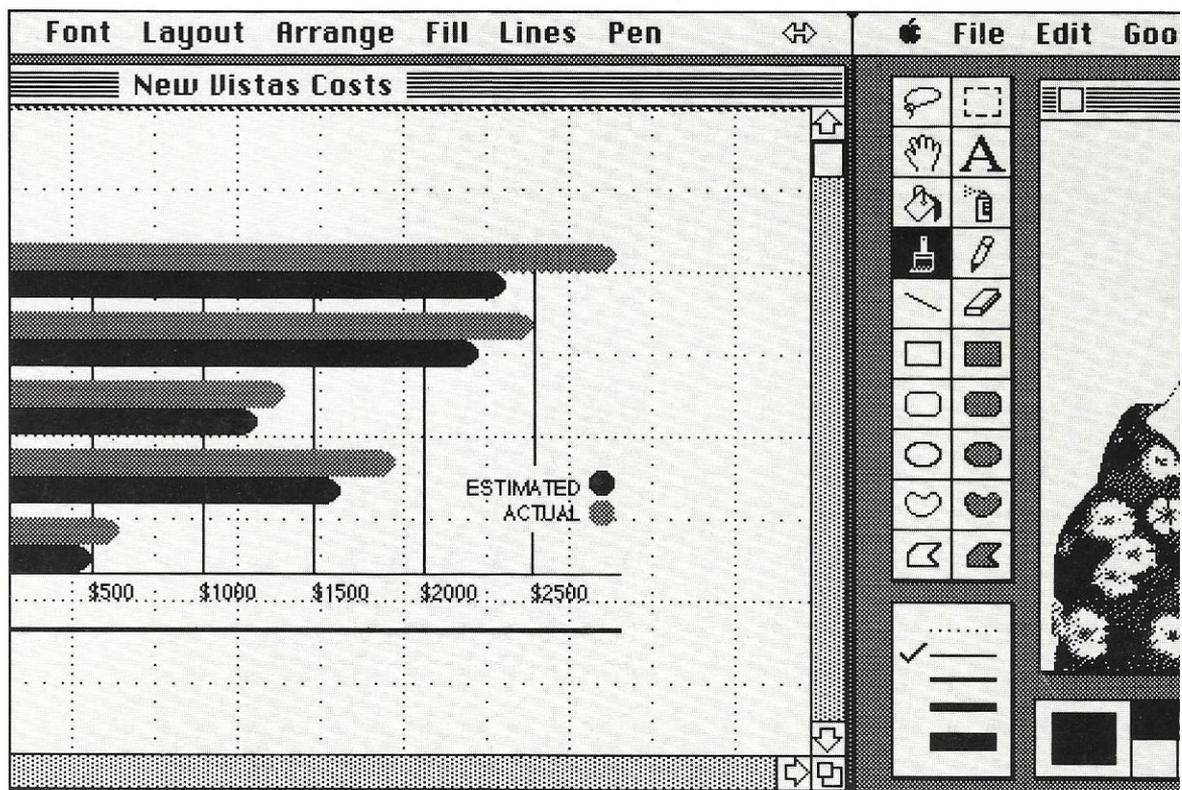




Macintosh™

Switcher Construction Kit

Runs on a Macintosh with at least
512K of memory



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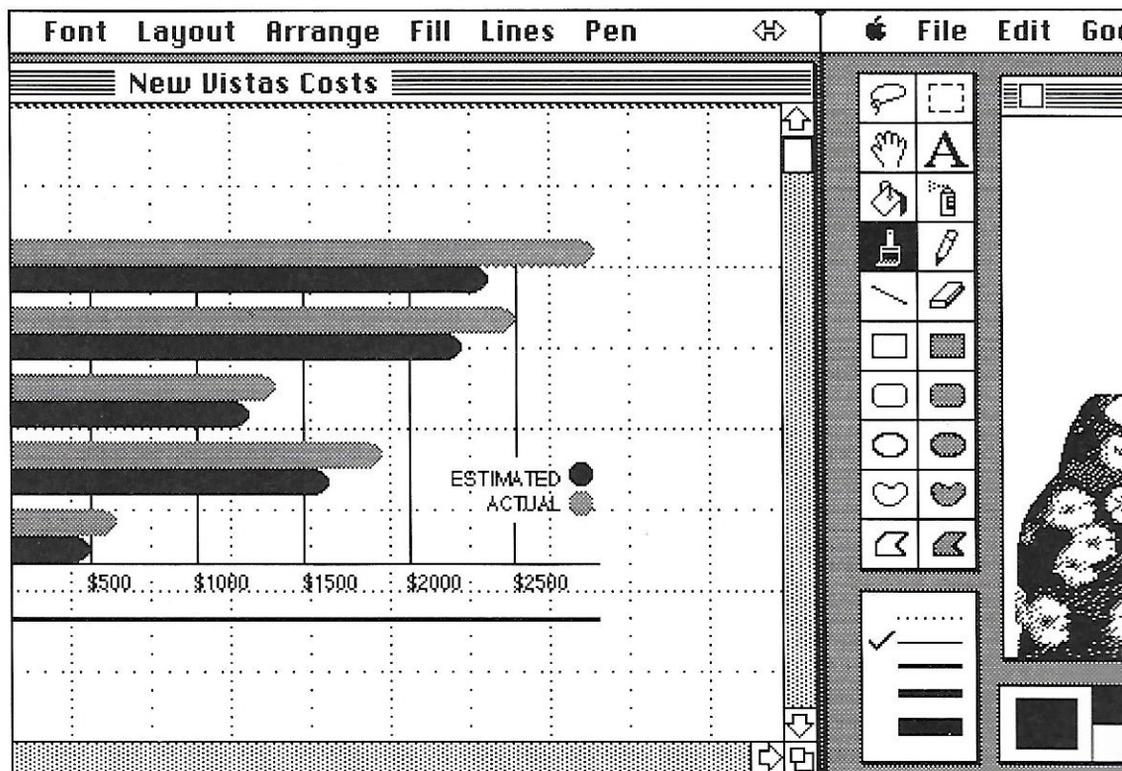
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Macintosh™

HARRY Campbell
779 5357
Switcher Construction Kit



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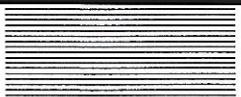
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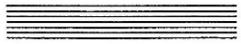
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Introduction

The Switcher™ Construction Kit is a powerful timesaver. It lets you use several applications on the Apple® Macintosh™ computer at the same time. The Switcher Construction Kit (called simply Switcher throughout the rest of this manual) divides available memory and allocates portions of it to different applications. You can start two or more applications in turn and change between them instantly. You can work on a sketch in MacPaint™, switch to MacWrite™ when you get an inspiration for your novel, switch to a spelling checker and look for typos, and then switch back to MacPaint and continue with your sketch—all without returning to the Finder. You can even have the best of two worlds: With the Finder installed as one of Switcher's applications, you can do all your computer housekeeping (copying, renaming, and removing documents) without ever leaving Switcher or quitting an application.

- ❖ *By the way:* You set up a particular combination of applications only once; then you save information about that combination in a Switcher document. When you open that Switcher document from the Finder, Switcher starts each application automatically.

What you need to use Switcher

Switcher works with any computer in the Macintosh family having at least 512K of memory. It works most efficiently if you have an external disk drive or a hard disk to hold applications and documents. All the examples in this manual assume you have two disk drives.

- ❖ *Single-Drive Switcher:* You can use Switcher with just one disk drive, but you'll have to make a large number of disk swaps. For all reasonable purposes, you'll need a second disk drive.

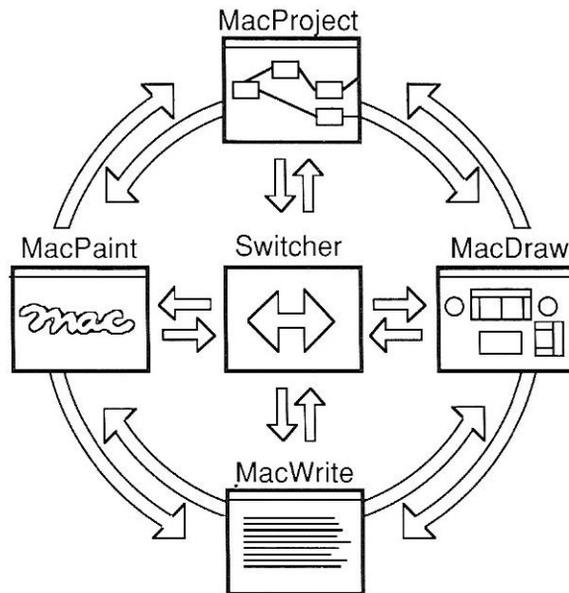
This manual also assumes you are familiar with your Macintosh owner's guide and with the Finder. Chapter 1, the tutorial, assumes you have access to, and are somewhat familiar with, MacWrite and MacPaint (although any two applications will do).

How Switcher works

Switcher acts as an intermediary between Macintosh applications and the Macintosh operating system. Usually, an application "talks" to the operating system directly. In order to create its unique environment, Switcher intercepts and replaces certain operating system commands.

You install each application that you want to use in a Switcher application slot. (See the first figure in Chapter 1.) Switcher automatically allocates a specific amount of memory to each application slot as the application is installed. You can override Switcher's automatic memory allocations, giving more or less memory to an application as the case demands.

Switcher also controls how applications appear on the screen, letting you rotate through the applications as if they were on a wheel.



About this manual

This manual gives you the information you need to create and to use any number of combinations of your favorite applications.

Chapter 1, **Learning Switcher**, leads you step-by-step through Switcher's basic features. Go through this tutorial first, at your computer.

Chapter 2, **Using Switcher**, tells you more about each Switcher feature, from the simplest to the most complex. Read this chapter to expand your knowledge about Switcher after you've gone through the tutorial.

Chapter 3, **Menus**, provides a synopsis of the commands on Switcher's menus, in the order that they appear.

Chapter 4, **Customizing Switcher**, shows you how to use each Switcher option to its best advantage and how to segment your computer's memory in the most efficient way for your work. Refer to this chapter when you want to put polish on your Switcher documents.

Chapter 5, **Particular Software, Particular Hardware**, gives specific recommendations for using Switcher with some of the most popular Apple software, including the Finder, MacWrite, MacProject™, and more, and provides tips about installing Switcher with different types of hardware (such as hard disks and the LaserWriter™ printer).

Make a backup now!

Make a copy of the Switcher master disk; then put the original away. Use the backup copy any time you want to transfer Switcher to another disk. That way, if some disaster happens, your original will still be intact. Make the backup copy now, before you go on. See your computer's owner's guide for instructions on how to copy a disk.

Switcher's limitations

Although Apple has tested Switcher and is satisfied with its performance and reliability, Apple cannot guarantee the reliability of any particular application or combination of applications used with Switcher. Some software designed exclusively for the Macintosh 512K, for example, might not work with Switcher. This manual helps you achieve maximum reliability by identifying potential problems and by suggesting configurations that work well. See the inside front cover of this manual for the complete text of the warranty.



Chapter 1



Learning Switcher

This brief tutorial takes you step by step through Switcher's basic features, using MacWrite, MacPaint, and the Finder as sample applications. You'll need a Macintosh with at least 512K, an external disk drive, MacWrite, MacPaint, your Switcher disk, and two blank disks. You should be familiar with MacPaint and MacWrite.

Getting started

You'll set up two disks to use with this tutorial. First, you'll create a disk called *Inside Disk*; it will become your startup disk.

1. Copy your Switcher disk (including the System Folder) to a blank disk.
2. Copy MacWrite (the application only, not the entire disk) to the same disk.
3. Name the disk *Inside Disk*.

Now you'll create *Outside Disk*; it will go into your external disk drive.

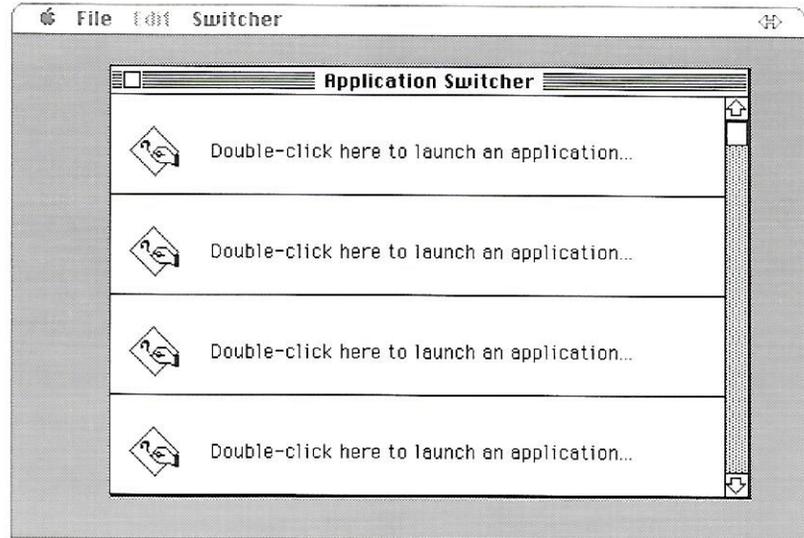
1. Copy the MacPaint application to *Outside Disk*.
2. Copy any MacWrite or MacPaint documents you'd like to use to *Outside Disk*. (You don't really have to do this step now; but you would do it in everyday Switcher use.)
3. Label the disk *Outside Disk*.

Your two disks should now be set up like this:

Inside Disk	Outside Disk
System Folder	MacPaint
MacWrite	MacPaint and MacWrite documents (optional)
Switcher	

Starting Switcher

1. Choose Shut Down from the Special menu.
2. Insert *Inside Disk* into the internal disk drive and *Outside Disk* into the external disk drive. (If you're using a Macintosh XL, you'll need to turn it on.) The Finder starts and the disk icons appear on the screen.
3. Open *Inside Disk* and open the Switcher icon. After a few moments, you'll see the Switcher display:

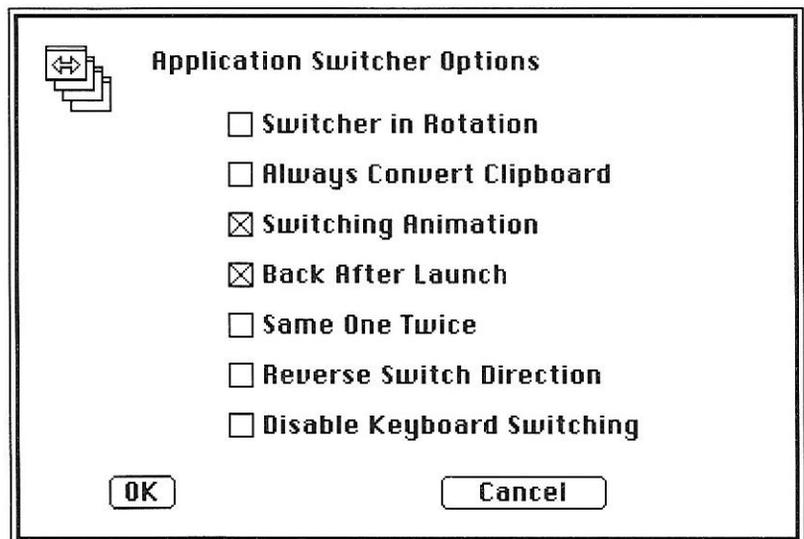


The section called "Starting Switcher" in Chapter 2 gives a full description of the Switcher display. (But you don't have to go there now to work with this tutorial.)

Installing applications

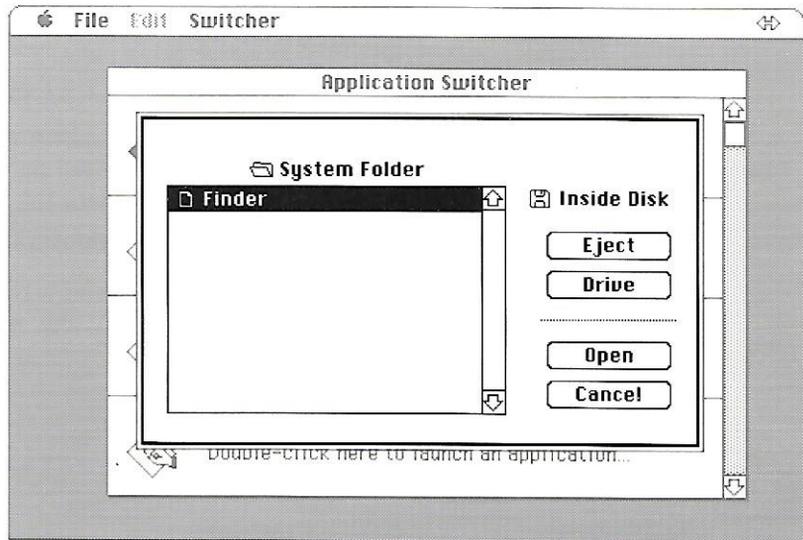
After you start Switcher, you designate the applications you want to use by *installing* them. Before you start, check to see that the correct Switcher options needed for this tutorial are checked.

1. Choose Options from the Switcher menu. You'll get the Options window.
2. Check Back After Launch and Switching Animation. Uncheck any other options that might be checked.
3. Click OK.



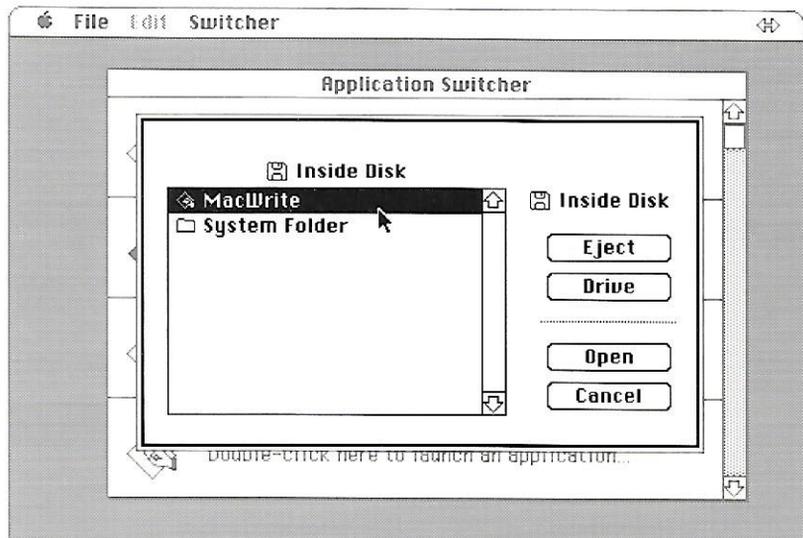
Now you're ready to install applications. First you'll install the Finder.

1. Position the Pointer anywhere in the first slot and double-click. You'll see the applications available on *Inside Disk*: Finder and MacWrite. (If you're using the hierarchical file system, you might need to double-click on the System Folder to see the Finder.)
2. Select Finder and click Open.



The Finder's screen appears briefly, and then you return to the Switcher display. You'll see the Finder in the first slot. Now you can install the next application, MacWrite.

- Position the pointer in the second slot, below the Finder, and double-click.



Your only choice is MacWrite this time; you won't see the Finder because you've already installed it.

- Select MacWrite and click Open.

The MacWrite screen appears briefly, and then you return to the Switcher display. Now install the last application, MacPaint, using a different technique—just for the practice.

- Choose Install Application from the Switcher menu.

Choosing Install Application is the same as double-clicking a slot. You don't need to select a slot; Switcher automatically installs the application in the next slot. You're presented with no choices, because you've installed both applications on *Inside Disk*. But you can install MacPaint, which is on *Outside Disk*.

1. Click the Drive button. You're presented with the choice on *Outside Disk*, MacPaint.
2. Select MacPaint and click Open (or just double-click MacPaint).

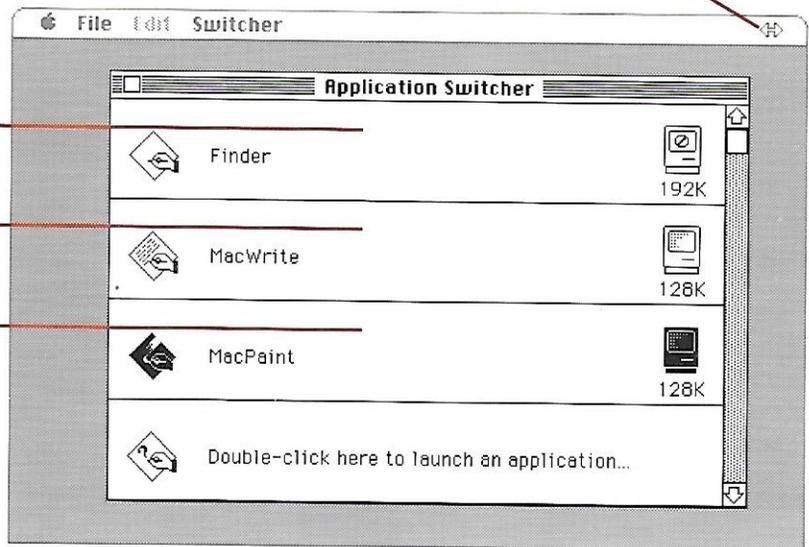
The MacPaint screen appears briefly, and then you return to the Switcher display. Three slots now hold application names—Finder, MacWrite, and MacPaint.

Switching arrow

Finder slot

MacWrite slot

MacPaint slot

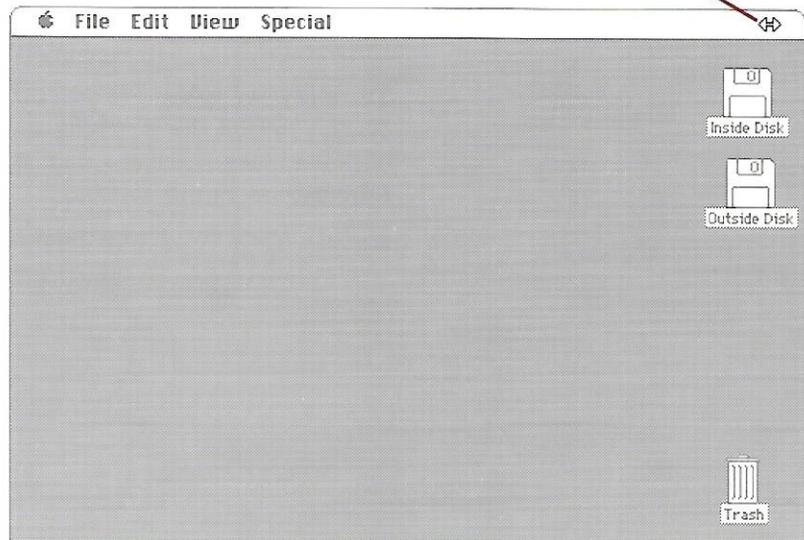


Switching between applications

From the Switcher display, you can go directly to an application by double-clicking its slot, or you can click the *switching arrow* (it's at the upper-right corner) to rotate between Finder, MacWrite, and MacPaint.

- Double-click the Finder slot.

Switching arrow



You'll switch to the Finder screen, familiar but with one difference: You'll see the switching arrow on the right side of the menu bar. You can do anything you'd ordinarily do in the Finder, such as copy, remove, or rename documents. But for now, use the switching arrow to switch to MacWrite.

- Click the right side of the switching arrow. (You might have to press for a second or two.)

The Finder display rolls away and MacWrite rolls in. Type a few words; then switch again.

1. Click the right side of the switching arrow. MacPaint appears on the screen.
2. Again, click the right side of the switching arrow—the Finder rolls in. You've completed the circuit of your applications.
3. Click the left side of the switching arrow. You return to the previous application, MacPaint.

Think of the applications as if they were on a sprocketed wheel. When you click the switching arrow, you move the wheel forward or backward, one notch at a time. (See the figure at the end of the Introduction to this manual.)

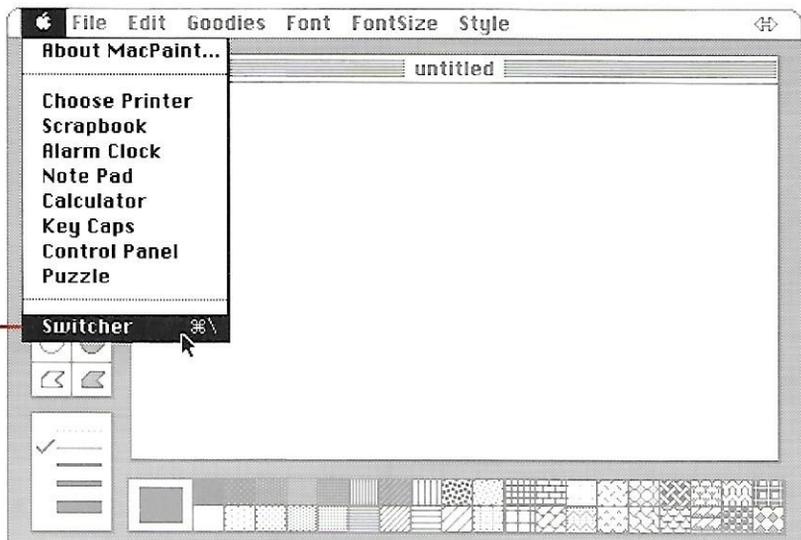
- Make a few swirls with the paintbrush while you're here in MacPaint; then go on.

Returning to the Switcher display

You'll need to return to the Switcher display if you want to change settings or add applications. Switcher adds the command, Switcher, to the bottom of every application's Apple menu.

- Choose Switcher from the Apple menu.

This gets you back to the Switcher display

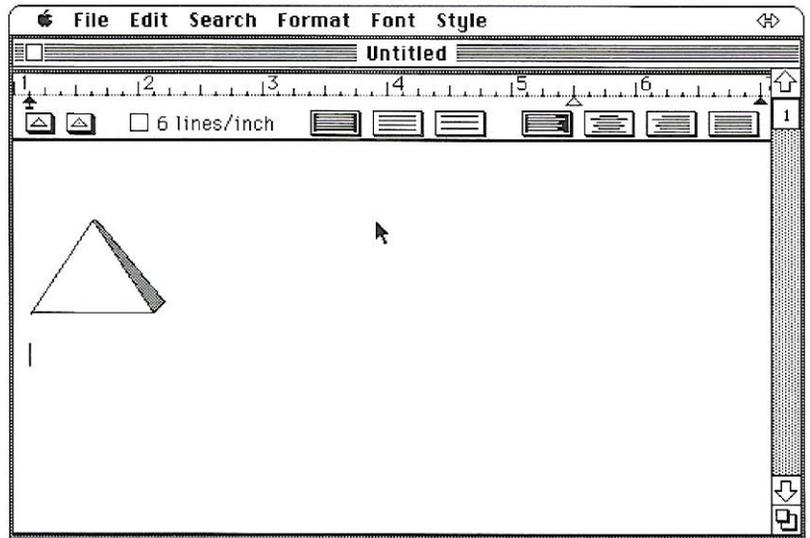


You return to the Switcher display.

Cutting and pasting between applications

Ordinarily, Switcher doesn't transfer the Clipboard from application to application. But by using the Option key as you switch, you can tell Switcher to transfer the Clipboard so you can cut and paste between applications.

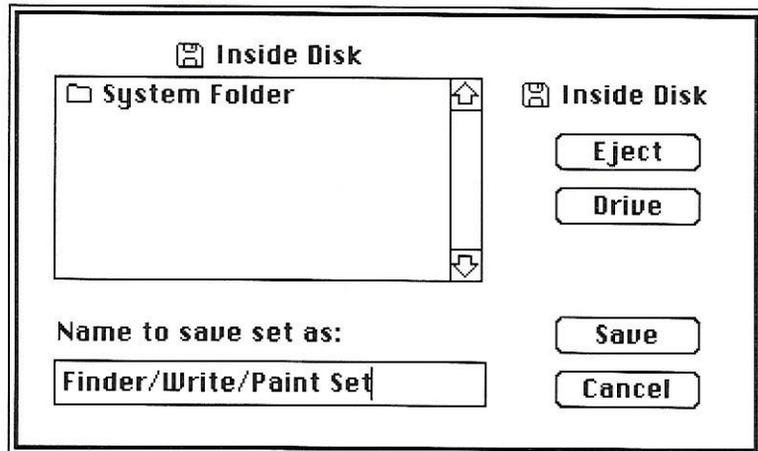
1. Click the switching arrow until you reach MacPaint.
2. Draw a shape and select it with the lasso.
3. Choose Copy from the Edit menu.
4. Hold down the Option key and click the switching arrow until you reach the MacWrite screen.
5. Release the Option key and choose Paste from the Edit menu.
The shape appears in the MacWrite document.



Creating a Switcher document

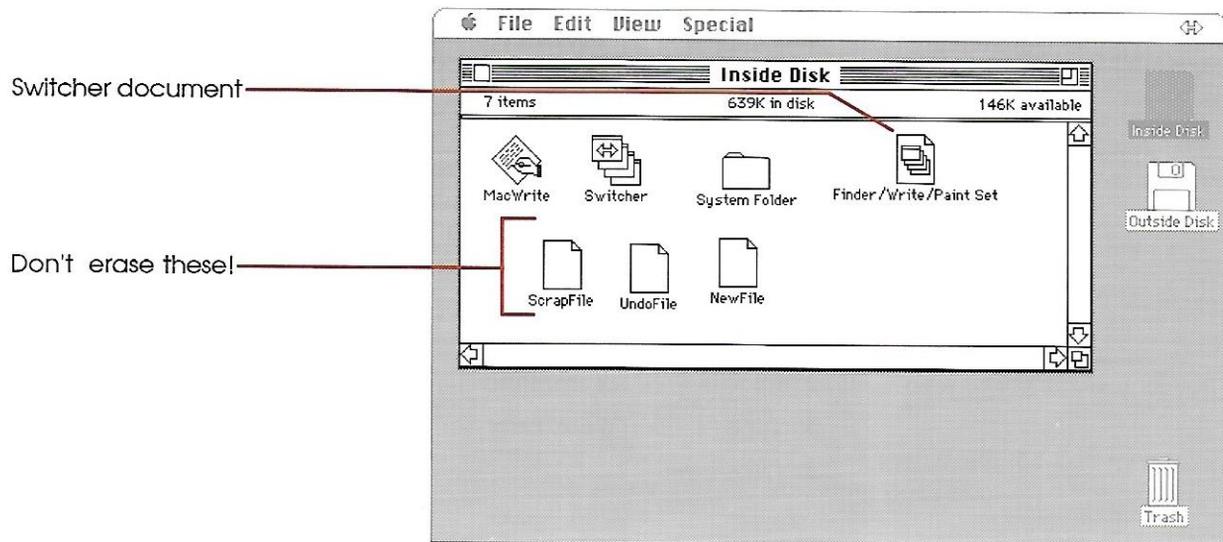
A Switcher document lets you automatically start up several applications at once. After you've installed the applications you want to use together, you can create a Switcher document. The next time you want to use those specific applications with Switcher, you can start the Switcher document from the Finder; Switcher will start all the applications for you.

1. Choose Switcher from the Apple menu to return to the Switcher display.
2. Choose Save Set from the File menu.
3. Type "Finder/Write/Paint Set" to name the document.
4. Click Save.



Switch to the Finder to see the Switcher document you created.

- Click the switching arrow until you arrive at the Finder. You'll find the Switcher document in *Inside Disk* with the name you gave it.



You might see a few unfamiliar documents as well—these are temporary documents, usually invisible, created by MacPaint and MacWrite. MacWrite and MacPaint need them to do their work. Don't erase them; they'll be erased for you when you close your applications.

Quitting Switcher

Now you'll quit Switcher and start Switcher again from the document you just created.

You quit Switcher by quitting each application individually and then quitting from the Switcher display.

1. Switch to MacPaint by clicking the switching arrow.
2. Choose Quit from the File menu.
3. When you're asked if you want to save any changes, click no. MacPaint quits and you return to the Switcher display.
4. Switch to MacWrite by double-clicking the MacWrite slot.
5. Choose Quit from the File menu.
6. When you're asked if you want to save any changes, click no. MacWrite quits and you return to the Switcher display.

Now you're left with the Finder as the only active application. You can quit Switcher if it has only one application.

- Choose Quit from Switcher's File menu.

Switcher quits and returns you to the Finder. The switching arrow is gone; Switcher is closed.

Starting a Switcher document

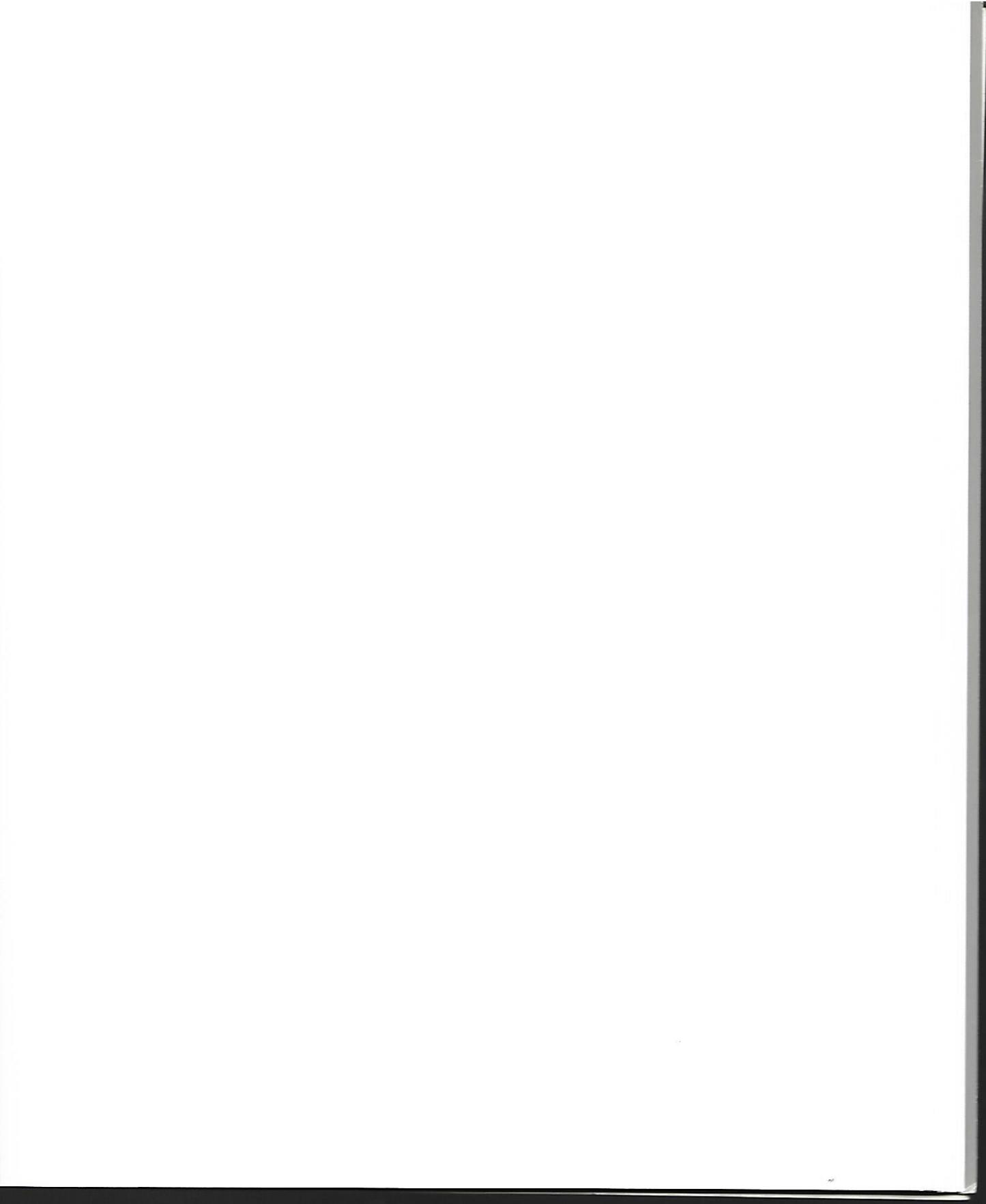
Now you'll start Switcher again, but this time from the Switcher document you created.

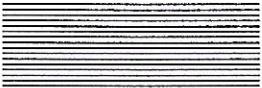
- Select the Switcher document Finder/Write/Paint Set and choose Open from the File menu (or double-click the Switcher document).

Switcher starts and installs Finder, MacWrite, and MacPaint. This takes a few seconds. When Switcher is finished, you're automatically switched to the Finder (the application you installed in the first slot). You'll see the switching arrow in the right side of the menu bar to remind you that you're using Switcher. You now can switch between applications.

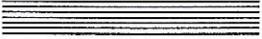
Just for fun...

Choose About Switcher from the Apple menu. It gives you some helpful hints about using Switcher, and provides an amusing diversion in its upper-left corner.





Chapter 2



Using Switcher

You'll find it easy to work with your usual applications under Switcher. This section gives you an overview: how to use Switcher's basic features, how to use an application running under Switcher, and how to create a Switcher document—your own custom set of applications.

Setting up your disks

Switcher works best when the applications and documents you'll be using are available on disks inserted in the disk drives. Using Switcher will be easier if you do some disk planning before you start. If you have a hard disk, you can use it to hold all your files—system files, applications, and documents—and don't have to worry about disk arrangement.

Ideally, all your applications (including Switcher itself) should be on the same disk in one drive, and all your documents should be on another disk in another drive. This arrangement keeps disk swapping down to a minimum. (Of course, ideal states aren't always possible to achieve.)

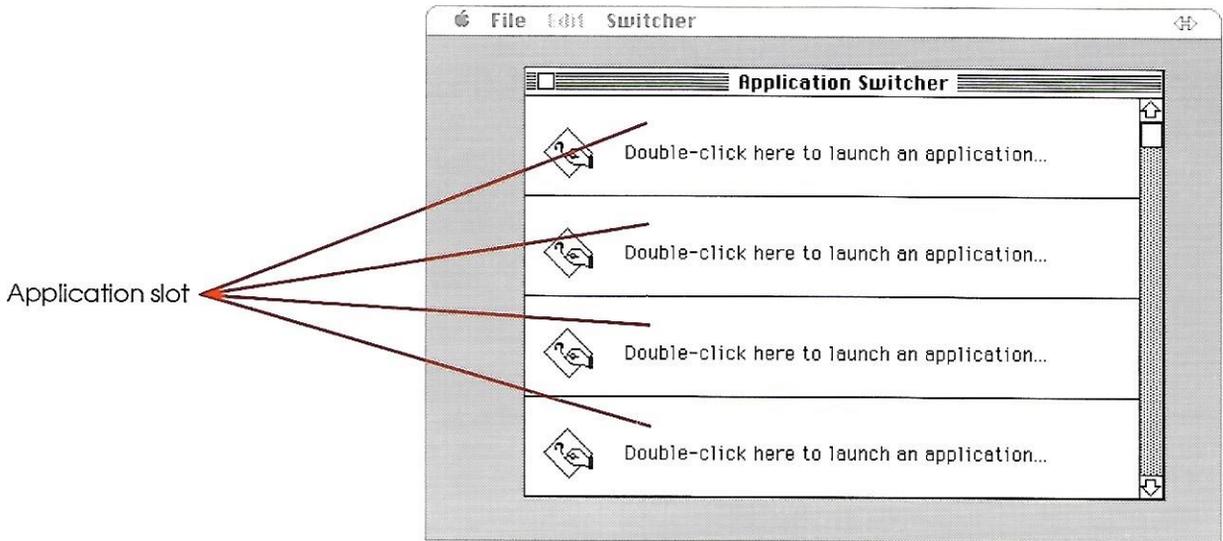
To avoid confusion, you should have system files (Finder, System, printing resources, and desk accessory files) on the same disk; if your computer uses the hierarchical file system, your system files should all be in the same file folder.

Here are the steps to take to set up Switcher disks:

1. Using your backup of the Switcher master disk, copy Switcher and the system folder to a new disk.
2. Copy as many of your chosen applications to the new Switcher disk as will fit.
3. Insert a disk into the other disk drive; this disk will hold your documents. Also use it to hold any applications that won't fit on the other disk.

Starting Switcher

Start Switcher as you would any other application—by selecting its icon in the Finder and choosing Open from the File menu (or by just double-clicking the Switcher icon). You'll see the Switcher display made up of a window and the familiar menu bar:



The window is divided by horizontal lines; the boxes between the lines are Switcher's application slots, each one capable of holding information about a different application. There are eight application slots in all. You can use the scroll bar to scroll to the others. The number of application slots you can actually use depends on the amount of memory you have available.

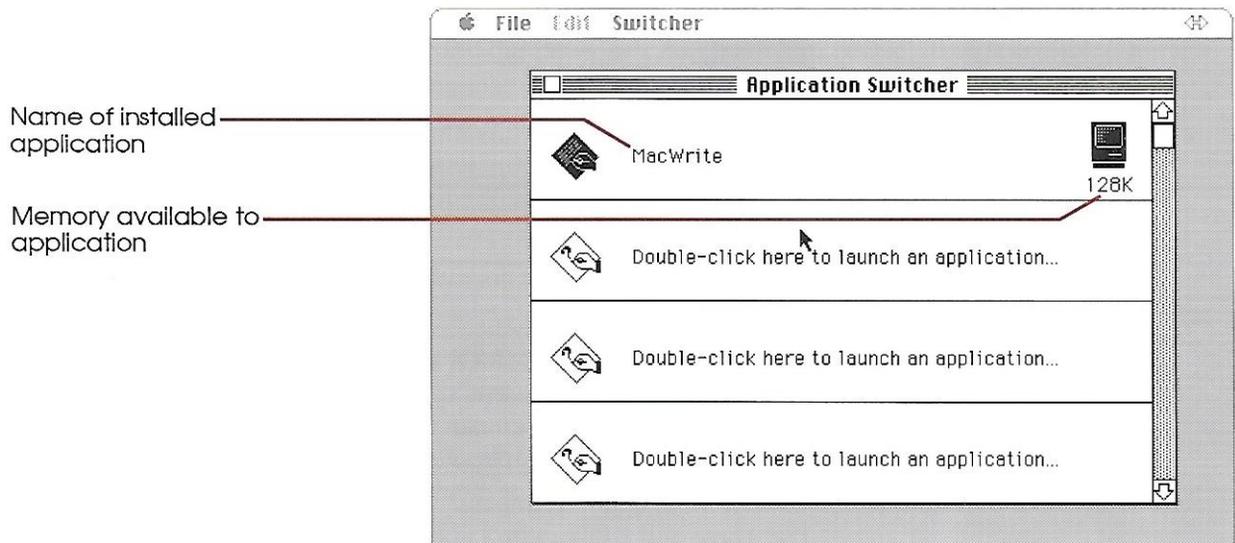
The Apple and Edit menus are standard. The File and Switcher menus contain Switcher commands (the subject of Chapter 3). On the right side of the menu bar is the *switching arrow*. The switching arrow appears in the same position in the menu bar of every application you use with Switcher.

Installing applications

After you start Switcher you install the applications you want to use. You can install all the applications at the outset, or you can install one, start working, and add or remove other applications later.

To install an application, follow these steps:

1. In the Switcher display, select an application slot by double-clicking anywhere in it. A dialog box shows you all the applications on the disk.
2. Select the application you want to install and click Open, or click the Drive or Eject buttons to get applications on another disk. Switcher installs the selected application, starts it, and returns you to the Switcher display. The display now shows the application installed in its slot.
3. Repeat steps 1 and 2 to continue installing applications.



- ❖ *Installing the Finder:* Many users find it extremely useful to install the Finder in an application slot. Install it just as you would any other application—by following the steps you just read about. When you use the Finder with Switcher, the Finder should always be the first application you install, and it should be installed in the first slot. See “The Finder” in Chapter 5 for complete details.

Installing additional applications

To install additional applications while you're working, return to the Switcher display and repeat the steps for installing an application. (You may need to quit an installed application to get enough memory for the new application; to do that, choose Quit from the application's File menu.)

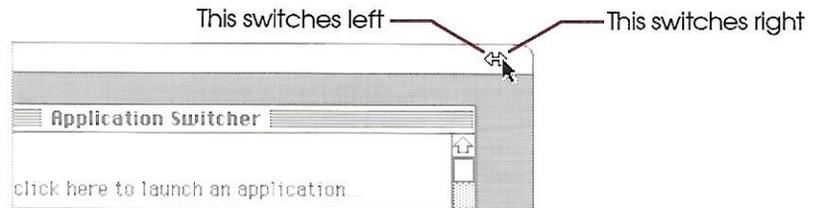
Using applications with Switcher

With Switcher you can work within any of your applications and then switch to another at any time.

Switching to other applications

There are several ways to switch among applications:

- Click either side of the switching arrow to move to the next or previous application.
- Press Command-[to move to the next application; press Command-] to move to the previous one.
- Double-click the application's slot from the Switcher display.



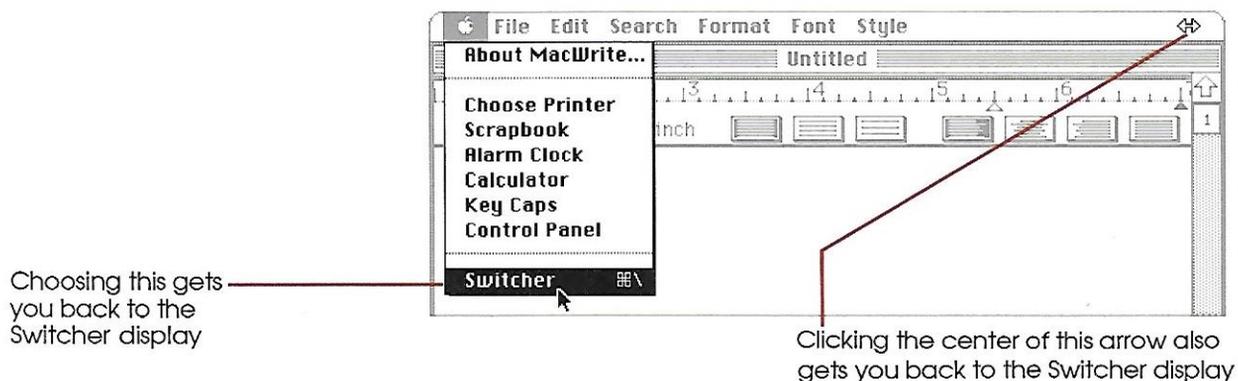
You can begin working with an application as soon as it appears. When you switch to another application, Switcher preserves your document in memory; your document is always ready for you to continue working on when you switch back.

- ❖ *Switcher Doesn't Save Your Work:* Switcher doesn't save your work to disk each time you switch. Rather, it preserves your document in memory. You need to save your document from within its application, just as you do when you're not using Switcher.

Returning to the Switcher display

To return to the Switcher display at any time, use any of these methods:

- Click the center of the switching arrows.
- Press Command-\.
- Choose Switcher from the Apple menu.

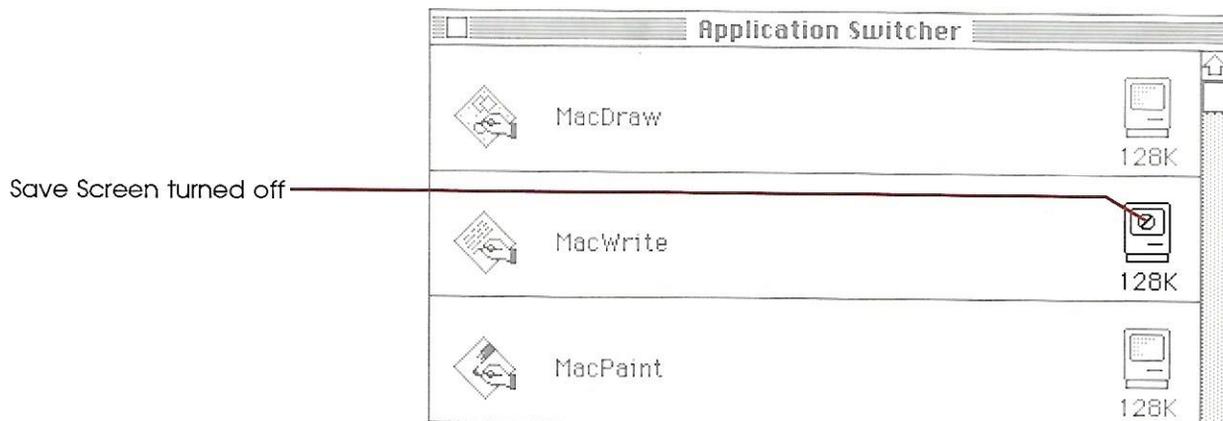


Screen saving

When Switcher moves from application to application, the new application's display appears instantly. The display you see is actually a kind of snapshot that Switcher takes as you leave an application to switch to the next one—you pick up where you left off.

This screen-saving function has its costs. When it's on, it uses 22K of memory per application. You can free up that much memory for Switcher's use by turning Save Screen off. When Save Screen is off, Switching time increases slightly because Switcher must redraw an application's screen from scratch each time you switch to it.

You turn the Save Screen option on or off by returning to the Switcher display and clicking the screen of the Macintosh icon in an application slot. In the next figure, the MacDraw™ and MacPaint screens are saved between switches, but the MacWrite screen is not saved. (The fact that Save Screen is off is indicated by the international “No!” symbol—a circle with a line through it.)



- ❖ *Save Screen Doesn't Save Your Work:* The Save Screen option has nothing to do with whether or not your work is saved. When you switch applications, you don't lose any work whether or not Save Screen is checked. You need to save from within each application.

You can decide when you install an application whether to have its screen automatically saved each time you install it. See “Save Screen” in Chapter 4 for details.

- ❖ *Inaccurate Displays:* Some applications won't be able to redraw the display accurately with the Screen Save option turned off. An inaccurately redrawn display won't harm your document, but it can be annoying.
- ❖ *Turning Save Screen On Again:* After you've turned Save Screen off, you may not always have enough memory to turn it back on, depending on what you've done in the interim. Switcher beeps if there isn't enough memory to turn it back on.

In case of disaster...

If one of your applications appears to be spinning its wheels and doing no useful work, or if you get a message with a bomb icon, you might be able to recover by returning to the Switcher display. Hold down the Option, Command, Shift, and period keys, all at the same time. When the problem is specific only to the particular application, you can return to the Switcher display by using this method, and the other applications won't be affected. (But any unsaved changes in the document you were working on will be lost.) Otherwise, the problem probably affects shared system software and therefore all applications.

When an application crashes, it may damage the system memory shared by all applications under Switcher. To avoid problems, you should save each document and quit each application immediately. Then quit Switcher and restart your Macintosh by turning it off and then on again.

Using Switcher documents

A Switcher document contains all the information you need to load several applications (and, optionally, several documents) at the same time.

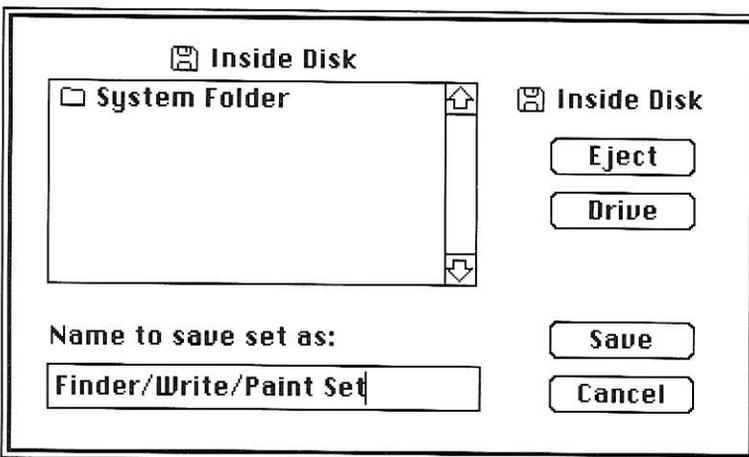
Creating a Switcher document

The Save Set command in the File menu lets you store in a Switcher document information about the current set (the active applications in Switcher at a given moment). A Switcher document works much like any other Macintosh document: When you start a Switcher document from the Finder, the document starts the Switcher application for you. The information in the document makes Switcher load all the applications and documents that make up the set.

You can create as many Switcher documents as you want. You could have a writing set, for example, that might include a word processing program, a spelling checker, and a graphics program for creating illustrations. A telecommunications set might have a modem program like MacTerminal™, an editor for storing text documents, and a stock analysis program for handling the information you got from your on-line broker. Perhaps you'll have a finance set—an accounting program, a spreadsheet, a tax analysis program, and a database listing the antacids you have in your medicine cabinet.

Creating a Switcher document is simple:

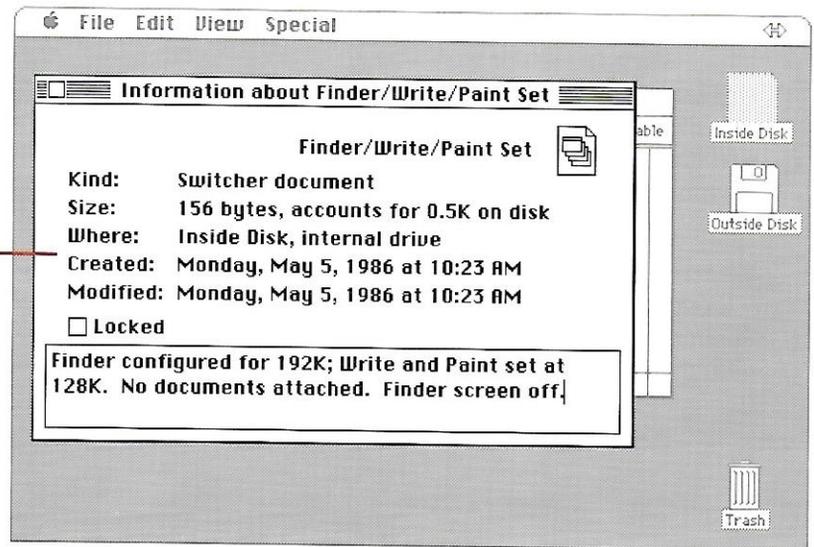
1. Start Switcher.
2. Install all the applications you want to use. If you want an application to open a particular document, use the Attach Document command in the File menu. (See "File Menu" in Chapter 3.)
3. When you're satisfied with the set, choose Save Set from the File menu. Switcher asks you to name the set.



After you've saved the set, you can continue working. The next time you return to the Finder, you'll see the Switcher document you created.

It's a good idea to record information about the set (the name of the documents in the set, whether there's a document attached, and so on) in the document's Get Info window. Just select the document and choose Get Info from the File menu; then type the information.

Get Info window



Loading applications from a Switcher document

From the Finder: To start Switcher with a set of applications chosen in advance, open a Switcher document from the Finder. Switcher will start, install all the applications (and any attached documents), and finally switch you to the application installed in the first slot.

From Switcher: Choose Load Set from the File menu in the Switcher display—when the dialog box appears, choose the set you want to use. If you've already installed applications and choose Load Set, Switcher installs as many applications as memory allows from the set you've named.

See "Load Set" in Chapter 3 for more information.

Transferring information between applications

To transfer the Clipboard's contents so that you can cut and paste between two applications, hold down the Option key and click the switching arrow until you get to the application you want. (Using Switcher's preset options, you won't be able to copy information from one application and then paste that information directly into another application; each application under Switcher maintains its own separate Clipboard.)

You can tell Switcher to transfer the Clipboard all the time by checking Always Convert Clipboard in the Options dialog box. (You get that dialog box by choosing Options in the Switcher menu; see "Options" in Chapter 3 for the details.) It takes longer to switch between applications when you use this option.

Quitting applications

To quit an application, switch to the application, save your changes, and choose Quit from the File menu. That application is removed from the Switcher environment. Its application slot and the memory allocated to it become free and you return to the Switcher display.

Quitting Switcher

When you want to quit Switcher, you must first switch to each application and choose Quit from the File menu; then return to the Switcher display and choose Quit from the File menu, or click the close box in the Switcher window.

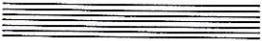
You can quit Switcher when only one application is still installed. Choose Quit from Switcher's File menu (or click the close box in the Application Switcher window); you'll end up in that application.

Remember: Switcher doesn't save documents for you. Be sure to save and quit each application individually—never just turn the Macintosh off.





Chapter 3



Menus

The four menus on the Switcher display are Apple, File, Edit, and Switcher. The Apple menu is standard, except when you are in an application: The Apple menu includes a return-to-Switcher command at the bottom. Nothing in the Edit menu works in the Switcher display; use its commands when you're using a desk accessory from the Apple menu.

File	Edit	Switcher
Load Set...		⌘L
Save Set...		⌘S
Attach Document...		⌘A

Show Info Window		

Quit	⏏	⌘Q

File menu

Each item in the file menu is explained in this section.

Load Set

This command lets you choose a Switcher document to load. Switcher starts each application in the set in turn, leaving you in the application that occupies the first slot. The applications and documents in the set must be on disks already inserted in your Macintosh. If Switcher can't find an application or document while loading a set, it stops loading and returns to the Switcher display.

Switcher loads only as many applications as it can fit in memory. Before you choose the Load Set command, quit any active applications you don't need.

The Load Set command ignores Back After Launch (described in "Switcher Options" in Chapter 4). After Switcher has loaded all applications, you're switched to the application that occupies the first slot.

❖ *Loading Copy-Protected Software:* If Switcher encounters copy-protected software requiring a "key" disk (such as Microsoft applications), the startup disk will be ejected, and then you'll be switched back to the Switcher display. You'll need to follow these steps:

1. Reinsert the ejected disk to continue loading applications.
2. When you return to the application, eject the disk. (Press Command-Shift-1 if the disk is in the internal drive, or Command-Shift-2 if it's in the external drive.)
3. Insert the key disk. The application reads it and then ejects it.
4. Reinsert the correct disk.

Save Set

Save Set saves the current set of applications, options, and settings as a Switcher document that you can start from the Finder or load with the Load Set command.

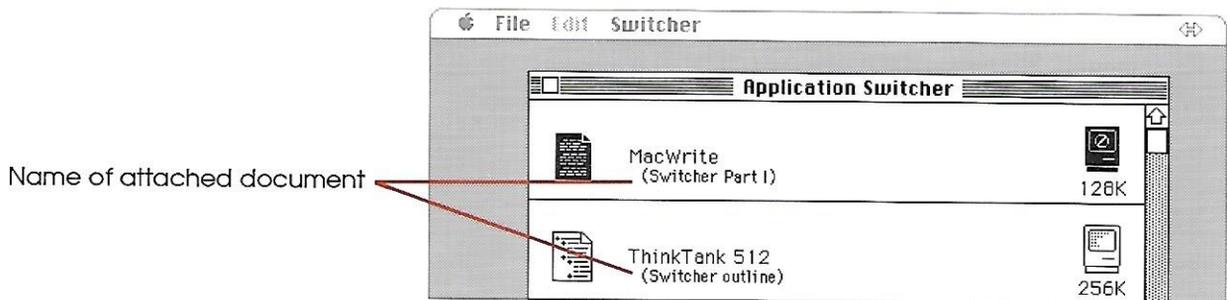
After you've saved a set or loaded a set from a Switcher document, any changes you make to the set—such as adding or removing applications or changing Switcher options—won't affect the contents of the saved set in the Switcher document.

Attach Document

This command lets you choose a specific document to be opened by an application when the application is installed from a Switcher document. Here's how to attach a document:

1. Switch to the Switcher display.
2. Select a slot with an application name in it.
3. Choose Attach Document from the File menu. A box appears with a list of all documents that the application can open.
4. Select the document you want to attach and click Open.

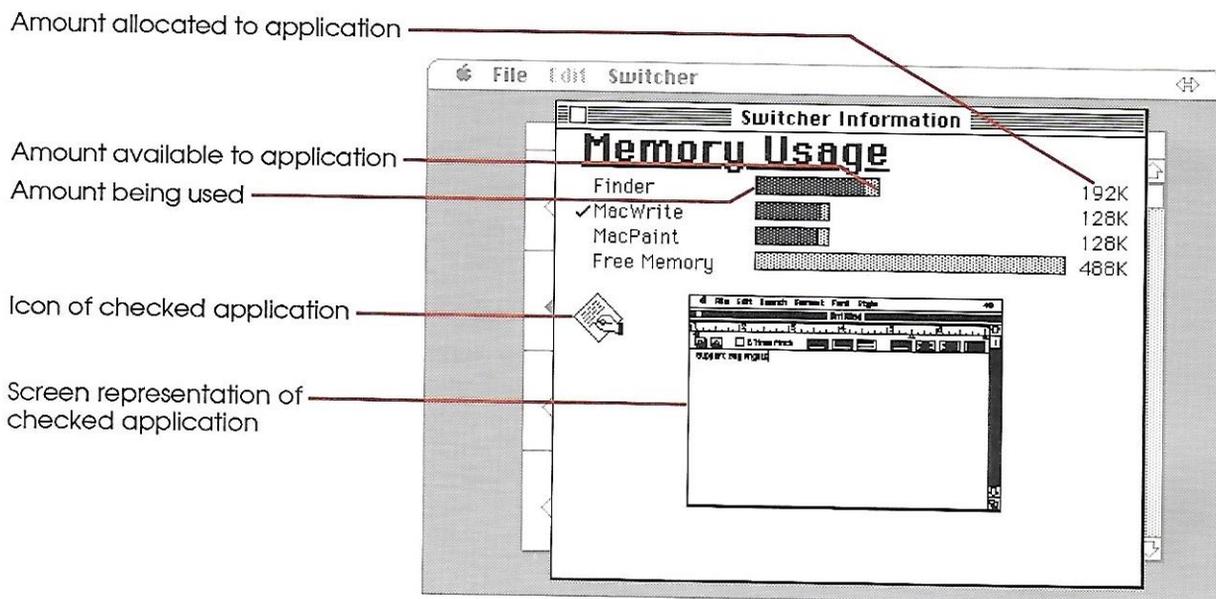
The document's name now appears in the application's slot in the Switcher display. If the application is active, the document you just selected is not opened: The document currently open in the application is not affected. If the application is not active, the document will be opened when you start the application.



Once you've selected a document with the Attach Document command, using the Save Set command saves information about the attached document in a Switcher document.

Show Info window

This command brings up the Switcher Information window—a graphic snapshot of the memory use and allocation for the current set of applications. You can use this information to help you configure your Switcher environment. (See “Configure then Install” in Chapter 4 for information on configuring.)



The bar next to each application represents how much memory has been allocated. The dark gray area shows how much memory is actually being used; the light gray area shows how much additional memory is available to the application. (An application doesn't use all the memory available to it all the time.) You'll notice that the memory-use numbers don't add up to what you'd expect—512K or 1 megabyte. That's because the Switcher program itself, the operating system, and the Save Screen option all use memory. Free memory is only an estimate, and Switcher usually understates it. If free memory is close to but slightly less than what you need, you can still try to install another application. Switcher will tell you if there's not enough memory.

The application that's currently selected in the Application Switcher window has a checkmark next to it and is visually represented by a miniature screen. Clicking the miniature screen switches you to that application. Switcher won't display a miniature screen if the Save Screen option is off for that application.

You can leave the Switcher Information window on your desktop and move between it and the Application Switcher window to keep track of free memory as you're installing applications.

Quit

Quit exits Switcher. You can accomplish the same thing by clicking the Switcher window's close box. You won't be able to quit Switcher until you've quit all (or all but one) of the active applications. If you quit Switcher with one active application remaining, Switcher leaves you in that application *with no increase in the amount of memory allocated to the application*. If you want more memory for the application, you'll need to quit and restart from the Finder.

Switcher	
Install Application...	⌘I
Remove Application	⌘R
Configure then Install...	

Open	⌘O
Switch Left	⌘[
Switch Right	⌘]

Options...	

Switcher menu

Each item in the Switcher Menu is explained in this section.

Install Application

This command lets you select an application to use with Switcher. Its action is the same as double-clicking one of the application slots in the Switcher display. If you haven't selected an empty slot, Switcher installs the application in the next available one.

Remove Application

Remove Application lets you remove a selected nonactive application from the current set. (A nonactive application is one that Switcher has allocated memory to, but that hasn't started yet.) A nonactive application has the word *configure* in its Switcher slot. If you try to remove an active application, Switcher reminds you to switch to the application and choose Quit from the File menu. After you remove an application, its application slot and any memory allocated to it become free.

Configure then Install

This command lets you specify information about an application and then install it. If you haven't selected an application slot, Switcher selects the next available one. If you select a slot with an active application, you'll get a reminder that you can't configure an active application. See "Configure then Install" in Chapter 4 for complete information on configuring options.

Open

Open starts a selected nonactive application or switches you to the selected active application.

Switch Left

Switch Left has the same effect as clicking the switching arrow that points left.

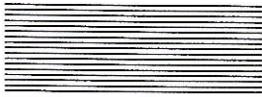
Switch Right

Switch Right has the same effect as clicking the switching arrow that points right.

Options

This command presents the Options window, described at the beginning of Chapter 4.





Chapter 4

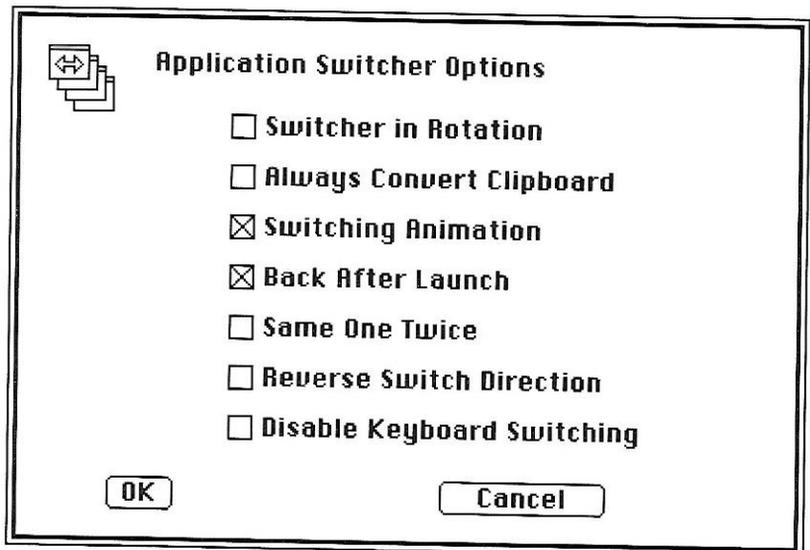


Customizing Switcher

You probably won't need to change Switcher's preset options. But Switcher was designed to be flexible. This chapter provides the information you need to customize the Switcher environment to meet your personal tastes, and to install applications in ways that make the most efficient use of memory.

Switcher options

You can tailor Switcher to suit your needs and preferences. From the Switcher display, choose Options from the Switcher menu. A dialog box appears:



Switcher automatically remembers the options you choose from session to session; you don't have to save them.

Switcher in Rotation

Checking this option means that, as you click the switching arrow, one of the applications you switch to is the Switcher display.

Always Convert Clipboard

When you use Switcher, each application maintains its own separate Clipboard, so you can cut, copy, and paste within each application as you normally would. When you check Always Convert Clipboard, each time you switch to another application Switcher transfers the Clipboard contents from the current application to the next one; any old information in the destination application's Clipboard is lost.

It takes longer to switch between applications when you use this option.

You can override the current state of Always Convert Clipboard by holding down the Option key as you switch to the next application. If Always Convert Clipboard is not checked, then switching while holding down the Option key converts the Clipboard contents for that particular switch. If Always Convert Clipboard is checked, then switching while holding down the Option key will not convert the Clipboard contents.

Switching Animation

When you check this option, applications appear to roll by as you switch. When this option is not checked, the next application simply appears. This option is strictly a matter of aesthetic preference; it's preset to be checked.

Back After Launch

When this option is checked, you return to the Switcher display after you install a new application. You can continue installing applications, or go directly to the application you want to work with by double-clicking its slot. When Back After Launch is not checked, you remain in the application you just installed. Switcher ignores Back After Launch when you start or load a Switcher document. This option is preset to be checked.

Back After Launch might interfere with disk-insertion sequences when you're installing copy-protected software requiring a "key" or master disk. Here's what happens:

1. The application ejects the disk and asks for the master disk.
2. Before you can insert the master disk, Switcher takes control and returns you to the Switcher display.
3. Switcher asks for the ejected disk. (Push it in.)
4. When you switch back to the application, it's still waiting for the master disk. You'll need to eject the disk manually (with Command-Shift-1 or -2, depending on the drive the disk is in), and then insert the master disk.

To avoid all this, uncheck Back After Launch when you're using copy-protected software.

Same One Twice

This option lets you run the same copy of an application twice from the same disk (useful when you want to work on, say, two different MacProject plans at the same time). When it is not checked, Switcher lets you start the application only once from a particular disk.

Warning

Some applications (including MacWrite and MacPaint) create special temporary files and can get confused deciding which files go with which copy of the application. It's safe to start two copies of an application as long as each copy is on a *different* disk or (in computers using the hierarchical file system) in different folders—in which case, you won't need to check Same One Twice. It's *never* safe, however, to run two copies of the Finder.

Reverse Switch Direction

This is another aesthetic feature. It lets you decide the direction the Switcher wheel turns when you click the switching arrow. When this option is unchecked, clicking the left side of the switching arrow makes the display roll off the left side of the screen, bringing in the next application from the right. When this option is checked, clicking the left side of the switching arrow makes the display roll off the right side of the screen, bringing in the next application from the left. Try it for yourself and see what happens.

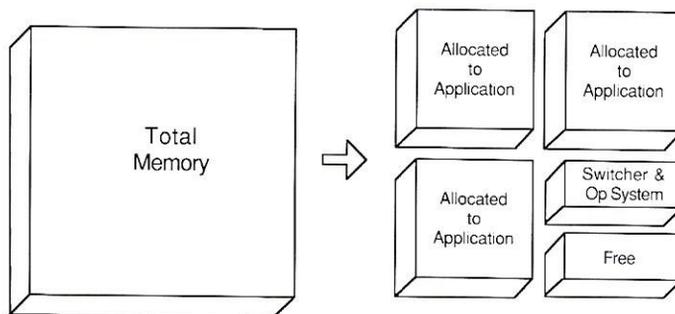
Disable Keyboard Switching

This option turns off the Switcher Command key equivalents: Command-[, Command-], Command-\ (back slash), and the emergency exit combination Command-Shift-Option-Period. (See "In Case of Disaster" in Chapter 2 for details about the emergency exit.) Some applications use the same keyboard equivalents to represent their own functions; unless you check this option, Switcher's meaning for the keyboard equivalents takes precedence.

When you click OK or Cancel, you end up back at the Switcher display.

Configure then Install: allocating memory to applications

Switcher divides up memory and allocates it to different applications. Each application works as if it were using a Macintosh with 128K; Switcher keeps track of the memory allocations, allowing you to switch between applications.

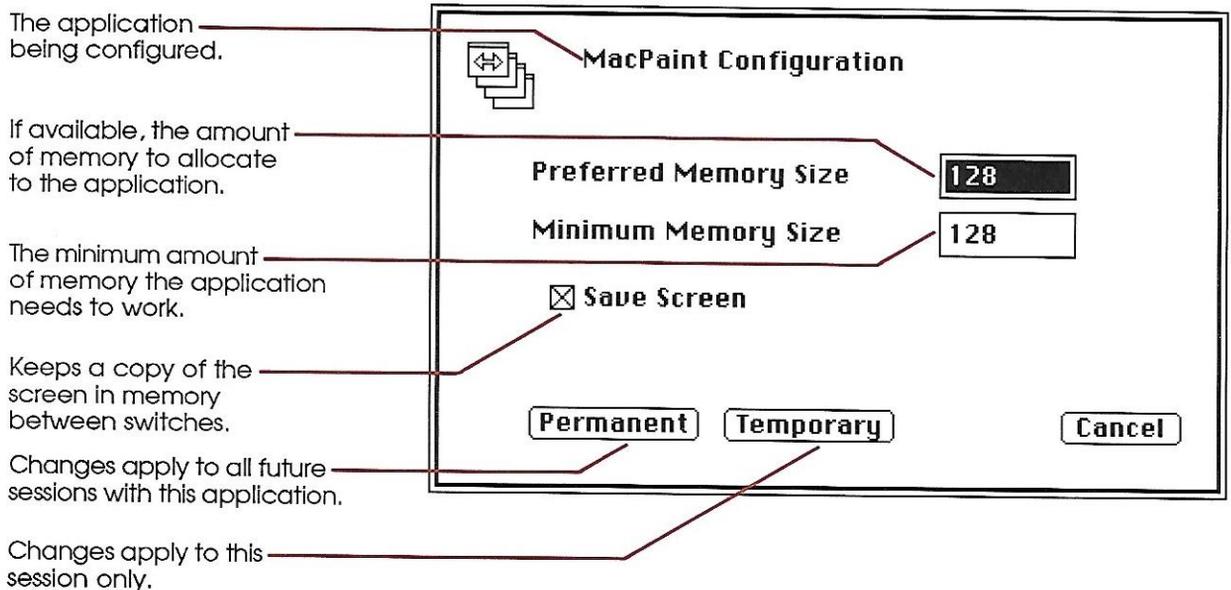


The Configure then Install command in the Switcher menu lets you specify the amount of memory to give to an application, changing the 128K that Switcher usually allocates. Some applications, designed to be used with Switcher, automatically request specific amounts of memory without your having to use this command. The Finder (version 5.0 and higher), for example, automatically gets 192K of memory.

You might be able to allocate more or less memory than an application usually requires. If you are working with a memory-based application such as MacDraw, you might want to allocate more memory to MacDraw so you can work with larger documents.

Here are the steps to take to change the preset memory allocations:

1. Click an empty application slot in the Switcher display.
2. Choose Configure then Install from the Switcher menu.
3. Select an application to install from the dialog box that appears.
4. When the configuration box appears, make the appropriate settings. (See the descriptions following the figure.)
5. Click Permanent to use these settings each time you use this application; click Temporary to use these settings for just this session. Click Cancel if you don't want to install this as a configured application.



Preferred Memory Size

This is the amount of memory Switcher allocates to the application if that much memory is available. The number you see is the amount an application requests, a previously configured amount, or 128K (Switcher's preset amount).

Minimum Memory Size

This is the smallest amount of memory Switcher tries to give an application. Minimum Memory Size is either a previously configured amount or 128K.

Switcher first tries to allocate the Preferred Memory Size. If there's not enough memory, Switcher tries to provide the Minimum Memory Size. The absolute minimum allocation in any case is 64K.

❖ *When Minimum Memory Is Too Much:* If there's not enough memory to use the minimum memory specified, you get an error message. You'll see the application in a slot with zero K allocated, and the word *configure*. You can remove the application by choosing Remove Application from the File menu; or try to free additional memory by turning Save Screen off or by quitting another application and restarting the one you want to use. You can restart the application by choosing Open from the Switcher menu and again choosing options from the configuration box. To see how much free memory is available, choose Show Info Window from the File menu.

Save Screen

When this option is checked, Save Screen is on when the application starts. When Switcher moves from application to application, the new application's screen appears instantly. The screen you see is actually a kind of snapshot that Switcher takes as you leave an application to switch to the next one. The cost of having this option on is 22K of an application's allotted memory.

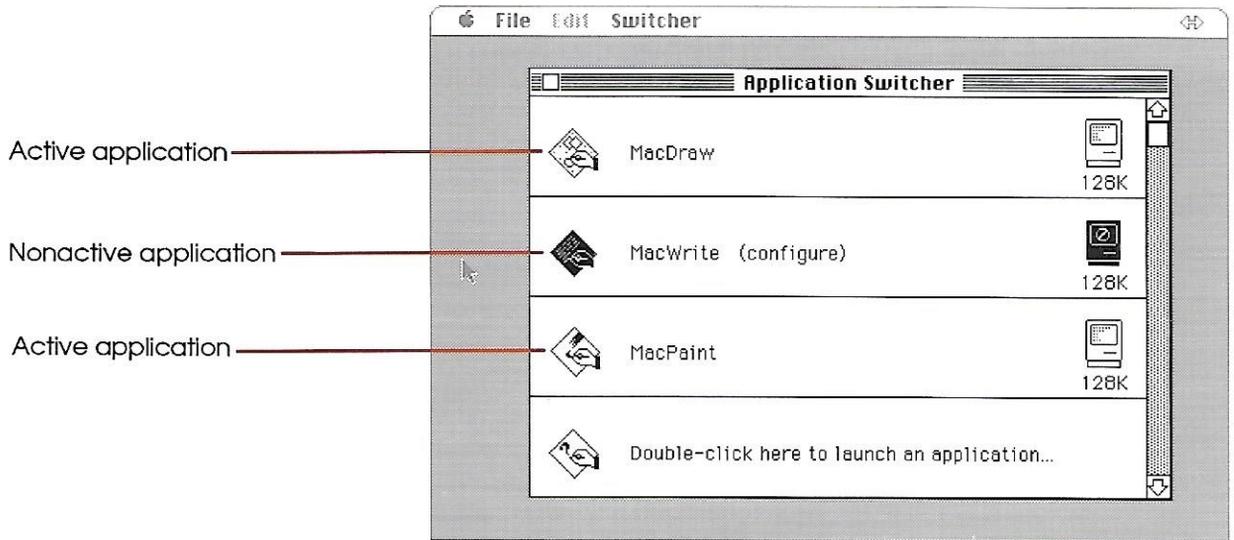
Permanent

Clicking the Permanent button installs the application and makes the settings in this dialog box apply to all future Switcher sessions for that particular application. (The information is attached directly to the copy of the application you're using.) The next time you want to install the application, you can simply double-click an empty application slot in the Switcher display and select the application from the directory window: The options you chose will be in effect every time you install that application. If you want to change the permanent configuration later (for example, if you get an updated version of the application and want to replace the old version), quit the application and again choose Configure then Install.

Temporary

Clicking the Temporary button installs the application and makes the settings in this dialog box apply to this session only. Pressing Return or Enter is the same as clicking Temporary.

After you've finished configuring an application by clicking the Permanent or Temporary button, you return to the Switcher display. The application appears in a slot with the word *configure* to show that the application is nonactive—memory has been allocated to the application, but the application has not yet been started. To start the application (and thus make it active), double-click its slot or choose Open from the Switcher menu. The application starts and you return to the Switcher display.



Configuration notes

You must change the memory allocation *before* you install an application; otherwise you must use the preset amount.

Many applications might not run correctly (if at all) if you change their memory allocations; the only way to tell is to experiment.

It's difficult to determine the smallest amount of memory on which an application can run on. Some applications will tell you right away that you've allocated too little memory (you'll get "out of memory" messages); memory-based applications such as MacDraw won't be able to open large documents; and some applications such as the Finder will work with less memory, but lose functionality (the Finder won't be able to remember as many disks on the desktop, for example).

The safest course is to use the preset value—usually 128K. If you want to assign a different amount, experiment with nonessential information first.

Some specific memory situations

This section talks about specific situations you might encounter after you've become familiar with Switcher.

Installing the maximum number of applications

To use the maximum number of applications (eight for the Macintosh Plus and four for the Macintosh 512K), check a couple of things:

1. Make sure that the Preferred Memory Size of each application is 128K. Use Configure then Install (described in detail earlier in this chapter) to make any necessary changes. (But realize that, if you change an application's preset Preferred Memory Size, it might not run optimally, or at all.)
2. Make sure that you've turned off the Save Screen option *before* you start any application; if the Save Screen option is on for any application, you won't have enough memory to install the final application.

Without changing Switcher's preset options, you can install seven applications in a Macintosh Plus or three applications in a 512K Macintosh.

If you've already installed all but one of the maximum allowable applications and want to install the last one, turn Save Screen off for all the existing applications. Then use the Configure then Install command in the Switcher menu to load the final application.

- ❖ *Macintosh XL Owners:* You can use these instructions to install three 128K applications on a 512K Macintosh XL or seven applications on a 1-megabyte Macintosh XL.

Using inconsistent amounts of memory

The document size of many applications is limited by the amount of memory available. If you create a document allocating one size of memory to its application, and later try to open that document under Switcher while allocating a lesser amount of memory, the document might not fit in memory or the application might crash altogether. If you have trouble, try allocating more memory to the application and opening the document again.

Using less than 128K of memory

Some applications can run with less than 128K of memory. Try different Preferred Memory Size amounts with the Configure then Install command. Most applications will tell you immediately if they won't work.

Using 512K applications in less than 512K of memory

Applications designed to work on a Macintosh with at least 512K may still be able to work in Switcher with less than 512K memory allocated to them. Try installing the application using Configure then Install with different Preferred Memory Size amounts. Some applications will not work, will give you a system error message (a box with a bomb icon in it), or will tell you that there's not enough memory and then stop the installation by returning you to the Switcher display. Many applications, however, will tell you the minimum amount of memory they need to work.

Switcher and disk cache software

Macintosh Plus, Macintosh 512 and other Macintosh computers using newer versions of the ROM come with disk cache software that you set in the Control Panel. This and similar software packages (like RAM disks) work by using the computer's memory to store information that the application would ordinarily get from the disk. RAM cache and RAM disk software let you work faster, but Switcher can't use the memory you've assigned to such programs.

- ❖ *Changing RAM Cache:* If, while you're running Switcher, you make changes to the amount of memory set aside for disk caches or RAM disks, the changes won't take effect until *after* you quit Switcher. These changes affect Switcher; the more memory you put into the RAM cache, the less you have available for applications running with Switcher.

Speed, memory, and safety

Most of Switcher's features require tradeoffs among speed, memory consumption, and safety. This section gives you ideas on how to optimize Switcher for your own needs. *Speed* refers to the amount of time it takes to switch between applications. *Memory consumption* refers to options that consume memory beyond what is allocated to applications. *Safety* refers to the configuration and options most applications can use without danger of crashing. Because Switcher cannot predict how a particular application is designed, some options may be more likely to cause problems.

Speedy options

For fastest switching between applications, uncheck Always Convert Clipboard and Switching Animation (described in “Switcher Options” earlier in this chapter), and turn Save Screen on for each application.

To start Switcher quickly, do any of the following:

- Save your favorite sets of applications as Switcher documents. From the Finder, simply open a Switcher document: Switcher installs and starts applications for you.
- Designate Switcher as the startup application—when you turn on your Macintosh and insert a startup disk and any application disks, Switcher starts automatically. To set Switcher as the startup application, follow these steps:
 1. Go to the Finder.
 2. Select the Switcher application icon.
 3. Choose Set Startup from the Special menu.
- Designate a startup Switcher document. Follow these steps:
 1. Go to the Finder.
 2. Select the Switcher application icon.
 3. Choose Set Startup from the Special menu.
 4. Rename the Switcher document “Switcher.startup”.

Switcher will start up automatically and load the set from the document. If you don't want Switcher.startup to load, hold down the Option key while your Macintosh is starting up.

Saving memory

To conserve memory,

- Allocate as little memory as possible to each application.
- Quit applications you are no longer using.
- Turn off the Save Screen option for each application.

Safety

Because Switcher can't predict how specific applications are designed, some settings are considered risky—they might cause the program to crash without warning. The following settings are the safest for most applications; Switcher originally starts with them. Settings that aren't listed here have no effect on safety.

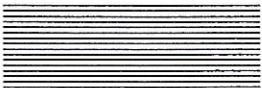
Configure Then Install

Preferred Memory Size	128
Minimum Memory Size	128
Save Screen	On

Options

Always Convert Clipboard	Off
Same One Twice	Off
Maximum Number of 128K Applications (Macintosh 512K)	3
Maximum Number of 128K Applications (Macintosh XL, 512K)	2
Maximum Number of 128K Applications (Macintosh XL, 1 megabyte)	6

❖ *The biggest safety tip of all:* Save your work early and often.



Chapter 5



Particular Software, Particular Hardware

This chapter gives specific recommendations for using Switcher with some of the most popular software from Apple Computer, Inc., and provides tips for installing Switcher on specific hardware.

Software

This section gives recommended memory sizes and notes about several Apple Macintosh applications running under Switcher.

The Finder

Preferred Memory Size: 128K (versions 4.0 and higher)
192K (versions 5.0 and higher)

Minimum Memory Size: 128K (versions 4.0 and higher)
192K (versions 5.0 and higher)

Having the Finder as one of your set of applications gives you the speed and flexibility of Switcher as well as most of the utility of the Finder, with no time lost returning to the Finder.

When you use the Finder with Switcher, the Finder should always be the first application you install, and it should be installed in the first slot.

To quit the Finder from within Switcher, use either of these methods:

- Switch to the Finder and double-click another application's icon. That application is started and installed in the slot previously occupied by the Finder.
- Switch to the Finder and choose Quit from the Special menu. (Quit appears where Shut Down usually does.)

To quit Switcher when the Finder is one of the applications, quit all other active applications, leave the Finder active, and then quit Switcher.

If you try to start a Switcher document from the Finder under Switcher, the set won't load. Switcher will quit the Finder and return you to the Switcher display.

When you switch to the Finder, you might see the temporary files that other applications are using. These files have a generic icon and names like Paint1 and Paint2 (MacPaint) and UndoFile and ScrapFile (MacWrite). *Do not* remove these files; if you do, you might lose information or cause the application to crash. The application removes these files when you quit.

Printing with the Finder in a Switcher application slot can be curious. When you install an application with its Same One Twice option turned off, you can't print a document of that application from the Finder. (Switcher tries to install the application a second time.) To print a document from the Finder, turn on the application's Same One Twice option.

- ❖ *Same One Twice:* Don't use the Finder with the Same One Twice option.

Font/DA Mover

Preferred Memory Size: 128K

Minimum Memory Size: 128K

Don't use Font/DA Mover while any other applications are active in Switcher. Font/DA Mover alters the System File, and this could cause problems with other active applications.

- ❖ *Same One Twice:* Don't use Font/DA Mover with the Same One Twice option.

MacDraw

Preferred Memory Size: 128K or more

Minimum Memory Size: 128K

When using MacDraw under Switcher, don't use more than approximately 80% of the application's memory. Don't copy or paste when copying or pasting would use more than 80% of memory. (Use the About MacDraw command in the Apple menu to check your memory usage.) MacDraw is likely to crash when memory used exceeds 80%.

MacPaint

Preferred Memory Size: 128K or 179K

Minimum Memory Size: 128K

Run MacPaint only at memory sizes of 128K or 179K.

❖ *Same One Twice*: Don't run MacPaint with the Same One Twice option.

MacProject

Preferred Memory Size: 128K

Minimum Memory Size: 128K

MacWrite

Preferred Memory Size: 128K (144K to use LaserWriter) or more

Minimum Memory Size: 128K (144K to use LaserWriter)

❖ *Same One Twice*: Don't run MacWrite with the Same One Twice option.

Installer

Never use Installer with Switcher. For technical reasons, these two applications cannot happily coexist.

Hardware

This section makes specific recommendations about using Switcher with hard disks, with the Apple LaserWriter printer, and with the Macintosh XL computer.

Hard disks

Copy Switcher to the hard disk. Always start from the hard disk. Be sure to keep all your system files in the same hard disk volume. If you're using the hierarchical file system, keep all your system files in the same folder.

LaserWriter

Follow the LaserWriter software installation procedures. In general, printing on the LaserWriter calls for more memory than printing on other types of printers. Most Macintosh software will print fine with the 128K minimum, but you might need to experiment with different memory amounts occasionally. (For example, you'll need to install MacWrite with a Minimum Memory Size of 144K.)

Macintosh XL

Switcher works well with a Macintosh XL with either 512K or 1 megabyte of memory, running MacWorks™ (software that allows a Macintosh XL to run Macintosh software). Here are a few things you should know about Switcher and the Macintosh XL:

- Copy Switcher to the XL's hard disk and always start Switcher from the hard disk.
- A 512K Macintosh XL does not equal a Macintosh 512K. MacWorks needs 128K of memory, so only 384K is available to Switcher. This means you can install two 128K applications while using Switcher's preset options, or three 128K applications with the Save Screen option turned off. (See "Installing the Maximum Number of Applications" in Chapter 4.)
- On a 1-megabyte Macintosh XL, you can install six 128K applications while using Switcher's preset options, or seven 128K applications with the Save Screen option turned off. (See "Installing the Maximum Number of Applications" in Chapter 4.)
- The Finder needs 128K Minimum Memory Size in order to work on a Macintosh XL.
- You can't install Macintosh Pascal in Switcher on a Macintosh XL.



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THE APPLE PUBLISHING SYSTEM

This Apple manual was written, edited, and composed on a desktop publishing system using the Apple Macintosh™ Plus and Microsoft® Word. Proof and final pages were created on the Apple LaserWriter™ Plus.

POSTSCRIPT™, the LaserWriter's page-description language, was developed by Adobe Systems Incorporated.

Text type is ITC Garamond® (a downloadable font distributed by Adobe Systems). Display type is ITC Avant Garde Gothic®. Bullets are ITC Zapf Dingbats®. Program listings are set in Apple Courier, a monospaced font.





The Switcher™ program for the Macintosh™ personal computer allows you to work with more than one application in memory at the same time. With the Switcher, you can move back and forth between Macintosh programs—and exchange information between them—as quickly and easily as you move back and forth between papers on your desk. By enabling you to create your own “integrated applications,” the Switcher can help you work faster and more productively.

Software Compatibility

The Switcher works with most Macintosh applications. The best way to use it is with pretested Switcher configurations included on program disks from Macintosh software developers. If you have any questions about software compatibility, ask your authorized Apple dealer or contact the software developer.

The Switcher Construction Kit

This manual and the accompanying disk contain all the information you need to construct, test, and create your own configurations for the Switcher.

We cannot guarantee the reliability of any particular application or combination of applications used with the Switcher. This manual, however, provides information to help you to maximize the reliability of applications. It also identifies potential problem areas and contains recommended configurations.

Hardware Requirements

The Switcher requires a Macintosh with at least 512K of memory. In addition, we strongly recommend an external disk drive or hard-disk drive to hold additional applications and documents.

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TLX 171-576

M0540
030-1250-C
Printed in U.S.A.



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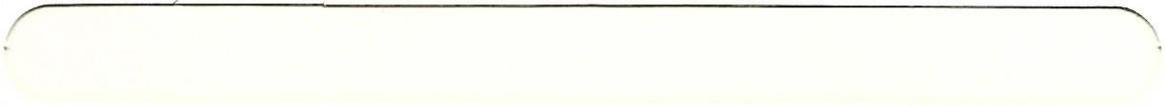
Switcher 5.0

The enclosed Switcher™ disk includes new system software from Apple (System 3.2 and Finder 5.3). This improved system software increases the performance and reliability of your Macintosh™ computer. You should use this system software or later versions as they become available at your authorized Apple dealer.

Because this new system software requires more memory to run than previous versions, you may have less room to work with applications in Switcher. Specifically:

- If you're using a Macintosh with only 512K of memory, you won't have enough memory to install all three of the applications as shown in the "Learning Switcher" example. Choose two of the three shown.
- Many applications that once worked in a 128K slot in Switcher may now require more memory to work dependably. This is especially true if you are using a LaserWriter or LaserWriter Plus printer.
- Most applications will require more memory if you're working with large documents or if you're using the Attach Document command to load large documents.
- If you experience problems with applications installed in a 128K slot in Switcher, try using the Configure then Install command to assign more memory to the application. The Switcher manual explains how to do this.

In general, if you have problems with an application working dependably in Switcher, experiment with giving the application more memory.



914-0435-A



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