



# AlphaSmart<sup>®</sup> 2000

## Owner's Manual





### **Three Year Limited Warranty**

Intelligent Peripheral Devices, Inc. warrants the AlphaSmart 2000 keyboard and display to be free from defects in materials and workmanship for a period of three years from the date of original retail purchase. During this period, if a defect should occur, Intelligent Peripheral Devices will, at its option, repair or replace the AlphaSmart 2000 at no charge to you, provided that it is returned during the warranty period to Intelligent Peripheral Devices or one of its authorized dealers. This warranty does not apply if the AlphaSmart 2000 has been damaged by accident or abuse, or modified without the written permission of Intelligent Peripheral Devices, or if the serial number has been removed or defaced. There are no other warranties, express or implied. Intelligent Peripheral Devices accepts no responsibility for consequential damages, including but not limited to loss of profit or benefits.

*To return a unit, please see the Return Procedures section.*

### **AlphaSmart 2000 Loaner Program & Technical Service**

Please contact our Technical Service Center toll-free at (888) 274-2720 for technical questions, or for more information on getting an AlphaSmart 2000 loaner (including a lab. pack of loaners). You may also contact us by e-mail at [support@alphasmart.com](mailto:support@alphasmart.com).

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## ■ SYSTEM REQUIREMENTS

The AlphaSmart 2000 works with any desktop or laptop computer with an external keyboard port, whether IBM compatible, Apple Macintosh, or Apple IIGS.

The AlphaSmart 2000 also works with IBM compatible computers including PC AT, PS/2, 286, 386, 486, and Pentium.<sup>1</sup> AlphaSmart 2000 is compatible with all versions of DOS, Windows and OS/2.

The AlphaSmart 2000 works with any Apple® computer (or Mac clone) equipped with an Apple Desktop Bus™ (ADB) port, which includes the Apple IIGS®, all Macintosh® models, all PowerBook™ models, the Performa™, Centris™, and Quadra™ series, Mac clones, and all Power Macintosh models.<sup>2</sup> AlphaSmart is compatible with all Apple system software versions 6.0.x and later, including System 7.x and 8.x.

***Note for Macintosh Users:** For the sake of simplicity, the term “Macintosh” is used generically throughout this manual. The procedures are the same regardless of the particular Macintosh model being used.*

***Note for PC Users:** For the sake of simplicity, the term “PC” is used generically throughout this manual when referring to an IBM-compatible DOS, Windows or OS/2 personal computer. The procedures are the same regardless of the particular IBM compatible model being used.*

## ■ QUICK START

For those of you who don't like to read manuals, here's a quick guide to working with the AlphaSmart 2000 keyboard and display.

***Note:** It is important to follow these steps completely in the order they are given.*

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<sup>1</sup>AlphaSmart is not compatible with the older XT model PCs and with laptops without an external keyboard port.

<sup>2</sup>AlphaSmart does not work with older, non-ADB-based Macs, including the Mac 128, Mac 512, Mac 512E, Mac Plus, and the PowerBook 190. It is also incompatible with the Apple IIe and Apple IIc. It is compatible with the Mac SE and all Macs produced after the Mac SE.

### Step One—Using AlphaSmart

- Turn on the AlphaSmart by pressing the on/off key and start typing. Your text will appear in the window.
- Use the arrow keys to move your cursor in the text.
- Use the **Delete** key to erase.

### Step Two—Transferring Text to a Computer

- Turn on the Macintosh or PC
- Start up your word processing application and open a new file. You must have a file in this application open in order to transfer files from the AlphaSmart.
- **Mac:** Unplug the cable from the Macintosh keyboard<sup>3</sup> and plug it into the AlphaSmart.
- **PC:** Connect your AlphaSmart to the PC using a PC Y Cable. See the section “Sending Text to a PC” for more detailed instructions.
- Press the **send** key on the AlphaSmart. Make sure you are in the word processing application before you press the send key. If you press send while in the Finder, you will rename your files to the text that is in your AlphaSmart.
- Your text will appear on the Macintosh or PC screen.
- Disconnect the cable from the AlphaSmart and reconnect the regular keyboard to the computer.

### Step Three—Finishing the Process

- At the Macintosh or PC, save the new file.
- At the AlphaSmart, press the **Clear File** key to erase the text.

AlphaSmart supports eight different files. To go to file 1, press the F1 key, F2 for file 2, and so on up to F8 for file 8.

### Auto Power Off

The AlphaSmart will automatically power off after 3–4 minutes of non-use.

## ■ SAFETY, CARE & MAINTENANCE

With proper care and maintenance, your AlphaSmart will give you years of worry-free service.

- Your AlphaSmart will turn off automatically when it is idle for more than three minutes.
- Always turn off your AlphaSmart before changing the

<sup>3</sup>See the Installing the Mac “Y” Cable section for information on an even faster and more convenient connection.



- batteries or connecting to an AC adapter.
- Take care not to break the LCD screen. Don't drop the AlphaSmart or subject it to strong impact. Do not place an AC adapter or other heavy object over the LCD screen.
  - Keep your AlphaSmart away from extreme heat. Don't leave it on the dashboard or in the trunk of a car, or near a heater.
  - Don't leave your AlphaSmart in a place that is extremely dusty or damp.
  - Do not use frayed or damaged cables.
  - Never force a connector into a port if the connector and port do not join easily.
  - Clean the screen only with a soft dry cloth. Do not use solvents.

### **Caring For Batteries**

- To avoid battery leakage, change the batteries as soon as they become weak.
- Do not drop, puncture, disassemble, mutilate or incinerate the batteries.
- Recharge only rechargeable batteries, and then only as directed in the manual.
- Do not leave batteries in hot locations.
- When storing the AlphaSmart for several months (like over the summer), remove the AA batteries.

## **■ ENTERING TEXT**

When you first turn on your AlphaSmart, you will see the splash screen (AlphaSmart 2000 v3.x) for a few seconds, and then a blank screen. To enter text, simply begin typing as you would on any other keyboard. Use the Delete key to erase. As soon as you type each character it is automatically saved. There is no Save command. The arrow keys allow you to move your cursor through the text. Additionally, the following keyboard combinations will also move your cursor as specified:

- ⌘↑ moves the cursor up 4 lines (one displayed page)
- ⌘↓ moves the cursor down 4 lines (one displayed page)
- ⌘→ moves the cursor to the end of the line
- ⌘← moves the cursor to the beginning of the line

As with any word processing application, the text will auto-



matically wrap at the end of each line, so you should use the Return key only to separate paragraphs.

All text formatting, including margins, tab stops, font, size, and other styling attributes, are done on the desktop computer after the file has been transferred from the AlphaSmart. Only the characters themselves (ASCII key codes) are transferred from the AlphaSmart to the computer. However, the Tab key can be used on the AlphaSmart to create columns or paragraph indentations which will transfer to the Macintosh with the file. When the tab key is used, it will appear as a right arrow on the AlphaSmart screen when Show Marks is activated.

The AlphaSmart does not have cut, copy, or paste functions included. These advanced editing features are more easily performed when using a larger screen and mouse, and therefore should be performed once a file has been transferred to the desktop computer.

When an AlphaSmart file is full, a message will display which reads:

*File is full. Use another file or send data to your computer.*

### **Caps Lock Indicator**

When Caps Lock is active, the lower right character of the screen will be solid black. Pressing the Caps Lock key toggles the Caps Lock on and off.

## **■ WORKING WITH FILES**

The first time that the AlphaSmart is turned on, it will display the message *Opening file 1*. On subsequent startups, it will automatically open the last file used.

The AlphaSmart 2000 supports eight files, which are fixed in length. File 1 is 16 pages long, files 2–5 are 8 pages each, files 6 and 7 are 6 pages each, and file 8 is 4 pages in length. This provides a total storage capacity of 64 pages of single-spaced text or 128,000 characters.

This file structure is intended to support multiple users or to enable a single user to organize his or her work into chapters or sections.

To move between files, press the **F1/file 1** key to go to file 1,



the **F2/file 2** key to go to file 2 and so forth, up to F8.

Text entered into each file will remain there until you explicitly erase it by pressing the **Clear File** key when the AlphaSmart is not attached to a desktop computer. Note that when you press the Clear File key, you are clearing only the file in which you are currently working; other files will remain unchanged.

Once the Clear File key is pressed and the file is deleted, information may still be recovered using the Data Recovery command described below. However, for confidential files which you wish to erase without the ability to recover, you may press **Option-⌘-Clear File**. This command writes 0 (zeros) to the entire file. Use this command with care.

## ■ SPELL CHECK

To spell check the current file, press the **Spell Check** key. Your file will be checked from the top to the bottom. When it finds a word not in its dictionary, the AlphaSmart will try to come up with a list of suggested spellings.

For example, if the word “runn” is checked, a list of suggestions (run, runs, rune, rung, runt, ruin) will be displayed. If one of the suggestions is the correct spelling, use the arrow keys to select it and press Return to replace the incorrect word with the correct one.

If your intended word is not displayed, or the message “No suggestions found” appears, then press the spacebar to skip over that word and continue checking the other words in the document.


Also, if the word is spelled correctly, but isn't in the AlphaSmart dictionary, just press the spacebar to skip over the word and leave it unchanged in your file.

To spell check a single word in a document, put the cursor anywhere within the word you wish to check and press **⌘-Spell Check**. That word alone will be checked and if not in the dictionary, replacement suggestions will be offered.

To disable the spell check feature (for example, to give the



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class a spelling test), press **⌘-Option-spell check**. You will be prompted to enter the master password to disable spell checking. To enable the spell check feature, once again press **⌘-Option-spell check** and enter the master password.

There is no “user dictionary” as well as no way of adding words to the existing dictionary.

## ■ DATA RECOVERY

If you accidentally clear a file, it can still be recovered as long as no text has been entered into that file yet. Open the file you wish to recover by pressing one of the F1–F8 keys. Press **Option-⌘-R** to activate the AlphaSmart Data Recovery command.

The Data Recovery command restores the end-of-file marker to the same position it was when the file was last cleared (by pressing the Clear File key). So if you accidentally clear a file, **Option-⌘-R** will un-clear it.

If **Option-⌘-R**, the Data Recovery command, fails to recover the data, try pressing **Ctrl-Option-⌘-R**. This is the Recover 40 Characters command. Each time you press this command it will move the end-of-file marker back 40 characters. Press this command repeatedly until you see all of your text, plus some garbage. Then hold the delete key down until the garbage characters are deleted.

You may also try pressing **Shift-Ctrl-Option-⌘-R** to recover the entire file. Scroll down to the end of your text where the garbage characters start and press **⌘-Delete** to erase from the cursor to the end of the file.

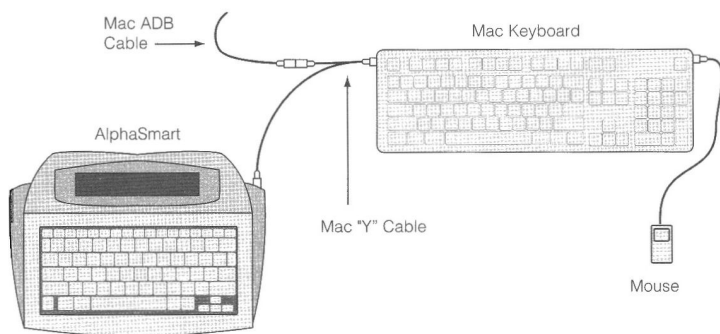
*Note: If the file was deleted using the Option-⌘-Clear File command, the data is not recoverable.*

## ■ INSTALLING THE MAC “Y” CABLE

You may use any Apple Desktop Bus (ADB) cable to transfer data from the AlphaSmart to the Macintosh—no special cable

is usually needed.<sup>4</sup> For convenience, however, we offer an optional “Y” cable that makes connecting and disconnecting an AlphaSmart even easier. We suggest installing the “Y” cable between your keyboard and its ADB cable, as shown in Figure 1.

To install the “Y” cable, first disconnect your Macintosh keyboard from the computer (at the keyboard end). Insert the trunk of the “Y” cable into the empty ADB port on the keyboard.



**Figure 1. Installing the Mac “Y” Cable**

Plug the short leg of the “Y” cable into your original keyboard cable. The remaining cable leg will be used to connect your AlphaSmart to the Macintosh when you want to transfer text.

To install the “Y” cable with a M2980 keyboard (which has a permanently attached ADB cable), first unplug your mouse from your keyboard. Insert the trunk of the “Y” cable into the empty ADB port in the middle back of the keyboard. Plug your mouse into the short leg of the “Y” cable (see Figure 2). The remaining cable leg will be used to connect your AlphaSmart to the Macintosh when you want to transfer text.

**Warning:** DO NOT attach the AlphaSmart to both a PC and the Mac at the same time. It won't work and possible damage may occur to the Mac or the PC.

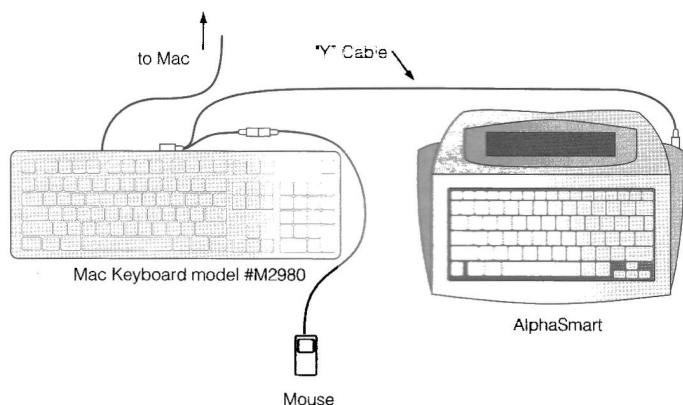
<sup>4</sup>The Mac “Y” cable is required when connecting to a Macintosh with an “Apple Design Keyboard,” model #M2980, since this keyboard has an attached ADB cable and only one ADB connector.

## Concerns about ADB Live Connect/Disconnect

The AlphaSmart keyboard is designed to be connected to and disconnected from Macintosh ADB ports while the Mac is running.

Some people may be concerned with this, since Apple recommends not unplugging or attaching an ADB device while the computer is running. This is recommended by Apple because certain ADB devices change modes when they are unplugged, causing confusion to the system when the devices are reattached.<sup>5</sup>

However, the AlphaSmart has been designed so that it does not change modes when unplugged. More importantly, it does not confuse the Mac when unplugged and reconnected.




**Figure 2. Installing the Mac "Y" Cable with Mac Keyboard model #M2980**

## ■ SENDING TEXT TO A MACINTOSH

The connector on the right is the Macintosh ADB port. (If you need two ADB ports, use the Y cable to provide the other ADB port.)

<sup>5</sup>As stated on page 290 of *The Guide to Macintosh Family Hardware* by Apple Computer (published by Addison-Wesley): "Do not unplug and reattach an ADB device while the computer is running—if you do, the device reverts to its default address while the computer continues trying to reach the device at the address assigned at startup time."



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When you attach your AlphaSmart to a Macintosh, the AlphaSmart changes modes and the screen displays the following message: *Attached to Macintosh, emulating keyboard. Press send Key to transfer file.*

If you do not see this message, check your cable and make sure it is attached properly to the Macintosh.

When the AlphaSmart is attached to a Macintosh, all of the keys except the send and On/Off keys behave as standard Macintosh keyboard keys. Any characters that are typed will appear on the Macintosh screen, and the Clear File key acts as a Macintosh clear key. Although the Control, and Option keys have no function when the AlphaSmart is used in stand-alone mode, they function as normal Macintosh keys when the AlphaSmart is plugged into a Macintosh.

To change files when attached to the Macintosh, press **Option-⌘-F1** to go to file 1, **Option-⌘-F2** to go to file 2, and so on.

Pressing the send key (at the extreme upper right of the keyboard) initiates the transfer of the current file from the AlphaSmart to the Macintosh. If you want to abort a file transfer, just press any other key. *You must have a word processing application or Hyperstudio open and have the cursor placed where you wish to insert the text before pressing the send key. Be sure to be within the application and not the Finder or Desktop when you press the send key, or you may rename your files to the text in your AlphaSmart.*

When the transfer is complete, disconnect the AlphaSmart. (You may also leave the AlphaSmart connected to the Macintosh for use as a normal keyboard.) Reconnect your normal Macintosh keyboard after the AlphaSmart has been disconnected.

To finish the transfer process, save the word processing file on the Macintosh. Once the text is saved on your Macintosh, you can style, format, and spell check the file as you would any other file in your word processing application.

To erase the transferred file from the AlphaSmart, press the **Clear File** key on the AlphaSmart. The currently displayed file will be deleted.



## ■ TIPS FOR DOWNLOADING TO SPREADSHEETS, DATABASES, HYPERCARD, HYPERSTUDIO, E-MAIL AND OTHER APPLICATIONS

Because AlphaSmart simply retypes the data from your files, you may transfer the text in your AlphaSmart to any application that you can type into—not just into word processing applications.

### Other Programs

When in another application, simply put the cursor where you want the text to go and press send. This can be in a HyperCard, HyperStudio, or Digital Chisel text field, or when using the text tool of a page layout program, or when using an e-mail program. Wherever you would normally type in the information, you can easily download information from your AlphaSmart into that spot by placing your cursor in the new application and pressing **send**.

### Spreadsheets

For spreadsheets, you need to do a special trick to get things to work the way you want. Say you want to download the following data that you already typed into your AlphaSmart into your favorite spreadsheet program (with numbers separated by tabs):

```
98→46→78←  
75→89→100
```

If you put the cursor in the upper left cell and press enter, here is what you will probably get:

	A	B	C	D	E
1	98	46	78		
2			75	89	100

The reason for this is that the **return** causes most spreadsheets to drop straight down a row, instead of going back to the left-most column of the spreadsheet.

An easy trick to fix this is to send your text to a word processor, copy it, then paste it into your spreadsheet. The paste



command will fix the problem and your spreadsheet will look like this:

	A	B	C
1	98	46	78
2	75	89	100

***Note:** If you are using TurboTransfer, there is no need to use the above spreadsheet trick. TurboTransfer pastes your text into the spreadsheet correctly, avoiding the problem.*

### Databases

The steps below work for transferring text to a ClarisWorks database document on a Macintosh. Database programs differ substantially, so transferring to other databases may require experimentation

1. Create your database in ClarisWorks if you haven't already done so, and set up your fields.
2. Create a tab-delimited record on the AlphaSmart by entering the data in the tab order of the database, entering a return at the end of each record. The tabs separate the fields and the return indicates the end of the previous record and the beginning of the next one. Enter as many records as you want in a single AlphaSmart file until it is full—you do not need to save each record into a separate AlphaSmart file.
3. Open the database on the Macintosh in ClarisWorks.
4. Open a new empty word processing file.
5. Connect the AlphaSmart to the Mac keyboard cable.
6. Download the data file from the AlphaSmart to the empty ClarisWorks word processing document by pressing the **send** key on the AlphaSmart.
7. Select all the downloaded text by doing a **Select All** from the Mac Edit menu. (⌘-A).
8. Copy the data to the clipboard by choosing **Copy** from the Edit menu (⌘-C).



9. Make the database the active ClarisWorks document either by choosing the database file in the View menu or by clicking once in the database window (Do not click on an individual field in the document to make it the active field or **all** the data will be put into the one field).
10. Paste the data from the clipboard by selecting **Paste** from the Edit menu or by pressing **⌘-P**. The data will be transferred to the database, beginning with the second record if there was already a record in the database (a newly-created database will have an empty record as the first record).
11. Delete the empty record if needed. Save and close the database. Reopen to verify that the data is there and transmitted correctly. When you wish, you may discard the data in the unnamed text file. Subsequent transmission of new data will be appended to the end of the database and will not create a new blank record.

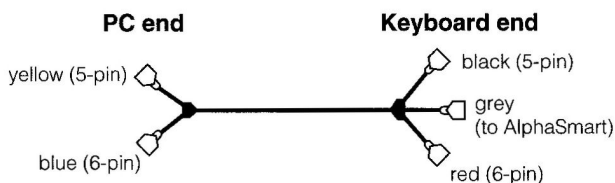
If the database contains calculated fields, you may simply skip the field by entering a tab. When the data is pasted it will make the calculations automatically in the database.

If you find errors in the way the data appears in the database after it has been transferred, you can make the corrections in the original AlphaSmart file and then retransmit the data to the word processing file.

## ■ INSTALLING THE PC DUAL CABLE

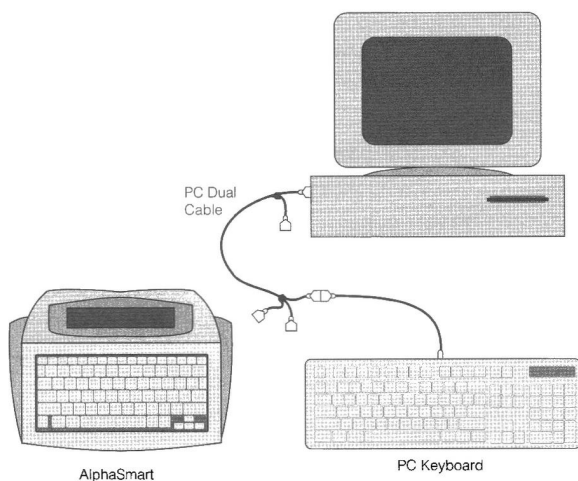
A special adapter cable is required to connect an AlphaSmart to a PC. The PC Dual cable allows an AlphaSmart to be attached to either a 5-pin or 6-pin Mini-DIN PC.

As shown in Figure 3, one end of the PC Dual cable connects to the PC and one end connects to the AlphaSmart. When the normal PC keyboard is being used with your PC, the PC Dual cable acts as a keyboard extension cable so the user doesn't have to reach behind their computer to disconnect/connect the keyboard cable (see Figure 4).



**Figure 3. PC Dual cable**

**Warning:** Do not connect a PC keyboard and an AlphaSmart to a PC at the same time while using the PC Dual Cable—your PC will become hopelessly confused and will have to be rebooted! Unlike the Macintosh, PCs only allow one keyboard device to be attached at a time. The PC Dual cable is **not** a PC keyboard “Y” cable. See the following section for information about the PC Y Cable.



**Figure 4. Keyboard connected to a PC with the PC Dual cable**

### Installing the PC Dual Cable

1. Disconnect your PC keyboard from the back of your PC.
2. Examine the keyboard port on the back of your PC. If you have a DIN 5-pin connector, connect the yellow end of the PC Dual cable to the keyboard port on the back of





your PC. If you have a Mini-DIN 6-pin connector, connect the blue end of the PC Dual cable.

3. To connect your AlphaSmart to the PC, connect the grey end of the PC Dual cable (found on the opposite end of the yellow and blue connectors) to the AlphaSmart.
4. To reconnect your PC keyboard, first disconnect the AlphaSmart from the PC Dual cable. If your keyboard cable has a DIN 5-pin connector, plug it into the black connector of the PC Dual cable. If your keyboard cable has a Mini-DIN 6-pin connector, attach it to the red end of the PC Dual cable (See Figure 4).

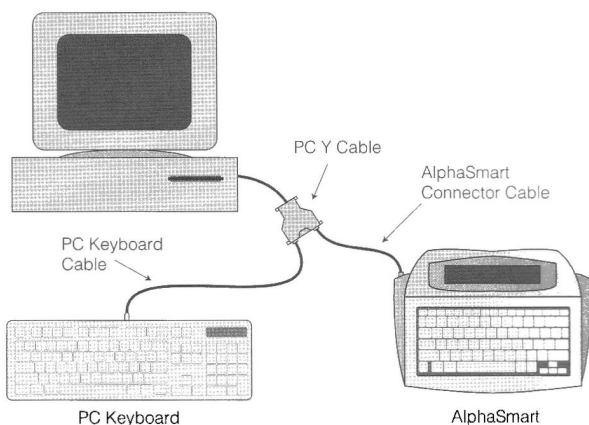
## ■ INSTALLING THE PC Y CABLE

To install your AlphaSmart PC Y Cable:

1. Turn off the computer
2. Disconnect the keyboard from the computer keyboard port and determine if it is a 5-pin or Mini-DIN 6-pin connector. If you have a Mini-DIN 6-pin connector, use the PC Y Cable and AlphaSmart Connector Cable alone. You will not need the 2 adapters. If it is a 5-pin connector, you need to connect one of the included 5-pin to Mini-DIN 6-pin connectors to the tail of the PC Y Cable and the other to the port that says PC Keyboard.
3. Plug the cable end of the AlphaSmart PC Y Cable labeled Computer's Keyboard Port into the computer's keyboard port. Replug your computer keyboard cable into the PC keyboard port on the PC Y Cable.
4. With the PC Y Cable installed and your normal PC keyboard plugged in, turn on the computer, wait for complete boot up and test your keyboard for operation.
5. Now, with your computer running and a word processor open, you may plug one end of your AlphaSmart Connector Cable into the port labeled AlphaSmart on the Y cable and the other end to the PC port on the AlphaSmart and send your data to the PC. When the transfer is complete, you may disconnect the AlphaSmart.

You may leave the AlphaSmart cable connected to the Y cable and use it whenever you want to transfer text.

**Note:** Always leave the PC Y Cable installed. If, for any reason, you need to remove the PC Y Cable from the PC, do so when your computer is turned off.



**Figure 5. Connecting the PC Y cable between a PC, a regular keyboard and an AlphaSmart**

## ■ SENDING TEXT TO A PC

The connector on the left side of the AlphaSmart 2000 is labeled PC and is used to download to PCs.

### Attaching to a PC

To connect the AlphaSmart to your PC, you need to use the PC Dual cable or the PC Y cable. To install either cable, please see the two previous sections. Once the appropriate cable is installed, do the following:

#### *For PC Dual Cable users:*

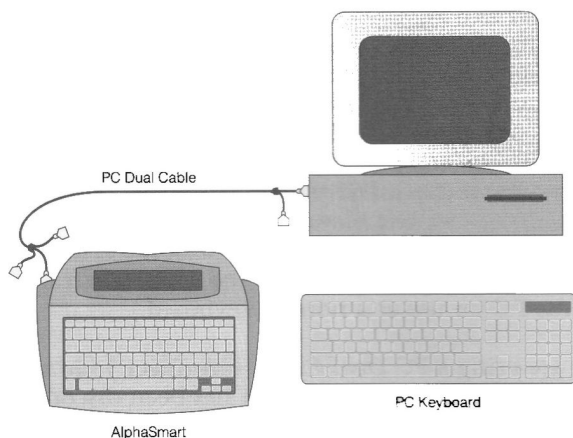
1. Unplug your PC keyboard. **Warning: Do not connect a PC keyboard and an AlphaSmart to a PC using the PC Dual cable at the same time—your PC will become hopelessly confused and will have to be rebooted!**
2. Turn on the AlphaSmart and plug the grey end of the PC Dual cable into the port labeled PC on the AlphaSmart (Figure 6).



### **For PC Y Cable users:**

Connect the AlphaSmart Keyboard to the AlphaSmart port on the PC Y Cable using the adapter cable (see Figure 5).

When your AlphaSmart is attached to a PC, it changes modes and the screen displays the following message: *Attached to PC, emulating keyboard. Press send Key to transfer file.* If you do not see this message, check your cable and make sure it is attached properly to the PC.



**Figure 6. Attaching the AlphaSmart 2000 to a PC**

### **Keyboard Command Differences**

When the AlphaSmart is attached to a PC, all of the keys except the send key behave as standard PC keyboard keys. Any characters that are typed will appear on the PC screen. Although the Escape, Enter, Control, and Alt keys have no function when the AlphaSmart is used in standalone mode, they function as normal PC keys when the AlphaSmart is plugged into a PC.

When the AlphaSmart is attached to a PC:

**print** is the same as PrtScrn

**Shift-print** is the same as Pause

**Spell Check** is the same as ScrLk

**Shift-Spell Check** is the same as NumLk

**Find** is the same as del

**Shift-Find** is the same as ins

**⌘-print** is the same as F9

- ⌘-Spell Check is the same as F10
- ⌘-Find is the same as F11
- ⌘-clear file is the same as F12

To change files when attached to the PC, only press the ⌘ key and the Fx key (F1 for file 1, F2 for file 2, etc). Do not press the alt/option key. Pressing the alt key puts some word processing programs into command mode and the file won't transfer correctly.

### Transferring Text to a PC

1. Pressing the send key (at the extreme upper right of the keyboard) initiates the transfer of the current file from the AlphaSmart to the PC. If you want to abort a file transfer, just press any other key. *You must have a word processing application open and your cursor at the beginning of your file before sending text to a PC.*
2. When the transfer is complete, disconnect the AlphaSmart. (You may also leave the AlphaSmart connected to the PC for use as a normal keyboard.)
3. If you are using a PC Dual Cable, reconnect your normal PC keyboard after the AlphaSmart has been disconnected.
4. To finish the transfer process, save the word processing file on the PC. Once the text is saved on your PC, you can style and format the file as you would with any other file in your word processing application.
5. To erase the transferred file from the AlphaSmart, press the **Clear File** key on the AlphaSmart. The currently displayed file will be deleted.

***Note:** If you only get the first one or two characters transferred when sending from the AlphaSmart, be sure your normal PC keyboard is not connected. Disconnect your keyboard and retry sending the text.*

### Tips for Connecting to PC-compatible Laptops

To get an AlphaSmart to download to a PC-compatible laptop computer, you must connect the AlphaSmart the exact same way you would attach an external keyboard to your laptop. Unfortunately, each different PC compatible laptop computer seems to have its own different, often non-obvious, way to connect to an external keyboard.



For example, some IBM Thinkpad laptops have a Mini-DIN 6 port with a mouse and keyboard icon near it. One might logically think that one could plug in a mouse or Mini-DIN 6 (PS/2 style) keyboard and expect it to work. Even though it fits, it won't work. To overcome this problem, you need a special adapter cable that plugs in the port.

Another example is a particular Hitachi laptop model that has a tiny switch that must be turned on in order to get an external keyboard to work.

Since there are so many different types of laptops and differing ways that they each handle external keyboards, you must look in your laptop's user manual for instructions on connecting an external keyboard. It is best if you can test it with an external PC keyboard first before trying it with an AlphaSmart. If an external keyboard can type into your laptop, then the AlphaSmart should also be able to connect, type, and send information to your laptop.

## ■ PC HOT-SWAPPING

*Note: This section pertains to PC Dual Cable users only.*

Some PCs do not support unplugging the keyboard and then plugging it back in while they are ON, called "hot swapping" the keyboard. To use the AlphaSmart with these PCs:

- Turn the PC off.
- Turn on the AlphaSmart and attach it to the keyboard port.
- Turn the PC on.
- Open your PC application and transfer the file as normal.
- When finished, turn off the PC, connect your normal keyboard and turn your PC back on.

**Important:** *The AlphaSmart **must** be turned on before the PC in order for the PC to boot when it is attached as the PC keyboard.*

To determine if your computer supports "hot swapping," disconnect your regular keyboard while the PC is running and then reconnect it. Open an application and try typing in it— if the characters look correct then your PC supports "hot swapping" and you should have no problem using your



AlphaSmart. If your PC does **not** support keyboard “hot swapping,” no characters or the wrong characters will show up when you try typing after reconnecting the keyboard.

When having problems connecting to a PC that you haven’t tried using with an AlphaSmart before, try the keyboard “hot swap” test described above using the PC’s normal keyboard to determine if the PC supports keyboard “hot swapping.”

The following PCs do not support “hot swapping”:

- IBM PS/2 model 56 and model 57
- IBM PS/2 model 90, model 8590-DLA
- Toshiba P1950CT Laptop

If you have additions or corrections to this list, please e-mail (support@alphasmart.com), call toll-free (888) 274-2720, or fax (408-252-9409) the changes to us. We will try to maintain a current and complete list.

You can find online support at our Web site Home Page (<http://www.alphasmart.com>), as well as the latest PC No “Hot Swapping” list and up-to-date troubleshooting information.

## ■ CHANGING THE TRANSFER SPEED

The AlphaSmart can send text faster than some older computers can accept it. If you notice missing characters or jumbled text, then you need to slow down the transfer speed. Even on newer, faster computers, some programs like Microsoft Word and KidWorks are slow to accept text and you must slow down the AlphaSmart to transfer text into these programs.

The AlphaSmart file transfer speed menu is accessed by the keyboard command **Option-⌘-S** (this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer). The speed command affects both the Mac sending speed and the PC sending speed.

The AlphaSmart has four file transfer speeds:

1. *Very Slow* is the slowest speed setting and is compatible with all machines and applications. It is recommended especially when you are using KidWorks™ or The



Children's Writing Center. If you still lose data sending to KidWorks 2, turn "Sound Effects" off by deselecting "Sound Effects" under the KidWorks 2 Options menu.

2. *Slow*, which is compatible with all machines and most applications. It is recommended especially if you are using a Mac Classic, an Apple IIGS or a PC AT (286).
3. *Faster* (the default speed), which is a little faster and is recommended for the Mac LC or for 386- and 486-based PCs.
4. *Fastest* is the fastest speed setting. However, some word processing programs may experience a loss of data when files are transferred using this mode, so you may wish to experiment to see which speed works best for you.

*Note: The keyboard control panel in your Macintosh system may also need to be adjusted to a faster setting.*

If you are using a Mac, you can significantly speed up the transfer of data (approximately 6 times faster) by using TurboTransfer software (see details under *TurboTransfer software*).

#### **Send speed for Mac**

- 1.25 pages per minute (set at speed 4, sending to ClarisWorks, on a Power Mac).
- With TurboTransfer, 8 pages per minute.

#### **Send speed for PC**

- 3 pages per minute (set at speed 4, sending to Windows Write, on a 486).

## **■ ALPHASMART FIND FEATURE**

To access the AlphaSmart Find feature, press the Find key or ⌘-F. You will see a screen that says:

```
Find: _____  
Press Return to search in file 1,  
option-Return to search in all files,  
CMD-G to Find again, Esc to exit.
```

At the cursor, you may enter up to 16 characters. The search is **not** case sensitive, so if you are looking for "CAT" and

type in “cat”, the search will find **cat**, **CAT**, **Cat**, or **caT**. It will also find partial words or characters embedded in other words. For example, if you searched for “cat”, it will also show you “catalog.”

If you press **Return** after entering your search text, it will search in the current file only. If you press **Option-Return**, it will search in all eight files. However, if password protection is activated, the **Option-Return** command cannot be used and you can only search in the current file. When a string is found in a different file than the one currently displayed, it will open that file and put a cursor at the end of the string it found.

After the text is found once, you may continue the search by pressing **⌘-G**. The next occurrence will be displayed or the message “String NOT found” will be displayed. (**⌘-G** does not bring up the Find dialog screen—unless you haven’t ever entered search text.)

## ■ KEYBOARD LAYOUTS

To change the keyboard layout, press **Option-⌘-L** (this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer). You will see four choices:

- Pressing 1 chooses *QWERTY*—the standard default layout of most keyboards and typewriters (see Figure 7).
- Pressing 2 sets the keyboard to *Dvorak*. Dvorak is a scientifically-designed key layout which requires much less finger



Figure 7. QWERTY keyboard layout.





reaching and stretching for the most commonly used keys, and results in faster and easier typing (see Figure 8).




Figure 8. Dvorak keyboard layout.



Figure 9. Right one-handed keyboard layout.



Figure 10. Left one-handed keyboard layout.

- 
- Choosing **3** sets the keyboard layout for *right-hand only*, and selecting **4** sets the keyboard for *left-hand only*. Right and left one-handed layouts enable faster typing for people with disabilities (see Figures 9 and 10).

KEYTIME® has fast and effective training materials for learning to touch-type on the standard, Dvorak, right-handed, left-handed, and single digit keyboards.

In addition, KEYTIME® has clear stickers to relabel keyboards and key-cap pullers to rearrange keys for alternative keyboard users. Contact KEYTIME®, Inc. at (206) 522-TYPE for more information and prices.

When the AlphaSmart is turned on, a message is displayed stating the current layout option—if other than the default QWERTY layout.

***Note:** When key layout changes, all command keystrokes use the default/QWERTY location for the key. For example, if the layout is currently set to Dvorak, you still press **Option-⌘-L**, where L is the QWERTY location of L, not the Dvorak location. (Note: this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer.)*

*Also, international characters use the QWERTY location for the letters and their accents. For example, to generate an é you press **Option-e**, using the QWERTY location for e, regardless of the current keypad setting.*

***Note:** AlphaSmart keys are removable and may be popped off and repositioned to match the new layout you choose.*

## ■ INTERNATIONAL CHARACTER SUPPORT

See the chart on the following page for international character key equivalences. International characters can be sent to Macintosh or Windows machines. They work with all Macintosh applications. If sent to a machine running Windows, international characters are sent using the codes defined in the Character Map Accessory.

## AlphaSmart International and Special Characters

option-A = á  
option-E = é  
option-I = í  
option-O = ó  
option-U = ú

option-shift-A = Á  
option-shift-E = É  
option-shift-O = Ó  
option-shift-U = Ú

ctrl-A = à  
ctrl-E = è  
ctrl-I = ì  
ctrl-O = ò  
ctrl-U = ù

ctrl-shift-A = À  
ctrl-shift-E = È  
ctrl-shift-O = Ò  
ctrl-shift-U = Ù

ctrl-option-A = â  
ctrl-option-E = ê  
ctrl-option-I = î  
ctrl-option-O = ô  
ctrl-option-U = û


ctrl-option-shift-E = Ê  
ctrl-option-shift-O = Ô  
ctrl-option-shift-U = Û

option-⌘-A = ä  
option-⌘-E = ë  
option-⌘-I = ï  
option-⌘-O = ö  
option-⌘-U = ü

option-⌘-shift-A = Ä  
option-⌘-shift-E = Ë  
option-⌘-shift-O = Ö  
option-⌘-shift-U = Ü

option-? = ¿  
option-! = ¡  
ctrl-2=â  
shift-ctrl-2=Å  
option-0 = °  
option-shift-1 = ½  
option-2 = ™  
option-3 = £  
option-4 = ¢  
option-6 = "(double dot)  
option-7 = □  
option-8 = •  
option-9 = º  
option-" = æ  
option-shift-" = Æ  
ctrl-option-⌘-A=ã  
shift-ctrl-option-⌘-A=Ã  
option-B = ß  
option-C = ç  
option-shift-C = Ç  
option-D = ° (degree symbol)  
option-G = ©  
option-N = ñ  
option-shift-N = Ñ  
option-M = µ  
ctrl-option-⌘-O=õ  
shift-ctrl-option-⌘-O=Õ  
option-P = ¶  
option-R = ®  
option-S = §  
option-Q = œ  
option-shift-Q = Œ  
option-Y = ¥

The following characters are not supported: Â, Î, Ï, Ì, Í



---

International characters work directly with the following Windows applications:

- Write
- Paintbrush
- Notepad
- Microsoft Works for Windows

International characters do *not* directly transfer correctly to the following Window applications:

- Word Perfect 5.2, 6.0

To transfer international characters to these applications,

1. Transfer your file to Windows Write or Notepad (or another application that does accept international characters directly),
2. Select your text, then **Copy** the text (so that it is in the Windows clipboard),
3. Open a file in one of the above applications, and
4. **Paste** the text into your document.

***Note:** The reason that the international characters don't directly transfer into these applications is that these applications don't support the Microsoft international character set. Fortunately, by copying and pasting through the clipboard, the clipboard performs the appropriate translations.*

All non-international characters transfer correctly to all Windows and DOS applications.

## ■ PRINTING FROM YOUR ALPHASMART

By using a special serial print cable or a special parallel print cable, your AlphaSmart 2000 can print directly to a large number of printers.

The printers currently supported by the AlphaSmart 2000 are:

1. Apple ImageWriters
2. Hewlett-Packard DeskJets and DeskWriters



3. Apple StyleWriter I, II, and 1200
4. Parallel printers (requires AlphaSmart Parallel Print Cable)

To print from an AlphaSmart 2000 to a printer:

1. Press **Option-print** to access the printer setup menu. Use the arrow keys to select either ImageWriter, HP DeskJet or Writer, Stylewriter, or Parallel. Press **Return** to leave the menu.
2. Connect the special AlphaSmart-to-Printer cable from the AlphaSmart PC port to the printer serial or parallel port. This cable is specially made and is not available from computer stores (it has some electronic components built directly into the cable).
3. Make sure the printer is turned on and, for the ImageWriter II, make sure the Select LED is green (printer is selected to print).
4. Press **⌘-P** or **print** on the AlphaSmart to print the current file. The printer should start to print.


The AlphaSmart will remember your selected printer, so you only have to do Step 1 once, or whenever you change printers.

***Note:** Font, print quality, line spacing, and margins are fixed and not changeable by the user. The line spacing is set for double spacing for easy manual editing.*

The AlphaSmart 2000 supports draft printing to most older direct connect printers. If your printer is already connected to a computer or a network, most users find it easier and faster to leave the printer connected to the computer or network, and download the text to the computer for printing.

Direct draft printing from the AlphaSmart works best when tabs are not used in the text. For most consistent direct printing, use spaces for separation instead of tabs.

***Printers with DIP switch settings.*** If the AlphaSmart fails to print and your printer has DIP switches for different option settings, consult your printer user manual and set the DIP switches to the following settings:

- 
- 
1. 9600 baud
  2. 1 stop bit
  3. no parity
  4. hardware handshake (DTR)
  5. LF on CR (line feed on carriage return)

## ■ KEYBOARDING TIMER

To access the Keyboarding Timer:

1. Press **⌘-find** (this command works in stand-alone mode only, not when the AlphaSmart is attached to a computer). A message will be displayed that says:

TYPING TIMER, BEGIN TYPING TO START TIMER.

2. Start typing. The elapsed time will be shown as you type. Press **CTRL** to stop.
3. When **CTRL** is pressed the screen will give the elapsed time and the words per minute(wpm).
4. To start the timer again press return.
5. To exit the Keyboarding Timer, hit **esc**.

When typing in the Keyboarding Timer, the delete key is disabled.

The text typed in the Keyboarding Timer is appended to the end of the current file so that the text can be reviewed for accuracy, if desired.

If you don't wish to keep the text, simply press Clear File after you exit the Keyboarding Timer. You may also wish to change to an unused file, or press Clear File before starting the Keyboarding Timer.



## ■ SPECIAL EDUCATION NEEDS

### AutoRepeat

The AutoRepeat function can be disabled or enabled by pressing **Option-⌘-K** to get to the AutoRepeat/Sticky Keys control screen, and then pressing **1** (this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer).

### Sticky Keys

To enable the Sticky Key function, press **Option-⌘-K** and then **2** to either enable or disable Sticky Keys (this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer).

With Sticky Keys enabled, you can type combination key-strokes without actually pressing the keys simultaneously. For example, you could press **Option-⌘-S** to get to the AlphaSmart speed menu.

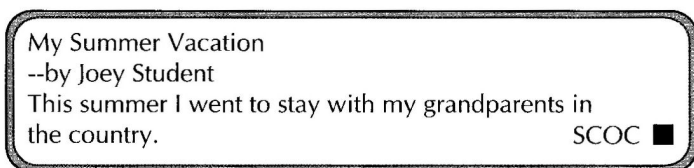
Sticky Keys affect the four modifier keys: shift, option, command (⌘), and control. When Sticky keys are enabled, pressing a modifier key effectively keeps that key “pressed down” for the next normal key press.

The current state of the shift, option, command, control, and caps lock keys are shown in the lower right of the AlphaSmart screen. The last five characters in the lower right corner of the display show which keys are “down” and which keys are “up.”

- The right-most character is the *caps lock* indicator, and is solid black if the caps lock key has been pressed. Caps lock is not affected by Sticky key settings.
- The second character from the bottom right corner is the *command* (⌘) key indicator. If the command key is down, a C will be displayed here.
- The third character from the bottom right corner of the screen is the *option* key indicator. If the option key is down, an O will be displayed.
- The fourth character from the lower right corner of the screen is the *control* key indicator. If the control key is down, a C will be displayed here.

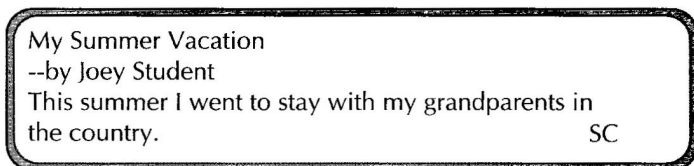
- The fifth character from the lower right corner of the screen is the *shift* key indicator. If the shift key is down, an “S” will be displayed here.

Figure 11 shows an example of what the screen would look like if all the modifier keys (shift, control, option, command, and caps lock) were in the “down” position.



**Figure 11. Example shows modify indicators in the lower right corner of the screen**

Figure 12 shows just the control and shift keys down.



**Figure 12. Example shows the control and shift modify indicators in the lower right corner of the screen**

## ■ SHOW MARKS

The Show Marks function can be disabled or enabled by pressing **Option-⌘-K**, and then pressing 3 (this command works in stand-alone mode only, not when the AlphaSmart is attached to a computer).

When Show Marks is enabled, tabs show up as “→” and returns show up as “↵”. When Show Marks is disabled, tabs and returns show up as spaces on the AlphaSmart screen. Regardless of the Show Marks setting, tabs and returns are transferred to the computer as tabs and returns.





## ■ CLEAR ALL FILES COMMAND

Press **Option-⌘-control-shift-clear** file to erase all eight files simultaneously. You will be asked if you are sure—pressing the Y key at this point will clear files 1 through 8. However, this deletion is not permanent, and you can still recover any of the files using the **Option-⌘-R** recover command *as long as you have not typed over the files*.

## ■ STATUS SCREEN

Press **Option-⌘-V** to get to the system status screen (this command works in stand-alone mode **only**, not when the AlphaSmart is attached to a computer). This screen tells you the AlphaSmart version number, what the current file number is, AutoRepeat and StickyKeys status, and which keypad layout option is currently in use.

## ■ ALPHASMART PASSWORD PROTECTION

When multiple people share one AlphaSmart, it is sometimes useful to password protect each file to keep the contents private and protected from accidental loss.

AlphaSmart 2000s are shipped with password protection disabled. To enable AlphaSmart's password protection feature for the first time, you will need to contact IPD to obtain the master password encoded into each AlphaSmart. To obtain the master password, call toll-free 1-888-274-2720. You may also fax your request (including your fax number) to (408)252-9409.

### Steps to Enable Passwords

Follow these steps to enable passwords on your AlphaSmart.

1. Turn the AlphaSmart on and make sure it is **NOT** connected to a computer.
2. Press the **Control-Option-⌘-P** keys simultaneously to show the Password Enable/Disable screen. The AlphaSmart will display the message:

Password protection is OFF.

Type master password to turn on:\_\_\_\_\_

3. Type in the five-letter master password you obtained from IPD to turn password protection on (to turn it off, follow the same steps). As you type the old password, the password will appear as Xs on your screen. When the password has been entered correctly, the AlphaSmart will display:

Password protection is ON.

Type master password to turn off:\_\_\_\_\_

4. Passwords are now enabled. Press the `esc` key to exit the password screen.

### Steps to Set Individual Passwords

Each of the eight files can have their own unique password. When the password feature is enabled, each individual file password is initially set to “smart”.

If eight different students are to share an AlphaSmart, instruct each student to set their own private password for their own file. Tell them to use “smart” as the old password.

### To change a file's password

1. Turn the AlphaSmart on and make sure it is NOT connected to a computer. Open file x (you might need to enter the password if password protection is on).
2. Press **Option-⌘-P** to show the Change Password Dialog screen. If pressed in file 4, you will see:


Change password for file 4

Old password: \_\_\_\_\_

New password: \_\_\_\_\_

Press `esc` key to exit.

3. First type the old password, which is “smart” if this is the first time. (If you have forgotten the old password, the master password may be entered by the teacher). As you type the old password, Xs will appear for each character. If you type the password incorrectly, the message `Invalid password, please try again` will appear, and you can try again. When you correctly type the old password, your screen will say:



```
Change password for file 4
Old password: XXXXX
New password: _____
Press esc key to exit.
```

4. The cursor will now be in the third row, waiting for you to type in the new password. Any letters or numbers can be used for the password. Unlike the old password, each character of the new password will be displayed as it is typed. *If you don't want anyone to see your password, be sure to type your password in a private location.*

```
Change password for file 4
Old password: XXXXX
New password: abcde
Press esc key to exit.
```

As soon as you type the 5th letter of the new password, you will see the message `Your password has been changed` for a second, and then you will return to the file which you were editing. (Passwords are all lowercase; pressing shift or caps lock has no effect.)

When password protection is enabled, anytime you change files you will be asked for that file's password before being allowed to edit that file. All individual file passwords can be overridden by typing the master password.

If, when turning on the AlphaSmart, you are prompted for the password for a file that isn't yours, simply press the appropriate file number to get your own file and enter the password.

***Note:** This password system was designed to protect against accidental or casual mischievous data loss and to provide a minimum level of data privacy. It is NOT designed to prevent concerted malicious efforts at data destruction. All security systems have ways of being "broken" if you try hard enough. As the old saying goes, "Locks are to keep honest people honest."*

## ■ BATTERIES AND POWER REQUIREMENTS

### Batteries

The AlphaSmart 2000 runs on three AA batteries of the same type (alkaline, carbon, or NiCAD). The longest battery life will be achieved with alkaline batteries. Good quality AA alkaline batteries will power the AlphaSmart for 120–300 hours. (When the AlphaSmart is turned off, no power from the AA batteries is used.)

### Battery Life—Using AA Alkaline Batteries

One of the ways the AlphaSmart obtains such good battery life is by entering a low power Sleep mode that uses much less power when nothing is being typed. When something is typed, the AlphaSmart wakes up, displays and saves the character, and then goes back to sleep—all transparent to the user. If a user is a slow typist or pauses while composing text, that user will get much longer battery life than a user who types 120 wpm all the time. A very slow typist can get over 300 hours of use. The fastest typist with constant use will see 50 hours or more of use. A “typical” user typing at 20 wpm constantly with no breaks will get over 100 hours of use. (The battery life hours mentioned above were measured using high quality Alkaline batteries, Duracell or Panasonic.)

***Battery Life and AlphaSmart 2000 Stacking Note:*** *If AlphaSmart 2000s are stacked on top of each other, AND if the one on top is offset by 1 inch to the front and 1/2 inch to the right, the rubber foot of the one on top may depress the on/off key of the AlphaSmart 2000 on the bottom. Constant depression of the on/off key by the rubber foot of the unit on top will cause a small but constant battery power drain even though nothing is displayed on the screen. Solution: Stack your AlphaSmart 2000s on edge or make sure they are stacked vertically and not offset.*

When replacing batteries all 3 batteries must be changed. If one discharged AA battery is used with 2 new batteries, the user will see a marked reduction in the battery life—4-5 hours will be common—even though 2 out of the 3 are new batteries.

### Rechargeable NiCAD Battery Pack

For convenience, you may purchase an AlphaSmart rechargeable NiCAD battery pack (see the AlphaSmart Accessories section for a complete description). When the rechargeable

NiCAD battery pack is installed into your AlphaSmart, it is automatically recharged whenever the AC adapter is plugged in, or when your AlphaSmart is attached to a Macintosh or PC. The NiCAD battery pack is charged regardless of whether the AlphaSmart is turned on or off.

### Installation

Equipment needed: 1 small phillips screwdriver

To install the NiCAD battery pack:

1. Remove the eight phillips case screws on the back of the AlphaSmart 2000.
2. Turn the unit right side up and lift open the front case.
3. Remove the AA batteries, if any are installed.
4. Place the NiCAD pack in the battery compartment with the wires to the left side of the compartment.
5. Insert the white NiCAD connector into connector J7 on the printed circuit board, just below and to the left of the **tab** key (see Figure 13). The little bump on the connector will be **up**. The connector only goes in one way, so you can't install it wrong. (Connector J7 is partially covered by the keypad; if you can't squeeze your finger under and insert the connector, remove the six screws holding the keypad in place and move the keypad while you insert the connector. Then replace the keypad and its screws.)
6. Replace the top case, turn over, and replace the eight screws.

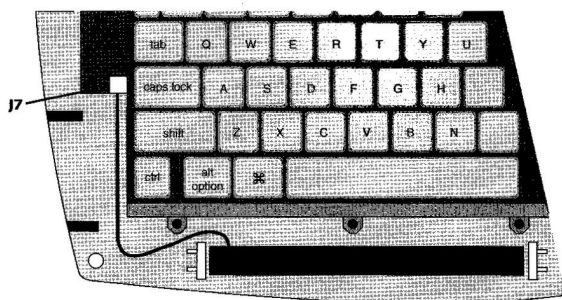


Figure 13. Installing the NiCAD Battery Pack



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## Charging/Discharging

The NiCAD pack is recharged whenever the AC adapter is plugged into the AlphaSmart 2000. The NiCAD will charge whether the AlphaSmart is turned on or off. An overnight charge of 16 hours will fully charge a discharged pack.

You will get the longest life from your NiCAD battery pack if you do shallow discharge/charge cycles. (NiCAD cells have a 500-cycle lifetime if fully discharged and charged, but have over a 1,000-cycle lifetime if the discharge/charge cycles are less than 50% of capacity.) The memory effect will also be avoided if the length of the discharges is somewhat random.

Complete charging of a discharged battery pack takes 16 hours. The best charging strategy is to recharge the NiCAD pack overnight after 8–15 hours (1–3 days) of use. A fully charged NiCAD pack will power the AlphaSmart for 20–50 hours, depending on use.

## Conditioning

***New NiCAD batteries require 3–5 charge/discharge cycles before reaching their full rated capacity. For the longest run time, charge and fully discharge your new battery pack three times to achieve the full rated capacity.***

Fully discharge your NiCAD battery pack by leaving the AlphaSmart turned on until the screen is so dim you can't read it anymore. Do not leave the AlphaSmart turned on past this point, as it may damage the NiCAD cells.

## Re-conditioning


After about 30 charge/discharge cycles, fully discharge your NiCAD battery pack before charging to avoid the ugly memory effect.

## Storage

NiCAD batteries which are not used over time lose their charge and should be recharged before use. Always fully charge your battery before you use it after it has been stored for more than one week at a time.

## Lifetime

Don't expect rechargeable batteries to last forever. Well maintained NiCAD batteries last about 500 charges or about 3 years. If your battery used to last 40 hours but now only lasts 1 hour, it's time for a new battery.



***Note:** If your batteries are dead and you have no AC adapter, you can still send your data to your Macintosh or PC. Simply attach the AlphaSmart to the Macintosh or PC and turn it on. The keyboard cable supplies power to run the AlphaSmart while attached. You can't do any editing, but you can transfer the data in your files.*

### **Toxic Elements Statement**

Each cell is a sealed container enclosing a nickel electrode, a cadmium electrode and potassium hydroxide electrolyte. The electrolyte is caustic. Avoid contact with skin or eyes. If accidentally exposed, flush eyes with water immediately.

Do not incinerate or mutilate the battery, as this may cause it to burst or release toxic materials. Do not short circuit, as this may cause burns. Please dispose in accordance with local, state, and federal regulations.

### **Use of Other Rechargeable Batteries**

Rechargeable NiCAD AA batteries and rechargeable Alkaline AA batteries may be used with the AlphaSmart. However, these batteries must be recharged **outside** the AlphaSmart. Plugging in the AlphaSmart to an AC adapter will not recharge your removable AA batteries—only the AlphaSmart rechargeable pack is recharged by the AC adapter.

***Note:** Many schools have reported better success with rechargeable Alkaline batteries than the NiCAD batteries. The rechargeable Alkaline batteries have 2–3 times the battery life of the NiCAD cell and experience no “memory” problem.*

### **Low Battery Indication**

When your AA batteries or NiCAD battery pack is getting low, a message will flash on your screen:

*Low Battery!!*

The Low Battery message will appear 15 minutes to 1 hour before the batteries are dead.

### **Lithium Battery**

AlphaSmart also uses a secondary backup battery that is not user-accessible. This 3V lithium coin cell battery (CR2032) powers the memory, preventing data loss when the unit is turned off and the primary AA or NiCAD batteries are dead. This lithium battery should be good for approximately

5–10 years. It is mounted in a socket and is replaceable. To determine if the 3V lithium battery has been discharged:

1. Enter some text into the AlphaSmart.
2. Turn the unit off.
3. Remove the AA batteries and make sure the unit is not plugged into the AC adapter or attached to a Macintosh.
4. Wait two minutes.
5. Replace AA batteries or plug into an AC adapter.
6. Turn the unit back on. If the text you entered is still there, then the lithium battery is still good. If the text has disappeared and the screen is blank, then the lithium battery has been discharged and should be replaced.

To replace the lithium battery, you must take the case apart. See the Troubleshooting section for instructions. Please dispose of the discharged lithium battery properly.

## Power

When connecting the AlphaSmart to a computer, do not connect the AC adapter. Using the AC adapter is not necessary as the AlphaSmart will use the power available in the keyboard cable, even if no batteries are installed.

The DC jack input will accept 9V DC with a minimum current rating of 200mA. Off-the-shelf AC adapters may be used at your own risk and should be marked with the ratings as shown in Figure 14. The DC jack polarity is negative (grounded) on the outside and positive in the middle.



Figure 14. DC Jack Polarity

Full testing was done with the AC adapter from Intelligent Peripheral Devices and use with any other AC adapter is not guaranteed. If damage occurs because of use with another AC/DC adapter, repair is not covered under the warranty.





## Radio and Television Interference

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 instruction manual, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

***Note:** Use of shielded power and interface cables with this equipment is required in order to ensure compliance with FCC specifications.*

***Caution:** Changes or modifications to this equipment not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.*

## ■ TROUBLESHOOTING

The following is a list of difficulties you may encounter while using AlphaSmart, and the solutions to these common problems.



***When a file is transferred to the Macintosh, some of the characters do not show up or appear not to have transferred.***

- Disconnect the AlphaSmart from the Macintosh and check the file transfer speed by pressing **Option-⌘-S**. Reset the AlphaSmart to a slower setting (speed 1 is the slowest).
- Try using a different word processing program. Some programs allow the AlphaSmart to transfer data faster than others. (ClarisWorks allows faster sends than MS Works and MS Word.)
- Adjust the keyboard control panel in the Macintosh system to a faster speed to maximize the file transfer speed.
- If the characters transferred are the wrong characters, e.g. you type an "A" but get something else and you are sending to a PC, then the PC probably doesn't support "hot swapping." See the section "PC Hot-Swapping" for details on how to get around this.

***My PC beeps at me when I send text to it.***

- Make sure you have a word processor file open on the PC.
- Try changing to a lower send speed by disconnecting the AlphaSmart and pressing **Option-⌘-S**.


***When I transfer text to my PC, only the first one or two characters of my text show up.***

- Make sure your regular PC keyboard isn't connected. Disconnect your keyboard and try resending your text.

***Nothing appears on the AlphaSmart screen when I turn it on.***

- Check your batteries. Plug your AlphaSmart into the AC adapter—if it turns on, your batteries are discharged or have been improperly inserted. Make sure the batteries are oriented as indicated in the battery cavity.
- If the screen is blank, except for a flashing cursor in the upper left corner of the screen, then you are simply in an empty file. Start typing and characters should appear on your screen.

---



*When I attach my AlphaSmart to my computer, I can't send any data and my AlphaSmart screen shows my file instead of the "Attached to..." message.*

- Check the cable connections. One may be loose.
- Check each end of the cable for bent or broken pins.

*Note: We suggest having a few spare cables on hand. Schools have told us that the younger the student, the more often the pins will get bent.*

*When I start up the AlphaSmart, I see something other than the file that I expected.*

- Make sure you are in the correct file. AlphaSmart supports eight different files. To change files, press F1 to go to file 1, F2 to go to file 2, and so on.


*I try to type into a file, but no characters show up.*

- If the file looks empty, press the **Clear File** key to make sure the file is erased. Then try typing again. (Sometimes the file recovery command **Option-⌘-R** gets hit by mistake, filling up the file so that you can't type any more into it. See the Data Recovery section for more details.)
- If you can't see the cursor on the screen, then your batteries may be too low. Check your batteries or plug in your AC adapter.

*My file is full of garbage/The end of my file is full of garbage.*

- If you have no useful text in the file, just press the **Clear File** key to erase the entire file.
- If you have some data you would like to save, go to where the garbage characters start and press **⌘-delete** to delete from the cursor to the end of the file.
- Send the file, abort when garbage shows up.

*When the AlphaSmart is attached to my PC, and I type a "Q", the letters "yy" show up on my screen. When I type a "P", the numbers "66" show up.*



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This computer can't be hot swapped. To use the AlphaSmart with this computer, make sure that the AlphaSmart is attached and turned on when you boot your PC. See the section "PC Hot Swapping" for more details.

***When I transfer text to my PC, the case of the characters is reversed; all the lowercase characters show up as uppercase, and the uppercase characters show up as lowercase.***

What has happened is that the caps lock key was pressed when the PC keyboard was disconnected. The computer remembers that the caps lock is on and does the case reversal. To fix it, simply press the caps lock key once either on the normal PC keyboard or on the AlphaSmart when it is attached to the PC (when the AlphaSmart is attached to the PC, it functions as a normal keyboard). Before sending from the AlphaSmart, it is often a good idea to try typing a few characters from the AlphaSmart keyboard to see if it transfers correctly to the PC screen. If not, press the AlphaSmart caps lock key once to fix it, and then type a few keys to verify that it is now correct.

***It doesn't save when I turn it off or I see a "Signature not found" and "Testing RAM" message when I turn it on.***

The internal Lithium battery has probably become dislodged. If the AlphaSmart rattles when you shake it, then this is definitely the problem. To fix it:

1. Turn the AlphaSmart off.
2. Take the 8 screws off the back with a Phillips screwdriver.
3. Flip the unit over and carefully open the case by lifting the front of the top case, taking care not to disconnect the LCD cable.
4. With the unit open, the top case laying back, prevent static discharge damage by touching one of the metal connector cubes on the upper right side of the keyboard with your bare finger.
5. Locate the Lithium battery, it's a silver-colored coin cell battery about the size of a nickel. The socket for the battery is in the upper-right corner of the printed circuit



board when the keyboard is in front of you.

6. Replace the Lithium battery, making sure the flat, plus (+) side is up, slipping the battery under the metal clip.
7. Flip the lid closed and test to see if it saves data now by turning the AlphaSmart on (you should see a Testing RAM message the first time you turn it back on). Type something in the file, then turn the AlphaSmart off for more than 60 seconds. Turn the AlphaSmart on and it's fixed, your data should still be there and you shouldn't see the Testing RAM message.
8. Replace the screws. (Check and make sure the two keyboard cables are not pinched between the case and the keyboard when you replace the lid.)

## ■ FREQUENTLY ASKED QUESTIONS

### **How can I change the transfer speed?**

When disconnected from the computer, press **Option-⌘-S** and change the speed as desired. For details, please see the section "Changing the Transfer Speed". For Macs, there is another option, TurboTransfer Software, that speeds up the transfer speed by a factor of six. Please see the "TurboTransfer Software" section for more details.

### **If my AlphaSmart does not work properly, what should I do?**

See the "Return Procedures" section for details.

### **If I accidentally erased or cleared my file, can I recover it?**


Yes!! Press **Option-⌘-R**. For details, please see the "Data Recovery" section.

### **Is there a way for me to send text from my computer back down to the AlphaSmart?**

Yes, this is the function of the AlphaSmart Get Utility software. It is available for both Mac and Windows machines. It is not available for DOS.

### **Can I have my questions answered by e-mail?**

Yes! Actually, e-mail is the fastest and most reliable way to get questions answered. Simply send your questions to [support@alphasmart.com](mailto:support@alphasmart.com). You may also be interested in



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browsing our home page, <http://www.alphasmart.com>, where we have a complete service manual and technical guide published, as well as the current price sheet and troubleshooting tips.

**Does the AlphaSmart 2000 (and the AlphaSmart) work with the Apple IIGS?**

Yes.

**When the AlphaSmart is connected to the computer, how can I change files without having to disconnect the cable?**

For the Mac, press **Option-⌘-F1** to go to file 1, **Option-⌘-F2** to go to file 2, and so on. For the PC, press just **⌘-F1** to go to file 1, **⌘-F2** to go to file 2, and so on.

**Is it OK to connect/disconnect the keyboard cable when the computer is ON?**

**Macintosh:** Yes—we have specifically tested this. For details, please see the section “Concerns About ADB Live Connect/Disconnect”.

**PC:** Yes—most PCs allow connecting/disconnecting the keyboard while the computer is on. Some PCs, however, have a security feature where they detect a keyboard being swapped and then lock up, preventing any unauthorized access. To regain use of this type of PC, it must be rebooted. However, physical damage will not occur on any machine because the keyboard interface is an open-collector type. See the “PC Hot-Swapping” section for more details.

**What is TurboTransfer Software?**

It is an extension that is available for Macs only (loaded into the Mac system), that speeds up the transfer speed by a factor of six. For more details, please see the TurboTransfer section.

**Is there a Y cable for PCs?**

Yes. Please refer to page 15 for more information.

**How do I order an AlphaSmart or other products?**

AlphaSmarts may be ordered from your local dealer or one of our distributors. See our web page at <http://www.alphasmart.com> for a list of local distributors and 1-800 catalog phone numbers.



You may also order directly from us. IPD accepts school purchase orders by fax or mail. You may also order by telephone using VISA/MasterCard, or by sending a personal check. The product will usually be delivered within four weeks after we have received your order. Our address is:

Intelligent Peripheral Devices, Inc.  
20380 Town Center Lane, #270  
Cupertino, CA 95014  
Phone: (888) 274-0680  
Fax: (408) 252-9409  
E-mail: [info@alphasmart.com](mailto:info@alphasmart.com)  
<http://www.alphasmart.com>

## ■ MONEY BACK GUARANTEE RETURN PROCEDURES AND RESTRICTIONS

When you have a problem with your AlphaSmart, first read the Troubleshooting and Frequently Asked Questions sections in this manual. If this doesn't solve your problems, then:

1. Call the business which sold you the AlphaSmart, e-mail IPD at [support@alphasmart.com](mailto:support@alphasmart.com), or call AlphaSmart Service toll-free at (888) 274-2720. 80 percent of all problems can be solved by e-mail or over the phone.
2. If the unit does need to be returned to the factory for repair, ***it MUST be assigned an RMA (Return Material Authorization) number before it is returned.*** To receive an RMA number, call IPD at 888-274-2720 or e-mail [support@alphasmart.com](mailto:support@alphasmart.com) with the following information:
  - a. a detailed description of the problem.
  - b. the serial number of the unit.
  - c. your name and the address to which the unit should be returned.

If you don't have e-mail, you may fax the above information to (408) 252-9409—and be sure to include your fax number. You may also call (888) 274-2720.

This information is put into IPD's RMA database used to track returns. **Only the IPD office can assign RMA numbers.**



If an AlphaSmart is returned without an RMA number, it will delay its repair and increase the chance that it can become "lost." Please ensure that you ship the AlphaSmart with a reliable shipper. IPD will not be held responsible for units that are lost (in shipment from a customer), or that are returned without an RMA number.

3. **Write the RMA number on the outside of the box**, and on the inside—tape a short, detailed note to each AlphaSmart explaining the problem (include the RMA number on each note).
4. Ship the damaged AlphaSmart to the address given when you receive your RMA number. **You will be sending the AlphaSmart to a repair center, not the IPD office.**

Your repaired AlphaSmart will be returned to you within two weeks of receipt.

If damages are due to accident or abuse, then you will be charged for the parts replaced and repair handling fee.

IPD will refund your money in full (less original shipping charges) if the items are returned in mint condition within 30 days of customer receipt of items.

## ■ ALPHASMART ACCESSORIES

To make your AlphaSmart even more useful and convenient to use, Intelligent Peripheral Devices, Inc. offers several accessories, some of which you may have received with your AlphaSmart. See your dealer for information on pricing and bundling.

### **AC Adapter**

This allows the AlphaSmart to be used when its batteries are either discharged or not available. It is also used to charge the NiCAD Rechargeable Battery Pack, when it is installed in an AlphaSmart.

### **Carrying Case**

This black denier polyester carrying case protects the AlphaSmart from damage during moving or storage. It has a shoulder strap and a small handle for carrying convenience.





### **Mac “Y” Cable**

This cable streamlines the process of connecting the AlphaSmart to your Macintosh by making it unnecessary to disconnect the Macintosh keyboard every time you want to transfer a file. See the section *Installing the Mac “Y” Cable* for more information.

The Mac “Y” cable is required when connecting to a Macintosh with an “Apple Design Keyboard,” model #M2980, since this keyboard has an attached ADB cable and only one ADB connector.

### **PC “Y” Cable**

A special cable that allows you to connect an AlphaSmart and a PC keyboard to a PC at the same time.

### **PC Dual Cable**

A special adapter cable that connects an AlphaSmart to a PC. The PC Dual cable allows an AlphaSmart to be attached to either a 5-pin or 6-pin Mini-DIN PC.

### **NiCAD Rechargeable Battery Pack**

This pack eliminates the need to buy batteries. It is installed in the battery compartment and replaces the three AA batteries. With normal use, you will need to recharge the battery pack only once a week, using the AC adapter described above. When the AlphaSmart is either plugged into the AC adapter or attached to the Macintosh, it is recharging the battery pack.


## **■ TURBOTRANSFER SOFTWARE**

### **For the Macintosh, Version 1.2**

TurboTransfer Software provides a simple way to speed up the data transfer rate between your AlphaSmart 2000 and your Macintosh. Typically, you should notice your transfer speed increase by six times when using TurboTransfer Software.

### **Installation**

1. Drag the Extension titled “TurboTransfer 1.2” from the TurboTransfer software disk into the System folder on your Macintosh.



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2. System 7 users will see the following message:

*Extensions need to be stored in the Extensions folder in order to be available to the Macintosh. Put "TurboTransfer 1.x" into the Extensions folder?*

Click the "OK" button. If you are a System 6.x user, treat this as an INIT file and place it in your System folder.

3. **Restart the Macintosh** with the AlphaSmart disconnected in order to load the extension. Now you are ready to download at turbo speeds!

To deactivate this extension, simply drag it out of the Extensions folder (within the System folder) onto the desktop and **restart the computer**.

### **Tips for Using TurboTransfer with Different Applications**

TurboTransfer works by reading the file into the Macintosh Clipboard and then issuing a paste command. Wherever the cursor is when the **Send** key is pressed is where the file will be pasted. (Since the Macintosh Clipboard can only have one item residing at a time, whatever was in the Clipboard before the transfer will be lost, and the last transferred file will now reside in the Clipboard.)

#### **Word Processors**

Try sending to different applications. Some applications will transfer faster than others. For example: Sending a 10K or five-page file to MacWrite II, ClarisWorks or SimpleText takes only 55 seconds. But transferring the same file to MSWorks takes five minutes (one minute to transfer, four minutes to paste into the application).

#### **Spreadsheets**

TurboTransfer lets you directly transfer columns and rows of numbers into spreadsheet applications. Simply put the cursor in the upper left-most cell in the file (or wherever you would like to start) and press the **Send** key. Make sure your numbers or other items are separated by tabs (shown by a right arrow) on the AlphaSmart.

**Note:** *Without TurboTransfer on the AlphaSmart, you would need to transfer the data to a word processing application first, then cut and paste the information into a spreadsheet program.*



## Compatible Applications

ClarisWorks v4.0.4	MS Works v2.0 (see Note B)
MS Word v6.0 (see Note C)	SimpleText v1.0
TeachText v7.1	MacWrite II v1.1.3 (see Note A)
AppleLink v6.1	Excel v5.0
MacDraw II v1.1	Canvas v2.1
HyperCard v2.2	HyperStudio

TurboTransfer is NOT compatible with NotePad (found under the Apple menu).

## Troubleshooting Notes

- A. If you observe the previous contents of the Clipboard showing up in your document instead of the AlphaSmart file, try one of these solutions:
1. Press **⌘-Z** twice, or
  2. Press **⌘-P** to paste the AlphaSmart file, or
  3. Press **Send** again on your AlphaSmart.
- B. Transferring files to MSWorks takes longer than with other programs like ClarisWorks. This is a problem with MSWorks—all pastes take longer, regardless of whether it is TurboTransfer or the user doing the paste.
- C. If the Clipboard is empty when MSWord starts up—such as when you first start your Macintosh—all you will get is a “Beep” when you try to transfer from the AlphaSmart. This happens when the Paste command is disabled—a bug in how MSWord handles the Clipboard when it is empty.

To solve this, copy something into the Clipboard before you launch MSWord. An easy fix is to go to the Scrapbook under the Apple menu and copy (**⌘-C**) anything there.


You can also try the transfer (nothing happens), quit out of MSWord, then relaunch the application. The transfer will now work!

## TurboTransfer Times\*

16 pages (32K) or entire contents of File 1: 2 minutes and 5 seconds (Without TurboTransfer, 13 minutes).

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\*Test performed using ClarisWorks running on a Power Mac 6100/60/System 7.5.



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8 page file, or Files 2–6: 1 minute and 5 seconds.

With TurboTransfer: 8 pages per minute.

Without TurboTransfer: 1.25 pages per minute.

### **Notes**

1. Installing TurboTransfer in your System Folder increases the amount of RAM used by your System by 32K.
2. If you do not want the Extension/INIT to install, hold down the mouse button while restarting your Mac. This is especially useful if your Macintosh is crashing while the INIT/Extension is installed.
3. If you press the Send key and hear one or two beeps, then the transfer has failed. In this case, while the AlphaSmart is attached to the Macintosh, turn the AlphaSmart off and then on, and try the transfer again. Please note the circumstances that caused the beeps and see if you can easily reproduce it.

## **■ GET UTILITY SOFTWARE**

Get Utility is a software utility application that allows you to transfer text from a Mac, or a PC running Windows to an AlphaSmart keyboard. The program transfers the current contents of the Mac or PC Clipboard to a designated file on an AlphaSmart. (The Clipboard is a memory buffer that allows you to transfer information between different programs. Most Mac and PC applications support copying to the Clipboard)

Get Utility software is useful for downloading files from the computer to the AlphaSmart such as instructions, tests or templates.

Get Utility can transfer text by using a cable or wireless infrared transfer from a Mac or a PC. An IrDA\* option is only available for the AlphaSmart 2000.

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\*IrDA is a wireless method of transferring data between computer devices.

**Note:** For the sake of simplicity, the term “IR” is used to represent wireless infrared transfer.

### Get Utility for Mac v2.0

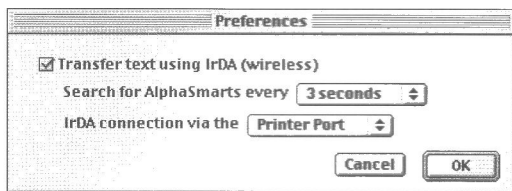
The Get Utility for Mac v2.0 is a software utility program that allows the user to send text between a Mac and an AlphaSmart, AlphaSmart Pro, or AlphaSmart 2000.

You can send text to an AlphaSmart, from your Mac, either by using an ADB “Y” cable or wireless infrared transfer if your AlphaSmart is equipped with an IrDA module.

### Using Get Utility on a Mac

To install Get Utility on a Mac:

1. Insert the disk into drive, and start the Installer program by double clicking on it.
2. The Installer will place the program in the folder that you select.
3. Once the installation is finished, double click on the program.
4. The Preferences window will be displayed the first time that you select the program. If you are not using wireless infrared transfer press **Cancel**.



**Figure 16. Preferences window**

### Sending text to an AlphaSmart using an ADB “Y” Cable

To send text to an AlphaSmart from your Mac via the ADB Y cable:

1. Open your file or text you wish to send on the Mac, highlight the text with the mouse and select **Copy** from the Edit Menu (**⌘-C**).

2. Turn on the AlphaSmart and select the file where you would like the text transferred. There is a pop-up file menu in Get Utility that can also be used to select the AlphaSmart file.
3. Attach the AlphaSmart to your Mac via the ADB port using the ADB Y cable (either plug in the AlphaSmart instead of your keyboard or attach to the ADB Y cable).
4. Run Get Utility by double clicking on its icon on the Mac. You should see the text you copied displayed in the "Clipboard Contents" window.
5. Press the **Scan or Scan for Cable Connected AlphaSmart** button so that the Mac verifies that an AlphaSmart is attached.
6. Press the **Send Text to AlphaSmart** button to send the text from the Mac to the AlphaSmart. The Clipboard text is sent to the current file on the AlphaSmart. If you are using a newer AlphaSmart (AlphaSmart 2000, AlphaSmart with ROM v1.08 or newer, or an AlphaSmart Pro with ROM v2.05 or newer), you can change to a new AlphaSmart file with a pop-up menu on the computer screen. If you are downloading to an older AlphaSmart, you will need to press **⌘-option-F2** to go to File 2, **⌘-option-F3** to go to File 3, and so forth.

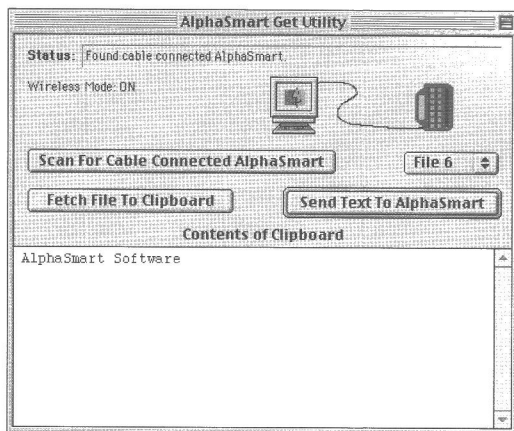


Figure 17. AlphaSmart Get Utility



7. Disconnect your AlphaSmart when the transfer is finished.
8. To download to other AlphaSmarts, it is not necessary to quit Get Utility and rerun it. Simply attach the new AlphaSmart and press the Scan or Scan for Cable Connected AlphaSmart button before downloading.

### ***Explanation of Controls***

- **Scan or Scan for Cable Connected AlphaSmart:** This button initiates a search for ADB connected AlphaSmarts.
- **Send Text To AlphaSmart:** This button initiates the sending of data to the AlphaSmart using either ADB or IrDA.
- **Fetch File To Clipboard:** This button initiates the fetching of data to go from the an AlphaSmart to a Mac using either ADB or IrDA.
- **AlphaSmart file #: \_\_:** This pop-up menu allows the user to change the current file on the AlphaSmart.

### **Get Utility for PC v2.0**

Get Utility for PC v2.0 is a software utility application that allows the user to send text from a PC running Windows 3.1, Windows 95 and Windows NT to an AlphaSmart 2000 or an AlphaSmart Pro version 2.09, or version 2.1.3 or newer (not to version 2.1 or 2.1.2\*). The program transfers the current contents of the Windows Clipboard to an attached AlphaSmart. (The Clipboard is a memory buffer that allow transfer of information between different programs.)

You can send text to an AlphaSmart, from your PC, either via a PC "Y" cable, PC Dual cable or via wireless infrared transfer, if your AlphaSmart is equipped with a built-in IrDA transceiver.

This version of the program does not support DOS.

### ***Installing Get Utility on a PC***

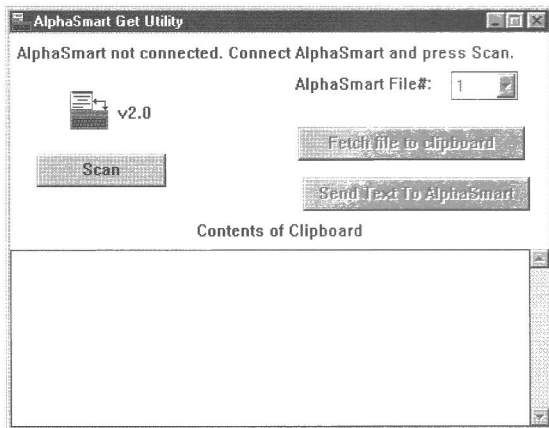
To install Get Utility for PC, using the PC "Y" cable:

1. Insert floppy disk into drive.
2. From the Windows File menu, select **Run**.

3. the command line box enter **a:\SETUP** where a is the drive letter of the floppy drive.
4. When the **install** dialog comes up, select a location for the Get Utility and press the Install button. The default directory is usually OK.

### ***Sending text to an AlphaSmart from a PC***

1. Copy the text into the PC Clipboard. Most Windows applications support copying to the Clipboard.
2. Open your file or text you wish to send, highlight it with the mouse, and select **Copy** (Ctrl-C) from the Edit menu.
3. Attach the AlphaSmart to your PC via the keyboard port. If using a PC Dual cable, unplug your normal keyboard, then connect your AlphaSmart. If using the PC "Y" cable, you do not need to disconnect your keyboard.
4. Run Get Utility (double click on its icon). You should see the text you copied displayed in the "Clipboard Contents" window.



**Figure 18. Get Utility for PC**

5. Press the **Scan** button so that the PC verifies that an AlphaSmart is attached.
6. Press the **Send Text To AlphaSmart** button to send the text from the PC to the AlphaSmart. The Clipboard text is sent to the current file on the AlphaSmart. You may change the AlphaSmart file by selecting a file on the file pop-up menu.





7. You may now disconnect your AlphaSmart and reconnect your normal PC keyboard.

To download to other AlphaSmarts, it is not necessary to quit Get Utility and rerun it. Simply attach the new AlphaSmart and press the Scan button before downloading.

## ■ INFRARED TRANSFER TO AND FROM AN ALPHASMART 2000

With the AlphaSmart 2000's IrDA capabilities, you will be able to send text via wireless infrared transfer to any Mac, PC or printer. The infrared transfer uses the same patented one button send and print functions as AlphaSmarts connected by cable to the computer or printer. To enable the AlphaSmart 2000 to send text via wireless infrared transfer, the AlphaSmart 2000 must be fitted with an IrDA module.

Simply launch AlphaBeam™ software, then open your favorite application (for example a word processor, multimedia or presentation software), point the AlphaSmart 2000 at the pod/transceiver and hit the "Send" key. Text will automatically be transferred to the open application. The AlphaSmart 2000 can be up to three feet (1 meter) away to transfer text to and from a computer.

Printing just got easier. For those printers that have a built-in IrDA transceiver, simply point the AlphaSmart at the printer, and hit the "Print" key.

There is also a new version of Get Utility v2.0 for Mac and PC allowing text to be sent from a computer to the AlphaSmart via wireless infrared transfer.

*Note: If the computer or printer does not have a built-in IrDA transceiver, you need to purchase an IrDA wireless pod for Mac or PC from IPD, Inc. For a list of companies that make the printer pods, please see our web site [www.alphasmart.com](http://www.alphasmart.com).*

### AlphaBeam for Mac v1.0

The AlphaBeam for Mac v1.0 is a software program that allows the user to send text to a Mac, that is equipped with a built-in IrDA transceiver or a wireless pod, from an AlphaSmart 2000 equipped with the optional IrDA module.

The program can insert the text from the AlphaSmart into any Mac program that allows text input.

Some of the Macs that are equipped with a built-in IrDA transceiver are iMacs, Powerbook 3400C, Powerbook G3, etc.

*Note: If the Mac does not have a built-in IrDA transceiver, you need to purchase an IrDA wireless pod for Mac from IPD, Inc.*

### **Installation Instructions:**

If the computer has a built-in IrDA transceiver, then go to Step 3.

1. Plug the IrDA wireless pod for Mac into a serial port (Modem or Printer) on the Mac.
2. Be sure and note which serial port the wireless pod for Mac is plugged into.
3. Insert the disk into drive, and start the Installer by double clicking on it.
4. The Installer will place the program in the folder that you select.
5. Once the installation is finished double click on the program.
6. The Preferences window will be displayed the first time that you select the program.
7. In the Preferences dialog click on the **Receive text using IrDA Wireless** checkbox and then select the correct port (modem, printer or built-in IrDA) that you plugged the IrDA wireless pod for Mac into. The frequency at which to look for IrDA AlphaSmarts can be adjusted, but the default selection of 3 seconds is adequate. Select OK and then the program will look for IrDA AlphaSmarts. These settings will be saved so that the next time you start the program you will not need to go into the Preferences.

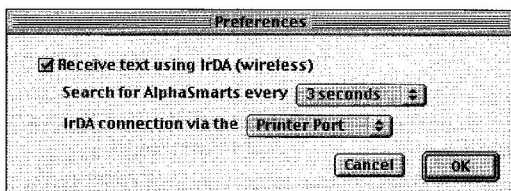
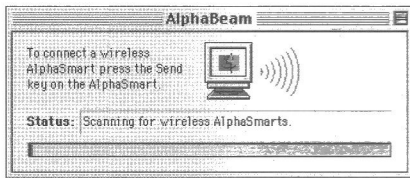


Figure 19. IrDA Preferences for AlphaBeam

### ***Sending text from an AlphaSmart to a Mac***

1. Open the program that you want to transfer the AlphaSmart file into.
2. Turn on the AlphaSmart and open the file you want to transfer to the Mac.
3. Point the AlphaSmart at the IrDA wireless pod for Mac and press the **Send** key on the AlphaSmart. The screen on the AlphaSmart should display the message "Connecting to IR Get Utility. Press esc to exit. Sending File x".
4. No text will show up in the program window until the file transfer is complete then the entire text will be pasted into the active program.



**Figure 20. AlphaBeam for Mac**

To send another AlphaSmart file to the Mac, it is not necessary to quit AlphaBeam and rerun it, just return to step 3.

### ***Tips on using AlphaBeam***

For Macs that have a built-in IrDA transceiver, make sure that the Infrared Control Panel has been set to IrDA.

The text from the AlphaSmart will be pasted in the active program or application on the computer. If AlphaBeam is the front most program then the text from the AlphaSmart will be placed in the Clipboard. In order to see the text, you must open another program and do a Paste which will place the Clipboard contents into your program.

You can arrange your windows so that when AlphaBeam is in the background (not the active program) you can watch the progress indicator show how the transfer is progressing.



## **AlphaBeam™ for PC v1.0**

AlphaBeam™ for PC v1.0 is a software program that allows the user to send text to a PC, that is equipped with a built-in IrDA transceiver or a wireless pod, from an AlphaSmart 2000 equipped with the optional IrDA module. Your PC must be running Windows 95 or Windows 98. The program transfers the contents of the open file on the AlphaSmart into the Windows Clipboard and to the user's word processor if it is running.

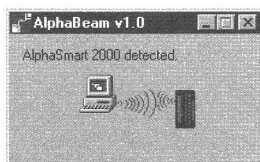
This version of the program does not support DOS, Windows 3.1 or Windows NT.

### ***Installing AlphaBeam for PC***

1. Plug IrDA wireless pod for PC into a COM port on the PC. A COM port is either a 9 pin or 25 pin male DB connector. Be sure and note which COM port the wireless pod for PC is plugged into. (ie. COM1 COM2 etc.)
2. Insert floppy disk into drive.
3. Select **Run**, from the Windows File menu or the Start Menu in Windows 95.
4. In the command line box enter: **a:\SETUP** where "a" is the drive letter of the floppy drive.
5. During the setup you will be asked which COM port the IrDA wireless pod for PC is plugged into. You will also be asked to set up a simulated COM port. The program selects a valid COM port and all you have to do is press the **Next** button.

### ***Sending text from an AlphaSmart to a PC***

1. Run AlphaBeam for PC (double click on its icon). At this point AlphaBeam will begin scanning for IR enabled AlphaSmarts.
2. Point the AlphaSmart at the IrDA wireless pod for PC and press the **Send** button.
3. The AlphaSmart will display the message " Connecting to computer (wireless mode). Press **esc** to exit. Sending File x."



**Figure 21. AlphaBeam for PC**

4. After a few seconds, AlphaBeam will show that an AlphaSmart has been found.
5. At this point the AlphaSmart will begin sending its file to the PC. After the send is completed, AlphaBeam will put the contents of the file onto the Clipboard and issue a paste command. If a word processor is open and is the top window, the contents of the file will be pasted into it.
6. After the send the AlphaSmart will be disconnected from the PC. You may then resend the same file by pressing the **Send** key again or you may open up a new file and send it, or bring up another AlphaSmart and send its file.

### **IR Get Utility for Mac v2.0**


Mac IR Get Utility is a software utility application that allows the user to send text from a Mac to an AlphaSmart 2000. The program transfers the current contents of the Clipboard to an attached AlphaSmart via wireless infrared transfer.

***Note:** Make sure that you quit AlphaBeam if it is running in the background before launching Get Utility for Mac.*

### **Installing Get Utility for Mac using IrDA transfers**

If your computer has a built-in IrDA transceiver, then go to Step 3 of the instructions.

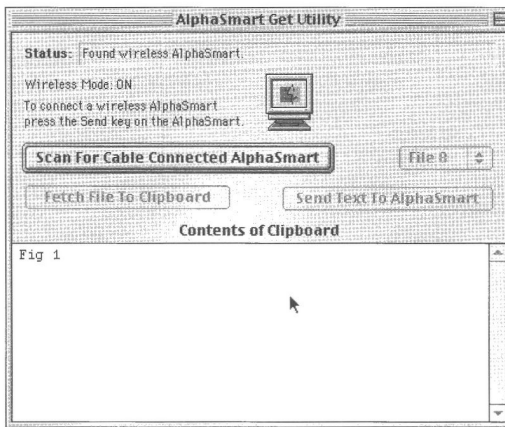
1. Plug IrDA wireless pod for Mac into a serial port (Modem or Printer) on the Mac.
2. Be sure and note which serial port the wireless pod for Mac is plugged into.
3. Insert the disk into drive and start the Installer by double clicking on it.

- 
4. The Installer will place the program in the folder that you select.
  5. Once the installation is finished, double click on the program.
  6. You will need to select the Preferences menu item under the Edit menu.
  7. In the Preferences dialog, click on the **Transfer text via IrDA wireless** checkbox and then select the correct port (modem, printer or built-in IrDA) that you plugged the IrDA wireless pod for Mac into. The frequency at which to look for IrDA AlphaSmarts can be adjusted, but the default selection of 3 seconds is adequate. Select OK and then the program will start looking for IrDA AlphaSmarts. These settings will be saved so that the next time you start the program you will not need to go into the Preferences.

Keep in mind that even though you have enabled IrDA transfers you can still transfer text using ADB cable connection. You do not need to turn off IrDA transfers before using the Mac "Y" cable. But once you have connected via a cable, you will need to press the Scan for cable connected AlphaSmart to transfer via wireless mode again

### ***Transferring text to the AlphaSmart***

1. Open your file or text you wish to send on the Mac, highlight the text with the mouse and select **Copy** from the Edit Menu (⌘-C).
2. Switch back to the Get Utility and you should see the text you copied displayed in the "Contents of Clipboard" window.
3. Now you need to attach the AlphaSmart to the Mac. Point the AlphaSmart at the IrDA wireless pod for Mac and press the Send key on the AlphaSmart. The screen on the AlphaSmart should display the message "Connecting to IR Get Utility. Press esc to exit. Sending File x".
4. You should see the picture in the program's window change to a picture that shows how your AlphaSmart is "attached".



**Figure 22. AlphaSmart Get Utility for IrDA wireless**

5. Select the file on the AlphaSmart, from the pop-up menu, you want to send the text to.
6. Press the **Send Text To AlphaSmart** button to send the text from the Mac to the AlphaSmart. The Clipboard text is sent to the current file on the AlphaSmart.
7. You may now disconnect your AlphaSmart by either pressing the **esc** key on the AlphaSmart or simply taking it away from the Mac.

To download to other AlphaSmarts, it is not necessary to quit Get Utility and rerun it, just return to step 4.


If you want to Fetch text from the AlphaSmart to send to a Mac just select the file using the pop-up menu and then press the “Fetch To Clipboard” button on the program’s window.

### ***Tips on using Get Utility for Mac***

For Macs that have a built-in IrDA transceiver, make sure that the infrared control panel has been set to IrDA.

### ***Explanation of Controls***

- **Scan for Cable Connected AlphaSmart:** This button initiates a search for ADB connected AlphaSmarts.
- **Send Text To AlphaSmart:** This button initiates the sending of data to the AlphaSmart using either ADB or IrDA.

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- **Fetch File To Clipboard:** This button initiates the fetching of data to go from the an AlphaSmart to a Mac using either ADB or IrDA.
  - **AlphaSmart file #: \_\_:** This pop-up menu allows the user to change the current file on the AlphaSmart.

### **PC IR Get Utility v2.0**

PC IR Get Utility v2.0 is a software utility application that allows the user to send text from a PC, with a built-in IrDA transceiver, running Windows 95 to an AlphaSmart 2000. The program transfers the current contents of the Windows Clipboard to an attached AlphaSmart via wireless infrared transfer.

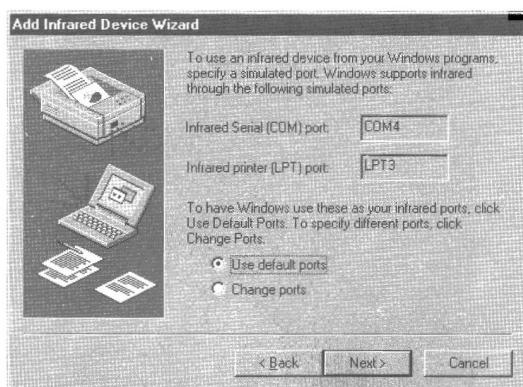
This version of the program does not support DOS, Windows 3.1 or Windows NT.

### ***Installing IR Get Utility for PC***

If your PC has a built-in IrDA transceiver, then got to Step 2.

1. Plug IrDA wireless pod for PC into a COM port on the PC. A COM port is either a 9-pin or 25-pin male DB connector. Be sure and note which COM port the wireless pod for PC is plugged into. (ie. COM1 COM2 etc.)
2. Insert floppy disk into drive.
3. Select **Run** from the Windows File menu or the Start Menu in Windows 95.
4. In the command line box enter **a:\SETUP** where "a" is the drive letter of the floppy drive.
5. During the setup you will be asked which COM port the wireless pod for PC is plugged into. You will also be asked to set up a simulated COM port. The program selects a valid COM port and all you have to do is press the **Next** button.





**Figure 23. Installing IR Get Utility for PC**

### ***Sending text to an AlphaSmart from a PC***

1. Copy the text into the PC Clipboard. To do this, open the file or text you wish to send, highlight it with the mouse, and select **Copy** (Ctrl-C) from the Edit menu. (The Clipboard is a memory buffer that allows you to transfer information between different programs. Most Windows applications support copying to the Clipboard)
2. **Run IR Get Utility for PC** (double click on its icon). You should see the text you copied displayed in the "Clipboard Contents" window. At this point the IR Get Utility will begin scanning for IR enabled AlphaSmarts.
3. Point the AlphaSmart at the IrDA wireless pod for PC and press the **Send text to AlphaSmart** button. The AlphaSmart will display the message "Connecting to IR Get Utility. Press esc to exit. Sending File x". After a few seconds, the IR Get Utility will show that an AlphaSmart has been found.
4. Select the file on the AlphaSmart, from the pop-up menu, you would like to send the text to. Press the **Send Text** button to transfer the text from the PC to the AlphaSmart. The Clipboard text is sent to the file that you selected on the AlphaSmart. You may now disconnect your AlphaSmart by either pressing the **esc** key on the AlphaSmart or simply taking it away from the PC.

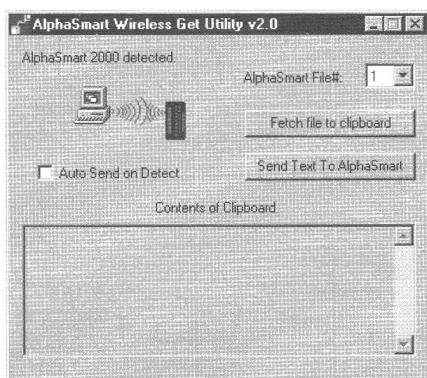


Figure 24. IR Get Utility for PC

To download to other AlphaSmarts, it is not necessary to quit Get Utility and rerun it, just return to step 3.


#### **IR Get Utility Controls**

- **Send text to AlphaSmart:** This button initiates the sending of data to the AlphaSmart.
- **Fetch file to Clipboard:** This button initiates the sending of data from the AlphaSmart to the PC.
- **AlphaSmart file #: \_:** This pop-up menu allows the user to change the current file on the AlphaSmart.
- **Auto Send on Detect:** If this check box is checked, the AlphaSmart will automatically send its current file to the PC when it is detected by the PC. If your word processor is running in the foreground the file will also be automatically pasted into it.

#### **■ SAFETY GUIDELINES**

**Warning:** Please be aware that there may be a risk of physical injury due to improper use of your AlphaSmart 2000. In order to help reduce this risk of physical injury, read and follow the instructions contained in this section.

Although a matter of some debate, there are studies that suggest the following may be responsible for certain physical



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injuries: Typing for extended periods, improper positioning of your body while using your AlphaSmart 2000, poor work habits, and/or individual health problems. Physical injuries could include carpal tunnel syndrome, tendonitis, and tenosynovitis. The warning signs of these injuries often occur after some injury has been suffered.

The following may be symptomatic of this type of physical injury:

- Lack of feeling in the area
- A hot, burning feeling inside the area
- Tingling
- Throbbing
- Stiffness and/or aching

In particular, watch for these symptoms in the hands, wrists, arms or neck. These symptoms may not occur during your use of the AlphaSmart 2000, or occur during times when work has not been performed for some time. In the event that these symptoms occur or you experience any other physical difficulties (including pain, stiffness or aching) that you think may be related, you should promptly contact your doctor.

The remainder of this section provides further safety information and advice about setting up your workstation, using proper posture, and proper work habits.

### **Work Environment**


Several factors may affect your ability to work in a comfortable and productive environment. By following the recommendations described below, it should help you achieve such an environment and minimize the risk of physical stress that may cause injury.

### **Positioning of the AlphaSmart 2000**

The AlphaSmart 2000 should be located in front of you and at a comfortable distance so that your arms and hands are resting in a relaxed and ready position at your sides. Choose a work area that can accommodate your AlphaSmart 2000 and any additional materials.

### **Furniture and Posture**

Adjust your workstation to be physically comfortable and to allow your body to work in a relaxed and efficient manner.



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If your table and/or chair is adjustable, adjust the height and angle so that your forearms and wrists are straight and parallel to the floor, and your feet are flat on the floor (use a footrest if necessary). The back of your chair should be adjusted to support your lower back while working. Position your chair to avoid undue pressure on the underside of your thighs near your knee and the backs of your lower legs.

In working, you should use a comfortable, upright position. Try not to lean forward, backward, or to the side while working. Materials should be within reach and frequently needed materials should not be located in an area where a twisting motion is required.

### **Hand and Arm Position and Motion**

In using your AlphaSmart 2000, you should keep a relaxed, comfortable position that follows the suggestions discussed in this section. While working, your elbows may lightly touch your sides, but should not exert pressure against your body. Your wrists should be in a comfortable, straight position. Try not to arch or bend your wrists while typing as this may place strain on your wrists. Rest your hands on a palm rest or on the table (if you do not have a palm rest). When typing, use a minimum degree of force and avoid hitting the keys with more force than necessary.

### **Lighting**

Like your workstation and posture, your lighting should be adjusted to accommodate your use of the AlphaSmart 2000. Adjust the lighting sources, shades, drapes, or blinds so that glare on the screen is minimal, while still allowing comfortable viewing of the materials around you. You should use several lighting sources to accommodate different tasks, such as overhead lighting for viewing your AlphaSmart 2000 and the overall workstation area, and more focused lighting for closer desktop tasks.

### **Vision Care**

Vision care is important, particularly if you are working for extended periods of time. Your eyes may become irritated and fatigued. Resting your eyes at regular intervals and keeping your glasses, lenses, and display clean should reduce the strain on your eyes. Also, it is advisable to have regular eye check-ups by a vision care specialist.



## **Work Habits**

General work habits are an important part of working in a comfortable, relaxed, and efficient manner. Take note of your work habits and positions during the day. Try not to work for extended periods of time on a single task. By shifting between several tasks you change the physical demands placed upon you. In changing tasks, adjust your posture somewhat to avoid extended strain on certain muscles. Try to take several breaks during the day to stretch and exercise.

## **Health Habits and Exercise**

Your existing health conditions can affect your ability to work in a comfortable manner. Health conditions which may make it difficult to work and may place undue stress upon your body include: Diabetes, excessive weight, hypertension, smoking, stress, arthritis or other inflammatory disease, and conditions affecting hormone levels (including pregnancy and menopause).

Each individual has a threshold level of physical stress that they can comfortably and efficiently work under without harm. However, it is important to keep track of your physical well-being and to avoid exceeding your threshold. If you have any of the above mentioned physical conditions, you should regularly and carefully keep track of how you feel as you work.


## **Conclusion**

By following the above recommendations and taking care of your overall physical condition through regular exercise, the use of your AlphaSmart 2000 should be more enjoyable and productive.

*Note: The above recommendations are to help you use your AlphaSmart 2000 in a more enjoyable and productive manner. However, you need to determine the best work conditions and environment for your work, as each situation is specific to that individual.*

## **For Further Information**

If you would like to learn more about adjusting to work environment and equipment or safety standards, we recommend you write to:



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Occupational Safety and Health Administration (OSHA)  
U.S. Department of Labor  
Technical Data Center, Room N2439  
200 Constitution Avenue, NW  
Washington, D.C. 20210

U.S. Department of Health and Human Service  
Public Health Service/Center of Disease Control  
National Institute for Occupational Safety and Health (NIOSH)  
Robert H. Taft Laboratories  
4676 Columbia Parkway  
Cincinnati, Ohio 45226-1998

American National Standards Institute  
11 West 42nd Street  
New York, New York 10036



## AlphaSmart Command List

<b>Option-⌘-S</b>	Speed menu
<b>⌘-F or Find</b>	Find text
<b>⌘-G</b>	Continue the find text search while in the find screen
<b>⌘-Find</b>	Keyboarding Timer
<b>Option-⌘-R</b>	Recover file from last deletion
<b>Option-⌘-ctrl-R</b>	Recover 40 lines of text
<b>Option-⌘-ctrl-shift-R</b>	Recover entire file
<b>Option-⌘-F1</b>	Changes files when attached to the Mac (F1 for File 1, etc.)
<b>⌘-F1</b>	Changes files when attached to the PC (F1 for File 1, etc.)
<b>Option-⌘-V</b>	System status, current file number, version number, etc.
<b>Option-⌘-K</b>	Sticky Keys, Auto Repeat, and Show Marks
<b>Option-⌘-L</b>	Layout options: QWERTY, Dvorak, right and left
<b>Option-⌘-clear file</b>	Permanently clear file
<b>Option-⌘-ctrl-shift-clear file</b>	Clear all files
<b>⌘-delete</b>	Delete from cursor to the end of file.
<b>⌘-P or print</b>	Print command
<b>Option-print</b>	Printer selection menu
<b>Option-⌘-P</b>	Change password
<b>Option-⌘-ctrl-P</b>	Password enable/disable
<b>⌘-spell check</b>	Spell check a word
<b>Option-⌘-spell check</b>	Disable/enable Spell Check

*See also page 25 for a list of insertion commands for international characters.*

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