key to select any letter from I through Q.

Third Row. Fourth Key. Letters R through Z.

Use this key to select any letter from R through Z.

Third Row. Fifth Key. Digits 0 through 9.

With this key, you can select digits 0 through 9.

Third Row. Sixth Key. Delete, Space, Accents, Punctuation, End of Line.

This key enables you to delete characters; add spaces, accents, or punctuation; or mark the end of a line. The key offers the following choices:

- Delete Back by Character.
- Delete Back by Word.
Space.
End of Line.
Acute Accent.
Grave Accent.
Hat (Circumflex) Accent.
Umlaut Accent.
Other Accent.
Period.
Comma.
Dash (or hyphen).

Hold down the Shift key and press the Sixth key to move in reverse order through this list.

Note: Delete Back by Character, when followed by the top right key, erases the current character. Delete Back by Work deletes the current word.

Using the Edit Selection Key.

You can perform the following five functions on the Editing level of the keypad:

Modify the current document name.

Add a footnote on the current page.

Edit any text in memory.
Edit a new document in memory.

Edit the pronunciation of a word.

Use the Edit Selection key to choose what you want to edit. This key is the large key in the lower left corner of the keypad. On the other keypad levels, except the Braille Editing keypad, the Edit Selection key is the Scanning key.

The following paragraphs discuss the five choices available on the Edit Selection key.

Choice 1. Modify Current Document Name.

With this option, you can assign a name to a document or change an existing document name. For more information about creating a document name, refer to Chapter 3.

Tip: The Reading Edge automatically assigns the name UNTITLED and a number to new documents in storage memory. When modifying a new document's name, remove UNTITLED and the number before typing the new name.

Choice 2. Add a Footnote.

Choose this option to add or modify a footnote on the current page. A footnote on The Reading Edge is similar to a footnote on a printed document.

Use the following steps to create a footnote:
Step 1. Choose footnote with Edit Selection key.

Press the Edit Selection key, the bottom left key on the keypad, until The Reading Edge says:

*Editing keypad will add a user-written footnote to current page.*

Step 2. Type the footnote.

The Reading Edge adds the footnote to the end of the page. The next time you read the page, the system reads the footnote.

Choice 3. Edit Text.

Choose the Edit Text option to indicate that you want to modify text in memory. You can then use the letter and digit keys to modify the text.


Use the Edit New Document option to create a new document. After creating the document, you can use the letter and digit keys to add text to it.

The Edit New Document option creates a document only for the purpose of typing new text. You cannot use the option to create documents for scanning or receiving text.

Choice 5. Pronunciation.
Use this option to change how The Reading Edge pronounces words. For example, the system reads the name G, e, n, e, as Jen. You can change this pronunciation by using the letters J, e, a, n for the letters G, e, n, e. The system then speaks the name correctly as Jean.

You can also use the Pronunciation option to substitute one word for another word. For example, you can change the abbreviation R, e, v, so that the system speaks the word revision instead of reverend.

Each time you make a pronunciation change, you are adding to a list of changes that the system stores automatically. These changes apply to all text that you scan and receive with the system.

Use the following steps to change the pronunciation of a word:

**Step 1. Choose pronunciation with the Edit Selection key.**

Press the Edit Selection key, the bottom left key on the keypad, until The Reading Edge says:

*Editing keypad will edit pronunciation; change words.*

The Reading Edge automatically creates a new line in the existing list of pronunciation changes.
Step 2. Change the pronunciation.

Use the letter and digit keys to type the word you want to change. Then, choose the Space option on the sixth key in the third row to create a space.

Next, type the new pronunciation and press the sixth key until you reach the End of Line option. Confirm your choice by pressing the key in the top right corner of the keypad.

You may find that certain words pronounce best when you place a dash (hyphen) within the pronunciation. Dash is available on the sixth key for this purpose.

End of Chapter 4. Section 5.
Chapter 4. Section 6.
The Communication Setup Level.

The Communication Setup level enables you to control how The Reading Edge communicates with computers through its serial connector.

You can change any setting on the Communication Setup level. You can save the setting for the Serial Output key. The other settings remain active until you turn The Reading Edge off. For details on the serial connector, refer to Chapter 5, "Using the Serial Connector."

The following paragraphs describe the small keys on the Communication Setup level. The paragraphs proceed row by row, moving left to right across the keypad.

Top Row, First Key. Baud Rate.

Use the Baud Rate key to set the speed at which The Reading Edge and another computer device exchange data.

Specifically, baud rate refers to the number of computer data bits transmitted per second. Higher baud rates mean higher transmission speeds.

The Reading Edge accommodates the following six baud rates:

300. 1200. 2400. 4800. 9600. 19200.

The factory default baud rate is 9600.

No matter which baud rate you choose, be sure the rate is the same for The Reading Edge and the other computer device.
Top Row, Second Key. Parity.

The Parity key enables you to set the parity bit, which is an extra bit that checks for transmission errors.

Refer to Chapter 5, "Using the Serial Connector," for more information about parity.

You can choose one of the following five parity settings:

   No Parity.
   Even Parity.
   Odd Parity.
   Space Parity.
   Mark Parity.

The following paragraphs explain these choices. No matter which parity setting you choose, be sure that it is the same for The Reading Edge and the other computer device.

Choice 1. No Parity.

Choose No Parity if you do not want to use a parity bit to check for transmission errors. This setting is the factory default.

Choice 2. Even Parity.

Choose Even Parity to set the parity bit so that the number of ones amounts to an even number (for example, 1000 0110).
Choose Odd Parity to set the parity bit so that the number of ones amounts to an odd number (for example, 1000 01010).

Choice 4. Space Parity.
Choose Space Parity to set the parity bit to zero.

Choice 5. Mark Parity.
Choose Mark Parity to set the parity bit to one.

Top Row, Third Key. Stop Bits.
With the Stop Bits key, you can set the number of stop bits, which are bits that separate one ASCII character from another during transmission.

You can choose one or two stop bits. The default setting is one stop bit.

No matter which setting you choose, be sure that it is the same for The Reading Edge and the other computer device.

Top Row, Fourth Key. Handshake.
Use this to choose a form of handshaking. Handshaking is a communications protocol that enables the receiving device to inform the sending device whether it is okay to transmit.
Handshaking helps you avoid losing what you are transmitting by controlling the flow of data. Such control is important because the receiving device might not be able to receive data as fast as the sending device transmits the data. The Handshake key provides the following three choices:

- Xon/Xoff Handshaking.
- CTS (Clear to Send) Handshaking.
- No Handshaking.

The following paragraphs explain these three choices. No matter which setting you choose, be sure that it is the same for The Reading Edge and the other device.

Choice 1. Xon/Xoff Handshaking.

Choose Xon/Xoff Handshaking for software handshaking. With this form, the receiving device sends an Xoff character to the other device to stop sending data. The receiving device sends an Xon character when it is ready to receive data.


Choose C.T.S. Handshaking to establish hardware handshaking through the serial connecting cable.

The receiving device uses one wire inside the cable to tell the sending device to send data. The receiving device uses another wire to request that the sending device begin transmitting.
Choice 3. No Handshaking.

Choose No Handshaking if you do not want to establish handshaking.

Second Row, First Key. Line End Markup.

With the Line End Markup key, you can specify the ASCII character that indicates the end of a line in transmitted text. This key is especially useful for choosing the right text format for your word processing program.

The Line End Markup key provides four choices:

- Carriage Return Line Feeds.
- Carriage Returns.
- Line Feeds.
- Spaces.

The following paragraphs explain these three choices.


This choice inserts a carriage return character and a line feed character at the end of each line. This setting is the default.

Change this setting if you notice that your word processor is inserting too much space between lines. The carriage return character is ASCII hexadecimal code 0 D. The line feed character is code 0 A.
Choice 2. Carriage Returns.
This choice inserts a carriage return character to mark the end of each line.

This option inserts a line feed character to indicate the end of each line.

Choice 4. Spaces.
Use this option to insert soft returns so lines wrap around. This is the preferred setting for word processors that have the "word wrap" feature.

Second Row, Second Key. Paragraph End Markup.
Press the Paragraph End Markup key to choose the ASCII character that marks the end of a paragraph in transmitted text. This key is especially useful for choosing the right text format for your word processing program.

The Paragraph End Markup key provides four choices:

- Not Reported.
- Carriage Returns.
- Carriage Return Line Feeds.
- Tabs.

The following paragraphs explain these four choices.
Choice 1. Not Reported.

This choice means that no codes are transmitted where ends of paragraphs are detected. This setting is the default.

Change this setting if you notice that your word processor is inserting too much space between lines.

Choice 2. Carriage Returns.

This choice inserts a carriage return character to mark the end of each paragraph. The ASCII hexadecimal code for the carriage return character is 0 D.


This choice marks the end of each paragraph with both a carriage return character and a line feed character. The ASCII hexadecimal code for a line feed character is 0 A. This is the preferred setting for word processors that have the "word wrap" feature.

Choice 4. Tabs.

This option inserts a tab character to indicate the beginning of a paragraph. The ASCII hexadecimal code for a tab character is 0 9.

Second Row, Third Key. Column End Markup.

With the Column End Markup key you can choose the ASCII character that marks the end of a column in transmitted text. This key is especially useful for choosing the right text format for your word processing program.
The Column End Markup key provides the following four choices:

Not Reported.
Line Feeds.
Carriage Return Line Feeds.
Form Feeds.

The following paragraphs explain these four choices.

Choice 1. Not Reported.
This choice means that no codes are transmitted where ends of columns are detected. This setting is the default.

Choice Two. Line Feeds.
This option inserts a line feed character to indicate the end of each column. The ASCII hexadecimal code for a line feed character is 0A.

This choice inserts both a carriage return character and a line feed character to mark the end of each column. The ASCII hexadecimal code for a carriage return character is 0D.

Choice 4. Form Feeds.
This option inserts a form feed character to mark the end of each column. A form feed character usually causes a printer or a brailer to advance to a new page. The ASCII hexadecimal code for a form feed character is 0C.
Second Row, Fourth Key. Page End Markup.

With the Page End Markup key, you can choose the ASCII character that marks the end of scanned pages. This key is useful for choosing the right text format for your word processing program.

The Page End Markup key provides the following four choices:

- Form Feeds.
- Not Reported.
- Line Feeds.
- Carriage Return Line Feeds.

The following paragraphs explain these four choices.

Choice 1. Form Feeds.

This option inserts a form feed character to mark the end of a page. This setting is the default.

The form feed character usually causes a printer or brailer to advance to a new page. Change this setting if you notice that your printer or brailer is ejecting extra blank pages. The ASCII hexadecimal code for a form feed character is 0 C.

Choice 2. Not Reported.

This choice means that no codes are transmitted where ends of pages are detected.

This choice inserts a line feed character to indicate the end of each page. The ASCII hexadecimal code for a line feed character is 0A.


This option inserts both a carriage return character and a line feed character to mark the end of each page. The ASCII hexadecimal code for a carriage return character is 0D.

Third Row, First Key. Save or Restore Settings.

Press this key to save or restore settings on Communication Setup level. This key offers the same choices available on the Setup level. However, you cannot use the key on the Communication Setup level to save or restore settings on the Setup level, and vice versa.

Remember that saving your settings to the top left key, Setting 1, causes them to be restored as the power on default the next time you turn The Reading Edge on.

For more information on this key, refer to Section 4.3.

Third Row, Second Key. Serial Output.

You use the Serial Output key to choose an output method for text.

You can save the setting for the Serial Output key.
The key provides the following choices:

- No Communication Output.
- Send Text.
- Send TIFF Image.
- Send Text and Messages.

The following paragraphs describe these choices.

Choice 1. No Communication Output.

Use No Communication Output when you are not using the serial connector to send text or images.

Choice 2. Send Text.

Use this option to send ASCII text through the serial connector. The text is sent, following scanning, as it is recognized. The Reading Edge does not use a protocol (other than the handshaking selected) to send text.

Choice 3. Send TIFF.

Choose Send TIFF to send scanned pages as Tagged Image File Format (TIFF) images. The image file format is TIFF Group 4.

The Reading Edge uses the Xmodem protocol to send and receive TIFF images. In this form of communication, the devices exchange blocks of data, rather than transmitting one bit at a time. These blocks ensure error free communication.
Choice 4. Send Text and Messages.

Use this option to send ASCII text or messages through the serial connector. Messages can include both information and error messages. The Reading Edge does not use a protocol (other than the selected handshaking protocol) to send and receive text or messages.

Note: When sending text and messages to another system, ensure that The Reading Edge's communications parameters match those of the receiving device. For more information, refer to Chapter 5, "Using the Serial Connector."

Third Row, Third Key. Computer Compatibility.

With this key, you can specify the character set for the computer to which The Reading Edge is attached. A character set is a list of letters, numbers, punctuation marks, and symbols that a system recognizes.

The Computer Compatibility key provides the following four choices:

- I.B.M. Compatible DOS Character Encoding.
- MS Windows and I.S.O. Character Encoding.
- Macintosh Compatible Character Encoding.
- 7 bit I.S.O. Character Encoding.

The following paragraphs explain these choices.
Choice 1. I.B.M. Compatible DOS Character Encoding.

Choose this option to select the I.B.M.® PC eight character set for I.B.M. compatible personal computers.

Choice 2. MS Windows and I.S.O. Character Encoding.

Choose this option for computers running Microsoft Windows or Unix®. Such systems use the International Standards Organization (I.S.O.) character set.

Choice 3. Macintosh Compatible Character Encoding.

Use this option when communicating with a Macintosh computer.

Choice 4. 7 bit I.S.O. Character Encoding.

Choose this option for terminals that use the International Standards Organization (I.S.O.) 7 bit character set.

Third Row, Fourth Key. Not in Use.

Third Row, Fifth Key. Not in Use.
(This is the designer's key.)

Third Row, Sixth Key. Not in Use.

End of Chapter 4, Section 6.
Chapter 4. Section 7.
The Disk Management Keypad.

The Disk Management level of the keypad expands The Reading Edge's data storage and retrieval capacity. On this level, you can load and erase files stored on a floppy disk and locate documents in storage memory.

You can perform disk management functions by adding a Blazie Braille 'n Speak® Disk Drive Accessory® and MS-DOS® compatible disks.

Note: The cable that connects the Blazie drive with the Braille 'n Speak does not work with The Reading Edge. This connection requires a special cable. For information about the cable, contact Blazie Engineering, Inc., at 410-893-9333.

You can perform four disk management functions on the Disk Management level of The Reading Edge. These functions include:

- Format high-density floppy disks.
- Save files to disk.
- List and load files from disk.
- Delete files from disk.

This section provides detailed information about these four functions.
Tip: Whenever you turn off a Reading Edge that is connected to a Blazie disk drive, always turn off the drive, too. When restarting, always turn on The Reading Edge first.

On the Disk Management level, the keys in the top two rows are the same movement keys in the top rows of the Reading level. In the third row, the first key is the Spell key, which is also on the Reading level. For information on the movement and Spell keys, refer to Chapter 4, Section 2, of the User's Guide.

The Select Keypad and Shift keys work the same as on other levels. On the Disk Management level, however, the Help key does not provide a status update but can be used to review the files on a disk.

To list the files on a disk, press and hold the Help key. You hear the following message while The Reading Edge reads the disk:

Please wait.

Continue holding the Help key. After a brief pause, you hear the Ready message, and The Reading Edge speaks the name and size of each file on the disk.

To interrupt the list, release the Help key any time after the Ready message. When The Reading Edge is interrupted or reaches the end of the list, it states the total number of files on the disk and the amount of free disk space.

The Disk Management function keys comprise the second through sixth keys in the third row. The following paragraphs describe these function keys.
Third Row. Second Key. Format Disk.
Press this key to format a new disk. You hear:

*Format the disk. Please confirm with top right key.*

Press the top right key to confirm your choice. You hear a series of beeps, and after a few minutes, the disk is formatted to a high-density capacity of 1.44 megabytes, or the equivalent of 1.44 million text characters.

Caution: Formatting a new disk is necessary to prepare it for accepting data. However, formatting a used disk erases all existing data from that disk.

Third Row. Third Key. Move to Document.
Use this key to locate a document by name in memory. Each time you press this key, the system reads the name of the next document in memory. To go to the beginning of the named document, confirm your choice by pressing the top right key on the keypad.

Third Row. Fourth Key. Save a Document on Disk.
Press this key to save the current document on a disk. You hear the message:

*Please confirm with top right key.*

Press the top right key to confirm that you want to save the current document on a disk. To cancel the operation, press any other key.
Note that disks for the Blazie drive use MS-DOS, which requires file names that are no longer than eight characters and contain no blank spaces. Names can, however, end with a period and can be followed by an extension up to three characters long.

If a name is less than eight characters, for example, doc1, then the file name appears as such on the disk. If you choose a name that is longer than eight characters, The Reading Edge adds a period after the eighth character and an extension using the ninth and tenth characters.

For example, if you scan a document and save it under the name mayreport, the name appears as follows on the current disk:

\textit{MAYREPOR.T}

For a document saved as marchreport, the name appears as follows:

\textit{MARCHREP. OR}

The system also applies other conventions for naming documents saved on a disk. For instance, it replaces all blank spaces with underscores, but ignores all underscores and blanks that appear at the end of a name. For example, it treats the file name NAME1_ as:

\textit{NAME1}
With some names, The Reading Edge searches for the first period from the right, beginning with the eleventh character, and ends the name with the next two available characters after the period. For example, if you save a document called \textit{CC.TE.STDOC}, the document name appears as follows on the disk:

\textit{CC\_TE.ST}

If The Reading Edge does not find a period while searching, it looks for underscores. When it finds an underscore, the system replaces the underscore with a period and adds a two-character extension. For example, the system treats the name \textit{TEST\_DOC} as:

\textit{TEST.DO}

When a new file has the same name as an existing disk file, The Reading Edge appends to the new file's extension the first unused letter from A through Z. For example, if you save a file named \textit{UNTITLED 1} to a disk containing the files \textit{UNTITLED\_1}, \textit{UNTITLED\_1A}, and \textit{UNTITLED\_1C}, the system automatically names the file \textit{UNTITLED\_1B}.

Third Row. Fifth Key. Load a Document from Disk.

Each time you press this key, the system reads the name and size of the next file on the disk. To load this file into storage memory, press the top right key on the keypad. You hear the following message:

\textit{Please wait.}
After a pause, you hear a message indicating that the operation is done. The file you loaded is at the end of storage memory.

To cancel the operation, press any other key.

Note: A floppy disk has one root or main file directory. It might also have many subdirectories. The Reading Edge only reads and loads files located in the root or main directory of the disk.

Third Row. Sixth Key. Delete Disk Document.
As you press and release this key, the system reads the name of the next file on the disk, and you hear:

*Please confirm with top right key.*

To delete the most recently named file from the disk, confirm by pressing the top right key on the keypad. To cancel the operation, press any other key.

**End of Chapter 4. Section 7.**
**End of Chapter 4.**
Chapter 5.
Using the Serial Connector.

Chapter 5. Section 1.
Overview.

This chapter covers how to use The Reading Edge serial connector to send and receive ASCII text and TIFF images.

The chapter includes the following sections:

- What is Serial Communication? (Section 5.2.)
- Connecting Cable Requirements. (Section 5.3.)
- Sending To Another Device. (Section 5.4.)
- Receiving From Another Device. (Section 5.5.)
- The Reading Edge as a Speech Synthesizer. (Section 5.6.)

The chapter does not provide detailed information about the Communication Setup keypad. For more information, refer to Chapter 4, "The Six Keypad Levels."

End of Chapter 5, Section 1.
Chapter 5. Section 2.
What is Serial Communication?

Serial communication is a common way for two computer devices to exchange information.

Because serial communication involves both sending and receiving computer data, this form of communication is useful for a range of applications. For example, you can use a modem to connect a personal computer to a telephone to in turn exchange information with another computer.

With serial communication, the two computer devices must be able to send and receive information without getting in each other's way. The devices must also agree on the type of information they are exchanging.

Understanding Data Bits.

When two devices are sending and receiving text, they exchange characters one data bit at a time. A computer data bit is a tiny electric on/off switch that is the basic unit of information for computers.

Depending on the computer application, a data bit's on or off position represents a true or false statement, a yes or no answer, or the numbers zero or one.

Transmitting text involves sending two sets of data bits. One set of data bits represents letters, numbers, or punctuation characters. The other set indicates where one letter ends and the next begins. This second set of data bits also checks for errors and controls sending and receiving.
When two devices are sending and receiving TIFF images, they exchange blocks of data. In this case, the two devices are using a form of communication called the Xmodem protocol.

**How Do You Make Computer Devices Agree?**

To communicate successfully, the two devices must agree on which data bits represent parts of letters, and which data bits represent transmission control codes. To ensure that the devices agree, you use a flexible set of commands called communication parameters.

Communication parameters specify such things as transmission speed and the number of data bits required for letters and numbers. In serial communication, the two computer devices must use the same communication parameters.

For more information about communication parameters on The Reading Edge, refer to Chapter 4, "The Six Keypad Levels."

**End of Chapter 5, Section 2.**
Chapter 5. Section 3.
Connecting Cable Requirements.

The Reading Edge uses an R.S. 232 interface for serial communication. The R.S. 232 interface is a flexible way to connect a range of computer devices.

Most computers in the United States have an R.S. 232 interface. The Reading Edge can communicate with any device that has this interface.

The R.S. 232 interface has two parts. The first part is a connecting socket on each of the computer devices you are using. This socket is the serial connector. The second part is the cable that links the communicating devices' serial connectors.

The Reading Edge has an R.S. 232C D.C.E. (Data Communications Equipment) serial connector. This 25-pin connector receives the male end of a serial connector cable.

Serial connector cables use one of two possible wire arrangements, D.T.E. or D.C.E. D.T.E. stands for "Data Terminal Equipment." D.C.E. stands for "Data Communication Equipment." Most personal computers use the D.T.E. arrangement. The Reading Edge uses the D.C.E. arrangement.

Note: D.C.E. and D.T.E. serial connectors look the same from the outside. The crossing of a single pair of wires within the connector is the only difference between the two.
If the two devices you want to connect have different types of serial connectors, you need a **standard modem** or **straight through** cable. If the two connectors are the same type, you must use a **null modem** cable or **cable adapter**.

The Reading Edge is a D.C.E. device, so in most cases you can use a standard modem cable to connect The Reading Edge to a personal computer. You need a null modem cable or adapter to connect The Reading Edge to another D.C.E. device.

If you are not sure which type of cable or adapter you need, refer to the documentation for the equipment you are using, or ask a computer dealer for more information.

**End of Chapter 5, Section 3.**
Chapter 5. Section 4.
Sending To Another Device.

You can send ASCII text and TIFF images from The Reading Edge to another computer device. You can transmit while scanning or transmit a portion of the text in memory.

Note: The Reading Edge must be at the Reading level for you to send text or images over the serial connector.

Sending Data While Scanning.

Use the following six steps to send text or TIFF images to another device during a scanning session.

Note: The image file format is TIFF Group 4.

Step 1. Connect the two devices.

With both devices turned off, plug the male end of the connecting cable into The Reading Edge's serial connector. Then, plug the other end into the receiving device's serial connector.

Looking at The Reading Edge from the back, note that the 25-pin serial connector is five inches from the lower left corner. The connector is about three and one-half inches to the left of the air grille.

Step 2. Turn on the devices.

Turn on The Reading Edge and the receiving device.
Step 3. Select the output format.

Press the Shift and Select Keypad keys to move to the Communication Setup level. The Shift key is the middle key on the bottom row, and the Select Keypad key is the key at the top left corner of the keypad.

Next, press the Serial Output key twice to choose text or three times to choose TIFF. This key is second from the left in the third row.

Tip: If you are sending a TIFF image, be sure to indicate TIFF or binary in the communications software. Some communications software may interpret the incoming data as text unless instructed to do otherwise.

If you are given a choice of protocols, select Xmodem.

Step 4. Set the communication parameters.

On the Communication Setup level, set The Reading Edge's communication parameters so that they match those of the receiving device.

Because there are many different parameters, you might notice parameters on the receiving device that are not available on The Reading Edge. When in doubt, leave the questionable parameters set to their default configurations.

Step 5. Transmit the text or image.

Press the Shift and Select Keypad keys to return to the Reading level. Then, press the Scanning key to start scanning. The Scanning key is the far left key in the bottom row.
The Reading Edge transmits what it scans and recognizes until it completes the scanning session or until you cancel the scan.

**Step 6. End the transmission.**

When you have finished sending, press the Shift and Select Keypad keys to return to the Communication Setup level. Then, press the Serial Output key until The Reading Edge says:

> No communication output.

Next, choose the appropriate command on the receiving device to end the transmission. This command varies by device, so refer to the documentation for the device you are using.

**Sending Selected Text.**

Use the following eight steps to send a portion of text.

**Step 1. Connect the two devices.**

With both devices turned off, plug the male end of the connecting cable into The Reading Edge's serial connector. Then, plug the other end into the receiving device's serial connector.

Looking at The Reading Edge from the back, note that the 25-pin serial connector is five inches from the lower left corner. The connector is about three and one-half inches to the left of the air grille.

**Step 2. Turn on the devices.**

Turn on The Reading Edge and the receiving device.
Step 3. Select the output format.

Press the Shift and Select Keypad keys to move to the Communication Setup level. The Shift key is the middle key on the bottom row, and the Select Keypad key is the key at the top left corner of the keypad.

Then, press the Serial Output key twice to choose text. This key is second from the left in the third row.

Step 4. Set the communication parameters.

Set the same communication parameters on both devices. You might notice parameters on the receiving device that are not available on The Reading Edge. When in doubt, leave these additional parameters as they are.

Step 5. Set the mark.

Press the Shift and Select Keypad keys to move to the Reading level.

Next, use the movement keys in the top two rows (for example, Last Line or Column) to move to the position from which you want to send text. Then, press the Mark key twice. The Mark key is the fourth key from the left in the third row.

The Reading Edge says:

*Set mark.*

Use one of the top eight keys to set a mark at this location. Remember which key you have used to mark this location.
Step 6. Position the cursor.

Move forward to the other end of the text you want to send.

Step 7. Send the text.

Press the Mark key five times. The system says:

*Transfer the text between the mark and the cursor. Please select mark with one of top eight keys.*

Select the same mark you just set. The Reading Edge sends the text between the mark you set in Steps 5 and 6 and your current position. The Reading Edge then says:

*Done.*

Step 8. End the transmission.

When you have finished sending, press the Shift and Select Keypad keys to return to the Communication Setup level. Then, press the Serial Output key until The Reading Edge says:

*No communication output.*

Next, choose the appropriate command on the receiving device to end the transmission. This command varies by device, so refer to the documentation for the device you are using.

**End of Chapter 5, Section 4.**
Chapter 5. Section 5.
Receiving from Another Device.

The Reading Edge can receive text and TIFF images from another computer device.

Note: The Reading Edge must be at the Reading level for you to receive text or images over the serial connector.

Use the following six steps to receive text or images:

Step 1. Connect the two devices.

With both devices turned off, plug the male end of the connecting cable into The Reading Edge’s serial connector. Then, plug the other end into the sending device’s serial connector.

Looking at The Reading Edge from the back, note that the 25-pin serial connector is five inches from the lower left corner. The connector is about three and one-half inches to the left of the air grille.

Step 2. Turn on the devices.

Turn on The Reading Edge and the sending device.

Step 3. Set the communication parameters.

Press the Shift and Select Keypad keys to move to the Communication Setup level. The Shift key is the middle key on the bottom row. The Select Keypad key is in the top left corner of keypad.
Next, set the same communication parameters on both devices. You might notice parameters on the sending device that are not available on The Reading Edge. When in doubt, leave these additional parameters as they are.

Step 4. Choose text or image.

Press the Shift and Select Keypad keys to move to the Reading level. Then, press the Select Input key six times for text or four times for TIFF. The Serial Input key is the far right key in the third row.

Step 5. Start the transmission from the sending device.

Start the transmission from the sending device. As The Reading Edge receives material, it positions it beyond the last page in memory.

Note: The Reading Edge only saves text in storage memory. To be saved in memory, received text must have an end of file character. The Reading Edge does not store TIFF images.

In addition, The Reading Edge accepts only TIFF images with a resolution of 300 dots per inch (D. P. I.) or less. Three hundred D. P. I. is the recommended size.

Step 6. End the transmission.

When you have finished receiving, choose the command on the sending device to end the transmission. This command varies by device, so refer to the documentation for that device.
Tip: If you do not plan to receive material for a while, return to the Reading Level and choose Scan Text on the Select Input key.

If you do not switch to this option at this point, you hear the following message when you next attempt to scan:

Scanner not selected. Can't scan.

End of Chapter 5, Section 5.
Chapter 5. Section 6.
Using The Reading Edge as a Speech Synthesizer.

You can use The Reading Edge as a stand-alone speech synthesizer. In other words, The Reading Edge provides speech to a personal computer with communications or screen reader software but no speech board.

When you use The Reading Edge as a speech synthesizer, it speaks but does not store text.

Follow the five steps below to use The Reading Edge as a stand-alone speech synthesizer.

Step 1. Connect the two devices.

With both devices turned off, plug the male end of the connecting cable into The Reading Edge's serial connector. Then, plug the other end into the personal computer's serial connector.

Looking at The Reading Edge from the back, note that the 25-pin serial connector is five inches from the lower left corner. The connector is about three and one-half inches to the left of the air grille.

Step 2. Turn on the devices.

Turn on The Reading Edge and the source device.
Step 3. Set the communication parameters.

Press the Shift and Select Keypad keys to move to the Communication Setup level. The Shift key is the middle key on the bottom row. The Select Keypad key is in the top left corner of keypad.

Next, set the same communication parameters on both devices. You might notice parameters on the source device that are not available on The Reading Edge. When in doubt, leave these additional parameters as they are.

Step 4. Select speech input.

Press the Shift and Select Keypad keys to switch to the Reading level. Then, press the Select Input key four times. This key is the far right key in the third row.

The Reading Edge says:

*Receive from screen reader.*

The source device then takes control of The Reading Edge's speech.

**Note:** Selecting the ScreenReader option disables every key on The Reading Edge except the Select Input key.
Step 5. End the speech synthesis process.

When you have finished, press the Select Input key to choose another option.

End of Chapter 5, Section 6.
End of Chapter 5.
Chapter 6.
Tips and Techniques

Chapter 6. Section 1.
Overview.
This chapter presents tips and techniques for using The Reading Edge.

End of Chapter 6. Section 1.
Chapter 6. Section 2.
Tips and Techniques.

This section provides a series of tips and techniques for getting the best results from your Reading Edge.

Creating New Documents for Different Document Styles.

For the best recognition results, consider starting a new document for each document or page with a different style.

To start a new document, press the Mark Text key four times, or until you hear:

Start new document with next input.

The Mark Text key is the fourth key from the left on the Reading keypad.

Erasing a Page During Recognition.

If you use the Erase Current Document or Erase Current Page option during recognition, only the portion of the document that is already recognized is erased. After the deletion occurs, any unrecognized text is then recognized and stored in memory.

To erase an entire page during recognition of that page, first cancel the page. Then, use either the Erase Current Document or Erase Current Page option. To cancel the page, hold down the Shift key and press the Scanning key.
Exposing the Unit to Cold Conditions.

If you expose The Reading Edge to cold conditions, turn the system on and allow it to adjust to room temperature before scanning.

If you attempt to scan before The Reading Edge has warmed up, you might experience unpredictable recognition results or hear the following message:

*Page appears to be blank.*

These conditions should subside when the system has warmed up sufficiently. If they persist, contact X.I. S. Customer Support.

Improving Recognition by Changing Brightness Levels.

Long processing times, or a low percentage of words recognized, often indicate the need for a different brightness level. By adjusting the brightness level, you can improve the quality of document recognition.

During recognition, you can find out how well the system is processing by pressing the Status key, which reports the number of Words Seen and Words Completed.

If the system has a very low completion percentage (for example, 200 Words Seen and 5 Words Completed), or if letters are breaking apart or joining together, consider canceling the page and adjusting the brightness level.
Lower the brightness level for broken characters, or dropped characters such as l’s and i’s. You should also lower the level if the system recognizes single characters as multiple characters.

Raise the brightness level for joined characters, or if the system inserts punctuation marks such as quotes and periods where they should not exist. You should also raise the level if the system recognizes groups of characters as a single character.

Note: Before you begin scanning again with a different brightness level, you should start a new document.

Refer to Chapter 3, Section 4, or Chapter 4, Section 3 for more information on setting the brightness level.

Reducing Recognition Time.

Features that automate the system also require longer processing times. However, if you typically scan single column documents with pages in portrait orientation, you can reduce recognition time.

To reduce recognition time, scan text right side up, if possible, with the top of the document on the left side of the glass. Then, select the following settings:

On the Reading keypad, choose the Single Column option for the Columns key.

On the Setup keypad, select Portrait for the Page Orientation key.

On the Setup keypad, select Do Not Remove Halftones When Scanning for the Remove Halftones key.
If you often scan similar documents, you can reduce setup time by saving and restoring settings. For information about saving and restoring settings, refer to Chapter 4, Section 3.

You can scan with all of these settings in their "Fast" state by simply choosing the "Fast Scan a Single Page" setting from the Select Input key. This overrides the settings of these three keys.

Removing the Memory Card.

You should not remove and reinsert the memory card unless it is required, because you might bend The Reading Edge's connecting pins, making it impossible to insert the memory card.

Remove the memory card only to change languages or install new software releases. If you need to remove the card for one of these reasons, turn the system off. Then, facing the memory-card side of The Reading Edge, gently grasp the card and pull it toward you.

To insert the memory card, grasp the Braille end with the Braille facing upward. Then, gently slide the card into the slot. The card should fit into place easily.

Scanning Type Larger than 36 Points.

For the best results in scanning type that is larger than 36 points, move to the Setup keypad and select the following option on the Remove Halftones key: Do Not Remove Halftones When Scanning.
Sliding the Keypad into the Storage Position.

If you are having difficulty placing the keypad in its storage compartment, try the following technique.

Start by holding part of the keypad cable outside the storage compartment. Then, on a flat surface, gently slide the keypad into the storage compartment, with the cable end, or back of the keypad, going into the compartment first.

Next, place the cable on top of the keypad and lift the keypad's front end up and into the locking position.

Startup Tones.

Whenever you turn on The Reading Edge, you should hear two diagnostic tones. If the scanner bar is on the right side of the glass, these two tones occur in rapid succession. If the bar is on the left side, the two tones are separated by a pause during which the scanner bar moves to the right side of the unit.

If you do not hear the diagnostic tones when you turn on The Reading Edge, contact X. I. S. Customer Support.

Understanding Your Location in Memory.

If you hear a low-pitched beep, the beep means that you are at the beginning or end of a page. You are not necessarily at the end of text in memory, however.

If you are unsure of your location in storage memory, hold down the Help or Status key, the large key in the lower right corner of the keypad. This key gives you the name of the current document, as well as the page.
Saving Documents on a Multilingual System.

If you use more than one language on the same Reading Edge, you might notice that documents saved in one language sound garbled in another language. Ensure that you are using the correct memory card for the language in which you want to read.

End of Chapter 6. Section 2.
End of Chapter 6.
Appendix A.
Error Messages.

Appendix A. Section 1.
General Error Messages.

This appendix lists and explains error messages you might encounter while using The Reading Edge. The appendix discusses the meaning of each message and provides a remedy.

The appendix is organized in two sections, one for general error messages and one for disk-related error messages.

The messages are spoken.

Message.

*The document is too large to be permanently stored.*

Meaning.

You hear this message when you bring a large file into The Reading Edge through its serial connector. The message indicates that the file is too large to be retained in storage memory.

When this situation occurs, The Reading Edge stores the large file temporarily, enabling you to read the text. However, the system removes the file when you begin scanning or turn the unit off.
Message.

An error was detected while transmitting data over the serial port.

Meaning.

You hear this message if the system cannot send or receive images through the serial connector.

Remedy.

Ensure that the sending or receiving computer is using the Xmodem protocol.

Message.

Bad setting restored. Please check and save again.

Meaning.

This message occurs when you attempt to restore a setting that has an invalid value.

Remedy.

Save the setting again. Then try restoring it.

Message.

Cache failed this power up.

Meaning.

This message indicates a hardware problem with the system.
Remedy.
Contact X.I.S. Customer Support.

Message.
*Column on this line is not present. Shifted left <some number> columns.*

Meaning.
This error occurs if the system encounters a blank entry in the last vertical column of a table. In this case the system automatically shifts the cursor to the left. That is, the cursor moves to the next available entry in the current row. <some number> tells you how many columns it moved left.

Remedy.
Use the Next Row and Next Sentence keys to move to the entry below the blank entry.

Message.
*DRAM failed this power up.*

Meaning.
This message indicates a hardware problem with the system.

Remedy.
Contact X.I.S. Customer Support.
Message.

I.S.C. failed this power up.

Meaning.

This message indicates a hardware problem with the system.

Remedy.

Contact X.I.S. Customer Support.

Message.

Keypad is unplugged.

Meaning.

This message indicates that the keypad is not attached to The Reading Edge.

To attach the keypad, begin by detaching The Reading Edge power cord. Do not attempt to attach the keypad with the power on.

Next, place the keypad on a flat surface and pick up the end of the cable that has the small, square plug. This plug is similar to the plug on a telephone receiver.

Hold the plug in such a way that your thumb is against the top surface, that is, the flat surface with tiny ridges. Press your index finger against the bottom side of the plug, which is the side with the thin plastic tab.

Next, locate the keypad jack, which is inside the keypad storage compartment. This jack is the small opening at the rear of the compartment, on the bottom left side.
Holding the plug as described above, gently press the plug into the jack. You hear a click when you have successfully inserted the plug.

Message.
*Keypad failed this power up.*

Meaning.
This message indicates a hardware problem with the system.

Remedy.
Contact X.I.S. Customer Support.

Message.
*The last page recognized was very tilted.*

Meaning.
You hear this message if the page you are scanning is skewed on the scanner glass. If the message occurs, reposition the page and try rescanning.

Message.
*Mark < number> has not been set.*

Meaning.
You hear this message when you attempt to go to a mark you have not previously set with one of the eight small keys in the top two rows of the keypad. <number> is 1 through 8.
Remedy.

Select your marks carefully to ensure that they are available when you need them later. Refer to Chapter 4, "The Six Keypad Levels," for information about setting electronic bookmarks.

Message.

*Mark <some number> is not in the same document as cursor.*

Meaning.

You have tried to transmit from a mark that is not in the same document as the cursor. <some number> is 1 through 8.

Remedy.

You can only transmit from a mark if the mark and cursor are in the same document.

Message.

*No Current Document.*

Meaning.

This message occurs when you are not in a document and you attempt to set a mark, erase text, or edit a document name, text, or footnote. This might happen, for instance, if you have erased all text and not scanned anything since then.

Remedy.

Reposition the cursor so that it is within a document, or scan a new document.
Message.

*Permanent storage may not be functioning properly.*

**Meaning.**

This message indicates a memory problem with The Reading Edge.

**Remedy.**

Contact X.I.S. Customer Support.

---

Message.

*Page is too complex; recognition cannot be completed.*

**Meaning.**

This message indicates that The Reading Edge does not have enough memory to process the current page. The error can occur when you scan a very complex image.

If you encounter this error, ensure that the page is not skewed on the scanner glass. Also try different settings, for example, Brightness Level, Columns, Remove Halftones, and so forth.

---

Message.

*Prefix character combination does not exist.*

**Meaning.**

This error occurs on the Editing level when you type a prefix that does not have meaning.
Remedy.
Try retyping the prefix, or consult a document that provides a list of Braille prefixes.

Message.
ROM checksum failed this power up.

Meaning.
This message indicates a hardware problem with the system.

Remedy.
Contact X.I.S. Customer Support.

Message.
Scanner error detected.

Meaning.
This message indicates a software problem involving scanning.

Remedy.
Try rescanning the page, then try turning the system off and restarting it.

Message.
Scanner not selected. Can't scan.
Meaning.

You hear this message when you attempt to scan while another input option is still selected.

Remedy.

Choose Scan Text, Fast Scan a Simple Page, or Scan Newspaper Print with the Select Input key.

Message.

*Text backup is nearly full. If you press Start or Stop Scanning again, documents <document names> will be removed from backup to make room.*

Meaning.

The Reading Edge stores between 50 and 100 pages of text, depending on page format. This message warns you that the system's memory is almost filled to capacity. The Reading Edge automatically replaces the first documents in memory with the new pages. <document names> is the name or names of the documents to be replaced.

Remedy.

This not a problem if you are finished using the first pages stored in memory and do not mind losing them. However, if you want to retain the oldest pages, you should stop scanning new pages when you hear this message. You can then use the Erase key to clear unused pages in memory to make room for new pages.
Message.

Text backup is nearly full. If you press Start or Stop Scanning again, part of document <name> will be removed from backup to make room.

Meaning.

The Reading Edge stores between 50 and 100 pages of text, depending on page format. This message warns you that the system's memory is almost filled to capacity. The Reading Edge automatically replaces the first documents in memory with the new pages. <name> is the name of the document affected.

Remedy.

If you do not want to lose older pages, use the Erase key to clear unnecessary text in memory to make room for all the pages you want to keep.

Message.

That setting was never saved.

Meaning.

This message occurs when you select a key to which no settings are assigned. The message indicates that no setting was ever assigned to that key, or that the setting was lost because the system was turned off while erasing all text.

Remedy.

Reassign the lost settings. For complete information about settings, refer to Chapter 4, "The Six Keypad Levels."
Message.

*The page appears to be blank.*

Meaning.

This message indicates that you have attempted to scan without a page on the scanner glass. You might also have placed a blank page on the glass, or placed the page with the wrong side face down. This message also might occur if the brightness setting is inappropriate for the page.

Remedy.

Ensure that you have a page on the scanner glass, and that the page's printed side is face down. If this message persists, adjust the brightness setting to a darker setting (higher number).

Message.

*The TIFF file could not be interpreted.*

Meaning.

This error occurs when you send text to The Reading Edge while the Receive TIFF option is active.

Remedy.

Ensure that the right option is active for the information you want to receive. For more information about selecting input options, refer to Chapter 4, "The Six Keypad Levels."
Message.

The TIFF image is too large to be recognized.

Meaning.

You have attempted to receive a TIFF image that is too large for The Reading Edge's memory.

Remedy.

The Reading Edge accepts only TIFF images with a resolution of 300 dots per inch (D. P. I.) or less. These images can be up to 8.5 inches by 14 inches.

Message.

Threshold D RAM failed this power up.

Meaning.

This message indicates a hardware problem with the system.

Remedy.

Contact X.I.S. Customer Support.

End of Appendix A. Section 1.
Appendix A. Section 2.
Disk-Related Error Messages.

This section lists error messages that you might encounter while using The Reading Edge with a Blazie Braille 'n Speak® Disk Drive Accessory®.

Message.

_Disk could not be read._

Meaning.

This message can occur for a number of reasons. For instance, it occurs when The Reading Edge attempts to access a disk but there is no disk in the Blazie drive.

The message also occurs if the current disk's format is not compatible with MS-DOS, for example, an Apple® Macintosh® disk.

You also hear this message if the current disk is write-protected.

Message.

_Disk turned off or not plugged into Reading Edge._

Meaning.

You hear this message when you try to perform a disk function while the Blazie drive is not running. The message also occurs if the drive and The Reading Edge are not properly attached.
If you hear this message, check whether the disk drive is running. If so, ensure that the drive and The Reading Edge are properly connected. You must have a cable specifically designed to plug into the disk drive. Contact Blazie Engineering at (410) 893-9333 for information about this cable.

Message.

Document selected is not text, load canceled.

Meaning.

You hear this message if you attempt to load a disk file that is not a text document, for example, a spreadsheet file.

Message.

No documents on current disk.

Meaning.

This message indicates that there are no text files on the current disk.

Message.

Unexpected response from disk drive.

Meaning.

This message indicates a software-related communication problem between The Reading Edge and the Blazie disk drive.
If this message occurs, try restarting both systems. Be sure to turn The Reading Edge on before you turn on the disk drive. If the problem persists, contact X.I.S. Customer Support.

End of Appendix A. Section 3.
End of Appendix A.
Appendix B.
Braille Keypad Quick Reference.

Appendix B, Section 1.
Overview.

This appendix lists the Braille Dot keys you use on the Editing keypad to create letters and numbers. You can also create any Grade 2 contraction; however, these contractions are not listed in this appendix.

Section 2 lists the Dot keys for letters, and Section 3 list the keys for numbers.

End of Appendix B, Section 1.
### Appendix B, Section 2.

### Dot Keys for Letters.

The following columns list the letters of the alphabet and the Dot keys you use to create them.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Keys to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Dot 1</td>
</tr>
<tr>
<td>b.</td>
<td>Dots 1 and 2</td>
</tr>
<tr>
<td>c.</td>
<td>Dots 1 and 4</td>
</tr>
<tr>
<td>d.</td>
<td>Dots 1, 4, and 5</td>
</tr>
<tr>
<td>e.</td>
<td>Dots 1 and 5</td>
</tr>
<tr>
<td>f.</td>
<td>Dots 1, 2, and 4</td>
</tr>
<tr>
<td>g.</td>
<td>Dots 1, 2, 4, and 5</td>
</tr>
<tr>
<td>h.</td>
<td>Dots 1, 2, and 5</td>
</tr>
<tr>
<td>i.</td>
<td>Dots 2 and 4</td>
</tr>
<tr>
<td>j.</td>
<td>Dots 2, 4, and 5</td>
</tr>
<tr>
<td>k.</td>
<td>Dots 1 and 3</td>
</tr>
<tr>
<td>l.</td>
<td>Dots 1, 2, and 3</td>
</tr>
<tr>
<td>m.</td>
<td>Dots 1, 3, and 4</td>
</tr>
<tr>
<td>n.</td>
<td>Dots 1, 3, 4, and 5</td>
</tr>
<tr>
<td>o.</td>
<td>Dots 1, 3, and 5</td>
</tr>
<tr>
<td>p.</td>
<td>Dots 1, 2, 3, and 4</td>
</tr>
<tr>
<td>q.</td>
<td>Dots 1, 2, 3, 4, and 5</td>
</tr>
<tr>
<td>r.</td>
<td>Dots 1, 2, 3, 5</td>
</tr>
<tr>
<td>s.</td>
<td>Dots 2, 3, and 4</td>
</tr>
<tr>
<td>t.</td>
<td>Dots 2, 3, 4, and 5</td>
</tr>
<tr>
<td>u.</td>
<td>Dots 1, 3, and 6</td>
</tr>
</tbody>
</table>
v. Dots 1, 2, 3, and 6.
w. Dots 2, 4, 5, and 6.
x. Dots 1, 3, 4, and 6.
y. Dots 1, 3, 4, 5, and 6.
z. Dots 1, 3, 5, and 6.

End of Appendix B, Section 2.
Appendix B, Section 3.
Dot Keys for Numbers.

The following columns list the numbers 0 through 9 and the Dot keys you use to create them. Before typing these Dot keys, you must type the number sign to indicate that what follows is a number, not a letter.

To create the number sign, press the Dot 3, 4, 5, and 6 keys simultaneously.

<table>
<thead>
<tr>
<th>Number</th>
<th>Keys to Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dot 1</td>
</tr>
<tr>
<td>2</td>
<td>Dots 1 and 2</td>
</tr>
<tr>
<td>3</td>
<td>Dots 1 and 4</td>
</tr>
<tr>
<td>4</td>
<td>Dots 1, 4, and 5</td>
</tr>
<tr>
<td>5</td>
<td>Dots 1 and 5</td>
</tr>
<tr>
<td>6</td>
<td>Dots 1, 2, and 4</td>
</tr>
<tr>
<td>7</td>
<td>Dots 1, 2, 4, and 5</td>
</tr>
<tr>
<td>8</td>
<td>Dots 1, 2, and 5</td>
</tr>
<tr>
<td>9</td>
<td>Dots 2 and 4</td>
</tr>
<tr>
<td>0</td>
<td>Dots 2, 4, and 5</td>
</tr>
</tbody>
</table>

End of Appendix B, Section 3.
End of Appendix B.
Appendix C.  
System Defaults.

This appendix contains a complete list of factory default settings for The Reading Edge. Some of these settings differ from earlier versions.

Reading Keypad.

The defaults for the Reading keypad are as follows:

Punctuation is off.

The Columns key is set for Variable Column Page Scanning.

Select Input is set to Scan Text.

Setup Keypad.

The defaults for the Setup keypad are as follows:

The Reading Voice is Paul. (In languages other than English, the voice is Male.)

The Message Voice is Betty. (With international languages, the voice is Female.)

The Emphasis Voice is Paul. (In languages other than English, the voice is Male.)

Reading Inflection is 100 percent of normal.
Message Inflection is 100 percent of normal.

Save or Restore Settings is set to Use Current Reader Settings.

The Startup Message is on.

Key Click is off.

Page Orientation is set to Automatic Text Orientation.

Remove Halftones is on.

The Brightness Level is set at eight.

**Communication Keypad.**

The defaults for the Communication keypad are as follows:

The Baud Rate is 9600.

Parity is set at No Parity.

There is one Stop Bit.

Handshaking is set to Xon/Xoff.

Line End Markup is set at Carriage Return Line Feeds.

Paragraph End Markup is Not Reported.

Column End Markup is Not Reported.

Page End Markup is set at Form Feeds.
Save or Restore Settings is set at Use Current Communication Settings.

Serial Output is set at No Communication Output.

Computer Compatibility is set at 7 Bit I.S.O. Encoding.

End of Appendix C.
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