Appendix 3
LZW Compression

LZW is a method for compressing data which has repetitive properties, but does not necessarily consist of repetitive runs of identical bytes. LZW stands for "Lempel-Ziv-Welch": the three people responsible for the creation and evolution of the algorithm. LZW works by finding generic repetitive strings in the data to be compressed and building them into a "dictionary." This way only an index into the dictionary needs to be known to expand a simple code into a longer string of bytes. Unisys holds a patent (number 4,558,302) on the LZW methodology, and if you want to use LZW in your programs, you *must* contact Unisys and arrange to license the methodology. The person to contact about the patent is:

Mark T. Starr
Unisys Corporation
P.O. Box 500
Township Line & Union Meetings Rds.
Blue Bell, PA 19424
Voice: (215) 986-4411
Fax: (215) 986-5721

AutoArk™

By D. Proni
& Josef W. Wankerl
Copyright 1995 by EGO Systems
All Rights Reserved

The LZW compression technology used in AutoArk is licensed for use under U.S. Patent 4,558,302 and foreign counterparts.

Published by:
EGO Systems
P. O. Box 15366
Chattanooga, TN 37415-0366

Technical Support: (615) 332-2087
FAX: (615) 332-2634
Internet: Diz@genie.geis.com

Second Manual Printing
March 1995

Copyrights

AutoArk and the AutoArk user manual are copyright 1995 by EGO Systems. All rights reserved.

This program contains material from the ORCA/C Run-Time libraries, copyright 1987-1995 by Byte Works, Inc. Used with permission.

License

This warranty applies to the original retail purchaser only. To obtain the warranty offered, the enclosed Registration Card must be completed and returned to EGO Systems within 30 days of purchase. EGO Systems retains title to AutoArk (the "Software") and to the AutoArk User Manual (the "Manual"). The Software may only be used on a single computer, and you may make one copy of the disk for backup purposes only.

EGO Systems warrants that, under normal use, the disk on which the Software is stored is free from defects in materials and workmanship for a period of 30 days from the original date of purchase.

EGO Systems makes no warranty or representation, either express or implied, with respect to the manual or the software; their quality, performance, merchantability, or fitness for a particular purpose. As a result, the software and manual are sold "as is," and you, the retail purchaser, are assuming the entire risk as to their quality and performance.

The Software and the Manual are fully copyrighted works. You may not decompile, reverse engineer, disassemble or otherwise reduce the Software to a human perceivable form.

Under no circumstances, including negligence, shall EGO Systems be liable for any incidental, special or consequential damages that result from the use or inability to use the Software or related documentation, even if EGO Systems or an EGO Systems authorized representative has been advised of the possibility of such damages. Some states do not allow the limitation or exclusion of liability for incidental or consequential damages so the above limitation or exclusion may not apply to you. In no event shall EGO Systems total liability to you for all damages, losses, and causes of action exceed the amount paid by you for the Software.

Trademarks

Apple, Apple II, and Apple IIGS are registered trademarks of Apple Computer, Inc.
AutoArk is a trademark of EGO Systems.
GS+ Magazine is a registered trademark of EGO Systems.
Quick Click Calc is a trademark of the Byte Works, Inc.
All other names are trademarks or registered trademarks and are the property of their respective holders.

Appendix 2
AutoArk Q & A

Q. Will AutoArk expand files compressed by other compression utilities?
A. AutoArk will only expand files compressed by either AutoArk or Universe Master.

Q. Are there any kinds of files I shouldn't archive?
A. Yes. AutoArk has been pre-configured to *not* archive System files, fonts, icons, and other archive files (such as ShrinkIt files). Those are the types of files we recommend not be archived. If you select Configure AutoArk from the Finder's Extras menu, and then click on the Assign Compressors button, you will see the list shown in Figure 15. If you scroll through the list you will find "None" listed in several places under the Compression column. If you leave these settings alone then you need not worry about whether you should compress a certain file type or not.

We also recommend that you not archive large, frequently used applications. For example, if you use Quick Click Calc very often, it might become a burden to wait for it to expand every time you use it. Of course, you will have to decide what is best for your situation. If you archive a file and later find you would rather have it unarchived all the time (as it was initially), all you need do is go to the Finder, select the file and then choose Expand from the Extras menu. The file will then be permanently dearchived.

Q. Can I archive data files that are used with ProDOS 8 applications?
A. Yes you can, but you will not be able to access archived files from *within* ProDOS 8 applications, so doing this is not recommended. To archive and dearchive ProDOS 8 data files you will have to do so manually, using one of the means discussed in chapter 3. Note that you *could* archive your ProDOS 8 *applications*, and they would be expanded when you launched them (assuming you launch them from a GS/OS program launcher like the Finder).

Q. Can I configure AutoArk or get information on an archive in a program other than the Finder?
A. No. At this point, the only way to configure AutoArk or to get information on an archive is to use the items that AutoArk places in the Finder's Extras menu. However, we hope to provide these capabilities from *every* program in a future version of AutoArk.

Appendix 1
If You Use Universe Master

AutoArk and ECON Technology's Universe Master use the same file format to compress and encrypt files. Therefore, any file that was compressed and/or encrypted using Universe Master can be accessed by AutoArk. Conversely, any file that was compressed and/or encrypted using AutoArk can be accessed by Universe Master!

For example, let's assume you are using Universe Master to make incremental backups of the files on your hard drive. In conjunction with your backup, you specify that the files be compressed. Sometime in the future you want to look at one of your backup files to copy out a paragraph you have deleted from the current version of the file. Without AutoArk, you would have to launch Universe Master and restore the file so that it was no longer archived! Instead of doing this, you can now simply go to the Finder and double-click on that file. AutoArk will see that this is a file that was archived using either Universe Master or AutoArk and then proceed to expand the file so that you can access it. You no longer need to launch Universe Master in order to expand or decrypt your files—you can use AutoArk!

Contents

1. Introduction to AutoArk 4
   What is AutoArk? 4
   About This Manual 4
   System Requirements 5
   Please Tell us What You Think! 5

2. Installing AutoArk 6
   Step by Step 6
   Disabling AutoArk 9

3. AutoArk Basics 10
   Finder Extras 10
   New Desk Accessories 15
   Smart Names 17
   Other AutoArk Basics 18

4. Configuring AutoArk 20
   Finder Interface 20
   Locked Files 21
   Recompress Files 21
   Application Dialogs 22
   Key Equivalents 23
   Assign Compressors 24

5. Examples 26
   Automatic Expansion and Recompression 26
   Manual Compression and Expansion of Files 27
   Using Smart Names 28

Appendix 1 - If You Use Universe Master 30
Appendix 2 - AutoArk Q & A 31
Appendix 3 - LZW Compression 32

1. Introduction to AutoArk

If there is one truth in computing, it's that you can *never* have enough free disk space. It seems that no matter what size hard drive you buy for your computer, be it a 20MB or 1 gigabyte drive, it fills up faster than you can imagine! To help combat this problem, EGO Systems is pleased to bring you AutoArk, the original automatic file compression utility for the Apple IIGS!

What is AutoArk?

AutoArk is a compression utility for your IIGS that operates behind the scenes to automatically give you more disk space. (On average, AutoArk will compress your files down to 50% of their original size. This means that AutoArk can theoretically *double* the space on your hard disk!) You simply tell AutoArk which files that you want compressed, and then AutoArk will compress those files. Then, when you need to use the file, AutoArk will automatically step in and expand the file so that you can use it. Later, when you have finished using the file, AutoArk will automatically *recompress* the file for you!

AutoArk also allows you to password protect and *encrypt* files! By using this feature of AutoArk you can make sure that your personal files *stay* personal!

And, unlike similar products for the IIGS, AutoArk allows you to customize how it works so that it compresses only the types of files that *you* want to compress!

About This Manual

This manual is intended to do two things:

- Describe what AutoArk can and can not do.
- Give you concrete examples of how to use AutoArk.

Chapters 1 through 4 of the manual will describe in detail what AutoArk can do, and chapter 5 will give you examples of how you actually do all of those things.

Throughout this manual, screen shots are shown for the important windows and dialogs that you will see when you use AutoArk. Since AutoArk works in both 640 and 320 modes, the dialogs may appear slightly different for

Now, open the **Examples.ark** folder and move the Teach archive outside of the folder. (Just move it out to the folder that the **Examples.ark** folder is in, don't move it to the desktop!) What happens? You guessed it! AutoArk automatically expands the Teach archive as soon as you move it out of the **Examples.ark** folder!

That's about all there is to using AutoArk and Smart Names! Simple, isn't it?

Just remember that before AutoArk will automatically expand and recompress a file, you have to manually compress that file by using either the items in the Finder's Extras menu, Smart Names, or the AA Compress File(s) new desk accessory. After that however, AutoArk does everything automatically!

By the way, if you also have our Balloon new desk accessory installed in your system, you can use Smart Names with it as well. Simply add ".shk" to the end of a file's name, and Smart Names will tell Balloon to compress it into ShrintIt format! You can also remove the ".shk" suffix from the end of an archive file to have Smart Names tell Balloon to expand the archive. (However, Smart Names does not work with *folders* that have names ending in ".shk". That is, copying files in and out of folders ending with ".shk" will not do anything.)

So you might now be wondering, "But how do I use Teach now?" Simple! Just double-click on it!

As soon as you double-click on the Teach application (which is now stored in an AutoArk archive), AutoArk will step in and expand the archive. Then the Finder will run the Teach application just as it always did. Go ahead and try this now. You should see AutoArk expand the Teach application and then Teach should run as usual. When Teach finishes loading, quit back to the Finder. Once again, a few seconds after you return to the Finder, AutoArk will appear and recompress the Teach application. Now, let's look at how you can permanently expand the Teach archive . . . .

As before, find the Teach icon, and select it by clicking on it once. Then pick the Expand menu item from the Finder's Extras menu. AutoArk will then expand the archive, leaving you with the Teach application in its original form. Run the Teach application again and then quit back to the Finder. This time, you'll notice that AutoArk *doesn't* recompress the Teach application! That's because, when you manually expanded the Teach archive, you told AutoArk that you no longer wanted it to compress or expand that file for you.

Using Smart Names

Now, let's turn our attention back to the **Examples.ark** folder that is on your hard disk. In the Finder, select the **Examples.ark** folder and then press the return key. (Pressing the return key tells the Finder that you want to *rename* the currently selected icon. So let's do that now.) After you press the return key, type the word "Examples" and then press the return key again. (This will change the name of the folder to simply be "Examples.") At this point, you should see AutoArk begin to expand all of the archives in the folder! This happened because Smart Names saw that you renamed the folder so that the ".ark" extension was no longer part of the name. So, Smart Names immediately told AutoArk to expand all of the archives that it could find inside that folder.

Now, change the name of the folder back to "Examples.Ark". What happened? That's right, AutoArk immediately began compressing all of the files in the folder! Now let's look at another cool feature of Smart Names . . . .

Once again, find the Teach application (which should *not* be compressed at this point) and copy it into the **Examples.ark** folder. As soon as the copy operation is complete, AutoArk compresses the copy of the Teach application that is in the folder!

each mode. All the screen shots in this manual are for 640 mode unless otherwise noted. (The content of the dialogs will be the same for both 640 and 320 mode, it may just be arranged differently to accommodate the smaller screen width in 320 mode.)

System Requirements

AutoArk only works with Apple IIGS System Software version 6.0 or later. It will not work with any System Software prior to v6.0. (If you do not have System Software v6.0, you can contact The Byte Works, Inc. at 505-898-8183 to purchase it.) We also recommend that you have at least 2MB of RAM (the more RAM you have, the better) to make good use of System Software v6.0 and AutoArk. AutoArk takes up approximately 190K of disk space on your startup disk, so a hard drive is also required.

Please Tell us What You Think!

Before you read any further, please take a few moments to fill in your name, address and AutoArk serial number on the product registration card that came with AutoArk. (Your AutoArk serial number can be found on the AutoArk disk label.) After you've done this, read the rest of this manual, install AutoArk, and then take some time to work through the examples in chapter 5. When you finish the examples, jot down any comments you have about AutoArk on the registration card, and then send it in to us so that we can know what you think about AutoArk!

2. Installing AutoArk

To correctly install AutoArk, you *must* use the Installer program on your AutoArk disk. The AutoArk Installer program requires System 6.0, just as AutoArk does, so be sure you are using the correct system before you launch the Installer. Launch the Installer and then use the following instructions to tell the Installer where you want AutoArk installed.

Step by Step

1. Start up your IIGS as you normally do. (If you do not normally use the Finder as your program launcher, run the Finder now so that you can follow along with the rest of these instructions.)

2. When the Finder finishes loading, insert the AutoArk disk into your computer's disk drive. (Note: It is *very* important that you make sure the AutoArk disk is *not* write-protected when you insert it in the disk drive!)

3. Open the AutoArk disk and launch the application called "Installer" by double-clicking on its icon. (See Figure 1 below.)

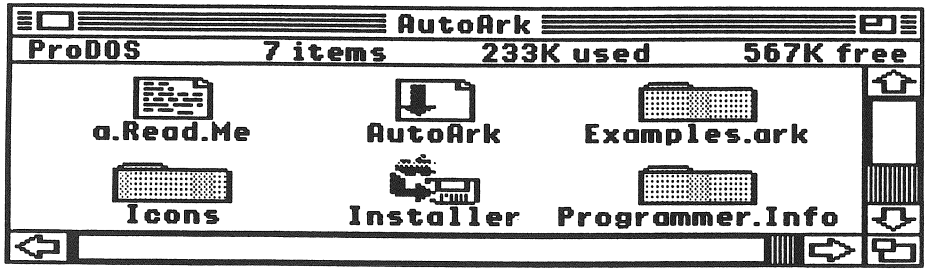

Figure 1. Run the Installer application on the AutoArk disk.

4. The AutoArk installer will prompt you to enter your name and the name of your organization (as shown in Figure 2). These names will be permanently recorded in your copy of the AutoArk program, so choose something appropriate.

selected. When AutoArk finishes, the dialog will disappear and Teach will open the file and present it to you in a window.

Now, take a few moments to read the file (Warning! It's a propaganda file that tells you about some of our other products!), and then quit the Teach application.

When you get back to the Finder, you should notice that after about five seconds, AutoArk will automatically begin to recompress the file you just opened inside Teach! By recompressing the file (now that you are finished with it), AutoArk ensures that the file takes up the least possible room on disk.

That's all there is to using the automatic expansion and compression features of AutoArk!

Of course, you don't have to run an application first . . . . Instead of running Teach first, you could have simply opened the **Examples.ark** folder in the Finder and double-clicked on one of the archives inside it. Try it now. When you double-click on one of the archives, AutoArk will step in, expand the file, and then the Finder will run Teach. When Teach loads, it will automatically load the file you double-clicked on! Then, when you quit Teach and return to the Finder, AutoArk will again recompress the file.

Manual Compression and Expansion of Files

Of course, before AutoArk can know to automatically expand and recompress a file, you have to manually compress the file for the first time. And, if you later decide that you *never* want a file to be compressed, you'll have to manually expand it, which will tell AutoArk to leave the file alone from then on. So, let's look at how to do each of these things.

First of all, we need a file to compress. The Teach application will be a good file to use for this, because it's an application that you might not use that often, so you'll want it to take up as little disk space as possible. To compress the Teach application, simply follow these steps:

1) Use the Finder to locate the Teach application, and then click on it *once* (don't double-click on it!).
2) Once you have the Teach application selected, pick the Compress menu item from the Finder's Extras menu.

That's it! As soon as you pick the Compress item, AutoArk will begin archiving the Teach application.

5. Examples

Now that we've had a look at what AutoArk can do, let's work our way through some examples that will show you exactly how to use AutoArk. But, before we can begin, you should make sure that you have installed AutoArk and Smart Names on your system. If you haven't done this yet, go back to chapter 2 for information on how to install them.

For the examples in this chapter, we will assume that you have the Finder selected as your AutoArk home application (this is the default), that AutoArk's Finder interface is enabled (see chapter 4), and that you have the Teach application installed on your hard drive. (Teach is a simple text-editing application that comes with System Software v6.0 and later. If you don't have it installed on your system, you can use the **:Install** disk that came with your System Software to install it.)

If you use another *stand-alone* text editor, like WordWorks Pro or AppleWorks GS, it should work just as well as Teach. However, if you use a new desk accessory editor (like our own EGOed or EGOed lite), you should probably disable them in able to work through these examples. (Note that new desk accessory editors will work perfectly with AutoArk installed! It's just that having one of these editors installed in your system will cause the following examples to work a little differently.) You can disable your new desk accessory editor the same way that you would disable AutoArk or Smart Names (as described in chapter 2).

Now that we are on the same footing, let's look at some examples!

Automatic Expansion and Recompression

On your AutoArk disk is a folder named **Examples.ark**. For this example, and all the others, you should first use the Finder to copy this folder to your hard drive. (You can also copy this folder to a RAM disk if you have one.)

After you have copied the **Examples.ark** folder to your hard disk, find and run the Teach application. When Teach finishes loading, pick the Open menu item from Teach's File menu and locate the copy of the **Examples.ark** folder that is on your hard drive. Open the **Examples.ark** folder and notice that there are two text files in it. (Actually, these files are AutoArk archives! AutoArk steps in and fools Teach into seeing the files as text files!) Select one of the files and open it. At this point, AutoArk will present you with a dialog telling you that it is expanding the file that you

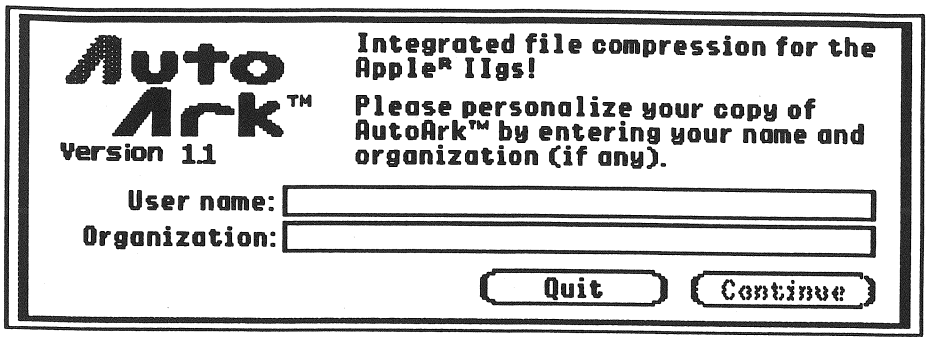

Figure 2. Enter your name and organization in the spaces provided.

5. After entering your name and organization (if applicable), click the mouse on the Continue button. If you wish to quit the installation process, click on the Quit button.

6. Next, the dialog shown in Figure 3 will prompt you to choose the volume where you want AutoArk installed. AutoArk must be installed on a bootable GS/OS system disk. By default, the startup volume of your IIGS will be selected. If you want to install AutoArk on a different volume, click on the Next Disk button. You can continue to click the Next Disk button until the name of the desired volume is listed in the dialog.

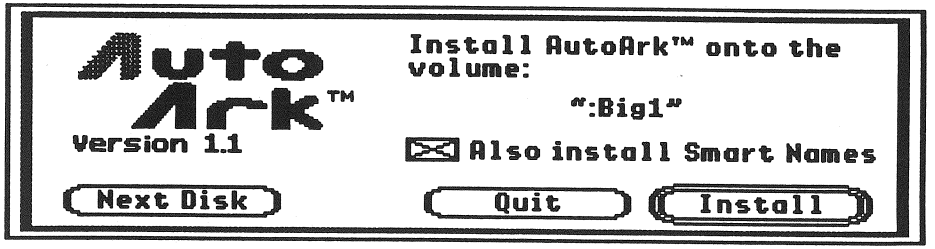

Figure 3. Use the Next Disk button to select a volume to install AutoArk on.

7. At this point, you should decide if you also want the Smart Names Finder extension installed with AutoArk. (Smart Names is a utility that allows you to use AutoArk to compress and expand files simply by changing their names in the Finder. For more information on Smart Names, see chapter 3.) The default is to install Smart Names. If you don't want Smart Names installed on your system, simply click on the "Install Smart Names" check box so that the check box becomes empty.

Once you've selected the appropriate volume, click on the Install button. At this point, the Installer program will copy AutoArk (and, if appropriate, Smart Names) to the selected volume. When the installation process is finished, the dialog shown in Figure 4 will be displayed to inform you that installation is complete. Click on the OK button to dismiss this dialog. At this point, you should click on the Quit button to quit the Installer program.

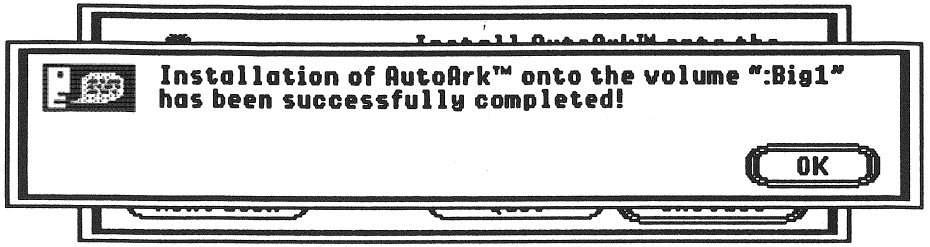

Figure 4. AutoArk was successfully installed!

AutoArk is a "permanent initialization file" (also called a "PIF" file) so you will have to restart your computer from the disk that AutoArk is installed on before you can use AutoArk. If you installed AutoArk on your current boot volume, you will have to restart your computer when you quit the Installer program. If necessary, the Installer program will inform you of this by displaying the dialog shown in Figure 5. You can click on the Restart button if you wish to restart your computer immediately, or you can click on the No Thanks button if you want to return to the previous application.

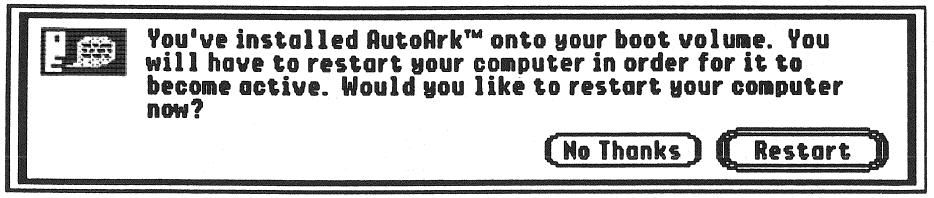

Figure 5. You must restart your computer in order to use AutoArk!

The next time your computer is restarted you will see the AutoArk icon appear at the bottom of the startup screen. Figure 6a shows the icon that you will see. (The number shown in the icon is the AutoArk version number, and it might not match the one shown here in the manual.)

At the bottom of this dialog are four buttons:

• Compression — Clicking on this button will bring up the dialog shown in Figure 16. This dialog contains a list of all the compression methodologies available in this version of AutoArk. To change the compression used for the currently selected file type, simply click on the desired compressor and click on the OK button. If you change your mind and decide not to change compressors, simply click on the Cancel button. (Note that if you *never* want AutoArk to compress a particular type of file, set the compression methodology for that file type to "None" and AutoArk will not compress any files of that type!)

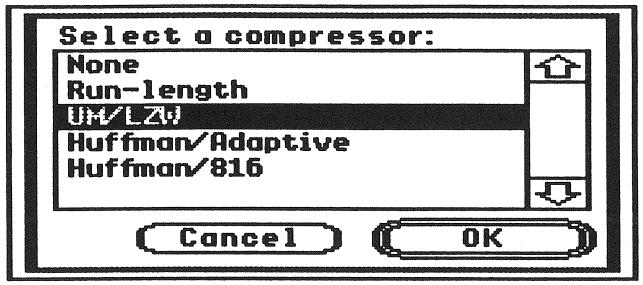

Figure 16. Select a new compression methodology for the selected file type

• Expansion — As mentioned above, this version of AutoArk only supports Static expansion, so this button does not currently do anything.

• Cancel — Clicking on this button will cause AutoArk to disregard any changes that you have made in this dialog.

• Done — Clicking on this button will cause AutoArk to remember all the changes that you made in this dialog.

in the corresponding line edit boxes and then click on the Done button. The changes you specify will take effect immediately.

Assign Compressors

One of the neatest things about AutoArk is that for each type of file on your computer, you can specify exactly what type of compression methodology should be use to compress those files. Clicking on the Assign Compressors button brings up the dialog (shown in Figure 15) that allows you to make these compression assignments.

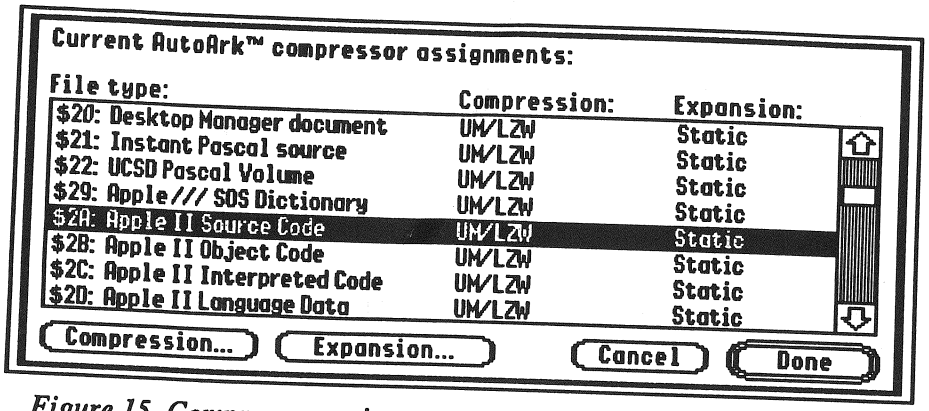

Figure 15. Compressor assignments may be changed from this dialog.

For each type of file, this dialog gives you the following information:

File Type
This is the exact type of file that this compression methodology will be used on.

Compression
This is the compression methodology that will be used on files of this type. For example, in Figure 15, we see that the "UM/LZW" compression methodology will be used on all Apple II Source Code files. (By the way, the "UM" in the compression methodology designation means that this type of compression is compatible with ECON Technology's Universe Master program. For more on this, see Appendix 1.)

Expansion
This tells AutoArk how a file should be expanded. In this version of AutoArk the only available option is "Static" expansion.

Figure 6a. Normal AutoArk Icon

Figure 6b. AutoArk Disabled

Disabling AutoArk

If for some reason you do not want AutoArk to load at boot time, press and hold the "A" key when your computer is booting. When the AutoArk icon appears you will see it has a red "X" across it (see Figure 6b). This is an easy way to disable AutoArk if you suspect that it is conflicting with some other part of your system. Of course, if you disable AutoArk at boot time, you will not be able to use it until you reboot and allow it to be loaded.

While the above trick will disable AutoArk temporarily, you can also disable AutoArk permanently by taking the following steps:

1. Launch the Finder and open the **System** folder on your boot disk.

2. Inside the **System** folder, open the **System.Setup** folder.

3. Inside the **System.Setup** folder, find and select the AutoArk item.

4. With the AutoArk item selected, pick the Icon Info item from the Finder's Special menu.

5. When the information window appears, click on the "Inactive" check box so that the check box has an "X" in it.

6. Reboot your IIGS.

At this point, AutoArk will be deactivated. To reactivate it, repeat the above steps, making sure that you *clear* the "Inactive" check box. Then reboot your IIGS.

Smart Names can be deactivated and activated in much the same way. The only difference is that you will find Smart Names in the **FinderExtras** folder, not the **System.Setup** folder.

3. AutoArk Basics

Using AutoArk is extremely simple. All you have to do is tell AutoArk which files you want it to work with and then forget about them! When using AutoArk, the only decisions you have to make are:

1. Which files do you want to compress, encrypt or expand?

2. How will you tell AutoArk about them?

Of course, only *you* know which files you want to work with, so let's look at the different ways that you can tell AutoArk about those files.

(By the way, for the remainder of this manual the term "archive" will be used to refer to files that have been compressed and/or encrypted with AutoArk. This is where the name "Auto*Ark*" comes from.)

Finder Extras

When you install AutoArk, you will find five new items under the Extras menu in the Finder: "Compress," "Encrypt," "Expand," "Archive Info," and "Configure AutoArk." Figure 7 shows you these new items. (Note that depending on the other Finder extensions you have installed in your system, the AutoArk items might not appear at the top of the Extras menu.) These five menu items provide you with the means to completely control AutoArk from inside the Finder. To use any of these items (except the Configure AutoArk item) you simply select a file, or files, with the Finder and then select the item from the Extras menu. (If you don't know how to select files in the Finder, refer to your IIGS owner's manual for information on how to do this.)

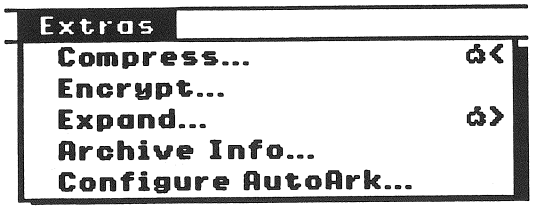

Figure 7. The five new selections in the Finder's Extras menu.

It should be noted that in Figure 7, all of the menu items are shown in their active state. However, this will not always be the case. For example, if no files are selected in the Finder, the first four of these items will be inactive

• Disabled — With the Application Dialogs pop-up set to "Disabled," AutoArk will not display any progress information dialogs as it compresses and expands files. However, there *will* be one small indication that AutoArk is active: The cursor will be changed to look like the AutoArk icon (it will look sort of like the letters "AA"). This will be a reminder to you that AutoArk is performing a compression or expansion.

WARNING!
If you have the Application Dialogs option disabled, and you launch an archived application, you might initially jump to the conclusion that something has gone wrong (because of the time required to expand the application before it can be launched) and the system is "hung-up." When this happens, *be sure to look at the cursor*! If you reboot your system at this time, thinking it is hung up, the results will probably be data corruption!

Key Equivalents

You may have noticed that some of the menu items that AutoArk places in the Finder's Extras menu have key equivalents. Well, if you don't like those key equivalents (perhaps they conflict with another Finder extension you have installed) or you want to give *all* of the AutoArk menu items a key equivalent, all you have to do is click on this button. This will bring up the dialog shown in Figure 14.

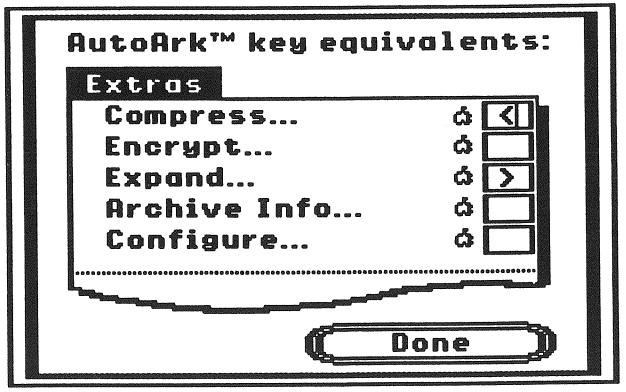

Figure 14. Command key equivalents for the AutoArk menu items may be defined here.

This dialog shows the five AutoArk menu items and their corresponding Command (Open-Apple) key equivalents. Initially only Compress and Expand will have key equivalents defined for them. To change the key equivalent for any of the AutoArk menu items, simply enter the desired key

the file so that Quick Click Calc can use it. After that however, the file remains in its expanded state until you quit Quick Click Calc and return to your home application. So, if you had the Finder defined as your home application (which is the default), the file would remain expanded until you returned to the Finder, at which point, AutoArk would recompress the file for you.

Of course, you might not want AutoArk to recompress files in *any* application. So, this pop-up menu also lets you tell AutoArk that it should wait until you actually shut down your computer before it starts recompressing files.

Now, let's look at the three options in this pop-up menu:

• On Shutdown — When you select this item, AutoArk will wait until you shut down your computer before it begins to recompress the files that it has automatically expanded for you. (Note that simply quitting from the Finder or restarting your IIGS won't cause AutoArk to recompress files. You must actually shut down the computer.)

• In Finder — Selecting this item tells AutoArk that the Finder will be your home application and that it should begin recompressing files after you return to the Finder. (Note that after you return to the Finder, AutoArk will wait about 5 seconds before it begins recompressing files. This is to give you time to run another application if you so desire.)

• In Your Application — Selecting this option will bring up a Standard File dialog box that you can use to select any GS/OS-based application to be your home application. (AutoArk won't display the name of the application in this pop-up menu, but it will remember the application!) AutoArk will then wait to recompress the archives it has expanded until you run this application. (Note that after you return to your home application, AutoArk will wait about 5 seconds before it begins recompressing files. This is to give you time to run another application if you so desire.)

Application Dialogs

This pop-up menu lets you tell AutoArk how "transparent" you want it to be while it does its job. There are two settings for this menu:

• Enabled — With the Application Dialogs pop-up set to "Enabled," AutoArk will display the archive progress dialogs shown in Figures 8 and 11.

and you won't be able to select them. If you select a file that has not been compressed or encrypted, the Encrypt and Compress items will become active. If you select a file that is compressed and/or encrypted the Expand and Archive Info items will become active. If you select both archived and non-archived files, all first four items will be active. The fifth option, Configure AutoArk is always active. Now, having said that, let's look at each of the new menu items and what they do.

• Compress — Compressing a file will reduce the amount of space that it occupies on disk. In order to compress a file (or group of files) for the first time, select the file or files from the Finder, pull down the Extras menu and choose the Compress item. AutoArk will then set to work compressing each selected file. (If you have selected a folder, all of the files in the folder will be compressed.) During the compression process, AutoArk displays the window shown in Figure 8 as each file is being compressed. After the files are compressed, you will notice that their icons have changed to look like the icons shown in Figure 9. This allows you to see at a glance which files have been archived by AutoArk. For example, if you're doing maintenance work on a volume, looking for files to compress/encrypt, you can easily spot which files have been archived and which haven't. (On the other hand, if you prefer to have the original icon for the file visible, AutoArk can do that too. For more information on this option, see the section "Finder Interface" in chapter 4.)

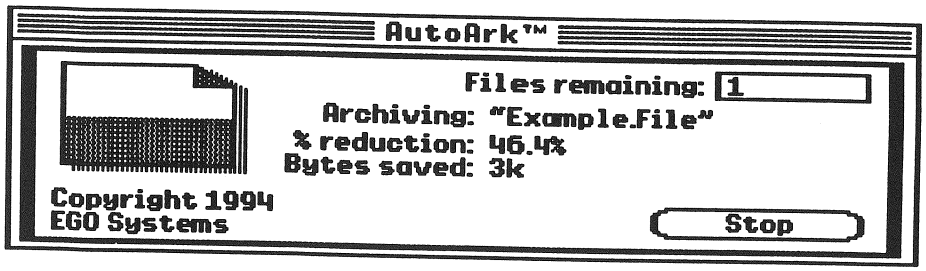

Figure 8. AutoArk displays this window as it compresses files.

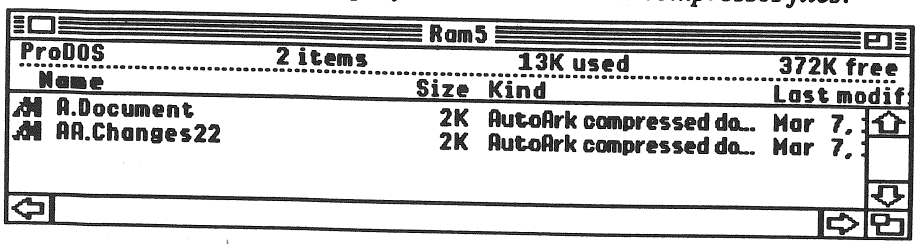

Figure 9. The files in this folder have been compressed, so they display the AutoArk icon.

• Encrypt — Encrypting a file will take the information in that file and make it unreadable by anyone that does not have the password for the file. An encrypted file can *only* be read by someone that has the password for the file. (Of course, someone with the appropriate resources, like the government, would eventually be able to decrypt the file, but it would take them quite a while!)

To use the Encrypt item, select the file or files you want encrypted, and choose the Encrypt item from the Extras menu. The dialog shown in Figure 10 appears and prompts you to enter a password. This password must then be entered a second time, in the "Verify password" edit box. AutoArk compares the two passwords to make certain they are identical. If you want to compress the file as well as encrypt it, check the box labeled "Compress Data". You can then click on the OK button, which will tell AutoArk to proceed with encrypting the file.

WARNING! Please Read Carefully!
AutoArk uses the password you provide to encrypt the data in a file. The data can only be decrypted by providing this password once again when you need access to the file. You should take whatever measures are necessary so that you won't lose or forget the password. If you forget your password you will not be able to dearchive the file! We won't be able to help you in this situation since we don't have the password either! The bottom line is this: If you forget your password, the file is gone!

Note: If you live outside the United States of America, your version of AutoArk will not actually encrypt the data in a file. However the file will still be password protected. (United States export restrictions prevent us from providing the encryption feature outside the United States of America.)

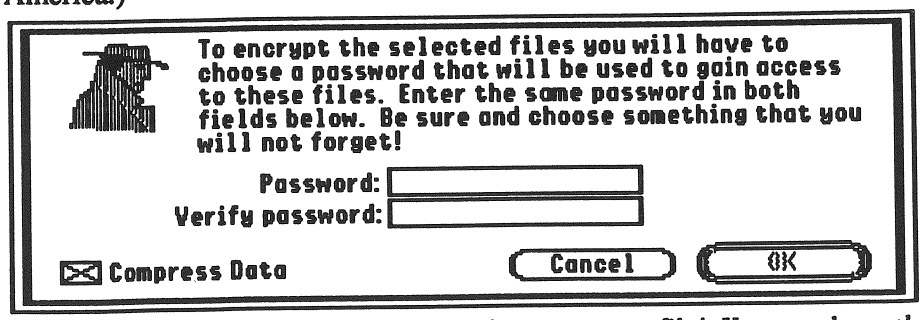

Figure 10. You must supply a password to encrypt a file! You can have the file compressed as well as encrypted by checking the "Compress Data" check box.

• Enabled — When the Finder interface is enabled, all of the items that AutoArk places in the Finder's Extras menu will be available for you to use. Also, the icon displayed for any archived files will be the AutoArk icon (not the original icon), and any file information displayed by the Finder will be that of the archive file, not the original file. Finally, with this option set to "Enabled," AutoArk will not expand any archives that you copy (using the Finder) from one disk to another.

• Disabled — With the Finder interface disabled, only the Configure AutoArk menu item will be available from the Finder's Extras menu. This means that while you are in the Finder, you will have to use another method (i.e. either Smart Names or the AutoArk new desk accessories) to manually compress or expand files. (Of course, AutoArk will still perform all of its automatic functions.) Additionally, the icon displayed for any archived files will be the original icon (not the AutoArk icon), and any file information displayed by the Finder will reflect the original file, not the archive file. Finally, with this option set to "Disabled," AutoArk will expand any archives that you copy (using the Finder) from one disk to another.

Locked Files

This is a pop-up menu that lets you specify what AutoArk should do when it attempts to archive a locked file. (A "locked" file is a file that can't be renamed, deleted or otherwise changed.) There are two options for this pop-up menu:

• Are Compressed — This option (the default), tells AutoArk to treat locked files just like any other files and to archive them when necessary.

• Generate Error — This option tells AutoArk that it should *not* try to archive locked files. Furthermore, AutoArk will present you with an error message whenever it comes across a locked file. (After all, locked files are usually locked because you don't want them changed *at all*!) This dialog will give you the option to continue archiving the remaining files you had selected or to cancel the archiving operation.

Recompress Files

This pop-up menu allows you to specify an application in which AutoArk recompress the files that it has automatically expanded for you. This application is called the AutoArk "home application," and it can be any standard GS/OS-based application. For example, assume that you have used Quick Click Calc to open a file that was archived by AutoArk. When you open the file with Quick Click Calc, AutoArk will step in and expand

4. Configuring AutoArk

For most users, AutoArk will work exactly the way they want it to simply by using the default configuration that AutoArk is shipped in. However, some users will probably want to change one or two things about the way AutoArk works, which is why we've provided AutoArk with extensive configuration options. All of these options are accessed by using the Configure AutoArk menu item in the Finder's Extras menu. When you select this menu item, AutoArk will present you with the dialog that is shown in Figure 14.

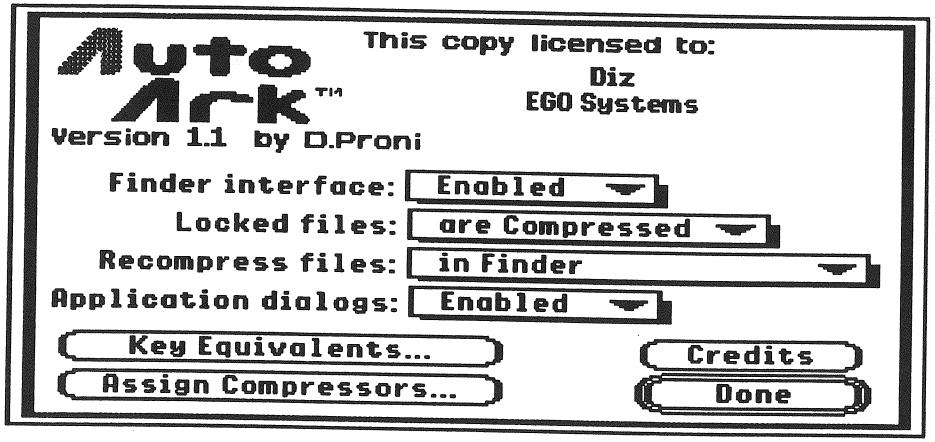

Figure 14. This dialog lets you configure AutoArk.

At the top of this dialog, you will find version information for AutoArk along with the information that you typed in when you installed AutoArk on your system. Below this information are four pop-up menus and four buttons.

Two of these buttons are self-explanatory . . . you click on the Credits button to get information on the fine people that created AutoArk, and you click on the Done button when you have finished making changes to the AutoArk configuration. While these two buttons are fairly easy to get the hang of, the remaining items in this dialog need a bit more explanation. So, let's look at each item in detail:

Finder Interface

This is a pop-up menu that allows you to specify how AutoArk should behave inside the Finder. There are two choices in this menu:

• Expand — One way to dearchive files that have been archived (by compression, encryption or both) with AutoArk, is to select the desired file or files from the Finder, and then choose the Expand item from the Extras menu. AutoArk will then expand the selected files. During the expansion process, AutoArk will display the window shown in Figure 11. Should any of the selected files be encrypted, you will have to provide the password for that file before it will be decrypted or expanded.

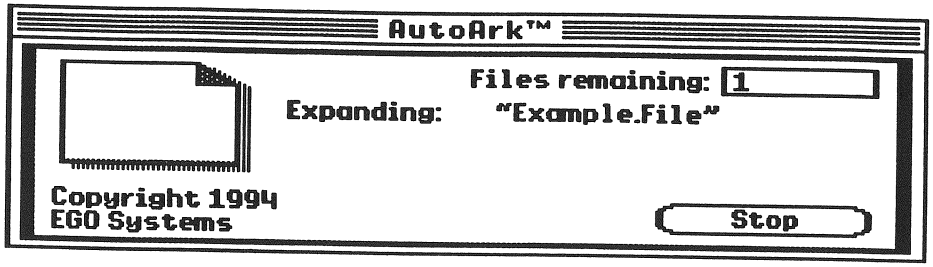

Figure 11. AutoArk displays this progress window as it expands files.

• Archive Info — After you have archived a file, you might have some trouble remembering exactly what was in the file, or how big it was originally, or whether or not you encrypted the file. That's when you should use the Archive Info menu item. To use this item, simply select the file or files that you want to get information on, and then pick the Archive Info item from the Extras menu. This will bring up the dialog shown in Figure 12. (If you selected more than one file, an arrow will appear in the bottom right corner of the dialog. You can click on this arrow to obtain information on the next file that you selected.)

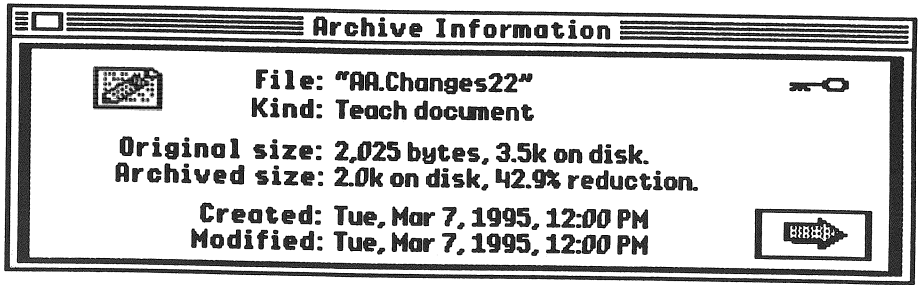

Figure 12. Information being displayed by AutoArk for the file "AA.Changes.22".

For each file that you selected, the following information will be displayed:

Original Icon
The original icon of the file (not the AutoArk icon), is displayed in the upper left corner of the dialog.

Encryption Indicator
If the file has been encrypted, you will see the picture of a small key in the upper right corner of the dialog.

The File Name
The name of the file. (This is simply called "File" in the dialog.)

The File Type
What type of file this is. (This is simply called "Kind" in the dialog.)

Original Size
The size of the file, in bytes and "k", before it was archived. (Note that 1K is 1,024 bytes.)

Archived Size
The size of the file, in "k", after it was archived by AutoArk.

% Reduction
This is an indication of how much smaller the archived version of the file is compared to the original file.

Date Created
The date and time (before archival) that the original file was created.

Date Modified
The date and time (before archival) that the original file was last modified.

The important thing to note here is that once you archive a file, the information that the *Finder* displays for the file will be that of the *archive*, and not that of the original file. All archived files will show up in the Finder as "Archival Library" files, and they will have the AutoArk icon. (Again, see the section "Finder Interface" in chapter 4 if you want the file's original icon to be displayed by the Finder.)

It should also be noted that archived files that are expanded from within an application other than your home application, do not get archived again until you return to your home application. (The "home application" concept

using never knows that the document is archived! So, you can simply open the document as if it weren't compressed!

And, after AutoArk has expanded your files, it will automatically recompress them when you return to your home application! (What's a home application? See chapter 4!) So, once you've initially told AutoArk to compress a file (which you *must* do manually), it will see to it that the file *stays* compressed until you need it!

The last AutoArk basic we need to discuss is how AutoArk will behave when you copy archives from one disk to another. If you are outside of the Finder, or if you are in the Finder and you have AutoArk's Finder interface turned off (see chapter 4), AutoArk will expand any files that you copy, so that they will be at their original size on the target disk. If, however, you are in the Finder and you have the AutoArk Finder interface enabled, AutoArk will *not* expand the archives that you copy from one disk to another.

do th-, the Smart Names Finder extension will automatically tell AutoArk to archive the file!

Then, if you later decide that you want to expand the file, all you have to do is change the file's name back to "Fred" and Smart Names will instantly tell AutoArk to expand the file!

Another neat feature of Smart Names is that if you have a folder with a name that ends in ".ark", any file that you copy into that folder will be archived! Also, any archive file that you move out of that folder will be expanded!

Here are some things to remember when using Smart Names:

1) For Smart Names to work, the file or folder you want to archive must be renamed to end with ".ark". Smart Names doesn't care if the letters are upper or lowercase, but you must include the period (".") before the letters "ark"!

2) Smart Names only works in the Finder! If you are outside the Finder and you rename a file to end with ".ark", nothing will happen!

3) Smart Names also works with our Balloon new desk accessory to allow you to easily archive files in ShrinkIt format! To use Smart Names with Balloon, you simply use the extension ".shk" instead of ".ark"! For more information on Balloon, contact us by one of the means shown on the first page of this manual.

Other AutoArk Basics

At the start of this manual, we said that AutoArk would work transparently to expand the files you compress with it. However, everything we've discussed so far has required some sort of action on your part to compress or expand a file. Never fear, what we've discussed so far are the *manual* methods of compression and expansion that you can use if or when the need arises. Normally however, after you have initially compressed your files, AutoArk will work behind the scenes without you having to do any additional work.

For example, if you double-click on an archived document in the Finder, AutoArk will automatically expand the file for you, and then the Finder will launch the application that owns the file just as it normally would! If you are already in an application and you are trying to open a document that just happens to be archived, AutoArk will see to it that the application you are

will be explained in chapter 4.) This means that the date and time the file is actually modified (shown in the Finder) will be different from the date and time it is archived. To find out the date the original file was actually modified you must use the Archive Info menu item.

EXAMPLE: On 10/20/94 at 1:05 PM you launch Quick Click Calc and immediately load the file **FiscalWeek22**. At 1:30 PM you are done making changes to the file so you save it. You then continue working with Quick Click Calc until 5:00 PM at which time you quit back to the Finder. It is at this point that AutoArk retrieves the file **FiscalWeek22**, archives it and saves the new archive file to disk. In this case the modification date and time for the actual file, which you will see when you get Archive Info for the archive, is 10/20/94, 1:30 PM. The modification date and time for the archive file, which the Finder would display in its Icon Info window is 10/20/94, 5:00 PM. So, the only way to view the *original* modification date and time is via the Archive Info dialog, or by expanding the document, at which time the original modification date and time would be restored to the expanded file.

• Configure AutoArk — Selecting Configure AutoArk from the Extras menu brings up a dialog that lets you set various options that control the way AutoArk does its job. Since this dialog and the options it lets you set are so important to the operation of AutoArk, they are discussed in their own chapter, chapter 4.

New Desk Accessories

While these new Finder extras are nice, they are only available from inside the Finder. So, what if you want to compress a file while you are in some other application? To solve that very problem, AutoArk also provides you with two new desk accessories (NDAs) in the Apple menu. These new desk accessories are: "AA Compress File(s)" and "AA Expand File(s)".

• AA Compress File(s) — Selecting the AA Compress File new desk accessory from the Apple menu will present you with the Standard File dialog shown in Figure 13. On the left side of the dialog is a list that shows you the contents of the currently open disk or folder. Above this list is the name of the disk or folder and a small button with a down arrow. Clicking on this arrow will bring up a pop-up menu that shows you the path to the currently selected folder. If you want, you may select any folder from this pop-up menu, and AutoArk will switch to and display the contents of that folder in the list.

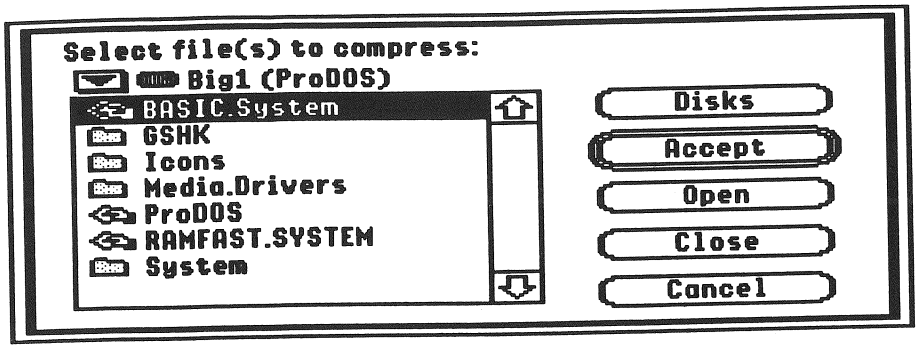

Figure 13. You can select files to compress from this dialog.

On the right side of the dialog are five buttons:

Disks
Clicking this button will give you a list of the disks that you currently have on line. To switch to another disk, simply double-click on its name in the list.

Accept
Clicking on this button tells AutoArk to go ahead and compress the files you have selected in the file list. If one of the files that you have selected is a folder, AutoArk will compress all of the files in that folder.

Open
If a disk or folder is selected in the list, clicking on this button will tell AutoArk to open it and display its contents in the list. If a single file (not a folder) is selected in the list, AutoArk proceeds to compress it. (Double-clicking on an item in the list produces the same results as clicking on this button.)

Close
Clicking on this button closes the currently open folder and displays a list of the files and folders that are in its parent folder.

Cancel
Clicking on this button closes the AA Compress File(s) dialog without compressing any files.

To select a single file in the list, simply click on it once with the mouse. Selecting more than one file can be done in two different ways.

1) To select a range of contiguous files, select the first file by clicking on it and then select the last file by pressing the shift key and then clicking on it. This will result in selecting *all* of the files between the first and last file you clicked on.

2) To select non-contiguous files you simply select each one by holding down the Command (Open-Apple) key and clicking on each desired file, one at a time. Clicking on an already selected file causes it to be deselected.

• AA Expand File — Selecting this new desk accessory will bring up a dialog very similar to the one discussed in "AA Compress File(s)" above. The main difference, of course, is that this dialog lets you select AutoArk archive files to expand, instead of ordinary files to compress.

Another difference is that only archive files and folders will be shown in this dialog (after all, you can't expand a file unless it has been archived). If you select a folder in the file list and ask AutoArk to expand it, AutoArk will search the folder and expand all of the archives that it finds. Of course, if any of the files you select to expand are encrypted, AutoArk will ask you for the password to the file before it will expand it.

(It should be noted that since AutoArk is intended to automatically expand files as you need them, you will probably *never* need to use this particular new desk accessory. However, if a program ever comes out that is incompatible with AutoArk's automatic expansion of files, or if you ever need to expand a file without going back to your home application, this new desk accessory will be *very* handy!)

NOTE: If you use either of these new desk accessories while in the Finder, any archive files that are currently shown in Finder windows will not have their icons updated when AutoArk finishes expanding them. To have the Finder display the proper icon, you must close and reopen the window containing the files you just compressed or expanded. (The files will still have been compressed or expanded, it's just that the Finder won't be displaying the appropriate icon when AutoArk finishes.)

Smart Names

If you installed the Smart Names Finder extension when you installed AutoArk, you have another way to compress and expand files—change their names!

For example, if you are in the Finder and you want to archive a file named "Fred", all you have to do is change its name to "Fred.ark". As soon as you