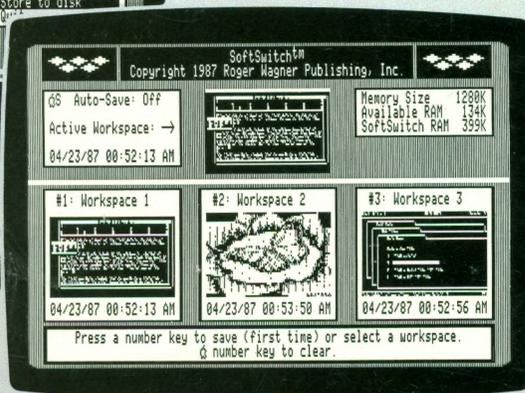
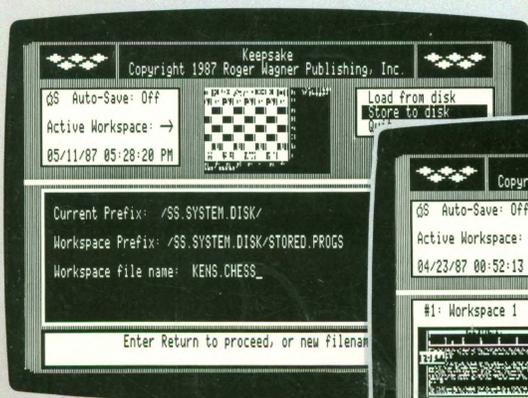


# SoftSwitch™

Program Switcher for the Apple IIGS

by Ken Kashmarek



**Roger Wagner™**  
PUBLISHING, INC.

# *SoftSwitch*<sup>TM</sup>

## A Program Switcher for the Apple® IIGS

by Ken Kashmarek

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Manual by Tom Burns

With special thanks to David Sparks

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## Chapter 1: Introduction

Welcome to SoftSwitch, a program designed specifically to take advantage of the extra memory in your Apple IIGS. Imagine being able to switch between up to 9 running programs with just a keystroke. Imagine being able to revert to a previous state of a given program. Imagine interrupting a program at any instant, saving the program to disk in its current state, and then returning to that exact point weeks later. Imagine all this and more, and you're beginning to understand the power of SoftSwitch.

SoftSwitch is implemented as a Classic Desk Accessory on the Apple IIGS. This means that it is available at any time by pressing the Control-Apple-Escape sequence that is used to access the IIGS Desk Accessory Menu.

When SoftSwitch is put on your System Disk, it is automatically installed when ProDOS 16 is started, and the name "SoftSwitch" will appear in the Desk Accessory Menu along with "Control Panel", "Alternate Display Mode," and whatever other Desk Accessories may be present in the GS.

The primary purpose of SoftSwitch is to allow you to install up to nine separate, but concurrent, programs, and to be able to switch between these applications at any point without having to re-start a program, or having to re-load any documents or related files.

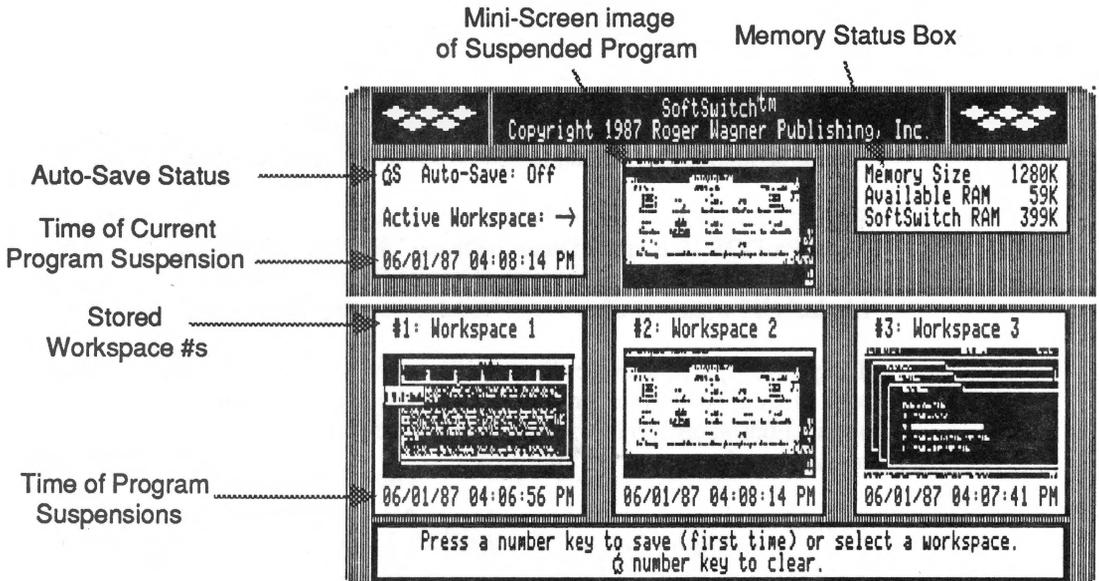
To load or switch applications, and to perform other SoftSwitch functions, you must be able to access the Desk Accessory Menu by pressing Control-Apple-Escape while you are using your program. If the program does not allow access to the Desk Accessory Menu, then it cannot be used with SoftSwitch.

SoftSwitch can also copy and paste Hi-Res, Double Hi-Res and Super Hi-Res screens between programs.

SoftSwitch can be used to switch ProDOS 8, DOS 3.3, Pascal and many copy-protected programs. It cannot switch ProDOS 16 programs, or programs that use the Super Hi-Res windows and pull-down menus, although many of these types of programs can be run without disturbing another program currently "on hold" in SoftSwitch.

## The SoftSwitch Display Screen

When SoftSwitch is first activated by selecting it from the Desk Accessory Menu, the SoftSwitch Display Screen appears. The display is made up of the following elements:



## An Overview

The general overview of SoftSwitch, and the purpose of the various displays is as follows:

When SoftSwitch is first entered, the program that has just been interrupted is indicated by a Mini-Screen in the upper center of the SoftSwitch screen display. The Mini-Screen is a compressed rendition of the display that was active at the moment the program's operation was suspended.

To the left, the date and time of the exact moment of suspension is indicated.

To the right, the Memory Status Box shows the total memory available in your Apple IIGS, how much is currently available for use, and how much memory is currently in use storing programs suspended by SoftSwitch.

The three boxes labeled "Workspace 1, 2 & 3" are like storage bins for the image of a suspended program. When SoftSwitch is first started, these storage areas hold nothing.

To use SoftSwitch, programs must first be run, and then interrupted. Then an image of that program must be stored in one of the Workspaces. The process is then repeated for each successive program until the desired number of Workspaces have been assigned stored programs. Once SoftSwitch has stored the programs, you can switch between programs at will.

SoftSwitch has very few command keys. The primary commands use the number keys 1 through 9. SoftSwitch is "context sensitive," which means that it can tell what you want to do by the context of when a command key is pressed. For example, if you enter SoftSwitch and press the corresponding key number for an empty Workspace, SoftSwitch assumes you want to store a copy of the program in that Workspace. However, if the Workspace you choose has a program already stored there, SoftSwitch assumes you want to switch to the program in that Workspace.

While the SoftSwitch display screen is visible, a Workspace area can be cleared at any time by pressing the Apple- and corresponding number key.

---

## *Uses For SoftSwitch*

There are many different ways of using SoftSwitch. The four main categories are:

- 1) Program switching is the most obvious use. You can quickly go from one program to another and back at will, eliminating any wasted time quitting one program and waiting for the next to load, or having to save and load documents between each switch.

- 2) SoftSwitch has a provision for copying any program display screen or stored graphic image from one program to another. For example, this "copy & paste" feature lets you transfer a Hi-Res graphics picture from one program where it was created, to another for printing, editing, or saving to disk. The two programs can be protected or not, and the transfer takes only seconds. Best of all, the two programs don't even need to run under the same disk operating system. Thus you can quickly transfer a ProDOS Hi-Res picture to a DOS 3.3 program, or vice versa.
- 3) You can use SoftSwitch to "revert" to the state of an application, or the entire computer, at some previous point in time.

The simplest application of this idea is with the Apple DeskTop program. Ordinarily, it takes quite some time to return to the DeskTop when you quit a program started from it. By storing it in one of the Workspaces, you can switch back instantly to the DeskTop environment, ready to run the next program.

The second variation on this theme is to revert a specific application to where it was at an earlier point in time. For example, most drawing programs with an "undo" feature limit you to only cancelling the very last action. With SoftSwitch, you could revert to the way the drawing was some minutes before.

- 4) You can use Keepsake, a separate program supplied on the SoftSwitch diskette, to save one or more of the currently switching applications to disk. Thus, you can suspend a program's operation over any period of time, and then resume the program exactly where you left off many days later.

The design of SoftSwitch has created an almost endless variety of possible uses:

- a) **Applications Extensions:** Do you sometimes wish that the program you're running had the functions of some other program? For example, if you're using 8/16 Paint, you may wish you could format a disk, or copy files as you can with the Apple II DeskTop program. With SoftSwitch, the DeskTop could be stored in a Workspace, and then you could switch whenever you needed to use any of the disk operations not available in 8/16 Paint. This principle applies to any combination of complementary programs that you can imagine.

b) **Multiple Users on a Single Machine:** In an office or school equipped with only one Apple IIGS, occasionally you're forced to save what you're working on and quit your program because another person has to use the computer for a more urgent task. With SoftSwitch, you can save your application in a Workspace, and then let the other person run another application. When the other person is finished, your application is restored instantly, and at the exact point where it was interrupted.

c) **Adventure games:** Many games take quite a long time to get to a certain point in the program. If your "character" should then perish, you have to start over. With SoftSwitch, you can save the state of an adventure game just prior to any hazardous encounter. Then, if your character succeeds, you can update the stored game with SoftSwitch. However, if your character perishes, you can revert to the state of the game just prior to the hazard, and try again, without having to re-run the entire program. SoftSwitch's Keepsake program also saves the suspended state of the game to disk. This is particularly handy for those programs that do not offer a save option.

d) **Arcade games:** Similar to the benefits to Adventure games, arcade games can be saved with Keepsake whenever you attain various high score situations. Thus you can always return to a level of success for another try without replaying the entire game. For example, in F15 Strike Eagle, you can make unlimited tries at landings and other maneuvers without repeating the beginning of the flight. Since not all entertainment programs let you save the current state of the game to disk, you may find Keepsake's save-to-disk feature handy for these as well.

e) **Debugging:** As a programming utility, SoftSwitch lets you freeze the program state at any point. Then the problem area of the program can be repeated over and over without a fatal system crash, because the "good" system can always be restored. You can also use file-compare utilities to compare "sanapshots" of programs at different times of operation, thus seeing each and every byte in the total environment (including the stack, zero page, and more).

f) **Documentation illustrations:** Because SoftSwitch can "capture" any Hi-Res, Double Hi-Res, 40 or 80 column screen, it can be used to copy and print any screen from a running program without disturbing it. Thus anyone who creates written explanations of any software package (authors, teachers, consultants, etc.) can use SoftSwitch to put perfect "screen shots" in any printed material. Appendix E has more information about this.

g) **Software demonstrations:** Anyone who demonstrates software to others (teachers, consultants, user group presenters, dealers, technical support personnel, etc.) can use SoftSwitch to quickly switch between several different programs without having to restart the machine. A great time-saver.

---

## *SoftSwitch Requirements*

SoftSwitch requires an Apple IIGS, a RAM Expansion Card with a minimum of 512K on it (768K total), and a 3.5" disk drive.

SoftSwitch stores and switches applications under ProDOS 8, DOS 3.3, and other modifications of these operating systems as long as the Desk Accessory Menu has not been disabled by the application.

SoftSwitch does not switch ProDOS 16 applications. Most current ProDOS 16 applications such as PaintWorks Plus, Music Studio and others, require a RAM Expansion Card of at least 512K. Thus, there is not enough room in memory to have two or more of these applications and SoftSwitch in the Apple IIGS at the same time. In addition, the considerations for switching a ProDOS 16 program are so substantial that a ProDOS 16 program switcher is not likely.

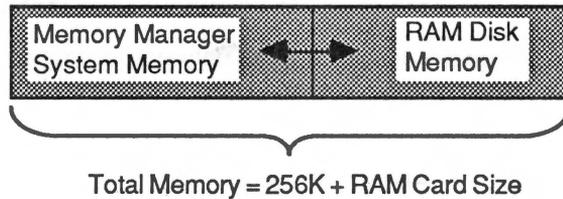
Programs which use ProDOS 1.1.1 present a different problem. ProDOS 1.1.1 turns off interrupts, and thus prevents access to the Desk Accessory Menu. Fortunately, most programs operating under ProDOS 1.1.1 can be started from a Program Selector such as the DeskTop. Using the DeskTop causes these programs to be started with ProDOS 8 instead, thus bypassing the ProDOS 1.1.1 that may be on the program disk. You can also use the DeskTop to replace the older ProDOS 1.1.1 on the disk with ProDOS 8. In addition, programs under ProDOS 1.1.1 that use the mouse (such as Dazzle Draw) automatically enable interrupts, and thus allow access to the Desk Accessory Menu. Most mouse-based programs will work with SoftSwitch, regardless of which DOS they use.

## Chapter 2: Installation

### Setting the RAM Disk

Before installing SoftSwitch, make sure that your Control Panel setting for the RAM Disk provides enough memory for SoftSwitch. As mentioned before, you must have at least 512K RAM on your RAM Expansion Card in addition to the 256K standard memory in the Apple IIGS, for a total of 768K, to use SoftSwitch.

When setting the RAM Disk values in the Control Panel on your Apple IIGS, it is important to understand that you are dividing up a fixed amount of memory between two distinct systems that use the memory.



As you make your RAM Disk size larger, the amount of memory available for SoftSwitch, and any other program that uses the system memory for programs, as opposed to a RAM Disk device, gets smaller. Likewise, as you make the RAM Disk smaller, the amount of system memory increases.

If you do not have any programs which require the RAM Expansion Card configured as a RAM Disk, you may just set the RAM Disk size to ØK. If you are using a program such as MouseWrite that can use a RAM Disk, you will have to decide how you want to partition memory.

If you are not sure how to use the Control Panel to change the RAM disk settings, see Appendix A, "The Control Panel Program," in the Apple IIGS Owner's Guide.

Here are some suggested settings for different RAM Expansion Card sizes and program use:

RAM Expansion Card Size	Minimum Setting	Maximum Setting	Memory Available for SoftSwitch
ØK	ØK	ØK	ØK

**IMPORTANT:** This is not large enough to use either SoftSwitch or a RAM Disk.

RAM Expansion Card Size	Minimum Setting	Maximum Setting	Memory Available for SoftSwitch
256K	ØK	ØK	256K

With this setting, you can only store 1 program in a SoftSwitch Workspace for reverting. True switching is not possible with this setting.

If you want to use the RAM Disk for some specific purpose later on, you can re-configure the Control Panel temporarily for the task, and then set the RAM Disk back to ØK when you're done.

If you only have 256K Expansion RAM, we recommend you set your RAM Disk to ØK for the time being, and think seriously about buying more RAM to expand your RAM card.

RAM Expansion Card Size	Minimum Setting	Maximum Setting	Memory Available for SoftSwitch
512K	ØK	ØK	512K

If you're using the DeskTop to start programs, 512K is the minimum amount of RAM Expansion memory needed to switch three programs.

If you're using the Apple Program Launcher or Finder (from the GS System disk) with a 512K RAM Expansion Card, you'll only be able to store and switch two programs. This is because the Finder (or Program Launcher) uses much more memory than the DeskTop. In order to switch three programs with the Program Launcher, you need a minimum of 768K on the RAM Expansion Card.

RAM Expansion Card Size	Minimum Setting	Maximum Setting	Memory Available for SoftSwitch
1Mb	512K	512K	512K
1.5Mb	512K	512K	1Mb

Remember that after you have made the appropriate changes to the RAM Disk settings, and you have pressed Return to accept the settings, you still must Quit the Control Panel and turn the power completely off on the IIGS. Then, when you turn the power back on, the new RAM Disk settings will be in effect.

We recommend that you set both the maximum and minimum values for the RAM Disk to the same value. The ability to use a minimum and maximum value implies that there is some usefulness to doing it. The reality is that some Apple IIGS programs will simply crash when they start fighting over the use of the undefined area created by differing minimum/maximum values. This is not the fault of the software, but an inherent problem in the implementation of the minimum/maximum design. We recommend you always keep the values the same.

**Note:** If you get an "Unable to load Tools.Setup file \$0027" error when you try to start the SoftSwitch (or any other ProDOS 16 disk), it means you have made your RAM disk setting too large, and have left insufficient system memory for startup. Make the RAM disk size smaller to fix.

**ROM disk Users:** Allocating part of your computer's memory as a ROM disk for products like Checkmate's Memory Saver, or Applied Engineering's RAMKeeper has the same effect of making the allotted amount of memory unavailable to SoftSwitch for storing programs as would using the memory for a RAM disk. When setting up a ROM disk, try to keep at least 512K of non RAM/ROM disk memory available for SoftSwitch.

---

## Installing SoftSwitch

SoftSwitch may be installed on any other ProDOS 16 (or ProDOS 8 with P8CDA) disk. As an illustration of the general process, this section describes how to put SoftSwitch on other diskettes by using the Ss.System.Disk itself as an example target disk. If you would like to go directly to the next Chapter, "Starting With SoftSwitch," and try the examples on using SoftSwitch, you may skip this section for the time being. This section is only required if you want to start up your Apple IIGS from another disk, such as a hard disk, or other ProDOS 16 System Disk, with SoftSwitch present. Eventually, you will want to install SoftSwitch on another diskette for your daily use, and keep the Ss.System.Disk in a safe place for future use.

\* \* \* \* \*

The Ss.System.Disk includes a program to transfer SoftSwitch to any ProDOS disk that contains the usual System files, such as the System.Disk that came with your Apple IIGS, or any ProDOS 16 disk with a System folder, including hard disks.

Unless you have the special utility P8CDA, SoftSwitch can only be installed on disks that start up in ProDOS 16. It cannot be installed on a ProDOS 1.1.1, or DOS 3.3 diskette. If you are unsure of a particular diskette, just start it and see if the very first screen that appears says "ProDOS 16." P8CDA is a separate program written by David Lyons, and available from Roger Wagner Publishing, that lets you install SoftSwitch, and most other Classic Desk Accessories (CDAs) directly from a ProDOS 8 disk. Using P8CDA, SoftSwitch is installed like any CDA. See your P8CDA manual for specific instructions.

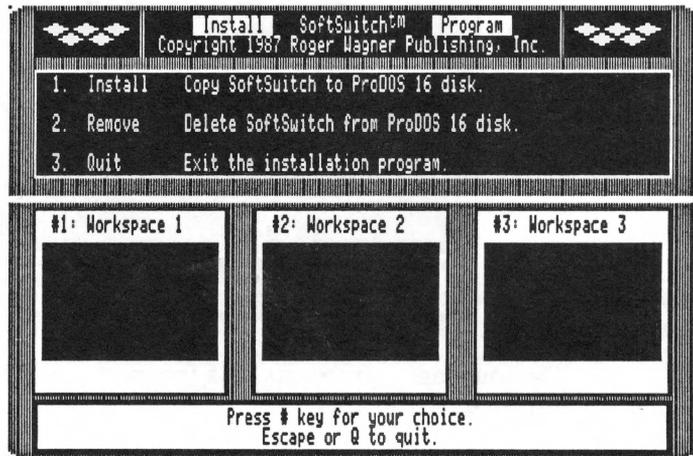
During the installation of SoftSwitch, you must know the volume name of the disk you want to put SoftSwitch on. This can be determined by just looking at the name of your disk icon on the Apple II DeskTop *before* you run the Install program.

To install SoftSwitch on a disk:

- 1) Start up on the SoftSwitch disk from a cold start as you would any 3.5 disk. When the SoftSwitch title screen appears, press Return to go to the DeskTop.

2) When the DeskTop and menu bar at the top of the screen appears, use the mouse pointer to select the "Selector" menu, and choose "Softsw.Install" from the menu list.

3) After a moment, the SoftSwitch Install display screen will appear. This is the SoftSwitch Install program. The dialog box at the bottom prompts "Press number key for your choice."



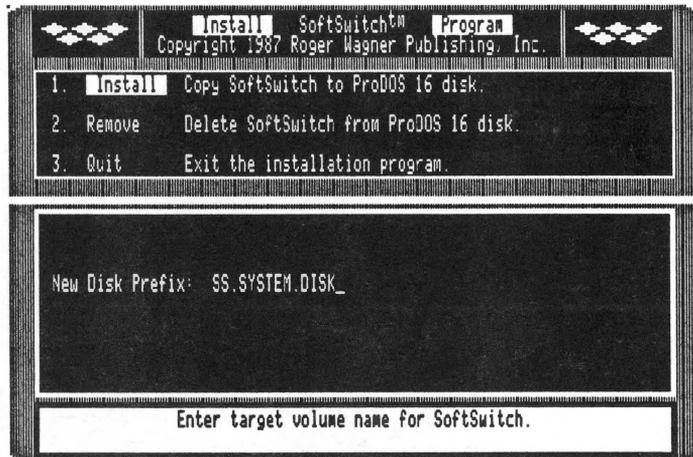
4) Press 1 to begin the installation.

"Install" is highlighted and the prompt "Enter target volume name for SoftSwitch" appears in the dialog box at the bottom.

5) This is where you would type the name of the volume you wanted to install SoftSwitch on. For this example, we'll pretend you wanted to put SoftSwitch on the Ss.System.Disk. (Obviously SoftSwitch is already on its own disk, but let's go through the steps just to see how the process works...) Type /Ss.System.Disk and press Return at the Volume Prefix: prompt. If you were using a different disk, you would type its volume name here, for example, /Hard1 for a hard disk, or /System.Disk for the Apple IIGS System disk.

The dialog box then prompts "Insert target disk volume, then press Return to continue or Escape to cancel." Since the Ss.System.Disk is already in the drive, press Return to begin the installation. If you were doing an actual

installation on a different disk, you would remove the SoftSwitch disk at this point and insert the target disk, if necessary, and then press Return.



The hourglass then appears for a few moments. Finally, the original Install display screen appears.

That's all there is to it! SoftSwitch is now properly installed on whatever disk you have specified for the target volume.

To return to the DeskTop, press 3 (to Quit). This will quit the Install program and go back to the DeskTop.

At this point you may wish to check your new disk installation by doing a cold startup of the disk, and verifying that SoftSwitch appears in the Desk Accessory Menu. When the disk has started, press Control-Apple-Escape to go to the Desk Accessory Menu. You should see "SoftSwitch" in the Desk Accessory Menu (see illustration, page 18). If it is not there, return to step 1 in the Installation procedures and carefully repeat the process.

Once SoftSwitch appears in the Desk Accessory Menu, you do not have to repeat the Installation process unless you want to add SoftSwitch to a new diskette.

---

## *Additional Installations*

You can use the program Softsw.Install on the Ss.System.Disk to put SoftSwitch on any disk that starts up with ProDOS 16. (For ProDOS 8 disks, see the description of P8CDA at the back of this manual).

You should not attempt to install SoftSwitch on copy-protected disks, regardless of their operating systems. Instead, start up your Ss.System.Disk first, and then run the .System file for the desired program. This should not be a problem since any disk that can be "opened" on the DeskTop can be run directly from there, without having to start the disk itself.

If you cannot "open" a DOS 3.3 or protected ProDOS disk, you can use the Startup menu in the DeskTop. These DeskTop techniques are covered in detail in the demonstrations later in this manual.

SoftSwitch is licensed for your own use on two computers, for example, one at home and one at work. If you intend to use SoftSwitch in an office, school or other multi-computer environment, you may buy one additional copy of SoftSwitch for each pair of computers that SoftSwitch will be used on.

The Ss.System.Disk included in the SoftSwitch package may be used to demonstrate SoftSwitch on any Apple IIGS at any time, and we welcome your interest in sharing your enthusiasm (though not the software) with your friends and associates. We have gone to extensive lengths to provide an easy to use, yet truly useful product for you at a reasonable cost. It is your support that makes continued improvement of this product possible, and we appreciate your help seeing that illegal copies of the software are not given to others.

**IMPORTANT!** At the front of this manual is a SoftSwitch Registration Card. This card *must* be on file at our offices for you to receive technical support over the phone or through the mail. In addition, returning this card also helps us notify you about any updates to SoftSwitch, along with notices of other new Apple IIGS products that may become available from Roger Wagner Publishing, Inc.

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## *Putting DeskTop on Your Own System.Disk*

If you would like to modify your existing System.Disk or hard disk to startup (boot) directly into the DeskTop, simply use the DeskTop to copy the file Start from the System folder on the Ss.System.Disk disk to the System folder on the destination disk. You also need to copy the file Desktop.Sys16 and the Desktop folder to the root directory of the destination volume. Be sure you have also installed SoftSwitch itself on the System.Disk using Install as described in this chapter.

SoftSwitch can also be manually installed on any ProDOS 16 disk by simply copying the files Softswitch.Init and Softswitch from the Desk.Accs folder, in the System folder on the Desktop, to the corresponding Desk.Accs folder on your own disk.

Backups of the SoftSwitch disk can be made using any file copy utility, including the DeskTop as provided on the SS.System.Disk.

For more information on installing SoftSwitch on other disks, be sure to also look at Appendix F, "Putting SoftSwitch on your Own Disks" at the end of this manual.

---

## *Removing SoftSwitch*

There may be an occasion (we can't think of any) when you want to remove SoftSwitch from a diskette. The procedure is virtually the same as installing SoftSwitch, except you begin by pressing item number 2 from the Install display screen. Alternatively, SoftSwitch can be removed by deleting the files Softswitch.Init and Softswitch from the Desk.Accs folder in the System folder on the disk from which you wish to remove SoftSwitch.

## Chapter 3: Starting with SoftSwitch

For being deceptively simple in concept, SoftSwitch has many different possible uses. This is because it "works" only by enhancing other pieces of Apple software. Since there are thousands of different programs that run on the Apple IIGS, there are thousands of ways to use SoftSwitch.

To make learning about SoftSwitch as easy as possible, we're going to lead you through a variety of scenarios for using SoftSwitch, and the exact steps needed to start and store a variety of different programs.

Keep in mind that none of these is *the* way to use SoftSwitch. After becoming familiar with the many options available from within SoftSwitch, you can decide which way of using it best suits a given task.

All of the examples that follow use files provided on the disk named `/Ss.System.Disk` that came in the SoftSwitch package. Not all these files are required for the normal use of SoftSwitch, but are provided for tutorial purposes only. The only essential files the operation of SoftSwitch are `Softswitch.Init` and `Softswitch` in the `System.Setup` folder. For more information on individual files, see Appendix F.

The `/Ss.System.Disk` in the SoftSwitch package is a little different from the one provided by Apple Computer with your IIGS in that it starts by going directly to the Apple II DeskTop program.

The advantage of this setup is both a faster startup time, and also the saving of system memory for SoftSwitch applications by avoiding the use of the Apple Finder or Program Launcher. The DeskTop program is not a Roger Wagner Publishing, Inc. product, but rather is licensed from Apple Computer Co., Inc. The DeskTop is provided on the SoftSwitch disk only as a basis for the discussions in this manual, and for your convenience in copying files, formatting disks, etc. It is also switchable by SoftSwitch, which is not the case for the Finder or Program Launcher.

Although these first examples will use the Apple II DeskTop to start up the various demonstration programs switched by SoftSwitch, the DeskTop, as such, is not required to use SoftSwitch. Remember, SoftSwitch is a CDA that is normally invisible as you run any particular program. Do not confuse the DeskTop program with SoftSwitch itself as the two are entirely independent of one another.

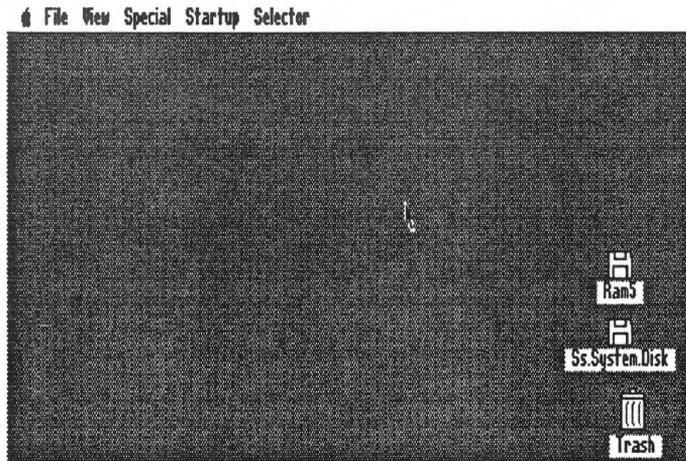
### *Example #1: Speeding Up the DeskTop*

The simplest use of SoftSwitch is to quickly revert the computer back to a previous point in time. A good use for this ability is to instantly return to the Apple II DeskTop after running a program. This gives a tremendous time savings when running new programs.

To see how this is done, place the /Ss.System.Disk in the 3.5 startup drive and turn on your IIGS.

After a moment, a title screen will appear. Press Return to start up the Apple II DeskTop. If you ever wish to get to Basic.System quickly, you can also press the Escape key at this title screen, and skip the DeskTop entirely.

When the DeskTop is displayed, it should look something like this:

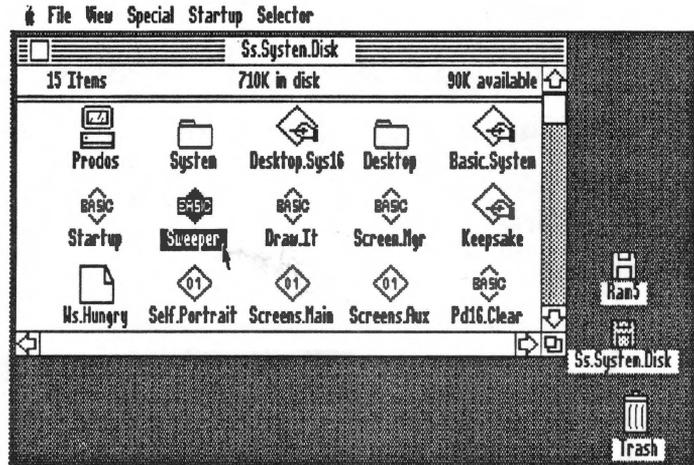


Now let's run a program. Running a program using the DeskTop is done by first using the mouse to double-click on the icon of the disk that has the program of interest on it.

Click once on the Ss.System.Disk icon now.

The icon will be darkened, showing it's selected. Now double-click to "open" the disk to see what is on it.

When you click to open Ss.System.Disk, one of the program icons you can see is called "Sweeper."



If the program you wanted to run was not immediately visible, you can use the up and down scroll arrows to see other files on the disk.

Double-click on Sweeper to run Sweeper now. To run any program from an opened disk, just double-click on the icon to run it.

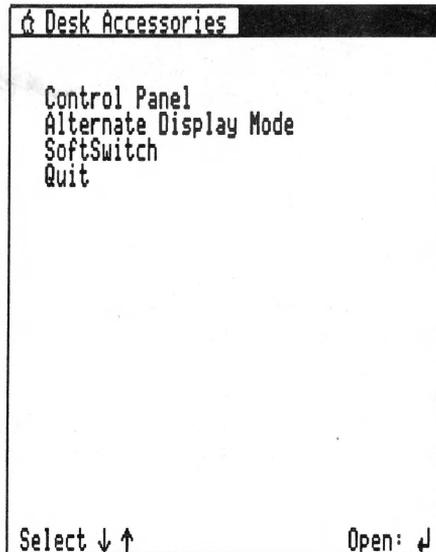
Sweeper is a Hi-Res program that draws interesting patterns on the screen. After watching a few patterns, press Return to Quit the program. When you do, the program will stop and automatically return to the Apple II DeskTop.

If you're like most people, you may think the DeskTop takes a little too long to start back up. Because of this, many people decide to stop using the DeskTop, and just press Control-Apple-Reset to run another program. As you'll soon find out, with SoftSwitch, you can have the best of all worlds: Easy program selection *and* a fast return to the DeskTop.

Let's take a look at SoftSwitch now. First, we'll store the state of the computer at this moment. Then you'll learn how to use SoftSwitch to "revert" back to this moment after you've run a program.

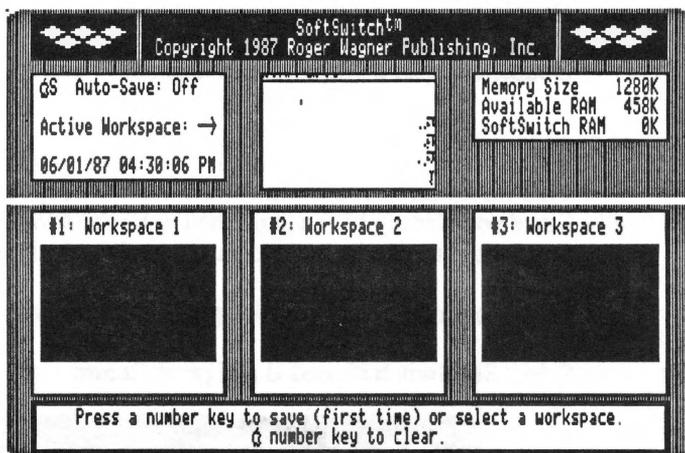
Press Control-Apple-Escape to go to the Desk Accessory Menu.

This is the same key sequence you use to go to the Control Panel to set your system preferences. However, this time you'll be selecting SoftSwitch instead. If you've installed SoftSwitch correctly, you should now see its name in the list of Desk Accessories, like this:



If the word "SoftSwitch" is not already highlighted, use the arrow keys to select SoftSwitch. When "SoftSwitch" is highlighted, press Return.

When you do, the following screen will appear:



Notice that the Active Workspace contains a Mini-Screen representation of the DeskTop program. This was the program that was running when you chose SoftSwitch. You'll begin by storing a copy of the DeskTop program in Workspace #1.

Press the 1 (for Workspace #1) key now. This tells SoftSwitch to store a copy of the currently active program in Workspace #1.

Immediately, you'll see a copy of the active Mini-Screen placed in the Workspace #1 display screen. This shows that SoftSwitch has just stored an exact image of your program, in this case the DeskTop, in the first Workspace. You can also see it has added the time at which that save took place. For our example, we'll say that time was 4:30 PM on 06/01/87.

Now that a program has been stored in Workspace #1, let's return to the active program.

Press the Escape key to exit SoftSwitch. This will return you to the Desk Accessory Menu. Then press Return to go back to the DeskTop ("Quit").

**Shortcut Tip:** Pressing Return in SoftSwitch will return you *directly* to your program, without stopping at the Desk Accessory Menu.

That was easy enough. Now let's run the demonstration program again.

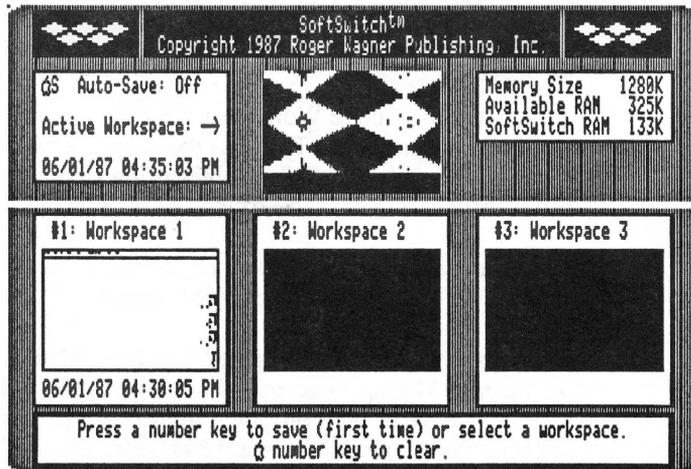
Double click on the Ss.System.Disk icon.

Double click on Sweeper to run it again.

After Sweeper is running, let's suppose you've decided you're finished with it and it's time to run another program. **DO NOT QUIT SWEEPER.** This would force you to wait while the DeskTop program is loaded again. Since you already have stored the DeskTop in Workspace #1, you can use SoftSwitch to eliminate the delay in loading the DeskTop again.

Press Control-Apple-Escape to go to the Desk Accessory Menu.

Select SoftSwitch if needed and press Return.



In the Active Workspace is the Sweeper program with its Hi-Res pattern. In Workspace #1 is the DeskTop as it was saved at 4:30 PM.

You want to replace the Active program (Sweeper) with the program stored in Workspace #1 (DeskTop).

Press the 1 key now. Since Workspace #1 has a program in it, this tells SoftSwitch you want to switch to that program.

SoftSwitch prompts you with "If you switch now, you will lose the current application. Press 'Y' to proceed."

SoftSwitch is reminding you that if you revert the computer back to the way it was 5 minutes ago, you'll lose what you've got right now. In this example, that is exactly what you want to do.

Press Y to confirm.

The Active Workspace Mini-Screen changes to match Workspace #1. The reversion is now complete.

Press Return to exit SoftSwitch.

You are back in the DeskTop! This process is called "reverting," and can be used whenever you want to revert a computer program back to where it was at an earlier moment in time. Obviously, to make this work, you must first save an image of that program within SoftSwitch at the point you'll want to return to later.

The first time through this may seem a little more complicated than letting the DeskTop run automatically when you quit a program. However, you'll soon get the hang of reverting to the DeskTop in just seconds, instead of waiting for the DeskTop to re-install itself each time you quit a program.

The moral of the story is: Don't press Control-Apple-Reset; use SoftSwitch! Try to change that habit of restarting the entire computer with Reset to just switching to the DeskTop!

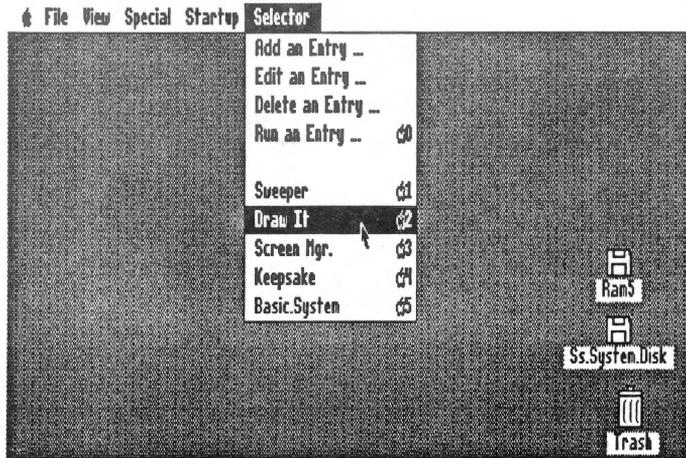
Try this process on your own now by running Sweeper again from the DeskTop and then using SoftSwitch to return to the DeskTop. You don't need to save the DeskTop again in Workspace #1 since it's already stored there.

## Example #2: Reverting a Single Program

A variation on reverting to the DeskTop is to revert an actual application to a previous state. This is done by just using another Workspace to save a copy of the program you're running, so that you can revert it when you want to.

This time, we'll use the "Draw It" demonstration program. Instead of selecting it from an opened disk icon, let's see how to use the "Selector" function of the DeskTop (although SoftSwitch really doesn't care how you run a program).

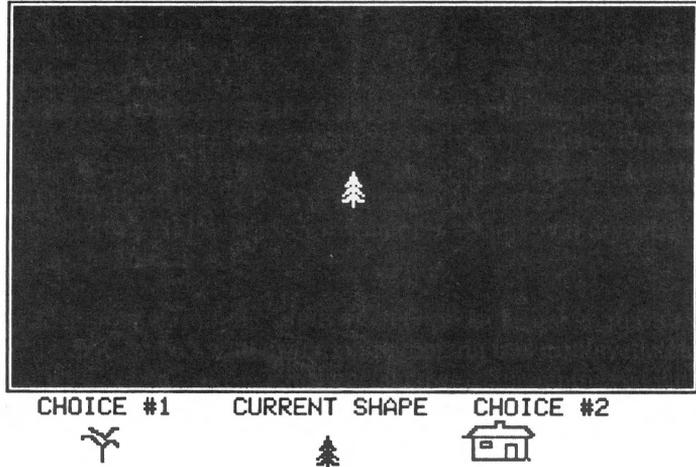
If you use the mouse to pull down the Selector menu, you'll see that the sample programs used in these demonstrations have already been entered into the Selector menu. To run any program you just press and hold down the mouse button as you drag the mouse down the menu to select the desired program. Then release the mouse button to run the program.



Select and run Draw It from the Selector menu now.

In a moment, a screen of instructions will appear. This program uses the mouse and pre-drawn shapes to help you create a Hi-Res picture. It is not intended to be a sophisticated program (although you're welcome to experiment with it), but rather an example of the type of program you might use with SoftSwitch, such as Dazzle Draw, Blazing Paddles, MousePaint, and so on.

After reviewing the instructions, press Return. The screen should then look like this:



In the middle of the screen is a tree. As you move the mouse around, the tree will also move on the screen. To draw the tree, just press the mouse button once. A permanent tree should now appear in the drawing, in addition to the one that follows the mouse pointer.

Click a few times to draw a couple of trees anywhere on the screen.

To store a copy of Draw It in SoftSwitch, press Control-Apple-Escape to go to the Desk Accessory Menu, choose SoftSwitch and press Return.

Since we want to keep the DeskTop in Workspace #1 available for when we finish with this program, you should store Draw It in Workspace #2.

Press the 2 key now to store Draw It in Workspace #2.

Immediately, you'll see a copy of the active Mini-Screen placed in the Workspace #2 display screen. SoftSwitch now has *both* the DeskTop and Draw It stored.

Return to Draw It now by pressing the Return key to go to your program.

Move the mouse to the bottom of the screen in order to select a new shape. The mouse cursor will change to a cross-hair. By placing this cursor on either "Choice #1" or "Choice #2," you can select a new shape. There are a total of 14 different shapes available. Select the house shape (Choice #2 on the right) and place it somewhere in your forest.

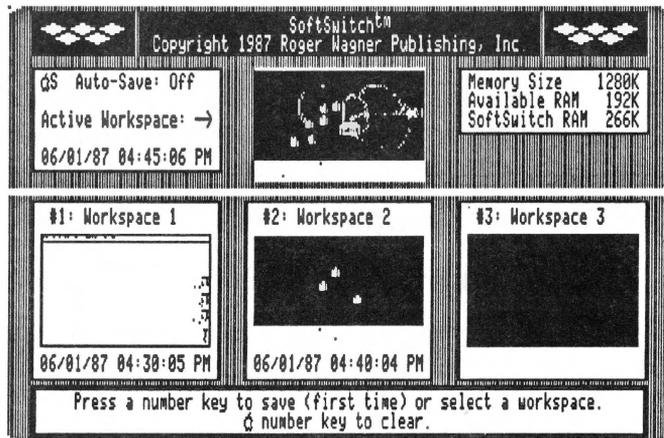
Now, click on Choice #1 (or #2, it works either direction) until the single dot (like a period) shape is the Current Shape. (You can also use the left and right arrow keys). This shape is used for drawing. Try it now by holding down the mouse button as you move the mouse around the screen.

As you draw, it will leave a multi-colored line of dots on the screen. The faster you move, the more widely spaced the dots will be.

Now that you've scribbled all over the screen, maybe you're thinking you'd like to start over. In most programs, you'd erase the screen, and start completely over. Let's see how to use SoftSwitch to "revert" back to where the program was when you only had a few trees on the screen.

Go to SoftSwitch as you've done before.

This time, the SoftSwitch display screen should look something like this:



What SoftSwitch is showing you is that Workspace #2 contains Draw It as it was saved at 4:40 PM (the time a program is saved is stored with every Workspace). In the Active Workspace is the program with the house and the scribbles at 4:45 PM.

You want to replace the Active program with the program stored in Workspace #2.

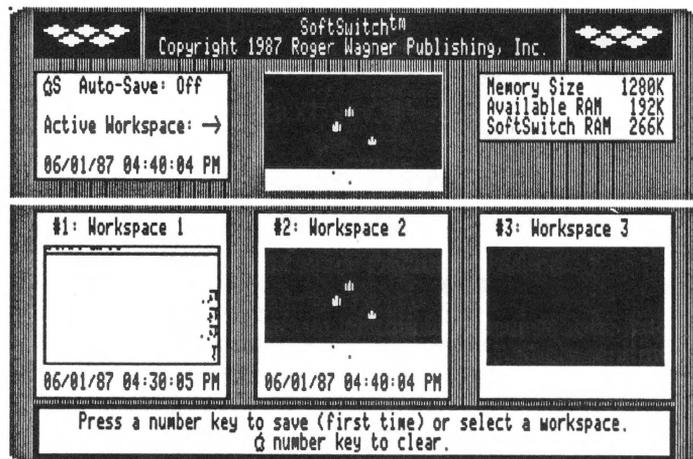
Press the 2 key now to switch to *stored* program #2 (Draw It).

SoftSwitch will prompt you with "If you switch now, you will lose the current application. Press 'Y' to proceed".

It is reminding you that if you revert to the program the way it *was* 5 minutes ago, you'll lose what you've got right now. Since that is what you want, press Y to confirm.

The Active Workspace Mini-Screen will then change to match Workspace #2. The reversion is now complete.

Press Return to exit SoftSwitch, and to be back in your program - as it was 5 minutes ago!



By the way, just because you save a program image, it doesn't mean you *have* to revert. It's just another option that SoftSwitch gives you.

Now we'll see how to dispose of a stored program. Go back to SoftSwitch now. The SoftSwitch display screen appears.

Press Apple-2 to erase Workspace #2.

Immediately the Mini-Screen turns to a blank, showing that SoftSwitch has disposed of its copy of the program.

Try pressing 2, then Apple-2 a few times now to see how to store a copy of your program, and then erase it, with SoftSwitch. While you're trying this, also notice how the Memory Status Box numbers change showing the memory used ("SoftSwitch Memory") when a program is stored, and how it is released when the program is erased.

You can also press 3 and Apple-3 to use Workspace #3 (or any number key from 1 to 9). SoftSwitch really doesn't care in which order workspaces are stored.

**"Undo" feature:** Whenever you erase a Workspace, SoftSwitch puts the message "⌘Z to Undo" in the appropriate box. This gives you a chance to change your mind. Pressing ⌘Z before you leave SoftSwitch will restore the Workspace you just deleted. Once you leave SoftSwitch, a deleted Workspace cannot be recovered.

### More about the Apple II DeskTop:

If you would like the Selector menu to be automatically displayed when you first startup Ss.System.Disk, rename the icon "Selector.X" in the "Desktop" folder to "Selector." Icons can be renamed using the "Rename an Icon" choice in the "Special" menu of the DeskTop.

If you prefer to use keyboard commands to launch a program, the DeskTop Selector menu lets you assign Apple-#-key commands to run many different programs with a single keystroke. Use the "Add an Entry" option in the Selector menu to create your own program list. You can use "Delete an Entry" to remove any of the existing entries from the Selector if you use the DeskTop program from the SoftSwitch disk.

Also remember, you *can* launch ProDOS 16 applications from the DeskTop. Simply double click on the program icon. When you quit that program, it will automatically return to the DeskTop.

## Example #3: Storing Multiple Copies

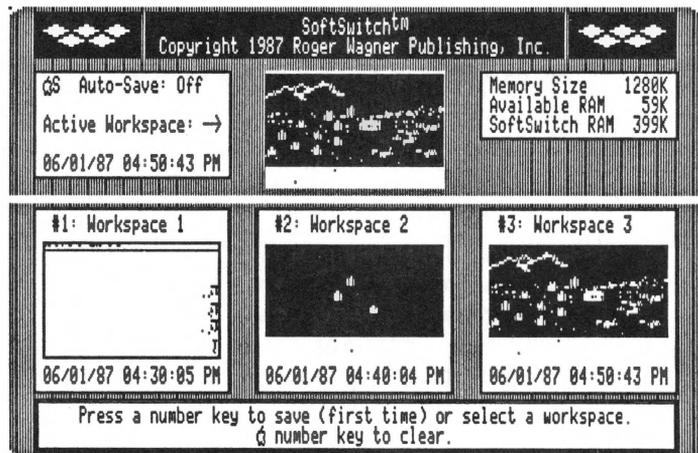
Suppose when you revert to a previous state, you also want to keep a copy of where you're at now, just in case you change your mind again? You can with SoftSwitch.

Since you've just reverted to the original picture with only trees, go back and draw a house, some lines, or whatever else you want to add to the picture. When you've added a fair amount to the picture, go to SoftSwitch.

This is very much like the way it was the first time you reverted. This time, however, we'll assume you want to keep this program state around in case you change your mind again. Simple.

Press the 3 key to store a copy of this program in Workspace #3.

You'll see the Mini-Screen appear in Workspace #3.



Now press the 2 key.

You'll see the Active Workspace display change to the earlier version. There is no warning prompt this time because SoftSwitch knows there's a copy in Workspace #3, so no data can be lost.

If you go back to your program, make changes, and then re-enter SoftSwitch, you'll now have three different program states on hand. You can either save the third and revert to either of the other two, or you can switch to the one you want, and erase the others.

When you're done using a given program, you'll probably want to go to SoftSwitch and erase its Workspace. This will release the stored memory, before quitting the program itself as you normally would. It doesn't hurt anything to have a stored program in memory, but there's also no reason to leave something around you don't need.

Even though Draw It has a Quit command, you've already learned a faster way to quit and run another program by using SoftSwitch and the stored DeskTop.

Therefore, to quit Draw It, just follow this sequence:

Go to SoftSwitch.

Switch to the DeskTop in Workspace #1 to make it the Active Workspace.

Erase the copies of Draw It in Workspaces #2 and #3 (Apple-2 and Apple-3).

Press Return to leave SoftSwitch and go back to the DeskTop.

**More than 3 workspaces note:** You might be concerned that if you use more than three workspaces, one window may obscure another. Just remember that using the left- and right-, or up- and down-arrow keys will rearrange the windows as you desire. Also, pressing the number key for any window brings that window to the top of its "stack."

---

## *Example #4: Switching with Auto-Save*

You can also use SoftSwitch for fast access to a program you use a lot, by switching between it and whatever other program is stored at the moment.

The DeskTop makes an excellent "accessory" to many programs because it can be used to format a disk, copy or delete files, and it has its own built-in "desk accessories," such as the calculator. With SoftSwitch, you can go to the DeskTop while you're in any program, and use its features as an add-on to any other program you wish.

To see how this might work, run Draw It again from the Selector menu in the DeskTop. Draw a few trees and so on, then go to SoftSwitch. Save it in Workspace #2, then go back to Draw It and draw a house or two.

Now suppose you're in Draw It and suddenly want to calculate some numbers, such as the number of board feet of pine needed to build a castle.

Go to SoftSwitch now.

You could switch back to the DeskTop by pressing "1", but you would get the "If you switch now you will lose the application in memory" message. It's telling you that SoftSwitch has Draw It as it was when you *first stored it*, not the current program state.

To switch without losing what you have now, you'd have to erase Workspace #2 (Apple-2), and then store the new program state before switching to the DeskTop (Workspace #1).

You're probably wondering, isn't there any way that SoftSwitch could automatically update the stored workspace so you can switch without any prompting? The answer is yes: just turn on the "Auto-Save" feature.

Press Apple-S now to activate Auto-Save.

SoftSwitch will prompt you with "This will overwrite the selected workspace with the application just interrupted. Do you want to proceed? (Y/N)."

---

Auto-Save works by synchronizing the appropriate stored workspace with the currently active one. By turning on Auto-Save now, SoftSwitch will update Workspace #2 with the image of the currently active program. This is what you want to do, so press "Y".

Now you can switch freely between programs #1 and #2. Try it now by pressing 1, then leaving SoftSwitch to go to the DeskTop.

In the DeskTop, pull down the "apple" menu in the upper left-hand corner, and select the Calculator. Click on the buttons with the mouse to see how it works.

Then go back to SoftSwitch, press 2 and Return twice to switch back to Draw It. Now go back and forth between the DeskTop and Draw It a few times until you understand how to switch between the two programs with Auto-Save turned on. Auto-Save automatically updates the stored Workspace each time you enter SoftSwitch. Auto-Save can be turned back off by pressing Apple-S again.

If you wanted to switch between two programs, *plus* keep the DeskTop on hand, you would first store the DeskTop in Workspace #1, then exit SoftSwitch and start the first application program. Save this in Workspace #2. Then switch back to the DeskTop and start the second program, store it in Workspace #3 and turn on Auto-Save. Then exit SoftSwitch to either of the applications to begin your work.

This is the most common way to use SoftSwitch. The general procedure for setting things up is:

- 1) Start up with the DeskTop and store it in Workspace #1.
- 2) Return to DeskTop and start up program #2.
- 3) Store it in Workspace #2.
- 4) Switch back to the DeskTop and start another program, if desired.
- 5) Store it in Workspace #3, and then turn on Auto-Save. No prompt will be printed since the stored workspace at that point is identical to the active workspace.
- 6) Switch freely between programs using just the number keys.
- 7) When done, go to SoftSwitch and turn off Auto-Save.
- 8) Press the number key (usually 1) for the DeskTop, then erase the stored workspace for program #2, and exit SoftSwitch back to the DeskTop.

---

## *Example #5: Switching 3 or More Programs with Auto-Save*

If you want to switch between three or more programs, the procedure is basically the same. Start with the DeskTop stored in Workspace #1. Use the DeskTop to start the next program, then store it in Workspace #2. Switch back to the DeskTop and start the next program, then store it in Workspace #3. Continue switching back to the DeskTop and starting each additional program. Finally, turn on Auto-Save and switch freely between them.

Remember that Auto-Save should not be turned on until the last program is stored in a Workspace.

When you're finished using the stored programs, remember to go to SoftSwitch and turn off Auto-Save. Then erase any others you don't need any more, and exit SoftSwitch back to the DeskTop.

If you have 512K or less on your RAM Expansion Card, the only way to store three programs in SoftSwitch is to avoid using Apple's Finder or Program Launcher. The Finder is a completely different program selector than the DeskTop, and is included on the System.Disk that came with your Apple IIGS. (All of this presumes that your RAM disk size is set to ØK).

If you have 768K or more of RAM on your RAM Expansion Card (and more than 512K is available to SoftSwitch), then you will be able to switch proportionally more programs. Each stored program in SoftSwitch takes 133K of RAM. Filling all nine workspaces requires about 1.2 Megabytes of free RAM.

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***Example #6: Switching DOS 3.3 or Protected Programs***

Switching a DOS 3.3 program, or a disk that is copy-protected, such as Dazzle Draw or Print Shop, requires a little different approach. Because these programs cannot be opened from the DeskTop, you won't be able to just click on the name there. You obviously also can't turn off the power and turn it back on again to start the disk because this would erase SoftSwitch from the Desk Accessory Menu. Pressing Control-Apple-Reset to restart would have the same effect.

In addition, DOS 3.3 and most protected programs have no provision for quitting them back to the DeskTop other than to turn off the power and restart, or to press Control-Apple-Reset.

Fortunately, there is a way. The DeskTop has a menu called "Startup" that you can use to startup a disk without erasing SoftSwitch, or even any of the stored programs currently in Workspaces.

You must give some thought to the order in which you want to save your switching Workspaces. For example, if you start up Dazzle Draw first (or any protected program), and then store that in SoftSwitch without first saving the DeskTop, you'd have no way to quit Dazzle Draw, and thus no way to get back to the DeskTop to select another program, or to use Startup again for another non-ProDOS disk.

The easiest solution is to be sure to first save DeskTop in Workspace #1. Then use Startup to start the DOS 3.3 or protected ProDOS disk you want. When that program is saved in Workspace #2, switch back to DeskTop to run or start up the next program for Workspace #3.

By leaving DeskTop stored as Workspace #1, you've always got a "back door" to any program. You can use SoftSwitch to exit the DOS 3.3 or protected programs and then go back to the DeskTop by switching to Workspace #1. This is also useful as a "clean" way to shut down those programs like Dazzle Draw without having to re-start when you're done. Just make DeskTop the active workspace by pressing its number key, and then use the Apple-# key to erase the stored images of the non-quittable programs.

By the way, if you're comfortable with typing "PR#6" from BASIC to start a disk, then you can also use that to start any non-ProDOS disk to be switched by SoftSwitch. You can get to BASIC by choosing Basic.System in the Selector menu of the DeskTop.

**IMPORTANT:** Some software programs, most notably the Apple IIe versions of Dazzle Draw and Pinrt Shop from Broderbund, Inc., have "false" Quit options in their menus that instead of a proper quit back to the DeskTop, clear all of memory and do the software equivalent of a Control-Apple-Reset. This erases SoftSwitch and any other stored programs in memory.

For this reason, you should *never* use a Quit option that does not return to the DeskTop, no matter how attractively it's offered. Instead, use SoftSwitch to switch back to the DeskTop, then erase the offending application from its Workspace, if desired.

Programs such as AppleWorks, which *require* a normal Quit, can be exited normally.

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## *Example #7: Fast Path Options*

If you don't use the other Desk Accessories like the Control Panel very often, you may find yourself wishing that you would go directly to SoftSwitch when you press Control-Apple-Escape. As it happens, SoftSwitch has just such a provision, called the Fast Path option.

From the DeskTop, or any program, press Control-Apple-Escape, and go to SoftSwitch. When the main screen appears, press Apple-F (for "Fast Path"). The message box at the bottom should display "Fast Path entry enabled. Press Return to proceed." Press Return. Now press Return to go back to your application program.

To test the fast path, press Control-Apple-Escape. This time, you will go directly to SoftSwitch without seeing the Desk Accessory Menu. Pressing Return takes you directly back to your program.

There are two other Fast Path options as well. Go back to SoftSwitch and press Apple-F again.

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This time the message box will print "Fast path disabled." Now when you press Control-Apple-Escape in your program, or press Return in SoftSwitch, you will always go through the Desk Accessory Menu. Try it now a few times.

Go back to SoftSwitch and press Apple-F once more. This time the message box will display "Fast Path exit enabled."

This has restored SoftSwitch back to its original condition where Return quits directly back to your program, but Control-Apple-Escape goes to the Desk Accessory Menu first.

Each time you press Apple-F, it will cycle through the three available options.

---

### *Example #8: Desk Accessory Menu Command*

If you're thinking that with the Fast Path enabled you won't be able to easily get to another Desk Accessory or the Control Panel, you'll be pleasantly surprised to know that SoftSwitch has its own Desk Accessory Menu built in.

Press Apple-D in SoftSwitch to bring up the Desk Accessories Menu, and the arrow keys and Return as you normally would to select any option.

This function is available at all times, regardless of the Fast Path setting.

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## Chapter 4: Supplemental Programs

This chapter discusses some of the further features of SoftSwitch, and also other programs such as Keepsake and the Screen Manager that are on the Ss.System.Disk.

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### *Example #7: Capturing a Screen Image*

Another special feature of SoftSwitch is its ability to capture a screen image from one program, and then to "paste" this image into another.

Before looking at how this is done, a short explanation of the various screen displays on an Apple IIGS is in order.

There are a total of 13 video screen displays available on the Apple IIGS. They are as follows:

- 40 column text, page 1 and 2.
- 80 column text, page 1 and 2.
- Lo-Res graphics, page 1 and 2.
- Double Lo-Res graphics, page 1 and 2.
- Hi-Res graphics, page 1 and 2.
- Double Hi-Res graphics, page 1 and 2.
- Super Hi-Res graphics, page 1 only.

Many of these displays use the same part of memory as another. That is, what you see just changes depending on the display mode of the computer, but you're still looking at the same part of memory.

As an example, if you've seen the 80 column screen suddenly go to 40 columns, you may have noticed that every other character from the 80 column screen is left on the 40 column screen. This is because the 80 column display mode uses the same memory that the 40 column display uses, plus another equal amount of memory to double the number of columns displayed.

SoftSwitch can examine and copy the following screen displays:

40 column text, page 1 only.

80 column text, page 1 only.

Hi-Res graphics, page 1 and 2.

Double Hi-Res, page 1 and 2.

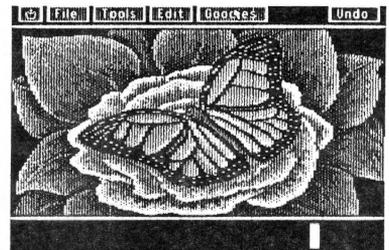
Super Hi-Res, page 1 only.

Having "captured" one of these images, SoftSwitch can then paste it into another program on either a Hi-Res, Double Hi-Res, or Super Hi-Res display, depending on what was captured.

Most of the time, you won't need to know which display mode or page is being used to create what you see in a given program, but understanding that there are many different modes will make it easier to understand what's going on when you use SoftSwitch.

In many graphics programs, the "picture" that you create is stored in two places within the program. The entire picture is first stored somewhere in memory, often on "page 2". This picture is not necessarily ever seen by the user of the program. Instead, this image is merged with whatever menus, prompts, window borders, and so on, that the program creates for the actual display that you see while using it.

For example, let's consider a program called Dazzle Draw, from Broderbund Software. As you look at the picture you're working on, you can also see the menus and other program features displayed at both the top and bottom of the screen. This is the Page 1 display, and it looks like this:



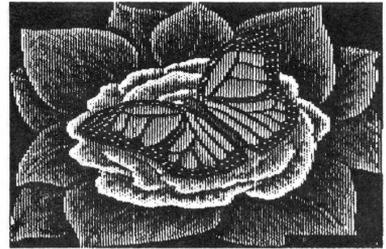
Page 1

One of those menu options is a choice to view the entire picture.

Dazzle Draw (and many programs like it) keeps the entire picture on the page 2 display. What you see while you work with the program is the page 1 display with added menus and program screen displays.

When you select "View Entire Picture," the computer changes the display for a moment to page 2, and the menus, etc. "disappear."

Thus, if you wanted to capture the actual picture being worked on, you would want to copy the page 2 display, *not* the page 1 display that included all the unwanted "extras."



Page 2

Likewise, if you wanted to paste an image *into* Dazzle Draw, you would want to paste the image into page 2. This is because page 1 is constantly being re-drawn based on the image on page 2. If you pasted to page 1, as soon as the screen was redrawn, the image would change back to the image from page 2. Instead, if you paste an image into page 2 in Dazzle Draw, this will become the master image for the picture and display screen, and you can then edit or save this picture as you would any other.

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## Example #8: Examining the Image

The best way to get a feel for copying and pasting screens is with an actual example. Run the Draw It program from the DeskTop, and then draw a few trees in the middle of the screen. Then change the current shape to the "house" shape.

Go to SoftSwitch, and then press Apple-E to "Examine" the image.

This command lets you examine the different text and graphics display pages of the Active Workspace program. The following prompt appears in the SoftSwitch dialog box: "4/8=40/80 Text, 1/2=Graphics Page 1/2, S/D=Single/Double Hi-Res, C/M=Color Mono, T/X=Super Hi-Res Text/Graphics, ⌘C=Copy, ⌘V=Paste, or Esc."

This is a list of command keys that you can use while examining the different display pages for the image you want to capture. Note that you can only copy and paste while you are actually in SoftSwitch, *not within the program itself*.

Press S (for "Single Hi-Res") to examine the Hi-Res display.

---

The screen display will change to show you Hi-Res page 1, which in this case is the main *working* screen of Draw It, complete with the shape choices at the bottom of the screen. So where is the picture that can be viewed with the "V" key in Draw It?

Press 2 to examine Hi-Res page 2.

The display will now change to Hi-Res page 2. (If you press the T - for "Text" - key, you can also see the help screen image of Draw It.).

You use the Apple-C command to capture or "copy" the screen image you're viewing, *while you're in SoftSwitch*. Press the S and 2 keys now so that you can see just the picture itself, without the options at the bottom of the screen.

Now press Apple-C to copy.

SoftSwitch will copy the image onto its "clipboard," and then immediately return the display to the normal SoftSwitch display screen.

"Pasting" means placing the image that is stored on the SoftSwitch clipboard into another program (that can accept it). Pasting is done by first switching the target program into the "active workspace," and then using the ⌘-E (examine) command to find the target screen. Then ⌘-V is used to paste the image. You can paste into any program that stores and uses within itself a complete Hi-Res, Double Hi-Res or Super Hi-Res picture. The examine command is used to make sure you're pasting onto the right image. The Screen Manager is a program that has been provided on the Ss.System.Disk to help illustrate this process. It is *only a representative of a general class of programs*, and is *not* required to use the Copy & Paste feature of SoftSwitch.

---

### *Example #9: Using the Screen Manager*

To see how Screen Manager is used, switch to the DeskTop (assuming you are still in SoftSwitch). Then choose "Screen Mgr." from the Selector menu.

Screen Manager is a simple program on the Ss.System.Disk whose sole function is to load and save Hi-Res and Double Hi-Res pictures, and to let you view them once they're loaded into memory.

When you run Screen Manager, you'll first see a title screen, and then this menu:

```
Screen Manager          ESCAPE: Quit to BASIC

  /----- Main Menu ----- \
  | 1. Select Picture From Disk |
  | 2. View Picture             |
  | 3. Save Picture to Disk     |
  | 4. Quit to BASIC            |
  |                             |
  | Select a Number & Press RETURN:█ |
```

Although you haven't loaded a picture from disk yet, you can take a look at what is currently in memory.

Select menu item 2 now.

You'll be shown Hi-Res page 1. If you press D, the display will switch to the Double Hi-Res display. You can switch it back to Single Hi-Res by pressing S again.

Press Return to go back to the Screen Manager main menu.

Now go to SoftSwitch, and press Apple-E to examine the Screen Manager display pages.

Press S to see Single Hi-Res page 1 again, and by pressing D you can see the Double Hi-Res page.

Now press the 2 key to view page 2.

You can now examine graphics display page 2, in both Hi-Res and Double Hi-Res. For the Screen Manager, page 1 is where the program stores its graphics images.

Remember that a copy of the picture you captured is still on the SoftSwitch clipboard. To paste it into the Screen Manager, press the S and 1 keys to look at Hi-Res page 1 again. Remember, you're still in SoftSwitch.

Now press Apple-V ("V" is the Apple standard key for "paste") to place the image in the Screen Manager's Hi-Res page 1. This assumes you've copied a graphic onto the clipboard from the Draw It program a moment ago (part #8). The picture will briefly appear, and you'll be returned to the SoftSwitch main screen..

Now exit SoftSwitch and go back to the Screen Manager. From the main menu, things look pretty much the same, but select item 2 to view a picture again. This time, you should see the picture that you captured from Draw It.

The picture has been pasted into the Screen Manager from SoftSwitch. To save the picture to disk, press Return to go back to the menu, and then select item #3. The disk directory will appear. Type in TREES and press Return. The picture will be saved to the disk.

This is the method you can use to capture the screen image from almost any program, and then paste it into the Screen Manager to be saved. In our example, you didn't use SoftSwitch to keep a stored copy of the Screen Manager in a Workspace, but this could have been done as well, if you anticipated switching many times between several different programs.

This copy & paste method can also be used to move a picture from one operating system to another, for example, DOS 3.3 to ProDOS. Simply load both DOS and ProDOS picture handling programs into memory (such as Blazing Paddles and Screen Manager), and then copy a picture loaded with one and paste it into the other. The copied image can be saved, edited, or printed, depending on the capabilities of the receiving program.

SoftSwitch can also capture 40 and 80 column text screens with the copy command as *either* a block of text, or as a Super Hi-Res screen. If you press 4 or 8, SoftSwitch will grab the text characters only. If you press T, it will convert the screen to Super Hi-Res, and then put it on the clipboard.

The main use for the "T" command is for printing out screen images, or "screen dumps," using a graphics printing program to print the captured and saved image. The Screen Manager can also accept the pasting of the text characters if you press 4 or 8 in the View Picture function *before* pasting the screen in. In fact, the Screen Manager is the *only* program we know of that can accept pasted text screens. *Do not* try to paste text screens into programs like AppleWorks, or any other text display program.

SoftSwitch does not convert Hi-Res images to Double Hi-Res or vice versa, and so will not let you paste the wrong image type into another program. The Screen Manager program can accept either Text, or Single, Double, or Super Hi-Res images, but some programs, like Dazzle Draw, may accept Single or Double Hi-Res graphics only.

See Appendix C at the back of this manual for tips on how to copy & paste images with specific commercial programs.

---

## *Example #10: Loading and Pasting Images*

The reverse process of the previous example would be to load a picture into memory using the Screen Manager, and to then paste it into another program, such as a drawing program like Draw It.

If you don't already have the Screen Manager in memory, run it now from the DeskTop.

Select menu item #1, "Select Picture from Disk."

The Select Picture function will first give you a list of all disk drives currently connected to your Apple IIGS.

Select Ss.System.Disk.

On the Ss.System.Disk should be your saved picture "TREES", from the previous example. Select this picture to load.

When it's loaded and you are returned to the main menu, use item 2 to view the picture. When you are done viewing the picture, press Return to go back to the main menu.

Now go to SoftSwitch and press Apple-E to examine the display pages. Press S and 1 to see the picture you just loaded.

Now press Apple-C to copy the image to the clipboard.

Switch to the DeskTop and exit SoftSwitch. Run Draw It from the Selector menu (or switch to it if you have it stored in a Workspace).

---

You want to paste the image just captured from the Screen Manager program into Draw It. You could do this now from SoftSwitch, but it might be hard deciding where to paste the image if no image exists there yet. So, before pasting into a program, it is always a good idea to look at whatever picture that program already has in memory. Then you'll know what you're about to replace.

To create something different than the trees currently on the SoftSwitch clipboard, press Escape and "E" to erase any picture currently in Draw It. Then use the mouse to select the house. Draw a few houses on the screen.

Then go to SoftSwitch, and press Apple-E, then S, 1 and 2 to examine the display pages of Draw It. On Hi-Res page 2 you should see your houses.

Press Apple-V to paste the image.

The image will be replaced with the TREES picture loaded by, and copied from, the Screen Manager. Now return to Draw It.

When the Draw It screen appears, you may be surprised not to see the pasted picture. This is because although you pasted the image onto page 2, thus replacing the picture, the working screen hasn't been updated yet.

To update the screen, press V to view the picture.

The new picture appears, and when you press a key to go back to the Draw It screen, the new picture has been updated into the program.

The actual procedure for updating the screen may vary between programs, but the principle is the same:

- 1) From within SoftSwitch, use the  $\text{⌘E}$  (Examine) command, and then the Copy ( $\text{⌘C}$ ) command to capture the actual picture image, not a working screen, from the first (source) program.
- 2) Run (or switch to) the second (destination) program, and go to SoftSwitch. From within SoftSwitch, identify the actual picture location (not the working screen) using the  $\text{⌘E}$  command. Paste the image using the SoftSwitch Paste ( $\text{⌘V}$ ) command.
- 3) Finally, return to the destination program, and force it to update its working screen. In most programs this is done by just viewing the entire screen picture, and then going back to the working screen.

**Note:** When saving pictures to disk, Screen Manager ordinarily saves pictures to the disk from which it was run. If you want to save a picture to a different disk or subdirectory, use the "Select Picture from Disk" option, but do not load a picture. Instead, just select "Set This Prefix" when you have found the desired disk or subdirectory. Then, when the picture is saved by Screen Manager, the selected prefix will be used.

Appendix C contains tips on specific commercial programs.

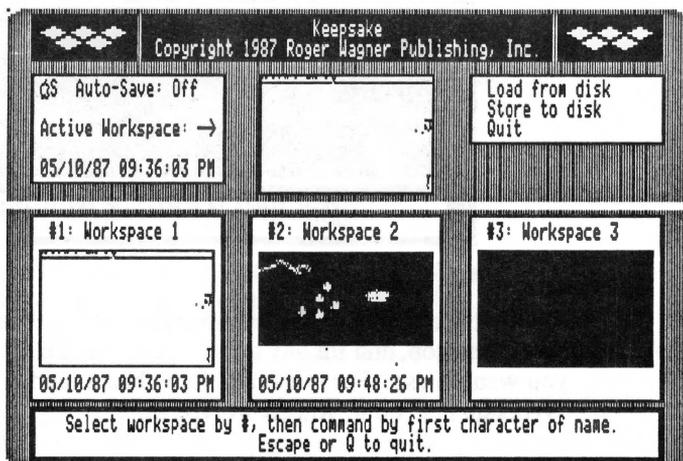
---

## *Example #11: Storing ProDOS Programs with Keepsake*

The Keepsake program is on the Ss.System.Disk diskette and is used to move a stored Workspace from the Apple IIGS to disk for long term storage. The principle is fairly simple. After a program has been stored in a Workspace with SoftSwitch, go to the DeskTop and use the Selector menu to run Keepsake. Let's try it now with Draw It.

If it's not already in memory, run Draw It, draw a few trees or whatever, and then store the program image in Workspace #2. Now switch to the DeskTop.

Now run Keepsake by choosing it in the Selector menu. The following screen will appear:



In the Workspace #2 Mini-Screen, you can see the image of the stored Draw It program. To load or save a Workspace to or from the disk, you must first press the number key of the desired Workspace.

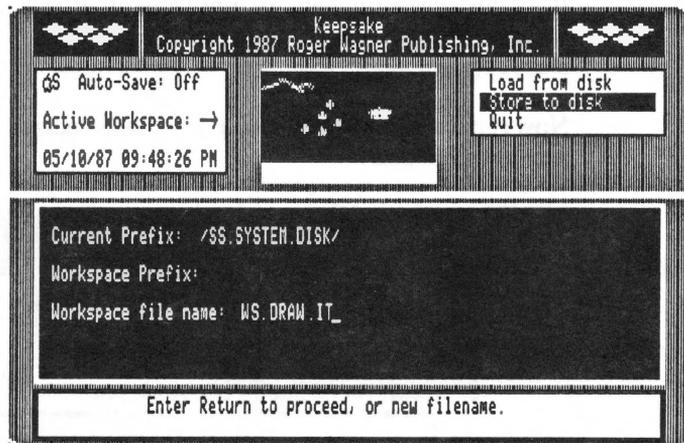
Press the 1 key now.

The Active Workspace display will change to the program in Workspace #1, "Store" will automatically be highlighted, and the screen will prompt you for the volume name and prefix to use for saving. Since you don't want to save Workspace #1, press the Escape key to back up.

Now press the 3 key. Notice that this time "Load" is highlighted. This is because Workspace #3 is empty, and Keepsake automatically knows a "Load" is logical here. Press Escape to back up again.

To save Workspace #2, press the 2 key to select Workspace #2.

The screen will now show:



The first prompt is for the volume name of the disk you want to save the Workspace on, and for any added names or subdirectories in the pathname you want to use. For example, if you had a hard disk, with a subdirectory "Workspaces" on it, you could type in:

/Hard1/Workspaces

as the complete pathname.

For now, though, let's use the Ss.System.Disk. To use the default name, just press Return.

The next prompt will be for the name to save the Workspace under. Type:

WS.DRAW.IT

and press Return. This will be the name used to save the entire suspended program. The prefix "WS." is used to remind you that the file on the disk is a saved workspace, but you can use any name you want. Press Return once more to start the save process.

The disk will then come on as the suspended program from "Draw It" is saved on the Ss.System.Disk. When the save is complete, the Keepsake display screen will return to the display of all the Workspaces.

Before seeing how to resume a stored Workspace, let's go to SoftSwitch and erase any stored Workspaces.

Press Control-Apple-Escape now to go to SoftSwitch.

When you enter SoftSwitch, the Active Workspace Mini-Screen will show the Keepsake screen. If you tried to save Keepsake at this point SoftSwitch would give you an error message reminding you that it can't save ProDOS 16 applications.

Even though Keepsake is a ProDOS 16 application, and not usable by SoftSwitch as a switchable program, you can still go to SoftSwitch from within it. This can be used when you want to erase any Workspace needed for loading Workspaces from disk.

You want to erase the stored version of Draw It . Pressing Apple-2. Then exit SoftSwitch and go back to Keepsake.

You can tell Keepsake to update its screen displays by pressing the space bar. Workspace #2 is now empty.

To quit Keepsake, press Q to Quit, and Select the "Return to DeskTop" option.

See the next example called "Restoring with Keepsake" for details on how to restore a program from disk.

---

### *Example #12: Restoring with Keepsake*

Now let's see how to restore a ProDOS stored Workspace from disk. Select Keepsake from the DeskTop "Selector" menu. When it is up and running, press the 2 key. Since Workspace 2 is probably not empty, Keepsake automatically chooses "Save". You can only load saved programs into an empty Workspace. Press `Space` to back up. Since Workspace 2 is not empty, you'll need to go to SoftSwitch and use Apple-2 to erase it. When you've done that, return to Keepsake, and press 2 again. This time, "Load" should be automatically selected.

As before, you can enter the volume name along with any subdirectories for the location of the stored Workspace. For now, press `Return` to accept the default of `SS.SYSTEM.DISK`.

For the filename itself, you could enter the name `WS.DRAW.IT` directly, but there may be times when you don't remember the exact name you used. Let's see how to look at the disk.

Without entering a name, press `Return` alone, and then `C` (for "Catalog") to see what files are on the disk. If there is more than one file on the disk, pressing `C` will continue the list. The first entry is `SYSTEM`, a directory file. Press `C` to skip this. When you see the name `WS.DRAW.IT`, press `Return` twice to load the file. You will see the mini-image appear in Workspace #2 when the load is complete.

Quit Keepsake by pressing `Q` and `Return`, and go back to the DeskTop. Then go to SoftSwitch. SoftSwitch is now loaded with the DeskTop and `WS.DRAW.IT`. Switch to Workspace #2, and then exit SoftSwitch.

You will find yourself exactly where you left when it was saved in SoftSwitch, and then stored on the disk.

As another example, try loading the saved Workspace file called `WS.HUNGRY` using Keepsake and resuming it from SoftSwitch.

You should find yourself in a program saved quite some time ago, and stored on the SoftSwitch diskette. "The Hungry Dot" is a program that shows the adventures of a little dot on the screen as it bounces around eating everything in its path.

---

If you have a monochrome monitor, the dot may be difficult to see. If so, press the M (for "monochrome") key to get a larger dot (C, for color, restores the dot to the normal size). Pressing any other key will stop the program. If you would like to save it as an Applesoft program, simply press a key to stop the program, type TEXT for a full text screen display, and then type SAVE HUNGRY.DOT and press Return to do the save.

The program can then be run directly from the DeskTop or Applesoft as you wish.

---

## *Example #13: DOS 3.3 and Protected Programs*

Using Keepsake with DOS 3.3 or non-standard ProDOS programs is only slightly different than the normal procedure.

Restoring programs from disk is done in the usual way. The only concern is whether the program you restore is the only program in SoftSwitch (i.e., no DeskTop in Workspace #1). If you use SoftSwitch to switch to the stored program, and it's a protected program that you can't quit from, you'll have no way of getting out of it and back to the DeskTop without turning off the power or doing a Control-Apple-Reset startup.

The answer, of course, is to just save the DeskTop in one of the other Workspaces before you switch to the program you're restarting. That way, when you're finished, you can switch back to the DeskTop.

Likewise, when you want to save a DOS 3.3 or non-standard ProDOS program to disk using Keepsake, you should first save the DeskTop, then run the desired program. Then you can switch back to the DeskTop to run Keepsake.

---

### **Warning!**

Keepsake saves the *entire* state of the operating system, including active disk drives, current prefix, etc. You must be careful *not* to try to resume a stored Keepsake program if you should change your slot assignments, RAM disk size, etc. Instead, delete the saved Workspace files and create new ones with Keepsake.

---

---

## *More About Keepsake*

If you have a 512K or less RAM Expansion Card, or a 1Mb card with only 512K or less for SoftSwitch (RAM Disk set to 512K or more), there isn't enough room for *three* stored Workspaces *and* Keepsake. With these settings, Keepsake should only be run with 1 or 2 stored Workspaces, not 3. If you have a 1Mb card, and your RAM Disk is set to 256K or less, then you can run Keepsake with three stored Workspaces.

If you run Keepsake and there isn't enough room in memory to load it, Keepsake will print an error message and return to the the DeskTop. If you have trouble running Keepsake, try erasing one of your stored Workspaces, or changing the control panel settings to provide more memory for SoftSwitch (smaller RAM disk size).

The usability of available RAM on the Apple IIGS depends on more than just how much there is. It is also important that continuous blocks of memory are available for programs to load and run properly. If you have run Keepsake, or used the Finder, Program Launcher, AppleTalk, or any ProDOS 16 program, it is possible that SoftSwitch will not be able to save a program in the third Workspace, even though the Memory Status box shows some memory still available.

If you have trouble saving a Workspace, you may have to re-start the Ss.System.Disk to "clean up" memory. If this happens often, you may want to change the control panel settings to provide more memory for SoftSwitch (smaller RAM disk size).

Saved Workspaces take a lot of disk space (269 blocks). The Ss.System.Disk does not have enough space to save more than one Workspace on it. Thus, you must use another disk. You can use the DeskTop to format 3.5 disks, or to see how much space is on a given disk by selecting the Get Info function in the Special menu of the DeskTop.

## Appendix A: Things to Remember

Keep the following guidelines in mind when using SoftSwitch:

1) Here's the general procedure for using SoftSwitch:

Store the DeskTop first in Workspace #1. Then run application #2 but do not quit it. Instead, go to SoftSwitch and store the application in Workspace #2. Then switch back to Workspace #1 and use the DeskTop to run application #3. This technique is useful for switching software, such as arcade games and protected software that do not allow an exit without a complete re-start (usually the equivalent of pressing Control-Apple-Reset).

2) SoftSwitch is very hardy. Starting a disk, as such, doesn't upset SoftSwitch. As long as you don't press Control-Apple-Reset, or re-start into ProDOS 16, SoftSwitch will remain active, along with any saved Workspaces. Thus, you can use a PR#6 in BASIC to start DOS 3.3 or protected ProDOS programs, and SoftSwitch will switch those DOS 3.3 programs right along with ProDOS 8 programs.

3) Keep track of your disks! If you have only one drive and you have one program that's using a given diskette (like Print Shop), and then switch to another program that expects its own disk in the drive (like MouseWrite), it's up to you to make sure the right disk is in the drive. SoftSwitch is not equipped with ESP and can't reach out of the computer and put in the right disk for you. If you have more than one disk drive, or a hard disk, this shouldn't be a problem; just start each program from it's own drive.

4) Speaking of disks, you also shouldn't save the same program in two different Workspaces if that program writes files to the disk. If the first copy opens a file and starts writing, and then you switch to the second copy of the same program, it may try to write to a half-completed file that the first isn't finished with. A general rule of thumb: If the program writes files to disk, don't store two copies of it in memory at once.

5) If you switch disks while you're in one program, and then go back to the DeskTop, it won't know you've swapped disks. To update the disk icons (a good idea if you've changed disks), you should select "Check Disks" in the "Special" menu.

6) SoftSwitch does not save and restore the state of running printers, modems, and other attached devices. SoftSwitch does not save the I/O (Input/Output) status of interface cards. Thus, if one program sets a serial card to 1200 baud, and another program sets it to 9600, SoftSwitch will not restore the baud rate after switching. In general, it is not a good idea to switch programs that are in the process of using any of these devices.

One exception to this is the mouse port. SoftSwitch remembers, and correctly sets, the independent states of the mouse hardware, including interrupt status, position and clamping between multiple applications.

7) Do not switch programs while a program is writing to a disk. This is because disk allocation is not updated until the end of the "write" process. If you interrupt or switch a program while it is writing to the disk, and then switch to a program that was using the same disk (or you didn't swap the disk when you should), the second program might overwrite the data that was in the process of being written by the first. Be careful!

8) When quitting, some programs need to put away things, save information to the disk, delete temporary files, and so on. This includes programs like AppleWorks 2.0 and a few others. You should not quit these programs by taking the SoftSwitch short-cut back to the DeskTop. You should quit these programs as you normally would, and let them take you back to the DeskTop. It's slower, but necessary to make sure everything gets put back where it is supposed to be. Generally speaking, programs like this are fairly rare, so you can usually use the SoftSwitch short-cut quit. You can tell which programs fall in this category because their manuals will caution you not to press Control-Apple-Reset, but to use a Quit command instead.

9) The only way SoftSwitch can tell if a program is using the Super Hi-Res screen is if that screen is being actively displayed when the program is stored or switched. Therefore, when using the Screen Manager with Super Hi-Res screens, try to have the Super Hi-Res screen in view when copying and pasting screens.

10) Some programs may appear to deny access to the Desk Accessory Menu. Before giving up, try alternating between pressing Control-Apple-Escape and moving and/or clicking the mouse. Sometimes this method will activate the Desk Accessory Menu and give you access to SoftSwitch. A last resort is to try Control-Reset. This also sometimes re-enables the Desk Accessory Menu, if the program doesn't crash.

## Appendix B: Common Questions About SoftSwitch

**"Why doesn't SoftSwitch switch ProDOS 16 programs like PaintWorks Plus or Music Studio?"**

The underlying principle of any switching program is to use the availability of more memory than the "switched" programs were originally designed to use. Obviously, one cannot switch three programs that each use 512K of RAM in a machine with only 512K RAM available. Even with a megabyte RAM Expansion Card, storing two 512K programs wouldn't leave any room for SoftSwitch.

In addition, certain Apple IIgs tools, such as QuickDraw, cannot be restarted by a second application once one application is already using them. This prevents having two graphics applications, for example, running in the same machine, regardless of a switching program.

You *can* run some ProDOS 16 programs (try Brickout.S16 on the SoftSwitch disk) without disturbing SoftSwitch or any stored programs. Run the program by selecting from the DeskTop. When you want to return to another program, just quit the ProDOS 16 program normally, then switch to any stored program when you return to the DeskTop.

**"Why can't a single keypress be used right within my program to switch, instead of having to go to the Desk Accessory Menu?"**

SoftSwitch isn't actually active during your program's operation. It only comes to life when you access it via the Desk Accessory Menu. This means that SoftSwitch isn't available during your program to be checking for anything. In addition, no matter which key or sequence we picked, some program somewhere would use the same sequence, and there would be a conflict. An example of this is Print Shop, described in Appendix D.

You might be interested, however, in another Roger Wagner Publishing, Inc. product, MacroMate. Although its primary purpose is to let the user automatically type entire phrases or groups of program commands with a single command key, it also lets you completely automate the switching process with SoftSwitch, such that a single keypress *can* switch from one Workspace to another..

**"Do I have to store all the programs to be switched first, before being able to switch between them?"**

Yes, but that's just logical. It doesn't take any longer to load a program with SoftSwitch in the background than without it, so you're not losing anything. What you gain is the ability to switch between the programs. As an aside, the Keepsake program on the SoftSwitch diskette can be used to pre-load interrupted programs, but it is actually designed for resumption of suspended programs, not as a quick-load utility.

**"Why can't I just startup SoftSwitch on a ProDOS 8 disk?"**

Because SoftSwitch is a Classic Desk Accessory, it must ordinarily be loaded by the Apple IIgs operating system, i.e., ProDOS 16. However, there is a separate software product, P8CDA, that can load almost all CDAs during the startup of a ProDOS 8 disk. This is discussed in Appendix G.

**"Can I copy and paste text with SoftSwitch?"**

Not really. This is mainly because there is no standard way for text programs to accept "pasted" text. However, the Screen Manager *can* accept a text screen captured from another program by SoftSwitch, and will save the text as an ASCII text file. This can then be read by word processors and other text-based programs. The other alternative to transferring text between programs is to save the text in the first program to disk, and then read the file back from the second program.

**"Will SoftSwitch affect other software?"**

Even when SoftSwitch is loaded into the computer, its presence is completely invisible to any program running. If you ever suspect a conflict between a program and SoftSwitch, just start up on a disk that doesn't have SoftSwitch, and/or remove SoftSwitch from your startup disk as described at the beginning of this manual. You can then verify that any problems you've encountered are independent of whether SoftSwitch is present or not. The other possibility for problems is other CDAs you may have on your system disk. When tracking down the source of problems, be sure to try removing any other CDAs or NDAs from the Desk.Accs folder as well.

## Appendix C: Tips on Copying and Pasting Graphics

SoftSwitch can copy any screen image (excluding Lo-Res) on any of the display pages, even if it is not visible, in virtually any program, whether it is switchable or not. However, the display you see on the screen may or may not be the actual "picture" being edited in a given graphics program.

To paste an image into a program, and to then be able to actually use that image within the destination program, requires two steps.

First you have to paste the image into the proper display page. SoftSwitch makes this easy by letting you view the different display pages in any program before you paste. In addition, it won't let you accidentally copy and paste images that don't match.

For example, in looking at a screen, you can't always tell by just its appearance whether it's text, Single, Double or Super Hi-Res. You can use the Screen Manager to load the picture "Self Portrait" to see a good example of this. Although you have sufficient information in SoftSwitch, because you select the display by pressing the S, D or T keys (for Single Hi-Res, Double Hi-Res or Text screen), you still might not remember the type of image on the clipboard when you paste. Therefore SoftSwitch only lets you paste into a destination display mode that matches the mode of the image stored on the clipboard.

The other variable between programs is which particular display page (page 1 or page 2), the picture image is stored on, in contrast to the working screen image that you see while you run the program.

Second, you sometimes have to do something to get the program to recognize and use the new image that has been pasted into it. In some programs, as soon as you return to them, you'll see your new pasted image. In others, you may have to do the paste at a particular command level in the program. For example, in Dazzle Draw you must choose the "View Picture" option and then return to the menu screen to update the working screen image.

The following notes provide helpful information on individual commercial graphics programs that you might want to use with the SoftSwitch Copy and Paste functions, and tips on the various ways to get a graphic image into

and out of them. Remember that although any display screen can be copied onto the SoftSwitch clipboard, what you may want is the actual entire picture, not what you see on the working screen that contains additional menus, the cursor, and so on.

Some packages contain several different programs, or different menu levels at which a copy or paste might occur. Each entry indicates the most appropriate program and/or menu level at which a copy and paste should be done.

Remember, the actual cutting and pasting is done within SoftSwitch, *not* within the actual programs themselves.

**MousePaint**  
**Apple Computer, Inc.**

Display Modes:	Single Hi-Res only.
Picture Image:	Not available.
Copy:	Any visible screen.
Paste:	Not available: MousePaint does not maintain a complete picture image anywhere in memory at any time to enable pasting.
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	No

Special Features: Uses Mouse to edit pictures.

**Note:** Although MousePaint is not practical to copy & paste with, it can load and save the same Single Hi-Res pictures used by the Screen Manager. This means you could copy & paste to the Screen Manager, then use the load or save picture function to access a disk file also shared by MousePaint.

**Blazing Paddles**  
**Baudville, Inc.**  
("Tools screen")

Display Modes:	Single Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2.
Paste:	Page 2 with tools displayed. Then click on any tool to update.
DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Zoom mode; add shapes & text; cut & paste portions of pictures.

**Pixit**  
**Baudville, Inc.**  
("Picture Editor": "Function Menu")

Display Modes:	Single Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2.
Paste:	Page 2 while at "Function Menu"; update is immediate.
DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Includes shape table editor.

**Prince  
Baudville, Inc.**  
("Pictures" menu)

Display Modes:	Single and Double Hi-Res.
Picture Image:	Page 1.
Copy:	Page 1.
Paste:	Page 1 while at "Pictures" menu. Then use "Find" command (in Edit Pictures) to update.
DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Print cropped portion of any graphics screen.

**8/16 Paint  
Baudville, Inc.**  
("PAINT.STD.HIRES")

Display Modes:	Single Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2.
Paste:	Draw a line or anything at the main level. Then paste to page 2; press Escape (to "Undo") to update.
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes

**Note:** 8/16 Paint is made up of four separate programs, each for a different graphics mode. Because the working Super Hi-Res pictures are not stored in the screen area of memory, it is not possible to paste Super Hi-Res pictures into the 640 or 320 Super Hi-Res portions of 8/16 Paint.

**8/16 Paint**  
**Baudville, Inc.**  
("PAINT.DBL.HIRES")

Display Modes:	Double Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2.
Paste:	Draw a line or anything at the main level. Then paste to page 2; press Escape (to "Undo") to update.
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Designed specifically for the Apple IIGS. Very advanced picture drawing, editing and printing features.

**Alpha Plot**  
**Beagle Bros. Inc.**

Display Modes:	Single Hi-Res only.
Picture Image:	Both Page 1 <i>and</i> 2 (dual editing).
Copy:	Any screen, complete pictures on both.
Paste:	Page 1 or 2; update is immediate.
DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	No
Special Features:	Edit both Hi-Res screens (pg 1 & 2).

**Beagle Screens**  
**Beagle Bros., Inc.**  
("Add Text to Screen")

Display Modes: Single and Double Hi-Res.  
Picture Image: Page 1.  
Copy: Page 1.  
Paste: Page 1; update is immediate.

DOS: ProDOS only.  
Load Pictures: Yes  
Save Pictures: Yes  
Print Pictures: No

Special Features: Pre-drawn screens that you can customize. Includes "slide show" program.

**Triple Dump**  
**Beagle Bros., Inc.**  
("Main Menu")

Display Modes: Single and Double Hi-Res.  
Picture Image: Page 1.  
Copy: Page 1.  
Paste: Page 1; update is immediate.

DOS: ProDOS only.  
Load Pictures: Yes  
Save Pictures: Yes  
Print Pictures: Yes

Special Features: Supports both Single & Double Hi-Res.

## **Animate Broderbund, Inc.**

Display Modes:	Double Hi-Res only.
Picture Image:	Page 2 (background).
Copy:	Page 1 or 2 as desired (page 2 = background).
Paste:	NOT AVAILABLE: Pasting to Animate will crash the program (Animate)!
DOS:	ProDOS only.
Load Pictures:	Yes (Single & Double Hi-Res)
Save Pictures:	Yes (Single & Double Hi-Res)
Print Pictures:	No
Special Features:	Specialty product for animated Double Hi-Res graphics. Can convert pictures between Single & Double Hi-Res.

## **Dazzle Draw Broderbund, Inc. ("View Picture")**

Display Modes:	Double Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2.
Paste:	Page 2; update occurs on return to menus.
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Double Hi-Res screen editor.

**Fantavision  
Broderbund, Inc.**

Display Modes:	Single Hi-Res only.
Picture Image:	Page 2 (background).
Copy:	Page 1 or 2 as desired (page 2 = background).
Paste:	NOT AVAILABLE: Pasting to Fantavision will crash program (Fantavision)!
DOS:	ProDOS only.
Load Pictures:	Yes ("backgrounds")
Save Pictures:	Yes ("backgrounds" only)
Print Pictures:	No
Special Features:	Nifty animation system.

**Print Shop  
Broderbund, Inc.**  
("Screen Magic": "Draw Text on Screen")

Display Modes:	Single Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 2 (*).
Paste:	Page 2 (*).
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Prints signs, greeting cards, etc.

(\*) Print Shop requires a special technique to access SoftSwitch. Because it treats the Apple key the same way as Return, namely sending you to a next menu level, it takes a little strategy to interrupt Print Shop at the exact spot you want.

**Note:** Print Shop GS is not switchable by SoftSwitch.

You can take advantage of the fact that if you *hold down* the Apple key, the program only advances *one level*, that is, it doesn't continue to select items from new menus.

The best way to paste a full-screen image into the Screen Magic portion of Print Shop is to select the choice "Draw Text on Screen" by *pressing and holding down* the Apple key. The screen will change to a new menu. It is at this point, while continuing to hold down the Apple key, that you should press Control-Escape. This will activate the Desk Accessory menu, from which you can go to SoftSwitch and paste the desired Single Hi-Res image onto page 2 in Print Shop.

**Note:** Although **Print Shop GS** is not a ProDOS 16 program, it does use the QuickDraw toolset of the GS, and as such is not switchable by SoftSwitch. You can capture Super Hi-Res screens from Print Shop GS, but you cannot paste images into it.

## Print Shop Companion

Broderbund, Inc.

("Graphic Editor+": "Get Picture from Memory")

Display Modes:	Single Hi-Res only.
Picture Image:	Page 1.
Copy:	Page 1.
Paste:	Page 1, Hi-Res <i>or</i> Double Hi-Res (*).

DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	No
Print Pictures:	No

**Special Features:** Capture portions of *any* Single or Double Hi-Res screen and convert it to a Print Shop graphic.

**Note:** Although the Print Shop Companion (PSC) is primarily a Single Hi-Res product, it does have a feature for capturing part of a Double Hi-Res screen, and converting it to a Print Shop graphic.

The PSC can be used with SoftSwitch to convert any graphic or text you can see on the screen, in any program, into a Print Shop graphic. This means that if you want to convert the dragon on your favorite adventure title screen into a border graphic, you can.

The main disadvantage of the PSC is that it is one of those programs that does not keep its permanent image of a Hi-Res screen in a standard place in memory. It is possible to paste a Single Hi-Res picture into PSC, but only while viewing the complete Hi-Res screen image. This is done by first selecting "Control-G = Get" in the Graphic Editor+ menu. The next menu will offer the choice "Get Picture in Memory." Select this. You will then be presented with a Hi-Res screen of whatever was in memory when you started up the PSC disk.

To paste an image from the SoftSwitch clipboard, first go to SoftSwitch, while the PSC screen with the cropping box on it is displayed. Here's the critical part: when SoftSwitch shows the Mini-Screen for PSC, if you can see the cropping box displayed, back out (press Escape) of SoftSwitch, go back to the PSC screen, and *then go back to SoftSwitch again*. The trick is to go to SoftSwitch and *not* have the cropping box show up in the Mini-Screen. If you paste an image while the box shows, you'll get a box drawn on the screen image that you paste into PSC. It may take a few tries, but you'll get it sooner or later.

When you do, save the PSC program image in a SoftSwitch Workspace. Then switch to the program that you want to copy the graphic out of (if you haven't already copied a screen, that is). Copy the Hi-Res image of your choice.

Then switch back to PSC and paste the image onto page 1. After the paste, press Return in SoftSwitch to go back to PSC. You'll see your pasted screen image with the cropping box. Pressing Return in PSC then captures whatever the cropping box has framed. See your PSC manual for specific PSC commands from this point on.

This is a good example of where "reverting" can come in handy. Once you've saved PSC in just the right state to receive a picture (i.e., no cropping box showing), you can convert a large number of graphic images by copying them from wherever you want, and then reverting PSC to the saved Workspace each time before doing the paste (as opposed to turning on Auto-Save and having to try to get things "just right" each time).

Double Hi-Res graphics requires a different technique. The only way PSC can capture a Double Hi-Res is to have the picture in memory *when PSC is started up*. The procedure here is to first use the Screen Manager program on the Ss.System.Disk, and paste your Double Hi-Res image into the Screen Manager.

Then exit the Screen Manager by pressing the Escape key, or selecting menu choice #4. When you get the Applesoft prompt, type PR#6 and press Return to start up the Print Shop Companion disk. Then go to the Graphic Editor+ part of the program, and select "Get Picture from Memory." This technique works for Single Hi-Res pictures too.

**The Complete Graphics System**  
**Polarware, Inc.**  
("Picture Editor" - main command level)

Display Modes:	Single <i>and</i> Double Hi-Res.
Picture Image:	Page 1 and 2.
Copy:	Page 1 and 2.
Paste:	Page 1 and 2.
DOS:	DOS 3.3 only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	No
Special Features:	Primarily designed for creating animation and full-screen pictures from data files rather than large bitmap screens.

**Graphics Magician**  
**Polarware, Inc.**

Display Modes: Single Hi-Res only.  
Picture Image: Not specifically available.  
Copy: Any screen as desired.  
Paste: Not available.

DOS: DOS 3.3 only.  
Load Pictures: Yes  
Save Pictures: Yes  
Print Pictures: No

Special Features: Primarily designed for creating animation and full-screen pictures from data files rather than large bitmap screens.

**Draw It!**  
**Roger Wagner Publishing, Inc.**  
(On Ss.System.Disk)

Display Modes: Single Hi-Res.  
Picture Image: Page 2.  
Copy: Page 2.  
Paste: Page 2; paste while viewing picture ("V"); update is immediate.

DOS: ProDOS only.  
Load Pictures: No  
Save Pictures: No  
Print Pictures: No

Special Features: Anybody can draw a picture with it!

**Screen Manager**  
**Roger Wagner Publishing, Inc.**  
(On Ss.System.Disk)

Display Modes:	Single and Double Hi-Res.
Picture Image:	Page 1.
Copy:	Page 1.
Paste:	Page 1; update is immediate.
DOS:	ProDOS only.
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	No
Special Features:	Excellent "receiving" program for pasted screen images that you want to save to disk, or a way to load pictures that you want to copy into other programs.

**Printographer**  
**Roger Wagner Publishing, Inc.**  
(At "Main Menu")

Display Modes:	Single and Double Hi-Res only.
Picture Image:	Page 2.
Copy:	Page 1 or 2.
Paste:	Page 1 or 2; select "Edit Picture in Memory" to update.
DOS:	ProDOS only (DOS 3.3 in older versions).
Load Pictures:	Yes
Save Pictures:	Yes
Print Pictures:	Yes
Special Features:	Prints in black & white (or color on appropriate printers) on almost 100 different printers. If you've got an odd printer, this is the program to use! Also adds text, and can crop screens for partial print-outs.

**Graphics Expander  
Springboard, Inc.**

SoftSwitch cannot be used with this program. (Desk Accessory Menu is disabled).

**The Graphic Exchange  
Roger Wagner Publishing, Inc.**

Display Modes: Lo-Res, Double Lo-Res, Hi-Res, Double Hi-Res, Super Hi-Res, Print Shop, Newsroom, etc.

Although you can't directly paste into this program, it is an invaluable utility for converting *any* Apple II graphics image to another. It is Apple IIGS-specific.

**Newsroom  
Springboard, Inc.**

Although the Desk Accessory Menu is normally disabled in this program, you can press Control-Reset (*not* Control-Apple-Reset) without crashing the program, which in turn re-enables the Desk Accessory Menu. From there you can copy graphic screens and paste them into other programs, but you cannot paste graphics directly into Newsroom.

## Appendix D: Commercial Programs and SoftSwitch

This section covers special techniques needed for using certain commercial programs with SoftSwitch.

### AppleWorks 2.0 Claris, Inc.

**Note:** The following information does *not* apply to earlier versions of AppleWorks.

Because of the way that AppleWorks 2.0 uses the RAM Expansion Card on the Apple IIGS, it should never be "reverted" with SoftSwitch. In other words, you should never install AppleWorks 2.0 as a SoftSwitch Workspace, return to AppleWorks, shut it down, and then try to resume it from memory later on by entering from another program and then re-activating SoftSwitch's saved Workspace of AppleWorks.

Likewise, once AppleWorks 2.0 is installed, you should turn on Auto-Save immediately after installing it in a Workspace. If Auto-Save has not been turned on, reverting will overwrite pointers in the active version, and thus cause unpredictable results.

AppleWorks 2.0 also has a tendency to commandeer all available memory when it first starts. Therefore, you should store it last, otherwise it will not leave any memory for any of the other applications you want to switch. It is perfectly safe to store AppleWorks 2.0 last, turn on Auto-Save, and then go on your way.

In general, a good way to use AppleWorks 2.0 with SoftSwitch is to first save a temporary copy of the DeskTop in Workspace #3 before running AppleWorks. To do this you will have to leave SoftSwitch, and then re-enter a second time to save the second copy of the DeskTop if you've already put a first copy in Workspace #1. The copy of the DeskTop in Workspace #3 is only a "dummy" space-saver, and could alternatively be a copy of BASIC, a program selector, or whatever else is most easily available.

Then, when you run AppleWorks and go to SoftSwitch to set it up for switching, use Apple-3 to erase the temporary copy of the DeskTop in Workspace #3, then press 3 to save AppleWorks, and finally turn on Auto-Save by pressing Apple-S. You can now switch freely between AppleWorks and other programs.

When you're done with AppleWorks, shut it down by first turning off Auto-Save in SoftSwitch (Apple-S again), then erase the switching copy by pressing Apple-3, and then return to AppleWorks and quit the program normally.

One other note: AppleWorks 2.0 identifies the additional memory it allocates in the Apple IIs with the same system ID # that the computer uses for ProDOS 8. The problem is that if you quit the application in another saved Workspace and run *any* ProDOS 16 program (including Keepsake or Brickout, etc.), the Apple IIs Memory Manager throws away the additional memory reserved for AppleWorks. For this reason, you should never run a ProDOS 16 application while AppleWorks 2.0 with the expanded desktop is saved in a SoftSwitch Workspace. Versions of AppleWorks prior to 2.0 (or 2.0 without the expanded desktop active) do not have this limitation, nor do other ProDOS 8 or DOS 3.3 applications of which we are aware. Therefore, if you are running any other application *other* than AppleWorks 2.0 with expanded desktop in SoftSwitch, you *may* run a ProDOS 16 program without disturbing SoftSwitch or any of the saved Workspaces.

**Programmer's Note:** AppleWorks 2.0 normally will not use extra memory available in the form of a slot-based RAM expansion card such as RAM Factor, MultiRAM, Apple's Expansion RAM card, etc. because before checking for one of these cards, it automatically uses the GS expansion RAM. This limits the number of available SoftSwitch workspaces. To change the byte in the APLWORKS.SYSTEM file (Vers. 2.0 only - USE A BACKUP ONLY!) go to Applesoft BASIC, and type in:

```
POKE 768,32  
BSAVE APLWORKS.SYSTEM,A$300,L$1,B$1520,TSYS
```

Remember the ProDOS prefix will have to be set before you do the BSAVE.

That's all you need to do. From then on, AppleWorks will use your RAM card for the expanded desktop.

## Flight Simulator SubLogic

Flight Simulator is not compatible with SoftSwitch. This is because the program does not properly return after going to the Desk Accessory menu, regardless of whether or not SoftSwitch is present.

## Print Shop Broderbund Software, Inc.

Print Shop presumes that any time the Apple key is pressed, the user wants to advance to the next level. Thus, the Control-Apple-Escape needed to access the Desk Accessory Menu (and ultimately SoftSwitch), always advances the program state one menu further than you really want. If a given program state is important, the only solution is to back up one level using the Escape key (Escape is a Print Shop command), then press the Apple key and *hold it down*. Continue to hold the Apple key until you're at the point you originally wanted to interrupt, then press 'Control-Escape' while continuing to hold down the Apple key to go to SoftSwitch.

**IMPORTANT:** Some software programs, most notably almost all software from Broderbund, Inc., have "Quit" options in their menus that, instead of a normal ProDOS "Quit", they clear *all* memory when selected, and do the equivalent of a Control-Apple-Reset before re-starting. This erases SoftSwitch and any other stored programs in the machine.

For this reason, you should *never* use the Quit option in these programs, no matter how attractively it's offered. Instead, switch back to the DeskTop and erase them from the Workspace they were stored in, if desired.

## Using SoftSwitch with Pascal

The only problem with using SoftSwitch from within the Pascal environment is that Pascal turns off interrupts when it starts up, thus preventing access to the Control Panel.

If you had a short little program you could run to re-enable interrupts, from then on you would be able to access the Control Panel, and thus SoftSwitch to switch from one Pascal program to another, or even to DOS 3.3 or ProDOS!

Here are the general instructions for creating that program:

1) In the Pascal editor, enter:

```
.PROC ENABLE  
CLI  
RTS  
.END
```

- 2) Exit the editor, and save this as a file, such as ENABLE (this will be saved on the disk as ENABLE.TEXT).
- 3) At the command line, assemble the file ENABLE. The result will be a code file, named ENABLE.CODE.
- 4) Go back to the editor, start a new file, and type in:

```
PROGRAM SOFTSWITCH;  
PROCEDURE ENABLE; EXTERNAL;  
BEGIN ENABLE END.
```

- 5) Leave editor, write the file to disk as SOFTSWITCH (saved as SOFTSWITCH.TEXT).
- 6) Compile program (saved as SOFTSWITCH.CODE).
- 7) Link SOFTSWITCH as the host file to the library file ENABLE.(no map file)
- 8) The output file can be SOFTSWITCH.
- 9) Execute SOFTSWITCH.

That should do it! From then on, just keep the program SOFTSWITCH handy, Whenever you get into Pascal (which can be "started up" from the DeskTop) and want to use the Control Panel, just execute the SOFTSWITCH interrupt enabler. You only need to do this once, since from that point on, interrupts will be enabled.

If you want to make the enabling be really automatic, use the output file name:

```
SYSTEM.STARTUP.
```

(the period at the end of the name is important!) If this file is on your Pascal startup, then this will be automatically run when you start. If you already have your own SYSTEM.STARTUP, you can also just include the routine ENABLE in it.

## Appendix E: Software Industry Use of SoftSwitch

If you are personally involved in the writing or marketing of software, or teach others about the Apple computer, there are certain features of SoftSwitch that you may find particularly useful.

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### *Software Documentation Illustrations ("Screen Shots")*

When writing any instructions on the use of software, it is very helpful to the reader to have illustrations of the computer screen as it will appear while running a program. Traditionally, this involves either the expensive process of photographing an actual computer screen, or the printing of text characters in the documentation to simulate the screen appearance. Both methods are tedious, and even the photographic method rarely produces clearly readable results.

With SoftSwitch, however, you can use the display screen "copy" command to capture the program screen at any point, and without disturbing the overall operation of the program. With the exception of the Desk Accessory Menu screen in Chapter 2, every "screen shot" in this manual was captured from the running program using SoftSwitch. The SoftSwitch images were captured by pressing Control-Reset while the SoftSwitch screen was displayed, and then immediately re-entering SoftSwitch and capturing the Super Hi-Res page.

Once the screen image is captured, it can be printed on any printer using any of the various printer dump utilities listed in Appendix C. Remember that both 40 and 80 column screens are converted to Super Hi-Res by SoftSwitch.

If you are using a Macintosh and a LaserWriter to prepare your documentation (as was done for this manual), you can use a package called "ATM" ("Apple II to Mac"), to transfer the Single and Double Hi-Res images, captured with SoftSwitch and saved using the Screen Manager, directly to a Macintosh. The image is converted directly to a MacPaint document, and can then be placed directly into PageMaker, or the program of your choice.

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ATM is available from:

Boojum Computer Systems, Inc.  
15004 Donna Drive  
Silver Spring, MD 20904

At the time of this manual's writing, the price was about \$50.00, but you should write the company for specific price and ordering information.

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## *Software Writers*

If you're writing instructions, descriptions or articles for magazines, your local newsletter or your classroom, SoftSwitch is a great way to switch back and forth between the program you're writing about and the word processor you're writing the story with. It's like having three computers side-by-side (except you don't have to roll your chair around!). SoftSwitch lets you not have to remember how a program worked - you can run the program even as you're writing about it!

---

## *Software Programming*

SoftSwitch can be used by programmers to quickly switch from a development program such as the Merlin assembler, to the environment in which the program is to be tested, for example the DeskTop or Basic.System. This eliminates all delays in shifting environments. In addition, because the computer environment is completely switched, you don't have to worry about a program corrupting a source file still in memory, or a DOS pointer somewhere.

If you've got a program that runs for 20 minutes before a bug occurs, and you want to observe the "crash" several times, SoftSwitch is an ideal way to save the system state just before the crash, and to repeat the problem as many times as necessary without having to re-run the entire program. The fast switching also makes it very convenient to switch back and forth and compare memory pointers, variables, etc. before and after the problem occurs.

---

## *Technical Support*

If your job involves helping other users of software packages, SoftSwitch can provide a quick way of switching from one program to another, without having to wait for each program to boot up. You can also use it to allow you to work on your word processor and/or data base while waiting for the next question. When you need to start a program up, just put your letter or mailing list on hold, instantly switch to (or start up via the DeskTop) the program in question. When you're done, you're only a keypress away from being back where you left off before the question.

---

## *Software Demonstrations*

If you demonstrate software for your user group, classroom, or in a retail setting, you can use SoftSwitch to set up all the programs you'll be needing before the fact. Then you'll have instant access to any program without having to waste time watching the disk spin to start up each new program. It conserves valuable time in demonstrations, and prevents impatience in your audience.

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## Appendix F: Putting SoftSwitch on Your Own Disks

The easiest way to put SoftSwitch on disk is to just use the SoftSwitch Install program on your original SoftSwitch disk, as described at the beginning of this manual. This section describes an alternative way of putting SoftSwitch on a disk, and also includes a general description of how to set up a ProDOS 16 startup disk, and the special considerations for hard disks and RAM disks.

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### *Transferring the SoftSwitch files*

SoftSwitch itself can be transferred to any disk by moving the files *Softswitch.Init* and *Softswitch* from the *System/Desk.Accs* folder on the *Ss.System.Disk* or any other disk you've installed SoftSwitch on, to the *System/Desk.Accs* folder on the target disk.

---

### *Ss.System.Disk backups*

You can back up all of the files on the *Ss.System.Disk* by using the DeskTop or any other file utility to copy the files to any other ProDOS disk. Because the *Install* program is only needed once to install SoftSwitch on your own disks, and because you can use the DeskTop or any file utility to transfer *Softswitch.Init* and *TSoftswitch* to any disk you wish, it is quite possible that once you've used the *Ss.System.Disk* for the installation, you may never need it again. Nevertheless, we recommend you keep it in a safe place. Some software updates done through Roger Wagner Publishing, Inc. require returning the original disk as "proof-of-purchase." Note that a SoftSwitch Backup disk label is included in the SoftSwitch package.

---

### *Finder vs. the DeskTop*

New Apple System diskettes use a graphic icon program launcher called the "Finder". This is a ProDOS 16 program, and is different from the DeskTop program provided on the SoftSwitch *Ss.System.Disk*. We think you'll find the DeskTop a better startup program to use with SoftSwitch because the DeskTop is faster, uses less memory, and most of all, is switchable with SoftSwitch. To set up your hard disk, or any startup disk so that it goes to

the DeskTop, simply move the folder DeskTop and the file DeskTop.S16 from the Ss.System.Disk to your startup disk (main directory). Then replace the file Start in the System folder on your disk with the Start program from the Ss.System.Disk (also in a System folder). You may have to delete some files on your startup disk to make room for the DeskTop programs, so make sure you have backup copies of anything you have to delete.

If you get tired of the SoftSwitch title screen, you can delete the file Start, but in that case the file Desktop.Sys16 *must* be before any other file whose name ends with .System or .Sys16 in the main directory. This may require deleting whatever application program (such as Aplworks.System) that may be currently at the beginning of the directory, replacing it with Desktop.Sys16, and then recopying the application back to the disk again in a later position.

---

## *ProDOS 8 vs. ProDOS 16 Startup Disks*

SoftSwitch *must* be installed on a disk that starts up into ProDOS 16 to work properly. You cannot put SoftSwitch on a ProDOS 8 disk because ProDOS 8 does not contain the necessary procedures to install SoftSwitch as a Classic Desk Accessory. A ProDOS 8 startup disk need only contain a file named PRODOS, which for a ProDOS 8 disk is equivalent to the file P8 on your Apple IIGS System Disk. When ProDOS 8 starts up, it "looks" for the first .System file in the main disk directory (such as Basic.System, or Aplworks.System) and runs that file.

A ProDOS 16 startup disk, on the other hand, must contain a number of different files. The file PRODOS, in the main directory, is not actually either version of ProDOS. Instead it is a simple loader file that just begins the startup process. The disk must also contain a folder (subdirectory) named System. The System folder is the one that actually contains the files P8 and P16. These are the ProDOS 8 and ProDOS 16 files that will be used to run programs.

When the disk starts up, it first load ProDOS 16 from the System folder. It then looks for a file called Start in the System folder, and runs that program. On the SoftSwitch disk (Ss.System.Disk), this is the program that puts up the title screen.

If a program called Start cannot be found (i.e., this is an optional program, and you don't have to have a Start program on a disk), the computer looks for the first system file in the main directory. This can be either a ProDOS 8 file (type: SYS, name ends in .System) or a ProDOS 16 file (type: S16, name ends in .SYS16). The computer will automatically activate the proper version of ProDOS (8 or 16) to run whatever the first system filetype is.

You can control what programs are run on your disks by carefully setting up the file folders so that the first system file is the program selector (DeskTop, Launcher, Finder, Prosel, etc.) or application (AppleWorks, MouseWrite, BASIC, etc.) that you want run.

---

## 3.5" disks

There are two possibilities here: a) You want to just make an exact duplicate of the SoftSwitch disk for your daily use as a startup disk; b) You want to install SoftSwitch on a startup disk you're already using.

**Using an existing disk.** If you have a 3.5 inch startup disk that you are already using, just start up the SoftSwitch disk, and run the SoftSwitch Install program (use the Selector menu). When it asks for the name of the disk you want to install SoftSwitch on, just enter the name of your own startup disk. For example, if you wanted to install SoftSwitch on a copy of the Apple IIGS System Disk, you would just enter System.Disk as the target volume. That's all you need to do. You can quit the SoftSwitch install program back to the DeskTop, and when you re-start the computer with your own disk, SoftSwitch will be on that disk and automatically put in the Desk Accessory Menu for you.

**Building a new disk.** If you just want to make a copy of the SoftSwitch disk to use as your daily startup disk, first format a new 3.5" disk using the format function in the DeskTop "Special" menu. Then transfer the following files on your SoftSwitch disk, ProDOS, System, Desktop.Sys16, Desktop, Basic.System, and Startup, to your new 3.5" disk.

If you don't have two 3.5" disk drives, you may want to use your GS expansion RAM as a RAM disk to make the transfer easier. You can also use the File Utilities on your Apple IIGS System Disk to format a disk and transfer the above files.

The new disk you've just built now has the SoftSwitch title screen program, Start, still in the System folder. You can remove this by just deleting the file Start on your new disk. If you want this disk to start up into something other than the DeskTop, such as ProSel, or AppleWorks, you can delete Desktop.Sys16, and replace it with the system file of your choice. Other files can then be added to the disk as you wish.

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## Hard Disks

There are two possibilities here: a) Your hard disk already starts up into ProDOS 16 just the way you want it and you want to add SoftSwitch, or, b) your hard disk now starts up with ProDOS 8, and you want to change it to ProDOS 16 so that it will load SoftSwitch.

**Adding SoftSwitch.** SoftSwitch is easily added to a hard disk that already boots ProDOS 16 by just using the SoftSwitch Install program on your SoftSwitch disk. This is most easily done by starting up the SoftSwitch disk and choosing the Install program from the "Selector" menu. When asked for the name of the target volume, enter the name of your hard disk, for example, HARD1. If the installation gives an error indicating that the directory /HARD1/SYSTEM or /HARD1/SYSTEM/ SYSTEM.SETUP was not found, then your disk probably does not startup in ProDOS 16, but rather ProDOS 8. See the following text for information.

**Converting from ProDOS 8 to 16.** If your hard disk currently starts up in ProDOS 8, changing it to ProDOS 16 is very easy. Just use the DeskTop (or any file transfer utility) to copy the file Prodos from your Apple IIGS System Disk (or the SoftSwitch disk) to your hard disk. This will replace an existing file named Prodos in the main directory of your hard disk. Then transfer the entire folder System, again, from either your Apple IIGS System Disk or the SoftSwitch disk, to your hard disk. The position of the System folder in the directory does not matter.

The System folder from the SoftSwitch disk contains the Start program that prints the title screen, and loads the program Desktop.Sys16. If you do not want your hard disk to start up into the DeskTop, you can delete the Start file in your System folder. If you do want your hard disk to start up into the DeskTop, you will also have to make sure the files Desktop.Sys16 and the folder Desktop are on the hard disk, and that Desktop.Sys16 is the first system file after Prodos in the main directory.

---

The Start file from the SoftSwitch disk will automatically run the DeskTop program, if you wish to use it in your System folder.

Remember, you can set up your hard disk to run any system file you want as the first program. This is determined entirely by the order of the files in the directory. To change the order of files, it may be necessary to first delete some files, replace them with the ones you want to be first in the directory, and then to later replace the deleted files so that they appear further down in the directory.

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## *RAM disks*

If you have a battery backed-up RAM disk such as the Memory Saver from Checkmate, Inc., or the RAM Factor from Applied Engineering, Inc. you can install SoftSwitch on that disk as well.

The best approach is to first follow the manufacturer's instructions to set up the RAM disk so that it starts up into ProDOS 16. The files can be organized to that the first program run is whatever program you wish. You may want to review the information for 3.5" and hard disks for insight into how the directory layout affects the running of programs.

When the disk starts up just the way you want it, you can then install SoftSwitch on your RAM disk. To do this, temporarily startup on your SoftSwitch disk, and choose the Install program from the "Selector" menu. When it asks for the name of the target volume, give the name of your RAM disk, for example, /RAM, /ROM, /AEROM, or whatever volume name you have used. You can determine the volume name by just looking at the icon on the DeskTop before you run the Install program.

**Remember:** To ProDOS, there really is no difference between a 3.5" disk, a hard disk, a RAM disk, or a ROM disk. The same procedure is used for each to create a disk you can start up from. Likewise, the Install program will put SoftSwitch on any disk that properly starts up into ProDOS 16, regardless of what kind of physical device it is.

**Helpful Tip:** We've found that the best approach to using a battery backed up RAM/ROM disk is to first build a 3.5" disk that works just the way you want. *Then* copy the files from the 3.5" disk to your RAM/ROM disk. That way if anything happens to the RAM/ROM files, you can easily restore the disk.

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## *SoftSwitch Disk Files*

Following is a brief description of the various files on the Ss.System.Disk. It is provided to assist you in determining which files are needed when setting up your own disks, or when moving a particular program or utility to another disk.

**Prodos:** This is the ProDOS 16 loader file that then goes to the System folder, and uses the files P8 and P16 to actually start ProDOS 8 or ProDOS 16.

**System:** This folder contains all the files needed by ProDOS 16. It includes P8 and P16, and:

**Start:** This is the title screen for the SoftSwitch disk, and it runs Desktop.Sys16 or Basic.System, regardless of where in the main directory those files are located.

**System.Setup:** This folder contains important initialization files for the Apple IIGS.

**Tools:** This contains tools like QuickDraw, the Window Manager, and others that are required by various ProDOS 16 programs. The tools in this folder were included only for the benefit of the ProDOS 16 demonstration program, "Brickout."

**Desk.Acce:** This folder contains the program files for CDAs. The actual SoftSwitch files are Softswitch.Init and Softswitch.

**Drivers:** This folder is empty on the SoftSwitch disk, but would normally hold driver files for modems, printers, etc. used by ProDOS 16.

**Softsw.Install:** This is the SoftSwitch Install program. It is not needed for the daily use of SoftSwitch, and is provided only as an easy way to copy the SoftSwitch program files to the disk of your choice. SoftSwitch can be manually installed on other disks by moving the files Softswitch.Init and Softswitch to the Desk.Acce folder on the target disk.

---

**Desktop.Sys16:** This is the ProDOS 16 program that starts up the DeskTop program. It is not needed on a ProDOS 8 disk, but does let the DeskTop startup a ProDOS 16 program when used with ProDOS 16.

**DeskTop:** This folder contains all the files related to the DeskTop program.

**Basic.System:** Used to bring up Applesoft BASIC under ProDOS 8.

**Startup:** Prints title screen before going to Applesoft BASIC.

**Windows:** A ProDOS 8 demonstration program that uses the mouse and pull-down menus under ProDOS 8. Windows requires to run:

**Windows.Obj:** This is the actual machine language core of the Windows program.

**Mgtk:** "Mouse Graphics TookKit". Subroutines used to create the windows and menus.

**Font:** The font definition file used by the Windows program.

**Sweeper:** Simple Applesoft demo program to use in manual tutorial.

**Draw.It:** Drawing program used in manual tutorial.

**Brickout:** Sample ProDOS 16 program to demonstrate SoftSwitch compatibility with ProDOS 16 programs. Requires fonts and tools located in those respective folders on the SS.System.Disk.

**Keepsake:** Utility to save and restore a suspended SoftSwitch workspace to and from disk.

**Ws.Hungry:** Sample program saved by Keepsake. Not required for operation of Keepsake.

**Screen.Mgr:** Utility for loading and saving various types of Apple text and graphics screens. Screen.Mgr requires the files:

**Screens.Main & Aux:** These create the default screens for Single and Double Hi-Res. These can be left off the disk, and Screen.Mgr will still run ok.

**Xloadsave:** Routine to load and save Super Hi-Res pictures, used by Screen.Mgr.

**Super.Hires.Pic:** Sample picture to load by Screen.Mgr. Not required by any program.

**Self.Portrait:** Sample Double Hi-Res picture that looks like a text screen. Not required by any program.



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# Automate Any Program with the Universal Macro Program...

## MacroMate™

MacroMate is a keyboard macro program that lets you assign an almost limitless amount of text and/or program keyboard commands to a single command key.

For example, you can set up a command key, like Option-L, to automatically run your favorite word processor, load an existing document, and type your letterhead! An obvious use is to be able to quickly define a long word or phrase, such as your company name, or an unusual technical term, and then have the computer automatically type the entire phrase for you with a single command key.

Macros can be defined in an easy-to-use "Record Mode", or with the powerful built-in MacroMate Editor. Both the Record Mode and editor are always available, no matter what program you're running - MacroMate is a Classic Desk Accessory, which is automatically installed whenever you start up any ProDOS 16 disk! (MacroMate can also be installed by a ProDOS 8 disk using P8CDA, another RWP product).

MacroMate is not copy-protected, and is easily installed on a hard disk, RAM disk or even ROM disk. MacroMate works with programs written in virtually any environment: ProDOS 16, ProDOS 8, DOS 3.3, Pascal, even many copy-protected programs!

Here are just some of the possible uses of MacroMate:

### With AppleWorks:

- Create macros with your name, address, company information, etc. that are usable not only in AppleWorks, but every other program you own!
- MacroMate comes with a predefined macro library specifically for AppleWorks that adds new one-key commands not normally available. For example: move to beginning and end of line, move to text marker, delete a line, delete to end of line, and more.
- Create a truly turn-key disk that upon startup, runs AppleWorks or MouseWrite, starts a new word processing document, types (for example) your letterhead and then an introduction. After adding some custom text, one more command key will do a printout and start over with a fresh copy.

### With SoftSwitch:

- Set up your System disk to automatically run three separate applications, complete with loading documents, setting pathnames, etc., and saving each in a SoftSwitch workspace, all without your having to press a single key!
- Create command-key macros to switch from one program to another, right from within any particular application.
- If you've ever wanted Auto-Save to be turned on for some workspaces, and not another, simply define some workspace switch commands to erase and re-save, while others automatically reply "Y" to the "Ok to switch?" question.

## **With Virtually Any Program:**

- The Record Mode makes it easy to define custom commands and/or text within any program as you need it. You don't have to run separate utilities with MacroMate, and it can load and save macro definition files under both ProDOS 16 *and* ProDOS 8!
- Disabled computer users, or anyone who just hates typing, can create single-key commands to perform virtually any function, or type any amount of text, in a program.
- MacroMate can be used as a "translator" to re-configure any program to use your own preferred command keys. For example, if you have a program that uses Apple-Q to clear to the end of a line, and you want it to be Apple-Y to match AppleWorks, you can use MacroMate to let you type Apple-Y, which in turn sends Apple-Q to your program.

## **MacroMate Features:**

- Automatic loading and optional activation on any ProDOS 8 (with P8CDA) or 16 disk. This means you never have to decide beforehand that you want to use MacroMate. While your computer is starting up, MacroMate is loaded and ready to go. MacroMate's Auto-Macro feature automatically outputs your own keyboard commands when a disk is started up. This means you can set up a truly "turn-key" disk that automatically runs a program, loads files, types text, etc., all without any human intervention!
- Load and Save custom macro definition files. After defining your own macro keys, MacroMate can save those definitions back to disk while you are in *either* ProDOS 16 or ProDOS 8. Definition files can be loaded back into memory at any time, or automatically when MacroMate starts up, and you can put multiple definition files on a particular disk, or load and save from several disks. Definition files can hold up to a total of 10,000 characters. There is no particular limit on a given macro within the 10,000 total-character limit.
- MacroMate has a built-in editor to let you manually define any macro, and to see exactly what the text and commands are for any macro. The editor is available all the time as part of the MacroMate CDA. Editing features include cut, copy & paste (even between different macro files), comments, find command, special characters for delays, time & date within macros, and more.
- Record Mode lets you define a macro by just typing whatever you normally would in an application, and having MacroMate remember everything to be repeated later by a single command-key. Macro command keys require at least the Apple- or Option-key as part of the defined key, but can be chosen to avoid conflict with any existing function keys in a particular application.
- For maximum transparency when you need it, MacroMate is easily turned on and off, right from the keyboard within an application. It can also turn itself off as part of a macro. This makes it easy to set aside for any application that you do not want MacroMate active in. MacroMate also has an optional command to tell it to completely ignore the Apple- or Option-keys, thus making it that more transparent for some application commands, while still leaving it active for others (for example, Apple-key commands for your program, Option-key commands for macros).

**MacroMate is normally priced at \$49.95, but if you order it with the special order form at the end of this manual, you can purchase it for just \$34.95!**

## **Special Accessory Product:**

# **P8CDA**

**(ProDOS 8, Classic Desk Accessories Loader)  
by David Lyons**

P8CDA is a nifty accessory by David Lyons that lets you put Classic Desk Accessories on your ProDOS 8 startup disks, thus avoiding the long startup time of ProDOS 16, while still enjoying the benefit of Classic Desk Accessories like MacroMate.

Normally, CDAs can only be installed by ProDOS 16 as a disk is started up. This means that you couldn't ordinarily put SoftSwitch, MacroMate, or any other CDA on, for example, a ProDOS 8 AppleWorks disk. With P8CDA, you simply create a folder named System, and within it a folder named Desk.Accs. During a ProDOS 8 startup, a disk with P8CDA on it will then go to the System/Desk.Accs folder, and automatically install any CDAs found there, and then finish the startup process as it would normally do.

P8CDA has a usual list price of \$29.95, but if you order it with the special order form in this manual, you can purchase it for just \$19.95!

See the reverse side of this page for a complete order form.

# Order Form

**Ordering Information:** MacroMate retails for \$49.95, P8CDA for \$29.95. If you order now, you can get MacroMate for just \$34.95, and P8CDA for only \$19.95. To order MacroMate, and/or P8CDA, simply remove this form, and return it completed with a check (U.S. funds drawn on a U.S. bank only), money-order, or charge card information to:

**Roger Wagner Publishing, Inc.  
1050 Pioneer Way, Suite "P"  
El Cajon, CA 92020**

**Please print clearly:**

Name	Telephone (     )	
Address		
City	State	Zip

## Products Ordered:

<u>Item</u>	<u>Price</u>	<u>Extension</u>
MacroMate (regularly \$49.95)	\$34.95	_____
P8CDA (regularly \$29.95)	\$19.95	_____
Sales Tax (6.5%, CA residents only)		_____
\$2.27 for MM, \$1.30 for P8CDA, \$3.57 for both)		
U.S. Shipping & handling:	\$4.00	_____
Canadian Shipping & handling:	\$5.00	_____
Foreign Shipping & handling:	\$8.00	_____
(U.S. Dollars only)		
<b>TOTAL Payment Due:</b>		_____

\* Prices good through May 30, 1989; subject to change thereafter without notice.

## Payment Options - Please check one:

I have enclosed a check for the total shown above.

I have enclosed a Money Order for the total shown above.

I wish to use my credit card:     MasterCard     VISA

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

**Important Program Requirements:** Both MacroMate and P8CDA require an Apple IIGS, and a recommended 512K of expansion RAM. MacroMate and P8CDA *cannot* be used on an Apple IIe or IIc.



