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Pathfinder

Operator's Manual

Setting Up and Using Pathfinder's Power Tools

PRENTKE ROMICH COMPANY

Corporate Headquarters:

1022 Heyl Rd. • Wooster, Ohio 44691

Telephone: (330) 262-1984

Fax: (330) 263-4829

E-Mail Address: info@prentrom.com

Web Site Address: www.prentrom.com

Worldwide Headquarters

Prentke Romich International, Ltd.

Whitegates • Swinstead • Grantham • Lincs. • NG33 4PA • UK.

Fax: 44 1476 550872

E-Mail Address: info@prentromint.com



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Some song programming tips and instructions were contributed by Snoopi Botten.

Your device computer access overlays are based on the work Chris Beatty did for the MIKE product. Prentke Romich Company gratefully acknowledges his contribution.

Digital photos of the devices courtesy of Doug Miller

ELECTRONIC INTERFERENCE INFORMATION

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

Warning! Changes or modifications to this product which are not authorized by Prentke Romich Company could exceed FCC limits and negate your authority to use this product.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. You can determine whether this product is causing interference in your radio or television by turning this product off. If the interference stops, it was probably caused by this product or one of its accessories. You can attempt to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move this product to one side or the other of the television or radio.
- Move this product farther away from the television or radio.
- Plug this product into an outlet that is on a different circuit from the television or radio; that is, this product should be controlled by different circuit breakers/fuses from the television or radio.
- If necessary, contact a Prentke Romich Company service technician for assistance.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respect toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE ENVIRONMENTAL INFORMATION: Use: 0° - 45° C; Storage: (-20°) - 50° C; 95% maximum relative humidity @ ambient temperatures less than 40° C.

CLASS 1 LED PRODUCT –The Tracker Headpointing option falls within the limits of a Class 1 LED product as specified by CENELEC EN 60825-1, Amendments 1 and 2.

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Attention! Consult accompanying documents.
Not intended to be an emergency call device or sole communication device.



Warning!

When operating the Pathfinder in a medical environment, do not use with any product that is not medically approved.



Warning!

Any mounts used should be fitted by a qualified person.
Failure to install the mounting system according to the manufacturer's instructions may result in an injury to the user.

Important Note!

To achieve the best results from your communication aid, keep it dry at all times.

See the **Troubleshooting** Section of this manual for more information.

Recommendation

To Avoid Static Discharge: Turn the device OFF before you plug anything into or unplug anything from the device. This includes switches, headpointers and especially the battery charger.

ALERTS

Pathfinder Manual: Power Tools

➡ If your Pathfinder has Windows CE Applications and you want to use them,

please read about turning your device on for the first time in the instruction sheet that came with your Pathfinder.

Turning the Pathfinder On for the First Time

To conserve batteries, the entire unit was turned OFF at the factory before it was shipped. To use it, you must turn the unit ON.

To Turn the Pathfinder ON

On the left front of the case:

Press the  (I/O) and the  (TOOLS) buttons down at the same time. When the display lights up and you see the Pathfinder name, release the buttons.

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Editing and Notebooks

NOTEBOOK MENU - No notebook open			1
1	New Blank	4	Save Notebook
2	New Formatted	5	Delete Notebook
3	Open Notebook	6	Close Notebook
		7	More Items
		8	OK
		9	Cancel

NOTEBOOK MENU - No notebook open			2
1	Rename Notebook	4	Notebook Speech Rate 1
2	Print Notebook	5	Load Notebook From Disk
3	Lock Notebook UNLOCKED	6	Save Notebook to Disk
		7	More Items
		8	OK
		9	Cancel

NOTEBOOK MENU

Some Editing Keys:

EDIT MODE EDIT MENU BLOCK MARKER ARROW KEYS

NOTEBOOK MENU and some Editing Tools

About the Editing Tools and Notebooks

The Pathfinder's primary form of communication is speech. However, the Pathfinder also offers printed text which is an important form of communication. Printed text can be used to communicate with someone who cannot hear the Pathfinder's speech. It can also be used to write letters and speeches, take notes and access a computer.

Because the Pathfinder has the ability to let you use printed text to communicate, it also offers a number of different tools to help you edit the text you create. You can cut and paste text, search for and replace words, delete characters and highlight text.

The Pathfinder also has Notebooks. Notebooks can be used to create and save long portions of text, like speeches, letters, class notes, etc. You can open new, blank Notebooks, or you can use the templates that the Pathfinder has already formatted for you. You can create a calendar or a schedule Notebook from a template. You can also save your own Notebooks to use as templates.

This chapter discusses Notebooks and editing tools.

WORKSPACE

Let's go to the library. I have a list of books to get. Is the van available? I need to change my shirt first. Where's my book bag? My library card is in my book bag.



Press the button. The door opens automatically. Would you help me? Where are the books about the history of England? Non-fiction. Will my wheelchair fit on the elevator? Thank you. Look, I can get through the aisles! Can you reach that book for me on the second shelf from the top? And maybe the one next to it? Thank you.

DISPLAY

The Regular Workspace

The Pathfinder's Regular Workspace

Summary:

The Pathfinder Workspace is a 2000 character page of text. The text that you put on the display screen in either Minspeak or Spell, eventually goes into the workspace. Editing tools allow you to go into the Workspace and change text that has scrolled off the display screen.

When you fill up the Pathfinder display screen with text, you may notice that the top line of text disappears from the screen so you can see the bottom line of text. This is called "scrolling".

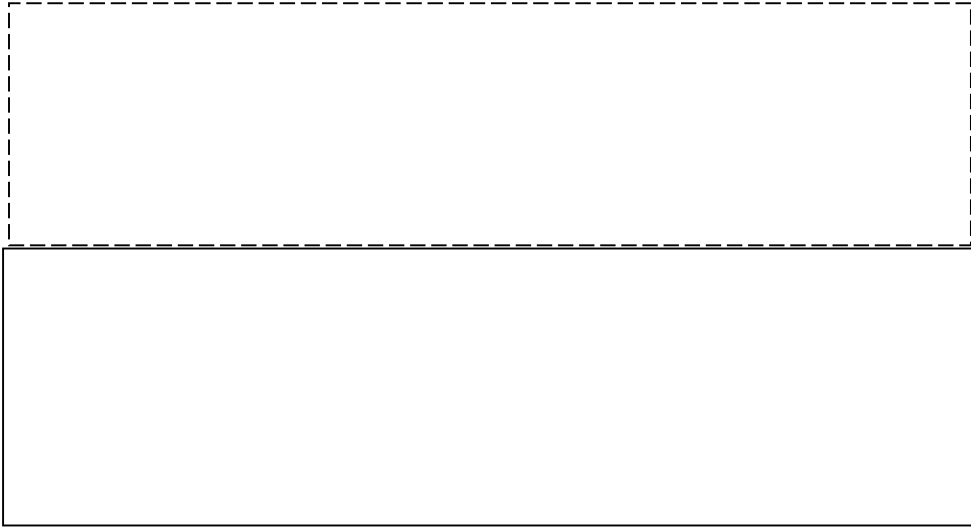
The text that has scrolled off the top of the display goes into the regular **Workspace**. This Workspace saves the last 2000 characters that you put on the display. This means that when text scrolls off the Pathfinder's display screen, it is still kept for awhile in the Workspace. You can use the edit tools to edit text in the Workspace as well as text on the display screen.

When the Workspace finally fills up, the characters scroll out the top of the Workspace to make room for new characters that are scrolling off the display. Once characters have left the workspace, you cannot retrieve them.

The Workspace can hold 8 or 9 times as much text as can be shown on the display screen.

☞The Pathfinder also has a Notebook Workspace. The Notebook Workspace is discussed later in this chapter.

WORKSPACE



DISPLAY

Activate **CLEAR DISPLAY** to Clear the
Display and the Workspace

CLEAR DISPLAY Clears the Text from the Display and the Workspace

If you want to clear all the text off the display screen and from the workspace, activate the CLEAR DISPLAY tool.

It is important to remember that CLEAR DISPLAY will clear the text from both the display and the workspace. **⚠If you activate CLEAR DISPLAY by mistake, you will loose all your text.**

If you want to clear text from the display only, use the DELETE WORD, DELETE CHARACER or DELETE LAST SELECTION tools. Any text that has scrolled into the workspace will remain in the workspace if you use these tools.

⚠CLEAR DISPLAY does not work this way with the **Notebook Workspace**. If a Notebook is open and you activate CLEAR DISPLAY, nothing will happen. You must use one of the DELETE tools to delete text from a Notebook.

Editing Tools

Summary:

Editing tools such as the arrow keys, Block Marker, Edit Mode and EDIT menu allow you to make changes to any text you put on the display.

There are several editing tools in the Toolbox and in the All Tools List. These tools allow you to edit messages. You can use them with stored messages and Notebooks. The edit tools work in Spell mode, Minspeak mode and in the Toolbox.

The Editing Tools:

↓↑→← These are the Arrow keys. They move the cursor in the direction of the arrow. You can use them to navigate through text or to navigate through things like icon categories and activities.

Home: Moves the cursor to the front of the current line.

Page Up: Moves the cursor to the top of the current page.

Page Down: Moves the cursor to the bottom of the current page.

End: Moves the cursor to the end of the current line.

Edit Mode – This tool determines how far the arrow keys move the cursor. For example, word-by-word, sentence-by-sentence, character-by-character, etc.

Block Marker – This tool allows you to highlight a block of text. Once text is highlighted, use the EDIT menu to move, copy or cut it.

EDIT Menu – This allows you to move, copy or delete highlighted text.

The next few pages explain how the editing tools work.

Arrow Keys and EDIT MODE

The arrow keys move the cursor the way the arrow points.

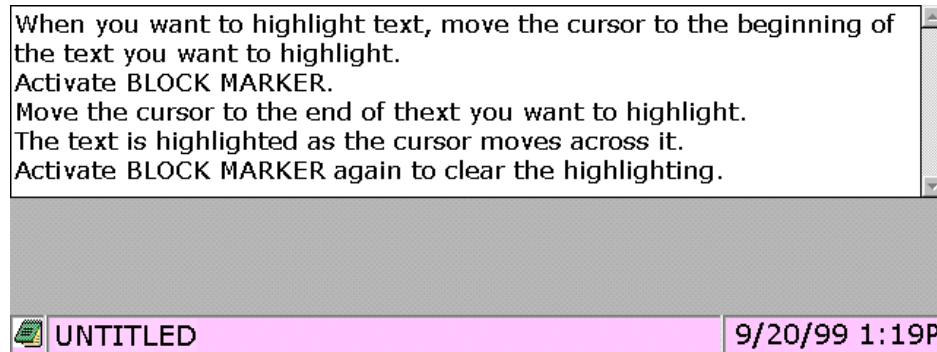
- ← Moves the cursor one character to the left.
- Moves the cursor one character to the right.
- ↑ Moves the cursor up one line.
- ↓ Moves the cursor down one line.

Use DELETE CHARACTER to delete individual characters to the **left** of the cursor. Use DELETE WORD to delete individual words to the **left** of the cursor. Use DELETE LAST SELECTION to delete the last thing you placed on the display.

If you spell in a new word or retrieve a Minspeak sequence to add to a sentence, the word will appear in **front** of the cursor.

EDIT MODE

- ← Moves the cursor to the beginning of next word to the left.
- Moves the cursor to the beginning of the next word to the right.
- ↑ **Word mode:** Moves the cursor up one page at a time.
Sentence mode: Moves cursor to the beginning of the text
Character mode: Moves the cursor up one line at a time.
- ↓ **Word mode:** Moves cursor down one page at a time.
Sentence mode: Moves the cursor to the end of the text.
Character mode: Moves the cursor down one line at a time.



Move the cursor to the beginning of the text you want to highlight.
Activate **BLOCK MARKER**.

Move the cursor to the end of the text you want to highlight.
The text is highlighted as the cursor moves.

To unhighlight text, activate **BLOCK MARKER** again.



Using BLOCK MARKER

Highlight Text with Block Mark Tool

The Block Mark tool is part of the key with the Toolbox on it.

To highlight text move the cursor to the text that you want to mark, activate **Block Mark**. Move the cursor to the end of the text to be marked. As the cursor moves the text is highlighted.

If you want to delete text, copy text or move text from one place in the workspace or Notebook to another, you must first highlight the text you want to move.

To Highlight Text

1. Use the arrow keys to move the cursor to the beginning of the text that you want to highlight.
2. Activate **Block Mark**.
3. Use the arrow keys to move the cursor to the end of the text that you want to highlight. As you move the cursor, all the characters that the cursor passes over will become highlighted. Move the cursor until all the text that you want marked is highlighted. ➡ You can use EDIT MODE to highlight a word or sentence, if you like, rather than highlighting character by character.
- 3a. To un-highlight the text you are marking, activate **Block Mark** again.
4. When the text is highlighted, activate EDIT MENU and select an option for your highlighted text.

The next few pages tell you how to cut, copy and paste highlighted text using the **EDIT** menu.

Cut and Paste Highlighted Text

You can cut (delete) highlighted text from the workspace or Notebook and paste it somewhere else. The Pathfinder can hold one item of copied text at a time. You can paste the item any number of times. The item remains in the Pathfinder's clipboard until you cut or copy new text.

To Highlight and Cut Text:

1. Place the cursor at the beginning of the text you want to cut.
2. Activate **block mark**
3. Move the cursor to the end of the text you want to cut. The text is highlighted as the cursor moves.
4. Activate the EDIT menu.
5. Activate Option #1, **Cut Text**. The text is cut and Pathfinder exits the menu.

To Paste Cut Text Back Into a Document

1. Use the arrow keys to place the cursor where you want the text to go.
2. Open the EDIT menu.
3. Activate Option #3, **Paste Text**.
4. The text appears where the cursor was on the display.



To unhighlight text, activate **Block Mark** again.

Copy Highlighted Text

You can copy highlighted text from the workspace or Notebook and paste it somewhere else. Copied text is not deleted from its original place in the workspace or Notebook as it is when it is cut. The Pathfinder can hold one item of copied text at a time. You can paste the item any number of times. The item remains in the Pathfinder's clipboard until you cut or copy new text.

To Highlight and Copy Text

1. Place the cursor at the beginning of the text you want to copy.
2. Activate **Block Mark**.
3. Move the cursor to the end of the text you want to copy. The text is highlighted as you move the cursor.
4. Activate **EDIT** menu.
5. Activate Option #2, **Copy Text**. The text is copied and Pathfinder exits the menu.

To Paste Copied Text into the Document

1. Place the cursor where you want the copied text to go.
2. Open the **EDIT** menu.
3. Activate Option #3, **Paste Text**. The Pathfinder pastes the text into the document at the cursor and exits the **EDIT** menu.

↩ To un-highlight text, activate **Block Mark** again.

Using Find and Replace

Let's look at the **Find and Replace** Options: Open the EDIT menu and activate **Find and Replace**.

"Find" Direction

Tell the Pathfinder to search forward or backward in your text. For example, if your cursor is at the end of the text you want to search, tell the Pathfinder to search **backward** through the text.

Match Case

If you want the Pathfinder to look for capital letters in the find or replace word, set this option to **Yes**. If it doesn't matter, select **No**.

Confirm Replace

When this is set to Yes, the Pathfinder will ask you each time it comes to a "find" item if you want to replace it. You must then select Yes or No. If this is set to No, the Pathfinder will not ask.

Find Next

If you select this, you must type in the word you want the Pathfinder to find. Select OK when you have entered the word. The Pathfinder will highlight the word in the text. You can then replace it yourself. Or, if you just want to know where all the occurrences of the word are in the text, return to the EDIT menu and continue to select **Find Next**.

Replace Next

If you select this option, type in the "find" word. Then type in the replacement word. Activate OK. The Pathfinder will automatically replace the word, one selection at a time. You must activate this option for each replacement.

Replace All

If you select this option, type in the "find" word. Then type in the replacement word. Activate OK. The Pathfinder automatically replaces the word throughout the whole text.

Editing or Erasing the Contents of the Regular Workspace

To retrieve text that has scrolled into the regular workspace, use the arrow keys to move the cursor up the display screen. Text in the Workspace will begin to appear on the display screen. When you see the text that you want to edit, stop moving into the workspace and begin editing.

If you want to erase the entire contents of the regular workspace, select CLEAR DISPLAY.

➡ When you erase the regular workspace by using CLEAR DISPLAY, you can no longer retrieve any text that was there. It is permanently erased.

NOTEBOOK MENU - No notebook open			1
1	New Blank	4	Save Notebook
2	New Formatted	5	Delete Notebook
3	Open Notebook	6	Close Notebook
		7	More Items
		8	OK
		9	Cancel

NOTEBOOK MENU - No notebook open			2
1	Rename Notebook	4	Notebook Speech Rate 1
2	Print Notebook	5	Load Notebook From Disk
3	Lock Notebook UNLOCKED	6	Save Notebook to Disk
		7	More Items
		8	OK
		9	Cancel

NOTEBOOK MENU - No notebook open			3
1	Copy Selected Notebooks	7	More Items
2	Copy All Notebooks	8	OK
		9	Cancel

The NOTEBOOK Menu

About Notebooks

Summary:

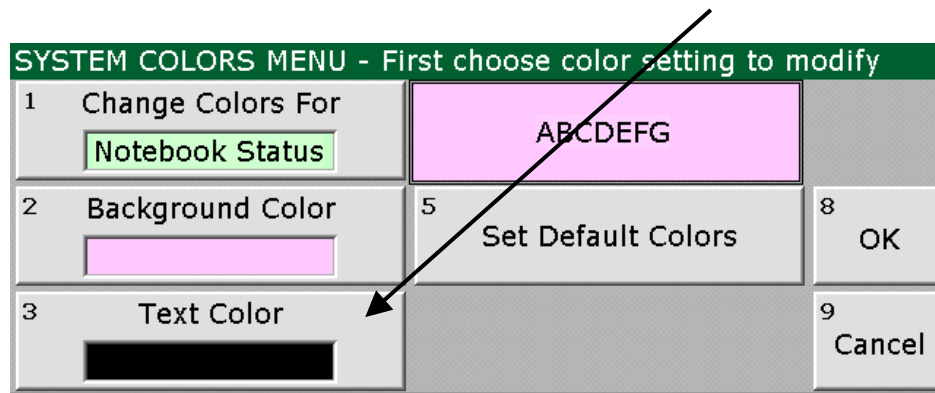
Use Notebooks for large amounts of text, for keeping schedules and calendars, for journals, etc. Notebooks are unique to a User Area and are automatically saved when the Pathfinder is turned Off.

When you have to create large amounts of text, use an individual Notebook. When you want to set up a daily calendar or schedule, use one of the Pathfinder's formatted Notebooks. If you have created a Notebook whose format you think you will use again, save it as a formatted Notebook so you can re-use it.

Many people who have learned to communicate well using a communication aid are often asked to give speeches. Notebooks are ideal for storing speeches. You can store the tool, SPEAK NOTEBOOK, to speak a specific Notebook. Or you can store the tool, SPEAK ALL to speak any unspecified Notebook. You can even select a special **Notebook Speech Rate** in the NOTEBOOK menu. This is the rate that the Pathfinder will use whenever it is speaking a Notebook.

Notebooks are unique to a User Area. A person in User Area 1 cannot access Notebooks from User Area 2, for example. Notebooks can also be locked. This means that a person can look at the Notebook but not change anything or create any new text in it.

Among other things, the NOTEBOOK menu allows you to start new Notebooks, open existing Notebooks, save Notebooks and copy Notebooks. The next few pages discuss the options in the NOTEBOOK menu.



Change Notebook Status Bar Colors in the
FEEDBACK Menu

The Notebook Status Bar Color signifies you are in a Notebook

You will find that it is helpful to make the Notebook status bar a different color from the regular display status bar. When the Notebook status bar is a different color, you can easily tell whether you are using a Notebook or not, especially if you are moving from the regular display to a Notebook, or hiding and showing Notebooks.

To Change the Notebook Status Bar Color:

1. Turn the Toolbox On.
2. Open the FEEDBACK Menu.
3. Activate MORE ITEMS until you see the **System Colors** option. Activate this option.
4. Activate option #1: **Change Colors For** until you see **Notebook Status**.
5. Pick a **Background Color** and a **Text Color** different from the colors you selected for your Workspace colors or Menu colors.
6. When you have finished, Activate OK twice, to exit the menu.

The Notebook Workspace

Summary:

The Notebook workspace is a 30,000 character page of text. The text that you put on the display screen in either Minspeak or Spell eventually goes into the workspace. Editing tools allow you to go into the workspace and change text that has scrolled off the display screen. The Notebook workspace is separate from the regular Pathfinder display workspace.

The Notebook workspace is like the Pathfinder regular workspace except that it is only available when you are working in an open Notebook. (See pages 13-15 for more information about the regular Workspace.)

When you are working in a Notebook and you fill the display screen with text, notice that the top line of text disappears from the screen so you can see the bottom line of text. This is called "scrolling".

The text that has scrolled off the top of the display goes into the **Notebook workspace**. You can use the edit tools to edit text in the workspace as well as text on the display screen.

When the workspace finally fills up, the characters scroll out the top of the workspace to make room for new characters that are scrolling off the display. Unlike the regular workspace, the Notebook workspace will keep all of the Notebook text. When a Notebook is full it won't allow you to add more text and nothing will scroll off the display into the workspace.

☞ Notebooks can take up a lot of Pathfinder memory. If you find you are running out of memory, look at your Notebooks and see if there are any you can delete.

Editing or Erasing the Contents of the Notebook Workspace

You can edit or erase the Notebook workspace by editing or erasing a Notebook's contents.

To Edit a Notebook:

Open the Notebook. Use EDIT MODE or EDIT MENU and the arrow keys to edit text in the Notebook.

If you want to delete the entire contents of a Notebook:

Open the NOTEBOOK MENU in the Toolbox and select **Delete Notebook**.

Select the Notebook you want to delete. This will delete the entire Notebook as well as the name of the Notebook.

OR

Highlight all the text in an open Notebook.

Open the EDIT MENU in the Toolbox.

Activate Cut.

This deletes all the text in the Notebook, but retains the name of the Notebook. In effect, you have a blank named Notebook.

OR

Highlight all the text in the Notebook

Activate the DELETE CHARACTER key on your overlay.

This also deletes all the text in the Notebook, but retains the name of the Notebook. In effect, you have a blank named Notebook.

 When you delete the contents of a Notebook, you can no longer retrieve any text that was there. It is permanently erased.

NOTEBOOK MENU - No notebook open			1
1	New Blank	4	Save Notebook
2	New Formatted	5	Delete Notebook
3	Open Notebook	6	Close Notebook
		7	More Items
		8	OK
		9	Cancel

NOTEBOOK MENU - No notebook open			2
1	Rename Notebook	4	Notebook Speech Rate 1
2	Print Notebook	5	Load Notebook From Disk
3	Lock Notebook UNLOCKED	6	Save Notebook to Disk
		7	More Items
		8	OK
		9	Cancel

The NOTEBOOK Menu

New Blank Notebooks

A new blank Notebook is a Notebook that has never been used before.
A blank Notebook is not formatted and it does not have a title.

To Open a Blank Notebook:

1. Remove the keyguard and overlay. Press the TOOLS button to open the Toolbox.
2. Activate the NOTEBOOK menu in the Toolbox.
3. Activate option #1: **New Blank**.

Notice that the status bar at the bottom of the Pathfinder display screen has the picture of a small Notebook in it and the word UNTITLED next to it. Whenever you are using a Notebook, the status bar will show the little Notebook icon and will display the name of your Notebook. If you have not saved and named the Notebook yet, the status bar will show the word UNTITLED.

You can **Save** a Notebook anytime it is open. Just open the NOTEBOOK menu and activate the **Save** option. If the Notebook has not been named yet, you must name it. When the Notebook is saved, the Pathfinder returns you to the open Notebook.

Close a Notebook; Save a Notebook

When you have finished using a Notebook, you can close it by activating the Close Notebook option in the NOTEBOOK menu. When you close a Notebook, the Pathfinder returns you to the regular display area. The Notebook icon disappears.

If this is the first time you have closed your Notebook, the Pathfinder will ask you to name the Notebook. Enter a name and activate OK. The Pathfinder automatically saves and then closes the Notebook.

If you want to close an Untitled Notebook without naming and saving it:

1. Open the NOTEBOOK menu in the Toolbox.
2. Activate Option #6: **Close Notebook**.
3. If there is no writing in the Notebook, the Pathfinder will simply close the Notebook and return you to the regular workspace.
4. If you have written in the Notebook, the Pathfinder asks you if you want to save the changes in the Notebook. Activate NO. The Pathfinder returns you to the regular display.

To Save a Notebook

When you are using a Notebook, you will want to save your work regularly. The **Save Notebook** option tells the Pathfinder to save your work.

1. Activate **Save Notebook**
2. If the Notebook you want to save has not been named yet, the Pathfinder will ask you to name it before it saves the Notebook.
3. The Pathfinder saves the Notebook and returns you to it. It does not close the Notebook.

🔔**Helpful Hint:** If you only want to close a Notebook for a moment so you can speak, you can use the **Hide/Show Notebook** key in the Toolbox to hide the Notebook. See page 41 for more information.

Using a Formatted Notebook

The Pathfinder offers you 8 different kinds of formatted Notebooks. Formatted means that these Notebooks are already set up for something specific. All you have to do is add your personal touch to them.

For example, if you would like to keep a daily schedule, you could use the "Schedule" Notebook. This Notebook has a list of the hours in the day at half-hour intervals. All you have to do is to enter your appointments at the correct time slot. Or, you might like to keep a calendar handy. The Pathfinder lets you set up a calendar Notebook. You can choose either a yearly calendar or a monthly calendar and you can set it up the way you want.

Formatted Notebooks save you the trouble of creating the same thing over and over.

Let's say you opened a new blank Notebook, made an outline of a speech you were asked to give and saved the Notebook. Some time later you are asked to give another speech and you wish you could use the same outline, only this time you would substitute points from your new speech into the outline. The Pathfinder lets you do this with the **Existing Notebooks** option.

The **Existing Notebooks** option in the NOTEBOOK menu gives you a list of all the Notebooks you have saved. You can select the one that has the format you want to re-use, open it, save it under a new title and then add or delete information as you wish. In the speech outline example, above, you could keep the outline format, use the editing tools to erase the old points and then type in the points for your new speech.

Open a Notebook from a List of Notebooks

Every time you name and save a Notebook, the Pathfinder keeps a record of it. If you want to open a particular Notebook, use the Open Notebook option in the NOTEBOOK menu.

To Open a Named Notebook:

1. Remove the keyguard and overlay. Press the TOOLS button to open the Toolbox.
2. Open the NOTEBOOK menu.
3. Activate Option #3: **Open Notebook**.
4. You see a list of all your Notebooks. Activate the option for the one you want to use.

➡ See page 42 for instructions about how to open a Notebook using an icon sequence.

Delete a Notebook

If you find that you no longer need a Notebook, you should delete it. This will free up Pathfinder memory. Deleting Notebooks that you no longer use also helps to keep your Notebook list manageable.

To Delete a Notebook:

1. Remove the keyguard and overlay. Press the TOOLS key to open the Toolbox.
2. Activate the NOTEBOOK menu.
3. Activate Option # 5: **Delete Notebook**.
4. The Pathfinder shows you a list of all your Notebooks. Select the one you want to delete. Activate OK.
5. If you want to continue, activate YES. If you decide you don't want to delete the Notebook, activate NO.
6. The Notebook is automatically deleted.

Rename a Notebook

To Rename a Notebook

You may decide to rename a Notebook for some reason. The Rename Notebook option allows you to do this.

1. Remove the keyguard and overlay. Press the TOOLS key to open the Toolbox.
2. Activate the NOTEBOOK menu.
3. Activate **More Items**.
4. Activate **Rename Notebook**.
5. Type in the new name and activate OK

Print a Notebook

You can print out an entire Notebook.

To print a Notebook, the Notebook must be open. If it is not, go to the NOTEBOOK menu and open the Notebook you want to print, then follow the directions below.

1. Connect your printer to the Pathfinder Serial Port on the top of the case. Use the cable that came with your printer.
2. The printer and Pathfinder baud rates must match. If necessary, you can use the Pathfinder's OUTPUT menu to change the Pathfinder baud rate to match the printer's baud rate.
3. The printer must be set up for: **Data Bits = 8; Stop Bits = 2; Parity = None.**
Check the printer manual to find out how to set these up if they are not already set this way.
4. In the OUTPUT menu, we suggest that you select **Delayed**. Text will not go to the printer until you tell it to by selecting the RETURN key or CLEAR DISPLAY on the Pathfinder.
5. Go to the NOTEBOOK menu and activate **Print Notebook**. (Make sure the Notebook you want to print is **Open**.)

Lock Notebook

You can lock a Notebook so that other people can look at it but not write in it or change anything that is already written there.

When you lock a Notebook, a small padlock icon appears in the Notebook status bar next to the Notebook icon. When a Notebook is unlocked, the padlock icon disappears. When a Notebook is locked the display screen background color also changes from the color you selected to a different color to signify that the Notebook is locked.

☞ You cannot delete or rename a locked Notebook. You must unlock it first.

To Lock a Notebook

☞ If the Notebook you want to lock is not currently open, use **Open Notebook** and open the Notebook you want. Then re-enter the NOTEBOOK menu

1. Remove the keyguard and overlay. Press the TOOLS key to open the Toolbox.
2. Activate the NOTEBOOK menu.
3. Activate **More Items**.
4. Activate **Lock Notebook**.
5. Activate OK.

Notice the Notebook's status bar at the bottom of the screen. The small padlock should be visible next to the Notebook icon. The display screen background color will also be different.

Save/Load a Notebook to a Memory Device

To save a Notebook

1. Make sure your USB Flash Drive or the Secure Digital Card is plugged into your communication aid.
2. Make sure **MTI Method** is set to **Auto** in the TRANSFER MEMORY MENU.
3. Open the NOTEBOOK MENU.
4. Select **Save a Notebook to Disk**.
5. Your Notebooks are listed. Select the Notebook you want to save.
6. The Notebook is loaded onto your flash drive or SD card as a **.txt** file.
7. Activate **OK** to exit.

Load a Notebook

You must have a Notebook to load on your USB flash drive or Secure Digital card.

1. Make sure your USB Flash Drive or the Secure Digital Card is plugged into your communication aid.
2. Make sure **MTI Method** is set to **Auto** in the TRANSFER MEMORY MENU.
3. Open the NOTEBOOK MENU.
4. Select **Load a Notebook to Disk**.
5. Any Notebooks on your USB drive or Secure Digital card are listed.
6. Select the Notebook you want to load.
7. The Notebook is loaded. Activate OK to exit.

Speaking a Notebook and Using the Notebook Speech Rate

There may be times when you will want to speak your Notebooks, perhaps to give a speech or to make a presentation. There are two insertable tools you can store that allow you to speak your Notebooks.

Use the SPEAK NOTEBOOK tool when you want to speak a specific Notebook. When you insert and store this tool, you must also store the name of the Notebook you want to speak. Use the SPEAK ALL tool to speak any open Notebook

The Notebook Speech Rate Option

We have found that the regular speech rate is often too fast for people who are listening to long pieces of spoken text. The **Notebook Speech Rate** option allows you to select a speech rate that is different from your normal conversational speech rate. A slower speech rate helps people to follow along better.

When you select a Notebook speech rate, the Pathfinder will use that speech rate with any Notebook you want to speak. We suggest you select some different speech rates and then have someone listen to each rate for a few minutes so you can decide which rate will be best for your listeners.

To Select a Notebook Speech Rate:

1. Open the NOTEBOOK Menu.
2. Activate MORE ITEMS.
3. Activate option #4: **Notebook Speech Rate**.
4. Practice with some different rates before you select a final one.

The HIDE/SHOW NOTEBOOK Tool

There may be times when you are working in a Notebook and you want to go to the regular display to work for a few minutes. You don't want to close your Notebook because you know you will be coming back to it shortly. Instead of closing your Notebook, you can hide it by activating the HIDE/SHOW NOTEBOOK tool in the Toolbox. The HIDE/SHOW NOTEBOOK tool is in the Toolbox. You can assign it to a key on your overlay or store it under an icon sequence if you want it to be available from your overlay.

When you activate HIDE/SHOW NOTEBOOK, the Notebook disappears and the Pathfinder display is visible.

Notice that in the status bar at the bottom of the display, the little Notebook icon is gone.

When you have finished with the regular display workspace, activate the HIDE/SHOW NOTEBOOK tool again.

Your Notebook appears and you can continue to work in it. Notice in the status bar that the little Notebook is visible. You will also see the title of the Notebook or the word UNTITLED if you have not yet named the Notebook.

🔄 This tool has been called the **Open/Close Notebook** tool on previous devices.

Store a Notebook Under an Icon Sequence

Summary:

Activate STORE. Activate the icon sequence you want to use. Activate Synthesized. Activate Spell Text for Message. Activate INSERT TOOL. Activate OPEN NOTEBOOK. Select the Notebook to store. Exit the menu.

You may have a Notebook (or two or three) that you use frequently. You would like to have them on your communication overlay so that you can access them quickly. Follow the direction below to store a Notebook under an icon sequence on your overlay.

1. Remove the keyguard and overlay. Press TOOLS to open the Toolbox.
2. Activate STORE CORE in the Toolbox.
3. Activate the icon sequence you want to use. Activate OK.
4. Activate **Synthesized**.
5. Activate **Spell Text for Message**. Activate OK.
6. Activate INSERT TOOL on the screen.
7. Step through the tools until you come to OPEN NOTEBOOK and then activate that option.
8. Select the Notebook you want from the list. Activate **OK**.
9. Activate OK again.

☞ You may want to store the NOTEBOOK menu under an icon sequence to make navigating between conversation and writing easier. Follow the steps above to store the NOTEBOOK menu. After you activate INSERT TOOL, find and activate NOTEBOOK MENU, then activate the number “3” (this opens a Notebook). The display will show: INSERT TOOL<NOTEBOOK MENU>3.

Minserts

MINserts

Pathfinder Manual: Power tools

Enter message, then select OK

Hi, «MINSERT», how's it going?

Insert Tool

OK

Cancel

Add Minserts to Messages when you are in
STORE mode

Minserts Can Make Messages Much More Flexible

Summary:

Minserts allow you to put "blanks" into a message that you will fill in when you speak the message. This allows you to have many variations of a particular message with minimum storing.

Minserts are blanks that are put into messages while the message is being stored. Later, when you recall the message, the Pathfinder allows you to fill in the blanks. This means you can have one message that can be used in a lot of different situations.

For example, think about the message, "Good morning, how are you?" Although this message is functional, consider the personal touch in saying, "Good morning, John, how are you?" or "Good morning, Aunt Sylvia, how are you?" While it isn't possible to store a personal greeting to all the people you could possibly meet, using a Minsert in this message allows you to insert a name into a generic greeting.

Minserts also allow you to store fewer messages while having access to many more. You could store this message, "I would like to _____ tonight." Any time you recall this message you can fill in the blank with something different, e.g., "go shopping," "eat at Joe's," "stay home," "watch a video".

You can use any number of Minserts in a stored message, but each blank must be able to be filled by activating only one sequence or one word.

Add Minserts to a Message when you Store the Message

Summary:

Use Minserts when you are storing a message. When you get to a place where you want to have a "blank", activate INSERT TOOL and then MINSERT. Continue the storing process.

When you use Minserts, you need to be able to fill in the blank by activating only one sequence or one word when you retrieve the message.

Create a Message with a Minsert in it:

1. Remove the keyguard and overlay and turn the Toolbox On.
 2. Activate STORE CORE.
 3. Select **Synthesized**.
 4. Select **Spell Text for Message**.
- ➡ For example, let's say you want to store, "Hi, _____, how's it going?"
5. Spell, Hi,
 6. Activate INSERT TOOL.
 7. Activate MORE ITEMS until you see MINSERT.
 8. Activate MINSERT.
 9. Add a comma or any punctuation you want that will go with the word you will insert later.
 10. Continue to spell the rest of the message.
- ➡ If you want to add more Minserts, do so.
11. Activate OK when you are finished.

Fill in the Minserts when you Retrieve Your Message

You can fill in the Minsert blanks when you retrieve your message. You may use one sequence activation or spell a word or phrase for each Minsert.

Fill in the Minsert by Activating a Sequence:

1. Activate the sequence you stored the message under.
2. Activate the sequence that contains the word you want to replace the Minsert with.

➡ If there is more than one Minsert, the Pathfinder will jump to the next Minsert to be filled.

Fill in a Minsert by Spelling a Word:

With **Auto Spell On**:

Begin to spell the word you want to replace the Minsert. The Pathfinder automatically puts you in Spell mode where you can finish spelling the word. Activate SPELL/MINSPEAK to return to your overlay.

➡ If **Spell One Word** is also on:

When you finish spelling your word activate a space and the Pathfinder will automatically return you to your overlay.

With **Auto Spell Off**:

Select **Spell Minspeak** to toggle back and forth.

Stuff a Minsert with more than One Icon

When the same icons are always used with a Minsert, you can store them with the message.

For example, the "Hi, <Minsert>, how's it going?" message is one where you are always going to be filling in the Minsert with a person's name. You can store this message so that the Minsert will include the NAME icon. When you recall this message, you will only have to activate the icon(s) that contains the name you want to use.

To stuff a Minsert using the above example:

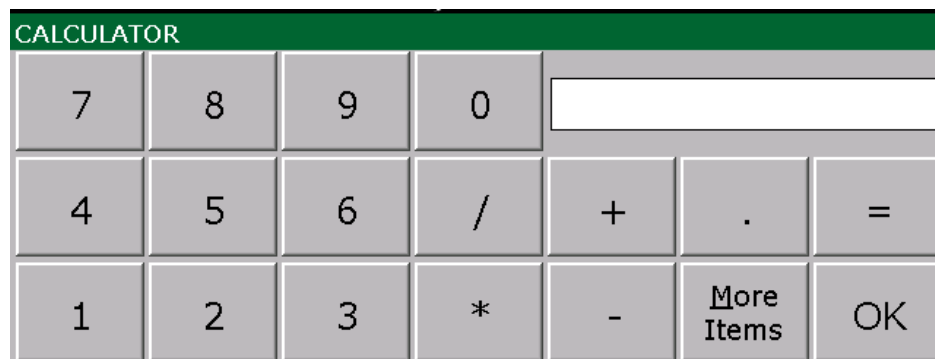
1. Activate STORE CORE.
2. Activate the sequence you want to use to retrieve the message.
3. Activate OK.
4. Spell, " Hi," add a space and activate **Insert Tool**.
5. Activate "i" and select **Icon**.
6. On your overlay select the NAME icon (the icon with the name of John Hancock and a pen on it).
7. Activate **Insert Tool**.
8. Activate "m" and select **Minsert**.
9. Type "how's it going?" and two spaces.
10. Activate OK twice.

Go to Minspeak and activate the sequence you stored this message under. Notice on your keyboard that only those icons that contain names are highlighted. Select the name you want to use.

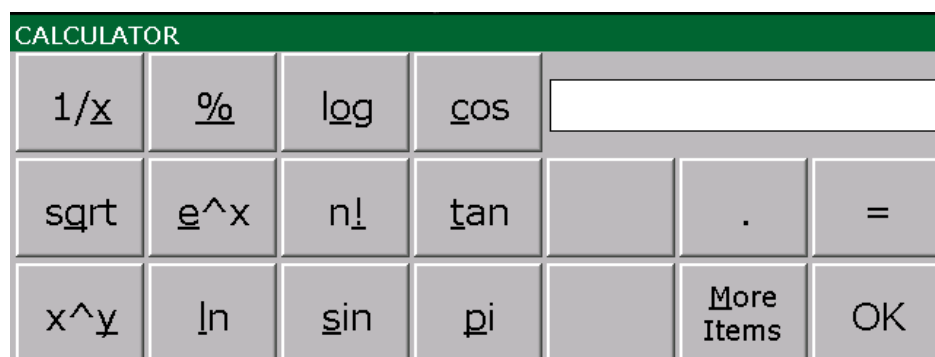
Calculator

CALCULATOR

Pathfinder Manual: Power Tools



Screen 1



Screen 2

The Pathfinder Calculator

The Pathfinder Calculator

The Pathfinder has a built in calculator. To see the calculator, go to the Toolbox and activate the CALCULATOR key. The calculator is always available in the Toolbox. In order to use the calculator in your user area, you must add the CALCULATOR tool to your overlay.

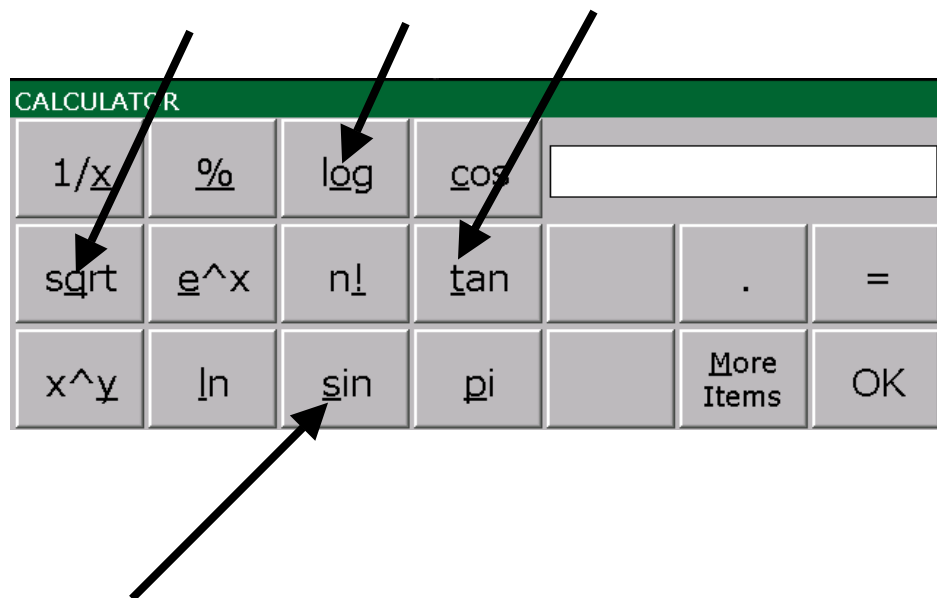
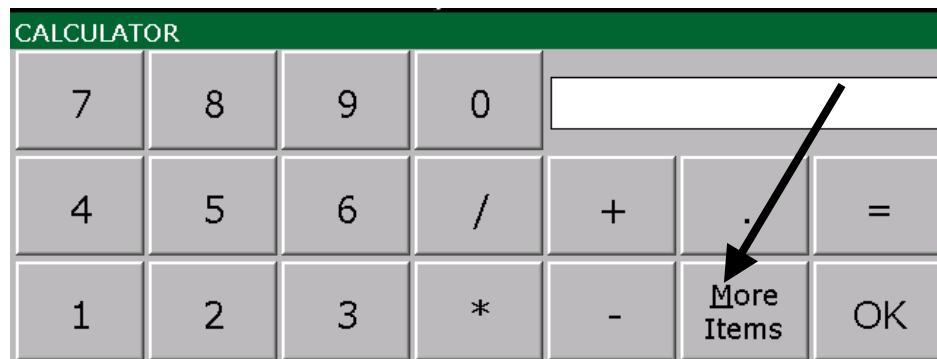
The first screen is for addition, subtraction, multiplication and division. Activate MORE ITEMS to go to the second screen. This screen contains keys for more advanced mathematical problems.

If you can directly access the display screen, you can perform all the calculator functions by using these two screens.

If you cannot directly access the display screen to select keys, you can perform all the functions by using your keyboard. Make sure that **SPELL** mode in your area contains all the numbers and operational signs that the calculator needs. You need to have the numbers 0-9, the +, -, /, *, = signs, the alphabet, and the OK and CLEAR DISPLAY keys assigned to keys on your overlay. If you are using a pre-defined overlay, it will already have all of these keys on it.

If you do not want the calculator to speak, simply turn the SPEECH OFF.

➡ See the **Personalize Your Overlay** chapter in the **Basic Tools** manual for information on adding Tools and assigning characters to your overlay.



Underlined Letters for use on your Keyboard

Using the Calculator

An Addition Problem:

Open the calculator in the Toolbox.

On Screen 1: **Activate 1+1=2.** Did you notice that each time you activate a new key, the screen clears and the latest number is added to the screen? When you activate the = key, the answer to the problem is visible in the display area of the calculator.

If you make a mistake, or want to move to a new problem, activate the **CLEAR DISPLAY** key on your overlay or in the Toolbox. This clears the current problem and lets you start over.

A Square Root Problem

Activate **CLEAR DISPLAY** on your overlay.

Activate **4.**

Activate **More Items** to go to Screen 2.

Activate **sqrt.**

The number 2 appears in the answer box.

If You Can't Access the Display Screen:

Notice on Screen 1 that the "**M**" in **More Items** is underlined and, on Screen 2, one letter in each function is underlined. If you cannot easily access the display screen, you can activate the keys on your overlay that contain the underlined letters to perform the designated calculator function. For example, to find the square root of 4, you can activate the key that has the "4" on it, then the key that has the "Q" on it. The answer will appear on your display in the answer box.

The OK Key:

The OK key does three things. It exits you from the calculator and returns you to the workspace or an open Notebook. It also copies the answer to your last problem and puts it into the Pathfinder clipboard.

Copy an Answer to a Notebook or the Workspace

If you want to copy the answer to a problem into a Notebook or the display workspace, activate the OK key when you have finished your problem. Go to the Notebook or workspace where you want the answer to be pasted. Open the EDIT MENU and activate the **Paste** option. The answer will appear where your cursor was on the screen.

If you do not want to paste the answer anywhere, just activate OK and exit the calculator. The answer will remain on the clipboard until you copy something else or turn off the Pathfinder.

More Tools for Communication

SPEECH MENU - Select Voice Type, then modify settings as needed 1

1 Voice Type Main Voice	4 Speech Rate 2	7 More Items
2 Voice PAUL	5 Pitch Range 4	8 OK
3 Average Pitch 2	6 Test Speech	9 Cancel

SPEECH MENU - Select Voice Type, then modify settings as needed 2

1 Speech Dictionary	4 Synthesizer DEC	7 More Items
		8 OK
		9 Cancel

SPEECH MENU - Select Voice Type, then modify settings as needed

1 Voice ScanSoft Jennifer	4 Test Speech	
2 Speech Rate 5	5 Speech Dictionary	8 OK
3 Volume 6	6 Synthesizer RealSpeak	9 Cancel

The SPEECH Menu

Select a Voice from the SPEECH Menu

The SPEECH menu is available for synthesized speech. From it you can choose the voice you want the Pathfinder to use for speaking messages and for speaking auditory prompts. Other options allow you to refine the voice. The Pathfinder offers DECtalk[®] and RealSpeak[™] for English speaking countries. You can also add words to and delete words from the Speech Dictionary in this menu.

Select a Speaking Voice

1. Open the Toolbox and select the SPEECH MENU.
2. DECtalk speech is the default. If you want to change to RealSpeak, select **More Items** and select RealSpeak in the Synthesizer option. Wait a few seconds and the RealSpeak menu will appear.
3. In the **Voice Type** option select **Main Voice**, or **Auditory Prompt Voice**.
4. In the **Voice** option, step through the voices until you see the voice you want to use. The choices will be different depending on the synthesizer you selected in Step 1.
5. When you have finished, activate **OK**.

➡ Use the **Test Speech** option to listen to the voice.

Speech Rate, Average Pitch and Pitch Rate are explained in the following pages.

➡ **The Hidden Speech Menu:** This menu allows you to raise the Tone value of the voice to 10. The voice sounds then sounds more like the Liberator voice, but differences in technology mean that the Lib and Pathfinder voices will never sound exactly alike. **To enter the hidden Speech Menu:** activate <CTRL><SPEECH MENU>. In software earlier than 1.05, you must activate <shift><CTRL><SPEECH MENU>.

Selecting a Speech Rate

Summary:

Speech rate is how fast, or how slowly, words are spoken.

Sometimes synthesized speech is difficult at first for listeners to understand. Slowing down the speech rate so that words are spoken more slowly often helps listeners become used to your voice. On the other hand, you may find that people who listen to you talk all the time understand you easily and want you to speak faster. Raising the rate may be helpful here.

The speech rate is from 0-9. 0 is very slow and 9 is very fast. You will probably not want to use either of these extremes.

To Change the Speech Rate:

1. Remove the keyguard and overlay. Press the **TOOLS** button on the front of the Pathfinder to open the Toolbox.
2. Activate the **SPEECH** menu in the Toolbox.
3. Activate the **Speech Rate** option until you see the rate you want.
➡ Use the **Test Speech** option to listen to your changes.
4. Either activate **OK** when you are finished or continue to look at the various speech options. Activate **Cancel** if you want to exit the menu without saving any changes.

➡ **Helpful Hint:** When you are giving a speech or talking on the telephone, people will understand your speech better if you set the speech rate to one of the lower numbers. ➡ **For Telephones:** Ask someone to listen to you on the phone while you try out some of the lower speech rates to see which one is easiest to understand. ➡ **For Notebooks:** You can set a speech rate for Notebooks in the **NOTEBOOK** menu. Once you set a rate in the **NOTEBOOK** menu, all Notebooks will be spoken at that rate.

Selecting an Average Pitch

Summary:

Pitch is how high or low a voice sounds.

The pitch of a voice refers to whether a voice sounds high or low to someone who is listening to it. If you change the pitch of the voice you have chosen, you can make it sound higher over-all or lower over-all.

Each optional voice defaults to a different average pitch level. The range is 0-9. The nearer to 9, the higher the voice will sound. The nearer to 0, the lower the voice will sound.

To Change the Average Pitch:

1. Remove the keyguard and overlay. Open the Toolbox by pressing the **TOOLS** key on the front of the Pathfinder case.
 2. Activate the **SPEECH** menu in the Toolbox.
 3. Activate the **Average Pitch** option until you see the number you want.
- ➡ You can use the **Test Speech** option to listen to your changes.
4. If you are finished, activate **OK**. Activate **Cancel** to exit without saving any changes.

Selecting a Pitch Range

Summary:

Pitch range is the amount of variation (or inflection) there is in the pitch of a voice during speech. A pitch range of 0 produces a monotone. A pitch of 9 produces wildly inflected speech.

Average Pitch is what we are referring to when we say that someone has a high voice or a low voice. **Pitch Range** is the variation of tones we hear when words are being spoken. This variation is called inflection. When someone speaks in a monotone, every word in a sentence sounds the same and it is boring to listen to. On the other hand, if someone is really excited, or very afraid, they may pitch the words in a sentence so wildly that they can barely be understood. A good pitch range is one where words can be easily understood but are also interesting to listen to.

The Pitch Range is from 0 –9. 0 is a monotone and 9 is extremely inflected. The default Pitch Range is different for each voice option.

To Change the Pitch Range:

1. Remove the keyguard and overlay. Open the Toolbox by pressing the **TOOLS** key on the front of the Pathfinder case.
2. Activate the **SPEECH** menu in the Toolbox.
3. Activate the **Pitch Range** option until you see the number you want.
➡ You can use the **Test Speech** option to listen to your changes.
4. If you are finished, activate **OK**. Activate **Cancel** to exit without saving any changes.

The Speech Dictionary

Summary:

Add words to the Speech Dictionary to teach the Pathfinder how to pronounce them correctly. Erase words you no longer use. Review the words that are in your Dictionary.

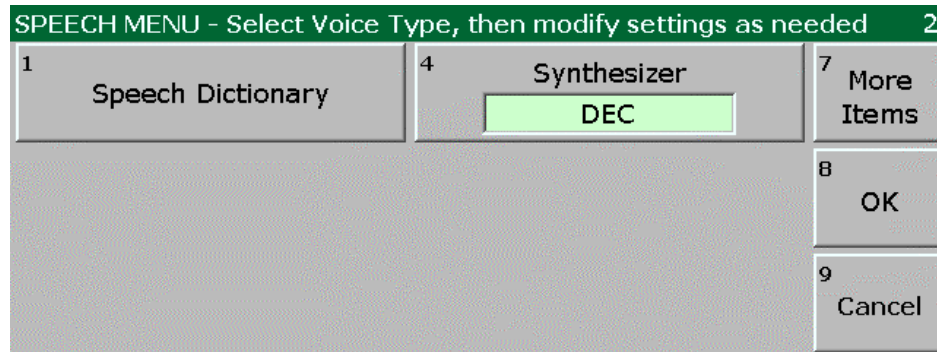
The Pathfinder's DECtalk Access32 speech correctly pronounces most words that you use, but it has trouble with proper nouns like the names of cities and people's names. When you add a word to the dictionary you are teaching the Pathfinder to pronounce it correctly.

You can review all the words that you have put in the dictionary. This can help you decide if you have words that you no longer need in the dictionary.

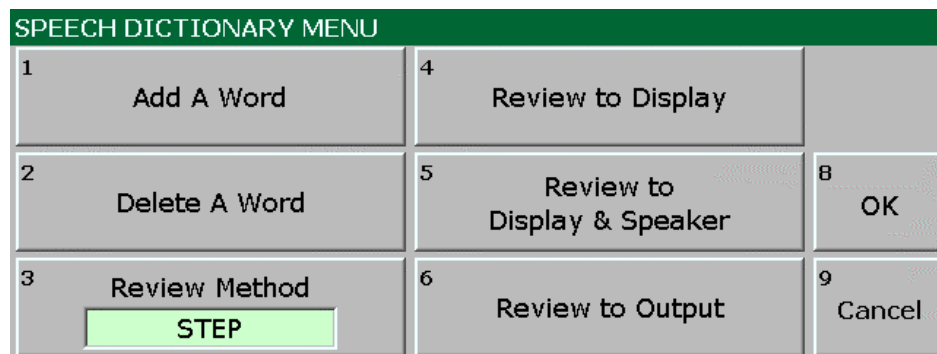
If you find words that you no longer need, you can erase them from the dictionary.

The next few pages explain all the dictionary options.

 **Note:** We have already included a number of words in the Dictionary. You might want to review these words before you begin to add any. This will save you both time and the bother of duplicating words.



Select Speech Dictionary



Speech Dictionary Menu

Add Words to the Speech Dictionary

Summary:

Add words to the Speech Dictionary to teach the Pathfinder how to pronounce them correctly.

When you add a word to the Dictionary, first spell it correctly, then spell it the way you want it pronounced. For example, the name "Romich" (in Prentke Romich) is usually mispronounced in the English-speaking Pathfinder, so it is a good name to practice with.

To Add a Word to the Dictionary:

1. Remove the keyguard and overlay. Open the Toolbox.
2. Open the **SPEECH** Menu
3. Activate the **Speech Dictionary** option.
4. Activate **Add a Word**.
5. Spell the word you want to add. Spell it correctly. In this case you would spell, "Romich".
6. When you have finished spelling the word correctly, activate **OK**.
7. Now spell the word the way you want it to be pronounced. This means typing the word the way it sounds. You may want to try out different spellings until the Pathfinder pronounces the word the way you want. Activate the text display area to hear the word pronounced. You will probably end up with a word that looks something like, "Roemick."
8. When you are satisfied with the pronunciation, activate **OK**.
9. You can continue to add words, delete words or review words. If you are finished with the dictionary, activate **OK**.

🔄 **Note:** Some words can be pronounced two ways. For example, "record" can be pronounced reCORD and REcord. Words with alternate pronunciations **should not** be added to the Dictionary unless you always want them pronounced in one way only. See "Words with Alternate Pronunciations" in Appendix F for more information.

Delete Words from the Speech Dictionary

Summary:

Delete words from the Speech Dictionary that you no longer need.

To Delete a Word from the Speech Dictionary:

1. Remove the keyguard and overlay. Turn the Toolbox on, then activate the SPEECH menu in the Toolbox.
2. Activate the **Speech Dictionary** option.
3. Activate the **Delete a Word** option.
4. Correctly spell the word you want to delete.
5. Activate **OK**.
6. The word is automatically deleted.

➡ **Note:** If you hear an error beep, try spelling the word differently (perhaps you misspelled it). In order to delete a word you must enter the correct spelling of the word, not the pronunciation spelling.

Review Words in the Speech Dictionary

Summary:

If you use the dictionary a lot, you may want to review the words in it every now and then. You can find out what words you use and want to keep, or you can note which words you don't use any more and delete them.

To Review Words in the Speech Dictionary:

Remove the keyguard and overlay. Press the TOOLS button on the front of the Pathfinder case to open the toolbox.

Activate the SPEECH DICTIONARY menu.

Review Method: Step or Auto

Step: Activate a key or switch every time you want to move to more words. **Auto:** The Pathfinder moves you automatically through the words.

Review to Display

The dictionary is shown on the Pathfinder's display screen.

☞ You can edit a word or delete a word by activating on the display screen the word that you want. Then select to edit the message or to delete it.

Review to Display and Speaker

You can see the dictionary on the display and hear the Pathfinder speak it at the same time.

Review to Output

You can send the dictionary to a printer or computer by using a USB flash drive, a secure digital card or a cable. The options in the OUTPUT menu must be set before the information will appear on a printer or computer. See **Appendix C** for complete information.

The Speaking Tools

Summary:

These tools help you to communicate easily and promptly. All of these tools work whether you have the speech On or Off. You can assign them to keys or under sequences. Some of these are on your overlay and some are in the All Tools List.

SPEAK WORD: the Pathfinder speaks the last word you typed in Spell mode, or the last word you brought up in Minspeak mode.

SPEAK LAST SELECTION: the Pathfinder speaks the last stored message you activated or the last spelling characters you put on the display. This is helpful if you have to repeat yourself so that someone listening can understand you better, or to get someone's attention.

SPEAK DISPLAY: the Pathfinder speaks everything that is visible on the display screen.

 **Helpful Hint:** when you are storing and you want to speak the text you are entering, activate **Speak Display**. The Pathfinder will speak only the text being entered, not all the storing instructions.

SPEECH ON/OFF: the default is On. Anything you select or type is spoken. When this is turned Off, nothing is spoken unless you activate one of the tools listed above.

More Speaking Tools in the All Tools List

SPEAK ALL: the Pathfinder speaks all of the text on the display and in the buffer. This tool can also be used with Notebooks.

SPEAK SENTENCE: the Pathfinder speaks the sentence that contains the cursor, or the sentence in between two punctuation marks. This is helpful if you want to hear how something you are working on sounds but don't want to listen to everything that is written on the display. It is also useful if you are going to give a speech or presentation. People

seem to understand synthesized speech better when they hear it one sentence at a time until they get used to listening to it.

SPEAK NEXT SENTENCE

SPEAK NEXT WORD

These tools are to be used with Notebooks. Each time you activate the tool you can speak a Notebook word-by-word or sentence-by-sentence.

SPEAK NOTEBOOK: This speaks the entire content of the Notebook you have selected. You cannot speak part of a Notebook with this tool.

CTRL+any SPEAK tool: When you store this tool in a macro it will perform any SPEAK function if the Pathfinder speech is already turned On.

SPEECH MARKER

TEXT MARKER

TEXT AND SPEECH MARKER

These tools allow you tell the Pathfinder which parts of a message you want to have spoken which are to be seen, but not heard. See the next page for more information.

A Speaking Tool in the FEEDBACK Menu:

SPEAK WHEN SPELLING

Letters

Words

Both

Tell the Pathfinder to speak each letter as you spell it or to speak each word after it is spelled or both.

Using Text and Speech Markers

Summary:

These tools mark text that is to be seen on the display but not spoken or that is to be spoken but not seen. Text & Speech Marker tool closes the operation.

Use the TEXT MARKER tool when you want text from a stored message to be seen on the display, but not spoken. The Text Marker tool goes in front of the text that is to be seen on the display.

Use the SPEECH MARKER tool when you want text from a stored message to be spoken by the Pathfinder but not to be seen on the display screen. The Speech Marker tool goes in front of the text that is to be spoken.

Use the TEXT & SPEECH MARKER tool to end the operation where individual speech and text markers were used in a message.

An Example of Using Text and Speech Markers:

Store the "Pledge of Allegiance." When you activate the icons for the pledge, you will see only the title on your display while the Pathfinder speaks the pledge.

1. Go to the Toolbox and activate STORE.
2. Select an icon sequence and activate **OK**.
3. Select **Spell Text to Speak**.
4. Activate INSERT TOOL.
3. Activate <TEXT MARKER>.
4. Type "The Pledge of Allegiance"
5. Activate INSERT TOOL.
6. Activate <SPEECH MARKER>.
7. Type in the complete Pledge of Allegiance.
8. Activate INSERT TOOL at the end of the pledge.
9. Activate <TEXT AND SPEECH MARKER>.
10. Finish the regular storing process.

Changing Voices Within a Message

Summary:

DECtalk speech allows you to store messages that contain two or more voices. Use the synthesized speech storing method.

You might want to store a message that uses more than one voice. Perhaps you are asked to read something out loud, or you want to tell a joke that has different characters speaking in it.

To use two or more voices you must type in a special code for each voice that you use. The voice code must be entered right before the word that is to be spoken in that particular voice. For example, you could store the following message using a number of different voices:

[:np]Papa Bear said [:nh]Who's been sitting in my chair?
[:np]Mama Bear said [:nb]Who's been sitting in my chair?
[:np]Baby Bear said [:nk]Who's been sitting in my chair?

You can see that it is quite easy to change voices in a message. Just remember to copy the code for each voice exactly as you see it written below. Use small letters, square brackets and no spaces.

[:np] Perfect Paul
[:nb] Beautiful Betty
[:nh] Huge Harry
[:nf] Frail Frank
[:nk] Kit the Kid
[:nr] Rough Rita
[:nu] Uppity Ursula
[:nd] Doctor Dennis
[:nw] Whispering Wendy
[:nv] Variable Val

Use the synthesized speech storing process you learned in the **Storing** chapter.

Wait Any Key

Summary:

The Pathfinder waits until you press any key before it speaks.

When you add the WAIT ANY KEY tool to a DECTalk message, you can pause within the message, wait for any amount of time, and then activate any key on the keyboard or any switch to continue speaking.

For example, suppose you were going to store a joke under an icon sequence.

The joke is: Why is 6 afraid of 7?
(audience response)
Because 7 8 9!

You might store "Why is 6 afraid of 7?" under one sequence and "Because 7 8 9!" under another sequence. To tell the joke you would have to activate the first sequence, wait for a response and then activate the second sequence to tell the rest of the joke. If you stored the whole joke and used the WAIT ANY KEY tool, you would only have to activate one sequence plus one extra key or switch activation.

To Use the WAIT ANY KEY Tool:

1. Go to the Toolbox. Activate STORE CORE.
2. Select an icon sequence and activate OK.
3. Choose **Synthesized**. Choose **Spell Text for Message**. Type in the message. Remember to use INSERT TOOL and WAIT ANY KEY. For example, in this example type in "Why is 6 afraid of 7?" Then activate INSERT TOOL. Type a "w", then activate WAIT ANY KEY. Type "Because 7 8 9!" (Put spaces between each number.) Activate **OK**.
4. Activate **OK** again.

Now when you retrieve this message, the device speaks, "Why is 6 afraid of 7?" and pauses. Wait for the audience response and then activate any key on your keyboard, or a switch, and the Pathfinder will finish the joke.

Using the TRANSFER MEMORY MENU

TRANSFER MEMORY MENU			1
1	Load Entire Device Contents	4	Save One User Area
2	Save Entire Device Contents	5	Import Icons
3	Load One User Area	6	Load Icons from MTI File
		7	More Items
		8	OK
		9	Cancel

TRANSFER MEMORY MENU			2
1	MTI Method AUTO	4	MTI Baud Rate 57600
2	Load Delta MTI File		
3	Load Liberator MTI File	6	Select Save Directory
		7	More Items
		8	OK
		9	Cancel

The TRANSFER MEMORY MENU

About Memory Transfers

➡ We highly recommend that you make memory transfers using a USB flash drive or a Secure Digital card. You received a USB flash drive in the box with your device.

The options in the **MEMORY TRANSFER MENU** allow you to save your device's memory. You can save the memory in a single area or you can save the entire device memory. You can also load saved memory back into your device, import graphics and store sound files.

Handy Tip: In the **TRANSFER MEMORY MENU**, set the **MTI Method** option to **AUTO** (use **More Items** to go to the option). Your communication aid will automatically select the device you have plugged in: USB flash drive or SD card. If you have both devices plugged in, you will have to change the option to the one you want to use.



USB Flash Drive



Secure Digital Card

Examples of a USB Drive and a Secure Digital Card

Memory Transfer with a USB Flash Drive or Secure Digital Card

USB Flash Drive

1. Plug your USB flash drive into the rectangular USB port on the left side of the case.
2. Go to the Toolbox and open the **TRANSFER MEMORY MENU**.
3. Select **More Items**. Select **AUTO** for the **MTI Method**. Return to the first page of the menu or exit the menu.

Secure Digital Card

1. On the top of the Pathfinder, there is a small thin slot with the letters SD and an arrow next to it. It's directly above the Mouse serial port. Insert your Secure Digital card in the slot. The side of the card that has the small arrow on it should be face up and the arrow end should slide into the slot first. Push it in until it clicks into place. Push it again to remove it.
2. Open the **TRANSFER MEMORY MENU**.
3. If it is not already set, select **AUTO** for the **MTI Method**.

Save an Area: an example

Complete steps 1-3 above.

Select **Save One User Area**

Select the Area you want to save.

Type in a name for the MTI file. Your device will save the Area you selected on the SD card or USB drive, whichever is in your device. If both are present, you will be asked to select the one you want to use.

A dialog box will appear to tell you when the transfer is completed.

Load an MTI File into an Area: an example

Complete steps 1-3 above.

Select **Load One User Area**

Select the Area you want to load the file into.

You see a list of all the files on your SD card or USB drive.

Find the file you saved earlier. It will have **.mti** at the end of the name.

Select the file.

A dialogue box will appear to tell you when the transfer is complete.

➡ **To load files onto your computer**, read the directions that came with your SD Card or USB flash drive. For an SD card you will need a card reader. For a USB flash drive, in some cases you may need to load a driver. Your storage device directions will tell you.

➡ **If you would like to be more organized** about saving files to your USB flash drive or SD card, read **Using the Select Save Directory** on page 96. Also see **Using the File Organizer**, page 99.

Importing Icons

➡ You must have graphics/icons stored on your USB Flash Drive or SD Card in order to import them to your device. You can import .bmp, .jpg and .gif files.

1. On your device, plug in the USB flash drive or an SD Card.
2. Go to the Toolbox and open the **TRANSFER MEMORY MENU**.
3. Select **Import Icons**.
4. You see a list of all the graphics/icons stored on your USB flash drive or SD Card. Select the ones you want to import, or use **Select All** to select all the graphics/icons. Select **OK**.
5. You see the graphic and an option to change the name. You can also change the **Aspect Ratio**. We suggest you leave this set to **YES**. When you are ready, select **OK**.
6. You see the **Icon Category Menu**. Your device automatically places the graphic in an **IMPORTS** category folder. If you want the graphic(s) available in another Category, select the Category. If you just want to keep the graphic in the **IMPORTS** folder, select **Cancel** to exit the Category List.
7. You see the **TRANSFER MEMORY MENU**.

From now on, when you are using the Category List, you will be able to use the imported icons in your **IMPORTS** folder or find them in any other folder you may have selected to put them in.

Load Icons from an MTI File

Perhaps you know someone who has a Pathfinder with a lot of imported icons on it that you like. This friend saves his device vocabulary, which includes the imported icons, as an MTI file and e-mails it to you. You can load the imported icons from the MTI file into your device without loading all the friend's vocabulary, too.

1. The MTI file must be on a USB flash drive or an SD card. Plug the flash drive or card into your communication aid.
2. Go to the Toolbox and open the TRANSFER MEMORY MENU.
3. Select **Load Icons from MTI File**.
4. Select the MTI file you want to load.
5. Your device loads the imported icons into the IMPORTS Category folder.

To see the imported icons you will have to activate the **Change Icon** option in one of the storing menus. This will take you to the **Icon Categories** list. Look for and select the **Imports** category.

Save/Load a Notebook—In Notebook Menu

To save a Notebook

1. Make sure your USB Flash Drive or the Secure Digital Card is plugged into your communication aid.
2. Make sure **MTI Method** is set to **Auto** in the TRANSFER MEMORY MENU.
3. Open the NOTEBOOK MENU.
4. Select **Save a Notebook**.
5. Your Notebooks are listed. Select the Notebook you want to save.
6. The Notebook is loaded onto your flash drive or SD card as a **.txt** file.
7. Activate **OK** to exit.

Load a Notebook

You must have a Notebook to load on your USB flash drive or Secure Digital card.

1. Make sure your USB Flash Drive or the Secure Digital Card is plugged into your communication aid.
2. Make sure **MTI Method** is set to **Auto** in the TRANSFER MEMORY MENU.
3. Open the NOTEBOOK MENU.
4. Select **Load a Notebook**.
5. Any Notebooks on your USB drive or Secure Digital card are listed.
6. Select the Notebook you want to load.
7. The Notebook is loaded. Activate OK to exit.

PC Memory Transfer with a Serial Cable

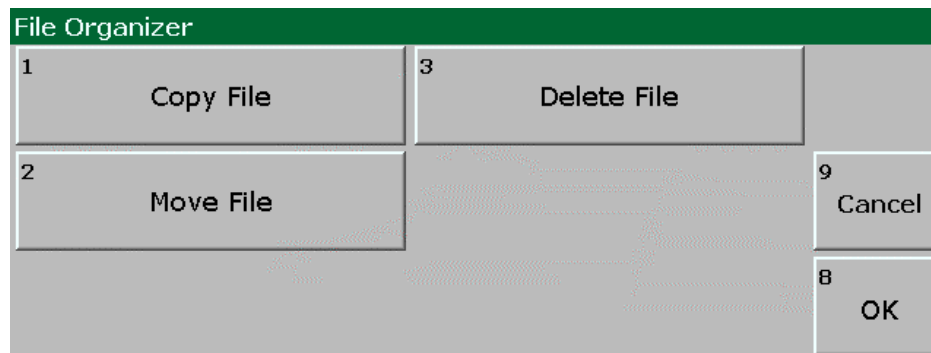
If you purchased the optional serial cable for memory transfers using Windows® and a PC:

1. All memory transfers should be made with the **battery charger plugged in**. Connect one end of the battery charger that came with your device to the battery charger port on the case. Plug the other end into a working wall outlet.
2. Plug one end of the serial cable into Serial Port 1 (also known as COM port 1) on your computer. Plug the other end into the connector labeled  on the case.
3. Turn the computer On and insert the MTI CD (this came with your device) into the appropriate drive. Use Windows Explorer to go to the drive that has the MTI CD in it. You can right-click on My Computer and click on Explore to go to the drive that has the MTI CD in it.
4. Double click on **MTI.exe**. The MTI screen is visible on your computer monitor.
5. Open the **Options** menu at the top of the MTI screen. Open the **Device** option and select the device you are using (e.g., Pathfinder). Open the **Port** option and select the computer COM port you are using (most likely "1"). Look at the **Baud Rate** box. Check to make sure the MTI baud rate and your device baud rate **are the same**. (Your device baud rate option is in the **OUTPUT MENU** in the Toolbox.) If the baud rates do not match, change one of them to match the other. It does not matter which one you change, the MTI or your device. 115200 is the fastest rate.
6. On the MTI screen, select the option you want. In this case, select the **Save** option. This has the picture of an arrow going from the device towards the computer.

7. You see the computer's File Browser screen. Select the drive or folder on your computer where you want to store the MTI file. Name the file so you will remember what it is.
8. Go to the Toolbox and open the **TRANSFER MEMORY MENU**. Make sure **Serial** is selected in the **MTI Method** box.
9. Select the option you want. For this example, select **Save One User Area**.
10. Select the Area you want to save. If everything is connected correctly, you will see the "Memory Transfer in progress" on your computer screen and device display.
11. The transfer may take awhile. When it is finished, click **OK**

To Restore a File:

1. Select **Load Entire Device** or **Load One User Area** from the **TRANSFER MEMORY MENU**. If you select **Load One User Area**, select the Area to load.
2. On your computer, go to the drive/folder where you stored the MTI file. Select the file you want to load.
3. On your computer, select **Restore**.



The FILE ORGANIZER MENU

Using the FILE ORGANIZER

➡ You must assign the FILE ORGANIZER MENU to a key or sequence on your overlay.

The FILE ORGANIZER menu allows you to copy and move files from one memory device to another or move files onto one memory device into folders on the same device. You can also copy and delete files.

Perhaps you use a Secure Digital card as a permanent storage area in your device. You rarely remove the card from your communication aid. However, your USB drive frequently travels between your device and your computer because you use it to download files from your computer and then put them in your communication aid. You would like to be able to easily transfer files from your USB to your SD card so that you don't have to have the USB drive plugged into your communication aid in order to listen to songs or access other files. The FILE ORGANIZER MENU allows you to do this.

To Move Files from One Memory Device to Another:

1. Make sure your SD card and USB drive are plugged into your communication aid.
2. Open the FILE ORGANIZER menu.
3. Select **Move File**.
4. Select the **memory device** that has the files you want to move.
5. Select the **files** to move. You can open any folder and select files from the folder, if you wish.
6. When you have finished selecting files, select **OK**.
7. Select the destination for the files (i.e., the other storage device).
8. If you have a folder on the destination memory device that you want to store the files to, select it, then select **OK**. Otherwise, just select **OK**.
9. Answer **YES** in the message box if you want to continue or **NO** to stop.
10. The files are transferred. Depending on the amount of files, this could take a few minutes.
11. The files are no longer on the original memory device.



If you **Copy Files**, the files will be available on both memory devices.



If you **Delete Files**, they are erased from the memory device you select.

Using the MP3 PLAYER MENU



USING THE MP3 PLAYER MENU

Pathfinder Manual: Power Tools

Listening to Music with your Communication Aid (MP3, WAV and WMA files)

⚠ **WARNING:** PRC reminds you that MP3, WAV and WMA files are under the jurisdiction of all copyright laws.

If you have sound files stored on a USB flash drive or a Secure Digital card, you can play them on your communication aid. Plug the flash drive or secure digital card into your device, open the MP3 PLAYER MENU in the Toolbox and select the options you want. You can play all the songs on your flash drive or SD card; you can create playlists; you can skip and repeat songs; you can talk while the songs are playing and many other options.

➡ Before you can use the MP3 Player Menu, you must assign the MP3 PLAYER MENU tool to a key or sequence. See the **Basics** manual for instructions about assigning tools.

Let's look at the options in the MP3 PLAYER MENU so you will know what to expect.

In the following pages you will learn how to use the **MP3 PLAYER MENU** in order to listen to your songs.

Select the key or sequence where you stored MP3 PLAYER MENU.

MP3 Player					1
1 Previous	2 Play	3 Next	Repeat OFF	7 More Items	
4 Playlist	5 Stop		Shuffle OFF		
Loaded Playlist: No Playlist Selected			Earphones OFF	9 Cancel	

MP3 Player			2
1 Play Source AUTO	4 EQ Volume 7	7 More Items	
2 Speech Break Pause	5 Bass 4		
	6 Treble 8	9 Cancel	

MP3 PLAYER MENU

About the Options in the MP3 PLAYER MENU

➡ In order to play music files on your communication aid, you must have an SD Card or USB flash drive with songs on them plugged into the device.

➡ You must assign the MP3 PLAYER MENU tool to a key or sequence. See pages 167-176 in the **Basic Tools** Manual for instructions about assigning tools.

MP# PLAYER MENU Options

Previous

Select **Previous** to listen to the song before the one currently playing.

Play

Your device will play songs according to how the **Play Source** is set: AUTO/Playlist/SD Card/USB Disk. Unless you press **Stop**, music will continue to play until all the songs on the source have been played. You can also pause a song by pressing **Play** while the song is playing.

Next

Select **Next** to listen to the song that follows the one currently playing.

Playlist

Your communication aid will play the playlist that is currently loaded. Use this option to create, open and edit playlists.

Stop

Select this to stop listening to music.

Repeat: OFF/1/ALL

OFF: no songs will repeat.

ALL: an entire playlist or all the songs on a flash drive or SD card will repeat.

1: repeat the song that is currently playing. This song will repeat until you select **Stop**, **Next** or **Previous**.

Select the key or sequence where you stored
MP3 PLAYER MENU.

MP3 Player					1
1 Previous	2 Play	3 Next	Repeat OFF	7 More Items	
4 Playlist	5 Stop		Shuffle OFF		
Loaded Playlist: No Playlist Selected			Earphones OFF	9 Cancel	

MP3 Player			2
1 Play Source AUTO	4 EQ Volume 7	7 More Items	
2 Speech Break Pause	5 Bass 4		
	6 Treble 8	9 Cancel	

MP3 PLAYER MENU

Shuffle: OFF/ON

Plays songs in a random order.

Earphones

Turn this option On if you have earphones plugged into the device.

Play Source: AUTO/Playlist/SD Card/USB Disk

This tells your device where to find your songs. Select **AUTO** for most occasions.

AUTO: Your device will play the current Playlist. If no Playlist is loaded, it will look for songs on the USB drive or SD card. If both are plugged in, it will select the memory device that was plugged in last.

SB Card/USB Disk: If you select this option, your communication aid will play every song on the card or disk.

Playlist

Your communication aid will play the playlist that is currently loaded. If none is loaded, you will hear a beep, reminding you to load a Playlist.

Speech Break: Pause/Stop/OFF

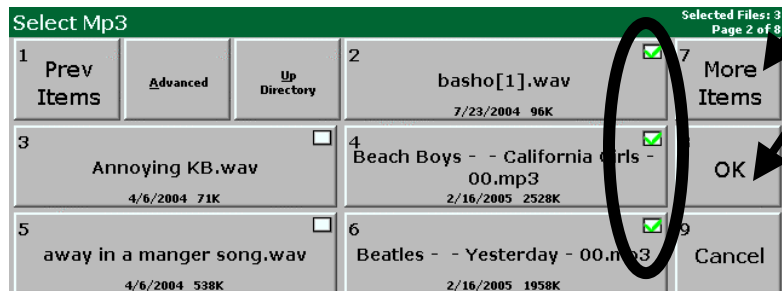
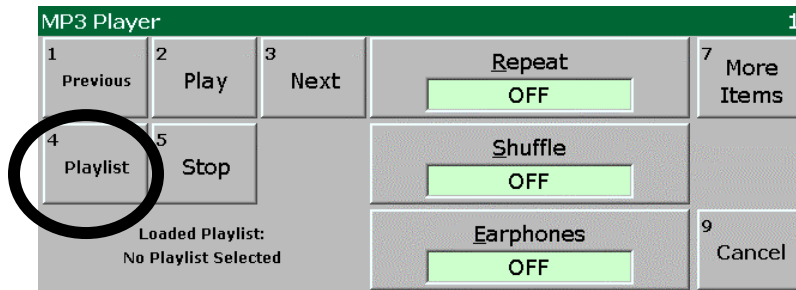
This option controls what happens when you speak while a song is playing. If you select **Pause**, the music will pause while you speak. When you stop speaking, the music will begin playing again. If you select **Stop**, the music will stop altogether. To listen to it, you must go back into the menu and select **Play**. If you select **OFF**, the music will continue to play while you speak. **OFF** means "no speech break".

EQ Volume

This equalizes the volume level between different sound files. It also lowers the sound volume when you want to speak while music is playing. This option is independent of your device's speech volume control.

Bass**Treble**

These options allow you to customize the bass and treble sound levels.

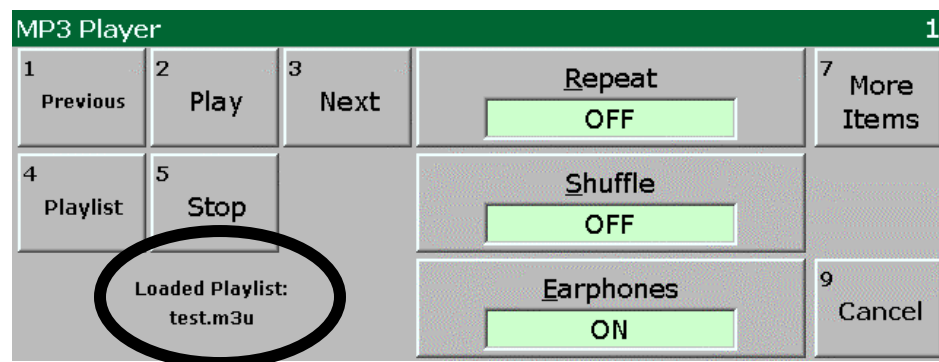


Creating a Playlist

Creating and Using Playlists

1. Plug a Secure Digital Card or USB drive into the correct connector on the case.
2. Go to the Toolox and open the MP3 PLAYER MENU.
3. Select the **Playlist** option.
4. Select **Create New Playlist**. You see a new screen.
5. Select **Add MP3**.
6. You see the **File Browser**. Any sound files you have stored on your flash drive will be visible. Above the menu and to the right, you see the number of pages containing files. Use **More Items** to see other pages. Select the files you want for your playlist. Make sure the box is checked on each key you select. Use **Select All** to choose all the sound files on the all the pages.
7. When you have finished, activate **OK**. You see your playlist.
 - ➡ You may see a message box telling you that a certain song may not play and asking if you want this to be fixed. If you respond YES, your device will make sure the song is playable on your communication aid. This generally involves shortening the information about the song that is included in the song's "tag". The song itself is not changed in any way. If you reply NO to the message, the song may play as it is or it may not.
8. Use the **Move Up** and **Move Down** keys to re-order the placement of the highlighted song in the list. You can also select **A**, **U** or **D** keys on your overlay to move songs Up or Down or to Add songs. (These letters are underlined in the menu to remind you they are available on your overlay.) Use **Remove MP3(R)** to delete a song from the playlist. **More Items** allows you to navigate through the pages in your list if you have more than one page.
6. Select **OK**.

9. Spell a name for the playlist and select **OK**. The playlist is saved on the storage device you have been using
 10. You see the MP3 PLAYER MENU. Below the **Playlist** and **Stop** keys you should see "Loaded Playlist" with the name of your playlist. If you have more than one playlist, you can select the **Playlist** option and choose the **Open Playlist** option to load a different playlist. Select **OK**. Select **Play** and listen to your music.
- ➡ To create a Playlist Directory where you can place all your Playlists, see page 93.



New Music Tools

There are some new insertable tools for listening to music. Store these tools on your overlay or assign them to keys.

MP3-PLAY DRIVE

Allows you to select either the USB flash drive or the SD card to listen to when both devices are plugged into your communication aid.

MP3-PLAY FILE

Allows you store a link to one song under a key or sequence.

MP3-PLAY-PAUSE

This tool allows you to pause a song, then go back to it.

MP3-PLAY PLAYLIST

Allows you store a link to an entire playlist under a key or sequence.

For example, you might have a song you are really crazy about at the moment. You could store the PLAY FILE tool, select the song you want to link to, and then activate the key or sequence you used on your overlay to hear the song as often as you wanted. If you have forgotten how to store tools, see pages 167-176 in the ***Basics*** manual.

MP3 PLAYER MENU

This tool gives puts the MP3 player menu on your overlay for easy access.

MP3-PREV

Select Previous to listen to the song before the one currently playing.

MP3-STOP

Select this to stop listening to music.

Using the Select Save Directory Option: Create a Playlist Directory

This option allows you to organize your files. You can create any number of Directories in which to store various files. This page teaches you about creating a Playlist Directory. The next page teaches you about creating an MTI Directory.

Create a Playlist Directory

1. In the TRANSFER MEMORY MENU, select the **Select Save Directory** option (select **More Items** key).
2. Select USB or SD, whichever you are using.
3. You will see a list of all the directories that are on your storage device.
4. Select the **Advanced** option.
5. Select **Create Directory**.
6. Spell a name for the Directory, e.g., "Playlists".
7. There is nothing in the Directory yet, so select **OK**.
8. Select **OK** to exit.

If you already have playlists on your USB drive or SD card, you can move them into your new Playlist Directory by using the File Organizer (see page 83) or by plugging the drive or card into your computer and using Explorer to move the files.

You can create new playlists or re-create old ones in the MP3 PLAYER MENU then save them to the Playlists Directory. See "Creating a Playlist" on page 93.

➡ **Important Note:** Anything you save from now on will be saved into the Playlists directory unless you activate **Select Save Directory** in the TRANSFER MEMORY MENU and select a different Directory to save to.

Using the Select Save Directory Option: Create an MTI Directory

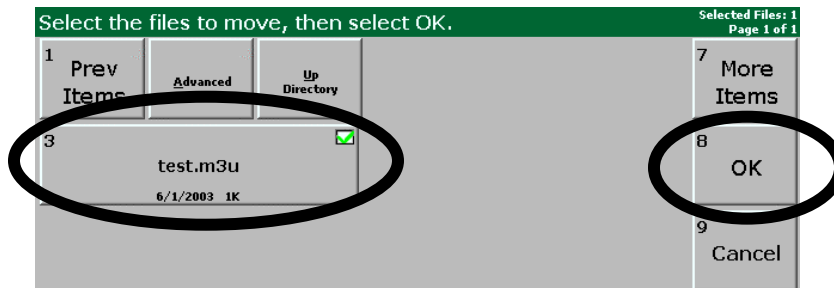
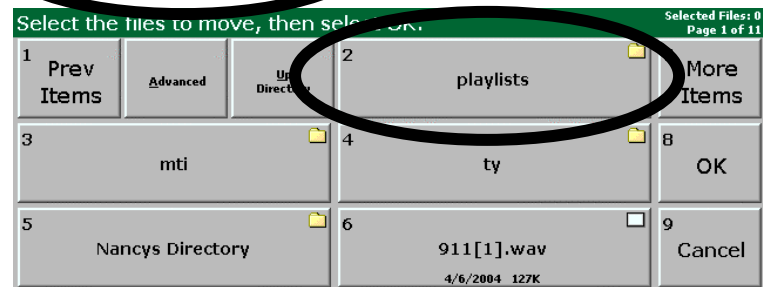
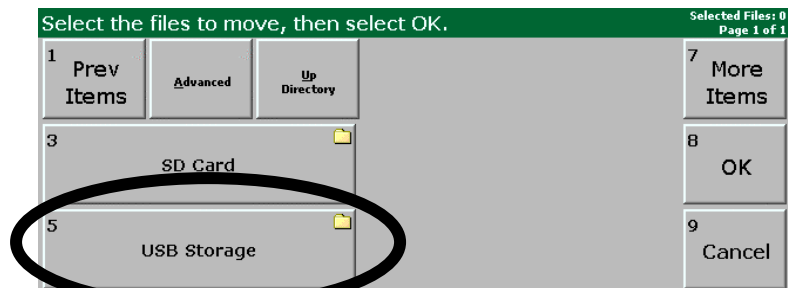
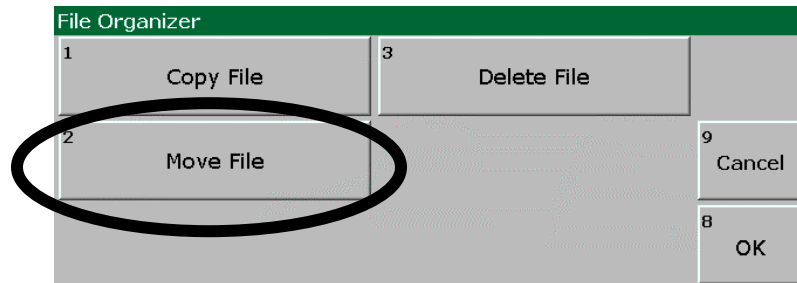
This option allows you to organize your MTI files.

Create an MTI Directory

1. In the TRANSFER MEMORY MENU, select the **Select Save Directory** option.
2. You should see an option for either the SD card or the USB drive, whichever is plugged in. Select the key that is listed. ➡ If you have both storage devices plugged in, you will see an option for each one. Select the one you want.
3. Select the **Advanced** option.
4. Select **Create Directory**.
5. Select a name for this directory, e.g., "MTI Files". Activate **OK**.
6. There are no files yet in the directory, so select **OK** to exit.
7. Activate **Save One User Area**.
8. Select the Area to save.
9. Spell a name for the file. Select **OK**.
10. The file is saved in the MTI Directory.

➡ **Important Note:** Anything you save from now on will be saved into the MTI directory unless you activate **Select Save Directory** and select a different directory to save to.

Store the FILE ORGANIZER tool on your Overlay



FILE ORGANIZER Menus

USING THE MP3 PLAYER MENU

Pathfinder Manual: Power Tools

Using the FILE ORGANIZER

➞ Assign this tool to a key or sequence.

The FILE ORGANIZER menu allows you to copy and move files from one memory device to another or move files on one memory device into folders on the same device. You can also copy and delete files.

Perhaps you use a Secure Digital card as a permanent storage area in your device. You rarely remove the card from your communication aid. However, your USB drive frequently travels between your device and your computer because you use it to download files from your computer and then put them in your communication aid. You would like to be able to easily transfer files from your USB to your SD card so that you don't have to have the USB drive plugged into your communication aid in order to listen to songs or access other files. The FILE ORGANIZER MENU allows you to do this.

To Move Files from One Memory Device to Another:

1. Make sure your SD card and USB drive are plugged into your communication aid.
2. Select the key or sequence where you stored the FILE ORGANIZER menu.
3. Select **Move File**.
4. Select the memory device that has the files you want to move.
5. Select the files to move. You can open any folder and select files from the folder, if you wish.
6. When you have finished selecting files, select **OK**.
7. Select the destination for the files (i.e., the other storage device).
8. If you have a folder on the destination memory device that you want to store the files to, select it, then select **OK**. Otherwise, just select **OK**.

9. Answer **YES** in the message box if you want to continue or **NO** to stop.
 10. The files are transferred. Depending on the amount/size of files, this could take a few minutes.
 11. The files are no longer on the original memory device.
- If you **Copy Files**, the files will be available on both memory devices.
- If you **Delete Files**, they are erased from the memory device you select.

About Importing Sound Files to Store on your Overlay

➡ Use a Secure Digital or USB Flash Drive to Import Sound files.

You can import mp3, wav and wma sound files into your device and store them under an icon or an icon sequence. You can then activate the sequence and hear the sound you stored.

➡ **When you store sound files on your overlay, they are stored as speech.** This means that they act exactly as if you had recorded and stored them as vocabulary messages. For example, if you store a 3-minute song under an icon sequence, you cannot use your communication aid for anything else until the song is finished. In this case, it would be wiser to listen to the song using the MP3 PLAYER MENU or to store one of the music tools that allows you to link to songs, than to store them on your overlay as speech.

Some sounds, though, are fun to have on your overlay: laughter, clapping, animal noises, popular sound bytes, etc. They don't take up much memory and they make conversation interesting.

Select type of message, then create it. Select OK when finished.

Message:

Sequence:

2	Type of Message Recorded	Record or Import Message	8 OK
3	Spell Text to Display		9 Cancel

Hold "Record Message" and speak, or Select "Import Sound File"

1	Record Message	4	Listen to Recording	
2	Import Sound File			8 OK
3	Microphone Volume 4			9 Cancel

Select the WAV file to import.

Selected Files: 0
Page 1 of 1

1	Prev Items	Advanced	Up Directory	7	More Items
2	SD Card			8	OK
5	USB Storage			9	Cancel

Import a Sound File and Store it on your

Store a Sound File under an Icon or Icon Sequence on your Overlay

To Store a Sound File on your Overlay:

1. Make sure the USB flash drive or SD card that contains your sound files is plugged in.
2. Select **STORE** on your overlay or in the Toolbox.
3. Select the icon or icon sequence you want to use and select **OK**.
4. If you select a sequence that has a word or phrase associated with it, you can keep the word or phrase and store the sound file with it, or you can delete the word and just have the sound file. If you keep it, you might want to add something to the icon label to remind you the sound file is there, too.
5. In the **Type of Message** option, select **Recorded**
6. Select the **Record or Import Message** option.
7. Select **Import Sound File** option.
8. Select your USB drive or SD Card. You see the sound files on your USB drive or your SD card. Select the file you want to store.
9. When the sound has been transferred your device returns you to the Menu. Select **OK** until you exit the menu.
10. Select the icon(s) you used for your sound file.

You should hear the file.

Using the Phone



Store this tool in a PHONE Activity

Phone Dial Pad						
1	2	3	*	Mic: OFF	 	
4	5	6	0	Send	Clear	Text Messages
7	8	9	#	,	Phone Config uration	Cancel

Use your Device to Send and Receive Calls

Before You Begin

The cell phone is a Pathfinder accessory.

You can use the phone option in two different ways:

- For text messaging only, you must have an AirCard and an antenna. No audio is available with this option.
- For making and receiving phone calls (audio) you must have an Air Card, antenna and small cable. (Text messaging is included in this option.)

You can purchase the card, antenna and/or cable from PRC. Installation instructions come in the package.

The latest Pathfinders will accept the phone card and cable. Check with the PRC Sales Department if you have an older Pathfinder. It may need to be sent in for a hardware update to accommodate the phone card and cable

➡ The information in this chapter assumes you have your AirCard, antenna and cable installed in your device. Installation directions came in the package with your phone accessories.



Select **More Items**



Phone Configuration			1
1	Detect AirCard ON	3	Mic Level 1
2	AirCard ON	4	Headphone Level OFF
			9 Cancel

Turn Detect **AirCard** **ON**

When **Detect AirCard** is **ON**, **AirCard** will come on automatically.

Phone Configuration			2
1	Band 850/1900	6	Headset Volume 7
Current Band: 850/1900		4	Gain Out 9
3	Set Band	5	Gain In 0
			9 Cancel

Band is set automatically when Detect AirCard is ON

Phone Configuration Menu

USING THE PHONE

Pathfinder Manual: Power Tools

Enable the Phone Card

The first thing you must do after installing the phone card, antenna and cable (if you ordered the cable), is to enable the card.

1. Got to the Toolbox and open the MAINTENACE MENU.
2. Select **More Items** until you see **Phone Configuration**. Select it.
3. Turn the **Detect AirCard** option to **ON**.

You may see a box asking you to plug in your battery charger. Do so. At this point you may see another box stating that firmware is being updated. This update will take awhile. Be patient.

➡ Not all devices will need to be updated.

The other options in this menu will be set automatically once the card is installed/detected.

About AirCard ON/OFF

This will be turned On automatically when you put the AirCard in your device.

➡ **IMPORTANT NOTE: Turn this option OFF when you are in a place where cell phone use is not allowed, e.g., an airplane, a theatre, certain areas of hospitals, etc.**

Band and Set Band

This indicates the frequency your phone uses and is automatically set for your country when you insert your AirCard. If you go to another country you may have to re-set the Band to that country's frequency.

Select **OK** and exit the MAINTENANCE MENU.

In the Status Display Area on your device you should see two new phone icons: a white wing on a square and a phone in a circle with a slash through it ("No Phone"). If the AirCard is initialized correctly, the icons will be red. If it is not initialized, they will be gray. The No Phone icon signifies either that there is no signal or no service available. If service or a signal is available you will see signal strength bars and perhaps a small capital "R" to signify "Roaming"



Store Phone Numbers



All phone functions



Send text messages only – no dial pad



Receive and end calls – no dial pad



Read text messages only – no dial pad

New Phone Tools

New Phone Tools

There are 5 new insertable tools for phone use. Although you can store these tools on your overlay, you may want to create a Phone activity and assign the tools you want to use to the activity along with frequently used phone numbers.

New Phone Tools

Phone Dial Pad

This is the tool you need for complete phone use. It allows you to dial numbers, receive calls, end calls, read and send text messages, go to your Minspeak overlay, configure the phone and clear the display. The Phone Dial Pad contains all the separate tools listed below.

Phone Dial Number

Use this tool when you want to assign separate phone number to keys, e.g., the number for work; the number for pizza; friends' phone numbers, etc.

Phone Send Text Message

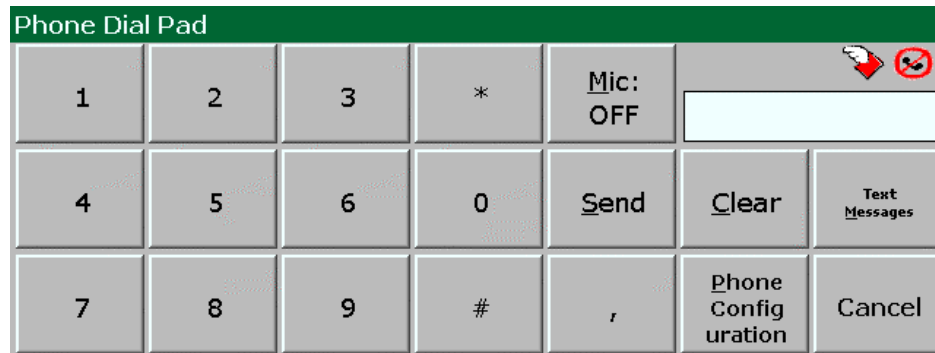
This allows you to write and send text messages without using the Dial Pad.

Phone Send/End

This allows you to answer and end calls without using the Dial Pad.

Phone Text Messages

This allows you to read text messages without using the Dial Pad.



When you activate **Send** to make a call, you see this icon.



You also see this icon when the phone is ringing on your device.

Phone Dial Pad

Using the Dial Pad

The Phone Dial Pad allows you to perform all phone functions: dialing calls, answering calls, using Minspeak to carry on conversations, sending text messages and receiving text messages. You can also configure the phone from the Dial Pad.

To make a call, the phone card must be active (a red and white wing icon visible in the Status Display Area) and there must also be signal

bars visible. 

To Make a Call

1. Activate the number keys on the keypad to dial the number you want.

➡ **Note:** Use commas when you dial phone numbers that include extensions. For example: 3302621984,123. If a number contains multiple extensions, use a comma between each extension.

2. Activate **Send**.

3. While the phone is ringing, you can **Go to Minspeak** to be ready to talk when someone answers.

4. When the call has ended, activate **End** on the Dial Pad.

The **Clear** button clears the display.

➡  The "Connecting Icon" replaces the "Wing" icon in the Status Display Area when you select **Send**. The "Connecting Icon" is also visible when the phone rings on your device. This is helpful should you have the device volume turned down. If you see the icon but don't hear anything, you know your phone is ringing.

To Answer a Call

1. You hear the phone ring, or see the "Connecting Icon" in the Status display Area.

2. Activate **Send**.

3. Activate **Go to Minspeak** and answer.

4. When the call has ended, activate **Send** on the Dial Pad.

Phone Configuration			2
1	Band 850/1900	6 Headset Volume 7	7 More Items
Current Band: 850/1900		4 Gain Out 9	
3 Set Band	5 Gain In 0	9 Cancel	

Gain Out: to better hear the person talking to you, turn this up.

Gain In: to enable the person on the other end of the line to hear you better, turn this up.

Adjust Caller and Listener Volume

Adjusting Caller and Listener Volume

There are two options in the CONFIGURATION MENU that allow you to adjust the phone volume so a listener can hear you better and/or so you can hear a caller better.

Activate the **Phone Configuration** option on the Phone Dial Pad.

You see the **Gain In** and **Gain Out** options.

Gain Out

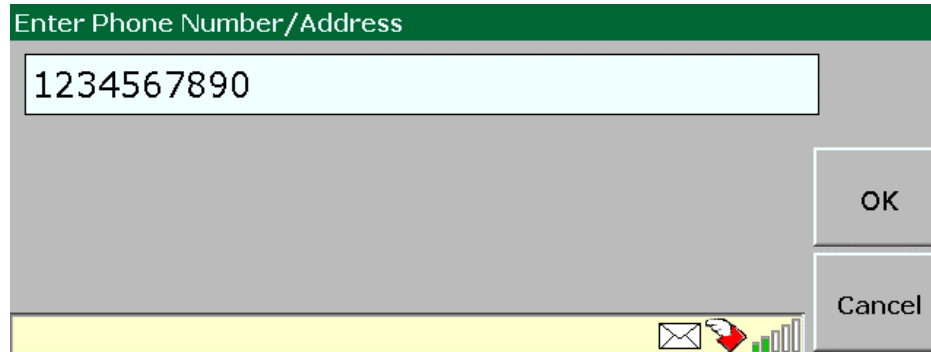
If you have trouble hearing the person who is talking to you, turn this option up.

Gain In:

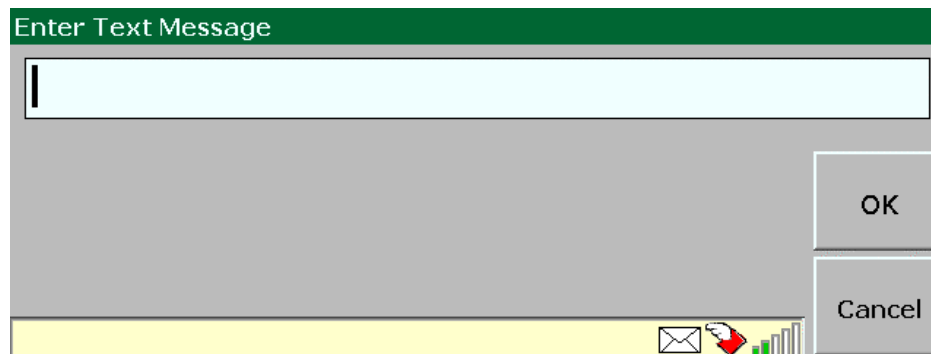
If the other person is having trouble hearing you, turn this option up.

Send a Text Message

Select the key or sequence where you stored the tool,
Send Text Messages



Enter phone number.
Select **OK**



Enter text message. You may also use Minspeak.
Select **OK**.

Send a Text Message

Send a Text Message

➡ Store the **Phone-Send Text Messages** tool on your Overlay.

To Send a Text Message

1. Select the **Send Text Message** key on the Dial Pad.
2. You see the spelling overlay. Enter the number you want and select **OK**.
4. Type in the message you want to send.

➡ You can also use Minspeak by selecting the **GO TO MINSPEAK** tool on the overlay.

5. Select **OK** when you are finished.
6. A yellow message box tells you when your text message has been sent.

Read Text Messages



You have a message when you see this icon in the display area.



Select this key to see your messages.

Select Text Message To View	
1 weltydjw: (using AOL	7 More Items
2 weltydjw: (using AOL	8 Prev Items
	9 Cancel

You will see all messages. Unread messages are blue. Messages you have read and kept are black. Select message to read.

Select Text Message To View	
weltydjw: (using AOL IM) hi (You can reply to this message)	7 Reply
	8 Delete
	9 Cancel

Reply, Delete or Cancel. Cancel saves the message

Reading a Text Message

When you receive a text message an icon of a small white envelope appears in the Status Display Area.

To Read a Text Message

1. Select the **Text Messages** key on the Dial Pad.
2. You see a screen that contains all new and saved text messages. The buttons display the first few words of the messages.
3. Select the message you want to read.
4. The whole message is displayed.
5. You can **Reply** to the message, **Delete** the message, or select **Cancel**. **Cancel** saves the message.

If you **Reply**, you will see the Spelling screen. Enter your message and select **OK**. You will see a box telling you that the message is being sent.

Using the Internal Microphone to Speak

You can use the Pathfinder's internal microphone to speak on the phone if you are able to do this.

The **Mic: OFF** option on the Phone Dial Pad turns the microphone **On** (or **Off.**) and allows you to set the volume to that you can be heard by the caller.

Turn the microphone ON, then select the **Phone Configuration** option.

Adjust the **Mic Level** option to make the volume louder or softer. (Remember that if the volume is too loud, you will get feedback noise.)

You can use Minspeak whether the microphone is On or not.

Using Headphones

You can plug headphones into the External Headphone connector, use the spelling keyboard or Minspeak to speak, and no one will be able to hear your conversation.

Turn the **Headphone Level** option to **On**.

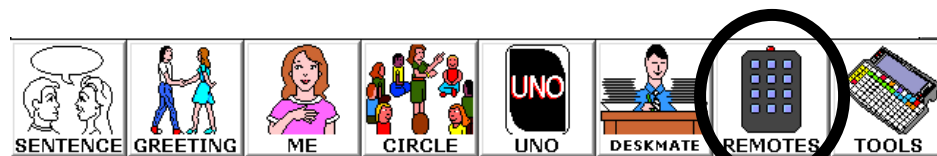
Select **More Items**.

Select **Headset Volume** and set a volume level that is comfortable to listen to.

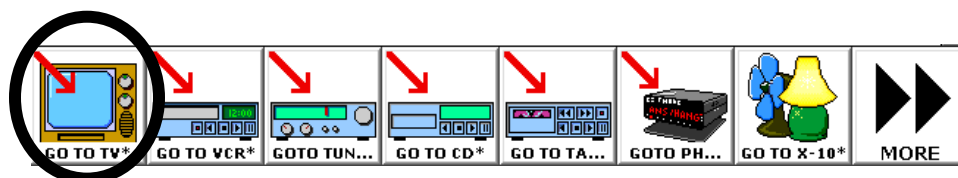
Using a Remote Control



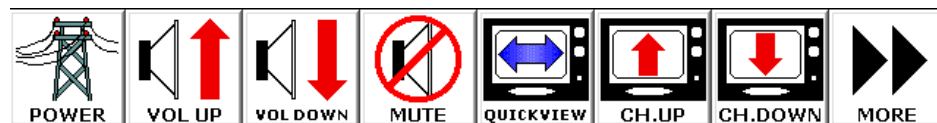
When using infrared in a medical environment,
do not use with any product that is not medically
approved.



Select REMOTES Activity



Select TV Activity



TV Activity

REMOTES Activity

Using your Communication Aid as a Remote Control

With its built-in infrared (IR), your communication aid can learn infrared signals for any device you own that has a remote control. This includes a TV, CD player, VCR, toys, etc. You teach the remote control signals to the Pathfinder and then store the commands for the signals on your overlay.

There are a number of remote control activities that are already set up in your device. You select these activities from the REMOTES activity in your Activity Row.

You will have to teach your communication aid the remote control signals for any appliances you want it to control except the X-10 and EZ Phone. It already knows the X10 and EZ Phone signals.

 **Important Note:** When you have completed teaching remote signals to your device, save the device's memory. Use **Save Entire Device** in the TRANSFER MEMORY MENU so that you do not have to re-teach the signals if something should happen to your device's memory. You must use Save Entire Device. Saving a single user area will not save your remote control signals.



Learning IR Signals Area



Infrared Transmitting Signals Area

About Teaching Remote Control Signals to your Device

The Learning IR window is on the right side of the case as you face the device. The Sending IR window is on the top back of the case below the earphone and speaker plugs. If you want to teach a remote control signal, you point your remote control at Learning IR window. If you want to send a signal your device has learned, make sure the Sending IR window is facing in the general direction of the appliance you want to send the signal to.

Before you begin to store any signals, you need to have the remote control you are going to use nearby. During the signal storing process, your device will tell you to aim your remote control at the its IR window and then to tap the button on the remote that will send the signal you want your device to learn.

Hold the remote control 6-8" away from the Learning IR window. Point the infrared area of the remote at your device's Learning IR window and press the function button on the remote, for example, "Power". You will hear a small beep when the device accepts the signal.

To store signals you will use the IR SETUP MENU in the Toolbox. When you store signals using this menu, they are automatically stored on the correct remote control page for later use.

Important Notes!

When you have finished storing all the remote control signals that you want to use, we **highly recommend** that you perform a memory transfer and save your device's memory to a USB flash drive or Secure digital card.

Use the **Save Entire Device** option, **not** the **Save One Area** option. The signals will not be saved unless you use the **Save Entire Device** option.

IR SETUP MENU

1	Add A Device	4	Rename Device	
2	Modify Device	5	Device	8 OK
3	Delete Device		TV	9 Cancel

2

1

Add, Modify, or Test TV Functions

1	Add A Function	4	Re-Learn IR Signal	
2	Rename Function	5	Test Signal	8 OK
3	Delete Function	6	Function	9 Cancel
			POWER	

4

3

Add, Modify, or Test TV Functions

1	Add A Function	4	Re-Learn IR Signal	
2	Rename Function			8 OK
3	Delete Function	8	OK	9 Cancel

To learn signal: Aim remote at IR window and tap remote button for TV, POWER

IR SETUP MENU

Teach Remote Control Signals to your Device

Teach remote control signals for the devices that are already stored in the your device. For this example, let's teach TV signals.

1. Go to the Toolbox and open the IR SETUP MENU.
2. In the **Device** option, select **TV**.
6. Now select **Modify a Device**.
4. When the name of the device you want is in the **Device** box, activate the **Modify a Device** option.
5. In the **Function** option, select **Power**.
6. Get your remote control ready. Know which button you want to press on the remote. Hold the remote infrared window 6-8" away from your device's Learning IR window on the side of the case.
7. On your device, activate the **Re-learn Signal** option.
8. Press the function key on the remote control, e.g., the "Power" key. The Pathfinder beeps when the signal has been sent. If you do not hear the beep, try moving your remote closer to the Pathfinder and re-send the signal.
9. If you are near the device you want to be controlled, you can test the signal. Point your device's Sending IR window toward the device you are testing (e.g., the TV) and activate the **Test Signal** key in the menu.
9. Repeat steps 4-8 for each function you want your device to learn. You can exit by activating **OK** twice, or you can select another device and continue to teach signals.

When you have finished storing signals for a device, go to that REMOTES activity in your Activity Row and explore what you have done!

IR SETUP MENU					
1	Add A Device	4	Rename Device		
2	Modify Device	5	Device EZ PHONE	8	OK
3	Delete Device			9	Cancel

Select **Add a Device**

Spell name for new device, then select OK	
TV2	
	OK
	Cancel

Spell the new device **name**.
Activate **OK**.

Spell new TV2 function name, then OK	
POWER	
	OK
	Cancel

Spell the name of the first **function** you want to use.
Activate **OK**.
Teach the signal to your device.

Add a Device to the IR SETUP MENU

Add a New Device to the IR SETUP MENU

To Add a Device (TV2) to the IR SETUP MENU

1. Open the IR SETUP MENU.
2. Activate **Add a Device**.
3. Spell the device name (e.g., TV2) and activate **OK**.

 You can use up to 15 characters for a device or function name.

Spell the name of the first function you are going to teach to your device (e.g., POWER), then activate **OK**.

4. Teach the signal to your device.
5. Continue to add functions and teach signals or exit the IR SET UP MENU.

Once you have added the new device and its functions and taught the your communication aid the new signals for the functions, you must decide how you want to store these signals so that you can use them. Do you want to create a TV2 activity like your other remote control activities? Or do you want to store the functions under different icon sequences on your communication overlay?

For an example let's say you want to store the TV2 functions as a TV2 activity and that you want the TV2 activity to be part of your REMOTES activity. You also want to be able to go to any other remote activity from TV2.

First, you might find it helpful to go to the Toolbox and activate the ACTIVITY menu and the **Modify Activity** option. Then select one of the remote control pages to look at. Do you see any keys that you will want to add to your TV2 page so that it will be consistent with the other pages? You might write these keys down so you don't forget them or use their position when you add functions to your TV2 activity.

Create a TV2 Activity

Now, let's create a TV2 activity.

1. Go to the Toolbox and open the **ACTIVITY** menu.
2. Activate the **Create Activity** option.
3. Choose an icon to represent the activity.
4. Spell the name for the new activity (e.g., TV2).
5. Now you must choose a key to define. These will be the keys where you assign the TV2 functions. Pick a key where you would like TV2 POWER to go.
6. When you have selected a key, choose **Spell Text for Message**.
7. Select **INSERT TOOL**, activate **More Items** until you see **IR COMMAND**. Select it. Select TV2, select POWER and then select **OK**.
8. Pick an icon for your key and change the label if you want.
9. Select the next key and repeat these steps until you have stored all the functions for TV2.

Place the TV2 Activity in your REMOTES Activity

Now place your TV2 activity into your REMOTES activity so you can access it from the Activity Row.

1. Go to the Toolbox and activate the **ACTIVITY** menu. Activate the **Modify Activity** option.
2. Select the REMOTES activity.
3. Select **Modify Option within Activity**.
4. Choose an empty location where you can add TV2.
5. Select **Spell Text for Message**.
6. Select **INSERT TOOL**, activate **More Items** until you see **SET ACTIVITY**. Select it. Choose TV2. Change the icon and label if you wish.
7. Activate **OK**. Then activate **GO TO MINSPEAK**.
8. Activate the REMOTES activity in the Activity Row to see if your TV2 activity is there. Try it out.

How to Store the TV2 Functions under an Icon Sequence

If you don't want to add a TV2 activity to your REMOTES activity, you can always store it under an icon sequence on your overlay.

To Store TV2 (or any remote control device and its functions) under an Icon Sequence:

1. Go to the Toolbox and select STORE CORE.
2. Choose the icon sequence you want to store the command under.
3. Activate **OK**.
4. Select **Spell Text for Message**.
5. Select INSERT TOOL. Activate **More Items** until you see IR COMMAND, then select it. Select TV2, select "Power", select **OK**. Modify the last picture and change the icon if you want.
6. Select **OK** when you are finished.
7. Repeat these steps until all the TV2 functions are stored under icon sequences.

➡ No matter where you decide to store remote control functions, the formula you will use is always:

INSERT TOOL, IR COMMAND, DEVICE NAME, FUNCTION NAME

➡ Remember to save the Pathfinder's memory after you store remote control signals. Use the **Save Entire Device** option.

Delete a Device; Rename a Device

You can delete devices from the IR SETUP menu. You can also rename an existing device.

To Delete a Device:

1. Go to the Toolbox and open the IR SETUP menu.
2. In the **Device** option, select the device you want to delete.
3. Activate the **Delete Device** option.
4. Activate **Yes** to delete; **No** if you change your mind.

When you delete a device from the IR SETUP menu, you may also want to delete the device activity. Open the ACTIVITY menu and activate the **Delete Activity** option. Select the activity that you want to delete. Activate **Yes**. Activate OK.

To Rename an Activity

1. In the Toolbox, open the IR SETUP menu.
2. Select the device you want to rename.
3. Activate the **Rename Device** option.
4. Spell the new name, then activate OK.

If you have stored the device under an icon sequence:

Delete the sequence you used by following the ERASE CORE procedure.

IR SETUP MENU				
1	Add A Device	4	Rename Device	
2	Modify Device	5	Device	8 OK
			TV2	
3	Delete Device			9 Cancel

Add, Modify, or Test TV2 Functions				
1	Add A Function	4	Re-Learn IR Signal	
2	Rename Function	5	Test Signal	8 OK
3	Delete Function	6	Function	9 Cancel

Spell new TV2 function name, then OK	
MUTE	
	OK
	Cancel

Add, Modify, or Test TV2 Functions				
1	Add A Function	4	Re-Learn IR Signal	
2	Rename			8 OK
3	Delete F	8 OK		9 Cancel

To learn signal: Aim remote at IR window and tap remote button for TV2, MUTE

Add a New Function to an Existing Device

Perhaps you didn't add all the TV functions that you wanted to use to your TV2 activity. You can add new functions to a device that is already in the IR SETUP menu.

1. Go to the Toolbox and open the IR SETUP menu.
2. Select the device you want to add a function to (e.g., TV2).
3. Select **Modify Device**.
4. Select **Add a Function**.
5. Type in the name of the function you want to add (e.g., MUTE) and activate **OK**.
6. Place the remote control on the table or hold it in your hand with the remote's IR window pointing at the Learning IR window on the Pathfinder. Press the key for the remote function that you want to add.
7. Test the signal using the **Test Signal** option in the menu.
8. Continue to add functions or activate the **OK** key to exit the menu.

Once the function is added to the IR SETUP menu, you must add it to the device activity. (In some cases, the function may already be in the activity.)

1. Open the ACTIVITY menu in the Toolbox. Select the Activity you want to modify.
2. Select the **Modify Activity** option.
3. Select the key where you want to put the new function.
4. Choose **Spell Text for Message**.
5. Select INSERT TOOL, activate More Items until you see IR COMMAND, then select it. Select TV2. Select MUTE. Select OK.
6. Pick an icon for your key and change the label if you want.
7. Repeat these steps until you have stored all the functions you want for TV2.

Rename a Function

You can rename any function in the IR SETUP menu.

1. Go to the Toolbox and open the IR SETUP menu.
2. Select the device for the function you want to rename.
3. Select **Modify a Device**.
4. Select the function you want to rename.
5. Select **Rename a Function**.
6. Spell the new name for the function.
7. Activate **OK**.

The new name automatically replaces the old one wherever you have it stored.

Delete a Function

You can delete any function from the IR SETUP menu.

1. Go to the Toolbox and open the IR SETUP menu.
2. Select the device that has the function you want to delete.
3. Select **Modify a Device**.
4. Select the function you want to delete.
5. Select **Delete a Function**.
6. Activate **YES** to delete, **NO** if you change your mind and decide not to delete.
7. Activate **OK**.

You may also want to delete the function from its device activity. Use the **Modify Activity** procedure in the ACTIVITY menu.

If you have been using icon sequences, you must delete the sequence you stored the function under. Use the ERASE CORE procedure.

Add, Modify, or Test TV2 Functions		
1 Add A Function	4 Re-Learn IR Signal	
2 Rename Function	5 Test Signal	8 OK
3 Delete Function	6 Function 	9 Cancel

Add, Modify, or Test TV Functions		
1 Add A Function	4 Re-Learn IR Signal	
2 Rename		8 OK
3 Delete F	8 OK	9 Cancel

To learn signal: Aim remote at IR window and tap remote button for TV, CHANNEL DOWN

Relearn Signal

Re-Learn Signals

Suppose you have to buy a new remote control for your TV. You will need to teach the new signals to the Pathfinder. ➡ You do not have to create a new device. You can use the old device and teach it the new signals. For example, you can use the original TV (or TV2) device category and just teach the new remote signals.

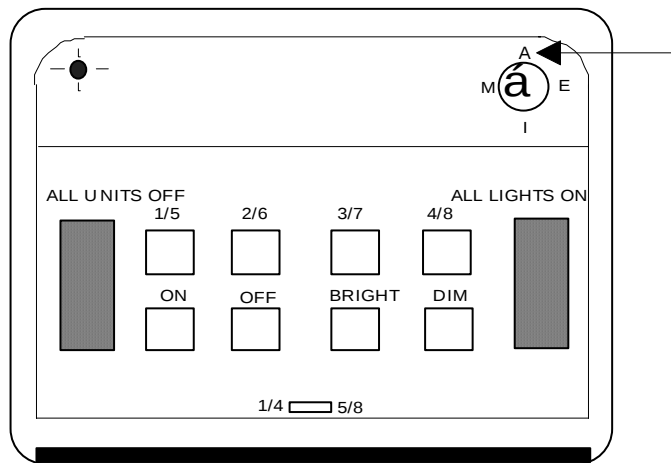
To Re-learn Signals:

1. Go to the Toolbox and open the IR SETUP menu.
2. Select the device that has the signals you want the Pathfinder to relearn.
3. Select **Modify a Device**.
4. Select the function to re-learn.
5. Select **Re-learn a Signal**.
6. Place the remote control on the table 6"-8" away from the Pathfinder with the remote IR window pointing at the Learning IR window on the Pathfinder. (You can also hold the remote in your hand following these same guidelines.) Press the key for the remote function that you want the Pathfinder to re-learn.
7. Test the signal.
8. Repeat #4-7 until you have taught the Pathfinder all the new signals.

The new signals will automatically replace the old signals whether they are in an activity or stored under icon sequences.

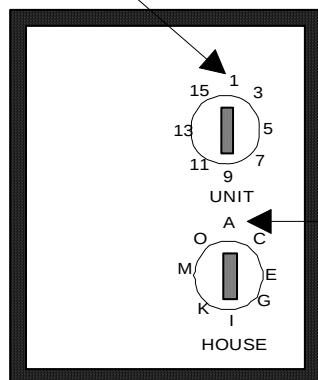
➡ **If the Pathfinder does not seem to learn the signals:** Try holding the remote control closer to the Pathfinder Learning IR window.

COMMAND CENTER Receiver



A Unit code (number) must be given to **each** appliance

Make sure the two HOUSE codes are the same



Appliance Power Module

Setting Up the X-10 Modules

The X-10 activity is set up to control up to 9 X-10 appliance modules. The HOUSE Code defaults to "A". You can get to the X-10 activity by opening your REMOTES activity and selecting X-10.

On the front of each module there are two small circles. One is labeled UNIT and has the numbers 1-16 around it. The other circle is labeled HOUSE and has the letters A-P around it.

When you plug an appliance (e.g., a lamp) into a module, you must give the appliance its own UNIT code. The code is a number from 1-16. You must also give all the appliances plugged into the modules the same HOUSE code. If you are using the modules in your home, the HOUSE code will be "A". If you are using them in a hospital or center, ask what HOUSE code you should use.

Plug the Command Center into a working wall outlet. Set the HOUSE code (on the upper right of the case), to "A" (or whatever the HOUSE code is that you are using).

To Set Up the Modules:

1. Plug an appliance into a module.
2. Hold the module in your hand. Place a small screwdriver or a dime into the groove labeled HOUSE on the front of the module. Turn the groove so that it points to the letter "A". Do this for each module that you are going to use.
3. Now stick the screwdriver or dime into the groove labeled UNIT on the front of the module. For the first appliance, turn the groove to the number "1". For a second appliance, turn the groove to the number "2". Each module that you use must have a different UNIT code from any other module. You can have up to 16 UNIT codes.
4. Plug the module into a working wall outlet.
5. Turn the appliance On using the on/off switch on the appliance.

Open the IR SETUP menu in the Pathfinder Toolbox. Select X-10. Select the option that corresponds with your appliance number. The command for that number is already stored in the Pathfinder.

If you need more than 9 On-Off commands, add a new row to the X-10 activity. Open the ACTIVITY menu, select the REMOTES activity, select X-10, select **Modify Activity**, select **Add New Row**.

➡ The infrared area on the Pathfinder and the infrared area of the Command Center must be able to “see” each other when you send signals. If something blocks this line-of-sight, the signals cannot get through and the command cannot be performed.

Adding Phone Numbers to the EZ Phone Activity

If you are using an EZ Phone, you will want to add important and frequently used phone numbers to the EZ Phone activity so that you can dial these numbers quickly.

The EZ Phone activity currently has 3 rows. Row 1 contains some pre-stored telephone functions and the emergency 911 number. Row 2 contains the individual dial numbers (0-9) which are continued in Row 3. Use these numbers to dial phone numbers of people you want to talk to. The rest of Row 3 contains four blank Directory keys where you can store your own phone numbers. (Each key with a phone number stored with it is called a Directory.)

To Add Phone Numbers to the Blank directory Keys in Row 3:

1. Go to the Toolbox and open the ACTIVITY menu.
2. Select the **EZ Phone** activity.
3. Select the **Modify Activity** option.
4. Select **More Items**.
5. Select **Next Row** two times.
6. Select **Directory 2**, then select **More Items** two times.
7. Activate **Spell Text for Message**.  **DO NOT DELETE** the DIAL command that is already in place (i.e., <IR(EZ PHONE,DIAL)>). Just type in the phone number you want to store immediately following the DIAL command.
8. Activate **OK**.

You can add a label and/or an icon to the Directory to remind you of the number, e.g, "PIZZA". You can also use the **Change Position** options in the ACTIVITY menu to change the position of the keys in the rows if you want to.

Repeat these steps for each Directory number you want to store.

If You Want to Store More than Four Numbers

If you want to store more than four numbers, select the **Add New Row** option in the EZ Phone activity in the ACTIVITY menu. With a new row, you must add the DIAL command to each key you want to add a phone number to.

To Add the DIAL Command:

You can use the editing tools to cut and paste the dial command from another key to your new key or you can add it by doing the following:

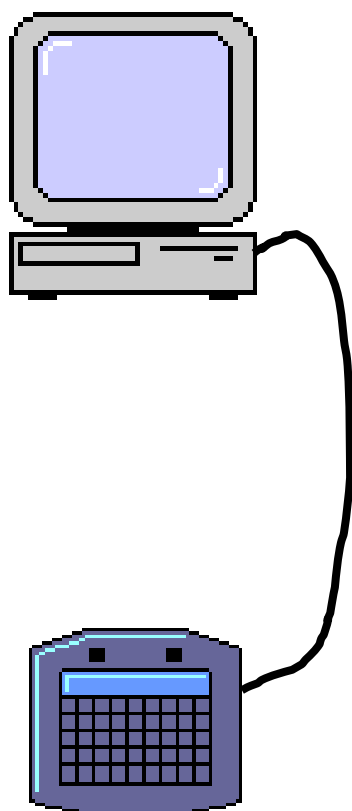
1. Activate INSERT TOOL
2. Activate **More Items** until you see IR COMMAND. Select it.
3. Activate EZ PHONE.
4. Select DIAL.

Once you have the DIAL command in the text box, type in the phone number you want to use and activate OK.

➡ Remember to add a **More Items** key to this new row so you can move between rows.

5. When you have finished storing your numbers, exit the ACTIVITY menu. Activate GO TO MINSPEAK. Activate the REMOTES activity in the Activity Row. Activate EZ Phone and call someone!

Using a Computer



Connect to a Computer

Computer Emulation with a USB Cable

Connect a USB cable to your communication aid and your computer, then use your communication aid to work on your computer.

Connect a USB Cable

You received a USB cable in the box with your Pathfinder.

Connect one end of the USB cable to the square port USB on the left side of the case. Connect the other end to the USB port on your computer (this may be on the front of the computer or in back, or both). If they are not already on, turn on your computer and communication aid.

1. Go to the Toolbox and open the OUTPUT MENU.
2. Set **Output Method** to **USB Disk**.
3. Set **Output ON**
4. Do not worry about **Auto Line Feed**.
5. Select **OK**.

Go to page 165 to learn about using the computer mouse overlay.

Computer Emulation with a Serial Cable

 If you are using a serial cable, you will need AAC Keys in order to generate computer commands. To download a free copy of AAC Keys and to get directions for using AAC Keys with a computer go to www.prentrom.com. In the **Search** box, type **AAC Keys**. Click on the first item listed.

If you are using a Serial Cable

Connect one end of the battery charger that came with your communication aid to the battery charger port on the left side of the case. Plug the other end into a working wall outlet.

Plug one end of the serial cable into Serial Port 1 (also known as COM port 1) on your computer. Plug the other end into the connector labeled  on the right side of the case.

1. Go to the Toolbox and open the **OUTPUT MENU**
2. Set **Output Method** to **RS232**.
3. Set **Output ON**
4. Do not worry about **Auto Line Feed**.
5. Select **OK**.

Go to page xx to learn about using the computer overlay.

Using an Infrared Receiver (IRR)

➡ Use an IRR with a serial cable and AAC Keys or your computer's Accessibility Options. You do not need either of these if you are connected with a USB cable.

The IRR is an infrared accessory that accepts infrared signals from your communication aid. To use an IRR with a computer plug the IRR into the serial port on your computer. To use it with a printer, plug the IRR into the serial or parallel port on the printer.

The infrared window on the IRR must be able to see the Sending IR window on your communication aid, otherwise the IRR will not receive the signals it sends. If the IRR and the Pathfinder's Sending IR window are closer than 18 inches and directly facing each other, the infrared signal from your device could be too strong for the IRR to read. Either move the devices farther apart, or place your communication aid so that the Sending IR window is at an angle to the IRR window.

Go to the OUTPUT MENU set the **Output Method** option to **Infrared**.

Your device is set up to send information by **Packet, Unit #1 at 1200 Baud**. See the **Infrared Troubleshooting** section at the end of this chapter for complete information.

➡ When you are using an IRR, always have the IRR battery charger plugged in!

➡ For IRR cable and settings information, read the Infrared Receiver Instructions that came with your IRR. These instructions also contain a list of IRR commands that can be stored in your communication device.

➡ The recommended baud rate for your communication aid with an IRR is 1200. Baud Rate is set in the OUTPUT MENU in the Toolbox.

Setting Up a Computer Emulation Software Program

To prepare your computer and Pathfinder for computer emulation you must set up your emulation software and connect the computer and Pathfinder (or IRR) with a cable that came with your Pathfinder.

On the Pathfinder:

1. In the Toolbox, open the OUTPUT menu.
2. In **Output Method** select **IR** if you are using the IRR, or **RS232** if you are connected to the Pathfinder.
6. Set **Serial Output** to **On**.
7. Set **Output Mode** to **Immediate**
8. Set **Baud Rate** to **1200**.
9. Activate **OK** to exit the menu.

Accessibility Options for IBM PC's and Clones

1. Open the **Start** menu.
2. Click on **Settings**.
3. Click on **Control Panel**, then click on **Accessibility Options**.
4. Click on the **General** tab.
5. Click on **Support SerialKeys Devices** so that a check appears in the box beside the option.
6. Click on the **Settings** box.
7. Select a free **serial port** that you can use to connect the computer and the Pathfinder.
8. Select a **baud rate**. The Pathfinder defaults to **1200**. The computer baud rate and the Pathfinder baud rate must be the same.
9. Click on **Apply**. Then click on **OK**. Exit all menus.
10. Open the **Start** menu again and click on **Shut Down**.
11. When the computer has turned off, take the **serial cable** that came with your Pathfinder. Plug one end of the cable into the serial port on the computer that you selected from the Accessibility menu. Plug the other end of the cable into the connector that has the picture of the computer on the top of the Pathfinder. If you are using an IRR, plug the other end of the null modem cable into the computer port on the IRR.
11. Turn the computer back on.

On the Pathfinder:

1. In the Toolbox, open the USER AREA menu.
2. Select the **Computer Access** option.
3. Choose **Older Mac**, **Newer Mac** or **IBM**.
4. Select **Calibrate Mouse**. Notice on the computer that your cursor is now in the upper left corner of the computer screen.

In order for the Pathfinder to calculate how large your computer screen is, you must move the computer cursor from the upper left corner of the computer screen to the lower right corner. You do this by activating the large and small movement buttons in the menu on the Pathfinder display.

When you have calibrated the mouse, activate OK. Activate OK again to exit the USER AREA menu.

 **IMPORTANT NOTE: Pay attention as you move the cursor.** If the cursor goes off the edge of the screen, you must start over. Use large movements to move down or across the screen. As you get near the bottom or sides, use small movements. You will not be able to go completely into the corners.

On your computer, open an application like Microsoft Word. Begin to type letters from your Pathfinder. They should appear on your computer screen.

Setting Up SerialKeys for the Macintosh

SerialKeys is a product of the Trace Research and Development Center at the University of Wisconsin-Madison. You can call them and ask for a SerialKeys disk, or you can download a copy from their web site.

The phone number is: 608-262-6966.

The web address is:

<http://trace.wisc.edu/world/computer-access>

On the Pathfinder:

1. In the Toolbox, open the OUTPUT menu.
2. In **Output Method** select **IR** if you are using the IRR, or **RS232** if you are connected to the Pathfinder.
3. Set **Serial Output** to **On**.
4. Set **Output Mode** to **Immediate**
5. Set **Baud Rate** to **1200**.
6. Activate **OK** to exit the menu.

On the Computer:

1. Turn the Mac off.
2. Find the Mac cable that came with your Pathfinder. Plug one end into a free port on your Mac (either the Modem or Printer port). Plug the other end of the cable into the connector that has the picture of computer on the top of the Pathfinder. If you are connecting to the IRR, plug the free end of the Mac cable into the computer connector on the IRR.

3. Re-start the Mac.
4. Install the SerialKeys program.
5. Double click on the **SerialKeys** icon to open the program.
6. Open the **Serial Setup Menu** in the menu bar.
7. Select the port on your computer that you plugged the Mac cable into.
8. Select the baud rate you want. The Pathfinder defaults to 1200 baud. The Pathfinder and computer baud rates must be the same.

On the Pathfinder:

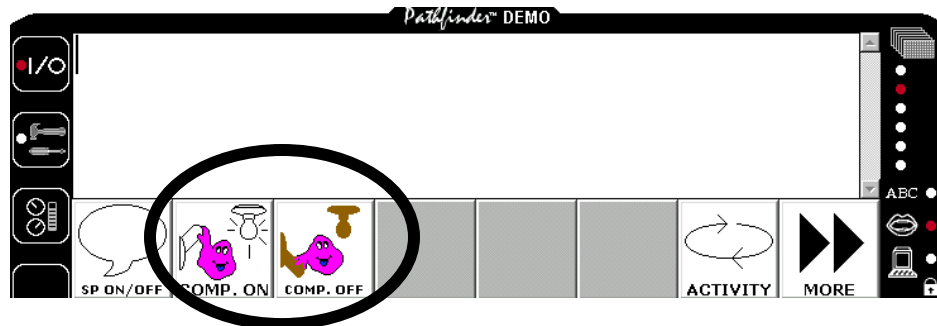
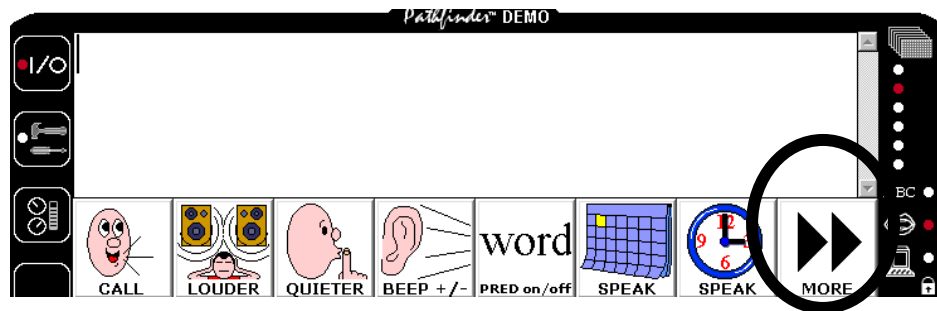
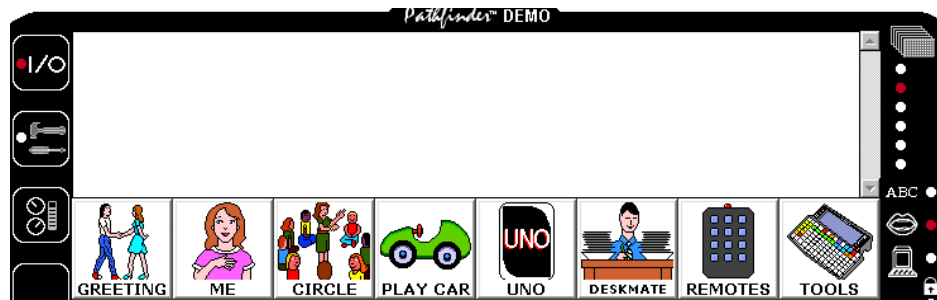
5. In the Toolbox, open the USER AREA menu.
6. Select the **Computer Access** option.
7. Choose **Older Mac, Newer Mac** or **IBM**.
8. Select **Calibrate Mouse**. Notice on the computer that your cursor is now in the upper left corner of the computer screen.

In order for the Pathfinder to calculate how large your computer screen is, you must move the computer cursor from the upper left corner of the computer screen to the lower right corner. You do this by activating the large and small movement buttons in the menu on the Pathfinder display.

When you have calibrated the mouse, activate OK. Activate OK again to exit the USER AREA menu.

 **IMPORTANT NOTE: Pay attention as you move the cursor.** If the cursor goes off the edge of the screen, you must start over. Use large movements to move down or across the screen. As you get near the bottom or sides, use small movements. You will not be able to go completely into the corners.

On your computer, open an application like Microsoft Word. Begin to type letters from your Pathfinder. They should appear on your computer screen.



Set Up Communication with your Computer

About Computer On and Computer Off

In order for information to be sent between to the computer from your pathfinder, **Output** must be turned On in the OUTPUT MENU. When you finish using the computer you must turn **Output** Off. Pathfinder will do this for you. Output is On when you activate the COMP ON key, and it is turned off when you activate the COMP OFF key.

To Turn Output On (and start communication with your computer):

Activate the TOOLS activity in the Activity Row.

Activate MORE.

Activate the COMP ON icon.

To turn the Computer Off:

Activate the TOOLS activity in the Activity Row.

Activate MORE.

Activate the COMP OFF icon.

When you have activated **Computer On**, you can use Spell or Minspeak modes to generate text that will go to the computer. All the alphabet keys, icon sequences, the arrow keys, the DELETE CHARACTER and SHIFT keys will work exactly as they do in Minspeak or Spell, except now your text will appear on both the computer screen and the Pathfinder display. If you activate a left arrow key while you are in Computer mode, the cursor on your computer screen will move to the left. If you activate DELETE CHARACTER, the character to the left of the cursor on your computer screen is deleted.

➡ If you speak to someone when **Comp On** is active, any text you generate will be sent to the computer. If you want to speak and not have it all go to the computer, activate **Comp Off**, have a conversation and then activate **Comp On** when you are ready to work on the computer again.

Using Computer Mode

When you want to use the computer mouse, the function keys, special menus or other more advanced computer tools, you will use the Mouse/Computer overlay that came with the Pathfinder. You will also have to put the Pathfinder in **Computer mode**.

Place the Mouse/Computer overlay on top of your Unity overlay. You can use both the Unity overlay and the Mouse/Computer overlay together as long as computer communications are turned On and you are in Computer mode.

Computer mode is a special mode that allows you to use the mouse/computer overlay. If you are working with graphics or spreadsheets or applications that require mouse movements or special computer commands, you will want to use the mouse/computer overlay. If you are just working in word processing application, you probably will not need to use this overlay.

In order to use the mouse/computer overlay you must activate the **Computer On** sequence (see previous page) and you must also be in **Computer mode**.

To Go To Computer Mode:

To go to Computer mode, you must be in Minspeak mode. Activate this

sequence: TOOLS+ COMPUTER, .

Once you are in Computer mode, you can use the overlay for mouse movements, etc. However, the overlay limits your ability to enter plain text into the computer. If you want to switch to doing word processing,

activate the SPELL/MINPSEAK key,  to return to Minspeak.

From Minspeak you can activate the **Computer mode** sequence to return to using the mouse/computer overlay.

Basics for Using the Computer

Make sure both the computer and your Pathfinder are turned on.

On the computer, open a word processing application and a file you can type into.

On the Pathfinder activate the **Comp On** icon in the **TOOLS** Activity:

Use Minspeak and/or Spell modes to create letters, words or phrases on the Pathfinder. The text is sent to the computer and appears on the computer display and the Pathfinder display. Try writing whole sentences. The text should appear on the both displays.

To Edit Text:

You can edit any text you send to the computer by using the following keys:

ARROWS

Select an arrow key on your overlay. The cursor on the computer screen should move the same direction as the arrow points.

DELETE CHARACTER

Select DELETE CHAR on your overlay. The computer should react as if its <Backspace> key had been pressed. The cursor should move one space to the left and either delete a character if there is one there, or wait for further keystrokes.

SHIFT

Activate the SHIFT key once on the Pathfinder and then activate a letter. The letter should appear as a capital letter on the computer screen.

Each of these keys will work the same whether you are in Minspeak or Spell modes.

RETURN (↵)

If you are using an IBM computer, the RETURN key on your overlay acts as the IBM <Enter> key. Activate the RETURN key from Spell Mode.

If you are using a Macintosh, the RETURN key on your overlay acts as the <Return> key on the Mac. Activate the RETURN key from Spell mode.

If you want to use your Pathfinder to speak, or if you want to quit using the computer, you must turn the computer communication Off.

Select **Comp Off** in your TOOLS activity or select the sequence,

  on your overlay.

To return to using the computer, select **Comp On** in the TOOLS activity or select the sequence,   on your overlay.

Select both these sequences in Minspeak mode.

How to Access Other Computer Keys

Computers allow you to make modified keystrokes. You hold down a modifier key and activate one or more keys. Both IBM and Mac allow you to use modifier keys to perform shortcuts for other actions. For example, on an IBM if you hold down the <CTRL> key and activate the <s> key, the computer will save your work.

You can also use the <WINDOWS FLAG> key or the <WINMAC> keys on the computer to accomplish certain tasks. These are available to you from the Pathfinder, too.

On the following pages you will find a list of IBM and Macintosh computer keys and how to access them from the Pathfinder.



**IBM and Mac Computer Keys
on the following pages**



Pathfinder Access to IBM Keys

IBM Keys	Accessed from Which Mode?	Pathfinder Location	Pathfinder Icon
F1-F12	C	C2-M2; M3	
Arrow Keys	M/S/C	N2, O1, P2, O3	← ↑ → ↓
Tab	C	A4	
Home	S/C	N1	
End	S/C	N3	
Page Up	M/S/C	P1	PAGE UP
Page Down	M/S/C	P3	PAGE DOWN
Delete	M/S/C	P7	
Esc	C	A3	
Enter	S/C	N7	
Control	S/C	D8	ctrl
Alt	S/C	F8	
Windows Flag	S/C	E8	blank

Access Mode:

M = Minspeak

S = Spell

C = Computer (must use Mouse/Computer Overlay and be in Computer Mode)

Pathfinder Access to Macintosh Keys

Macintosh Keys	Accessed from Which Mode?	Pathfinder Location	Pathfinder Icon
F1-F12	C	C2-M2; M3	Various
Arrow Keys	M/S/C	N2, O1, P2, O3	← ↑ → ↓
Tab	C	A4	
Home	S/C	N1	
End	S/C	N3	
Page Up	M/S/C	P1	PAGE UP
Page Down	M/S/C	P3	PAGE DOWN
Delete	M/S/C	P7	
Esc	C	A3	
Return	S/C	N7	
Control	S/C	D8	ctrl
Option	S/C	F8	
WINMAC	S/C	E8	blank

Access Mode:

M = Minspeak

S = Spell

C = Computer (must use Mouse/Computer Overlay and be in Computer Mode)

Using the Mouse/Computer Overlay to Move the Mouse

Some computer functions are accessible only by using the Mouse/Computer overlay in Computer mode. These include the <F1-F12> functions, computer menus and the <Tab> and <Esc> keys. Also, the computer mouse can only be used from this overlay.

➡ **Remember:** to use the Mouse/Computer overlay, place it over your

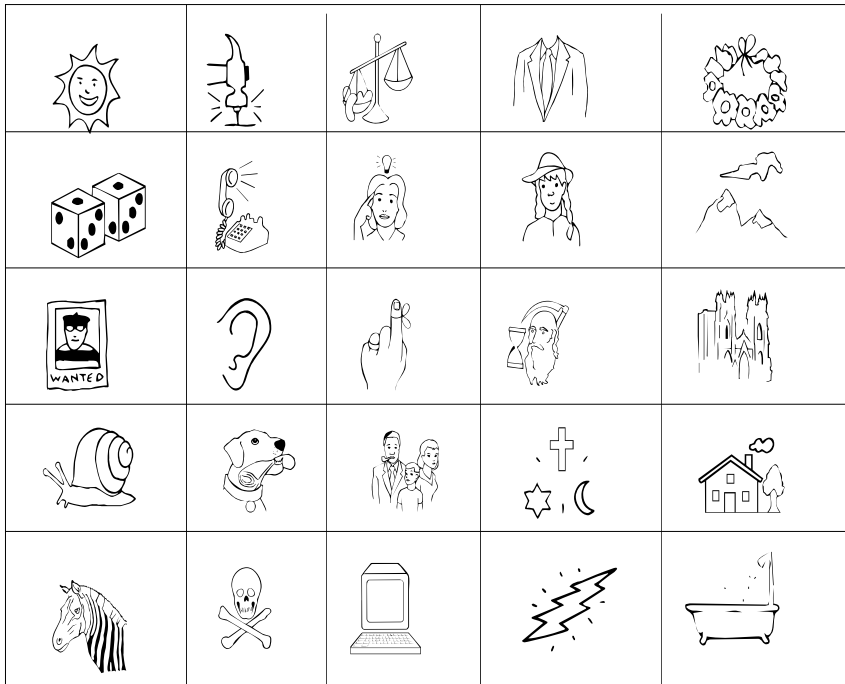
overlay and then select   to go to **Computer mode**.

There are two different grids for moving the mouse cursor on the Mouse/Computer overlay.

The **Small Movement Grid** moves the mouse in small or large steps in any direction. This is the larger of the two squares on the overlay.

The **Regional Movement Grid** moves the cursor to a specific location on the computer screen. This is the smaller of the two squares on the overlay.

These two grids and how to use them are described in the next two pages.



Mouse Small Movement Grid

Using the Small Movement Grid

The Small Movement Grid is the larger square on your Mouse/Computer overlay. The grid allows you to move the mouse cursor in steps in any direction. The corners of the grid should be at these locations on top of your Unity overlay: D3, H3, D7, H7.

➡ You must have **Computer On** and be in **Computer Mode** to use this overlay.

The outer keys in the square, outlined in **green**, move the cursor a **large step**. The inner keys, outlined in **yellow**, move the cursor a **small step**.

In the middle of the square there is a key outlined in **red** (the

REMEMBER  icon). This key acts as a **single-click** mouse button. This key **does not** move the cursor.

The Small Movement Grid works like a joystick. The red  key is the center point. The different colored keys surrounding the center move the cursor in the direction they are positioned from the center. For example:

Icons **below**  (e.g.,  , ) move the cursor **down** the computer screen.

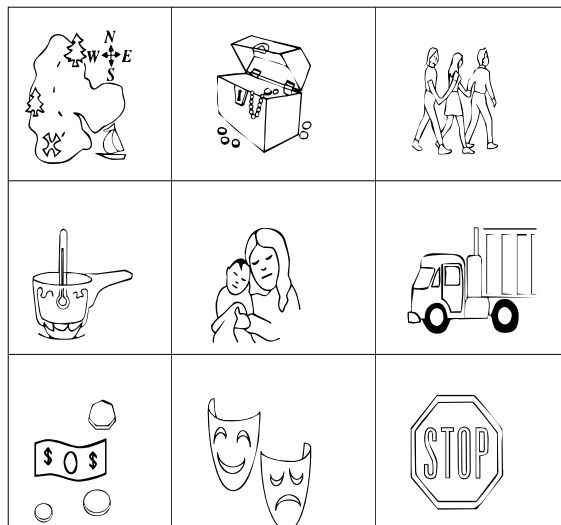
Icons to the **right** of  (e.g.,  , ) move the cursor to the **right** on the computer screen.

Icons **above**  (e.g.,  , ) move the cursor **up** the computer screen.

Icons to the **left** of  (e.g.,  , ) move the cursor to the **left** of the computer screen.

Icons that are **diagonal** to  (e.g.,  ,  , ) move the cursor **diagonally** across the computer screen.

 The **further away** a key is from the center  key, the **larger the step** the mouse will move.



Mouse Regional Grid

Using the Regional Grid

The Regional Grid is the smaller square on your Computer/Mouse overlay. The Regional Grid moves the mouse cursor to specific locations on the computer screen. The corners of the grid should be at these locations on top of your Unity overlay: J5, L5, J7, L7.

➡ You must have **Computer On** and be in **Computer Mode** to use this overlay.

The Regional Grid keys are outlined in **purple**. Each key represents a

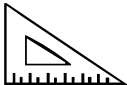
location on your computer screen. For example, The  icon is at the **center** of the grid. This key moves the mouse cursor to the **center** of your computer screen. The Regional Grid does not move the mouse step-by-step. When you activate a key on this grid, the cursor moves to a pre-set location on the computer screen.

If the keys in the Regional Grid do not move the mouse to the locations

you expect them to, select the   icons. This sequence should reset the mouse. Try moving the cursor again after you have activated this sequence.

Control the IBM Mouse Buttons

There are five locations on your overlay that correspond to the IBM mouse buttons. These buttons are outlined in red and are at locations F5, M4, N5, N6 and I8.

	REMEMBER = "click" (press and release) the IBM Left mouse button. "Clicking" selects object on the screen after the mouse cursor has been placed on them.
	THUMBS DOWN = "button down" (press down the mouse button and keep it down). "Button down" allows you to "drag" objects on the screen.
	THUMBS UP = "button up" (release the mouse from the "button down" state). Select "button up" after you have completed dragging a screen object. The "button up" location is also used to exit from MENU Theme.
	TRIANGLE= "click" (press and release) the IBM Right mouse button. The outcome of entering a Right button Click depends on the software application.
	MEDICAL = "double click." Double clicking is used to launch programs or to open and display the contents of disks and folders.

Control the Macintosh Mouse Button

There are four locations on your overlay that correspond to the Macintosh mouse button. These buttons are outlined in red and are at locations F5, M4, N5, N6.

	REMEMBER = “click” (press and release) the mouse button. “Clicking” is used to select screen objects after the mouse cursor has been placed on them.
	THUMBS DOWN = “button down” (press down the mouse button and keep it down). “Button down” allows you to “drag” objects on the screen.
	THUMBS UP = “button up” releases the mouse from button down state. Select button up after you have completed dragging a screen object. The button up location is also used to exit from MENU Theme.
	MEDICAL = “double click.” Double clicking is used either to launch programs or to open and display the contents of disks and folders.

The Mouse/Computer Overlay Menu Bar

 You must have **Computer On** and be in **Computer Mode** to use this overlay.

The Menu Bar consists of 8 keys in the middle of the top row on the Mouse/Computer overlay. The keys are outlined in **gray**. These keys correspond to the menus in the menu bar on your computer application.

For example, if you select the first key on the left in the Menu Bar, **NO**, the Pathfinder will say, "Open first menu" and the menu on the far left of the menu bar on your computer application will open. This will probably be the "File" menu for an IBM application. If you activate the

next key in the Menu Bar, , the Pathfinder will say, "Open second menu" and the next menu in your application will open.

When you select a key on the Menu Bar, the mouse cursor moves to the corresponding menu on the computer screen and opens it. The mouse button is held down automatically and the first item in the menu is highlighted.

Use the keys in the Small Movement Grid to move the highlight to the menu item you want to use. When the item you want is highlighted,

activate the  icon. This makes your selection and releases the mouse button.

If You Open the Wrong Menu

Press another key in the Menu Bar on your Mouse/Computer overlay to move to the next menu on your computer screen.

You can also use the Small Movement Grid keys directly to the left and

right of the  icon to move to another menu on the computer screen.

If the menu you want doesn't open, use the + or – keys to nudge the cursor in the direction of the menu you want. The + key is at location

B5,  and the – key is at location B6, .

Transfer Notebooks to a Computer

You can save your Pathfinder Notebooks onto a computer disk or transfer text files from your computer to a Pathfinder Notebook using the Memory Transfer Interface (MTI), a secure digital card or a USB port memory device. You can open the Notebook on your computer and use a word processing application to add to/edit text in your Notebook, if you wish. When you reload the Notebook into your Pathfinder, the Notebook will contain whatever changes you made to it on the computer.

See page 39 and 79 for instructions about transferring Notebooks to and from a computer.

About Modifying or Creating Computer Commands

You can add new computer commands to your overlays or modify already stored commands. You can store commands under icon sequences or assign them to specific keys just as you learned in the Storing and Assign Key sections of the Basic Tools manual. If you are rusty about these procedures, please review these chapters before you begin storing or assigning computer commands.

To add or modify a computer command, you must know the correct code to enter for the computer command you want to use. **Appendix J** lists all the command codes for both IBM and Macintosh computer keys. You must use these codes **exactly as they are written** or your emulation device or program will not be able to translate the commands and send them to the computer.

You can change already defined commands by going to the Toolbox and opening the ASSIGN KEY menu. Activate the key whose assignment you want to change. Activate the option that contains the assignment you want to change. Make your changes.

➡ Some commands will be assigned in all three modes, some in only one or two. You must make your changes in each mode where the command is stored. If you are assigning a new command to a key, you must select which modes you want to assign the command to.

If there are no keys available, store commands under icon sequences.

Storing Mouse Commands

If you want to store or assign new mouse commands, you will need to insert a tool that tells the computer what kind of mouse movement you want to make and how to make it. The tools are called <MOUSE MOVE> and <MOUSE SET>.

About <MOUSE MOVE> and <MOUSE SET>

MOUSE MOVE tells the computer to move the mouse in little steps or large steps. These movements will be similar to the movements you make with the Small Movement Grid. These are step-by-step movements.

Once you select MOUSE MOVE as the tool that you want, you see a menu that lists many different kinds of movements such as, "up up left" or "SM right" (SM=small movement), etc.

MOUSE SET tells the computer exactly where you want the mouse cursor to go. These movements will be similar to the movements you make with the Regional Grid. These movements result in the cursor going straight to a specific location.

Once you select MOUSE SET as the tool you want you will see a menu that lists different mouse locations, such as "Middle Right" or "Lower Left".

To Store a Mouse Movement Command Under a Sequence:

Go to the Toolbox and activate STORE CORE.

Select the sequence you want to use.

See **Spell text for message** display.

Activate INSERT TOOL.

Type "**m**" and then activate **More Items** until you see <MOUSE MOVE> or <MOUSE SET>. Select the one you want.

Select the movement instruction you want from the list.

Activate **OK** three times to exit the menu.

Using the SERIAL MARKER Tool

The <SERIAL MARKER> tool is used when you want the Pathfinder to send a command out the serial port without having any text associated with the command sent to the computer, too. Use the <SERIAL MARKER> tool when you store computer access commands.

For example, let's look at the command for **Mouse Button Down**. This command is used for both Macintosh and PC computers and is on your Mouse/Computer overlay.

The command for "Mouse Button Down" is:

<CLEAR-DISPLAY><SERIAL-OFF>Mouse button down<SERIAL-ON><SERIAL-MARKER>↵,moulock.

In this command you want the text, "Mouse button down" to be displayed on the Pathfinder's screen, but you don't want the text to go to the computer. You just want the command itself (↵,moulock.) to go to the computer. We added <SERIAL-MARKER> in front of the mouse command. This tells the Pathfinder that only the **next** instruction is to go to the computer.

In this macro, <CLEAR DISPLAY> clears the Pathfinder's display. <SERIAL OFF> turns the serial output off so that nothing can be sent to the computer. "Mouse button down" is the text you type into the command that will appear on the Pathfinder display. This lets you know you have activated the correct command. <SERIAL-ON> turns the serial port back on so that what comes next is sent to the computer. ↵,moulock is the computer command that tells the computer to hold down the mouse button when this key is activated.

➡ Remember to use **INSERT TOOL** when storing or assigning any tools to keys or sequences.

➡ Special Storing Note

If you are using both a Mac and an IBM and they require separate commands for the same function (e.g., "backspace" on an IBM and "Delete" on the Mac do the same thing but need different commands): you can store your computer commands under a single icon sequence by including the tool: <IBM MARKER> plus the function command and <MAC MARKER> plus the function command. E.g., <IBM MARKER>←backspace. And <MAC MARKER>←delete.

➡ If the mouse cursor is not going where you want it to:

If you have stored all your commands correctly, but your mouse is not pointing where it is supposed to, recalibrate the mouse.

1. Go to the Toolbox and open the **USER AREA** menu.
2. Activate the **Computer Access** option
3. Activate **More Items** and then activate the **Calibrate Mouse** option.
4. Read the directions and use the options on the screen to move the mouse cursor from the top left corner of the computer display to the bottom right corner.

➡ Remember to back up the Pathfinder vocabulary when you have created or modified any computer commands. Use the **TRANSFER MEMORY MENU** and the **Save Entire Device Contents** option.

Infrared Troubleshooting:

If Multiple Devices are in use in the Same Room

The chances are that you will be the only person using your Pathfinder with an EZ Phone or a computer and the IRR. However, there may be situations, such as a lab or therapy facility, where there may be two or more Pathfinders, EZ Phones, IRRs and computers all in the same room, receiving the same signals at the same time.

If you are in a situation where multiple devices are in use, you have to tell your Pathfinder which devices it is going to talk to. You do this by assigning the same unit number to your Pathfinder, EZ Phone and IRR.

The EXTENDED IR SETUP MENU (see next page) allows you to set unit codes for your Pathfinder and its devices. If you are the only person using your Pathfinder with other IR devices, everything in this menu defaults to "1" which is just fine for you. If you are in a multiple device situation, you and the other people using Pathfinders must decide which Pathfinder will talk to which devices and assign the correct Unit Number to each device. For example, you might assign Unit Number 1 to your Pathfinder, EZ Phone and IRR, while your neighbor gets to use Unit Number 2 for her Pathfinder, EZ Phone and IRR.

➡ When you assign a Unit Number, your Pathfinder and all the devices that it will be sending signals to **must have the same Unit Number**.

EXTENDED IR SETUP MENU		
1 Pathfinder Unit Number 1	4 IRR Unit Number 1	
2 EZ Phone Unit Number 1	5 IR Receiver Protocol PACKET	8 OK
3 EZ Phone Baud 1200		9 Cancel

EXTENDED IR SET-UP MENU

To Open the EXTENDED IR SETUP Menu

Go to the Pathfinder Toolbox.

➡ You must be in the actual Toolbox.
You cannot use the on-screen Toolbox

Activate the CTRL key.

Open the IR SETUP menu.

The EXTENDED IR SETUP menu is on the display.

Infrared Troubleshooting:

The EXTENDED IR SETUP MENU

To open the EXTENDED IR SETUP MENU:

In the Pathfinder Toolbox:

Activate the CTRL key.

Activate the IR SETUP menu

You should see the EXTENDED IR SETUP menu on the display.

Pathfinder Unit Number = >1<

The default is Number 1. In multiple device situations, you can choose to be Unit 1, 2, 3 or 4.

EZ Phone Unit Number = >1<

The default is Number 1. In multiple device situations, you can choose to be Unit 1, 2, 3 or 4.

EZ Phone Baud = >1200<

The default is 1200. You can change to 300 if necessary.

IR Unit Number = >1<

The default is Number 1. In multiple device situations, you can choose to be Unit 1 or 2.

IR Receiver Protocol = >PACKET<

The default is PACKET protocol. You can choose PIPELINE protocol, if necessary. See the next page for protocol information.

 **Remember:** When you assign a Unit Number, your Pathfinder and all the devices that the Pathfinder will be sending signals to **must have the same Unit Number.**

Infrared Troubleshooting:

About the Protocol Options

There is an option in the IR ADDRESS MENU that allows you to choose the kind of protocol you want an Infrared Receiver (IRR) to use to receive signals from the Pathfinder. The protocol choices are PACKET or PIPELINE.

PACKET PROTOCOL allows you to have more than one Pathfinder and IRR in the room, with all of them receiving the same signals at the same time. Packet protocol allows you to assign a Unit Number to each device. Packet protocol also checks for errors in the infrared communication and screens out infrared information from outside sources. This provides for more accurate infrared communication. **1200 baud must be used with this protocol.**

PIPELINE PROTOCOL does not check for errors in the infrared information it receives. It does not allow you to assign Unit Numbers for more than one infrared device. It does not screen out infrared information from outside sources. This means that accurate infrared information may be difficult to achieve in some situations. You can use either 1200 or 300 baud with this protocol. **Character Pacing must be used with this protocol.**

Infrared Troubleshooting:

If You are Using an IRR and You Get an Error Message on the Pathfinder

If the IRR doesn't receive the infrared signals you send from the Pathfinder, the Pathfinder display will show the message, "Remote IR device is not responding. Please wait or activate the Text Display area to cancel."

Make sure the Pathfinder's IR window is facing the infrared window on the IRR. Check to make sure nothing is blocking this line-of-sight between the Pathfinder and the IRR. If something is in the way, remove it and the signal should go through.

The infrared signal that the Pathfinder sends is very strong. If the Pathfinder and IRR windows are closer than 18 inches to each other and are directly facing each other, the IRR may not be able to read the Pathfinder's signal. Either move the Pathfinder farther away from the IRR or set the Pathfinder so that its IR window is at an angle to the IRR. The signal will go through but it will not overpower the IRR.

When you use the Pathfinder with a computer and an IRR, you set (among other things) the "Serial Output" option to On and the "Send Output " option to IR in the Pathfinder's OUTPUT MENU.

If you use your Pathfinder with these settings when the IRR is not available (in another room or blocked in some way), you will get an error message that says the Pathfinder is busy sending IR data. Either go where the IRR is or check to make sure the IRR is not blocked. If you don't want to send signals at all, go to the OUTPUT MENU and turn the Serial Output to Off.

Appendices

APPENDICES

Pathfinder Manual: Basics

Appendix A: All Tools List

Summary:

An alphabetical list of all the tools that you can assign to a key or store under a sequence. Explanations of the tools follow the list.

ACTIVATE KEY	DELETE WORD
ACTIVITY MENU	DISABLE HEADPOINTER
ASSIGN KEY MENU	DOWN
AUDITORY PROMPT	EAR VOLUME DOWN
MENU	EAR VOLUME UP
AUDITORY PROMPTS	EDIT CORE
OFF	EDIT MENU
AUDITORY PROMPTS ON	EDIT MODE
AUDITORY PROMPTS	END
ON/OFF	ERASE CORE
BACKLIGHT INTENSITY	EXIT THEME
DOWN	FEEDBACK MENU
BACKLIGHT INTENSITY	FILE ORGANIZER
UP	FIND/REPLACE
BEEP OFF	GOTO COMPUTER MODE
BEEP ON	GOTO MINSPEAK
BEEP ON/OFF	GOTO SPELL
BLOCK MARKER	HIDE/SHOW NOTEBOOK
CALCULATOR	HOME
CALL	IBM MARKER
CANCEL	ICON
CAPS LOCK	INSERT TOOL
CAPS OFF	IR COMMAND
CAPS ON	IR SETUP MENU
CHOOSE ACTIVITY	LAM MARKER
CLEAR DISPLAY	LEFT
CLOSE NOTEBOOK	MAC MARKER
CLOSE TOOLBOX	MAINTENANCE MENU
COPY BLOCK	MINsert
CTRL	MORE ITEMS
CUT BLOCK	MOUSE BUTTON
DATE DISPLAY	MOUSE MOVE
DELETE CHARACTER	MOUSE SET
DELETE ICON	MP3 PLAYER MENU
DELETE LAST	NOTEBOOK MENU
SELECTION	OK
	OPEN NOTEBOOK

APPENDIX A: ALL TOOLS LIST

Pathfinder Manual: Power Tools

OPEN TOOLBOX
 OUTPUT MENU
 PAGE DOWN
 PAGE UP
 PASTE BLOCK
 PHONE-DIAL NUMBER
 PHONE-DIAL PAD
 PHONE-SEND
 PHONE-SEND TEXT
 MESSAGE
 PHONE-TEXT MESSAGES
 PICK 1 ICON THEME
 PICK 2 ICON THEME
 PLAY DRIVE
 PLAY FILE
 PLAY PLAYLIST
 PLURAL
 POWER OFF
 RANDOM CHOICE
 RESET DEFAULT
 REVIEW VOCABULARY
 MENU
 RIGHT
 ROLL DICE
 SAVE CHANGES
 SAVE NOTEBOOK
 SEARCH/REPLACE
 SELECTION TECHNIQUE
 MENU
 SERIAL MARKER
 SERIAL OFF
 SERIAL ON
 SERIAL ON/OFF
 SET 1 ICON THEME
 SET 2 ICON THEME
 SET ACTIVITY
 SETTINGS 1
 SETTINGS 2
 SETTINGS 3
 SETTINGS MENU
 SHIFT
 SING
 SPEAK ALL

SPEAK DATE
 SPEAK DISPLAY
 SPEAK LAST SELECTION
 SPEAK NEXT SENTENCE
 SPEAK NEXT WORD
 SPEAK NOTEBOOK
 SPEAK SENTENCE
 SPEAK TIME
 SPEAK WORD
 SPEAKER VOLUME
 DOWN
 SPEAKER VOLUME UP
 SPEECH MARKER
 SPEECH MENU
 SPEECH OFF
 SPEECH ON
 SPEECH ON/OFF
 SPELL/MINSPEAK
 START SCAN
 STORE CORE
 SYSTEM FUNCTION
 MENU
 TEXT MARKER
 TEXT/SPEECH MARKER
 THEMES MENU
 TRANSFER MEMORY
 MENU
 UP
 USER AREA MENU
 VOICE
 WAIT ANY KEY OR
 SWITCH
 WORD PREDICTION
 MENU

 CTRL any SPEAK function
 CTRL BLOCK MARK
 CTRL EDIT MODE
 CTRL SERIAL MARKER
 CTRL SERIAL ON
 CTRL SERIAL OFF
 CTRL SPEECH OFF
 CTRL SPEECH ON

APPENDIX A: ALL TOOLS LIST

Pathfinder Manual: Power Tools

Explanations of the Tools in the All Tools List

ACTIVATE KEY

Use this tool to tell the Pathfinder that you want to activate a particular key as part of your macro.

ACTIVITY MENU

Allows you to assign this menu to a key or sequence on your overlay.

ASSIGN KEY MENU

Allows you to assign a tool or tools and text to a core vocabulary key on your communication overlay. You can also swap keys, hide/show keys, assign tools and/or text to Spell, Computer or Minspeak modes with this tool.

AUDITORY PROMPT MENU

Assign the AUDITORY PROMPTS MENU to a key or icon sequence.

AUDITORY PROMPTS OFF

AUDITORY PROMPTS ON

AUDITORY PROMPTS ON/OFF

Turns auditory prompts Off or On or toggles between the two actions.

BACKLIGHT INTENSITY DOWN

BACKLIGHT INTENSITY UP

Turns the display backlighting up or down.

BEEP OFF

BEEP ON

BEEP ON/OFF

Turns the feedback beep on or off or toggles between the two actions.

BLOCK MARKER

Allows you to highlight a block of text.

CALCULATOR

Allows you to store the calculator to a key or sequence.

CALL

When activated, this tool emits a series of tones that will alert people that you need something immediately.

CANCEL

Allows you to cancel an action. You would most likely use this when you are navigating through menus.

CAPS LOCK

Allows you to type using all capital letters. Activate it again to return to lowercase letters. When CAPS LOCK is On, the LED lights next to the picture of the padlock on the upper right front part of the Pathfinder case.

CAPS OFF

Activate to switch to lower case letters.

CAPS ON

Activate to type with all capital letters.

CHOOSE ACTIVITY

Allows you to select an activity from the Activity Row.

CLEAR DISPLAY

Removes all text and prompts from the display and text buffer.

CLOSE NOTEBOOK

Allows you to close an open Notebook from your overlay.

CLOSE TOOLBOX

Allows you to close the Toolbox with a macro.

CONTROL (CTRL)

Activating this key can change what the next key that you activate does. The behavior of some keys will be altered, or the next character typed will generate a "control character" which can be sent to a computer, for example. *See the CTRL commands at the end of this list.*

COPY

Allows you to copy text in one application and paste it into another application. For example, if you have created some text in the regular Workspace that you decide is something that you would like to save in a Notebook, you can highlight the text using BLOCK MARK and copy it to a Notebook.

CUT

Allows you to cut text from a document and paste it somewhere else.

DELETE CHAR

DELETE CHARACTER removes the character to the *left* of the cursor.

DELETE ICON

This tool deletes the last icon that you selected. You can select a new icon or re-select the deleted one if you want.

DELETE LAST SELECT

DELETE LAST SELECTION removes any text that you brought up on the display when you activated your last (previous) selection. If the previous selection was a tool, DELETE LAST SELECTION does nothing.

DELETE WORD

This tool removes the word or group of letters to the *left* of the cursor up to the next space or punctuation mark. If the character to the left of the cursor is a space, DELETE WORD removes the space.

DISABLE HEADPOINTER

Activate this tool to disable your headpointer. When the headpointer is disabled you will see a box on the Pathfinder screen. When you are ready to re-enable the headpointer, click OK in the box. When the headpointer is disabled you will only be able to activate OK in the box. The headpointer will not activate any other keys.

DOWN

Moves the cursor down one line, one screen, to the end of the workspace, depending on the EDIT MODE setting.

EAR VOLUME DOWN**EAR VOLUME UP**

Turns the earphone volume up or down.

EDIT CORE

Allows you to edit core vocabulary sequences.

EDIT MENU

Allows you to cut, copy edit and replace text from your overlay.

EDIT MODE

Allows you to move through text by sentence, word, or character.

END

Moves the cursor to the end of the current line.

ERASE CORE

Erases sequences stored in your core vocabulary.

EXIT THEME

Allows you to exit a theme from your overlay. Activate once to exit for one sequence; activate twice to permanently exit theme.

FEEDBACK MENU

Allows you to change the feedback the Pathfinder gives you.

FILE ORGANIZER

Allows you to move files from one memory storage device to another, and to move files to different folders on a storage device.

FIND/REPLACE

Allows you to use the FIND/REPLACE function from the EDIT MENU.

GO TO COMPUTER MODE

Allows you to go from the mode you are currently using to Computer mode.

GO TO MINSPEAK

Use this tool to move from the mode you are currently using to Minspeak mode.

GO TO SPELL

This takes you from the mode you are currently using to Spell mode.

HIDE/SHOW NOTEBOOK

This allows you to hide the Notebook you are working in and to retrieve it later.

HOME

Moves the cursor to the beginning of the current line.

IBM MARKER

Use this tool in conjunction with the MAC MARKER tool. Perhaps you use an IBM at work and a Mac at home. Often a Mac and an IBM have a key that does the same thing but it is called something different on each computer (e.g. Mac <DELETE> command or IBM <BACKSPACE> command). When you store computer emulation commands, you can store INSERT TOOL, IBM MARKER, and the specific IBM key command; then add INSERT TOOL, MAC MARKER and the specific Mac key command. Store both these commands under the same icon sequence.

When you activate this sequence, the Pathfinder will select the correct command for the computer you are using, (Select the computer you are going to use for computer access in the **Computer Access Menu** of the USER AREA MENU.)

ICON

Places a selected icon into the icon buffer.

INSERT TOOL

Allows you to store tools or text and tools under icon sequences or assign them to keys. Activate this tool before each tool that you want to store. Then activate the tool you want to store.

IR COMMAND

Use this tool when you are storing remote control commands.

IR SETUP MENU

Allows you to store infrared commands for remote controls.

LAM MARKER

A clinician or MAP developer who is setting up an overlay that will be used with the LAM can now assign this Tool to a key that normally would not be logged as an activation by the LAM. For example, if a user activates CLEAR DISPLAY, this action is not logged by the LAM. The clinician can add the LAM MARKER tool to the CLEAR DISPLAY key assignment, "<LAM MARKER>clear display", and the LAM data will show "clear display" when that key is activated.

LEFT

Moves the cursor to the left one character, word or sentence, depending on the setting of EDIT MODE.

MAC MARKER

See *IBM MARKER*.

MAINTENANCE MENU

This menu allows you to load software, erase the Pathfinder, lock the system, set the time and date, set backlight shut-off , etc.

MINsert

Allows you to put blanks in a message that you can fill when you speak the message.

MORE ITEMS

This allows you to access more items in a menu or activity.

MOUSE BUTTON

Use this with keyboard mouse emulation commands

MOUSE MOVE

This allows you to store mouse movements from a list of movements which are relative to your current mouse position, e.g., large movement, very large movement, small movement, etc. The mouse moves in increments.

MOUSE SET

This allows you to store mouse movements from a list of specific movements, e.g., upper left corner, bottom right corner, middle top, etc. The mouse moves to a specific location.

MP3 PLAYER MENU

This tool allows you to store the MP3 Player menu on your overlay for easy access.

NOTEBOOK MENU

Allows you to place this menu on your overlay.

OK

This is used in creating macros that navigate the menus. This tells the Pathfinder to save what you have done and return to the previous page. The OK key also acts as a "repeat" key in Minspeak mode. After you have retrieved an icon sequence, you can activate OK to repeat the sequence.

OPEN NOTEBOOK

Allows you to open a specific Notebook from your overlay.

OPEN TOOLBOX

Allows you to open the **Toolbox from your overlay.**

OUTPUT MENU

This menu allows you to set up the Pathfinder so that it will work with a computer or printer, remote control or memory transfer.

PASTE

Allows you to paste cut or copied text into a new place.

PAGE DOWN

Moves the text on the display down a page.

PAGE UP

Moves the text on the display up a page.

PHONE-DIAL NUMBER

Store under a key or sequence

PHONE-DIAL PAD

This is the Phone Pad for the phone card option. Use this to dial and receive calls, do text messaging, etc. This is the most complete of the phone tools.

PHONE-SEND

When you store this tool, you can answer and end calls without using the Dial Pad.

PHONE-SEND TEXT MESSAGE

Allows you to send text messages to other phones without using the Dial Pad.

PHONE-TEXT MESSAGES

Allows you to view a menu of your text messages without using the Dial Pad.

PICK 1 ICON THEME

Switches you to a 1 icon theme and allows you to select the theme icon.

PICK 2 ICON THEME

Switches you to a 2 icon theme and allows you to select the first two icons.

PLAY DRIVE

When you have music stored on a secure digital card and a USB flash drive and they are both plugged into your device, activate this tool and pick the storage device you want to listen to.

PLAY FILE

Use this tool to store one music file under a key or sequence so you can play it from your overlay.

PLAY PLAYLIST

Use this tool to store one playlist under a key or sequence so you can play it from your overlay.

PLURAL

When activated, the word to the left of the cursor is made plural.

POWER OFF

When this tool is activated the Pathfinder 'goes to sleep.' Activate a key or switch to wake it back up.

RANDOM CHOICE

This tool will choose random items from an Activity you have assigned the tool to.

RESET DEFAULT

This resets all the Pathfinder defaults.

REVIEW VOCABULARY MENU

Allows you to review all the vocabulary in the Pathfinder. You can print it out or see it on the display.

RIGHT

Moves the cursor right one character, word or sentence depending on the setting of EDIT MODE.

ROLL DICE

This tool allows you to play dice games that use from 1-6 dice. When you activate ROLL DICE a number will appear on the display indicating the dice roll. Activate ROLL DICE again. A different number will appear. The numbers will not be spoken.

SAVE CHANGES

Normally, when you turn the Pathfinder off, you see "Saving changes..." on the screen. This tool allows you to save changes without turning the Pathfinder off. You might want to store this tool if you are doing a lot of programming and want to periodically save your work.

SAVE NOTEBOOK

Allows you to save the current Notebook from your overlay.

SELECTION TECHNIQUE MENU

Choose a selection technique and the options for it that you want from this menu.

SERIAL MARKER

Any text that follows a SERIAL MARKER is sent out the serial port but not displayed or spoken.

SERIAL OFF

Turns the serial output Off.

SERIAL ON

Sets the serial output to its last active setting, either Immediate or Delayed. Text is automatically sent out the serial port when this is turned On.

SERIAL ON/OFF

Toggles between Serial On and Serial Off.

SET 1 ICON THEME

Switches you to a 1 icon theme you stored previously.

SET 2 ICON THEME

Switches you to a 2 icon theme you stored previously.

SET ACTIVITY

Allows you to go to a specific activity. Use the arrow keys and OK key on your overlay to navigate through your activities if you don't want to use the display screen.

SETTINGS 1**SETTINGS 2****SETTINGS 3**

Allows you to store and then access 3 different groups of settings.

SETTINGS MENU

Allows you to save settings and change between settings without navigating each of the menus. Use this with SETTINGS 1, 2 and 3 below.

SHIFT

When this is set, the next character you activate will be an UPPERCASE letter. The second character you activate will be in lowercase. When you activate SHIFT, the "Shift" LED flashes on the upper right front of the Pathfinder case.

SING

This tool shows you a list of all the songs in your Pathfinder and allows you to pick a song.

SPEAK ALL

When this tool is activated, the Pathfinder speaks all of the text in the text area of the display and in the buffer. (When you type, letters and words will move off the screen in order to make room for new letters

and words. Words that are no longer on the screen have moved to the workspace. You can use the arrow keys to bring them back onto the display screen.) Clearing the display (CLEAR DISPLAY tool) or turning the device Off clears the buffer. This tool works whether speech is On or Off.

SPEAK DATE

When you store this tool and then activate it, the Pathfinder will speak the current date.

SPEAK DISPLAY

When this tool is activated, the Pathfinder speaks everything that is visible in the text display area. This tool works whether speech is On or Off.

SPEAK LAST SELECTION

When you activate this tool, the Pathfinder speaks the last stored message you activated or the last spelling characters you put on the display. This is helpful if you have to repeat yourself so that someone listening can understand you better, or to get someone's attention. This tool works whether speech is On or Off.

SPEAK NEXT SENTENCE

For use with Notebooks. If you want to speak a Notebook sentence by sentence, use this tool. Activate it each time you are ready to move to the next sentence.

SPEAK NEXT WORD

For use with Notebooks. If you want to speak a Notebook word by word, use this tool. Activate it each time you are ready to go on to the next word.

SPEAK NOTEBOOK

Tells the Pathfinder to speak the Notebook you stored with the tool.

SPEAK SENTENCE

When you activate this key, the Pathfinder speaks the message that contains the cursor. This is helpful if you want to hear how something you are working on sounds before you store it. It is also useful if you are going to give a speech or presentation. People seem to understand DECtalk Access32 speech better when they hear it one sentence at a

time until they are used to listening to it. This tool works whether speech is On or Off.

SPEAK TIME

When you store this tool and then activate it, the Pathfinder will speak the current time.

SPEAK WORD

When this tool is activated, the Pathfinder speaks the last word you typed on your spelling overlay, or the last word you brought up in Minspeak mode. If you are typing in Spell mode, you can turn speech OFF (so you don't have to listen to the Pathfinder speak each letter) and type the word. Then you can activate this key and the word you typed will be spoken. See also the FEEDBACK menu, ***Speak When Spelling***.

SPEAKER VOLUME DOWN

SPEAKER VOLUME UP

Turns the speaking volume up or down.

SPEECH MARKER

This marks the beginning of text in a sequence that is to be spoken but not displayed.

SPEECH MENU

This allows you to insert the SPEECH MENU in a macro.

SPEECH OFF

SPEECH ON

SPEECH ON/OFF

When this tool is On, all the sequences you select or letters you type are automatically spoken. When this tool is Off, nothing is spoken unless you activate one of the SPEAK tools. SPEECH ON/OFF toggles between the two actions. (If ***Speak When Spelling*** is On in the FEEDBACK menu, the Pathfinder will speak regardless of where this tool is set.)

SPELL/MINSPEAK

Toggles between Spell mode and Minspeak mode.

START SCAN

Add this to a macro to force the Pathfinder to start scanning each time, regardless of how long a switch is held down.

STORE CORE

Allows you to store core vocabulary messages under icon sequences.

APPENDIX A: ALL TOOLS LIST

Pathfinder Manual: Power Tools

SYSTEM FUNCTION MENU

This single menu gives you access to all other menus. With this menu, you do not have to go to the Toolbox to access menus, nor do you have to store each individual menu in an icon sequence or on your overlay.

TEXT MARKER

This marks the beginning of text in a sequence that is to be displayed but not spoken.

TEXT AND SPEECH MARKER

This marks the end of the text in a sequence where a SPEECH MARKER and/or TEXT MARKER has been used. Any text after the TEXT AND SPEECH MARKER will be both displayed and spoken.

THEMES MENU

Allows you to have this menu on your overlay.

TRANSFER MEMORY MENU

This allows you to save the Pathfinder's memory to a computer disk, transfer memory from one Pathfinder to another and import graphics, and Save/Load Notebooks to and from a computer. (See the *MTI Manual* for more information.)

UP

Moves the cursor up one line, paragraph, to the end of the workspace, depending on how EDIT MODE is set.

USER AREA MENU

Allow you to select user areas and overlays.

VOICE

Allows you to use different voices in a message, without having to store the whole SPEECH menu in a macro. This gives you only the voice options from the menu.

WAIT ANY KEY OR SWITCH

Causes a pause in a macro until a key is activated.

WORD PREDICTION MENU

This menu allows you to turn Word Prediction On and Off, add words to the word prediction dictionary, delete words, etc.

Tools that can be used with the CTRL command:

CTRL EDIT MODE

Clears the current edit mode.

CTRL BLOCK MARK

Clears the current block marker.

CTRL SERIAL MARKER

This tells the Pathfinder to send data out the serial port only if the Serial option is turned On.

CTRL SERIAL ON

Turns the serial output back on in whatever the last serial mode was, for the remainder of the macro in which it is found.

CTRL SERIAL OFF

Turns the serial output back off in whatever the last active serial mode was, for the remainder of the macro in which this is found.

CTRL SPEAK (ADD ANY SPEECH FUNCTION HERE)

Performs any regular speech function (SPEAK ALL, SPEAK DISPLAY, SPEAK NOTEBOOK, etc.) only if speech is turned on.

CRTL SPEECH ON

Turns speech on for the remainder of the macro in which it is found.

CTRL SPEECH OFF

Turns the speech off for the remainder of the macro in which this is found.

CTRL START-SCAN

This only starts scanning if *Scan Auto Restart* is set to ON (in the SELECTION TECHNIQUE MENU)

Appendix B: Using the LAM (Language Activity Monitoring)

As a clinician or teacher you can use the LAM capabilities in your device to analyze your clients' language activities. This can be helpful for clinical intervention, outcomes measurement and research.

The following instructions are for use with a USB flash drive or Secure Digital card. If you need to connect to a computer with a serial cable, download instructions from the following web site:

www.aacoinstitute.org

Under Products and Services, click on LAMterm.

In order to accumulate language data to be analyzed, **Data Logging** must be **ON** in the **REVIEW VOCABULARY MENU**. Select Data Logging, then turn the Data Logging option **ON**. Your device will now record all language activity data. You should also set the **CLOCK** menu (in the **MAINTENANCE MENU**) to the current year, month and date and the correct time.

You can tell if there is data to be analyzed by looking at the **Clear Data Log** option. If there is a number displayed, (e.g., 134 Bytes, or 400 Bytes, etc.) then there is data available to be analyzed. If there is no number on the key, you will have to turn **Data Logging On** and have the client generate some data.

You will save the language data to your USB drive or the SD card. You can then download the Data Log file from the USB drive or SD card onto your computer and save it as a word processing document.

Save Data Log

Once you have accumulated some language data, you need to save it to your USB drive or SD card.

1. Make sure you have the USB drive or SD card plugged into the correct connector on your communication aid.
2. Open the REVIEW VOCABULARY MENU.
3. Select **Data Loggin**.
4. In the **Logging Destination** option, select **USB Disk** or **SD Card**, whichever you are using.
5. Select **Save Data Log**.
6. When the log is saved, remove the USB device or SD card from your device.
7. Follow the directions that came with your USB device or SD Card to place the Data Log on your computer.
8. Select **Clear Data Log** in the REVIEW VOCABULARY MENU. This erases the data you just saved. If you want to accumulate more data, make sure **Data Logging** is **On**.
9. Select OK to exit the menu.

An Example of a Data Log

CAUTION

The following data represents personal communication.
Please respect privacy accordingly.

Language Activity Monitor Springboard LAM-2
Version 2.00
Prentke Romich Company

```
*[YY-MM-DD=05-06-07]*
09:47:15 SEM "like "
09:47:22 SEM "read "
09:47:24 SEM "put "
09:47:28 SEM "please "
09:47:39 SEM "I "
09:47:41 SEM "eat "
09:47:48 SEM "I "
09:47:49 SEM "feel "
09:47:58 ACT "happy "
09:48:15 SEM "you "
09:48:17 SEM "feel "
09:48:18 ACT "happy "
09:48:22 SEM "I "
09:48:23 SEM "want "
09:48:24 SEM "drink "
09:48:27 ACT "water "
09:48:44 SEM "you "
09:48:45 SEM "go "
09:48:47 ACT "outside. "
09:49:05 SEM "my "
09:49:07 SEM " "
09:49:16 ACT "Maria "
```

An Example of CTL Information

```
01:52:01 CTL "Switch User Area from Unity 45 Full to Unity
84 Single Hit"
01:52:14 CTL "Switch User Area from Unity 84 Single Hit to
Unity 45 Full"
```

About the LAM Data

When you look at the Data Log, the first thing you see is the year, month and date of this particular log.

The next item you notice is the Time Stamp. Time is presented in a 24-hour format.

Following the time Stamp is the SOURCE of language event. Source codes are in capital letters. The following source codes are currently valid:

ACT (Activity Row)

CTL (Control – this supplies information on non-language key activations the client makes.)

PAG (Page)

SEM (Semantic Compaction – Minspeak[®] and Unity[®])

SPE (Spelling)

WPR (Word Prediction)

DWP (Derivative from Word Prediction).

Any characters spaced more than 0.2 seconds apart are considered as separate language events.

In the example at the top of the facing page you can see that the device user formed sentences and used Activities. In the second example, the user changed overlays. These were not language events, so you see the CTL source code, but from them you can see that the user knows how to change overlays.

More information about LAM data and LAM tools is available on the Web at www.aacinstitute.org

Appendix C: Using the "Review to Output Method" Option

You can send a vocabulary review to a computer where the review can be saved as a file or you can send it straight to a printer. You can also review the Word Prediction Dictionary using the method described below.

Option #1-with USB Cable

You can perform a review on your computer by connecting a USB cable to the square USB port on your device and to the USB connector on your computer. Open the OUTPUT MENU and select **USB Disk** for **Output Method**. Open the REVIEW VOCABULARY MENU. Select what you want to review and the method (step or auto) you want to use. On your computer, open a blank word processing document. Now select **Review to Output Method** on your device. The review will be visible on your computer screen.

Option #2-with serial cable

You can perform a review on the computer by using either the **Hyper Terminal** application that is already on most IBM computers (on Macs this is usually called the **Terminal** program), or you can download to your computer the free **AAC Keys** application. To download AAC Keys, go to www.prentrom.com, type "AAC Keys" in the Google Search box (make sure it's set to search the PRC website only), then download the application. The following directions are for Hyper Terminal but AAC Keys works in a similar manner.

To Review to an IBM or clone Computer:

Connect your computer and your device with a null modem serial cable. You can use the MTI cable that came with your device. Plug one end of the cable into COM 1 on your computer. If your computer has more than one COM port and COM 1 is being used for something else, plug the

cable into another port. Plug the other end of the cable into the serial port on your device.

Select the computer **Start** menu.

Select **Programs**.

Select **Accessories**.

Select **HyperTerminal**.

In the HyperTerminal window, select **Hyperterm.exe**.

In the **New Connection** dialogue box:

Type, "Review" as the name.

Select an icon. The program will save your review using that icon as the reminder for it.

Press **OK**.

In the **Phone Number** dialogue box:

At **Connect Using**, select **COM 1**. (If you connected your cable to a different COM port select the correct port.)

Press **OK**.

In the **COM 1 Properties** dialogue box:

Either select the **Defaults** option, or set the following:

Data Bits = 8

Parity = None

Stop Bits = 1

At **Bits per Second**, select **9600** if this is not already set there. Some computers may allow a higher baud rate. Your device will go up to 57600 baud.

At **Flow Control**, select **X on X off**.(or "Software" if that is the choice)

The "Review" window should now be open.

Open the **Transfer** menu in the menu bar. Select **Capture Text**. Type in the **drive** and the **file or folder** where you want the text to go. Click on **Start**.

On the Your Device

Open the **Toolbox**.

Open the OUTPUT menu.

Set **Output Method** to **RS232**.

Set **Output** to **On**.

Set **Baud Rate** = **9600**. (The HyperTerminal and your device baud rates must be the same.)

Set **Serial** to **On**.

Set **Auto Line Feed** to **On**.

Character Pacing should be **Off**.

Activate **OK** to exit.

Open the **REVIEW VOCABULARY** menu and activate **Review to Output**.

When the review has been transferred to your computer you can **Copy** it into a word processing program, **Save** it in a file or folder and then use the computer **Print** function to print the review.

On a Macintosh Computer

Connect your computer and your device with the MTI Mac cable that came with your device. Plug one end of the cable into either the Printer port or the Modem port of your computer, depending on what your

Terminal program calls for. (Some Terminal programs allow you to connect to either port, some only allow you to connect to the modem port.)

Open the **Terminal** program on your computer.

Select the **port** that you are connected to.

Set the **baud rate** to match your device's baud rate. (The baud rate is in the OUTPUT menu.)

On your Device

Open the **OUTPUT** menu.

Set **Output Method** to **RS232**.

Set **Output** to **On**.

Set **Baud Rate** = 9600. (You can select a higher baud rate, but the terminal program and your device's baud rates must be the same.)

Set **Auto Line Feed** to **On**.

Character Pacing should be **Off**

Activate **OK** to exit.

Open the REVIEW VOCABULARY MENU and activate **Review to Output**.

When the review has been transferred to your computer you can **Copy** it into a word processing program, **Save** it in a file or folder and then use the computer **Print** function to print the review.

To Print Directly to a Serial Printer

Attach the printer cable to the **serial port** with the picture of a computer on the top of the Pathfinder. Set the printer baud rate to match the baud rate in your device's OUTPUT menu.

The printer should be set for **8 Data Bits**, **2 Stop Bits** and **Parity** should be set to **None**.

Open the OUTPUT menu in the Toolbox:

Set **Output Method** to **RS232**.

Set **Output** to **On**.

Set **Baud Rate** = **9600**. (You can select a higher baud rate, but the printer and Pathfinder baud rates must be the same.)

Set **Output Mode** to **Immediate**.

Make sure the printer is on-line and ready to print.

From your device, activate **Review to Output**.

To Print to a Parallel Printer

If you want to print to a parallel printer, you will need a parallel-to-serial adapter. You can usually get these adapters from the place you got your printer.

Plug the printer cable into the adapter and plug the adapter into one of the serial ports on your device.

Set the **baud rate** on the printer to match baud rate on your device.

The printer should be set for **8 Data Bits**, **2 Stop Bits** and **Parity** should be set to **None**.

In the OUTPUT Menu in the Toolbox:

Set **Output Method** to **RS232**.

Set **Output** to **On**.

Set **Baud Rate** = **9600**. (You can select a higher baud rate, but the printer and Pathfinder baud rates must be the same.)

Set **Output Mode** to **Immediate**.

Make sure the printer is on-line and ready to print.

Open the REVIEW VOCABULARY MENU and select **Review to Output**. Then select **Printer**.

Appendix D: The Pre-Stored Songs in the Pathfinder

The following songs are pre-stored in the Pathfinder for your use.

Amazing Grace
Joy to the World
O Come Little Children
Silent Night
Away in a Manger
My Country 'Tis of Thee
Old MacDonald
Mary Had A Little Lamb
Humpty Dumpty
Twinkle Twinkle Little Star
London Bridge
I'm a Little Teapot
Hickory Dickory Dock

Appendix D: To Copy a Pre-Stored Song to Your Overlay

The songs on the previous page are already stored in your device. In order to sing them, you have to move them from the Toolbox to your Minspeak[®] overlay or into an Activity.

To Move a Song to Your Overlay:

Go to the Toolbox.

Activate STORE.

Select the icon sequence you want to use.

Select "Spell text for message."

Activate INSERT TOOL on your Spelling overlay.

Activate SING.

Select the song you want to copy.

Activate OK.

Remember, you can **record** your own songs. Simply follow the regular storing process for recording a message.

The next few pages explain how to program songs that you want the device to sing.



More DECtalk speech information can be found at the following web site:

<http://www.fonix.com/products/dectalk/>

Appendix E: How to Use DECtalk to Program and Store Your Own Songs

Programming a song in DECtalk is different from programming regular text because you must tell your device to sing the song, not speak it.

To do this you must type each letter of text phonetically and add time and pitch values, which correspond, to musical notes. At the end of this appendix you will find a list of PITCH and TIME values, a chart of musical notes and a list of vowel and consonant phonemes to use.

Programming songs is not difficult but it is time consuming, so plan accordingly.

➡ Highly Recommended

Write down the programming of your song before you begin to program it into your device.

This means writing down the words to the song in phonemes and adding the time and pitch values exactly the way you want to program them. This will save you a great deal of time when you are ready to enter the song into the device.

➡ Helpful Hint

You will be doing quite a bit of cross-referencing with the lists at the end of this appendix. We encourage you to use the sheet music for any song you want to program. This way you can match the notes on the sheet music with the notes in the pitch and time tables. You don't have to be able to read music.

When programming a song you must change the letters in your song to phonemes (the written form of sounds). Find the sound in the Vowel and Consonant Phoneme List for each letter in your song and write down the phoneme.

Once you have entered the correct phoneme for a letter, you must tell your device how long (time) to hold which note (pitch). The TIME and PITCH values are always enclosed in angle brackets < > immediately following the phoneme they represent. The TIME value always comes before the PITCH value inside the brackets. The two values are always separated by a comma, i.e., <300,24>.

You always start to program a song by activating the left square bracket [. This tells your device that you are programming a song. Program all songs in STORE mode for DECtalk speech.

Break the Song into Phrases or Lines

Most songs, unless they are very, very short (one line) must be broken down into separate phrases or single lines to be stored. After each phrase (or line) you must activate the right square bracket,] and then the **CTRL** key and the "k" key on your keyboard. You will see the right bracket and two small characters beside it on your display.

The right square bracket] usually tells your device that it has come to the end of the song. When it is combined with the **CTRLk** activation, it tells your device to keep on singing the song until it comes to a right square bracket that is **not** followed by a CTRL k character. The] without a CTRL k following it signifies the end of the song.

➡ Before you Begin to Store:

Write down the song you want to store exactly the way you will enter it into your device.

1. Start with the left square bracket [.
2. Use the **phoneme lists** to change each letter of the song into the correct phoneme.
3. Use the **TIME and PITCH tables** to match the note values in your song.
4. Write down the TIME and PITCH values after each phoneme.
Enclose the TIME and PITCH values in angle brackets < > and separate the two values with a comma.
5. Break the song into phrases or lines by adding a **right square bracket] at the end of the line or phrase.** Use a reminder of some kind to tell you to activate the **CTRL and "k" keys** when you are actually programming.
6. Start the next phrase or line with the left square bracket [.
7. Continue until you have completed the song.

About TIME Values

The TIME value refers to the amount of time in milliseconds that a note is to be held.

1,000 milliseconds = 1 second;

500 milliseconds = ½ second.

You can use the above numbers as a reference point.

You choose the amount of time you want a note to be held according to the tempo of the song. For example, a quarter note is held half as long as a half note, so you would adjust the time value for a phoneme accordingly. Use the **Note Time Value Chart** at the end of the appendix.

After you have entered a phoneme, type the left angle bracket < and then enter the TIME value (how long you want that phoneme to be held).

About PITCH Values

PITCH values correspond to notes as you see them on sheet music or hear them on a piano. The PITCH value of notes for your device range from 1 to 37. 1 corresponds to C2 (or the second C below middle C on a piano). 25 corresponds to the note C4 (middle C on a piano). 37 corresponds to C5 (the first C above middle C on a piano).

The two tables, **PITCH NOTES AND VALUES** and **PITCH VALUE CODE**, at the end of the appendix will help you to figure out PITCH values.

Enter the **PITCH** value that corresponds to the note you want after you have entered the TIME value and a comma. Then type a right angle bracket > . Do not put a space before or after the comma.

An Example of Programming a Song

Mary Had a Little Lamb



Ma - ry had a lit - tle lamb lit-tle lamb lit-tle lamb



Ma - ry had a lit-tle lamb its fleece was white as snow

1. **Change the words of the song into phonemes.** Use the Vowel and Consonant Phoneme Tables to find the correct phonemes.

Mar y ha d a li t tle la mb
MER IY HXAE D AX LIH T TUHL LEYAE M

li t tle la mb li t tle la mb
LIH T TUHL LEYAE M LIH T TUHL LEYAE M

mar y ha d a li t tle la mb
MER IY HXAE D AX LIH T TUHL LEYAE M

I t s flee ce wa s whi te a s snow
IH T S FLIY S WAX Z WAY T AE Z SNOW.

If you are new to using phonemes, it will take a little practice to become familiar with the different sounds. Sometimes a beginning consonant will blend into a vowel, but other times it may have to stand alone.

Most ending consonants will stand alone but will be held for a very short time. Use the phoneme tables at the end of the appendix.

Practice by spelling words into your device using the phonemes you think might work. Then listen to them. Soon you will develop an idea about which phonemes are going to correspond to which sounds.

2. Find the correct PITCH value in the PITCH Values charts.

Below is the regular notation for Mary had a Little Lamb.

The image shows two staves of musical notation for the song 'Mary had a Little Lamb'. The first staff contains the melody for the first line of the song, and the second staff contains the melody for the second line. The notes are written in a 4/4 time signature. Above each note is a pitch value: B, A, G, A, B, A, B, D. The lyrics are written below the notes.

Ma - ry had a lit - tle la mb lit - tle lamb lit - tle lamb

Ma - ry had a lit - tle lam b its fleece was white as snow

🔄 How You Can Make the Song Sound Better:

Most songs that have notes above "37" (see the PITCH Value Code Chart) are scored too high for any Pathfinder voice to sing well. These higher songs will sound much better if you give the notes their value in an octave lower. For example, the first note in Mary Had a Little Lamb is B above middle C. This B has a PITCH value of 36. To assign the correct value in an octave lower, go to the PITCH Value Chart and find the first B below middle C. Notice that its value is 24. Assign 24 to your B.

Also, some songs sung in a male voice may sound better if you program them in an octave lower than they are written.

Below, the PITCH values for Mary had a Little Lamb are shown an octave lower than written in the music.

The image shows two staves of musical notation for the song 'Mary Had a Little Lamb'. The first staff contains the melody for the first line of the song, and the second staff contains the melody for the second line. The lyrics are written below the notes. Above each note, a pitch value is written, indicating the pitch value for that note in an octave lower than written in the music.

Ma - ry had a lit - tle lamb lit-tle lamb lit-tle lamb

Ma - ry had a lit-tle lamb its fleece was white as snow

3. Find the correct TIME value for each note and write it down.

1. Using the secondhand on a watch, time the amount of time it takes you to sing your song.
2. On the sheet music, look at the tempo of the song. In our example it is 4/4 time.
3. The top "4" means that there are four beats to a measure. There are four measures in our song. The vertical lines between groups of notes define a measure.
4. The bottom "4" means that each $\frac{1}{4}$ note gets one beat.
5. Suppose it takes 10 seconds to sing Mary had a Little Lamb.
To find out how many seconds each measure gets, divide 4 into 10.
In this case each measure gets 2.5 seconds.
6. To find out how many milliseconds each $\frac{1}{4}$ note (one beat) gets, divide 4 into 2.5. In this case each $\frac{1}{4}$ note gets 625 milliseconds per beat. (You can round these numbers up or down so that they are easier to work with; e.g., 600.)
7. An $\frac{1}{8}$ note is held for one-half the time of a $\frac{1}{4}$ quarter note, or 312 milliseconds (625 divided by 2). A $\frac{1}{16}$ note is held for one-half as long as an $\frac{1}{8}$ note, or 156 milliseconds (312 divided by 2).
8. A $\frac{1}{2}$ note is held twice as long as a $\frac{1}{4}$ note, or 1250 milliseconds (625 times 2).
9. A whole note (4/4) is held twice as long as a $\frac{1}{2}$ note, or 2500 milliseconds (1250 times 2).
10. This gives you a rough formula for figuring out the TIME values.

In our example, "Mary" (two $\frac{1}{8}$ notes in the music) makes up one beat and a beat is one $\frac{1}{4}$ note. But "Mary" is broken down into three phonemes: m er iy (the "a" and "r" in Mary is one vowel sound). The "m" "ea" "r" and "iy" phonemes are equivalent to one $\frac{1}{8}$ note. According to our calculations above, an $\frac{1}{8}$ note gets 312 milliseconds.

Shortcut for Finding a TIME Value

If you are not concerned with achieving the exact tempo of a song, there is a quicker way to figure out the TIME values.

Hum a song. Look at a watch or have someone count to calculate the rough timing of the song. Decide how many seconds you want a whole note to be held. Then divide the $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{8}$ notes accordingly.

For example: If you give a whole note the time of 2 seconds (or 2000 milliseconds), then a $\frac{1}{2}$ note gets the value of 1000 milliseconds; a $\frac{1}{4}$ note gets the value of 500 milliseconds; an $\frac{1}{8}$ note gets the value of 250 milliseconds.

By practicing giving whole notes different time values and listening to the results on your device, you can approximate the tempo of a song fairly accurately.

4. Assign TIME and PITCH values to the phonemes.

Now let's figure out how many milliseconds from among the 312 (or 625 for a ¼ note) to give to each phoneme. Vowels are always held for a longer amount of time than consonants. Consonants that stand alone at the beginning and end of words are usually held for short amounts of time.

Now that we know this we can begin to put the phonemes, TIME value and PITCH value together.

The "m" and "er" of "Mary" can probably be sung together—"MER". Together, these two phonemes make up an 1/8 note. We discovered that in this song an 1/8 note uses 312 milliseconds, so let's assign a TIME value of 300 to "MER". (300 is easier to work with than 312 and there is no noticeable difference between the length of 300 and 312.)

When you compare the notes on your sheet music with the notes on the PITCH Charts, you see that the first note (MER) has a PITCH value of 24. So "MER" will be sung with a TIME value of 300 and a PITCH value of 24.

The "IY" phoneme is held for about the same amount of time as "MER" when you sing it so let's give it a TIME value of 300, too. When we look at the PITCH charts, we see that its PITCH value is 22.

The first word of our song will look like this when you enter it into your device:

[MER<300,24>IY<300,22>

The second word, "HAD" uses an 1/8 note and contains the phonemes "HXAE D". The "D" is an ending consonant and stands alone. We don't want it to sound too pronounced when the word is sung, so it should get a lesser TIME value than "HXAE".

Now we have: [MER<300,24>IY<300,22>HXAE<220,20>D<80,20>

Let's give "HXAE" a TIME value of 220. Its PITCH value is 20. And let's give "D" a TIME value of 80. Its PITCH value is 20. (220 plus 80 equals 300, or an 1/8 note.)

"A" (phonemes "AX") is easy. It's a one-phoneme 1/8 note. It gets a TIME value of 300 and the assigned PITCH of 22.

"LITTLE" must be broken up into "LIH T TUHL". Because we want to hear the "T" pronounced in "little" we should give it its own TIME value. "LIH" and "T" make up the first 1/8 note, so let's give LIH the TIME value of 250 along with its PITCH value of 24. Since an 1/8 note has 300 milliseconds and we have used 250 for "LIH", that leaves us with a TIME value of 50 for "T" (300 minus 250 equals 50). Its PITCH value is 24. "TUHL" uses an 1/8 note so it gets a TIME value of 300 and its PITCH value of 24.

Now we have

```
[MER<300,24>IY<300,22>HXAE<220,20>D<80,20>AX<
300,22>LIH<250,24>T<50,24>TUHL<300,24>
```

"LAMB" ("LEYAE M") uses a ¼ note or about 600 milliseconds. It has an ending consonant, "M" (the "b" is silent) which must stand alone so we can hear it. Let's give "LEYAE" a TIME value of 500. Its PITCH is 24. ("LEYAE" sounds better when sung than "LAE".) "M" then gets a TIME value of 100. Its PITCH value is 24.

When "LAMB" is repeated in the second line of the song, it uses an 1/8 note (300 milliseconds) so give "LEYAE" the TIME value of 200 and "M" the TIME value of 100. The pitch is 24.

Now we have

```
[MER<300,24>IY<300,22>HXAE<220,20>D<80,20>AX<
300,22>LIH<250,24>T<50,24>TUHL<300,24>LEYAE<
500,24>M<100,24>
```

Use the] and CTRLk

We have reached the end of the first line of our song. This is a good place to insert a right square bracket **]** and the **CTRLk** character so that your device knows that it should keep on singing. Select the **]** key on your keyboard and then select the CTRL key and the "k" key. (You will see a symbol for CTRLk () on your display, not the letters.)

IMPORTANT:

When you end a phrase or line of a song with a **]** (right square bracket) and the **CTRLk** characters, you **must** start the next phrase or line with a **[** (left square bracket).

If you do not do this, your device will not know it is supposed to continue singing the song.

At the end of the entire song you **must** enter a **]** (right square bracket).

MARY HAD A LITTLE LAMB

Written down exactly as it is to be entered into your device

```
[MER<300,24>IY<300,22>HXAE<220,20>D<80,20>AX<300,22>  
LIH<250,24>T<50,24>TUHL<300,24>LEYAE<500,24>M<100,24>  
]CTRLk[LIH<250,22>T<50,22>TUHL<300,22>LEYAE<500,22>M<100,22>  
]CTRLk[LIH<250,24>T<50,24>TUHL<300,27>LEYAE<500,27>M<100,27>  
]CTRLk[MER<300,24>IY<300,22>HXAE<220,20>D<80,20>AX<300,22>  
LIH<250,24>T<50,24>TUHL<300,24>LEYAE<500,24>M<100,24>]CTRLk  
[IH<170,24>T<50,24>S<80,24>FLIY<200,22>S<100,22>WAX<200,22>Z<100,22>  
WAY<220,24>T<80,24>AE<200,22>Z<100,22>SNOW<600,20>]
```

🔗 Helpful Hints:

If you have Auto Power Down turned On, your device will power down if no activations are made after a pre-set number of minutes pass. If you are entering your song and your device powers down, you will lose your programming. Before you begin to program songs into your device we recommend that you **turn Auto Power Down Off**.

We also highly recommend that you have the song written down on a piece of paper exactly as you are going to program it before you begin to enter it. This will save you a lot of time.

Storing the Song

If you do not have all the extra song programming characters on your Minspeak® overlay (including TEXT and SPEECH MARKERS if you plan to use them), store the song from the Toolbox.

Storing Using TEXT and SPEECH MARKERS

When you store a song under an icon sequence, each time you activate the sequence to sing the song, the display will show the song just as you programmed it. Using TEXT and SPEECH MARKERS tells your device to display only the title of the song. See below.

1. Activate STORE.
2. Select the icon sequence you want to use.
3. Activate INSERT TOOL.
4. Activate TEXT MARKER.
5. Type the title of the song.
6. Activate INSERT TOOL.
7. Activate SPEECH MARKER.
8. Activate the left square bracket [.
9. Type in the song exactly as you wrote it out for programming.
10. You can listen to your song at any time by activating SPEAK ALL after you have entered a right square bracket] and **CTRLk**. You can use the arrow keys and DELETE keys to edit the song and correct any mistakes.
11. When you reach the end of the song, before entering the right square bracket], activate INSERT TOOL.
12. Activate TEXT AND SPEECH MARKER.
13. Activate the right square bracket] .
14. Select OK.
15. Select OK again.

➡ If you do not want to use TEXT and SPEECH MARKERS, skip steps #3-7 and #10-11.

English Vowel Phonemes

Phoneme Symbol	Example	Phoneme Symbol	Example
Vowels			
aa	f a ther	ih	b i t
ae	b a t	ix	k i sses
ah	b u t	iy	b ea t
ao	b ou ght	ow	b oa t
aw	b ou t	oy	b oy
ax	a bou t	rr	b ir d
ay	b i te	uh	b oo k
eh	b e t	uw	b oo t
ey	b a ke	yu	c u te

R-Colored Diphthongs

ar	b ar
er	b ear
ir	b eer
or	b or e
ur	p oor

Syllable Consonants

el	bott le
en	butt on
rr	butt er

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For more DECtalk speech information see the following web site:

http://www.forcecomputers.com/binary/images/dectalk/dtdocuments/dectalk_ref_

English Consonant Phonemes

Phoneme Symbol	Example	Phoneme Symbol	Example
Consonants			
b	b in	p	p in
ch	ch in	r	r ed
d	d ebt	s	s it
dh	th is	sh	sh in
f	f in	t	t est
g	g ive	th	th in
hx	h ead	v	v est
jh	g in	w	w est
k	c at	z	z oo
l	l et		
m	m et		
n	n et		
nx	si ng		
dx	ri d er, wri t er		
lx	be ll		
rx	o r ation		
tx	La t in		

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For more DECtalk speech information see the following web site:

http://www.forcecomputers.com/binary/images/dectalk/dtdocuments/dectalk_ref_

Pitch Notes and Pitch Values

PITCH NOTES AND PITCH VALUES

BASS

A musical staff in bass clef showing seven notes: C, C#, D, D#, E, F, and F#. Each note is a half note. Below each note is a number indicating the finger to use: 1 for C, 2 for C#, 3 for D, 4 for D#, 5 for E, 6 for F, and 7 for F#.

Note	Fingering
C	1
C#	2
D	3
D#	4
E	5
F	6
F#	7

A musical staff in bass clef showing seven notes: G, G#, A, A#, B, C3, and C#. Each note is a half note. Below each note is a number indicating the finger to use: 8 for G, 9 for G#, 10 for A, 11 for A#, 12 for B, 13 for C3, and 14 for C#.

Note	Fingering
G	8
G#	9
A	10
A#	11
B	12
C3	13
C#	14

A musical staff in bass clef showing seven notes: D, D#, E, F, F#, G, and G#. Each note is a half note. Below each note is a number indicating the finger to use: 15 for D, 16 for D#, 17 for E, 18 for F, 19 for F#, 20 for G, and 21 for G#.

Note	Fingering
D	15
D#	16
E	17
F	18
F#	19
G	20
G#	21

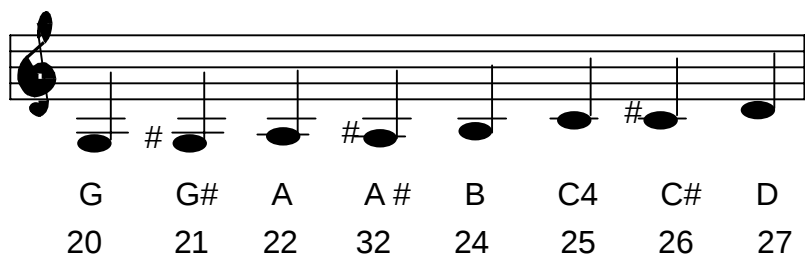
TREBLE

A musical staff in treble clef showing seven notes: G, G#, A, A#, B, C4, and C#. Each note is a half note. Below each note is a number indicating the finger to use: 20 for G, 21 for G#, 22 for A, 32 for A#, 24 for B, 25 for C4, 26 for C#, and 27 for D.

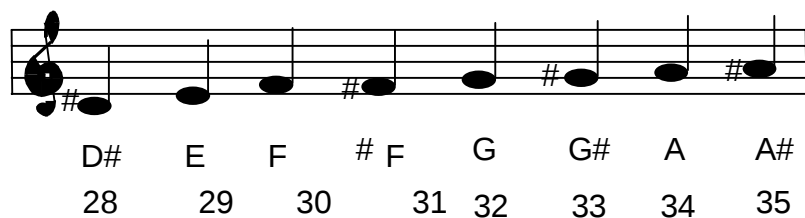
Note	Fingering
G	20
G#	21
A	22
A#	32
B	24
C4	25
C#	26
D	27

➡ If you select a number for a note and the note doesn't sound right, try the next higher or the next lower number.

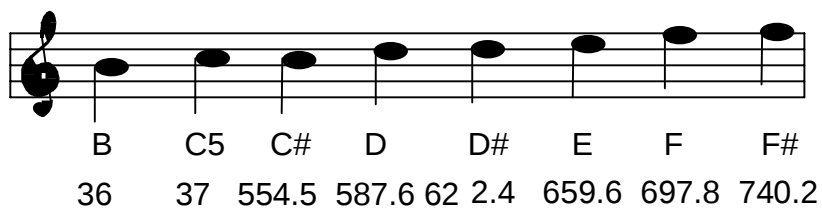
PITCH NOTES AND VALUES (cont'd)



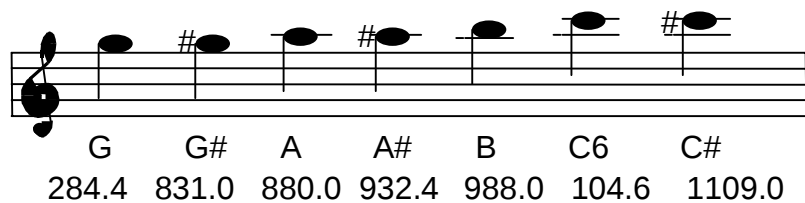
Note	Frequency (Hz)
G	20
G#	21
A	22
A#	32
B	24
C4	25
C#	26
D	27



Note	Frequency (Hz)
D#	28
E	29
F	30
#F	31
G	32
G#	33
A	34
A#	35



Note	Frequency (Hz)
B	36
C5	37
C#	554.5
D	587.6
D#	622.4
E	659.6
F	697.8
F#	740.2



Note	Frequency (Hz)
G	284.4
G#	831.0
A	880.0
A#	932.4
B	988.0
C6	104.6
C#	1109.0

➡ If you select a number for a note and the note doesn't sound right, try the next higher or the next lower number.

PITCH Value Code

PITCH NOTE	PITCH VALUE	OCTAVE RANGE
C4	25	C4 = Middle C
B	24	ONE
A#	23	
A	22	
G#	21	OCTAVE
G	20	
F#	19	
F	18	BELOW
E	17	
D#	16	
D	15	MIDDLE C
C#	14	
C3	13	
B	12	TWO
A#	11	
A	10	
G#	9	OCTAVES
G	8	
F#	7	
F	6	BELOW
E	5	
D#	4	
D	3	MIDDLE C
C#	2	
C2	1	

PITCH Value Code (cont'd)

PITCH NOTE	PITCH VALUE	OCTAVE RANGE
C4	25	C4 = Middle
C#	26	
D	27	
D#	28	ONE
E	29	
F	30	
F#	31	OCTAVE
G	32	
G#	33	
A	34	ABOVE
A#	35	
B	36	
C5	37	MIDDLE C
C#	555.4*	
D	587.6	TWO
D#	622.4	
E	659.6	
F	697.8	OCTAVES
F#	740.2	
G	784.4	
G#	831.0	ABOVE
A	880.0	
A#	932.4	
B	988.0	MIDDLE C
C6	1046.8	

* For two octaves **above** middle C, you must enter PITCH values in Herz. This range is quite high for DECtalk speech voices. If you don't like the way a song sounds in this range, try entering the same notes with PITCH values that correspond to one octave **lower**.

TIME Values of Notes

NOTE TIME VALUE CHART

1/16 note 1/8 note 1/4 note 1/2 note dotted 1/2 note whole note

1/8 note triplet (= 1/4 note) 1/4 note triplet (= 1/2 note) | pair of 1/8 notes pair of 1/16 notes

1/8 rest 1/4 rest half rest Whole

(each note above gets part of the time value)

Tempo		Largo	Larghetto	Adagio	Adagietto	Andante
Metronome		40-50	50-60	60-70	70-80	80-92
Notes	Rests					
		7200 - 9000	6000 - 7200	5140 - 6000	4500 - 5140	3910 - 4500
		4800 - 6000	4000 - 4800	3430 - 4000	3000 - 3430	2610 - 3000
		3600 - 4500	3000 - 3600	2570 - 3000	2250 - 2570	1960 - 2250
		2400 - 3000	2000 - 2400	1715 - 2000	1500 - 1715	1300 - 1500
		1800 - 2250	1500 - 1800	1285 - 1500	1125 - 1285	980 - 1125
		1200 - 1500	1000 - 1200	855 - 1000	750 - 855	650 - 750
		600 - 1125	750 - 900	640 - 750	560 - 640	490 - 560
		600 - 750	500 - 600	430 - 500	375 - 430	325 - 375
		450 - 560	375 - 450	320 - 375	280 - 320	245 - 280
		300 - 375	250 - 300	215 - 250	190 - 215	165 - 190

APPENDIX E: PROGRAM A SONG USING DECTalk

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Tempo		Andantino	Moderato	Allegro	Allegretto	Presto	Prestissimo
Metronome		92-108	108-120	120-144	144-168	168-200	200+
Notes	Rests						
		3330 - 3910	3000 - 3330	2500 - 3000	2140 - 2500	1800 - 2140	Less than 1800
		2220 - 2610	2000 - 2220	1670 - 2000	1430 - 1670	1200 - 1430	Less than 1200
		1670 - 1960	1500 - 1670	1250 - 1500	1070 - 1250	900 - 1070	Less than 900
		1110 - 1300	1000 - 1110	835 - 1000	715 - 835	600 - 715	Less than 600
		835 - 980	750 - 835	625 - 750	535 - 625	450 - 535	Less than 450
		555 - 650	500 - 555	415 - 500	360 - 415	300 - 360	Less than 300
		415 - 490	375 - 415	310 - 375	270 - 310	225 - 270	Less than 225
		280 - 325	250 - 280	210 - 250	180 - 210	150 - 180	Less than 150
		210 - 245	190 - 210	155 - 190	135 - 155	110 - 135	Less than 110
		140 - 165	125 - 140	105 - 125	90 - 105	75 - 90	Less than 75

APPENDIX E: PROGRAM A SONG USING DECTalk

Pathfinder Manual: Power Tools

Tempo Chart

Tempos go from slowest (Largo) to fastest (Prestissimo). Metronome values represent the number of beats in a minute, so the smaller the metronome setting, the longer you hold a note.

This chart is based on a time signature with a 4 as the lower number in the time signature, and a quarter note  gets one beat - 4/4, for example. If the time signature for your music has an 8 for the lower number in the time signature - 6/8, for example - an eighth note  gets one beat, so you would double the numbers in this chart. If the time signature for your music has a 2 for the lower number in the time signature - 2/2, for example - a half note  gets one beat, so you would cut the numbers in this chart in half.

Remember that the numbers in the chart are just guidelines. It is not necessary, or even desirable, to be precise. Flexibility and creativity enhance the music.

PITCH NOTES, PITCH NUMBERS, PITCH VALUES and VOCAL RANGES

This chart matches Pitch Numbers with the various notes, pitches, values, and vocal ranges you may work with when you program music.

Pitch Number	Note	Pitch	Vocal Ranges
1	C2	65	
2	C#	69	
3	D	73	
4	D#	77	
5	E	82	Bass
6	F	87	Bass
7	F#	92	Bass
8	G	98	Bass/Baritone
9	G#	103	Baritone
10	A	110	Baritone
11	A#	116	Baritone
12	B	123	Baritone
13	C3	130	Baritone/Tenor
14	C#	138	Baritone/Tenor
15	D	146	Baritone/Tenor
16	D#	155	Tenor
17	E	164	Tenor
18	F	174	Alto
19	F#	185	Alto
20	G	196	Alto
21	G#	207	Alto
22	A	220	
23	A#	233	
24	B	247	Soprano
25	C4	261	Soprano
26	C#	277	Soprano
27	D	293	Soprano
28	D#	311	Soprano
29	E	329	Soprano
30	F	348	Soprano
31	F#	370	
32	G	392	
33	G#	415	
34	A	440	
35	A#	466	
36	B	494	
37	C5	523	

Use the Guide Below to Decide on a Singing Voice when Programming a Song

The chart below may help you to select a voice to use for the song you want to sing.

BASS	Harry
BARITONE	Rita, Dennis, Paul
TENOR	Frank
ALTO	Wendy, Betty
SOPRANO	Ursula, Kit

Appendix F: Helpful DECtalk Speech Tips

Sometimes a word has two different pronunciations. For instance, the word "record" can be pronounced as it is in this sentence, "We kept a REcord of how many people attended the museum opening." The word can also be pronounced as it is in this sentence, "Our speech teacher let us reCORD our voices on a tape recorder."

The way a word is most often spoken is the way your device will pronounce the word. In this case, if you type "record" it is pronounced "RECORD." If you want the alternate pronunciation for the word, activate the **CTRL** key and then the **SPACE** key. Type the word you want and add a space after it.

If you store a word using CTRL SPACE, every time you retrieve that word your device will speak the alternate pronunciation of the word.

➡ We recommend that you **do not** store alternate pronunciations in the Dictionary, since they are the less frequently used pronunciations of words.

The next few pages contain a list of words that have alternate pronunciations which DECtalk speech already knows. There is also a list of all the abbreviations that you can use which DECtalk speech knows how to pronounce.

The last part of this appendix explains how your device and the DECtalk speech board handle numbers.

Words with Alternate Pronunciations

abstract	defect	perfect	segment
abuse	deliberate	permit	separate
addict	desert	pervert	subject
advocate	digest	polish	sublet
affix	discharge	predicate	subordinate
alternate	dove	predominate	suspect
animate	duplicate	present	syndicate
annex	elaborate	proceed	suspect
appropriate	estimate	produce	tear
associate	excuse	progress	torment
attribute	exploit	project	transform
august	export	protest	transport
bass	extract	read	upset
close	implant	rebel	use
combat	import	recall	wind
combine	imprint	recap	wound
compact	incense	recess	
compound	incline	record	
compress	increase	recount	
conduct	insert	refill	
content	insult	refresh	
conflict	interchange	refund	
console	intimate	refuse	
construct	invalid	reject	
contest	lead	relapse	
contract	live	relay	
contrast	miscount	remake	
converse	misuse	rerun	
convert	moderate	research	
convict	object	retake	
coordinate	overrun	rewrite	

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Abbreviations Recognized by DECtalk Speech

Abbreviation	Word
all-in-1	All in one
all-in-one	All in one
Apr.	April
Assoc.	Associates
Aug.	August
Av.	Avenue
Ave.	Avenue
bldg.	Building
Blvd.	Boulevard
CH.	Chapter
Ch.	Chapter
cm.	centimeters
cms.	centimeters
Co.	Company
COD	"see-oh-dee"
cont.	continued
Corp.	corporation
Ctr.	center
CTRL	control
cu.	cubic
dec	DEC (as in Digital)
Dec.	December
Dist.	District
deg.	degrees
Dept.	Department
doz.	dozen
Dr.	Doctor (when followed by a name, i.e., Doctor West)
Dr.	Drive (when preceded by a name , i.e, West Drive)
e.g.	"ee""gee" (not 'for example')
ESC	escape
esp.	especially

Abbreviation	Word
est.	established ("eee ess tee")
etc.	et cetera
ext.	extension
Feb.	February
fig.	figure
Flt.	flight
FOB	freight on board
fn.	footnote
Fr.	Father
Fri.	Friday
ft.	feet (not 'foot')
Ft.	Fort (not 'Foot')
Gen.	General
gm.	grams
Gov.	Governor
hrs.	hours
i.e.	"eye ee" (not 'that is')
Inc.	Incorporated
Intl.	international
Jan.	January
Jr.	Junior
Jul.	July
Jun.	June
kg.	kilograms
kgs.	kilograms
km.	kilometers
lb.	pounds
lbs.	pounds
Ltd.	Limited
Mar.	March
mg.	milligrams
mgs.	milligrams
misc.	miscellaneous
ml.	milliliters
Mon.	Monday
Mr.	mister
Mrs.	missus

Abbreviation	Word
ms.	miz
msde.	merchandise
msec.	milliseconds
msecs.	milliseconds
mss.	manuscripts
Mt.	Mount
Nov.	November
Oct.	October
oz.	ounces
ozs.	ounces
Pl.	Plural
pp.	pages
ppd.	post paid
Pres.	President
Rd.	Road
recd.	received
Rep.	Representative
Rev.	Reverend
rsts	"ris-tis"
rsts/e	"ris-tis-ee"
Rte.	route
Sat.	Saturday
Sen.	Senator
Sep.	September
Sept.	September
sq.	square
Sr.	Senior
St.	Saint (when followed by a name)
St.	Street (when preceded by a name)
Sun.	Sunday
Thu.	Thursday
Thurs.	Thursday
Tue.	Tuesday
Tues.	Tuesday
Univ.	University
USA	"you-ess-aye"

Abbreviation	Word
Vol.	Volume
vs.	versus
yds.	yards
Exceptions*	
nt.wt.	net weight
op.cit.	op cit
p.p.d.	post paid
pat.pend.	patent pending.
Wednesday	
* These abbreviations will not work at this time (12/90)	

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For more DECtalk speech information see the following web site:
http://www.forcecomputers.com/binary/images/dectalk/dtdocuments/dectalk_ref_

Producing a Long "A" in the Middle of a Sentence:

Usually an "A" by itself in the middle of a sentence is pronounced as "uh," but there may be times when you want it to be pronounced as a long "A" ("ayee"). To achieve this, type in the capital letter "A" and then add a punctuation mark immediately following it:

A, A? A! (A A;

This will change the inflection of the sentence somewhat, but it will produce a long "A".

How DECtalk Speech Handles Numbers

1998 is a year. 1,998 is a big number. 1998 (no comma) is spoken as "nineteen-ninety-eight." 1,998 (with a comma) is spoken as "one-thousand-nine-hundred-and-ninety-eight." Any four-digit number is spoken as a year unless you add a comma after the first digit. Commas are not necessary if a number contains more than four digits (e.g., 10,375). Numbers containing up to 9 digits are pronounced correctly.

Examples of Entering Math Problems:

When you enter math problems, they must be spaced correctly for DECtalk speech and your device to pronounce them correctly.

For example: $5 - 3 = 2$

Enter this problem in the following manner:

5 (space) -3(no space between "-" and "3" but add a space after "3")
=(space) 2.

The problem looks like this when it is entered:

5_-3_=_2 ("_" indicates a space)

Examples of Spacing for Other Math Problems:

2*8_=_16; 1*2_=_2 ("*" indicates "times" but your device speaks "asterisk".)

2_+8_=_10

1 1/2 must be entered as 1&_1/2

(1/2 can be entered by activating "1" "slash" "2".)

At this time DECtalk speech and your device cannot speak division problems correctly.

Examples of Entering Dates:

DECtalk speech does not recognize dates if you enter them the way they are normally written, e.g.,

6-8-1990 or 11/20/95

Enter dates in the following manner for them to be spoken correctly:

6-Aug-1990 or 20-Nov-1995

These dates are spoken as "August 6, 1990" and "November 20, 1995".

Example of Entering a Phone Number:

Phone numbers must be entered by placing spaces and commas as shown below:

1_1_6,_2_6_2,_1_9_8_4 or 2_6_2,_1_9_3_3

For more DECtalk speech information see the following web site:

http://www.forcecomputers.com/binary/images/dectalk/dtdocuments/dectalk_ref_

Appendix G: About Dependent Icons

➡ If you are using one of the Unity overlays, dependent icons are already programmed into the vocabulary. If you are creating your own overlay from scratch, you will want to create dependent icons to make programming the overlay and the retrieval of words from the overlay easier.

Let's say you have an icon that represents NOUN and an icon that represents NOUN PL (plural nouns). Let's also say that you have stored your most commonly used nouns under icon sequences that end with the icon: NOUN. For example, HOUSE+NOUN = home. If you want the word "homes" on your overlay, traditionally you would have to store it under another sequence that ended with the icon: NOUN PL. For example, HOUSE+NOUN PL = homes. This means you would have to store under icon sequences, all the nouns you want for your vocabulary. Then you would have to store all those same nouns again as plurals!

With Pathfinder you can make NOUN PL a **dependent** icon. This means that an icon sequence ending with NOUN PL will be dependent on an identical sequence which ends in NOUN. For example, if you store NOUN PL as a dependent icon and then activate the sequence, HOUSE+NOUN PL, the Pathfinder will look to see what is stored under HOUSE+NOUN. It will see "home" and automatically add an "s" to it. You would see "homes" on your display. Dependent icons save you hours of storing. You can do the same thing with verbs by making icons such as VERB+ed and VERB+ing dependent on sequences that contain the icon: VERB. You store all of the regular verbs you want to use and the Pathfinder will put the correct ending on them.

The next page explains how to create dependent icons.

Creating Dependent Icons

➡ This example assumes that you have added a space after any words that you have stored in your vocabulary.

In this example we are going to assign the icons NOUN and NOUN PL to separate keys. We are also going to make NOUN PL dependent on the NOUN icon. Then we will type in instructions for the Pathfinder to follow whenever the NOUN PL key is activated. These instructions will tell the Pathfinder to find the word stored under a sequence that ends in NOUN, to delete the space after the word that is stored there and to add an "s" and a space to the word.

Assign NOUN to a Key:

1. Go to the Toolbox and open the ASSIGN KEY MENU.
2. Select the key you want to assign NOUN to.
3. Activate the **Minspeak Assignment** option (#1).
4. Make sure the **Assign Key As:** box is set to **ICON**.
5. Activate **Rename Icon**.
6. Type in the name: NOUN.
7. Activate OK twice.

Assign NOUN PL to a Key:

8. Activate the **Select Next Key to Define** option (#6).
9. Select the key you want to assign NOUN PL to.
10. Activate the **Minspeak Assignment** option (#1).
11. Make sure the **Assign Key As:** box is set to **ICON**.
12. Activate **Rename Icon**.
13. Type in the name: NOUN PL.

Make NOUN PL Dependent on NOUN and Type in Directions:

14. Activate OK.
15. Activate the **Icon Type** option (#5) twice.
16. You see a box that asks if you want to make the icon NOUN PL a dependent icon. Answer YES.

17. Select the icon you want NOUN PL to depend on. In this case select the key where you stored NOUN.
18. Now you must tell the Pathfinder what you want it to do when it sees NOUN PL.
 1. Activate INSERT TOOL.
 2. Type "d" and select <DELETE CHARACTER> or activate MORE ITEMS until you see <DELETE CHARACTER> and then select it.
Type the letter "s" and add a space.
19. Activate OK until you exit the ASSIGN KEY menu.

NOUN PL is now a dependent icon. It will add an "s" to any word stored under a sequence that ends with the NOUN icon.

Some Notes and Exceptions for Dependent Icons

You can create dependent icons for many different circumstances. You could have a dependent icon that automatically adds "the" before any noun (e.g., the HOME) or one that adds "es" to nouns (e.g., HOUSES).

However, some irregular nouns and verbs will have to be programmed separately. For example, suppose you have the noun WOMAN stored under the sequence WOMAN NOUN. Since you have made NOUN PL a dependent icon, if you activate WOMAN and NOUN PL, the Pathfinder will display "Womans" instead of Women. You would have a hard time writing a macro to make a dependent icon work with all irregular nouns or verbs because they do not follow a standard format. Because of this, you will have to store irregular nouns and verbs under separate sequences.

For example, using the regular storage process, you can store the noun "women" under WOMAN+NOUN PL. In this case NOUN PL is not used as a dependent icon. It is simply part of an icon sequence for the word, "women".

To Return a Dependent Icon to a Normal Icon

If, for some reason, you decide that you no longer want an icon to be dependent, you can return it to a normal icon.

1. Go to the Toolbox and open the ASSIGN KEY menu.
2. Select the key that you want to return to normal.
3. Activate the **Minspeak Assignment** option (#1)
4. Make sure the **Assign Key As** option is set to **ICON**.
5. Activate the **Icon Type** option (#5) until you see **NORMAL**.
6. Activate **OK** twice to exit the menu.

Your dependent icon is no longer dependent, and will now act as a regular icon.

Appendix H: External Speaker and Earphone

You can connect an external speaker and earphone to the Pathfinder. (External earphones should be used if you are also using Auditory Prompts.) Their connectors must fit into the following jack sizes on the Pathfinder's top panel:

External Speaker Jack—3.5 millimeter mono; use an 8 ohm speaker

Earphone Jack—2.5 millimeter; mono



Warning!

Do not plug an earphone into the **EXTERNAL SPEAKER** jack.
This could cause damage to your hearing.

Appendix I: Creating Macros That Contain Menu Options

Many menus have options that are not listed in the All Tools List as insertable tools. For example, you cannot insert the tool "1-Switch" into a macro. But you can create a macro that includes part of the SELECTION TECHNIQUE MENU that allows you to change your selection technique to 1-Switch Scanning.

Let's say that you normally use the keyboard for your selection technique, but when you get tired you like to change to 1-switch scanning. You might like to create a macro that allows you to change from keyboard to 1-switch scanning. You can store this macro on your overlay and activate it whenever you want to switch selection techniques.

In order to create a macro that includes part of a menu you have to do some homework first.

- You need to know and write down (or remember) the keys that you have to activate in the menu.
- For our 'Keyboard to Scanning' example, you should set up the Keyboard and 1-Switch selection techniques **before** you begin to create the macro so that all the options are set the way you want them when you use a switch.

Homework:

Let's find out what key activations you have to make in the SELECTION TECHNIQUE MENU to change from Keyboard to 1-Switch Scanning.

Go to the Toolbox and open the SELECTION TECHNIQUE MENU.

You see your current selection technique.

Activate the **Selection Technique** option until you see **1 SWITCH**.

Activate **OK**.

To Return to the Keyboard

1. Activate TOOLBOX.
2. Activate SELECTION TECHNIQUE MENU
3. Activate the Selection Technique option four times.
4. Activate OK.

To Create the "Keyboard to Scanning" Macro:

1. In the Toolbox, activate STORE CORE.
2. Select the icon sequence you want to store the macro under, for example, you might use the pointing finger (REMEMBER) and the medical icon (MEDICAL).
3. Activate **OK**.
4. Activate **Spell Text for Message** (we will add a message to be spoken at the end of the macro.)
5. Activate INSERT TOOL. Activate "S" on the keyboard.
6. Activate the SELECTION TECHNIQUE menu
7. Type #1.
8. Activate INSERT TOOL
9. Activate OK.
12. Now type a message if you want one, perhaps: "Please plug in my switch."
13. Activate **OK** when you have completed your message. Activate OK again.
14. Close the Toolbox. Go to Minspeak mode.
15. Activate the icon sequence you chose (REMEMBER MEDICAL).
16. The Pathfinder should speak, "Please plug in my switch." Activate your switch once. If you are using Row/Column scanning, the top row of the display screen should be highlighted in red, ready for you to scan.

➡ If you want to **return** to using the keyboard (that is, if you want toggle between two selection techniques) you must create and store a second macro that takes you back to the first technique.

➡ Besides storing these macros under icon sequences, you can store them in Activity keys or assign them to Core keys.

Other Macros That Might Be Used:

You could modify other selection technique settings for different times of day without going to the Toolbox.

( **Remember**, you can also do this by saving your settings and storing them on your overlay, see Appendix K beginning on page 268.)

You could turn scan beeps on and off using menu selection #3 from the FEEDBACK menu.

Appendix J: Computer Commands for IBM Keyboard and Keypad Keys

➡ Create the <esc> command that you see below by activating **CTRL [** (Control left bracket) in your Toolbox. This sequence (CTRL[) is shown as <esc> in all commands below.

Keyboard Keys

	<esc>f5.
	<esc>f6.
<esc>backspace.	<esc>f7.
<esc>capslock.	<esc>f8.
<esc>delete.	<esc>f9.
<esc>down.	<esc>f10.
<esc>end.	<esc>f11.
<esc>enter.	<esc>f12.
<esc>esc.	<esc>home.
<esc>f1.	<esc>insert.
<esc>f2.	<esc>left.
<esc>f3.	<esc>pagedown.
<esc>f4.	<esc>pageup.

<esc>pause.

<esc>print.

<esc>right.

<esc>scroll.

<esc>tab.

<esc>up.

<esc>,hold,alt.

<esc>,hold,control.

<esc>,hold,shift.

Specify a right or left key by placing an "l" or "r" in front of the key name.

For example, to hold the left shift key: <esc>,hold,lshift.

Keypad Keys

	<esc>kpdown.
<esc>kp0.	<esc>kpend.
<esc>kp1.	<esc>kpenter.
<esc>kp2.	<esc>kphome.
<esc>kp3.	<esc>kpins.
<esc>kp4.	<esc>kpleft.
<esc>kp5.	<esc>kpminus.
<esc>kp7.	<esc>kppgdn.
<esc>kp8.	<esc>kpplus.
<esc>kp9.	<esc>kpright.
<esc>kpdel.	
<esc>kpslash.	
<esc>kpstar.	
<esc>kpup.	
<esc>numlock.	
<esc>sysreq.	

Appendix J: Apple/Macintosh Computer Keyboard and Keypad Commands

➡ Create the <esc> command that you see below by activating **CTRL [** (Control left bracket) in your Toolbox. This sequence (CTRL[) is shown as <esc> in all commands below.

Keyboard Keys

<esc>backspace.	<esc>f2.
<esc>capslock.	<esc>f3.
<esc>delete.	<esc>f4.
<esc>end.	<esc>f5.
<esc>esc.	<esc>f6.
<esc>f1.	<esc>f7.
<esc>f10.	<esc>f8.
<esc>f11.	<esc>f9.
<esc>f12.	<esc>help.
<esc>f13.	<esc>home.
<esc>f14.	<esc>insert.
<esc>f15.	<esc>left.

<esc>pagedown.

<esc>tab.

<esc>pageup.

<esc>up.

<esc>pause.

<esc>,hold,command.

<esc>print.

<esc>,hold,control.

<esc>return.

<esc>,hold,option.

<esc>right.

<esc>,hold,shift.

<esc>scroll.

<esc>hold,alt.

Specify a right or left key by placing an "l" or "r" in front of the key name.

For example, to hold the left shift key: <esc>,hold,lshift.

Keypad Keys

<esc>kp0.

<esc>kp1.

<esc>kp2.

<esc>kp3.

<esc>kp4.

<esc>kp5.

<esc>kp6.

<esc>kp7.

<esc>kp8.

<esc>kp9.

<esc>clear.

<esc>kpdel.

<esc>kpdown.

<esc>kpend.

<esc>kpenter.

<esc>kpequal.

<esc>kphome.

<esc>kpins.

<esc>kpleft.

<esc>kpminus.

<esc>kppd.

<esc>kppgdn.

<esc>kppgup.

<esc>kpplus.

<esc>kpright.

<esc>kpslash.

<esc>kpstar.

<esc>kpup.

<esc>numlock.

<esc>reset.

Mouse Button Commands

Command	Action
<esc>,click.	Clicks mouse button on Mac and left button on PC mouse
<esc>,click,right.	Clicks right button on 2-button mouse
<esc>,click,left.	Clicks left button on 2-button mouse
<esc>,dblclick.	Double clicks mouse button on Mac and left button on PC mouse
<esc>,dblclick,right.	Double clicks right button on 2-button mouse
<esc>,dblclick,left.	Double clicks left button on a 3-button mouse
<esc>esc,moulock.	Locks mouse button on Mac and left button on PC mouse
<esc>,moulock,right.	Locks right button on 2-button mouse
<esc>,moulock,left.	Locks left button on a 2-button mouse
<esc>,mourel.	Releases all mouse buttons that were locked

<esc>,mouse, right.	Releases right button on a 2-button mouse
<esc>,mouse, left.	Releases left button on a 2-button mouse

Mouse Cursor Movement Commands

These commands move the mouse cursor a specific distance on the screen.

The first number is the horizontal movement.

Horizontal plus (+) numbers move the mouse to the right.

Horizontal minus (-) numbers move the mouse to the left

The second number is the vertical movement.

Vertical plus (+) numbers move the mouse downward.

Vertical minus (-) numbers move the mouse upward.

The mouse moves **diagonally** when both horizontal and vertical numbers are sent.

Command	Mouse Cursor Movement
<esc>,move,+5,0.	Moves 5 pixels to the right
<esc>,move,-5,0.	Moves 5 pixels to the left
<esc>,move,0,+5.	Moves 5 pixels down
<esc>,move,0,-5.	Moves 5 pixels up
<esc>,move,+10,+10.	Moves 10 pixels diagonally down and to the right
<esc>,move,-10,+10.	Moves 10 pixels diagonally down and to the left
<esc>,move,-10,-10.	Moves 10 pixels diagonally up and to the left
<esc>,move,+10,-10.	Moves 10 pixels diagonally up and to the right
<esc>,moureset.	Resets the mouse and sends the cursor to upper left corner of the screen.

GOTO Commands

➡ Set the Mouse Speed in your computer to "tablet" or "slow".

GOTO commands send the mouse to an **assigned location** on the screen.

GOTO commands always start from the **upper left corner** of your screen.

The assigned location is given with horizontal and vertical number values, like those in the mouse cursor commands.

Since a GOTO command always starts in the upper left corner of the screen, the command always uses positive numbers.

Because GOTO commands always start in the upper left corner, you need to use the **<esc>,moureset.** command as the first mouse command. This puts the cursor in the upper left corner.

GOTO numbers will vary with computers. You need to experiment with your computer and mouse to determine where a specific set of numbers, such as those in the example below, will send the mouse.

A GOTO command will not work correctly if you send the mouse past the edge of the screen.

Command	Mouse Cursor Movement
<esc>,moureset.	Resets mouse and sends it to upper left corner of screen
<esc>,goto,+100,+150.	Mouse moves to a specific location on the screen

Appendix K: Save Your Setup Settings

Summary:

The insertable tool, SETTINGS MENU, allows you to save from 1-3 different groups of settings.

You may want to set up more than one selection technique and its options so that you can use different techniques during different times of the day. To do this, you need to assign the SETTINGS MENU key to your overlay or to store it under an icon sequence. The Pathfinder will save anything you have set in the SELECTION TECHNIQUE menu, AUDITORY PROMPT menu, FEEDBACK menu, SPEECH menu and OUTPUT menu.

To store the SAVE SETTINGS MENU under an icon sequence:

1. Activate STORE CORE.
2. Select the sequence you want to use.
3. Select **Synthesized** and **Spell Text for Message**.
4. Activate INSERT TOOL.
5. Activate "s" and **More Items** until you see SETTINGS MENU. Activate it.
6. Activate OK.

To Save your settings into the Menu

1. Make sure you are currently using the first set of settings you want to save.
2. Go to Minspeak and activate the sequence you saved the SETTINGS MENU under.
3. Save your current settings to #1 by activating **Save #1 Settings**.
4. Now set up your second technique and save those settings to **Save #2 Settings**.

5. Activate OK to until you exit the menu.

When you are using one group of settings and want to change to another, activate the SETTINGS MENU and then activate the "Use #2 Settings option, or whichever option you have saved settings to.

Once you have saved the settings you want in the SETTINGS MENU, you can store the tools, SETTINGS 1, SETTINGS 2 and SETTINGS 3 under icon sequences on your overlay. Then you can delete the SETTINGS menu if you want. To go to different settings, you just activate the sequence you stored the settings under.

➡ You can assign all these tools to keys on your overlay if you have any keys available.

Store the SETTINGS 1, SETTINGS 2 and SETTINGS 3 tools:

Repeat the Menu storing steps on the previous page to store the SETTINGS 1, SETTINGS 2 and SETTINGS 3 tools under sequences. Replace SETTINGS MENU in step #5 with SETTINGS 1,2 or 3.

To Change Your Settings

1. Activate the sequence where you stored the SETTINGS 1 tool.
2. You see a box that says: "Are you sure you want to replace your current settings with Settings #1?" Answer YES to store the settings.

Now when you are tired of using your headpointer and want to start using a switch or the keyboard, you can activate the sequence where you stored your switch or keyboard settings and the Pathfinder will automatically switch you to the new settings. You can delete the SETTINGS MENU if you are not going to set new settings any time soon.

Appendix L: Troubleshooting



Warning!

DO NOT open the Pathfinder case!

If you encounter a problem with your unit,
call the PRC Service Department at 1-800-262-1990.
If you are outside the U.S., call your local distributor.

Do not attempt to open the case!

Battery Charger Warning:



Warning!

Use **only the battery charger that came with your Pathfinder**. Other chargers may damage the batteries or the Pathfinder. This also applies to your headpointer battery charger.

The Battery Status display window on the Pathfinder screen will tell you the battery status at any given time. You must turn the display window **ON** in the FEEDBACK menu, in order to see the status of the batteries.

Remember! You cannot STORE when the batteries are low.



If you plan to store the Pathfinder for a month or more without using it, unplug the batteries from the device:

Charge the batteries to **Full**. Then open the Battery Door and pull on the small ribbon that is attached to the battery pack until the battery pack come loose and can be removed. Replace the pack and fully charge the batteries when you are ready to use the Pathfinder again.

➡ **If the battery charger is plugged in and the battery LED is solid red:**

This indicates that the battery pack is not communicating with the Pathfinder. Allow one hour of charging. If the battery charger LED continues to remain red after the hour of charging, call the PRC Service Department.

➡ **If the batteries in your Pathfinder need to be replaced,** dispose of the old batteries properly. **Follow the regulations of your community, state or country for the disposal of batteries.**

➡ **Important Note!**

When you turn on the Pathfinder On you must wait a few minutes for the software to open up. The computer screen will remain dark while the software loads. **Do not press the On/Off button again.** Doing so will lock up your device.

If you have locked up the Pathfinder:

Try pressing and holding the I/O and TOOLS keys at the same time.

If the above suggestions does not help:

Press all four keys on the top left side of the Pathfinder case **at the same time**. This re-boots the Pathfinder. All unsaved work will be lost.

➡ **The Pathfinder does not seem to be speaking:**

Go to the toolbox and make sure the speech is On.

Go to the **FEEDBACK MENU** in the Toolbox and set the "Volume" option to it highest setting. Check to see if **Speak when Spelling** is On or Off.

If it is On, check to see if it is set to Words or Letters. If it is set to Words, the Pathfinder will not speak until a whole word is spelled.

➡ **If you are having trouble storing or retrieving messages:**

You may need to exit a theme before you can use the Pathfinder the way you want to. Check the status bar at the bottom of the Pathfinder's display area. If you are in a theme, the theme icon(s) will be displayed followed by a colon.

➡ **If you are using a T-TAM and some characters are not appearing on your computer screen:**

If you send chunks of text over 60 characters in length through the T-TAM, it will probably drop some of those characters. Turn Character Pacing on in the OUTPUT menu or send smaller chunks of text.

➡ **You get double-hits from keys or a 'bouncing' effect when you activate keys, or when you move across the keyboard to activate a key:**

The **Acceptance** and/or **Release** times are too short. Increase these times.

Open the SELECTION TECHNIQUE menu and activate your selection technique option. If the Pathfinder keys are bouncing as you move across the keyboard to your target key, **increase** the **Acceptance Time** and then try activating the keys. If you still experience bounce, increase the **Acceptance Time** a little more.

If you are getting double-activations, **increase** the **Release Time** and practice with the keys. If double-activations continue, increase the **Release Time** a little more.

➡ **Your scanning speed is too slow.**

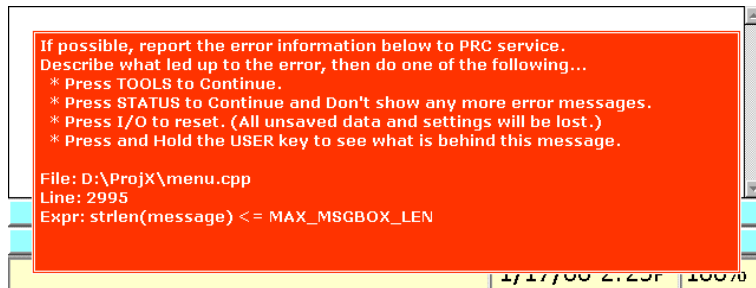
Go to the SELECTION TECHNIQUE menu, select your technique, then set the **Scanning Speed** option to a faster number.

To keep from scanning keys that you don't want to scan, read the pages on **Predictive Selection**, **Modify Predicted Keys** and **Linear Scan**.

➡ About accessing masked messages

If you transfer vocabulary that contains masked messages from a DeltaTalker or Liberator into the Pathfinder, use the **OK** key on the Pathfinder to access the masked messages.

➡ You did something and an Error Box (below) appeared on your display.



If you see this error box on your display, PRC would greatly appreciate it if you would take a few minutes to write down the error code at the bottom of the box (i.e., File; Line; Expr;) and to try to re-construct what you were doing just before this message appeared. Please phone the PRC Service Department and give one of the service representatives the information, or mail the information to PRC. The information can be very helpful to our software engineers as they work to debug the software.

If you need to see the screen you were working on before the box appeared, press and hold the USER key on the front of the Pathfinder. The error box will disappear and you can see the display. When you release the USER key the error box will reappear. We recommend that you do not choose to turn the error message off (the second option in the box). The information it contains can be very helpful if you have to call service or send the Pathfinder in to PRC.

➡ **About High-Efficiency Fluorescent Lights and the Use of Infrared:**

There is a compatibility problem between many infrared controls and high-efficiency fluorescent lights.

If you are using the Pathfinder in a room that has high-efficiency fluorescent lighting, the infrared, including headpointing, computer access, remote control commands, etc., will not work. Turn the lights off and the IR will work fine.

➡ **Never immerse your device in water!**

➡ **Important Note! Do not spray anything directly on the device. This will loosen labels and corrode connectors.** Spray a cloth instead and use the dampened cloth to wipe the device.

➡ **Regular Cleaning of your device:**

Clean the case with a soft damp cloth. Damp means wrung out till almost dry, never dripping. If you purchased a **keyguard**, wash it often in hot, soapy water.

Clean the display with the same kind of product you use for windows. To avoid scratching the display, use a soft cloth and **spray the cleaner directly onto the cloth**, not the display. If you notice a film over the screen after you have cleaned it, try a different cleanser. You can also clean the overlay protector with the window-cleaning product.

Disinfecting:

To disinfect your equipment, mix $\frac{1}{4}$ cup vinegar with 1 cup water. Wipe all equipment with a cloth dampened in this mixture. Allow the equipment to air dry.

What about drooling?

Any drool should be wiped up immediately, especially on the touch screen or around any of the connectors. Use a soft damp cloth to wipe the device.

What about Spills, Rain Showers, Accidental Immersion?

If you spill liquid or any runny substance on your device, if you're caught in a rain shower, or if the device is accidentally dropped in liquid, you must call the PRC Service Department. Tell them what happened. They may assign you a Return number and ask you to send in your device for servicing.

SERVICE DISCLAIMER

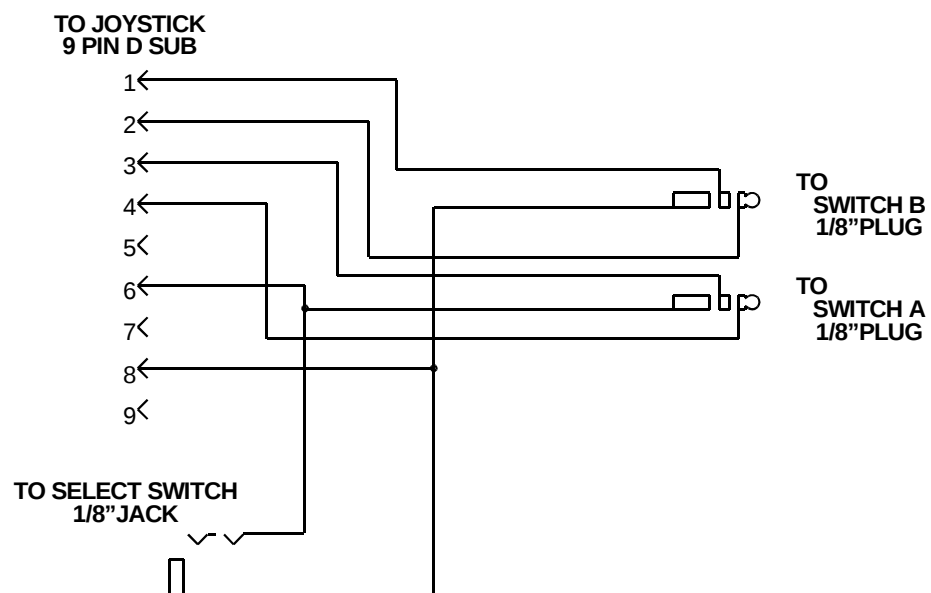
The PRC Service Department is not responsible for lost vocabulary on devices returned for service.

Before you return a device to PRC for servicing, **back up your vocabulary** on a disk, a computer or a USB memory device.

Appendix M: The Joystick Adapter

In order to use a joystick with your device you must have an adapter to plug into your device and your joystick. The schematic below shows you the adapter specifications. You can also call the PRC Rehab Department and ask about the availability of Joystick adapters, 330-262-1990.

JOYSTICK ADAPTER CABLE



Appendix N: RealSpeak™ Speech Tips

You can change the pronunciation of words, alter the rate at which words are spoken in a sentence, add pauses to sentences and tell RealSpeak to spell words out rather than pronounce them. To do these things you must use certain tags that tell RealSpeak what you want it to do. In the following pages you will learn how to use these tags. You will also learn how RealSpeak handles numbers and you will find phoneme charts to use for entering correct pronunciation.

Pronouncing Words Correctly

RealSpeak may not pronounce some words, especially nouns such as names of people or places, correctly. To teach the correct pronunciation of any word, you must enter it phonetically using a specific tag. This tag is shown below.

<pron sym="phonetic string"/>

Using this tag, you can enter words phonetically into the Speech Dictionary or into messages that you are storing.

 **Important Note: Phonemes must always be separated by spaces.**

For example: the phonetic spelling of "bed" is B EH D. The phonetic spelling of "about" is AX B A + UH T. You must add a space between each phoneme.

Phoneme tables and instructions are available for three English language variations: American English (page 278); British English (page 282); and Australian English (page 287).

Note: The following RealSpeak tips and charts are used by permission of Nuance Communications, Inc.

AMERICAN ENGLISH PHONEMES

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
aa	father	1 f aa - dh ax r
ae	cat	k ae t
ah	cut	k ah t
ao	dog	d ao g
aw	foul	f aw l
ax	ago	ax - 1 g ow
ay	bite	b ay t
b	big	b ih g
ch	chin	ch ih n
dh	then	dh eh n
eh	pet	p eh t
er	fur	f er
ey	ate	ey t
f	fork	f ao r k
g	gut	g ah t

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
h	help	h eh l p
ih	fill	f ih l
iy	feel	f iy l
jh	joy	jh oy
k	cut	k ah t
l	lid	l ih d
m	mat	m ae t
n	no	n ow
ng	sing	s ih ng
ow	go	g ow
oy	toy	t oy
p	put	p uh t
r	red	r eh d
s	sit	s ih t
sh	she	sh iy
t	talk	t aa k

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
th	thin	th ih n
uh	book	b uh k
uw	too	t uw
v	vat	v ae t
w	with	w ih dh
y	yard	y aa r d
z	zap	z ae p
zh	pleasure	1 pleh - zh ax r

See the next page for a chart of various symbols (period, comma, punctuation, etc.) that can be used to guide pronunciation as you enter phonetic text.

🔄 A Note about Text and Speech Markers:

If you are storing a message and enter a phonetically spelled word, also enter the correctly spelled word and use the Text and Speech Marker tools (page 68) so your device will speak the word correctly and show the correct word on the display, but will hide the phonetic pronunciation.

Symbol	Meaning	Phonetic Use	Spoken as
- (Hyphen)	Syllable boundary	h eh - 1 l ow !	Hello!
! (Exclamation mark)	Sentence ender	h eh - 1 l ow !	Hello!
&	Word boundary	h eh - 1 l ow & , h aw & ao r & y uw ?	Hello, how are you?
, (Comma)	Sentence ender	h eh - 1 l ow & , h aw & ao r & y uw ?	Hello, how are you?
. (Period)	Sentence ender	h eh - 1 l ow .	Hello.
? (Question mark)	Sentence ender	h eh - 1 l ow ?	Hello?
_ (Underscore)	Silence	h eh - 1 l ow _ h aw & ao r & y uw ?	Hello..... How are you?
1	Primary stress	h eh - 1 l ow	
2	Secondary stress	Ax - 2 f r ih - k ax - n ay - 1 z ey - sh ax n	Africanization

BRITISH ENGLISH PHONEMES

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
i	beat	s1 b i t
ih	bit	s1 b ih t
eh	bed	s1 b eh d
ae	map	s1 m ae p
o	go	s1 g o
q	pot	s1 p q t
aa	car	s1 k aa
ah	but	s1 b ah t
ao	bought	s1 b ao t
uh	book	B uh k
u	boot	s1 b u t
ax	about	ax s1 b a + uh t
er	turn	s1 t er n
i + ax or iyx	here	s1 h i + ax or s1 h iyx
eh + ax or ehx	there	s1 dh eh + ax or s1 dh ehx

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
u + ax or uax	poor	s1 p u + ax or s1 p uax
e + i or ei	bait	s1 b e + i t or s1 b ei t
ao + i or oi	boy	s1 b ao + i or s1 b oi
a + i or ai	buy	s1 b a + i or s1 b ai
a + uh or au	down	s1 d a + uh n or s1 d au n
p	pan	s1 p ae n
t	tan	s1 t ae n
k	can	s1 k ae n
b	boy	s1 b ao + ih
d	day	s1 d e + IH
g	got	s1 g q t
gt	eat	s1 gt i t
f	fine	s1 f a + ih n
th	thin	s1 th ih n

APPENDIX N: REALSPEAK SPEECH TIPS

Pathfinder: Power Tools

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
s	sin	s1 s ih n
sh	shine	s1 sh a + ih n
v	vine	s1 v a n
dh	that	s1 dh ae t
z	zone	s1 z o + uh n
zh	vis ion	s1 v ih zh ax n
h	head	s1 h eh d
j	you	s1 j u
w	wit	s1 w ih t
r	ride	s1 r a + ih d
l	let	s1 l eh t
m	my	s1 m a + ih
n	no	s1 n o + uh
ng	song	s1 s q ng
t + sh	church	s1 t + sh er t + sh
d + zh	jungle	s1 d + zh ah ng g ax l

See the next page for a chart of various symbols (period, comma, punctuation, etc.) that can be used to guide pronunciation as you enter phonetic text.

A Note about Text and Speech Markers:

If you are storing a message and enter a phonetically spelled word, also enter the correctly spelled word and use the Text and Speech Marker tools (page 68) so your device will speak the word correctly and show the correct word on the display, but will hide the phonetic pronunciation.

Symbol	Meaning	Phonetic Use	Spoken as
_! (underscoreexclamation mark)	Sentence ender	h eh s1 l o _!	Hello!
_& (underscoreand)	Word boundary	h eh s1 l o _& _, h au _& aa r _& j u _?	Hello, how are you?
_, (underscorecomma)	Sentence ender	h eh s1 l o _& _, h au & aa r _& j u _?	Hello, how are you?
_. (underscoreperiod)	Sentence ender	h eh s1 l o _.	Hello.
_? (underscorequestion mark)	Sentence ender	h eh s1 l o _?	Hello?
_s (underscore)	Silence	h eh s1 l o _s h au & aa r & j u ?	Hello..... How are you?
S1 or s1	Primary stress	h eh s1 l o	Hello
S2 or s2	Secondary stress	Ax - 2 f r ih - k ax - n ay - 1 z ey - sh ax n	Africanization

AUSTRALIAN ENGLISH PHONEMES

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
i	beat	s1 b i t
ih	bit	s1 b ih t
eh	bed	s1 b eh d
ae	map	s1 m ae p
o	go	s1 g o
q	pot	s1 p q t
aa	car	s1 k aa
ah	but	s1 b ah t
ao	bought	s1 b ao t
uh	book	b uh k
u	boot	s1 b u t
ax	about	ax s1 b a + uh t
ix	roses	S1 r o + uh z ix z
er	turn	s1 t er n
i + ax or iyx	here	s1 h i + ax or s1 h iyx

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
eh + ax or ehx	there	s1 dh eh + ax or s1 dh ehx
u + ax or uax	poor	s1 p u + ax or s1 p uax
e + i or ei	bait	s1 b e + i t or s1 b ei t
ao + I or oi	boy	s1 b ao + I or s1 b oi
a + i or ai	buy	s1 b a + I or s1 b ai
a + uh or au	down	s1 d a + uh n or s1 d au n
p	pan	s1 p ae n
t	tan	s1 t ae n
k	can	s1 k ae n
b	boy	s1 b ao + ih
d	day	s1 d e + IH
g	got	s1 g q t
gt	eat	s1 gt i t
f	fine	s1 f a + ih n

APPENDIX N: REALSPEAK SPEECH TIPS

Pathfinder: Power Tools

Phoneme	Example	Phonetic Spelling Enter any phonetic word with this tag: <pron sym="phonetic text"/>
th	thin	s1 th ih n
s	sin	s1 s ih n
sh	shine	s1 sh a + ih n
v	vine	s1 v a n
dh	that	s1 dh ae t
z	zone	s1 z o + uh n
zh	vision	s1 v ih zh ax n
h	head	s1 h eh d
j	you	s1 j u
w	wit	s1 w ih t
r	ride	s1 r a + ih d
l	let	s1 l eh t
m	my	s1 m a + ih
n	no	s1 n o + uh
ng	song	s1 s q ng
t + sh	church	s1 t + sh er t + sh
d + zh	jungle	s1 d + zh ah ng g ax l

See the next page for a chart of various symbols (period, comma, punctuation, etc.) that can be used to guide pronunciation as you enter phonetic text.

A Note about Text and Speech Markers:

If you are storing a message and enter a phonetically spelled word, also enter the correctly spelled word and use the Text and Speech Marker tools (page 68) so your device will speak the word correctly and show the correct word on the display, but will hide the phonetic pronunciation.

Symbol	Meaning	Phonetic Use	Spoken as
_! (underscore exclamation mark)	Sentence ender	h eh s1 l o + uh _!	Hello!
_& (underscoreand)	Word boundary	h eh s1 l o + uh _&_, h au _& aa r _& j u _?	Hello, how are you?
_, (underscorecomma)	Sentence ender	h eh s1 l o + uh _&_, h au & aa r _& j u _?	Hello, how are you?
_. (underscoreperiod)	Sentence ender	h eh s1 l o + uh _.	Hello.
_? (underscorequestion mark)	Sentence ender	h eh s1 l o + uh _?	Hello?
_s (underscore)	Silence	h eh s1 l o + uh _s h au _& aa r _& j u _?	Hello..... How are you?
S1 or s1	Primary stress	h eh s1 l o + uh	Hello
S2 or s2	Secondary stress	s1 l eh k s ih s2 k q n	Lexicon

Producing a Long "A" in the Middle of a Sentence:

Usually an "A" by itself in the middle of a sentence is pronounced as "uh," but there may be times when you want it to be pronounced as a long "A" ("ayee"). To achieve this, type in the capital letter "A" and then add a punctuation mark immediately following it:

A, A? A! (A A;

This will change the inflection of the sentence somewhat, but it will produce a long "A".

For example: *Give me an A! Give me aB!*

RealSpeak and Numbers

Most numbers are pronounced as you think they should be.

Cardinal Numbers

Cardinal numbers up to 15 digits are pronounced as full numbers.

Numbers with more than 15 digits are pronounced digit by digit.

For example: 2,345,789 is pronounced as *two million three-hundred-forty-five thousand, seven-hundred-eighty-nine*. 005 is pronounced as *zero zero five*.

Numbers from 1,100 through 9,999 are pronounced as full numbers when a comma is used. When no comma is used, the number is treated as a year.

For example: the number, 1,999, is pronounced *one-thousand-nine-hundred and ninety-nine*. The year 1999 is pronounced *nineteen-ninety-nine*.

Exception: The years 2000-2029 are pronounced as cardinal numbers, (e. g., *two-thousand-sixteen*). At 2030 they begin to be pronounced as years (e.g., *twenty-thirty*).

Telephone Numbers

Telephone numbers are pronounced digit by digit. To have the numbers pronounced as groups, add a space, a slash or a hyphen between the groups. Area Codes must be in parentheses.

For Example: (330) 262 1984 or (330)/262/1984. Both of these are spoken as: *Area Code 330, two six two, one nine eight four.*

International and mobile (or cell) numbers are usually read correctly assuming you have used the correct spacing.

For example: +22 (1343) 465-586 is pronounced: *plus twenty two one three four three four six five five eight six*; 011 44 (1733) 370 470 is pronounced: *zero one one forty-four one seven three three three seven zero four seven zero.*

Entering Math Problems

For math problems to be pronounced correctly, you must space the numbers correctly.

For example: $5 - 3 = 2$ must be entered as:

$5 - 3 = 2$ (5space -no space3space=space2)

$4 + 5 = 9$ is entered as

$4 + 5 = 9$ (4space +no space5space=space9)

With **multiplication**, use the "x" or the * .

For Example: $2 * 8 = 16$ or $2x8 = 16$. In either case your device will speak "x" or "asterisk", not "times". Do not put spaces between the multiplication sign and the numbers. Add a space before and after the "equals" sign.

Division is not available unless you have a "division" sign that you can assign to a key or sequence; otherwise, you must enter the words "divided by " with spaces, as in: 4 divided by 2 = 2.

Fractions are usually spoken correctly.

For example: 5/9 is spoken as *five ninths*; 3/2 is spoken as *three over two*; 223/845 is spoken as *two hundred twenty three over eight hundred forty five*.

Bank Account, Social Security, Credit Card Numbers

In order to have these types of numbers pronounced correctly, use hyphens between groups of numbers. Do not put spaces before or after the hyphen.

For example: 1234-5678-9123-4004 is pronounced as: *one two three four (pause) five six seven eight (pause) nine one two three (pause) four zero zero four*.

Dates

Depending on your country, dates are read as month/day/year (America) or day/month/year (Britain, Australia). Separate numbers with the date with slashes or hyphens. Do not add spaces.

For example: 5/15/06 is pronounced as: *May fifteenth two-thousand-six* in American English. 15-5-06 is pronounced: *the fifteenth May two-thousand six* in British and Australian English.

Currencies

RealSpeak correctly handles the currency symbols \$, £, ¥, and the most common currency abbreviations. The Euro symbol is also supported. You can find this symbol on the QWERTY spell page. Press the **Ext.**

Chars. key to find the Euro symbol.

For example: \$40.00 is pronounced *Forty dollars*. £125 is pronounced *One hundred twenty five pounds*. ¥60 is pronounced *60 yen*. €20 is pronounced *Twenty Euros*.

Abbreviations

The RealSpeak dictionary contains most common abbreviations. Some abbreviations can be spoken in more than one way, so RealSpeak looks for the context in which they are written. The abbreviation, "St." could be pronounced as *Saint* or *Street*. If "St." is followed by a capital letter, it is pronounced as *Saint*. If not, it is pronounced as *street*. Similarly, the abbreviation "Dr." could be pronounced as *Doctor* or *Drive*. If it is followed by a capital letter, it's pronounced *Doctor*. If not, it is pronounced, *Drive*.

For example: Dr. Johnson's St. is pronounced, *Doctor Johnson's Street*. St. John's Dr. is pronounced *Saint John's Drive*. Dr. Johnson lives on St. Peter's St. is pronounced, *Doctor Johnson lives on Saint Peter's Street*.

Acronyms and Initialisms

Acronyms are abbreviations formed by combining the first letters of a group of words. They are pronounced as words.

For example: NATO (nay toe), UNESCO (you ness coe)

Initialisms are abbreviations formed by combining the first letter of each part of a group of words. Initialisms are spelled.

For example: API (ay pee eye), FBI (eff bee eye), EC (ee cee)

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