

Macintosh™

BASIC

OPERATIONS



AGAINST THE CLOCK®
PERFORMANCE SUPPORT & TRAINING SYSTEMS



MACINTOSH™: BASIC OPERATIONS

AGAINST THE CLOCK
PERFORMANCE SUPPORT & TRAINING SYSTEMS



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GLOSSARY

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PURPOSE

The Against The Clock series has been developed for those involved in the field of graphic arts.

Welcome to the world of electronic design and prepress. Many of our readers are already involved in the industry — in advertising and design companies, in prepress and imaging firms, and in the world of commercial printing and reproduction. Others are just now preparing themselves for a career somewhere in the profession.

This series of courses will provide you with the skills necessary to work in this fast-paced, exciting, and rapidly expanding business. Many people feel that they can simply purchase a computer, the appropriate software, a laser printer, and a ream of paper, and begin designing and producing high-quality printed materials. While this might suffice for a barbecue announcement or a flyer advertising a local hair salon, the real world of four-color printing and professional communications requires a far more serious commitment.

THE SERIES

The applications presented in the Against The Clock series stand out as the programs of choice in professional graphic arts environments.

We've used a modular design for the Against The Clock series, allowing you to mix and match the drawing, imaging, and page layout applications that exactly suit your specific needs.

Titles available in the Against The Clock series include:

Macintosh: Basic Operations
Windows: Basic Operations
Adobe Illustrator: An Introduction to Digital Illustration
Adobe Illustrator: Advanced Digital Illustration
Freehand: An Introduction to Digital Illustration
Freehand: Advanced Digital Illustration
Adobe PageMaker: An Introduction to Electronic Mechanicals
Adobe PageMaker: Advanced Electronic Mechanicals
QuarkXPress: An Introduction to Electronic Mechanicals
QuarkXPress: Advanced Electronic Mechanicals
Adobe Photoshop: An Introduction to Digital Images
Adobe Photoshop: Advanced Digital Images
File Preparation: The Responsible Electronic Page
Preflight: An Introduction to File Analysis and Repair
TrapWise: Trapping
PressWise: Imposition

HOW TO USE THIS WORKBOOK

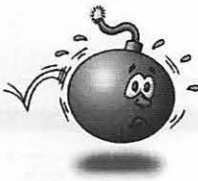
We've designed our courses to be "cross-platform." While many sites use Macintosh computers, there is an increasing number of graphic arts service providers using Intel-based systems running Windows (or Windows NT). The books in this series are applicable to either of these systems. This course applies only to the Macintosh. For a similiar course on Windows, see *Windows: Basic Operations*, from this same series.

All of the applications that we cover in the Against The Clock series are similar in operation and appearance whether you're working on a Macintosh or a Windows system.

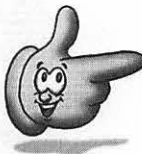
ICONS AND VISUALS



Pencil icon indicates a comment from an experienced operator. Whenever you see the pencil icon, you'll find corresponding sidebar text that augments or builds upon the subject being discussed at the time.



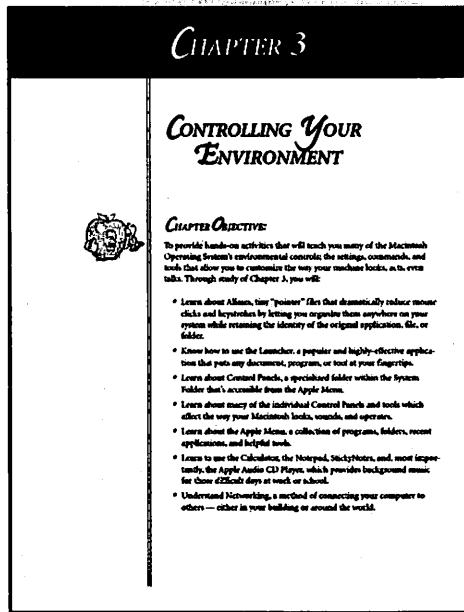
Bomb icon indicates a potential problem or difficulty. For instance, a certain technique might lead to pages that prove difficult to output. In other cases, there might be something that a program cannot easily accomplish, so we might present a workaround.



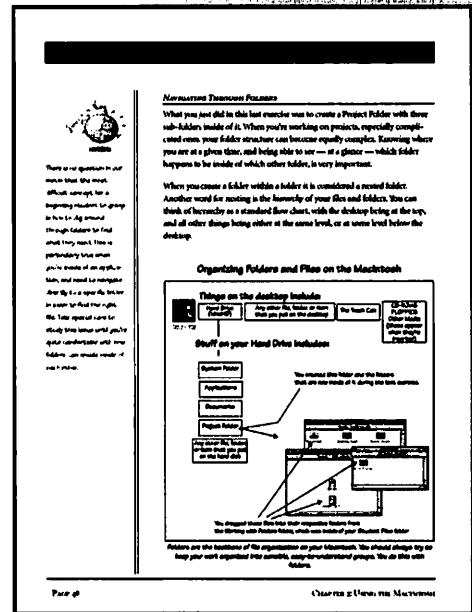
Pointing Finger indicates a hands-on activity — whether a short exercise or a complete project. This will be the icon you'll see the most throughout the course.



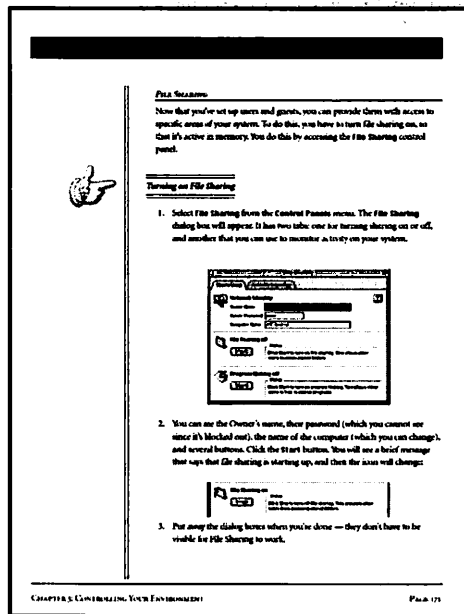
Key icon is used to point out that there is a keyboard equivalent to a menu or dialog-box option. Key commands are often faster than using the mouse to select a menu option. Experienced operators often mix the use of keyboard equivalents and menu/dialog box selections to arrive at their optimum speed.



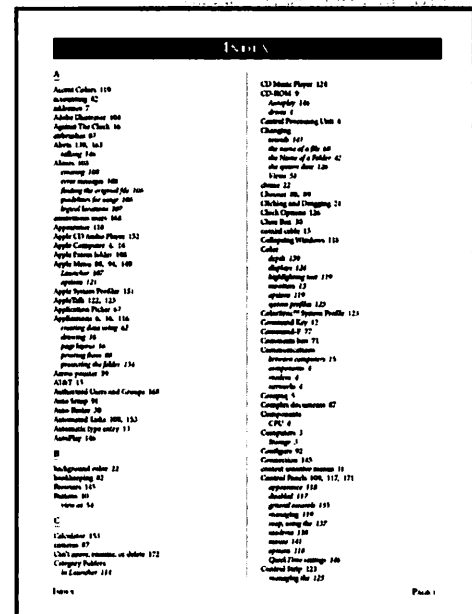
CHAPTER OPENINGS provide the reader with specific objectives.



Extensive and meaningful SIDEBARS provide additional insight into the content.



Each section of the course provides the student with extensive **HANDS-ON ACTIVITIES** that let the student practice what they're learning.



A comprehensive **INDEX** lets the student find and reference any term or feature discussed in the course.

FOR THE STUDENT

On the CD-ROM, you will find a complete set of Against The Clock (ATC) fonts, as well as a collection of data files used to construct the various exercises.

The ATC fonts are solely for use while you are working with the Against The Clock materials. These fonts will be used throughout both the exercises and projects and are provided in both Macintosh and Windows format. For the purposes of this course, *Macintosh: Basic Operations*, there are *no* fonts *necessary* to complete the exercises.

FOR THE INSTRUCTOR

The Instructor Kit consists of an Instructor's manual and an Instructor's CD-ROM. It includes various testing and presentation materials in addition to the files that come standard with the student books.

- **Overhead Presentation Materials** are provided and follow along with the course. These presentations are prepared using Microsoft PowerPoint and are provided in both "native" PowerPoint format as well as Acrobat Portable Document Format (PDF).
- **A Test Bank of Questions** is included within the instructor kit. These questions may be modified, reorganized, and administered throughout the delivery of the course.
- **A Final Review** at the end.

ACKNOWLEDGMENTS

I would like to thank all of the writers, illustrators, editors, and others who have worked long and hard to complete the Against The Clock series. Foremost among them are Gary Poysick, Dean Bagley, Jarrid Roulet, Michael Barnett, Gavin Nagatomo, and Jim Wheaton, whom I thank for their long nights, early mornings, and their seemingly endless patience.

Thanks to the dedicated teaching professionals whose comments and expertise contributed to the success of these products, including Jill Singewald of The Tripp Company and Ron Bertolina of The Graphic Arts Technical Foundation, and Dr. Mitchell Henke of Bemidji State University.

A big thanks to Judy Casillo, Developmental Editor, for her guidance, patience, and attention to detail.

A special thanks to my husband for his unwavering support and for living in a publishing studio and warehouse during the three years it took to develop the ATC series of courses.

Thanks to my original partner and friend Steve Tripp, for his faith and patience in the early days. Thanks, too, to Jung Mills, who was with me each and every day — making Against The Clock a household name.

Thanks to my “Fishin’ Buddies” EW Spencer and Jeannie Pugh. And special thanks to my dogs, Spike (who left for the big rawhide factory in the sky before the project was completed), Boda, and Chase.

Ellenn Behoriam, January 1998

AGAINST THE CLOCK

Against The Clock (ATC) was founded in 1990 as a part of Lanman Systems Group, one of the nation's leading systems integration and training firms. The company specialized in developing custom training materials for such clients as *L.L. Bean*, *The New England Journal of Medicine*, *Smithsonian*, the *National Education Association*, *Air & Space Magazine*, *Publishers Clearing House*, *The National Wildlife Society*, *Home Shopping Network*, and many others. The integration firm was among the most highly respected in the graphic arts industry.

To a great degree, the success of Systems Group can be attributed to the thousands of pages of course materials developed at the company's demanding client sites. Throughout the rapid growth of Systems Group, founder and General Manager Ellenn Behoriam developed the expertise necessary to manage technical experts, content providers, writers, editors, illustrators, designers, layout artists, proofreaders, and the rest of the chain of professionals required to develop structured and highly effective training materials.

Following the sale of the Lanman Companies to World Color, one of the nation's largest commercial printers, Ellenn embarked on a three-year project to fully redevelop a library of training materials engineered specifically for the professional graphic artist. The result of this effort is the ATC training library.

Ellenn lives in Tampa, Florida with her husband and her dogs, Boda and Chase.

ABOUT THE AUTHORS

Every one of the Against The Clock course books was developed by a group of people working as part of a design and production team. In all cases, however, there was a primary author who assumed the bulk of the responsibility for developing the exercises, writing the copy, and organizing the illustrations and other visuals.

In the case of *Macintosh: Basic Operations*, that author was **Gary Poysick**. Gary works on many of the ATC projects in a wide range of roles.

Gary is the President of GASP Engineering, Inc. GASP, which stands for Graphic Arts Service Provider, is a consulting firm that specializes in workflow reengineering, the development of customer focused teams, and business acquisition for printing and prepress concerns. In addition to the consulting services that the company provides, GASP Engineering authors the popular monthly newsletter *The GASP Report*. Gary is the author of *Workflow Reengineering*, Adobe Press, and co-author of *Creative Techniques: Adobe Illustrator*, and *Creative Techniques: Adobe Photoshop*, both available from Hayden Books.

KEY COMMANDS

The Macintosh has a key marked with an Apple and an icon that looks like a clover leaf. This is called the Command key. Whenever you see this icon, you will need to hold this key down. The Command key is a *modifier* key; that is, it doesn't do anything by itself, but changes the function of a key pressed while it's being held down. A good example is holding Command while pressing the "S" key: this Saves your work. The same thing applies to the "P" key; hold down Command and press it to Print your work.

Another special function key on the Macintosh is the Option key. It's also a modifier key, and you'll need to hold it down along with whatever other key is required for a specific function.

THE CD-ROM AND INITIAL SETUP CONSIDERATIONS

Before you begin using your Against The Clock course book, you will have to set up your system so that you have access to the various files and tools you'll need to complete your lessons.

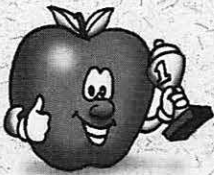
STUDENT FILES

This course comes complete with a collection of student files. These files are an integral part of the learning experience, as they're used throughout the course to help you work through the various exercises. Having these building blocks available to you throughout your practice and study sessions will ensure that you will be able to experience the exercises with a minimum of time spent looking for the various components required.

Navigate through the CD-ROM to locate the folder called "SF-Basic Mac Operations" and simply drag the icon onto your hard disk drive.

CHAPTER 1

WHAT IS A MACINTOSH?



CHAPTER OBJECTIVE:

To introduce you to the concept of hardware and software, and to discuss the various components that make up your Macintosh; to introduce you to programs and operating systems. In this first section of the course, you will:

- Learn about the computer itself and how the CPU controls the Macintosh system and provides important computing resources.
- Learn about memory and storage, how they differ, and how they work together to allow programs to function.
- Learn about storage: internal storage, external storage, and so-called removable media.
- Learn about CD-ROMs and how they are used to store data.
- Understand the difference between applications, the Macintosh operating system, and data files.
- Learn about popular graphics applications and what they're used for.

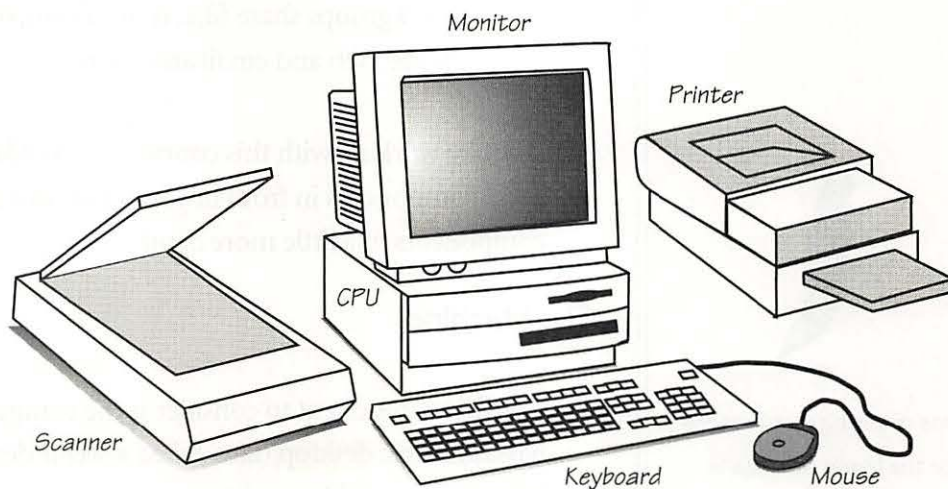


There are many people for whom the Macintosh is their first computer; for others, they're already familiar with another system — perhaps Windows.

Once upon a time, there was a major difference between the Mac and other systems — especially relative to how easy it was to use. Today, most computers have emulated the Macintosh user interface and ease-of-use. Still, the Mac is many people's favorite computer. In particular, its popularity in the graphics industry remains unchallenged.

What is a Macintosh?

So what exactly is a Macintosh computer? In the most fundamental ways, it's almost exactly like any other computer in that it boasts several components that are common to all *platforms*, or machine types.



The components are:

- **The Machine:** the actual computer itself, which consists of boards, chips, memory, circuits, and other electronic components.
- **Storage:** hard drives, diskettes, removable platters, optical disks, and other places where your data is stored, and where it remains when your computer is turned off.
- **Input devices:** items used to get information into the computer. These can include such basic items as the keyboard and mouse, and range all the way to complicated hardware such as expensive, high-end scanners and digital cameras.



One of the biggest reasons for the Mac's success is the fact that it's a "plug-and-play" machine. If you want to add a printer, or a monitor, or a keyboard, or any device to the system, you simply match up the small pictures on the cables, plug them in, and away you go.

- **Output devices:** components used to "show you the data." This can range from a monitor (capable of displaying the contents of files, folders, and the desktop environment where you actually work) all the way to extremely high-resolution devices that can actually print image plates for high-speed commercial printing.
- **Communication components:** things that allow one computer to talk to or communicate with another computer. Networks, where people in workgroups share files, is one example of communications; the World Wide Web and email are others.

If you're working with this course, it's very likely that you have at least some of these components in front of you (or at least accessible). Let's look at these components in a little more depth.

The Machine

The first component to consider is the computer itself. There are two types of basic systems: **desktop** (also called *tower* if designed to stand on end) and **laptops**, or portable machines. Laptops normally are small enough to fit in a decent-sized briefcase, and offer a self-contained keyboard, pointing device, and monitor. A well-configured laptop might even have a CD-ROM drive (more on those a little later), a floppy disk (ditto), and a modem for communicating with remote computers or networks.

THE CPU

If you opened up your computer, you would find a great deal of complex electronics stored inside. Among the many chips and circuit boards you might see is one large chip – essentially the "brains" of the entire thing. It's called the **CPU**, which is short for **Central Processing Unit**. This CPU contains the basic instructions that the system needs to perform tasks like using software tools, storing data, and communicating with devices like monitors, printers, and other system components.

Increasingly, manufacturers like Apple Computer are building computers that have more than one processor. Rather than attempting to build bigger and bigger devices (to meet increasing demands from more-and-more complicated programs), they have decided that it's easier to use multiple processors. That

way, the demands on the CPU can be divided up (by specialized operating system software) and shared among the processors.

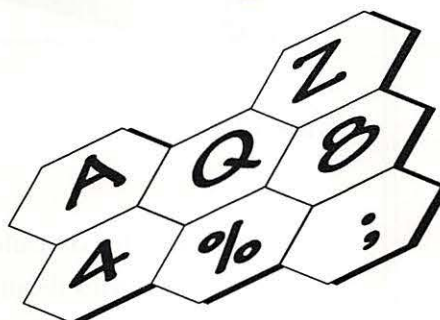
This doesn't mean that companies like Apple, IBM, Compaq, Intel, AMD, and many others aren't working to make the basic processors themselves more powerful – it's more a strategy that lets users like you select a system that's just right for their unique needs. If you work on digital images, for example, which are very computer-intensive, you might choose to buy a computer with two or more processors. If you're going to be a copywriter, primarily utilizing word processing programs (which inherently place less of a demand on the computer), a single-processor system might suffice quite well.

MEMORY

The amount of memory that's built into a given computer determines two things:

- How many things the computer can do at once (how many programs can be loaded and ready-to-go when you need them), and
- How fast certain functions execute.

Memory can be thought of as a honeycomb. Each cell on the grid represents one byte. A byte is enough to store one character.

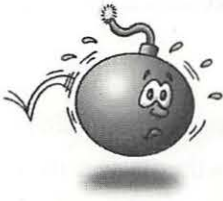


If you put together about 1,000 of these cells (actually 1024, but let's not get too crazy here), it's called a kilobyte. A million of them is called a megabyte, and a billion are referred to as a gigabyte.

You may have heard these terms before, especially when looking at promotional material for computers or hard drives. Memory contained in the computer is called RAM, or Random Access Memory.





Most computers today are equipped with at least 8 megabytes of RAM, and often contain much more. In fact, you can't buy a new computer with only 8 megabytes of RAM these days. The general rule of thumb is to buy as much memory as you can afford in your budget. The more RAM memory your computer has, the better it will perform.



Many people remain confused about the difference between RAM and hard disk space. In one way, they're very similar — and that's that you should budget for the biggest hard drive you can afford. The price per megabyte is pretty low these days, and you can purchase gigabyte (and greater) drives for a few hundred dollars. No matter how much drive space you have, you'll always need more. That's why proper drive organization is important.

RAM memory is only active and available when the computer is actually turned on and operating. Things that were stored only in RAM (which is the case while you're working on a new document, not yet saved) are lost when the system is powered down. When you want to store something permanently, you save the contents of RAM to the system's hard drive (or some other storage media). This transfer takes place whenever you issue a save command from within an application, or software tool. We'll be working with these concepts in depth a little later on in the course. Here's a graphic that shows the difference:

RAM vs. Hard Disks	
R A M 	Random Access Memory — the computer's internal memory available for files and application programs in current use. Contents of RAM are volatile and are erased when the power is turned off. The amount of RAM determines, in part, how fast and how many applications you can run at the same time. RAM capacity is rated in megabytes (MB). A megabyte is one million characters such as letters or numbers.
H A R D D I S K 	Most computers include at least one Hard Disk mechanical storage device. Files are "written" to these devices to store them for future use. Capacities, also rated in megabytes, range from 10 to thousands. The larger the capacity, the more applications and data files can be stored for easy retrieval. There are many types of drives; some are "fixed" inside the system, some are connected with cable. Others are in the form of removable devices: platters, opticals, and even CDs. CDs are usually created by a special device and can never be changed.

Storage

If you're new to computers, you have probably encountered someone who told you horror stories about losing your data to a "crash." This usually happens, it is said, whenever you're working on the most critical project of your life, it's due in the morning, and you have to work all night long. Fret not.

Today's computers are quite able to keep your important (and not-so-important) information safe and secure through all but the most traumatic events. Computers offer several different types of storage systems where you can save your information quickly and easily. Later in this chapter we'll discuss backup and archiving methods, which ensure that even if you do experience a system



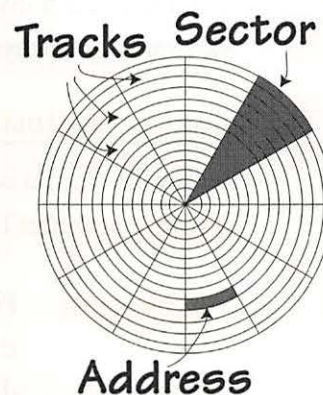
You probably have several different types of storage on your computer. At a minimum, you have a hard drive and a floppy disk. Perhaps you also have a CD-ROM built into your system, and you might even have other media, like the popular Zip or Jaz drives from the Iomega Corporation. These removable disks are increasingly popular in the graphic arts industry, where moving large image and page layout files is a common procedure.

failure, you will be able to restore your system to the way it was the last time you created a backup.

THE HARD DRIVE

The most fundamental type of storage you'll encounter as a Macintosh operator is the *internal hard disk*. These mechanical devices (pictured below) provide the basic storage space available to you.

Most computers today are configured with an internal hard disk — built into the actual system or portable unit. The way they work is quite simple. A read-write head modifies a magnetic field that's stored on the surface of the media itself (sometimes called the *platter*). The platter is formatted with concentric rings, called *tracks*, and pie-like slices called *sectors*. This segmenting strategy allows the entire surface of the device to contain unique *addresses*, which programs and the *Macintosh Operating System* (we'll explain these terms later) use when they store and retrieve your data, or when they launch (another word for start up) a program.



Hard disks do occasionally require maintenance, and have even been known to fail now and then — even with today's very secure and stable systems. Another disk-related problem that you might see happen from time to time is when a file becomes *corrupted*, or impossible to read. There are specialized programs that can be used to fix certain categories of problems. These applications are called *utility programs*.



These are high-capacity disks used to copy large files for transfer to a service provider for output, or to archive them for future reference. The standard in the industry has been the series manufactured by Syquest, but recently the Zip and Jaz drives have become very popular. The basic Zip holds 100 MB, and the Jaz holds 1 or 2 GB, but there are continuous improvements and upgrades in these products.

External Storage

Certain computers not only have internal hard disks, but are also equipped with external storage devices. These can take several forms:

FIXED

A fixed external hard drive is one that's contained in its own case, and usually has its own power supply. When you're considering the expansion of your system, you can choose to put another hard drive inside your computer (**internal**), or choose to put the device outside your system (**external**). Depending on the configuration, some computers either don't have the space inside within which to mount an additional drive, or aren't able to supply sufficient power to the device.

Sometimes, adding an external fixed drive is just easier to do, since the operator only needs to plug in the cables, supply power, and run a program that comes with the external hard drive in order to use it immediately. Installing an internal hard drive normally requires you to take your computer into a service center where a trained technician will do the installation without voiding your warranty or destroying some vital component.

REMOVABLE MEDIA

Removable media is just that: disks and storage systems that can be taken out of your computer. There are many types of such media, including:

Floppy Disks Floppies are normally 3.5 inches square, and fit into a slot either within your computer or in an externally-connected drive. They only offer about 1.5 megabytes of storage space, and are often reserved for making copies of small files to move to another machine, or as a limited backup media.

Removables Removable platters were quite popular for a while as a manner of both extending the amount of space available to the user, as well as moving larger graphic files from one system to another. An example is the designer or advertising agency who sends their files for output at a service bureau. While they're still in use at many sites, larger, faster, and more reliable methods are beginning to reduce their importance as removable media.



Most CD-ROMs are meant to be “read-only,” which means that your computer can read data from the drive, but cannot put data onto the disk (write). Some special CD-ROM drives are also able to write to a blank CD, though. The thing to remember about writing to CDs is that once they’re written to, the information is permanent, and they become read-only.

CD storage is gaining in popularity at an amazing pace, due to their stability, the low price of a disk (about \$10), and the relatively low cost of a CD-Writer device.

Optical Disks

Optical disks are larger (usually 5.25 inches) media that are mounted in a specialized read/write drive mechanism. Optical disks normally hold between 600 megabytes and 1.2 gigabytes of data — enough for most large projects and very reliable as a backup media. The disks are relatively expensive though, and they’re normally used for projects, not daily backups.

CD-ROMs

When most people think of CDs they either think of music CDs or the kind that you get when you purchase new software or interactive titles. CD-ROMs can also be written to (usually only once, though), and are increasingly being used to store important data. They can hold a lot of information (around 600 megabytes or so) and are very reliable.

Getting Stuff In

“Input” is one of those computer buzzwords so popular at Star Trek conventions, on internet chat lines, and among the “geek elite.” It’s just a term that refers to methods of getting information into your computer.

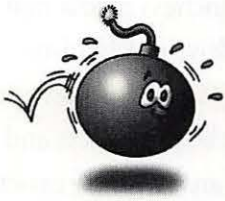
There are three primary methods of getting data or commands into your computer:

- A Mouse
- A Keyboard
- Scanners

The Mouse

In the old days, before there were mice (the mechanical, computer kind of mice, not the squeaky, pointy-eared species), using computers was quite a bit harder. To get the computer to do anything, you had to enter confusing strings of (otherwise) meaningless code.

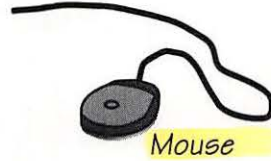
The mouse was invented in the late seventies, but didn’t make its public debut on a computer until Apple put one on an early model called the Lisa. This



Don't run your mouse on anything but a mousepad or a very clean surface. Even then, they'll occasionally become gunked up and won't work properly. This is because the roller ball and the tracking mechanism become clogged with this really weird, greasy stuff that is very hard to get off. You should remove the ball on a regular basis, and clean it really well with alcohol or soapy water. Same thing with the small rollers inside; examine them and make sure they're clean. If they have accumulated lint, remove it gently with a wooden toothpick.

Despite your best precautions and rodent hygiene, you can expect to replace your mouse about once a year — or less, if you're really a heavy-handed roller.

computer was never really popular, and it wasn't until the introduction of the Macintosh computer that mice began to make their impact on computers everywhere.



The way a mouse works is quite simple. Moving the mouse around on a flat surface (many people use a special piece of plastic called a *mouse pad*) controls an arrow that you can see on the monitor.

On the top of the mouse is a button. By using the mouse to move the arrow around the screen, and the button to click on the items on the screen, you can make things happen. This is (trust us) a much easier and more natural way to get computers to do things for you.

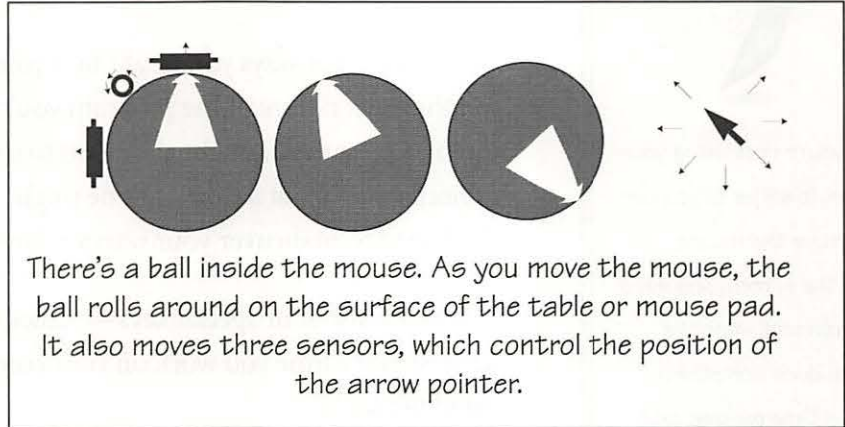
If using the mouse to point at different regions of the screen seems a little clumsy, just give it time. Before you know it you'll be speeding around like a regular expert. You'll learn how to adjust mouse operation later in the section about Control Panels.



This illustration should help you see how to clean your mouse. Before you do, though, be sure to check the instructions that came with your system.

There are kits available that have special balls that you put into your mouse, moisten with fluid, and roll around for a while. These devices help keep the rollers clean.

Here's how the mouse works:



THE KEYBOARD

The next way to get things into the computer is through the keyboard. The keyboard is used for several different types of input:

Typing information directly into various programs. You might find yourself entering copy into a word processor or into a design. If you do have to enter lots of copy, then learning how to type is clearly important. Other types of information you might find yourself inputting into the system are numbers. If you're working on financial documents a lot, then you will become familiar with the *numeric keypad*, which is usually found on the right side of the keyboard.

Using the keyboard to control programs. Almost all programs offer what are called *keyboard commands* or *keyboard equivalents*. All programs on the Macintosh offer several ways to accomplish certain tasks. Saving a file, for example, can be done using the mouse (which you'll learn later on in the course), or by pressing a combination of keys from the keyboard.







When you're first using your system, it will be all you can do to move the mouse, watch the screen, and gasp in amazement when the system does something cool. As time passes, and you become more comfortable with how the system works, you should make a concerted effort to begin using command-key equivalents, such as **Command-S** to Save, **Command-P** to Print, or **Command-Q** to quit. As great as the mouse is, it's not nearly as fast as using the keyboard when there's a choice between pressing a key or two and rolling the mouse from one side of your monitor to the other.

Using function keys. Function keys are positioned across the top of the keyboard, and are named **F1**, **F2**, and so on, usually through **F12**. These keys often consolidate common keyboard combinations into one keystroke.

There are other ways you might find yourself using the keyboard, depending on the exact nature of the program you're using at the time. A drawing program, for example, might allow you to use the keyboard to "nudge" or move an object a little bit at a time; a game might let you use the Arrow keys on the keyboard to maneuver your warrior through the bowels of Hell.

There are also four special keys — called *modifier keys* — that you will use almost every time you work on your computer. Here is a list of these special modifier keys:

	The Command Key is the most important special function key on the Macintosh; in most programs it's used to save, print, and open files.
	The Option Key is the second of the special function keys on the Mac. If you see this symbol anywhere, it means to hold this key down.
	If you've ever used a PC, you know about the Control Key . It's not used as much on the Mac, but newer programs are starting to use it more.
	The Shift Key works just like it does on a typewriter, capitalizing the letter it's used with; it's also used with the Command or Option keys.

There are four special function keys used by Macintosh programs.

If, for example, you wanted to open a file, you might have to hold down the "O" key while pressing the Command key. Pressing "O" by itself might not do anything at all — or at the most put an errant "O" somewhere in your important report. Pressing "O" while holding down the Command key, however, modifies the key, and makes it do something it wasn't originally designed to do.



Scanners are very popular in the graphic arts. There are two basic kinds:

Flatbeds (which have a glass, sort of like a copy machine, on which you put the thing you want to scan), and **Drum Scanners**. Almost all high-quality color scans that you see in books and magazines are done on drum scanners. They're usually much more accurate and capture more of the available color when scanning a slide or print.

SCANNERS

Depending on the nature of the system you're working on, and the environment in which you're operating, you may or may not have a scanner connected to your system. There are several different types of scanners, but they're all used to get information into your system. There are two ways a scanner might do that:

The first is to scan images. Images might be pictures, drawings, maps, or anything else you might want to have in your computer.

The second method is when a scanner is used for something called **optical character recognition (OCR)**. OCR is used to capture documents that have already been typed or printed. In this case, specialized software reads the words on the page being scanned and converts them into word processing documents.

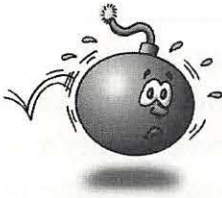
Getting Stuff Out

The next geeky computer term you should know is **output**. In English, this means how the information stored in your computer is presented to you or an audience. There are basically two ways that you can look at what's on your system. The first is to look at it on your **monitor**, and the second is to **print it** so you can look at it in a physical form – something that's often referred to as **hard copy output**.

THE MONITOR

Your monitor is the window into what's going on inside your Macintosh. Almost all computers are equipped with color monitors these days, and if you're going to be using your Macintosh to create graphics and other visual items, then it is critical to have a color monitor.

The next issue to consider when thinking about your monitor is how big it is. Since many Macintosh programs use a varied collection of tools that sort of



No matter what you might hear about how accurate today's monitors are at displaying color, remember that when you print a project on a color printer, or send your files away to a printer or service provider for high-resolution output (such as film for printing presses), you cannot trust that your monitor will be accurate. If you are working on projects that ultimately will be used in the commercial printing process, be sure to consult with your printer for specific instructions.

“float” around the screen in their own little palettes (you’ll learn a lot more about this later), the amount of space you have to arrange your work, the tools you have available, and other things you might want (or need) to have available to you at the time, becomes very important. The general rule of thumb is to buy as good (and big) a monitor as you can possibly afford. If you’re working on your system all day — as many of us are — it’s much easier to sit there if you’re not looking at a tiny screen and spending a lot of time arranging things on the monitor.

THE PRINTER

The printer your computer is connected to is a critical component in your system. Without the ability to create hard-copy output, all the work that you do on your system would be “stuck” on your hard drive — and you wouldn’t be able to show it to anyone, use it for communicating with the outside world, or making cool pizza flyers, worldwide best selling novels, or the latest recipe from your social group.

There are several different types of printers:

- Laser Printers** Laser printers are probably the most popular type of printers in use today — especially in the graphic arts. A laser printer works much like a photocopier, using toner to image the page.
- Dot Matrix** Dot matrix printers use a print head comprised of some number of small pins that drive ink from a ribbon onto the surface of the paper.
- Ink Jet** An ink jet printer sprays ink onto the paper from small nozzles in the print head.
- Dye Sub** Dye sublimation printers spray a special heat-sensitive colorant onto the page and heat it, bonding it to the surface of the paper.



The price of laser printers has fallen from almost \$5,000 ten years ago to a few hundred dollars today. There are two primary types of laser printers that you should think about: printers equipped with PostScript, which is a specialized language that is widely used in the graphic arts, or printers without PostScript, which will not always be able to reproduce your work if you're involved in commercial art.

Talking to Other Computers

The Macintosh has the ability to talk to other computers. These systems can be in your office or workplace, or in another physical location. There are two ways that your computer can share information with, or gather data from, other computers: *networking*, or through the use of *telecommunication devices*.

NETWORKING

Networking refers to a physical connection between two or more computers. This is usually done by means of an actual wire or cable that's hidden in the wall. There are several different types of connections, including regular telephone wire, special shielded wire called *coaxial cable*, fibre-optic cable, and even infrared signals that require no wires at all.

TELECOMMUNICATIONS

Telecommunications refers to a wide variety of methods that take the data from your computer and sends it — either over regular telephone lines or through special digital networks — to computers in remote locations.

Telecommunicating with another computer requires the use of special hardware, referred to as a *modem*. A modem translates what's on your computer into an analog signal capable of being sent across telephone lines to the huge networks maintained by companies like MCI, AT&T, Sprint, GTE, and others.

Software

THE OPERATING SYSTEM

There are several different types of computers in the marketplace today, the two most prominent being Windows-based machines and the Macintosh, which you're using if you purchased this book.



The Macintosh comes equipped with the ability to communicate with other computers via a network (which we describe in some detail later in the book). If you want to connect to networks outside your building or in other parts of the world (like the Internet), you'll need to purchase a modem. Modems allow you to connect to other computers via regular telephone lines. Many computers come with modems already installed — perhaps yours is one.

These two categories exist because each machine uses a different type of processor (see CPU). One is built by Motorola (for the Macintosh) and the other by Intel Corporation (for Windows-based systems).

The fact that the two computers use a different processor isn't the only thing different about them; there's another difference that's even more important to you as the operator: they use different *Operating Systems* — MAC OS for the Macintosh; Windows for the PC.

The operating system on your computer is actually a collection of programs, or instructions, that provide the basic functionality that your computer needs to do anything. This includes things like reading to (and writing from) hard drives and removable media, displaying graphics, controlling the mouse, getting input from the keyboard, and a host of other functions. The operating system also gives you access to so-called *high-level functions*, such as copying and moving files, creating and organizing folders, finding things, and connecting to other computers (both in your own location as well as around the world through the Internet).

Without an operating system, your computer wouldn't even start up. When you give it power, it would just sit there with a blank look on its face.

APPLICATIONS

Applications are the tools that you use to perform different functions. If you're going to be working in the graphic arts industry (which is probably the case if you're using the *Against The Clock* series of workbooks), you may find yourself using various application programs that provide page layout, drawing tools, painting or image editing programs, word processors, or image capture software. Any of these terms (applications, tools, programs, software) mean the same thing.







The exact combination of software programs that you will end up using is a purely personal choice (or company choice, in the case of commercial usage). We don't recommend one program over another, although we naturally have our own favorites (and no, we won't tell you what they are).



This book covers MacOS version 8.x. If you haven't already upgraded to this latest software, please do so before proceeding. Some features will not work properly if you do not, and many of the screens shown here are unique to OS8.

Here's a list of commonly used applications and what they're used for in a graphic arts environment:

Common Graphics Applications		
Application	Icon	Comment
Word Processing	 MS Word 6	Word processing programs allow you to enter and edit text (often called copy). Today's word processing programs are quite sophisticated, and are often used to create lengthy, complex documents.
Illustration	 Illustrator 7.0	Digital illustration programs are very important in the graphic arts. They are used to create logos, technical illustrations, tables (like this one), and many other common elements.
Digital Image Editing	 Photoshop	Programs like Adobe's Photoshop are used to manipulate images. They can correct flaws, and correct the colors so that printed output matches the original photo. They are also used as painting programs.
Page Layout	 PageMaker 6.5	Page layout programs are used to produce "digital mechanicals," artboards that are used in the printing of books, advertisements, magazines, newspapers, and many of the publications we see every day.

The four most common tasks in the Graphic Arts field are writing copy, developing illustrations, editing or creating photographic images, and constructing - or laying out - pages using a page layout program.



Notes:

CHAPTER 2

USING THE MACINTOSH



CHAPTER OBJECTIVE:

To introduce you to how the Macintosh works; to teach you the basic skills you'll need to operate a Macintosh in a commercial or educational environment. Through an intensive series of hands-on activities, you will:

- Learn about the Macintosh Operating System, and the Desktop — the area within which you do your work.
- How to use the Mouse to control your Macintosh.
- Understand the concept of Windows (the Macintosh kind, not the Microsoft kind); how to open and close them, how to move them around the desktop, and how to manage them.
- Be able to use the powerful Help system built into Macintosh System 8.x, and know how to reference topics in several different ways.
- Learn how to create and manage folders, one of the core components of the Macintosh environment.
- Launch your first application, a simple word processor that comes with your Macintosh.
- Use the SimpleText program to change the appearance of text elements, and to save your work.
- Know how to find lost or misplaced files, folders, or applications.
- Learn to print files, windows, the contents of folders, or just about anything else you might like to tape onto your refrigerator.



The Macintosh is known for its ease-of-use, but don't let this fool you into thinking that practice and experience aren't important. The longer you use the system, the better an operator you'll be. Another thing to remember is that operating systems and software applications are constantly being updated and modified. You should consider subscribing to a few Macintosh magazines, just to stay in touch.

Using the Macintosh

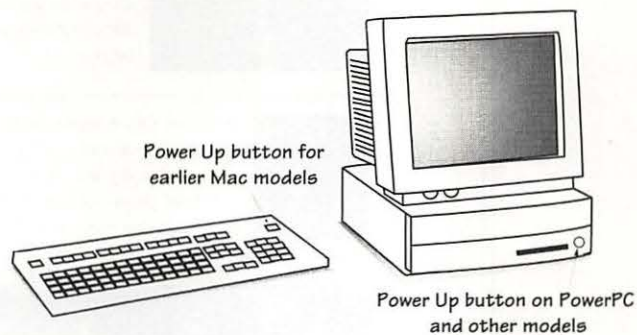
In this section of the book, we're going to be exploring the use of your Macintosh, starting with the basics (such as turning it on), and moving on to core functions such as folder management; what the desktop is and how to move around on the system; what files are, how to create them; and more.

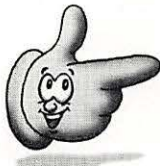
In this section of the course, you should be in front of your Macintosh, and ready to practice some hands-on activities that will help you learn to use your system.

Turning Your Computer On

In order for your computer to work, you will need to turn it on. While this sounds quite obvious, you would be surprised at how many support calls come into help centers because the computer hasn't been switched on. Another term for this is *powered up*.

Most Macintosh computers created since the eighties have had the power-on switch on the keyboard. On newer models — particularly the PowerPC models — the power button is on the front of the cabinet. Here's an illustration that shows where the power-on switches might be found on your computer.





This pointing finger icon is something you'll see a lot during the course. Wherever you see it, it means that there's a hands-on exercise — a task that you can actually practice on your system.

Turning On Your System

If it's not already on, press the power button and turn on your computer. A chime should sound letting you know that the system is powered up. After a brief wait an introduction screen should appear, and the desktop will appear.

The Desktop

When you first turn on your Macintosh the monitor fills up with a background color or pattern. This background is called the Desktop. In some cases, it might be a picture, since you can change the image that's used for the surface of your desk. Later on, when we teach you how to control and change the working environment, you'll learn how.

WHAT IS THE DESKTOP?

The desktop is the area on which you do all your work. Even when you're using a program that completely covers the desktop, it's still there. There are several aspects to the desktop you should notice. Take a look at this picture:

The Macintosh Desktop



Your hard drive appears on the desktop as an icon, as do folders, applications, and certain other types of objects. In the upper right hand corner is a program picker, which is used when you have more than one program running at once. The date and time are also displayed. We'll talk about both features later in the course.



The Trash Can is where you throw away stuff you don't need anymore. You can use it to discard just about anything. As is the case in the real world, you can also dig around in there in case you threw away something important (not that you would ever do something like that). The only difference is that this Trash Can doesn't contain any old gum or cigarette butts.



The Menu Bar is the most important aspect of the desktop. It's from here that you control your Macintosh.

The Macintosh Desktop is the background upon which all your work is done; it is always active, even when you're working in a program, surfing the internet, or listening to the latest sounds on your internal CD player.

At the top of the screen is a white region with words like **FILE**, **EDIT**, **VIEW**, and **SPECIAL** inside. This is called the **Menu Bar**.









In the upper right corner is a picture of your computer's hard disk drive. This can be thought of as a file cabinet in which your work is stored. We talked about hard drives a little earlier. The **picture you see is called an icon**.

ICONS



There are hundreds of different icons that you'll see on your system, and we couldn't put them all in a table. Each software manufacturer makes their own icons, and each application saves its files with icons that look something like that of the program itself. You can even collect icons and change them — later, when you really start “hacking” around with your machine. For now, we'll concentrate on the basics.

Commonly Used Icons on the Macintosh

Icon	Type	Description
 Applications	Standard Folder	These are the most common icons that you will see on your system.
 System Folder	System Folder	This folder contains the components of the Operating System.
 Hard Disk	Hard Disk Icon	Your own hard drive might have a different name.
 CD-ROM Icon	CD-ROM Icon	CDs containing data or music will appear on your desktop.
 Adobe Illustrator	Application Icon	Each program has a unique icon. This is the Adobe Illustrator icon.
 File Icon (Illustrator EPS)	File Icon (Illustrator EPS)	When you create a file, the program applies its own icon (EPS file shown).
 File Icon (Photoshop)	File Icon (Photoshop)	Some programs show the file itself. Here's a Photoshop document.
 Font Icons	Font Icons	Most fonts come in two parts, each having its own icon. More on this later.

Icons play a critical role in the operation of the Macintosh — and for that matter, almost any popular computer in the world. They show you, at a glance, the exact nature of a particular file.

As you can see from this table, the look of an icon can show you what the icon represents. An icon that looks like a folder is just that: a container in which other folders or files may be located. An application icon is usually a small picture that (hopefully) is related to the type of tool the program provides; and finally, each application has specific types of icons that it uses when you save a file containing your work.



This might sound silly, but make sure that the cord is coming out of the top of the mouse, or else when you move the mouse up, the arrow will move down. When we were in the business of supporting publishing installations, a support call came in and this proved to be the problem. We just thought we would mention it.

Using the Mouse

The most fundamental skill that you will learn is the use of your mouse. Without this pointing device to access the various menus, dialog boxes, and functions available to you, you would need to learn literally hundreds upon hundreds of complex keyboard commands. An experienced operator makes use of both keyboard commands and the mouse; depending on the type of work he or she does, they might lean heavily towards one or the other.

Artists working on digital images, architects, or anyone doing a lot of drawing and painting all use the mouse much more than they do the keyboard. They might access various tools from the keyboard, and they often find themselves entering type or numbers into their designs, but the mouse is their primary connection to the Macintosh.

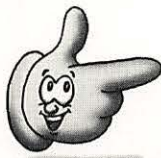
Other people, such as copywriters, account supervisors, customer service representatives, salespeople, accounting personnel, and data processing professionals spend a lot of time at the keyboard. Their typing skills are usually superior to those of someone who uses the mouse all the time, but their eye-hand coordination — the time it takes them to get the arrow onto the right part of the screen to click a button, for example — might not be that great.

As a student, you should seek to become proficient with the mouse as soon as possible. You'll get plenty of practice during this course.

CLICKING AND DRAGGING

The first thing to learn is how to click on something and drag it around. While this might not sound important, you will come to learn that it's a critical skill.

Clicking and dragging is just that: you point at something, hold down the mouse button (if you're working on a Windows system it's usually the Left mouse button), and move it around. This works for folders, icons, moving items from one folder to another, or from your system onto a floppy disk or removable hard drive. It feels a bit clumsy at first, but will become second nature as you gain experience.

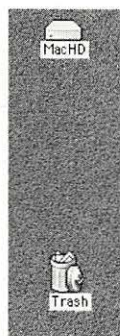


Throughout the course you'll be seeing these graphics, which are called "screen captures." Remember that our system is probably set up a little differently than yours, so they might differ slightly. Most of the time they'll be close enough so that you'll immediately recognize what's going on during an exercise or lesson.

It's important to keep the hard drive icon positioned in the upper right hand corner of the desktop — it's common practice, and the machine looks there first when it's starting up, so if it's there, the machine will "boot" quicker.

Clicking and Dragging

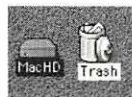
1. In the upper right corner of your desktop there's an icon that represents the hard drive in your computer. In the lower right corner, there's a little garbage (excuse us, *Trash*) can. We've shortened the distance between the two for this visual:



2. Position the arrow directly over the Trash icon and press down — and hold — the mouse button. The icon will become highlighted. Move it up the screen until it's directly below the hard drive icon. Let the button go — essentially dropping the icon in the new location.

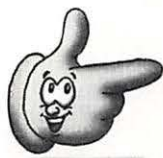


3. Now click and drag the hard drive icon until it is to the left of the Trash Can icon:



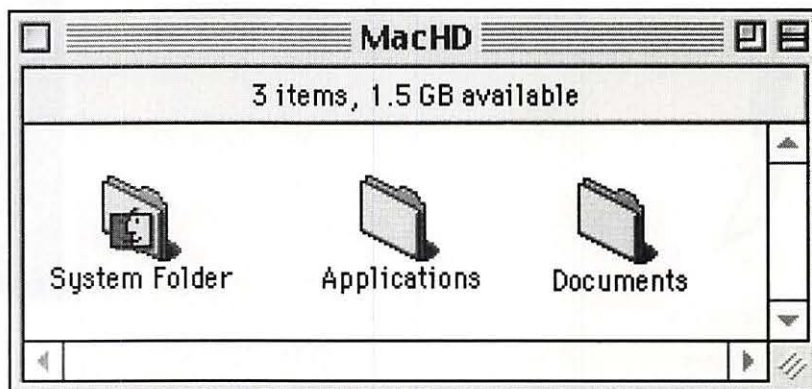
DOUBLE-CLICKING

The next important thing to learn is the ability to click the mouse button twice in rapid succession. It's called, appropriately, *double-clicking*. If you position your mouse on an icon and double-click your mouse, something will happen — as we'll see in this next exercise.



Double-Clicking an Icon

1. Position the arrow directly over the icon for your computer's hard drive. In our example, the name of the hard drive is *MacHD*. It might be called something else on your system, but it should be there.
2. Double-click the icon. It will open into a *Window*.



Working with Windows

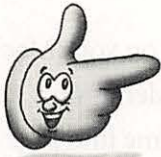


Don't be confused by the word *Windows* — we're not talking about Intel-based computers running Microsoft *Windows*. The term *Window* predates Microsoft's operating system. A window is a graphic that shows the contents of a file or folder.

A Window is a fundamental component of the Macintosh Operating System. Windows sit on top of the desktop, which is always functional and immediately available. Windows serve two functions:

- Displaying the content of folders, hard drives, removable disks, and CD-ROMs, or
- Letting you use different application programs. In most cases, programs show you a window containing the document that you're working on and provide different sets of tools that you use within the window. Many programs will let you have more than one document open at a time.

We're going to start out with the first kind of window: the one that displays the contents of a hard drive or folder.

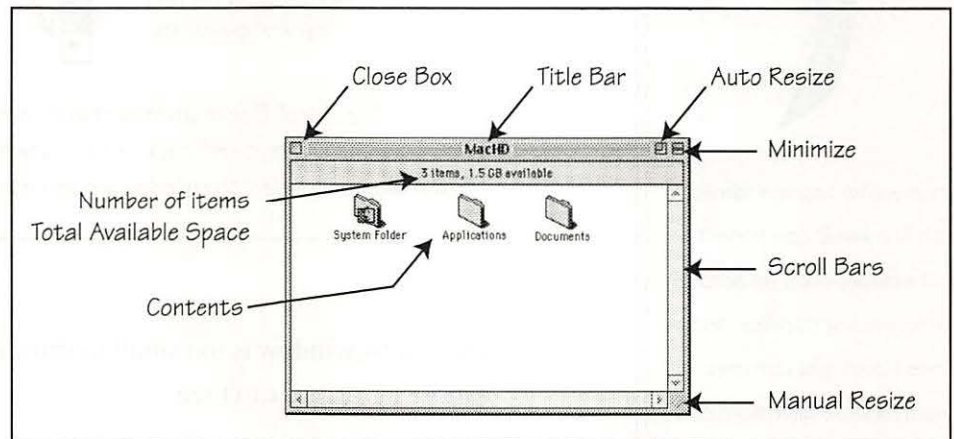


Working with a Window

1. Position the Arrow over the icon of your hard drive. It's the icon in the upper right corner of your desktop. When the Arrow is over the top of the icon, double-click the mouse button.
2. It will open into a *Window*. Some of the items inside might look different on your system; you may have more or less folders, or you might have folders and other icons representing files or applications. Here's what our hard drive looked like when we double-clicked the icon and it opened into a window:

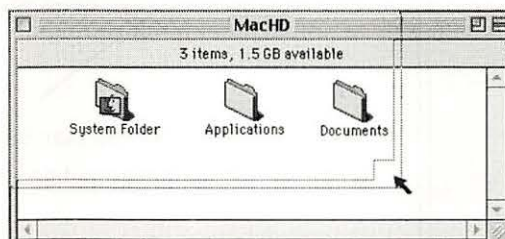


Whenever you see an illustrated window like this one, where we've put titles and arrows pointing out specific features, look at it and read the callouts. We'll often refer to these illustrations in that area of the text.



Anatomy of a Window

3. Move the Arrow over the lower right corner of the window, to the Manual Resize handle. Holding down the mouse button, drag the corner inwards, reducing the size of the window. When you let go, the window will remain at the size you made it.

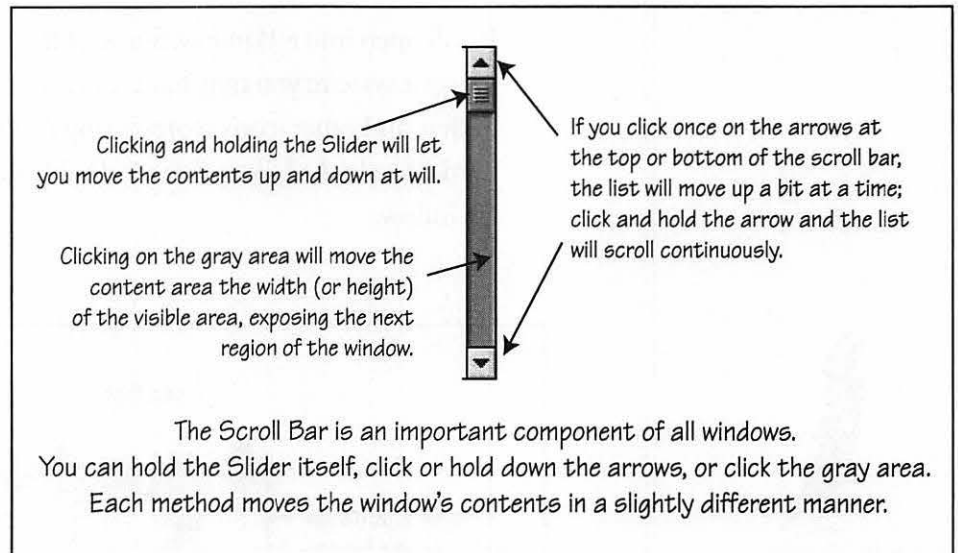


4. Resize the window until some of the contents are hidden.

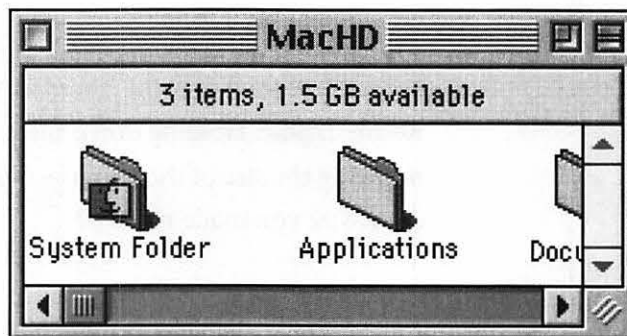
Scroll bars are an important part of managing windows on your Macintosh, because it's not uncommon to have more things in a folder or on a hard drive than can be seen at one time. That's where scroll bars come into play. Here's how they work:



Once you've become familiar with the basic components of a window, such as scroll bars, resizing handles, and close boxes, you can rest assured that all Macintosh software will present exactly the same type of window, and that they'll all work the same way. That's why once you've learned one program on the Macintosh, you've gone far towards learning the basic operation of any program.



5. Once your window is too small to show all the contents, use the sliders to expose items you can't see.

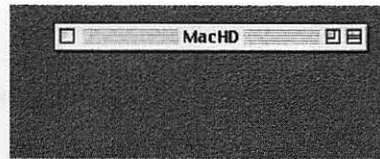


The Scroll Bar becomes active as soon as you make the window too small to show all the contents of the window

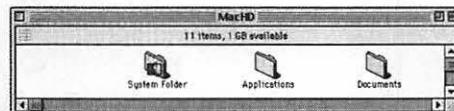


How you organize your work area is a personal thing, and often closely parallels your habits on a real desk (as opposed to an electronic, or “virtual” desk). If you’re sloppy, and your desk is normally buried under tons of paperwork, so too will be your Macintosh’s desktop. If you’re a real control head, and keep every single thing in its correct spot in the universe, then your Macintosh will be equally well-situated. We’re of the buried-under-the-rubble breed of operators.

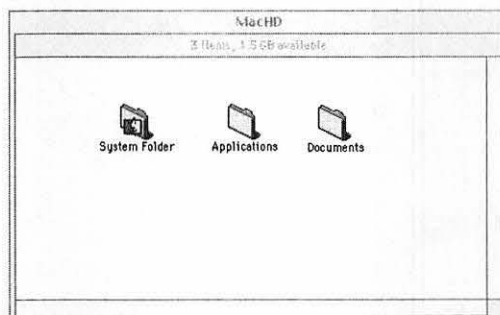
- Next, move the Arrow over the top of the window (over the Title Bar), click, and drag the window around. You can position the window anywhere on the desktop — even with part of it hanging off the monitor!
- Double-click the Title Bar. Watch what happens:



- You could double-click the Title Bar one more time to resize the window back to where it was before you *minimized* it, but you can accomplish the same thing by clicking in the Minimize button (the one in the very upper right corner of the Title Bar). Do that now.
- Click the Auto-Resize button (the second one from the upper right corner of the Title Bar). The window will get just big enough to show all the contents:



- You will notice that when you’re working with a window (resizing it, moving it, etc.), the Title Bar shows a series of black horizontal lines. These lines indicate that this is the Active Window. Click anywhere on the desktop outside the window, and see what happens:



11. You will notice that the Title Bar of that window is now grey — the lines indicating that it is active have disappeared. Click on the Title Bar again. It will be reactivated. This is very important when you have several folders opened at the same time. We will see this feature in action a little later on.
12. Close the window by clicking in the Close box (in the upper left corner of the window).

Anatomy of a Window

Whether you're looking at the contents of a folder or disk drive, or working in an application program that provides a window for you to work in, the basic features of a window can be found almost universally within Macintosh programs:

The *Title Bar* contains the name of the folder or hard drive.

The *Close Box* closes the window.

Auto-Resize expands the window to display all of the contents, or shrinks it to where you previously sized it. If the contents require more than the space available on your monitor to display, the Window expands to fill the entire monitor.

Minimize shrinks the window down to its Title Bar, or, if the window has already been minimized, it returns it to the size it was when it was shrunk.

The *Scroll Bars* allow you to move the inside of the window horizontally or vertically so that you can see items not currently in the visible area.

The *Resize Handle* lets you click and drag the window to whatever size suits your needs.

Working with Menu Bars

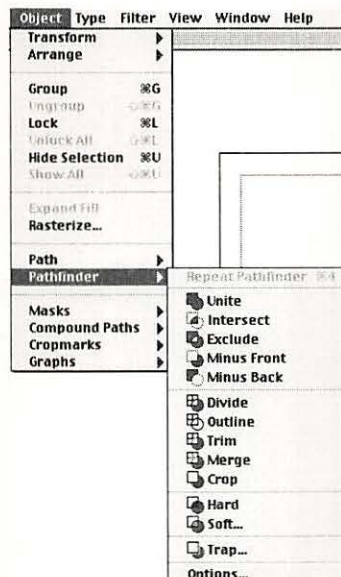
Whether you're working on the desktop or you're in the middle of drawing a masterpiece using an illustration tool, there will be menus available at the top of the screen. Menus are the fundamental method of controlling things on your Macintosh.



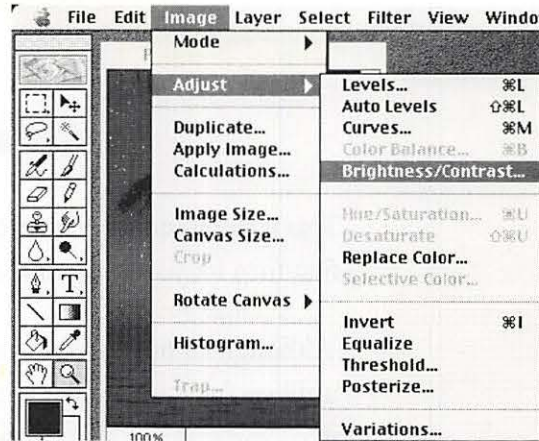
This is the standard Macintosh menu bar — the one that appears when you first turn on your machine, and before you've started any additional programs.

Although all menus work the same way — you click on them and slide down until you're at the choice you want to execute — menus change, depending on what you're doing at the time. Menus on the Macintosh are called *context sensitive menus*, since they change depending on the context within which they're working. At this level (the desktop), menu choices reflect things like opening and closing folders, making new folders, shutting down the computer, or emptying the Trash (more on that later). The options available to you at this point are related to working on your desktop.

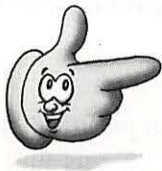
If, on the other hand, you were working in an illustration program, the menus would reflect drawing and viewing tools — more relative to drawing than to working with folders:



While working in an image-editing program (one that lets you modify the way scanned photographs appear and reproduce), the menus would show things like brightness and contrast, and similar image-related functions.

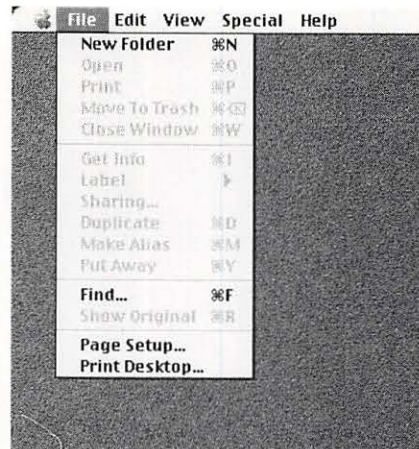


Throughout the course you'll be working with menus — both from the desktop as well as from inside of application programs.



Working with the Menu Bar

1. Move the Arrow to the first menu selection. It's called **File**. Click once on the word. A menu will slide down from the menu bar, and you'll see the choices available to you:





You should notice that to the right of the **Help** menu selection, there is the symbol for the Command key and the Question mark.

This is called a **Keyboard Equivalent**. That means that there's an alternative way to access that particular command (in this case accessing the Help window).

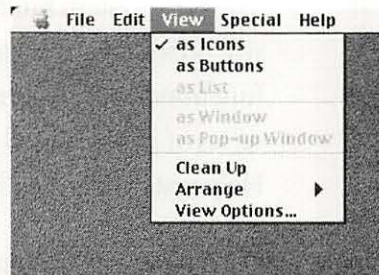
Hold down the Command key, and press the Question Mark (which is on the lower right side of the keyboard; pressing Shift at the same time isn't necessary). The Help window will appear without having to go to the menu bar.

Learning keyboard equivalents doesn't happen overnight, but you should try to remember them and use them whenever possible — it will make you a much more efficient and speedy operator.

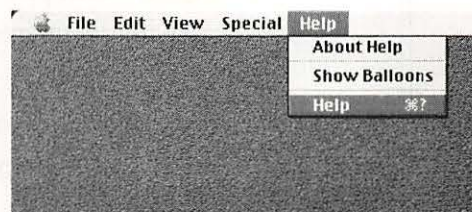
2. Slide over to the next menu — the one called **Edit**. That menu will unfold from the menu bar and you'll see more options. Don't worry about what they do just yet — you'll have plenty of time later on to learn all the commands:



3. The next in line is the **View** menu, where you can change the way files look and behave on your system. This is another menu that we'll explore a little later on in the course:



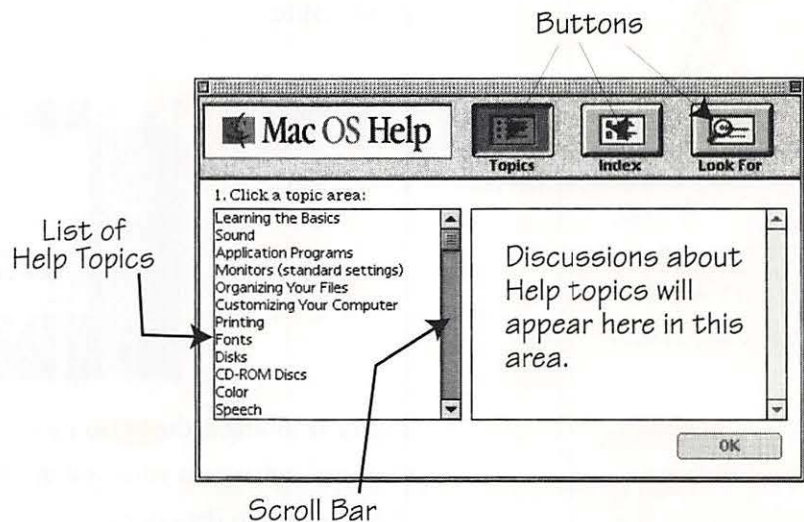
4. Next, slide past the **Special** menu, and take a look at the **Help** menu. Once it appears, slide the Arrow pointer down until the word **Help** is highlighted. We will discuss the Help system in the following section.





This section will provide you with some experience in using the built-in Help system that Apple provides with the Macintosh. The exercises are designed to familiarize you with how the system works — not to go through the hundreds of topics available. You should make extensive use of the help system as you're learning. Later, it will become just another thing that you don't use. We always install help files when we purchase new software. Some of the systems are very comprehensive, while others hardly provide any assistance at all. You will come to love help systems if you're anything like us — bad at reading manuals. Help systems are meant to be available at exactly the time you need them.

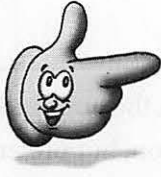
The Help System



The Help system built into the Macintosh is a powerful and effective aid that will provide answers to your questions and instruct you to perform specific functions. While a structured, hands-on course like the *Against The Clock* series of instructional guides is the best way to start learning, a comprehensive Help system is an indispensable tool as you move forward.

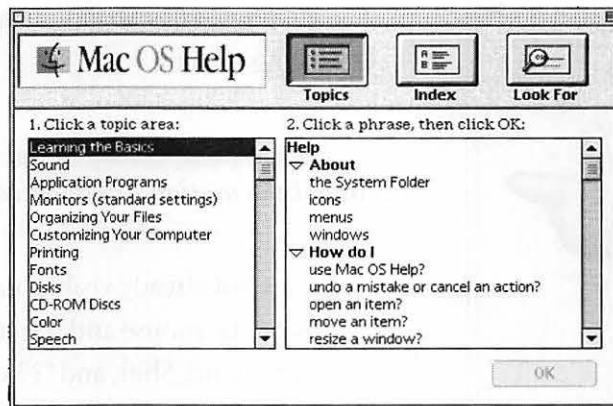
The buttons at the top of the window will let you use the Help system in one of three ways. You activate a button by clicking on it once. It will become highlighted, letting you know that it's selected. The three buttons on the Help window are:

- **Topics**, which provides a list of important topics that new users are particularly interested in.
- **Index**, which provides an alphabetical listing of every subject covered in the extensive Help files that came with your Macintosh, and
- **Look For**, which lets you enter words or phrases and then performs a search of all the available information. When it finds a relevant topic, it displays it for you.



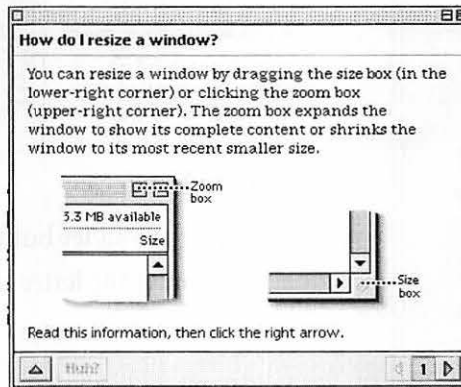
Help Topics


1. Click on the first of the three buttons.
2. Put the mouse on the slider, click and hold it, then move it down. You will see the list on the left move. When you're done, move it back to the top. Click once on **Learning the Basics**, in the left window. The right side of the window will display a list of basic topics:



Some icons are buttons, and some aren't. Buttons need to be clicked only once, while a regular icon needs to be double-clicked. It's usually not a problem if you accidentally double-click a button. Your computer won't blow up or anything, so if in doubt, click away.

3. You will see that the list is broken into categories. The second category is called **How do I** and is followed by a list. Double-click the item named **resize a window**:



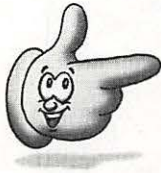
4. In the lower left corner of the window is a small up arrow that looks like this: . Click on it and you'll return to the main Help window.

INDEX

The second way you can use the Help system is through the built-in *Index*. The Index provides the same information as the Topics button, but presents it in a different order. This is the case with all three methods of accessing the Help system.

Using the Help system, particularly when you're new to the Macintosh, is a great way to find important information and, at the same time, it gives you a chance to practice clicking, scrolling, and working with windows.

The Help system is, in fact, an application program that is built into the basic Operating System.

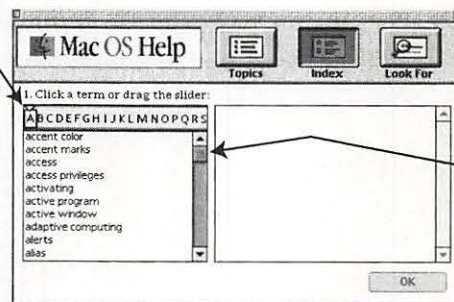


Many different applications make use of split windows like this one, where a list appears in one side, and the content in another. Some Web sites on the Internet also make use of this technique.

Finding Information Alphabetically

1. If it's not already visible on screen, bring up the Help window, either by using the mouse and selecting it from the menu bar, or by pressing the Command, Shift, and "?" keys at the same time.
2. Click the middle button at the top right portion of the window; the one that says Index:

This special slider works just like the one on an old telephone directory; you slide it to the appropriate letter and it gives a list of all the commands that start with that letter.

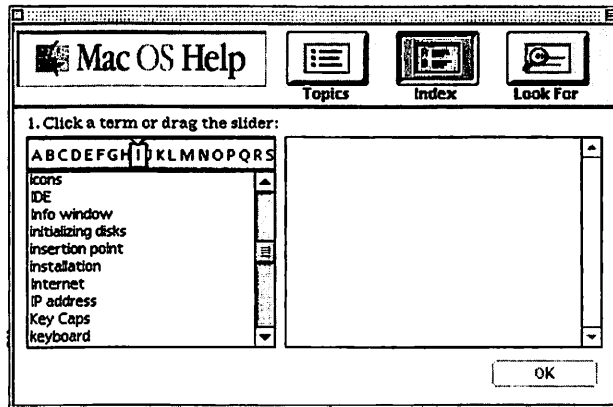


This scroll bar lets you view entries that are currently outside the visible window.

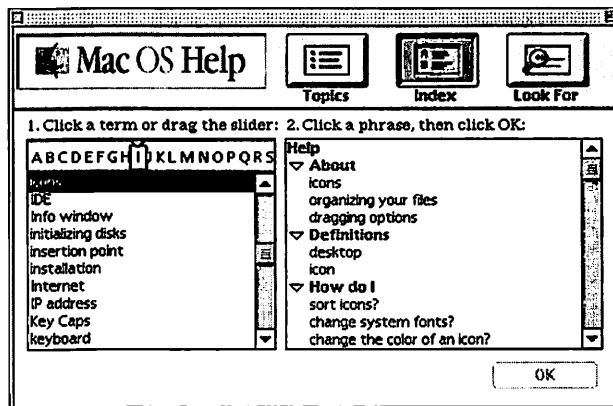
3. Move the slider button (the one over the alphabetic categories) until it is on top of the letter "I."



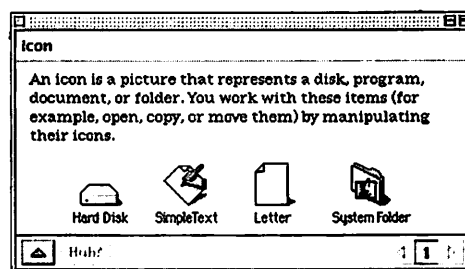
Lots of software applications make use of visual metaphors such as this one, which duplicates the way an old-fashioned paper booklet telephone directory used to work. It makes using software more friendly by making a connection between something familiar (the old directory) and something completely different (like a digital help system that's invisible until you call it up magically).



4. Click once on the first entry in the listing: the word **icons**. The content window to the right will fill up with subjects related to icons and how they work:



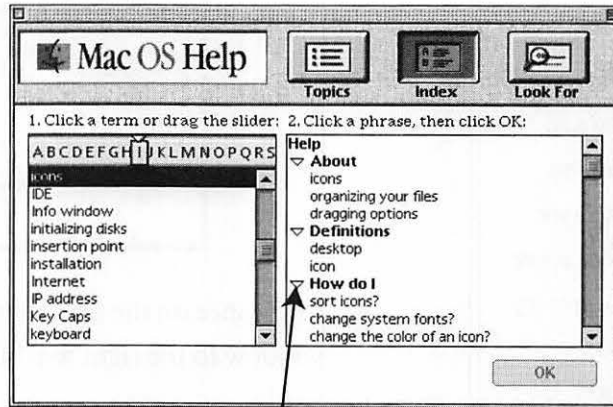
5. Double-click on the word **icon**, under the **Definitions** category, and you will see a brief description of an icon:



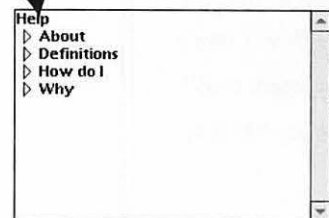
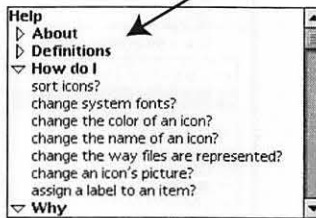
You might notice that next to each topic there is a small arrow. You can collapse topic headings into a more manageable outline by clicking on the arrows:



These small arrows, used here to collapse and expand the topics list, are another very common graphic element used throughout the Macintosh system. It's another visual tool that works the same way wherever it's used.



Click on these small arrows and you can collapse the topics into an outline.



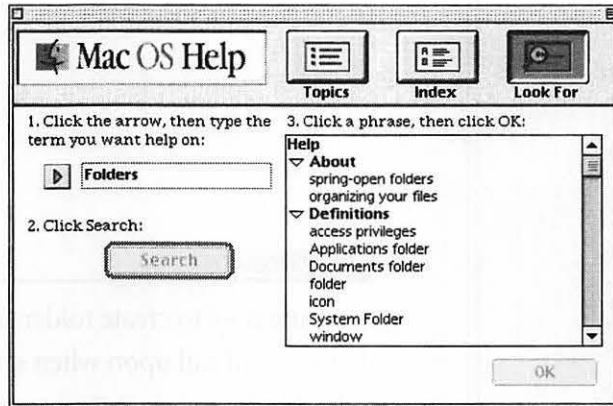
LOOK FOR

Perhaps the most effective method of finding information from the Help system is through the use of the *Look For* command.



Looking for Topics

1. Click on the **Look For** button on the Help window.
2. Click on the small arrow on the left side of the window, enter the word “Folders,” and click the **Search** button:



3. Feel free to look around the Help system for a while to familiarize yourself with how it works. When you're done, click the Close box (in the upper left corner) and put the Help system away. You can always access it any time you need it.

As we mentioned, almost all programs come with some sort of help system built in. Although they don't all look exactly the same, they all work on the same basic principle of topics and indices.





If you've used computers before the Macintosh, you're old. Just kidding. If you have, you might be familiar with the term subdirectory. A folder is a visual metaphor for a subdirectory.

Using Folders

You've already double-clicked an item when you opened the hard drive icon in an earlier hands-on exercise. That's going to help you in this section, where we're going to discuss the way folders work on the Macintosh — and how you can create, name, arrange, and throw one away when you don't need it anymore.

WHAT ARE FOLDERS?

You can tell a folder when you see one: it looks just like a folder would look on your desk. Well, maybe it looks a *little* digital, but then again, this is the computer world.



Applications

CREATING FOLDERS

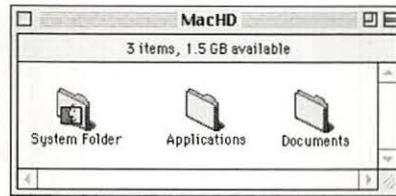
Learning how to create folders is one of the most important, fundamental skills that you will call upon when setting up your system, getting ready for a project, or backing up your important files; in short, you will be creating folders from now till those proverbial cows finally show up at the old homestead.

Creating folders is really quite simple, as you'll see from the next exercise. It's not making folders that's the hard part — it's keeping them organized.

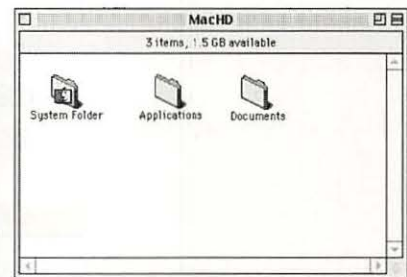
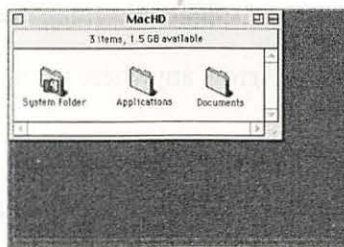


Creating a New Folder

1. If your hard drive icon isn't open (displaying a window with the drive's name in the Title Bar), double-click it so that it is. Click once in it just to make sure that it's active (the Title Bar has lines in it and isn't just plain gray):



2. Resize the window so that you can see more of the contents:



3. Move your Arrow until it's in the menu bar at the top of your desktop. Click on the **File** menu, let it appear, and slide the pointer down until **New Folder** is highlighted. Click the mouse button.



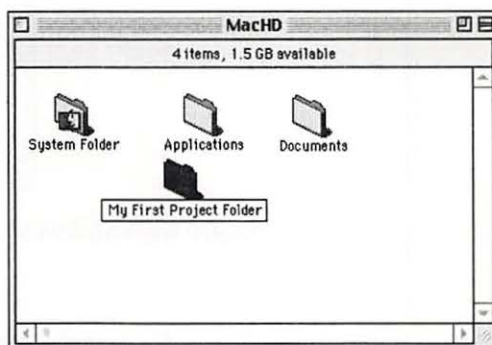


Throughout the exercises we say things like “name the folder Harry.” You don’t have to use our names — it will just make it easier, because that way the screen captures will look the same as your system.

4. As soon as you let go of the mouse button, a new folder will appear in the window. The name of the folder is highlighted. Type in the words:

“My First Project Folder”

Don’t worry if you make a mistake, just use the Delete key on your keyboard to back up and retype it:



Click the Arrow anywhere in the window (not on an icon) to deselect the folder.

RENAMING FOLDERS

It’s important that you know how to change the name of a folder. There are plenty of times when this is necessary: when you want to add a date to a folder’s name, when you want to correct a misspelling, or when you want to change a name in order to better organize a collection of folders. Doing so is simple:

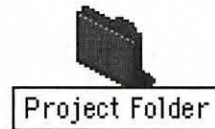


Changing the Name of a Folder

1. Click once on the folder you just created. It will become highlighted:



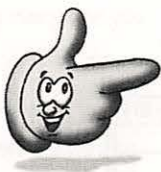
2. Hit the Enter key on the right side of the numeric keyboard. If you don't have a numeric keypad (or if you just want to do it a different way), simply put the Arrow Pointer over the top of the name and wait a second or two. A box will appear around the highlighted name of the folder, indicating that you can now type a new name. Change the name of the folder to *Project Folder*:



NESTING FOLDERS

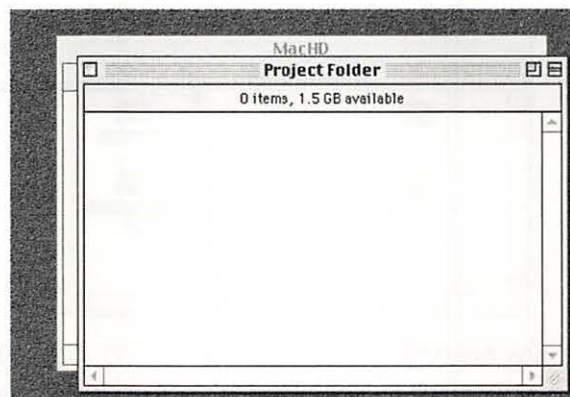
Nesting folders refers to the process of putting folders inside of other folders. We don't really know why it's called nesting, it just is. Some old computer geek needed to come up with a meaningless term to confuse non-computerites, we suppose.

For this exercise, we're going to use some of the files that came on the CD-ROM (supplied with the book).

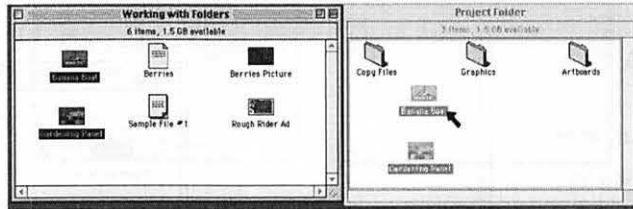


Organizing Folders

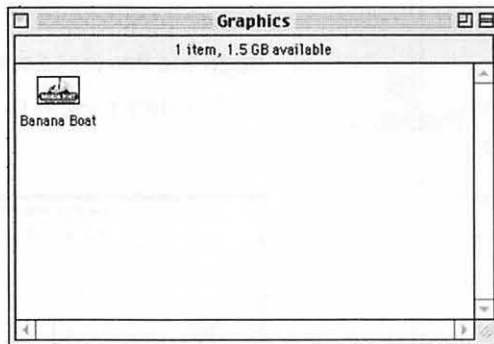
1. Double-click the **Project Folder** you just created. It will open up and display its (now empty) contents window. Notice how it sits on top of the folder inside of which it was created:



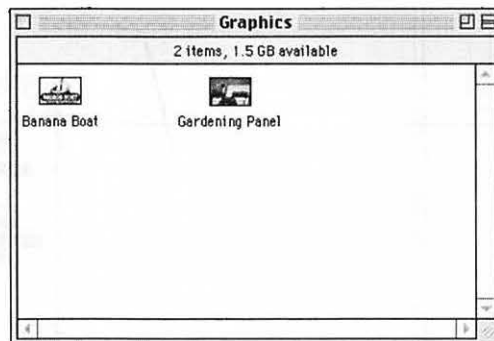
8. Drag the two folders over to the **Project Folder**. You will see them move. Drop them onto the window by releasing the mouse button:



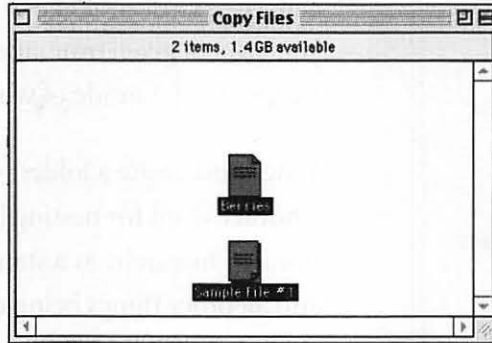
9. Drag the *Banana Boat* icon onto the top of the folder called **Graphics**. Hold it there a moment, and the folder will open. Drop the file:



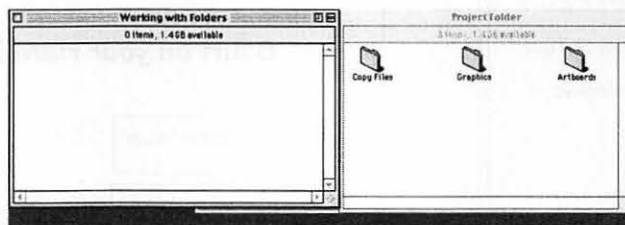
10. Close the folder by clicking on the Close box. Next, take the *Gardening Panel* icon and simply drag it onto the **Graphics** folder and drop it immediately. It will go into the folder without opening. Remember, if you wait a moment, the destination folder will open by itself; if you simply drag something onto a folder and drop it, the item will automatically move to that folder. Open the **Graphics** folder and check it out:



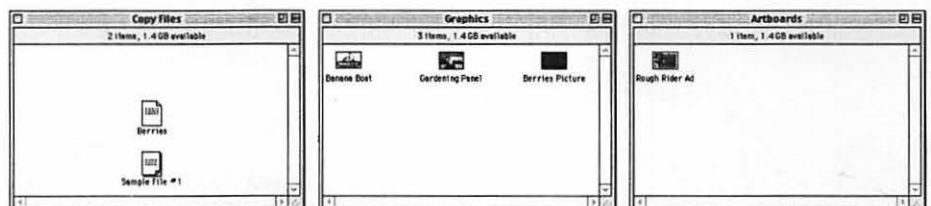
- Put the *Berries* file and the *Sample File #1* file into the folder that you named **Copy Files**:

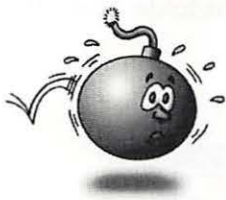


- Put the *Rough Rider Ad* file into the **Artboards** folder, and the *Berries Picture* into the **Graphics** folder, along with the other two images you dragged into it.
- When you're done, the **Working with Folders** folder will be empty, and all the files will have been organized into the three folders that you created:



- When you've finished with this exercise, Close all the folders so that your desktop is empty (or at least the exact way it was when we started the exercise).





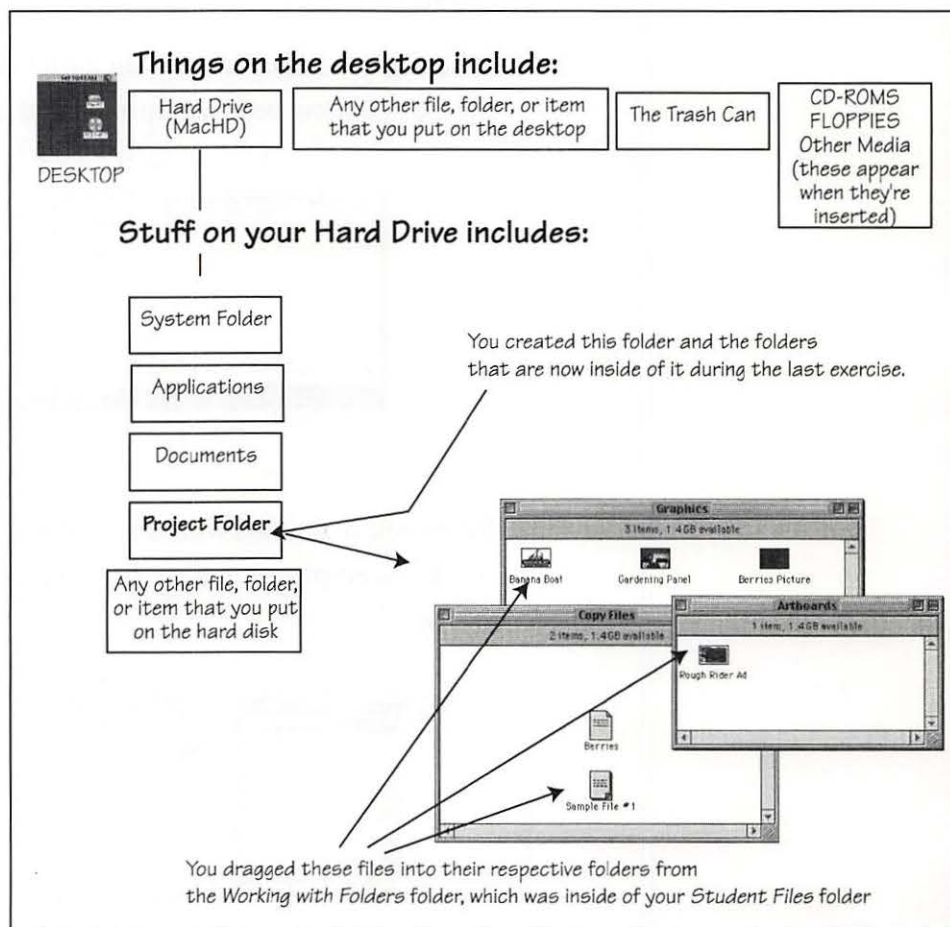
There is no question in our minds that the most difficult concept for a beginning student to grasp is how to dig around through folders to find what they need. This is particularly true when you're inside of an application, and need to navigate directly to a specific folder in order to find the right file. Take special care to study this issue until you're quite comfortable with how folders can reside inside of each other.

NAVIGATING THROUGH FOLDERS

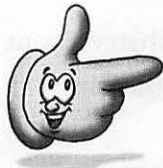
What you just did in this last exercise was to create a Project Folder with three sub-folders inside of it. When you're working on projects, especially complicated ones, your folder structure can become equally complex. Knowing where you are at a given time, and being able to see — at a glance — which folder happens to be inside of which other folder, is very important.

When you create a folder within a folder it is considered a nested folder. Another word for nesting is the *hierarchy* of your files and folders. You can think of hierarchy as a standard flow chart, with the desktop being at the top, and all other things being either at the same level, or at some level below the desktop.

Organizing Folders and Files on the Macintosh

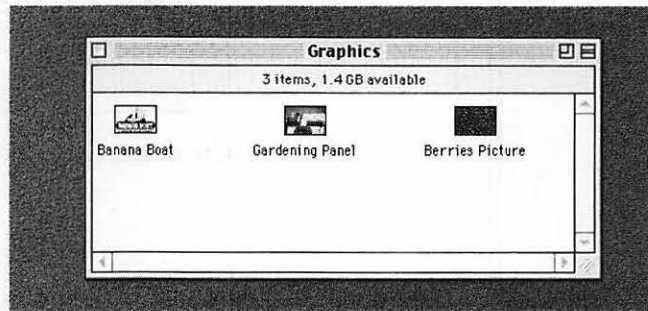


Folders are the backbone of file organization on your Macintosh. You should always try to keep your work organized into sensible, easy-to-understand groups. You do this with folders.

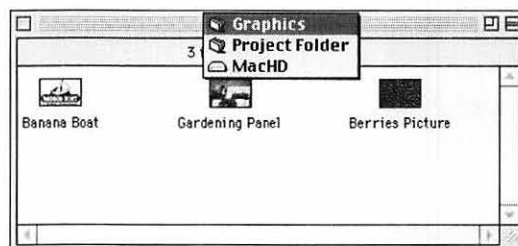


Identifying a Folder's Hierarchy

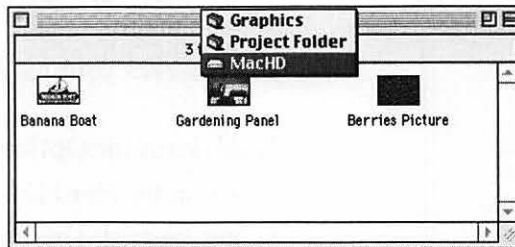
1. If any folders are open on your desktop, close them.
2. Double-click your hard drive icon.
3. Hold down the Option key and double-click the **Project Folder**. You will note that the Hard Drive window automatically closed when the **Project Folder** opened. This automatic closing of one folder when you open one of its subfolders is very important when you're going deeper and deeper into nested folders. Otherwise you would have to either close each one individually, or live with a very cluttered desktop.
4. Do the same thing with the **Graphics** folder. The **Project Folder** will close, and the only thing left on your desktop will be the **Graphics** folder:



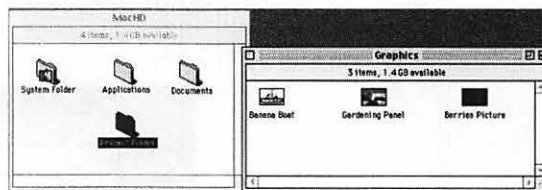
5. Hold down the Command key and click-hold on the folder's name in the Title Bar at the top of the window. Something called a *Pop-up Menu* will appear. (It's called a pop-up menu because that's what it does. You will see many more of these during the balance of this course.)



- Slide your Arrow down until the word **MacHD** (or whatever your hard drive is named) is highlighted. Let go of the mouse button:



- Notice that when you selected your hard drive by Command-clicking the Title Bar, its window automatically opened. You can use this technique at any time either to open the “containing folder” or simply to look and see where it is you’re working at any given time.



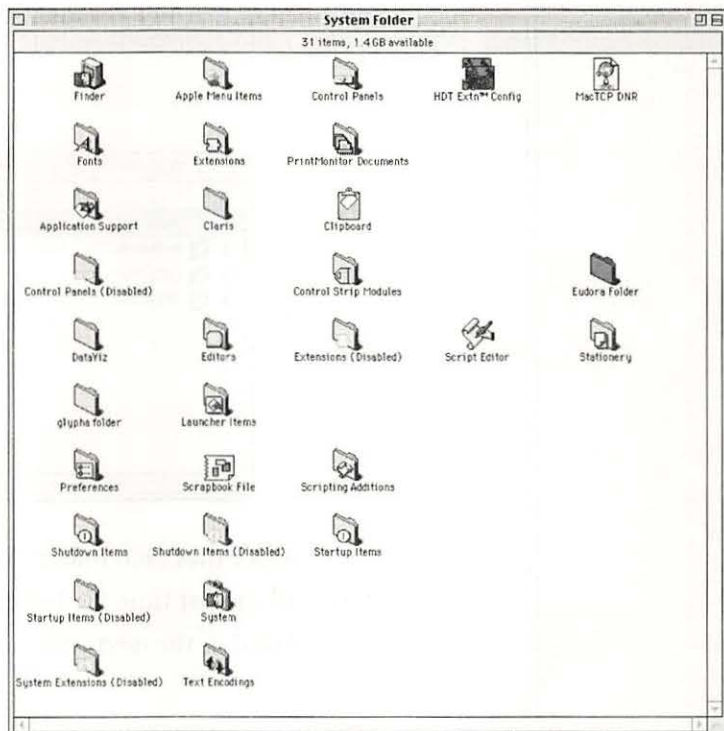
- When you’re done, Close all the windows again.

CHANGING VIEWS

Another very important aspect of managing and arranging your folders is how the contents appear when you open them.

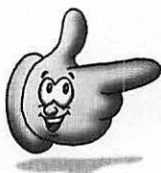
So far, we've been looking at icons, and while that's fine for some applications, there are other times when a folder contains so many files and folders that it's simply impractical to move around using only little pictures of files. There are times when we need to look at lists. Icons are pretty, but lists are very effective under certain conditions.

For example, if we open our **System Folder** (which is a special folder we'll be talking about a little later) into a large window, we see these icons:



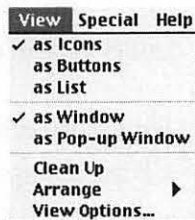
This isn't even a very radical example. Folders might contain hundreds of files — a catalog which requires 400 or 500 individual scans to complete, for example — and can be very tough to look at.

Fortunately, there are many different ways that you can arrange your files in an open window.

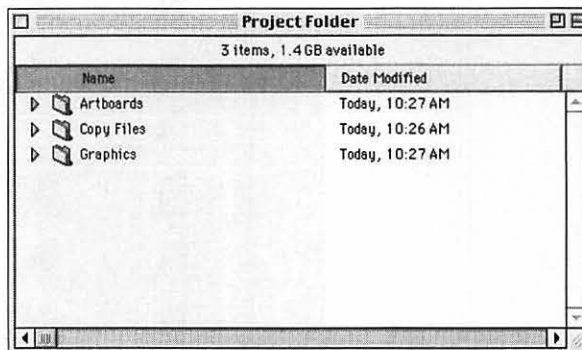


Changing Views

1. Double-click your hard drive icon, then hold down the Option key and double-click the **Project Folder** you created earlier.
2. Go to the menu bar and select **View**:

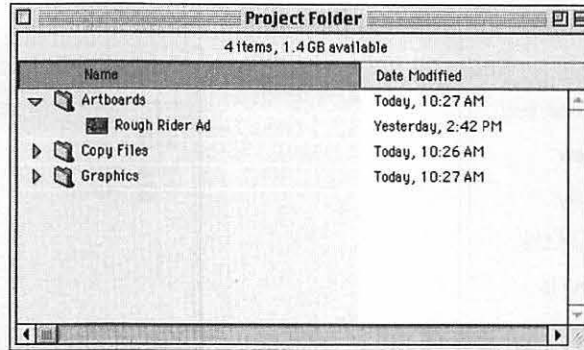


3. Slide down until the **as List** selection is highlighted. Let go of the mouse button. The **Project Folder** will now display its contents as a list instead of as icons:

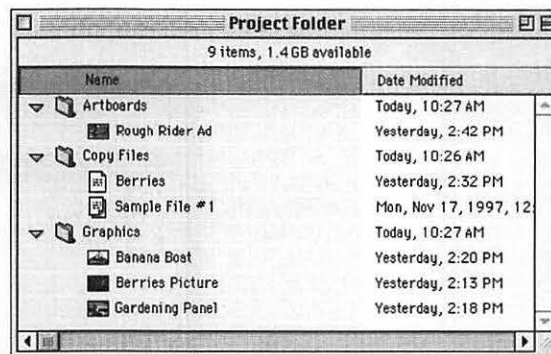


4. You'll notice that each folder's name is listed on the left side of the window, and the last time the folder was modified (or in this case created) will be displayed in the next column.

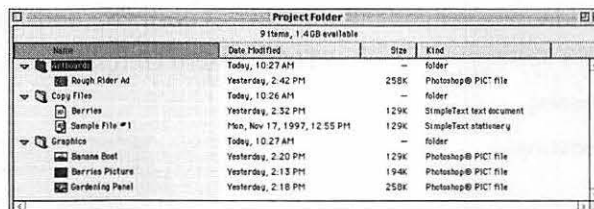
- To the left of each folder's icon and name is a small arrow. Click the arrow directly to the left of **Artboards**:



- Do the same thing to all three folders:



- The list view contains a lot of information about each file that doesn't show in icon view. Enlarge the window to the right, until you can see all the categories:



- Click on the arrows again to collapse the outlines until you only see the three folders again.

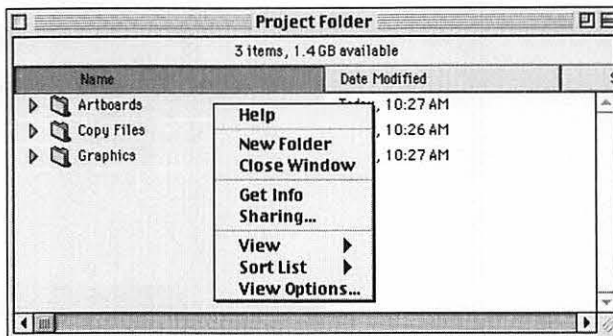


Whenever you close a folder, it remembers the view options that you selected before it was closed. This ensures that you can keep some folders all open within each other, others closed, and still others with different view options.



When you get a chance, you should check out **View Options**. Access it by Control-clicking inside the window, and selecting it from the pop-up menu:

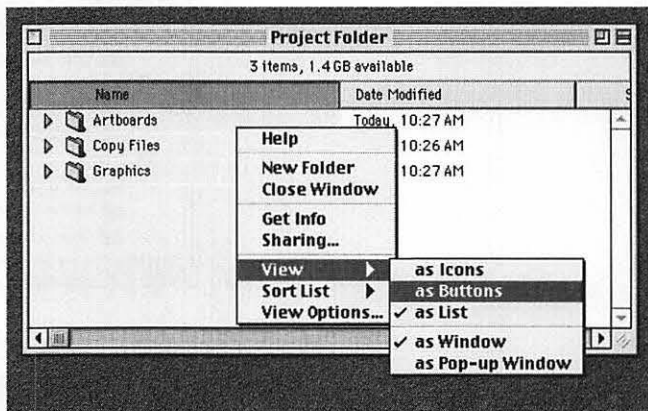
9. This time, instead of going to the menu bar and accessing the **View** menu, hold down the Control key (on the lower left of your keyboard) and click inside of the window. Another pop-up menu will appear:



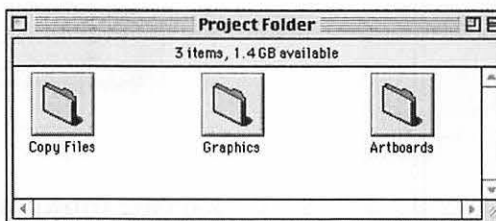
10. Slide down until the **View** pop-up menu appears, and slide down that list until you highlight the “**as Buttons**” option:



This window lets you set the way icons behave within a window. We normally keep large icons, and don't automatically arrange them to an invisible grid. Try changing a folder's view to **as Icons**, and messing around with these settings.



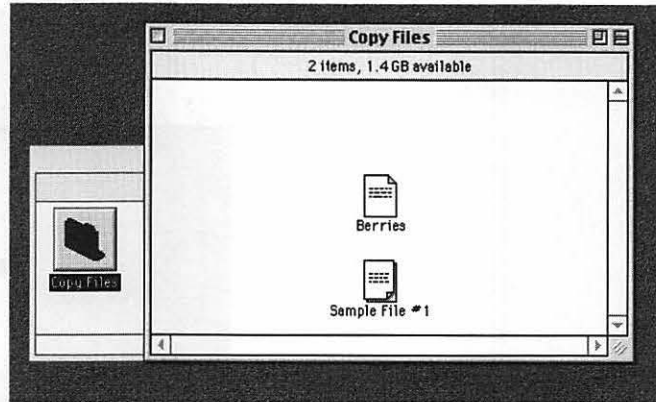
11. When you make this selection, the folders inside the **Project Folder** will appear as buttons — just like the ones we used to select how to use the Help system (remember?).





If you've ever used a Windows-based machine (the Microsoft kind), you're probably familiar with the *Minimize* command. This command reduces a window to a small button at the bottom of the Windows desktop. That's basically what *Windows as Pop-ups* does to a Macintosh window.

12. Try opening one of the folders. Now you don't have to double-click; a button only needs to be clicked once:



13. When you're done, Close all the windows again.

WINDOWS AS POP-UP MENUS

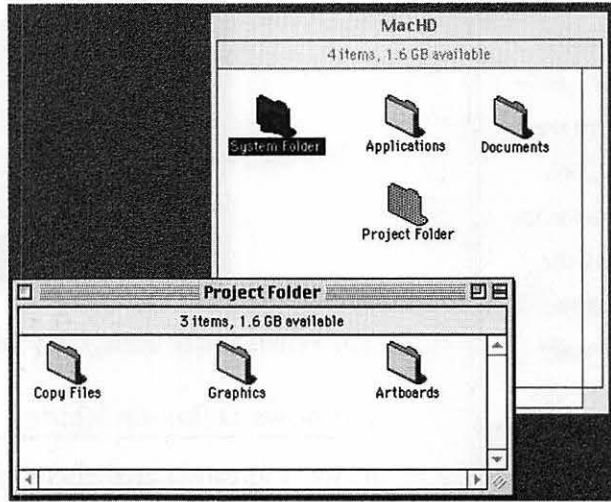
As we've already stated, there will be times when your monitor is so filled with folders that you can't find the forest (an important file) for the trees (jillions of folders opened and all over the desktop). There's a third way to view folders and their contents: it's called a Pop-up View.

We've used pop-up menus already; that's how we accessed the View menu in one of our exercises (by holding down the Control key and clicking in the window). This is a different sort of pop-up, though. It takes the active window and collapses it into a button that sits at the bottom of your monitor. You click the button and the folder opens into a tabbed window. Click it again, and it goes back to the bottom of the monitor and waits patiently until you need it. That way it's close at hand, but still out of the way of a busy desktop.

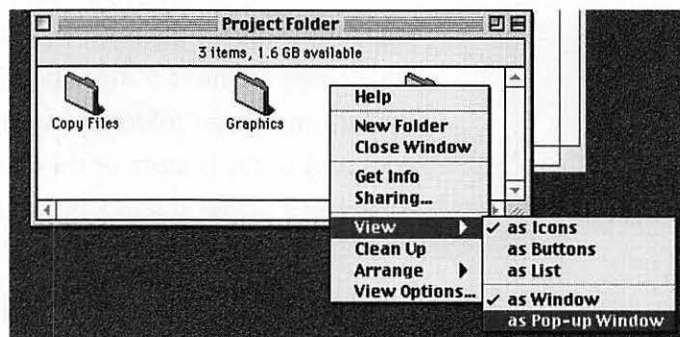


Turning a Folder into a Pop-up

1. First, double-click your hard drive icon to open it, and double-click the **Project Folder** to open it as well:

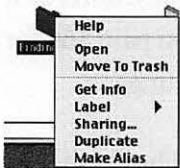


2. Hold down the Control key, and click inside the window (Control-click). A pop-up menu will appear. Slide your pointer down to **View**, then down to **as Pop-up Window**:

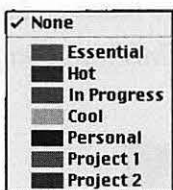




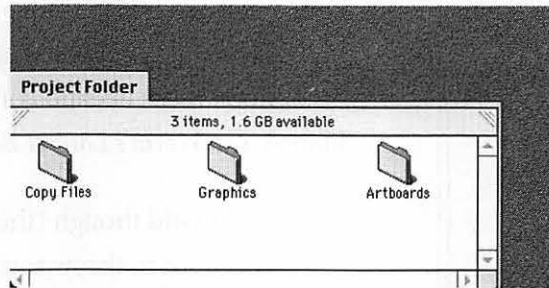
This might be a good time to check out the **Label** function. Select a folder and Control-click and Control-click:



Slide down and choose **Label**. You can then set a color and a label from the pop-up. Later, when you learn to use the built-in **Find** command, you can use these labels as a search method.



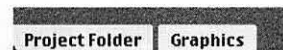
3. The window will resize and assume its position in the lower left corner of your monitor:



4. As you can see, the Title Bar is no longer in the center of the window. Indeed, the folder isn't even displaying a conventional window anymore. The Title Bar is on a "tab" at the left side of the pop-up window. Click on it:



5. Click on it again. Double-click the **Graphics** folder and turn it into a pop-up window by Control-clicking and sliding down to **as Pop-up Window**. Now you'll have two "tabs" on the bottom of your monitor:



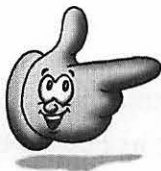
6. Experiment with your viewing options. You can, for example, have one of the pop-up windows view as Icons, another view as List, and another view as Buttons.

Using the Trash Can

We know people who could best be described as a computer-age pack rat. They have every file, folder, icon, picture, game, saved game, email, and downloaded file that ever hit their computer's hard disk. At some point they buy more hard disks, hook them up, and continue building their electronic equivalent of Idaho's *The World's Largest Ball of Twine and Other Useless Stuff* museum.

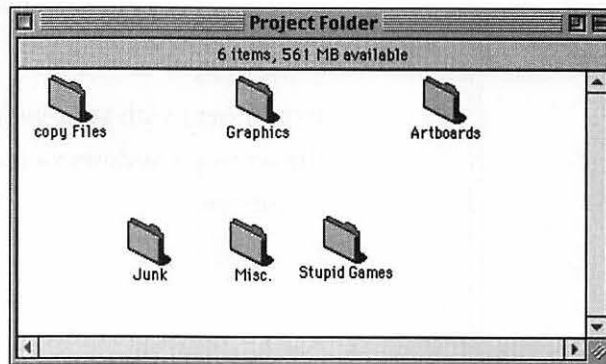
In the real world though (the one you occupy, hopefully), there will be times when you want to throw something away. It might be a file that's been superseded by another, it might be something you just don't need anymore, or it might be something you hate — like the stupid game that you paid \$60 for and can't make it out of the very first room of the 12,000-room dungeon.

At times like this, it's fortunate that you have the *Trash Can*. The Trash can is your friend. It lets you junk, trash, rip-up, discard, and otherwise get rid of stuff you don't want anymore. It also lets you discard important stuff that you need really, really badly (fret not, you can always dig around in there and find it — at least until the garbage truck comes, so to speak).



Throwing Things Away

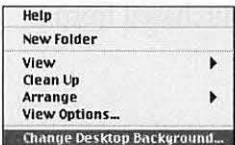
1. Open your **Project Folder**. Make sure the view is set to **as Icons** and **as a Window**. Make three new folders inside. Call them *Junk*, *Misc.*, and *Stupid Games*:



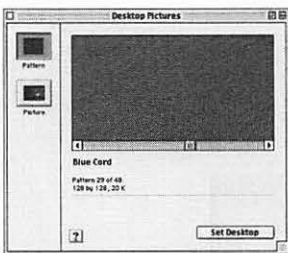
2. Open the **Graphics** folder. Make sure the view is set to **as Icons** and **as a Window**. Position it so that you can see the contents, and can also see the three new folders you just made.



Want to try something useless but cool? Control-click on your desktop and choose Change Desktop Background:



From this dialog box, you can select a different pattern for your desktop. We get into this a little later, so don't waste too much time here. Just thought you might need a break:



3. Drag the **Junk** folder to the Trash can. Just pick up the icon, hold down the mouse button, and move it over top of the Trash can icon.



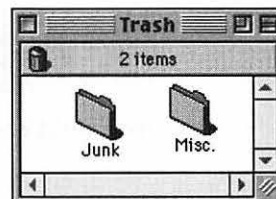
4. As soon as you drop the folder in the Trash, the icon changes, so that it looks just like our garbage can does — filled up and overflowing with junk, misc., and stupid games:



5. There's another way to throw something into the Trash: by using the Control-click method. Position your Arrow pointer over the **Misc.** folder. Control-click the mouse. Slide down until you highlight **Move to Trash**. Let go of the mouse button. The folder will fly away, landing directly into the Trash can.



6. OH NO! That **Misc.** folder contained the latest revision of your next great novel? The keys to the code of the ages? The latest Martha Stewart directions for making those cool Halloween death masks? Don't fret, little one. Double-click the Trash can icon:



7. That's right, you can simply drag either of these folders (or, by digging into them, something inside one) back to the land of the living. Unless...



There are several ways to recover a file even *after* the Trash Can has been emptied. There are several popular Utility programs that can recover deleted files. The most popular one is probably Norton Utilities, which can be purchased at your local computer store. The program comes with several other critical tools, including virus protection, and tools to speed up your hard drive — or recover the contents if the whole thing crashes and won't restart.

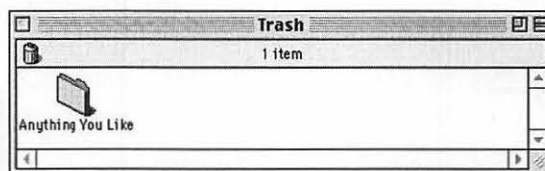
- Control-click the Trash can icon. Take a look at the pop-up menu that appears:



- Select **Empty Trash**. The can is empty. At this point, you would need special utility programs made especially for situations where you *did* throw away something critical. They can usually recover trashed files, at least for a while after you threw them away and emptied the trash. They are not included with the Macintosh, but have to be purchased from a third party. Don't ask us why.
- There's another way to empty the trash, and that's from the regular menu bar at the top of the desktop. Drag the **Stupid Games** folder to the Trash, and empty the Trash from there. Good riddance to bad rubbish.



- Create another new folder and call it anything you would like (not literally, just figuratively). Drag it to the Trash can.
- Double-click the Trash can. It opens:



- You could choose to drag this item out of the Trash and back to a folder.
- You can empty the Trash now.

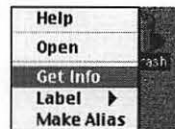


When you start getting comfortable with the system, you might be tempted to turn off the trash warning. We can tell you from personal experience that even the most jaded operator should leave this message turned on. It's one last chance to check yourself before you trash something important — like a three-hundred page course book that's just gone through eighteen edit cycles. (did we say that?)

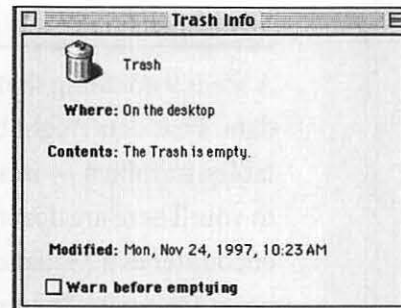
In general, you should be very careful before you empty the trash. It can easily destroy something you didn't mean to discard, because once you choose empty, it's pretty much over. You can, however, get the trash can to ask you just one more time if you're sure you want it emptied.

Turning on the Trash Warning

1. Position the pointer over the Trash can. Control-click the icon, and slide down until you highlight **Get Info**:

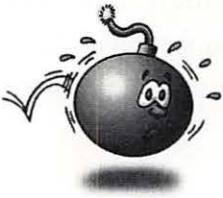


2. A dialog box will appear and provide you some information about the icon:



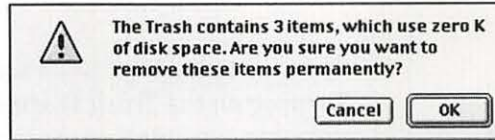
3. See the small box in the lower left corner, in front of the words *Warn before emptying*? Click once inside of it. A check mark will appear in the box, indicated that the option is active. This is a very common interface item, and it's called a *Checkbox*. You will see them from time to time when presented with a choice of something being turned on or off (as is the case with this warning option):

Warn before emptying



This is called an Alert Box, and you should always pay attention to them whenever they appear — they're usually trying to tell you something important.

4. Create two more junk and stupid folders, so you have something to throw into the trash. Drag them there, and Control-click the icon and choose **Empty Trash**. You'll see the warning message you just turned on:



When first learning how to use your system, it's probably not a bad idea to keep this warning active. Once you're an experienced user, you can turn it off, so that if you want to throw something away — no matter how critical it might be — you can do it instantly, darn it.

Working with Files

So far, we've explored the Desktop, Menu Bars, and Folders. Now, it's time to talk about data files. What is a file?

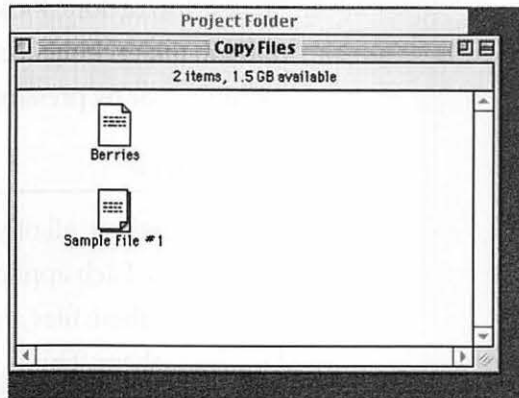
WHAT ARE FILES?

A file is something that's been created from within an application. It contains data. That data might be words, pictures, sounds, combinations of items, tables, numbers — in short, almost any information that might be important to you. There are dozens and dozens of different types of files that you will encounter as a Macintosh user — particularly in the graphic arts, where file types are especially important. For now, it's sufficient for you to know that files contain data.

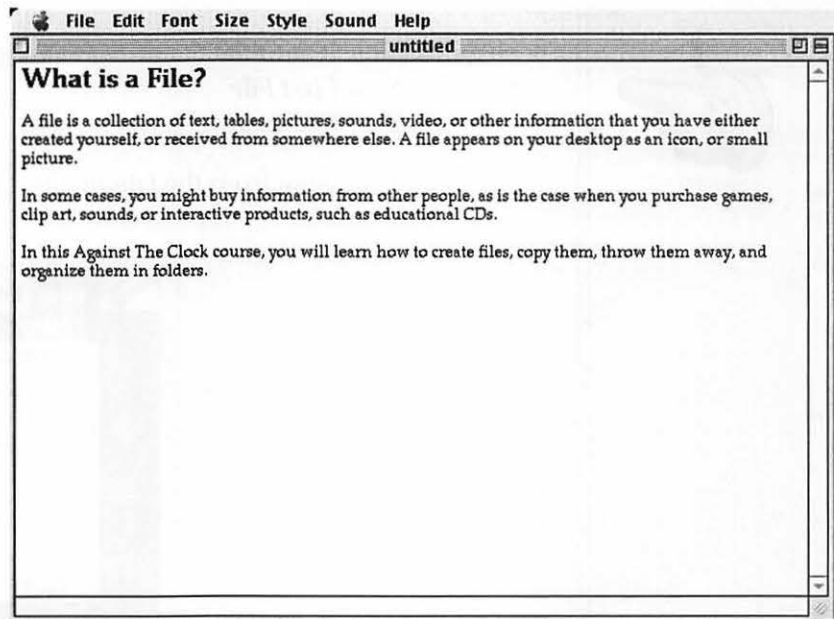


Examining a File

1. Open the **Project Folder**, and then open the **Copy Files** folder:



2. These files were created with a very simple application called *SimpleText*, which came with your Macintosh (specifically, it's included with the operating system supplied with your Macintosh). Double-click the one called *Sample File #1*. This action — double-clicking on a file — will cause the application to Open with the document active:



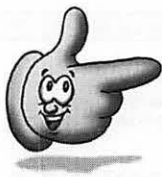
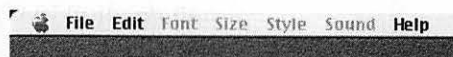
SimpleText lets you enter copy, do some simple formatting, open certain types of pictures, and record sounds. Since it's provided with your computer, we're almost positive it's installed on your system — and therefore it's very likely that you'll be able to perform the exercises in the book.

3. You'll notice that the document itself is in a window — one that acts the same way as a folder window. The only difference is that this window contains data — not files and folders. You can size the window, move it around the desktop, or close it just like a folder window.
4. When you're done looking at the file, close it by selecting **Close** from the **File** menu, clicking once in the Close box (at the upper left corner of the window), or by pressing Command-W.

CREATING FILES

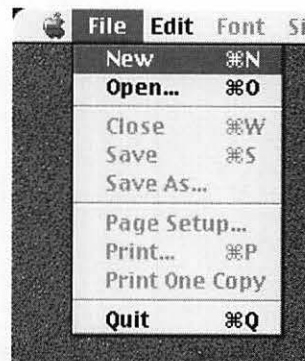
With few exceptions, all of your activities on your Macintosh will result in the creation of files. Each application creates its own type of file, and under normal circumstances, these files are directly connected to the application that you used to create them. This is why double-clicking the file in the last exercise started up the SimpleText program (another word for starting up an application is *Launching*).

At the end of the last exercise, you opened a file, then closed it. The application, however, was still running, or active. You can tell this by looking at the menu bar:



Creating Your First File

1. Choose **New** from the **File** menu:





Although we tried to supply you with a good collection of hands-on activities, don't be afraid to experiment. We do suggest that you make a copy of any files you want to mess around with, so that when you do try to follow one of these exercises, the machine acts the way we say it should. You can copy any file by holding down the Option key and dragging it to another spot — either in the folder or into another one.

2. A new document will appear. If you look in the Title Bar, you will see that it's called *Untitled*. Enter the following copy (to make blank lines, just hit the Enter or Return key a few times):

```
My First File
[type in your own name]
Dear Ma:
This is the first file I've created on my Macintosh.
The Kid
```

SAVING A FILE

At this point, you've entered some text into the file — but the file exists only in RAM memory. It doesn't reside in a folder somewhere on your hard drive.

Saving files is obviously a very important function, and that's what we're going to do at this point. We just thought it would help if we took a moment and mentioned that when you save a file, you should always think about *where* you're going to save it.

Whenever you're working in an application, the Macintosh is keeping track of what folder the program was "looking" into the last time you saved something. If you haven't saved something recently, it's likely that the program will just save the file in the same folder that the program is stored in.

That's usually the last place you want to save a file. You usually want to save your files either inside of a folder, or directly on the desktop. Some people choose to save stuff on the desktop while they're working, and drag the files into the appropriate folder before they quit for the day. We think files should always be saved into folders, but either method works.

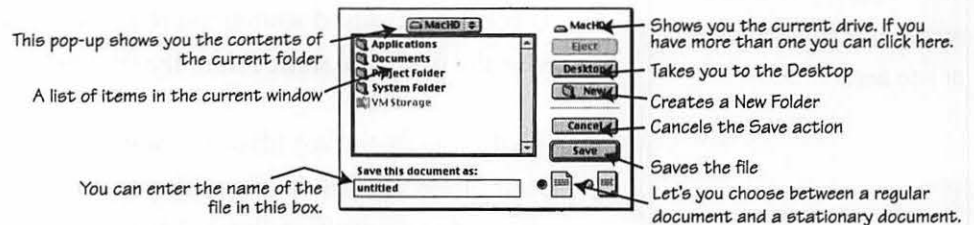


Saving a file

1. Choose **Save** from the **File** menu:



2. When you do, you will see something called the *Save Dialog Box*. Almost every program you will ever use has one, and although some have features that others don't (depending on the exact application), they all work exactly the same way.



3. By clicking the pop-up menu, double-clicking the names of folders, or by clicking a folder and using the **Open** button, you can explore your hard drive (also called *Navigating*) until you find the folder where you want to save your file. Alternatively, you can choose to click the **Desktop** button and save the file there.
4. Type the name of your file (My First File) in the region reserved for the file's name. Click the **Save** button and save the file inside the **Copy Files** folder, which is inside of the **Project Folder** that you created earlier.

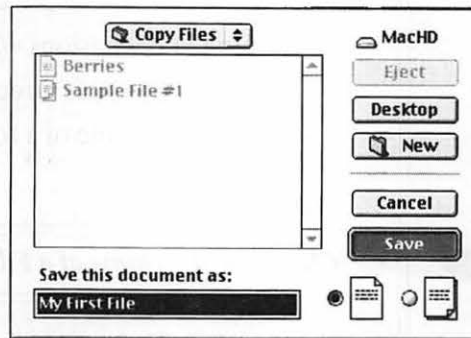


A Stationary Document is one that is specially locked by the Macintosh. You can tell a stationary document by its icon:



A stationary file opens automatically into an untitled window, protecting the original from change. That way, when you open one and make changes, you're forced to save it under a different name than the original.

SimpleText, as well as certain other applications, allows you the option of saving a file as a Stationary document. Another way is to change the document's attributes under the **Get Info** command, which we discuss later in the course.



5. After you click the **Save** button, the file will be written onto your hard disk, safe from (almost) anything.
6. Once you've saved the file, choose **Close** from the **File** menu.
7. Note the upper right corner of your desktop's menu bar:



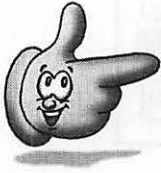
8. See the little icon in the very corner? Click on it:



9. This portion of the menu bar is called the Application Picker. It lets you switch back and forth between programs when you have more than one running at once.
10. Try using the **Hide Others** option. It will temporarily hide the desktop. Same thing when you're running the Finder (which is the Macintosh operating system).
11. When you're done, choose SimpleText from the application picker, and choose **Quit** from the **File** menu to exit the program.

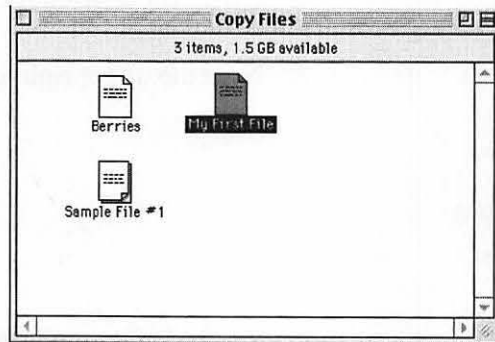
CHANGING THE NAME OF A FILE

There will be occasions when you'll need to change the name of one or more files. You can do this directly from the desktop. It works the same way as changing the name of a folder.

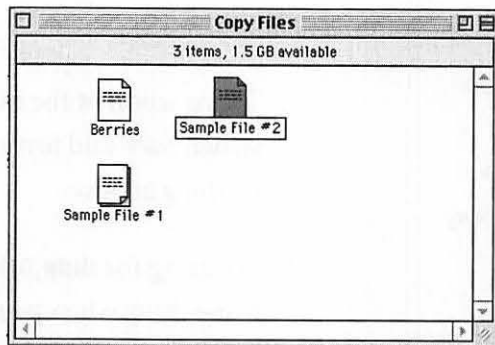


Changing the Name of a File

1. **Open your Project Folder**, then **Open the Copy Files** folder.
2. Highlight the file you just created:



3. Put the Arrow cursor inside the name. Wait a moment, and a box will appear around the name. Type a new name for the file: *Sample File #2*:

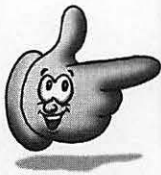


4. Hit the Enter key or click anywhere else on the window or desktop. The file will be renamed.

COPYING FILES

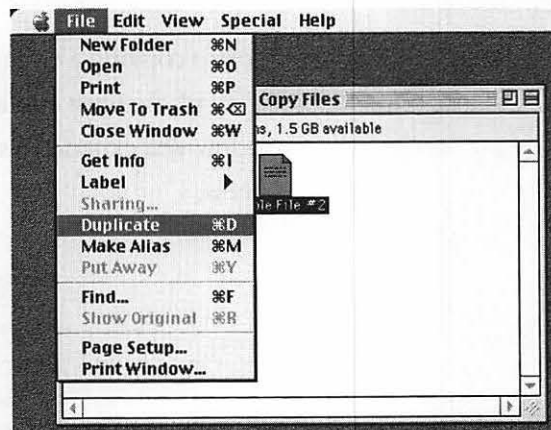
There are numerous cases where you will need to make copies of files. A very simple and basic example would be where you wanted to make a backup copy of a file onto a floppy, or into another folder somewhere on your system.

You can make copies quite easily on the Macintosh. There are several ways to accomplish this basic function.

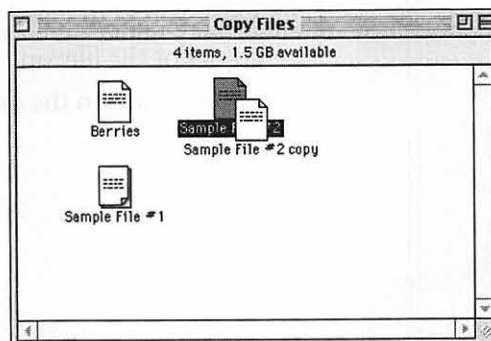


Making a Copy of a File

1. Click once on the file you just renamed (*Sample File #2*).
2. While the file is selected (highlighted), go to the **File** menu and choose **Duplicate**:



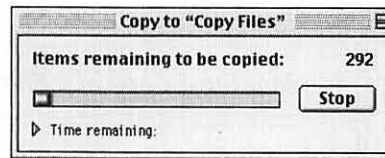
3. The file will be duplicated and named *Sample File #2 Copy*:





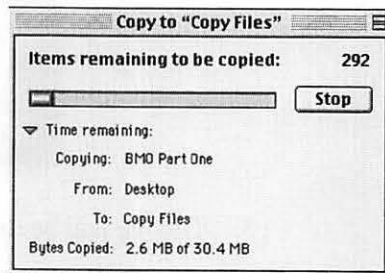
This graphic is called a Progress Bar, and acts as a time indicator for slower processes. The faster your computer, the faster the bar moves. That's why people always want the fastest, biggest, baddest machine on the block — so that they won't have to look at these bars too much.

4. Drag the copy to the Trash (and empty it if you would like).
5. Click on the *Sample File #2* file again. This time we're going to copy it to the desktop. Hold down the Option key and drag the file outside the folder to the desktop. *COPY TO floppy DISK WINDOW.*
6. You will see a graphic appear. It's called a *Progress Bar*: *10-1 DISK (COPY)*

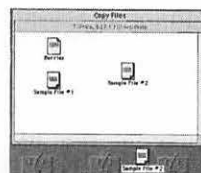


You should notice that the visual we used here shows almost 300 files being copied. We used a large folder to make this picture so that we would have time to capture and discuss the function of the Progress Bar. With a tiny file like the one you're working with, the bar appears and disappears very quickly.

If you're copying a large file, or group of files, you can click the arrow to the left of the **Time remaining** text (at the bottom of the bar) and the window will expand to show you the time required to complete the process:



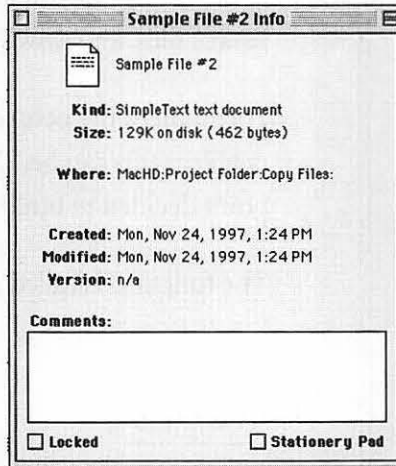
7. Once you've dragged the file to the desktop, there will be two different copies of the file; one inside the folder (the original document), and another one on the desktop:





Get Info

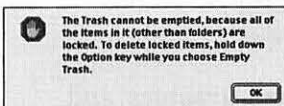
1. With the file highlighted, select **Get Info** from the **File** menu. An information window will open:



2. Notice the Comments box. You can enter info about the file or any comments you feel are pertinent, and they will be stored with the file.
3. When you're done looking at it, you can put it away by clicking in the Close box in the upper left corner of the window.



If you check "Locked" in the Info dialog, the file can't be thrown away, at least not so easily. Try locking one of the Sample Files, dragging it to the trash, and then emptying the trash. You'll see a dialog box appear:



As the message says, you can choose to delete a locked file. Make sure you take that file out of the Trash and don't delete it.



Although the Macintosh operating system has a pretty solid “find” capability built in (as you’ll see in this section), it’s no substitute for really good and structured organization. We

mentioned before that the way someone



keeps their desk in real life will probably reflect how they’ll keep their computer desktop. We just want to say that with a computer, it’s even easier to lose something than it is in the real world — unless of course you have a demon dog like we do, who routinely chews up important documents. Unless you end up with a really faulty and sick hard drive, this probably won’t happen on your Macintosh.

Finding Stuff

“Now where did I put that file? I *know* that I had it on the desktop!”

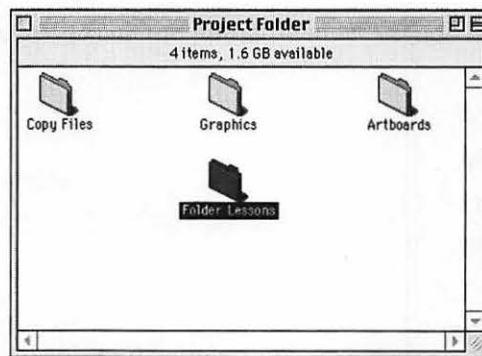
If you use a computer long enough, you’re bound to say these words. And worse. Nothing is more frustrating than losing a file. You know it’s there somewhere, but you just cannot find it. You click, double-click, look through lists of files, and slowly get increasingly frustrated.

Fortunately, the people who write computer operating systems know what a problem this can be. They are constantly losing stuff themselves, and at some point decided to build tools for finding troublesome, lost files.

The function is called *finding*.

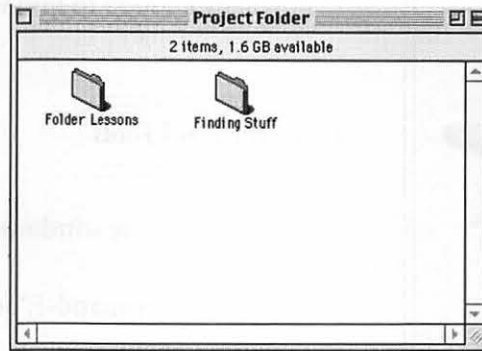
Getting Ready

1. Open your **Project Folder**.
2. Create a folder called “Folder Lessons”:

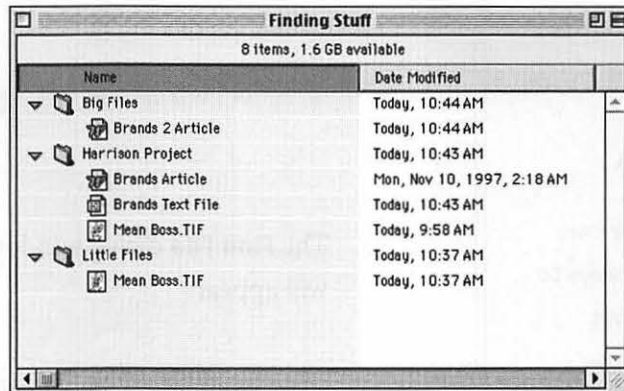


3. Put the three folders that we’ve been using (**Copy Files**, **Graphics**, and **Artboards**) into it. You should have only one folder showing, the **Folder Lessons** folder that you just created.

4. Open the **SF-Basic Macintosh Operations** folder on the CD-ROM that came with the book. Drag the **Finding Stuff** folder into your **Project Folder**:



5. Open the folder, and Control-click the window, setting the view to **as List**. Click the arrows to the left of the folder names to open them into the list view:



6. As you can see, this set of folders contains several files with the same names, some with different modification dates, and some with different sizes. This is the typical kind of mess that occurs when you're working on a dozen things at once.
7. Close the folder by pressing Command-W or by clicking in the Close box in the upper hand corner of the window.



Everyone has their own personal favorite ways to search for stuff, but without a doubt, the easiest and (usually) most effective is by knowing some part of the name of the file.

FINDING BY NAME

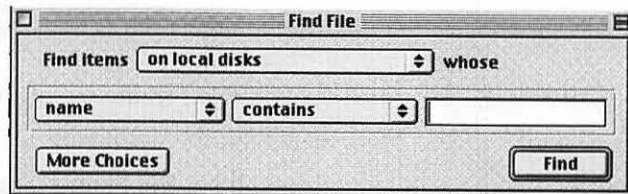
By far the most common method you will use to find files is by searching for their name. Usually you know what you called a file. You might not remember *exactly* what you called it, but you know *about* what you called it. This is normally enough to find what you're looking for.

Using the Find Tools

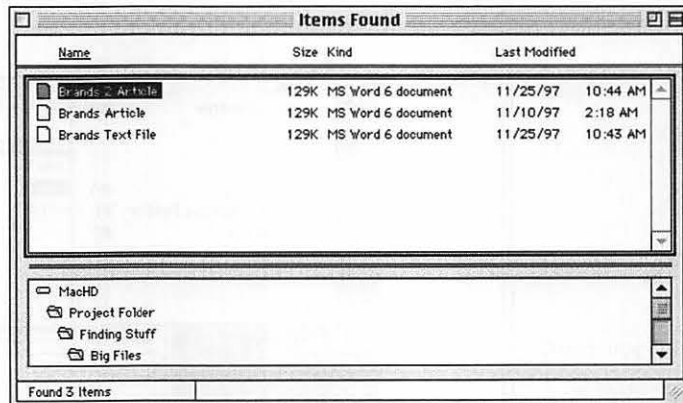
1. Close all the windows on your desktop.
2. Press Command-F, or use the **Find** function on the **File** menu:

File	Edit	View	Spe
New Folder			⌘N
Open			⌘O
Print			⌘P
Move To Trash			⌘⇧⌘
Close Window			⌘W
Get Info			⌘I
Label			▶
Sharing...			
Duplicate			⌘D
Make Alias			⌘M
Put Away			⌘Y
Find...			⌘F
Show Original			⌘R
Page Setup...			
Print Window...			

3. The **Find File** dialog window — the first of two parts of the Find tools — will appear:



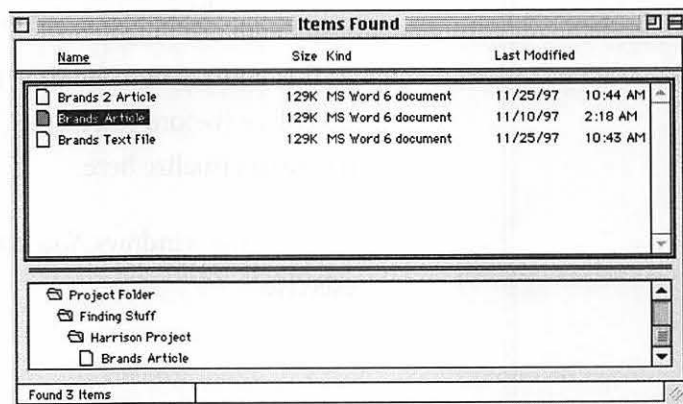
- There is a blank box where you can enter your criteria. Type in the word “Brands” and click the **Find** button. The second of the two tools will appear. This one is called **Items Found**:



- As you can see, the function has found three different files with the word Brand somewhere inside it. The first item is highlighted, and in the bottom portion of the window, you can see that it is inside the **Big Files** folder, which is inside of the **Finding Stuff** folder, which is inside the **Project Folder**, which is on your hard disk. Simple, right? While this may sound complex, seeing the hierarchy visually in the window makes it pretty easy to understand. Click once on the second item in the list. Its location will be displayed in the bottom portion of the window:



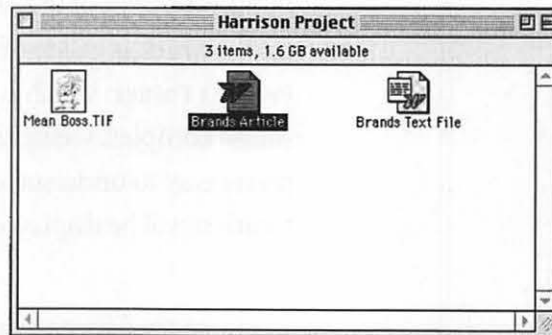
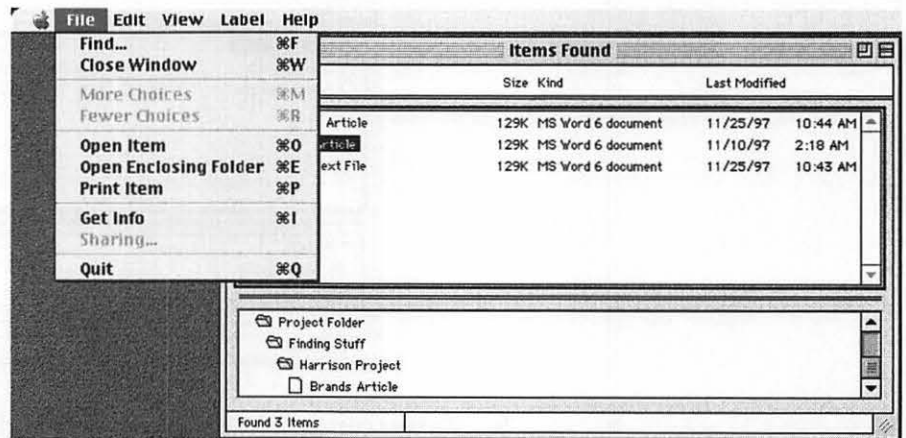
This view is a very powerful tool, because you can actually drag stuff from here to the desktop, make aliases (a pointer file that you'll learn about later), and copy files. You can also open the folder in which a specific file happens to be.





Don't forget that you might see file names or stuff in the background here in the course that could be different from what your system shows. No two systems are set up exactly alike. We tried to minimize this happening, but we're sure we didn't catch every instance.

6. The *Brands Article*, the one you were looking for, is inside the **Harrison Project** folder. You can automatically open the folder this item is in by choosing **Open Enclosing Folder** from the **File** menu or by pressing Command-E (for *Enclosing*):



7. At this point, you could drag the file to where it should have been in the first place (before you lost it). You don't have to move this file — we're trying to visualize here.
8. Close all the windows. You can leave the **Find** windows open for the next exercise.

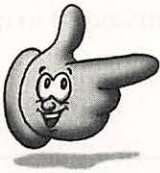
OTHER FIND METHODS

There will be times when simply knowing the name (or part of a name) will not be enough to find the specific file you're looking for. In these cases, there are several other methods of finding files.

The first thing to notice is that when the **Find** command locates a list of files that match your criteria, the view within the **Items Found** window gives you some insight into the differences between items in the list.

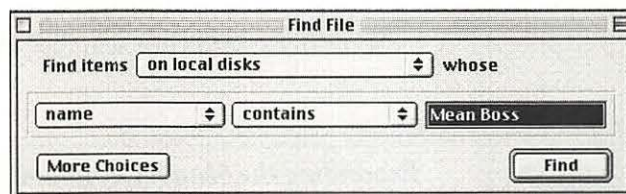
Let's say, for example, that you had two pictures of your mean, whip-wielding boss. One (the original) was black and white. For publishing in the company newsletter, though, you wanted a color version. So you took your painting program, colored the original, and saved it into a different folder.

You know that the colored file must be bigger, since it contains color data, whereas the original was only black and white. You know the name of the file is Mean Boss.

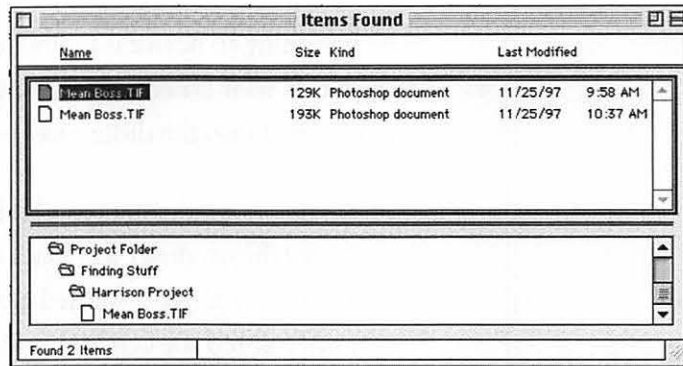


More Finds

1. Press Command-F to access the **Find** command. If it's already on your desktop from the last exercise, type in the name Mean Boss and click the **Find** button:



- When you click the **Find** button, you'll see that indeed, there are two copies of the same file. But notice that the size of the file is displayed, as is the last time the file was modified:



- At this point you could see that the larger file — and the one that was modified last — is the one in the **Harrison Project** folder.
- You can put the **Find** windows away. Either click in the Close box for each file (upper left corner of the window) or press Command-Q to quit the program.

USING OTHER SEARCH CRITERIA

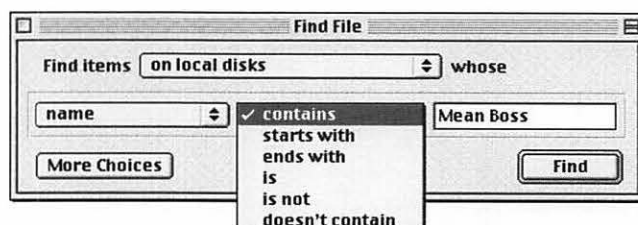
The Find command that comes with your Macintosh is a relatively powerful search command, providing several methods of locating information on your system and connected disks.

You can expand your searches in many ways.



Expanding the Search Command

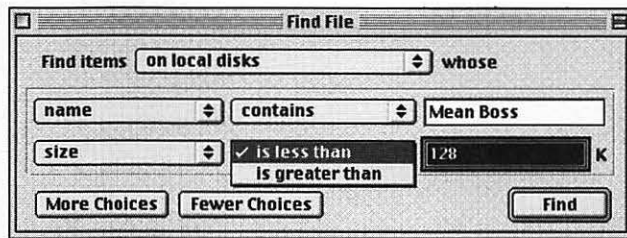
- Press Command-F to access the Find command. When it appears, click on the pop-up menu that currently says **contains**:



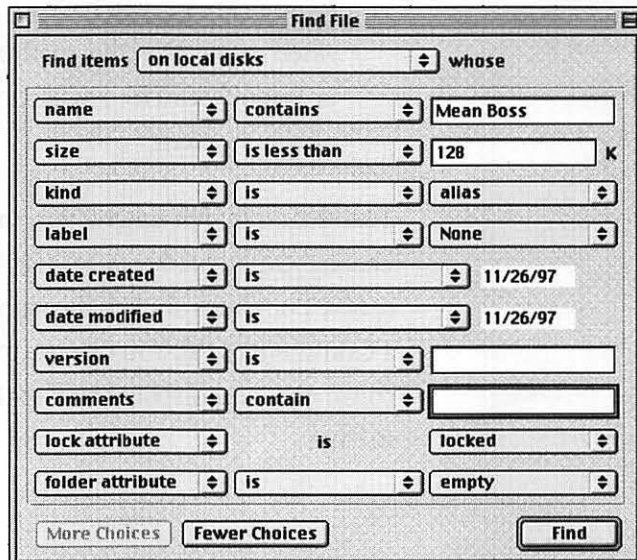


There are search criteria here that we've never used in the ten years we've been working on the system. That's not to say they won't be the most important to you, though. Who knows when you might desperately need to find a locked file, or an empty folder.

2. As you can see, there are several different ways you can use the name search. You might want an exact match, for example, or you might need to exclude certain letters or numbers from your search. You could find things that end with or begin with certain characters, or look for files that *don't* contain certain text.
3. Click on the **More Choices** button. The window will begin to expand to make room for the **Size** find option. You can see there's a pop-up menu there that lets you look for a size smaller than or larger than a specified size:



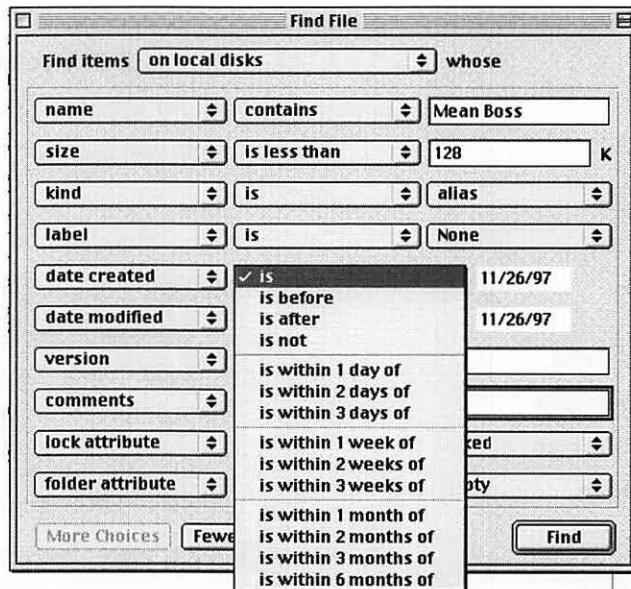
4. Open all the Choices by continuing to click **More Choices**:





Date Created and Date Modified searches will prove very important if you're in the graphic arts industry, when you're often faced with picking from two or two thousand files with similar names. How many different ways can you name a file that has a picture of a man on a beach, or a dog in a car?

5. Take note of two important search methods that you just uncovered. These are the **date created** and **date modified**. Click on either of these date-related pop-up menus and look at your choices:



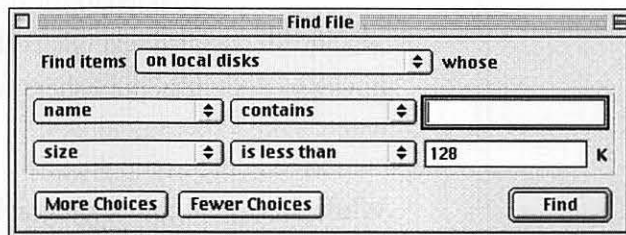
6. As you can see, you have a broad range of date-related searches. Trust us when we say that this method — the “I know I did that work last Thursday or Friday” search — will come in handy as you become more experienced on your system.

The second search criteria you should take note of is the **comments** selection. Earlier, you learned how to “Get Info” for a file (click the file and press Command-I or Control-click the icon and select **Get Info**). In the **Info** dialog box is a Comments field. You can use this search method to look through those comments and display any files that contain (or don't contain) specific information.

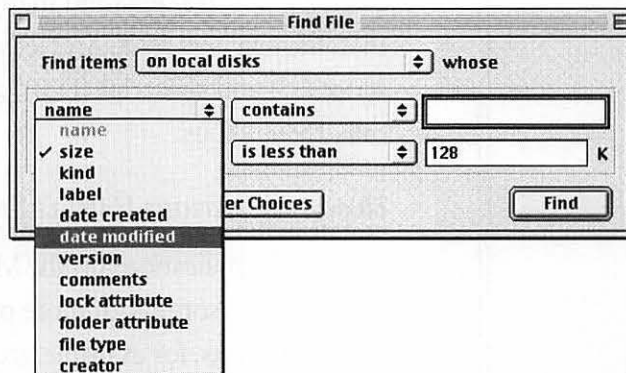


Customizing the Find Dialog Box

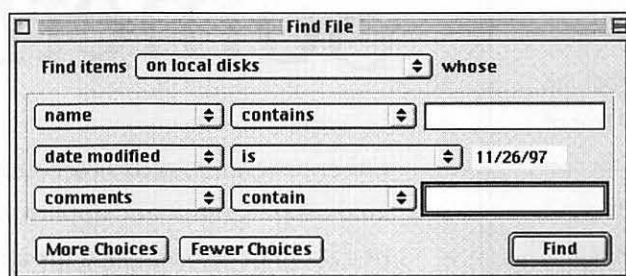
1. Click the **Fewer Choices** button until only two search criteria are showing (**name** and **size**):



2. **Name** is important, so we'll leave that as the first search method. The next most important method is, let's say, **date modified**. Click the **Size** button and use the pop-up list to put **date modified** next in the window:



3. Click the **More Choices** button, then click the **Size** button (it's moved down the list) and replace it with **comments** and **contain**:



Now, whenever you access the **Find** command, these three criteria will be the first in the list. You can, naturally, customize the command to fit your needs.



This artwork was done in Adobe Illustrator, one of our absolute favorite programs. Oops! We said we wouldn't tell you what our favorites were, for fear of improperly endorsing them. Oh well. It's too late now. "Jury, disregard that last statement!"

Formatting Text

When the Macintosh first came out, it was the first popular, mass-produced computer that gave its users the ability to change typefaces. It was that functionality, more than any other — including icons, the mouse, and other innovations — that led to the desktop publishing revolution. The way the Macintosh handled text (also called *fonts*) and graphics brought real computer power to designers, publishers, artists, and other people in the graphics industry.

While this isn't a course on graphic design (there are over 20 such books in the Prentice Hall/Against The Clock library), it is important that you know the basics of formatting text elements in a document.

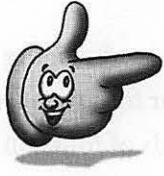
Almost all Macintosh programs allow you the opportunity to select text, and apply characteristics to that text. For example, there's *italics*, which you've seen throughout this book (and many others); there's also **bold** text, which is darker than the text around it. And let's not forget **outline** text, **Shadow** text, superscript (x^3) and subscript (H_2O), underlined, ~~strikethrough~~, and something called SMALL CAPS.

HOW APPLICATIONS HANDLE TEXT FORMATTING

Almost all applications on the Macintosh allow you to change and manage type styles — some with more precision than others. Applications designed for the graphic arts, for example, are more likely to provide you with tools to really fine-tune the appearance of type — both on screen as well as in printed output. With these tools you can do some really neat stuff with type.

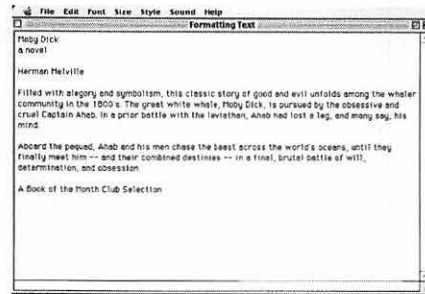
Something Fishy

Other programs, such as accounting or bookkeeping programs, statistical analysis programs, and applications that are more concerned with the accuracy of data than they are with the appearance of type, may provide you with less control over type. If you're in the graphic arts industry, though, it's likely that you will be working with page layout and illustration software that will let you accomplish almost anything when working with type.

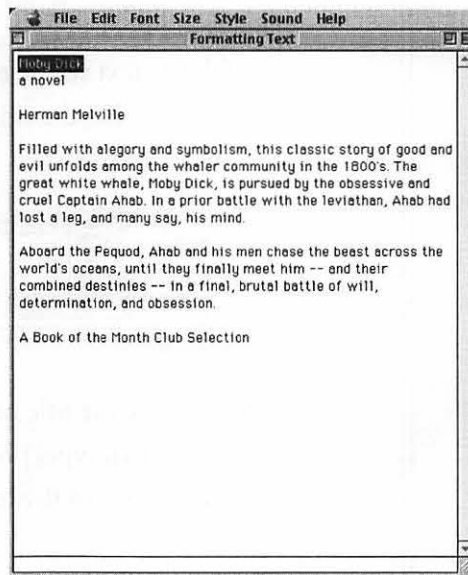


Working with Text

1. Find the file called "Formatting Text." Double-click the document. This will launch the SimpleText program that we used earlier.



2. When you move the cursor into the area of the type, it will turn into a small "I" beam. Use the I-beam to "paint" the first line: Moby Dick. It will become highlighted (much the same way that the titles of folders or icons become highlighted when you click on them):



In case you're wondering why this window is smaller than the one you're probably looking at, it's because we resized it so that the screen capture wouldn't be a million jgabytes.

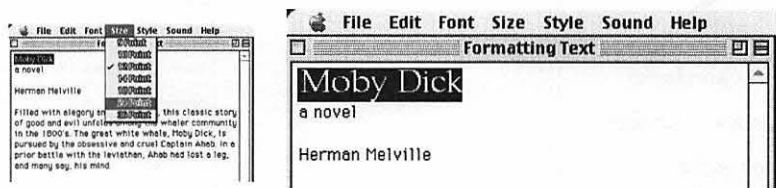
- Go to the **Font** menu. Click on it and move the mouse down the list until the font name **Palatino** is selected. Click on it. (Your font menu will probably look different than ours. We have hundreds of fonts on our systems since we publish books):



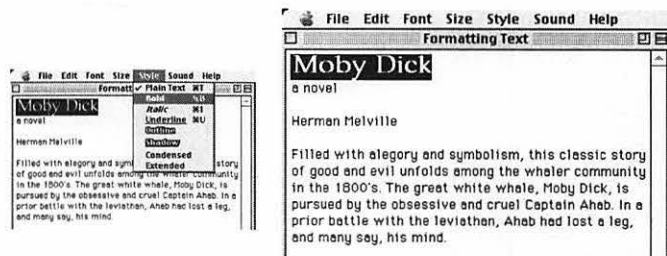
- The words "Moby Dick" will now be in a different type face: Palatino:



- With the text still selected, go to the **Size** menu, and select 24 points. When you do, the title will become considerably larger than it was:

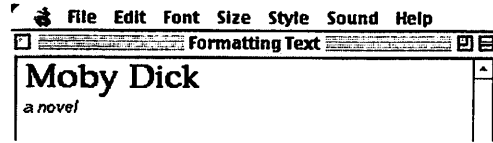


- Now make the title bold using the **Style** menu. Bold type is slightly darker than normal type, providing a means of making something stand out from the rest of the text:

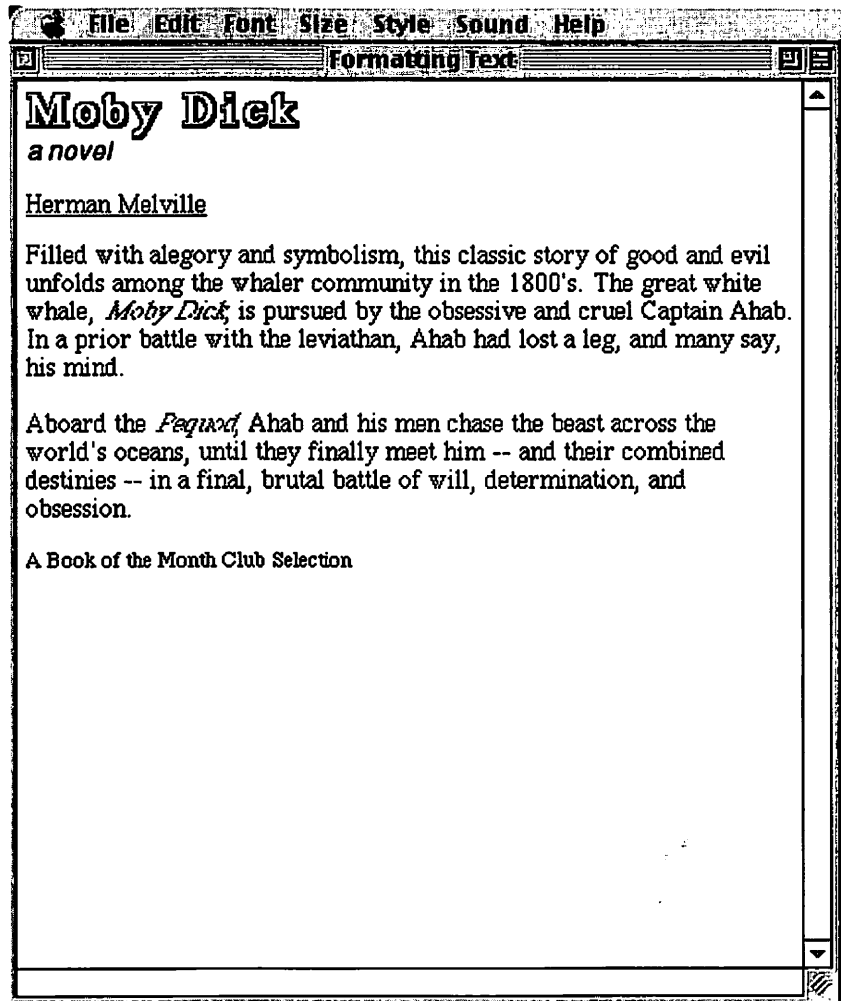


Points are a measurement used for type size. A point is exactly 1/72 of an inch.

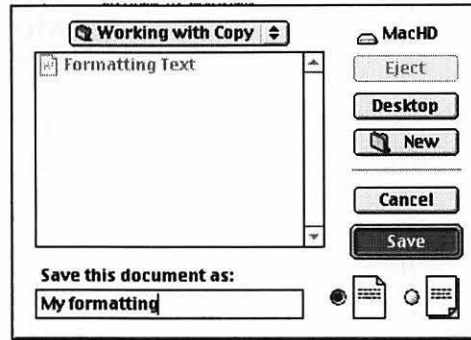
7. Highlight the words "a novel." Using the menus, select 10 point, helvetica and make the words italic:



8. Look at the changes that we've made to the document. One hint: we changed all the text below the "a novel" to Times, and played around with the sizes a bit. We also italicized some of the words within the text itself:



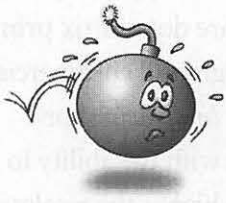
9. See if you can make your document look like this one. When you're done, select **Save As** from the **File** menu and give the document a name that you'll remember:



10. You can keep the document open if you want, or close it. We suggest that you put it in the Copy Files folder.



Although the Macintosh is certainly respected in the internet, interactive, video, and animation industries, it is in the printing business that the Macintosh has its strongest hold and most loyal supporters.



Don't let us give you the impression that the Macintosh can in any way replace talent. The software tools used by professional artists are just that — tools. Being a good designer takes a lot more than good tools. It takes talent, vision, experience, training, and a productive and supportive working environment.

Printing

As we've seen so far during the course, the Macintosh is quite adept at displaying your work on the screen. When you begin to work with various commercial tools, either at school or at work, you will see programs doing amazing things: creating the most complex artwork and page designs imaginable. You can create almost any artistic vision or design using the system. What once took airbrushes, cameras, paints, markers, razor blades, tape, and a myriad of hand-skills can now be executed on a Macintosh without leaving your desk. Although this can certainly be a bad thing, it also means that an artist can apply their talent to a project with a minimum of distractions.

Displaying your work on a monitor, however, is only half the battle. The other half is putting your work on paper. And that's where printing comes in.

How Applications Print

With the possible exception of some game software, all commercial applications on the Macintosh can print what you see on the screen. The ability of the computer to show you what you've "got" on screen is called WYSIWYG, or "wizzy-wig" — "What You See Is What You Get."

Printing stuff on a Macintosh is very easy. That's not to say you will not encounter problems — you will, we can assure you. Complex documents created with sophisticated imaging, illustration, and page layout software will sometimes cause you sleepless nights when they absolutely refuse to cooperate at printing time. But for the most part, printing is the same, and simple to perform.



As people who do a lot of printing, we wanted to say that the entire issue of print drivers, PostScript Printer Description (PPD) files, and output in general is an area that no one understands fully. You will have problems printing documents that should print just fine — no big graphics, no complex illustrations, no weird content at all. Other times documents that have all kinds of screwy stuff in them will print in moments. If you really figure it all out, call us and let us know. Right now we're trying to output this file, so we gotta go.

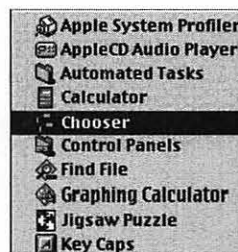
THE SYSTEM

There are three different components that come into play whenever you want to print your work on a Macintosh:

- The Application. The first thing that is usually involved in a printing event is the application program that you used to create the file. We say “usually” because you can print directly from the desktop (or *finder*). This is a useful technique when you need a hard copy of a folder’s contents.
- The second component of the process is called a *Printer Driver*. A printer driver describes a specific type of printer. To pick a printer driver, we use a program called *Chooser*, which is under the Apple Menu. You will see this program in a moment. Another word for a printer driver is a PPD, or *PostScript Printer Description* file.
- The third component of the printing cycle is the actual printer to which you send your work. There are many different types of printers in the Macintosh world. The two most popular are dot matrix printers and laser printers. If your work is destined for high-end commercial printing, you will also learn about devices called *Imagesetters* or *Platesetters*, which are a lot like laser printers but with the ability to output very small dots. The smaller the dots, the higher the *resolution* of the device is said to be.

THE CHOOSER

Chooser is a specialized application located in the Apple Menu (the small multi-colored apple in the upper left corner of your menu bar).



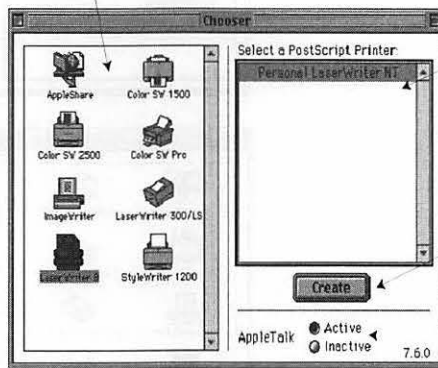
Early in the course, we told you that the *System Folder* contained special files and applications used by the Operating System to run your Macintosh and to provide services such as printing. Within the System Folder is a folder called *Extensions*. When you (or the people at the store) first set up your Macintosh, certain types of extensions (small files) that represent different printers are placed into this extensions folder. These appear in the left side of the **Chooser** window. You can remove these extensions if you want, and have less printer icons appear in the **Chooser** window.

If you click on a specific printer icon (on the left side of the window), any such printers connected to your system will appear on the right side. If several printers are listed in this window, you should click on the name of the one that will be used for the current print job.



The icon that's called AppleShare will come into play later on when you learn about networking. It's not a printer — it represents the network that your computer (might be/is) connected to.

Lists the devices available on your system



The name of the device appears here once you click on it.

Creates a PPD (driver) for a new, unlisted device

Allows you to turn Appletalk (the built-in networking software) on or off.

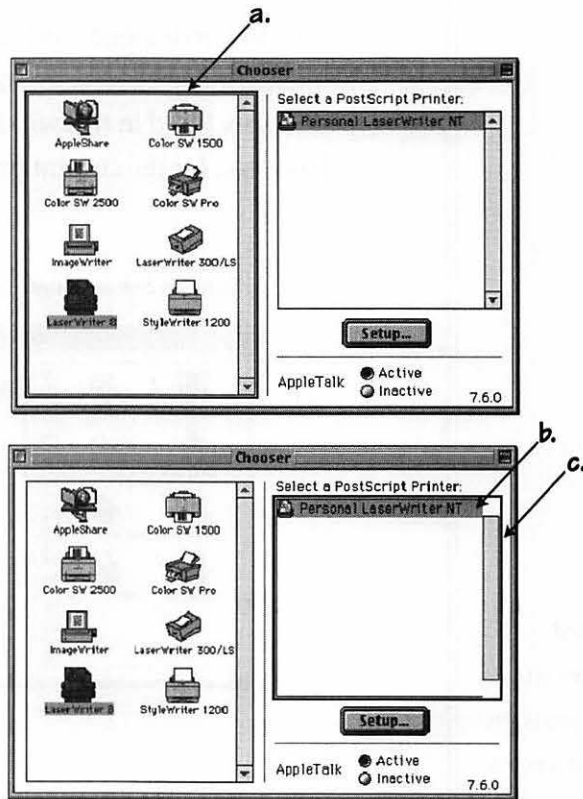
ACCESSING THE CHOOSER

When you click on a printer icon in the left side of the **Chooser** (a.), the window they are in takes on a black outline.

The name of the device appears in the window on the right side (b.). When you click on the name to select it, that window takes on the black outline (c.).



When you first install your software, many different types of printers are put onto your machine. You can go into the Extensions folder (inside of your system folder) and find these names. If you take them out of there, they won't show up in the **Chooser** window.



Setting Up Your Printer

If your printer does not correspond with any of the default icons that are resident in the left side of the **Chooser**, check with the documentation that comes with your printer to see if a Chooser Extension is available. In most cases, a floppy disk comes with the printer that contains the extension. The



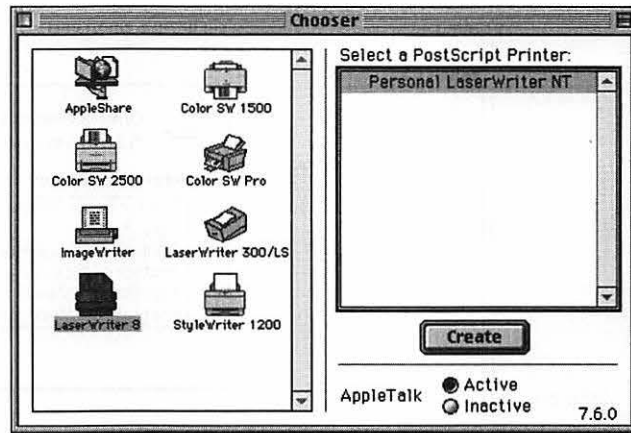
In this section, we talk about Spooling, or making something print while you're doing something else. This process is also called Background printing, since it occurs in the "background" while you're doing something else.

extension is put into the **System**→**Extensions** folder, then the computer is restarted.

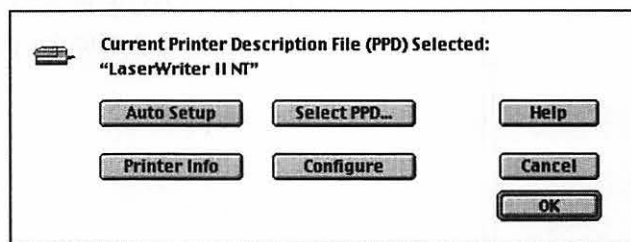
Your printer's icon should then be in the Chooser when it is accessed.

Because your printer is a newcomer, it needs to be setup. The button underneath the PostScript Printer selection window will say either **Setup** or **Create**. This button allows you to create a new printer driver for your printer.

- **Create** — If the button says Create, it will read your printer's specifications and create a configuration to match its requirements.



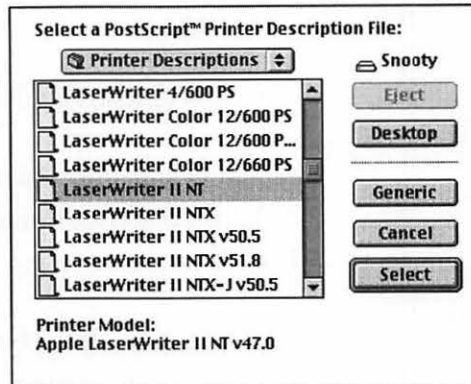
- **Setup** — If the button says Setup, it will take you to a window with several options for you to choose from to setup your printer.



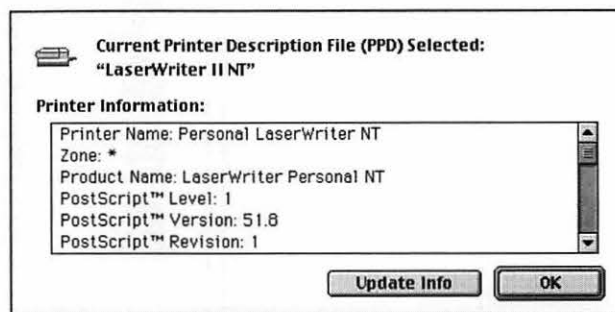
- **Auto Setup** — reads your printer's requirements and sets up a PPD.
- **Select PPD** — goes to the PostScript Printer Description (PPD) window to allow you to manually select the appropriate PPD for your printer.



Each of the three ports on your Macintosh has a different icon. Look on the back of your machine, where the cables are plugged in, and take a look.



- **Printer Info** — reads your printer and shows you the specifications.



- **Configure** — sets up those printers which can be programmed to receive configuring software that can customize its settings.

THE OUTPUT PORTS

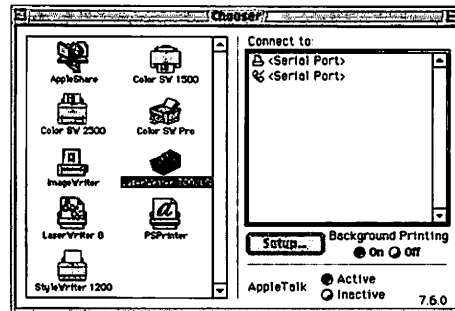
There are three ports in the back of your Macintosh computer that correspond to the needs of your particular printer.

- Printer port
- Serial port
- Modem port

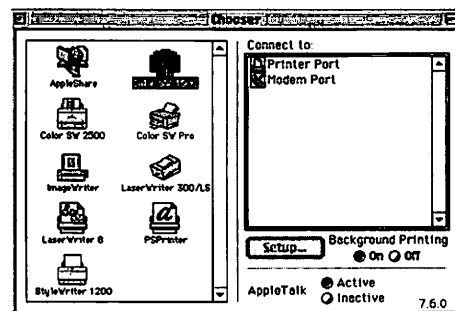
The Printer port is the most commonly used port for printers. But some printers, such as those of IBM configuration, require the Serial port for connection.

If you have a Fax/Modem connected to your computer, it will need to be connected to the Modem port.

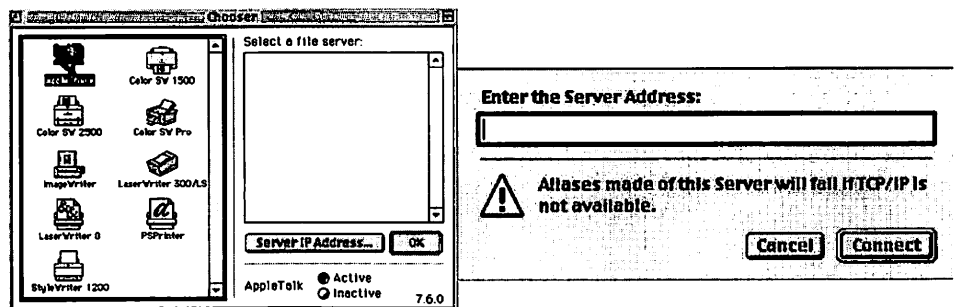
Here are some examples of what options are available for some of the default icons that come with the computer. The LaserWriter 300/LS asks for the Serial port.

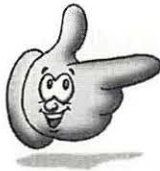


The Color SW 1500 asks for the Printer or Modem port. Some color printers require that AppleTalk be turned off to work on the Printer port. Be aware.



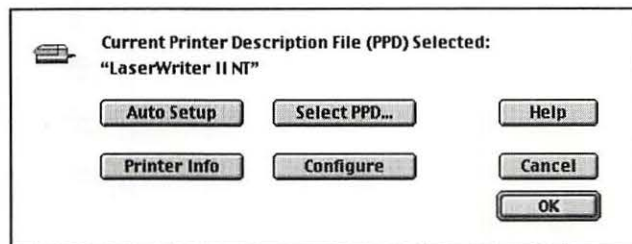
The AppleShare icon is for networking and sharing with other connected computers. The right side window, where printer names appear, is where the names of Servers will appear to choose from. When you click the Server IP Address button, a window to enter the Server's Address appears.





Using the Chooser

1. Go to the **Apple Menu** in the menu bar and scroll down to launch the **Chooser**. Make sure that your printer is connected and online.
2. In the left side of the **Chooser** window, click on each of the icons to see what appears in the right window.
3. Click on the items that are in the right window. Make no further selections, other than to click **Cancel** in the warning windows that appear. You do not want AppleTalk to be altered unless you know that a printer needs it turned off.
4. Click on the icon of your own printer that is on the left side of the **Chooser** window.
5. When the name appears in the right side window, double-click on the name. This will bring up the Setup dialog box.



6. Click on the **Select PPD...** button. You will be taken to the PostScript Printer Description window. Scroll through the various PPDs to view what is available. Click **Cancel**.
7. Click the **Printer Info** button. View the information about your printer. Click **OK**.
8. Click the **Configure** button. You will probably see a warning of **No Installable Options**. Click **OK**.
9. Back in the Setup window, click **Cancel**. In the **Chooser** window, click the upper left button to close the **Chooser**.



You can use the pop-up menu to change from one printer to another (**Set as Default Printer**). While you can also do this from the **Chooser**, it makes more sense to have all your printers on the desktop, where you can access them and change them with the Control-click option.

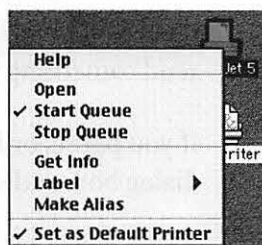
Desktop Printer Icons

In order for your Macintosh to print, you have to select a printer and ensure that you have the proper driver. Whenever you use the **Create** or **Setup** button, the Operating System sets up a special file on your desktop that's called (appropriately) a *desktop printer icon*.

On the system we've used to write this course, we have several printers. Here's a picture of the desktop printer icons for our printers:



You will notice that one of the two icons (the one for our HP Laserjet 5) has a dark outline around it. That's because it is the selected printer. Once you've used the **Chooser** to setup one of your printers, you can then change printers by Control-clicking the printer's desktop icon. You can also control print jobs from here as well:



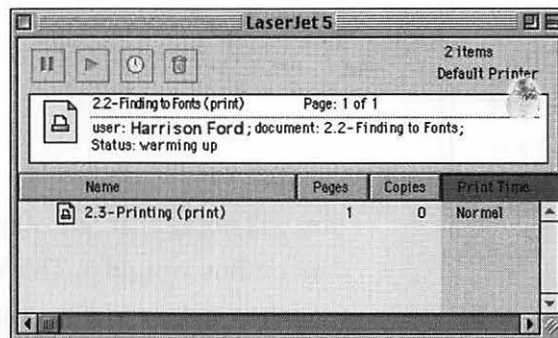
Spooling

As you can see, you can access the **Help** menu from this pop-up menu. You can also start and stop a **Queue**. A Queue is a list of jobs that are waiting to print.

In the old days of the Macintosh (and most other computers as well), when you wanted to print something, you clicked the print button, answered a few questions (like how many copies you wanted, which pages you wanted to print, etc.), and then waited until the whole job printed. This could take days (well, maybe not days, but it sure seemed like days when you were sitting there watching the monitor do nothing).

Today, a common process called *Spooling* is used by most computer operating systems. Spooling refers to the fact that when you print a job, it's sent into a special container (that's the *Queue*) and printed from there. In the meantime, you get your computer back so that you can continue to work (which makes your boss a happy camper).

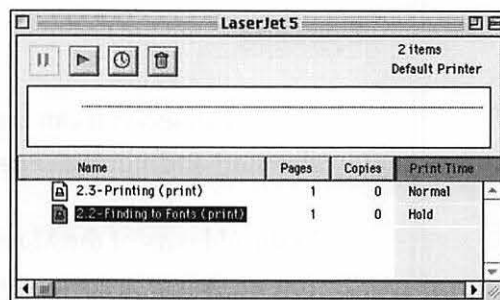
To show you a queue, we sent a few chapters of this book to the printer. Once we did, we double-clicked the LaserJet 5 icon on our desktop. Here's the dialog box that appears:



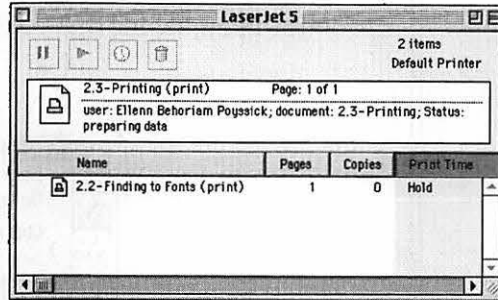
This dialog box gives us total control over the jobs being printed. Here's how:

▣ If we highlight any job, we can use this button to *pause* the job, or hold it until later, when we have the time to print it. This is good in case we want to send something to the printer, but not have it actually output.

If you pause, or *hold* a job, it moves back into the list at the bottom of the dialog box, and shows that it's being held under the Print Time listing:

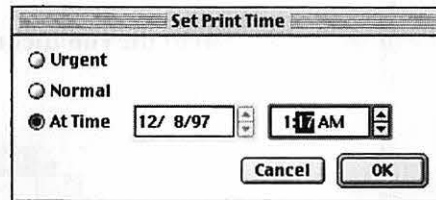


When you hold one job, the next one moves in to take its place:



▶ This icon lets us restart a job that was on hold. Simply click on the name of the job being held, click the **Go** button, and it starts printing again.

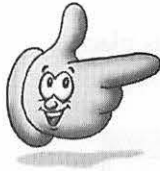
🕒 This clock icon allows us to select a job and specify an exact time at which we want the output to occur. This is extremely useful in a busy environment, where certain jobs are better left to the evening so that they don't tie up the printer during critical times:



If we set the print time to **Urgent**, it will go next — no matter how many jobs are in the queue. **Normal** keeps it where it is, and **At Time** let's us enter the time at which we want the job to start printing. Pretty cool, if you ask us.

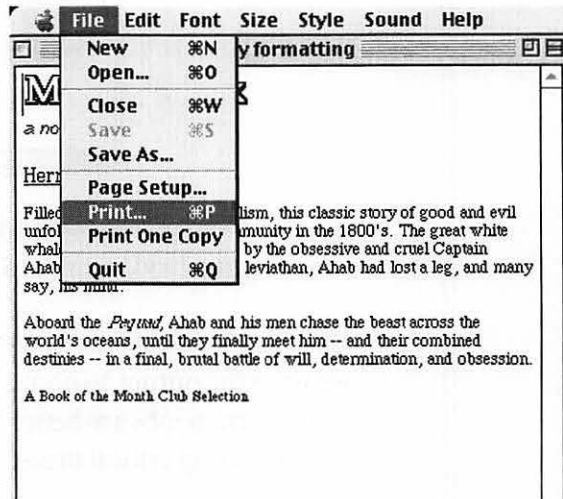
If you have a lot of jobs in the queue, you can also drag them around, moving them up or down in the list as necessary.

🗑️ Lastly, we have the old trash can. You can take any job that's in the queue and drag it to the trash, eliminating it from the queue. When it's trashed, it's gone, and if you want to output it again later, you'll have to send it to the printer from the original application.

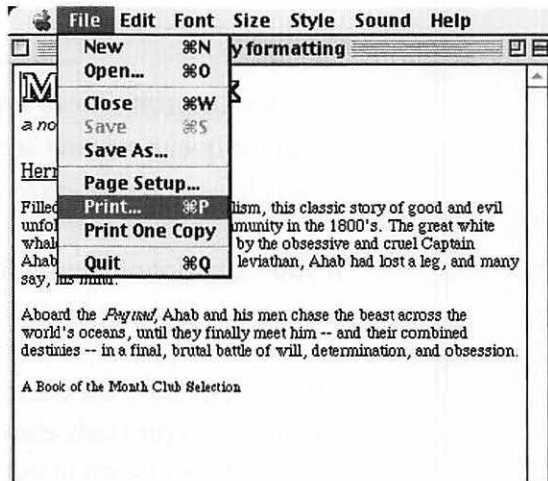


Printing a File

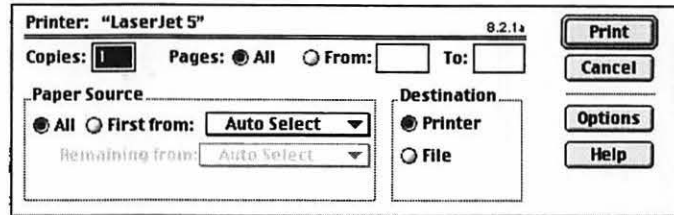
1. **Open** the file that you created in the Formatting section (*My formatting*).



2. Go to the **File** menu and select **Print**:



3. The *Print Dialog* box will appear:



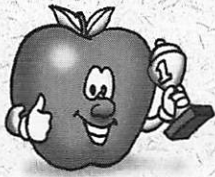
4. Click the **Print** button, and the document will be sent to whichever printer you've selected in **Chooser** or from the desktop icon, and shown at the top of the dialog box.



Notes:

CHAPTER 3

CONTROLLING YOUR ENVIRONMENT



CHAPTER OBJECTIVE:

To provide hands-on activities that will teach you many of the Macintosh Operating System's environmental controls; the settings, commands, and tools that allow you to customize the way your machine looks, acts, even talks. Through study of Chapter 3, you will:

- Learn about Aliases, tiny “pointer” files that dramatically reduce mouse clicks and keystrokes by letting you organize them anywhere on your system while retaining the identity of the original application, file, or folder.
- Know how to use the Launcher, a popular and highly-effective application that puts any document, program, or tool at your fingertips.
- Learn about Control Panels, a specialized folder within the System Folder that's accessible from the Apple Menu.
- Learn about many of the individual Control Panels and tools which affect the way your Macintosh looks, sounds, and operates.
- Learn about the Apple Menu, a collection of programs, folders, recent applications, and helpful tools.
- Learn to use the Calculator, the Notepad, StickyNotes, and, most importantly, the Apple Audio CD Player, which provides background music for those difficult days at work or school.
- Understand Networking, a method of connecting your computer to others — either in your building or around the world.

Controlling Your Environment

At this point, you're probably getting comfortable with the basics of running your Macintosh. These basics include creating folders, managing your desktop, creating files from within a simple application, changing fonts, and printing your work.

As you become more and more familiar with the basic operations of your Macintosh, you will increasingly find yourself wanting to customize your working environment. That's what we're going to explore in this section of the course.

Using Aliases

An *Alias* is a special file — one that occupies almost no space at all on your hard drive. What it does is *point* to another file. The file to which the alias points is called the *original*, and the alias acts just like that original in every way. You can put an alias anywhere on your system, and when you double-click it, it acts exactly as if you had found and double-clicked the original.

When you start working for real, you'll eventually end up with lots of files, and many levels of nested folders. To access any program or file on your system will require double-clicking your way through the maze of folders until you have found the correct item — the one you need at the moment.

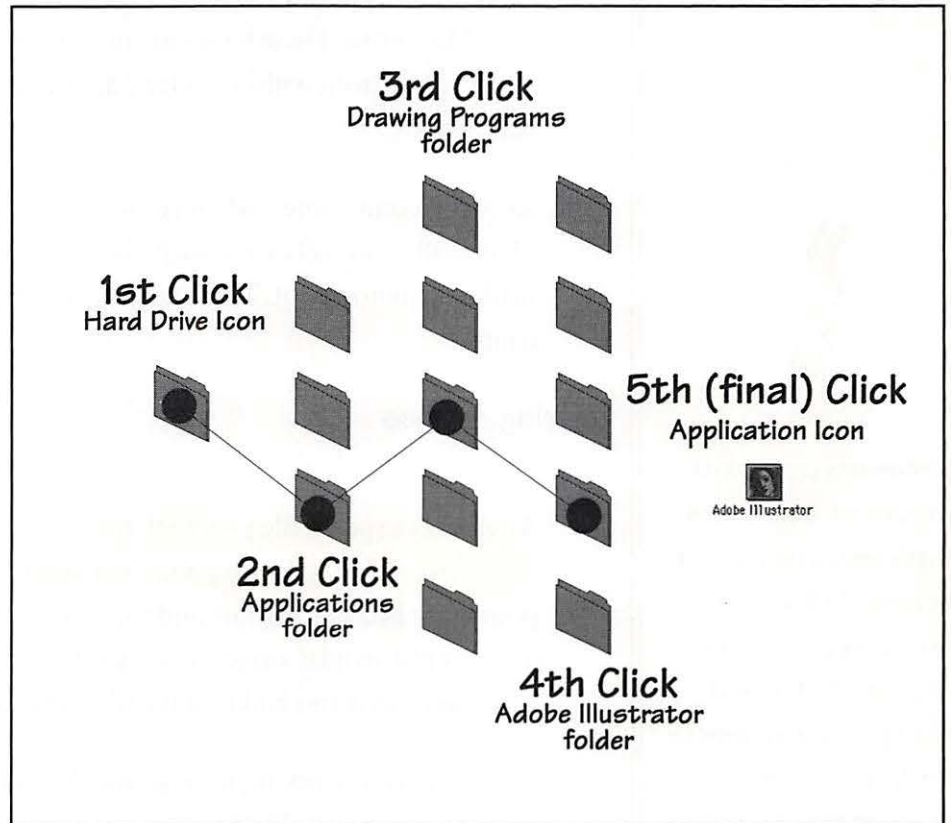


Customizing your working environment is something that's really a process, not an event. You'll always be fine-tuning your system. When you start working with application programs, like Adobe Illustrator, Microsoft Word, Photoshop, QuarkXpress, PageMaker, or others, you'll find that each of them also allows you to modify the way they look, feel, and act. When changing a program's environment, it's called changing the Preferences of the program.



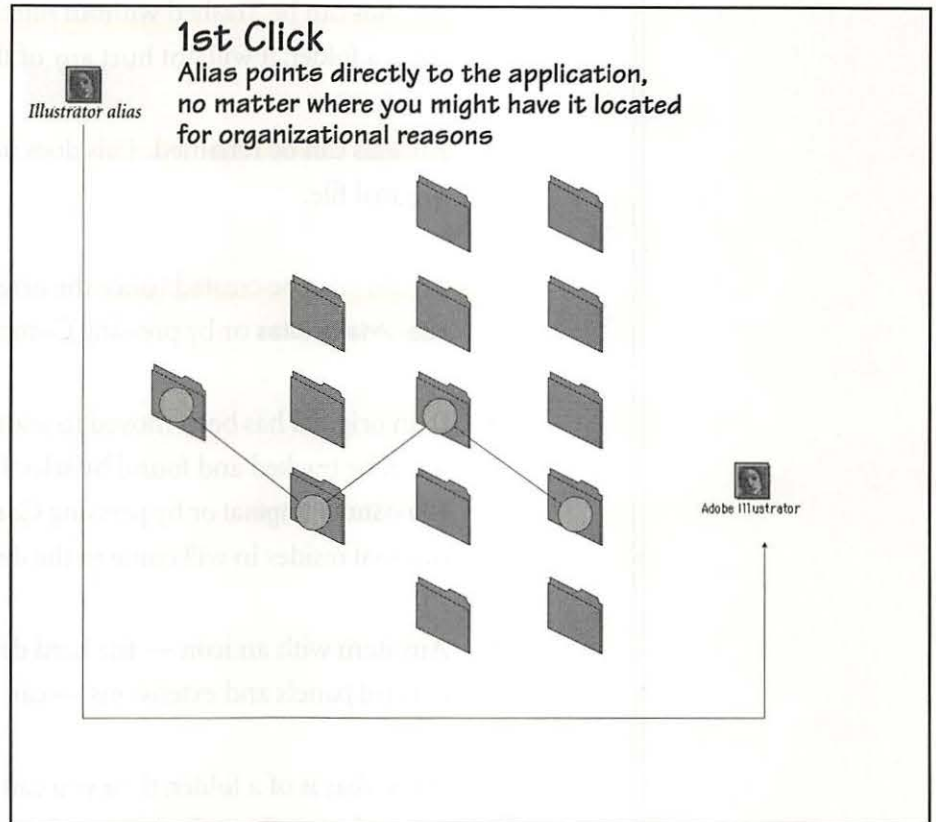
Throughout the book we've talked about how important it is to minimize keystrokes and mouse clicks. Aliases are an excellent way to make your system more productive and faster to use.

Here's an example:



Nesting items inside of folders is a great technique for organizing your folders, data files, and applications, but can easily lead to an awful lot of double-clicking to get where you need to go. In this case, you have to double-click five different times to launch (another word for start) the Adobe Illustrator program. That's a lot of clicking.

In this next illustration, we've created an alias of Adobe Illustrator, and placed it on the desktop. Check out the savings in clicking time:



Using an alias allows you to create custom pointers that act just like the original item, whether it's a folder, a data file created by a program, or a program itself.

In this example, double-clicking the Adobe Illustrator alias on the desktop immediately starts up the application — saving four double-clicks.

The alias keeps the same icon as the original, but italicizes the name text for quick identification.


New Folder


New Folder alias

Here are some rules and guidelines for using the alias concept.

- An alias can be duplicated many times, and each copy, regardless of where it's placed, relates to the original.
- An alias can be Trashed without hurting the original. And if the original is a folder, it will not hurt any of the contents.
- An alias can be renamed. This does not affect its connection to the original file.
- An alias can be created (once the original is selected) either by going to **File->Make Alias** or by pressing Command-M.
- If an original has been moved to another location that you can't recall, it can be tracked and found by selecting the alias, then going to **File->Show Original** or by pressing Command-R. The last folder that the original resides in will come to the desktop, showing the original.
- Any item with an icon — the hard drive, the Trash, the System Folder, control panels and extensions — can have an alias.
- If the alias is of a folder, then you can put items into the original folder simply by touching the items to its alias. In some cases, you might prefer to hold the Option key to send duplicates of the items into the folder.

DUPLICATING AN ALIAS

Once an alias is made, you do not have to trudge back to the original to make more aliases for other access locations.

- If you select an alias, then go to **File->Duplicate**, a copy will appear.



PUTTING ALIASES IN LOGICAL LOCATIONS

The best locations to put an alias are:

- The Apple Menu
- On the Desktop
- In the Launcher

To make an item more accessible, duplicate the alias several times and put them in these locations.

If the desktop is covered with folders, and you can't click an alias located there, the Apple Menu will let you quickly select the alias duplicate placed there.

If you open the **Recent Applications** or the **Recent Documents** folders, you will see aliases of the items that your computer keeps track of. The computer instantly makes an alias of an application or document and places the alias in the appropriate folder. This is a good example of how the Apple Menu uses aliases put there.

Items that are dragged to the **Launcher** window on the desktop are turned into aliases and placed automatically in the **Launcher Items** folder.

ACCESSING THE ORIGINAL

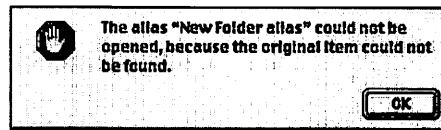
There might come a time when you actually need the original on the desktop to make some modifications. You do not have to go digging through folders to locate it. You also might have forgotten just where the original resides.

Merely single-click on its alias, then go up to **File->Show Original**. The folder that the original is in will open on the desktop.

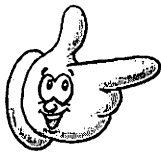


ERROR MESSAGES

If you have aliases lying about in various folders, and you choose to remove or delete the original, you will see a warning message if you double-click on one of the related aliases. The warning tells you it could not find the original.



The best thing to do in this case is Trash the defunct aliases.



Creating an Alias

1. Go to the Hard Drive and open its folder. Listed in the Hard Drive should be an **Apple Extras** folder. Open it.
2. You should see an **AppleScript** folder. Open this folder.
3. Inside this folder you should find the **Automated Tasks** folder. Open it.
4. Inside the **Automated Tasks** folder, press Command-N to create a new folder. Rename this folder "Hidden Tasks."
5. Click on the **About Automated Tasks** document to select it. Press Command-M to make an alias of it. Drag the alias into the **Hidden Tasks** folder.
6. Select the **Hidden Tasks** folder. Go to **File->Make Alias** to make an alias.

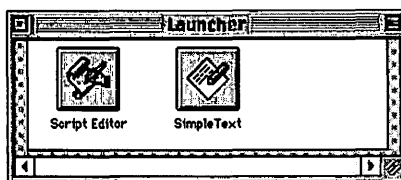
File	Edit	View	Spa
New Folder			⌘N
Open			⌘O
Print			⌘P
Move To Trash			⌘⇧T
Close Window			⌘W
Get Info			⌘I
Label			▶
Sharing...			
Duplicate			⌘D
Make Alias			⌘N
Put Away			⌘Y
Find...			⌘F
Show Original			⌘R
Page Setup...			
Print Desktop...			

Drag the alias out of the **Automated Tasks** folder and onto the desktop.

7. Now close all the folders you opened in this exercise.
8. On the desktop, you will see the Hidden Tasks alias you placed there.
9. Double-click on the alias. The **Hidden Tasks** folder, which still resides deep in the folders, will open on the desktop. Inside this folder will be the About Automated Tasks document alias.
10. Double-click on this alias. The application, SimpleText, will launch in order to open this text document.
11. You have succeeded in manipulating items without needing to dig deep in folders to get their originals. Close the SimpleText document. Close the **Hidden Tasks** folder.
12. Make an alias of the Hidden Tasks alias. Go to the Hard Drive and open its **System Folder**. Drag the “Hidden Tasks alias alias” to the **Apple Menu Items** folder. Close the **System Folder**.
13. Go up to the menu bar and pull down the Apple Menu (colored apple in upper left corner). Scroll down to the “Hidden Tasks alias” and access it.
14. The **Hidden Task** folder should appear once more. Keep this folder on your desktop.
15. Go to the **System->Control Panels** folder and double-click on the Launcher icon. This will put the **Launcher** on the bottom of your screen at the desktop.
16. From the **Hidden Tasks** folder, drag the About Automated Tasks alias to the interior of the **Launcher** window. You have just put another alias into the **Launcher**.
17. The About Automated Tasks icon in the **Launcher** has turned into a button. Single-click on this button in the **Launcher**. Observe how the document becomes launched and open.
18. Close the **About Automated Tasks** document. Close the **Hidden Tasks** folder.

Launcher

Launcher is a window that appears at the bottom of your desktop screen.



Items that are placed in the **Launcher Items** folder (which is located in your **System Folder**) turn into buttons that, when single-clicked, will launch/open the corresponding folders, documents, or applications.

Even though the **Launcher** is a control panel, it does not have a dialog box to make setting changes in. When you double-click on the Launcher icon in the **Control Panel** folder, the **Launcher** appears at the bottom of your screen.

If you do not want to activate the **Launcher** control panel manually each time you start your computer, you can set it to appear automatically by choosing **Show Launcher at system startup** in the **General Controls** control panel.

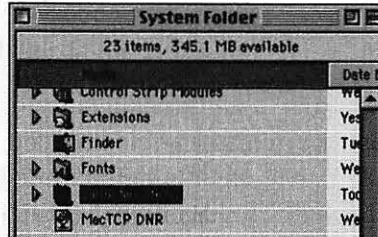
Here are some rules and guidelines to using the Launcher.

- Items placed in the **Launcher Items** folder can be either the actual document, folder, or application, or can be an alias.
- Items can be dragged, on the desktop, to the actual **Launcher** window to be placed there. This will not affect the original, because **Launcher** makes an alias of the document, leaving the original intact, in its current location.
- Items cannot be dragged back out to remove them from the **Launcher Items** folder. To remove any item, this folder must be opened on the desktop, and undesired items dragged from it.
- **Launcher** can be divided into category folders. These are helpful when keeping items together to access them through the **Launcher**.
- Launcher buttons can be sized (small, medium, large) by clicking on the **Launcher** window while holding the Command key.

PLACING/REMOVING ITEMS IN THE LAUNCHER

Placing items into the Launcher can be done two ways:

- By placing the actual item (or alias) into the **Launcher Items** folder, found in the **System Folder**.

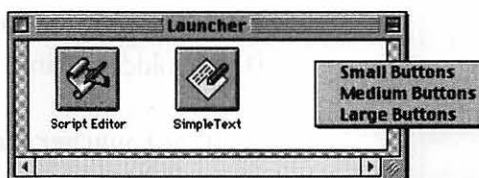


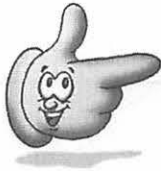
- By dragging, on the desktop, the item to the **Launcher** window, when it is present on the desktop.

To remove items, though, requires that you go to the **System Folder** and open the **Launcher Items** folder. You will see the icons of the items and can drag any out of the folder.



The buttons in the **Launcher** need only a simple, single click to operate. If you do not like the size of the buttons, you may change the size by holding the Command key and click-holding on the interior of the **Launcher** window. You will see the pop-up menu to select from.

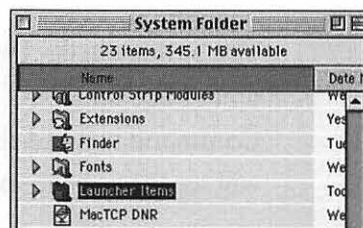




Basic Uses of the Launcher

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Launcher** control panel icon. What appears at the bottom of the screen?
2. Click on the desktop with your pointer arrow. Press Command-N to create a new **untitled folder**, which will appear on the right side of your screen.
3. Drag this folder into the **Launcher** window, at the bottom of your screen. You have added a new selection. Click on this new **Launcher** button of the **untitled folder**. Did you hear a click, as if you were flipping a switch? What else happened?
4. Hold the Command key and click-hold on the interior of the **Launcher** window. Select “Large Buttons” and observe how the icons appear in the **Launcher**. Hold the Command key and click to bring up the same submenu. Select **Medium Buttons**.
5. You now need to remove the **untitled folder** from the **Launcher**. Go back to the **System Folder** and view it **as List** from the **View** menu on your screen’s menu bar.

In the **System Folder**, scroll down to the **Launcher Items** folder, and double-click on its icon to open it.



You will see the icon of the **untitled folder**. Drag this out of the **Launcher Items** folder and into the Trash can on the desktop.

6. With the **Launcher Items** folder still open on your desktop, drag the actual **untitled folder** you created earlier to be inside the **Launcher Items** folder. Stay selected in this folder, but able to see the **Launcher** window.



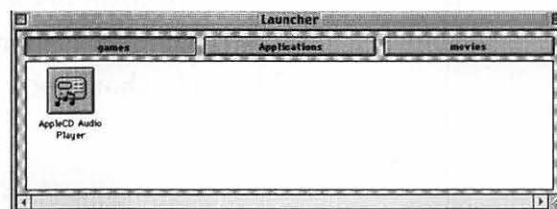
7. You will see that the **untitled folder** is not present in the **Launcher** window. Now, click on the **Launcher** window on your desktop. Did the folder suddenly appear?
8. Drag the **untitled folder** out of the **Launcher Items** folder and to the Trash.
9. Close the **Launcher Items** folder, then close the **System folder**.

LAUNCHER CATEGORY FOLDERS

You can use the **Launcher Items** folder to keep items in categories, just as you do with regular folders. These special folders will appear in the **Launcher** desktop window as extra category buttons that you push to see the content icons of that folder. The icons will become Launcher buttons.

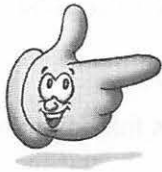
Seen here, the three Category buttons are Applications (default), Clients, and Games. When Category folders are used, the initial **Launcher** window defaults to become the Applications button.

In this example, the **Games** category is selected, and we see the **AppleCD** button present. If this button were pressed, the AppleCD Audio Player applications would launch.



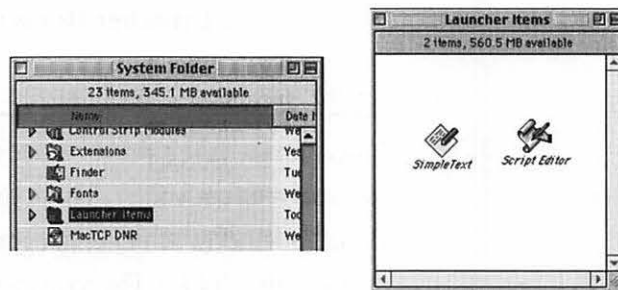
The restricting guideline to creating a Launcher Category folder is that you must be in the **Launcher Items** folder on the desktop when you create the new special folder. You cannot create a new folder on the desktop and drag it into the **Launcher Items** folder.

These Category folders act the same way as stated in the rules and guidelines of the Launcher, discussed earlier. The advantage to Category folders is that you can have more buttons at your service, just a simple click away.

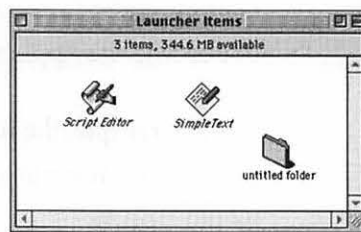


Creating and Managing Category Folders in the Launcher

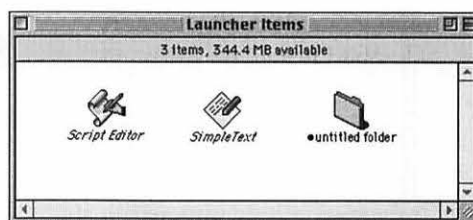
1. At the desktop, go to the **System Folder** and double-click on the **Launcher Items** folder icon to open the folder on the desktop.



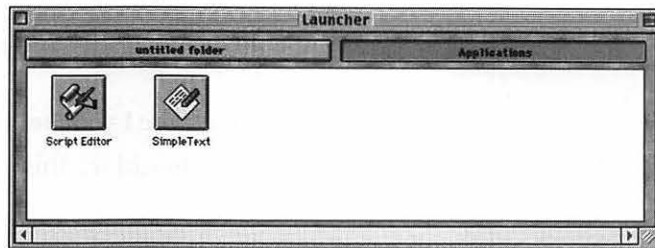
2. In the **Launcher Items** folder, press Command-N to create a new folder.



3. Click on the name of the untitled folder and before the name, type a bullet (•) by holding the Option key and pressing "8" on the keyboard. The name of the folder should now be "•untitled folder."



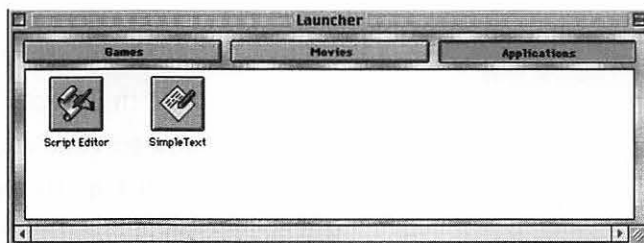
- If the Launcher is not currently on your desktop screen, go back to the **System folder**→**Control Panels** folder and double-click on the Launcher control panel icon.
- With the new Category folder created, the **Launcher** should look like this.



- Go back to the **Launcher Items** folder. Rename the “• untitled folder” to “• Games.” Create another new folder and rename it “• Movies.”



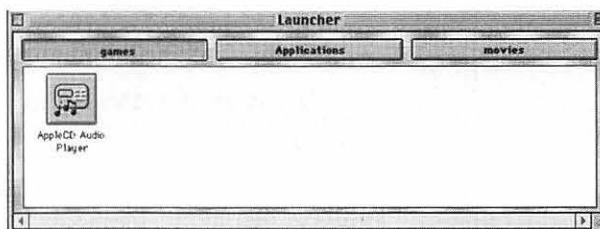
- Click on the **Launcher**. You will see the two new Category buttons.



- Go back to the desktop where the **Launcher Items** folder should be accessible. Go to the Hard Drive folder and open it. There should be a folder called **Applications**. Double-click on its icon to open it. You will see this.



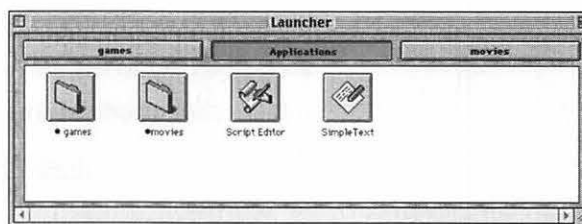
9. Click on the AppleCD Audio Player icon. Press Command-M to create an alias of this application. Drag the alias over to the **Launcher Items** folder and touch it to the “• Games” folder, so that it will move to this location.
10. In the **Applications** folder, click on the Movie Player icon. Press Command-M to make an alias of this application. Drag the alias to the **Launcher Items** folder and touch it to the “• Clients” folder.
11. Now, click on the **Launcher**. When you click on the **Games** category button, you should see this.



12. Click on all the Category buttons of the Launcher to see what buttons appear. You will also notice that each Category has its own color the window changes to when its Category button is clicked.

What do you do if you would like these Category folders to be accessible in the **Launcher**? You can't put a folder inside of itself. And to put its alias inside another Category folder would really confuse the issue.

13. Do this. Go to the **Launcher Items** folder. Click on the “• Games” name to insert the cursor in the text. Put one space before the bullet. Click on the “•Movies” name text and add one space before its bullet. Go back to the **Launcher** and click on the **Applications** button. The two Category folders will be present.



14. Close all open folders that are on the desktop. Keep **Launcher** active if you like it. Some users love it, others never keep it open. We're of the former group.

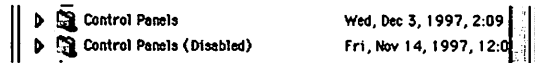


We could spend hundreds of pages talking about Control Panels. What we're going to try to do in this section is familiarize you with their basic usage, so you can experiment to your heart's content.

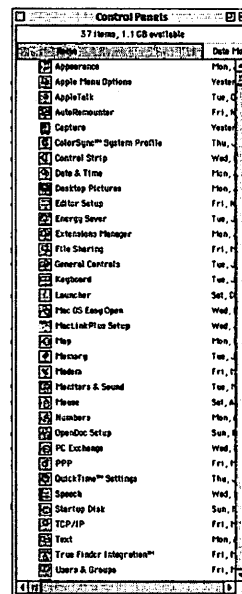
There are commercially available control panels that you might find yourself using as well. Naturally, we're going to cover only those that came with your basic system. If you do purchase commercial control panels, be sure to check the documentation that came with them.

Control Panels

Inside your **System Folder** is a special folder called **Control Panels**. Open your **System Folder**, and you will see two folders with the name "Control Panels." One of the two has the word Disabled in parentheses. This folder holds control panels that have been turned off:



Double-click the **Control Panels** folder and look at its contents:

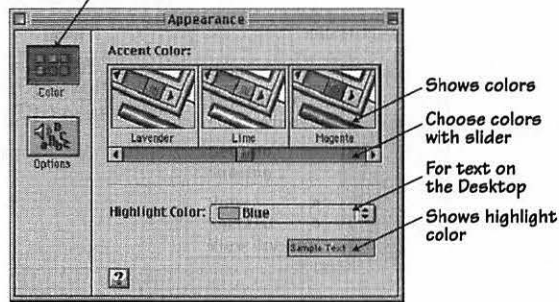


This collection of software tools, supplied with your Macintosh and installed when the system was first set up, provide you with extensive controls over how your system functions. Some are fun, others are critical to the operation of your system. All will prove important at one time or another. In this section of the course, we're going to explore these controls.

APPEARANCE

The **Appearance** Control Panel allows you to set some of the colors you see in the folders and text you see on the desktop.

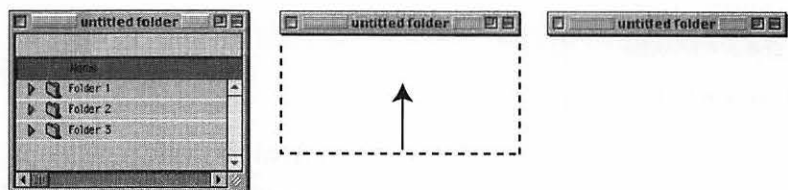
For customizing colors you see on the Desktop



The second choice offers you **Options** to change the way folder and dialog box windows work, and to change the System typeface fonts, and the platinum, metallic look of the windows.

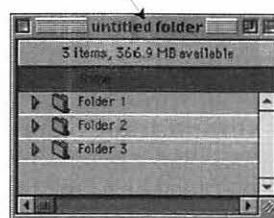
COLLAPSING WINDOWS

When you have quite a number of folder windows on your desktop, it can get very confusing to the eye. When a window collapses, it is also known as the windowshade effect. The folder window collapses up into the title bar, keeping the folder on the Desktop, but does not obscure other folders you need.



Collapsing a window can be done two different ways: by double-clicking on the title bar of the window; or, by single-clicking on the top right button of the window.

Double-click in the window header



Technique 1

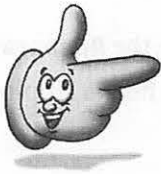
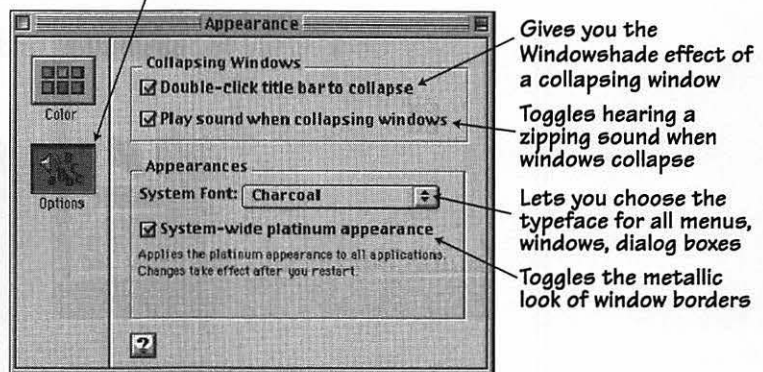
Single-click this button



Technique 2

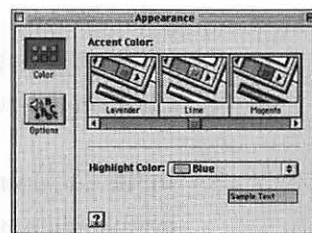
The double-clicking can be toggled in the **Appearance** dialog box through the **Options** button. Also, you can control whether you hear a zipping noise when the window collapses.

For customizing Desktop windows

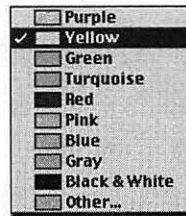


Managing the Appearance Control Panel

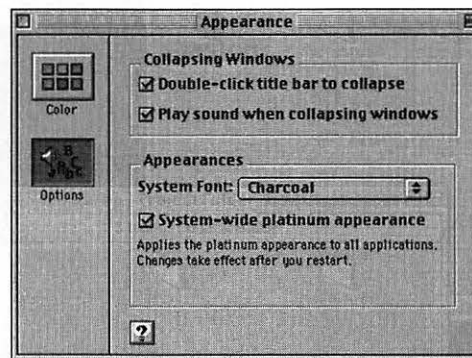
1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Appearances** control panel icon. The **Color** option will be what you see active.



2. Scroll through the **Accent Colors** to see the tints available. Select **Lime** as the chosen color.
3. Click-hold on the **Highlight Color** menu button. This affects the highlighting color you see when you use the cursor to highlight text on the desktop, such as a folder name. Select **Yellow** as the highlighting color.



- Click on the **Options** button under **Color** in the left column.

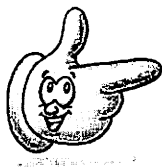
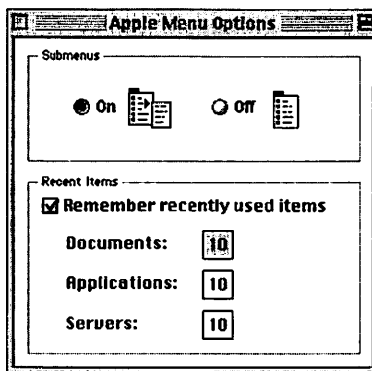


- Double-click on the window title bar where you see the **Appearance** name. Observe how the window collapses. Did you hear a zipping sound as the window collapsed?
- In the **Collapsing Windows** section, toggle both options Off. Now double-click again on the title bar. What change took place? Did the window collapse?
- Click on the upper right button of the window. Did the window collapse? Click on the button again.
- In the **Collapsing Windows** section, toggle both options back On. Now double-click again on the title bar.
- Altering the **System Font** and the **Platinum Appearance** requires the computer to be restarted, so we will not address this now.
- Go back to the **Options** section of this control panel and set the **Highlight Color** back to Blue.
- Close the **Appearance** control panel by clicking the upper left button of the window.

APPLE MENU OPTIONS

The Apple Menu, (the upper left colored apple icon of the screen's menu bar), is an instant access to other utilities, folders, aliases, and applications.

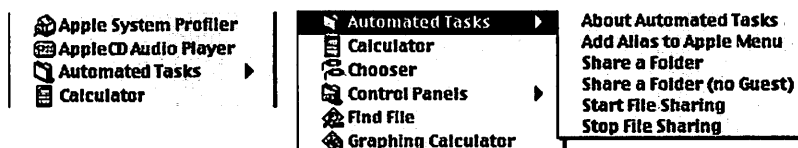
When an item in the Apple Menu has more selections to offer, such as folders, the submenus of these items are indicated by the small black triangle. The **Submenus** option must be On to do this. If **Submenus** is Off, you will be able to access only the items listed in the Apple Menu.



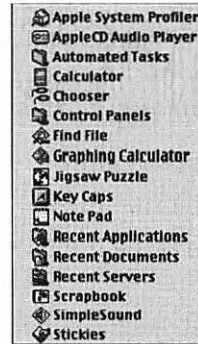
Using Apple Options

1. Open the **System** folder of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Apple Menu Options** control panel icon.
2. Go to the menu bar across the top of the screen. The extreme top left icon is the colored Apple Computers apple. Click-hold on this icon and you will see a menu of choices. This menu is the Apple Menu.

Some of the selections are folders. To recognize these, you will see a small black triangle pointing to the right. If you move the Arrow to an item with a triangle, the submenu will pop out, showing further selections in that folder.



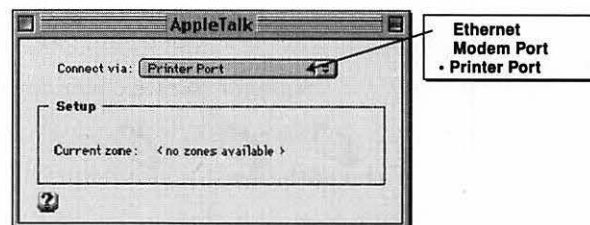
3. Make no choices in the Apple Menu. Let go of the menu and you will be back in the **Apple Menu Options** control panel. In the **Submenus** section, click on the Off button option.
4. Go back to the Apple Menu and observe if any of the items have submenus. Release the menu without making any selections.

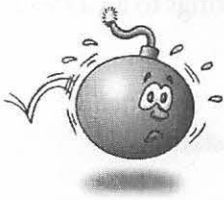


5. Go to the **Apple Menu Options** control panel, click the **Submenus On** button to make the submenus active again.
6. Close the control panel by clicking the upper left button of the window.

APPLETALK

AppleTalk is a control panel in which you choose the output port to which you need to send your information. You can select from Ethernet, Modem Port, or the most common, Printer Port. Most devices you buy will inform you which port needs to be used.



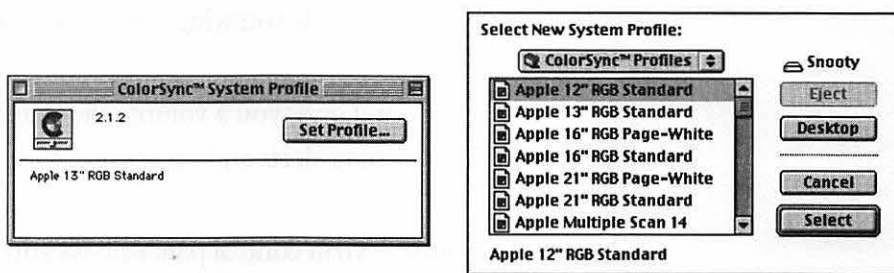


No matter how tempted you might be, don't trust your monitor to show you exactly the colors you'll get when you output your file to someone else's printer, or to film that will be used to generate commercial printing plates. Consult the technical staff at your printer before doing any important work on your system.

COLORSYNC™ SYSTEM PROFILE

One of the most common problems that occurs when doing color printing from the computer is that the colors you see on the screen are not always the colors you get on the printed paper.

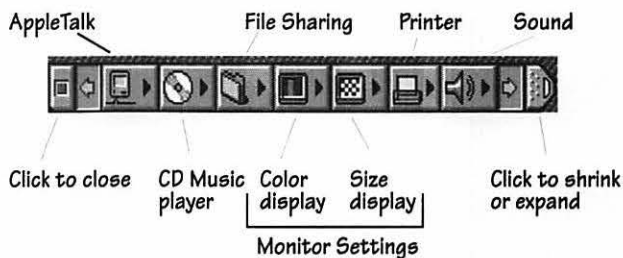
To try to synchronize the two, the ColorSync™ System lets you choose the Profile of the monitor you are using. In the control panel, you can click on **Set Profile**. This will bring you to a new list of monitors from which you can choose the monitor that best suits your own.



CONTROL STRIP

When your computer has started, on the desktop, in the lower left corner, you will see a small button. This is the Control Strip. If you drag the button to the right, you will see icons that give you instant control over certain functions, or will tell you the current state of others, such as monitor colors and display resolution.

When you click-hold on any one icon, you will see a pop-up menu telling you the current information, and giving you other choices to make.

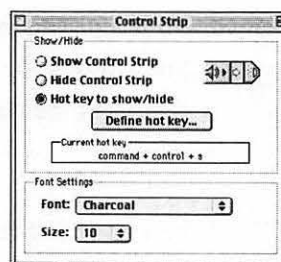


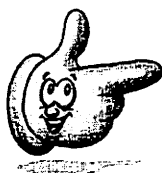
- AppleTalk lets you make it active or inactive.

- CD Music Player lets you play, eject, or make settings to a CD you might be playing.
- File Sharing lets you see and change the current status.
- Color Display lets you choose if you want gray or color for your monitor, and just how much resolution.
- Size Display shows you the current settings of your monitor.
- Printer tells you which printer the computer defaults to.
- Sound gives you a volume slider to adjust how loud you want your warning alerts and other sounds.

The **Control Strip** control panel allows you to choose if you want the strip to show, and gives you the option to assign a hot key to toggle this manually.

The font and size of the Control Strip's pop-up menu's typeface can be set here, as well.





Managing the Control Strip

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Control Strip** control panel icon.
2. If the Control Strip is not stretched out at the bottom of the screen, to see all options, click on its button. Click-hold on any item to see its window.



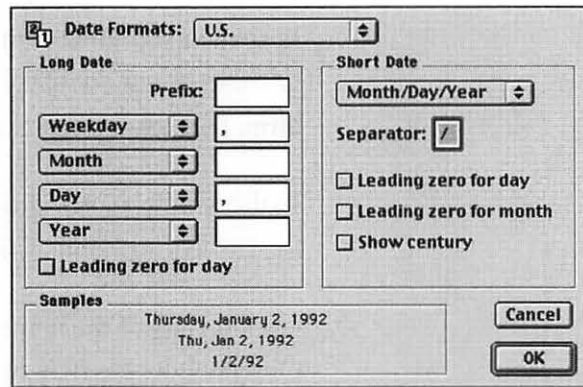
3. In the **Control Strip** control panel, click on **Hide Control Strip** to toggle it Off. Observe the actual Color Strip as you click. Click on **Show Control Strip**. Did the Control Strip appear again?
4. In the control panel, click-hold on the **Font** option button to set the font for Helvetica Regular. Click-hold on the **Size** button to set the size for 14.
5. Click on any of the items in the Control Strip to show their windows. Observe how the type size and font has changed. In the control panel, set the **Font** back to Geneva, and the **Size** back to 10.
6. Close the control panel by clicking the upper left button of the window.

DATE & TIME

In the upper right corner of your screen's menu bar, you will see the time. If you click on the numbers, you will see the current date set in your computer.

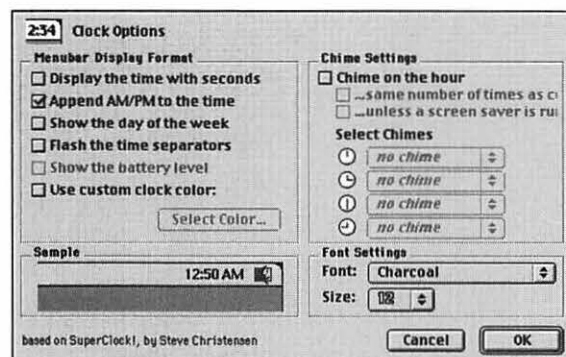


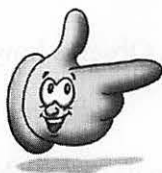
You can adjust your date and time to be correct in the **Date & Time** control panel. You can also turn the menu bar clock on/off, and set your Time Zone.



CLOCK OPTIONS

The **Clock Options** affect the menu bar appearance of date/time. You can also set the clock to chime at various intervals, plus set the font and size of the date/time that appears with it on the screen.





Managing the Date & Time

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Date & Time** control panel icon.
2. In the **Current Date** section, click in the white part of the box where the date is shown. The first item in the date will highlight. If you click directly any of the numbers, they will highlight.

11/27/97

Next to the date box are two arrows, Up/Down. Click on the Up arrow one time. You will observe the month date go numerically higher one digit. With the month still highlighted, type in the number of your current month. You can use either the arrow buttons or the keyboard to modify the numbers.

3. In the **Current Time** section, click directly on the minutes. Type in a different number of minutes. With this still highlighted, use the Up/Down arrows to bring the minutes back to the number it should be.

4:15:52 AM

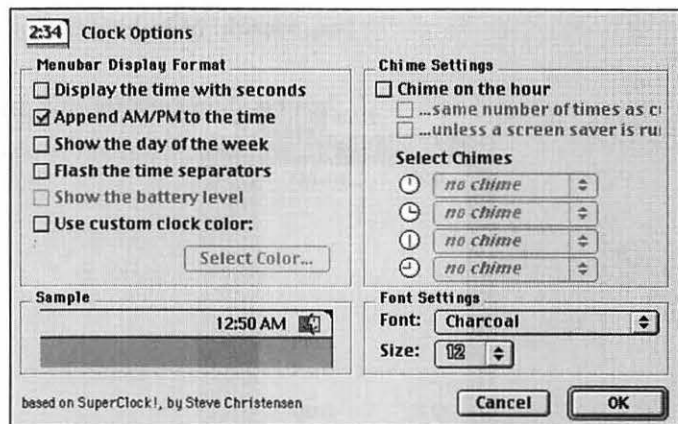
4. Go up to the menu bar and click on the time in the upper right corner. Observe how it is set, in sequence, as Month/Day/Year. Go to the **Current Date** section, click the **Date Formats...** button. In the next window, under **Short Date**, click the submenu **Month/Day/Year**. Choose the option **Day/Month/Year**. Underneath this, set the **Separator** to be a “-” (hyphen).

Click **Leading zero for day** and **Leading zero for month**, then click **OK** at the bottom of the window. You will be back at the main **Date & Time** window.

Go up to the menu bar again and click on the time. Observe how your changes affected the appearance of the date.

Go back to the **Date Formats...** and set the date formats back to Month/Day/Year, with a separator of a slash (/). Leave the leading zeros, unless you do not want the date to show this way. Click **OK**.

5. In the **Date & Time** control panel window, click on the **Time Formats...** button.
6. In the **Format** section, click in the **AM** box and highlight AM. Change it to lower case “am.” Highlight the **PM** and change it to “pm.”
7. Click in the **Separator** box and it will highlight. Change the separator to a bullet (•) by pressing Option-8.
8. You will see all these changes at the bottom of this window, under **Sample**. The samples change as you make modifications in the window.
9. In the **Clock** section, click on **24 hour**, and watch the samples as you do. Now click back on **12 hour**.
10. So that none of these changes take effect, click on **Cancel**.
11. Back in the **Date & Time** window, click on **Clock Options**. You will be at the **Clock Options** window.



12. The lower left corner of the window has a **Sample** section to show some of the visual changes. Experiment with some of the many settings and observe how they appear in the **Sample** section. When you are through, click **Cancel**.
13. Back in the control panel window, close the panel by clicking the button in the upper left corner of the window.

DESKTOP PICTURES

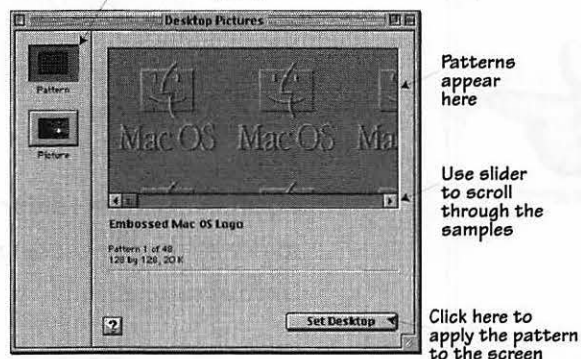
The image of the desktop is a pattern of the logo you see at startup. You can customize the desktop by using the **Desktop Pictures** control panel.

In the left column of the panel, you will see two options:

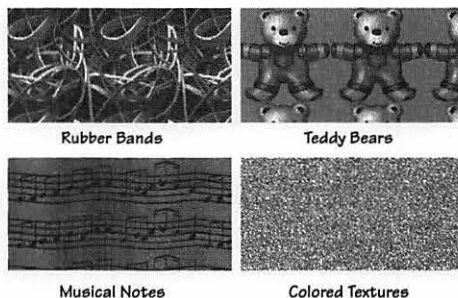
- Pattern
- Picture

When you click on **Pattern**, you will see this window. You can use it to scroll through the many choices of images, then press **Set Desktop** to apply the image.

Choose "Pattern" to apply patterns to the Desktop

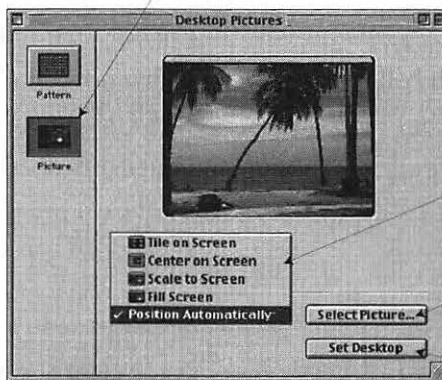


There are many attractive patterns to choose from. Here are four samples.



The **Picture** option changes the panel to let you select an actual photographic scene and apply it to the desktop.

Choose "Picture" to apply photo to your Desktop



Set the screen style or position of the picture

Use this to go select the picture for Apple Extras

Click here to apply the picture to the screen

When you want to choose a picture, the **Select Picture** button is clicked to allow you to go to the **Apple Extras** folder on your hard drive. From Apple Extras, the pictures are located in the **Sample Desktop Pictures** folder.



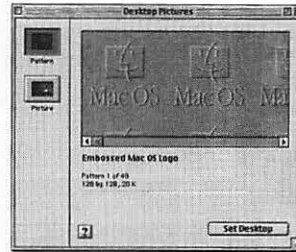
Using Desktop Pictures

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Desktop Pictures** control panel icon.

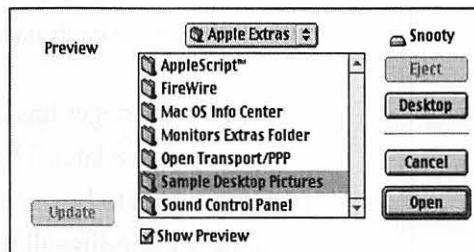


Keep in mind that the **Launcher** will not activate at startup unless you click "Show Launcher at system startup" in the **General Controls** control panel.

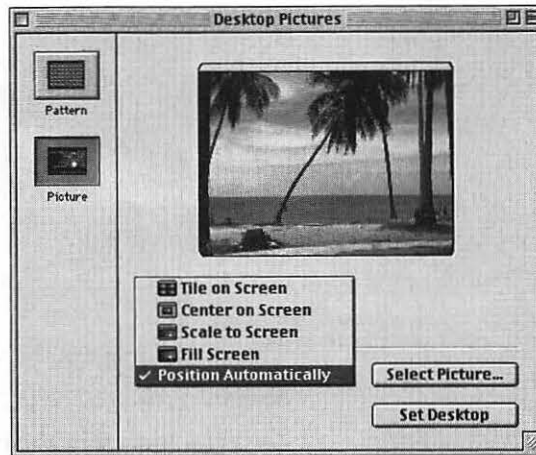
2. You will see the Mac OS color pattern in the viewing window.



3. Under the image is the viewing scrollbar. Use this to scroll through the selections offered. When you come to an image you like, click on the **Set Desktop** button in the bottom right of the window.
4. Observe how the desktop of your screen becomes filled with this pattern.
5. Scroll through other images in the viewing window and **Set Desktop** to experiment.
6. Click on the **Picture** option, underneath **Pattern**. Click on the **Select Picture** button in the bottom right corner. Use the next window to go to the **Apple Extras** folder on your hard drive. **Open** the folder **Sample Desktop Pictures**.



7. From the choices, select **Beach on Ko Samui**. Click **Open**.
8. You will be back at the **Desktop Pictures** control panel. Click-hold on the **Position Automatically** button. You will see other choices. Experiment with selecting the various position choices, then click **Set Desktop**.



9. Use your own judgment to select either a Pattern or Picture to be the background image of the desktop. **Set Desktop**, then close the control panel by clicking the upper left button of the window.

EXTENSIONS MANAGER

The Extensions Manager is like a light switch. It toggles the listed utilities on/off. This is a utility that operates on both Extensions and Control Panels that reside in their respective folders. It is simple to turn utilities on/off. The small box to the left of each name is the object to click to toggle it on/off.

Extensions Manager has the ability to save the settings in Sets that you can name and access later. This is handy when you are working on jobs that require certain utilities to be on/off. It is timesaving to select the Set, rather than scrolling and finding all the necessary items.

At the bottom left of the **Extensions Manager** window, there is an option to **Show Item Information** about the item selected in the window. It tells general information about creation date, file size, last time modified, then goes on to tell what functions it performs.

There are also three option buttons that will **Restart** your computer, **Revert** back to when **Extensions Manager** was last opened, and **Duplicate** a Set that you want to customize.

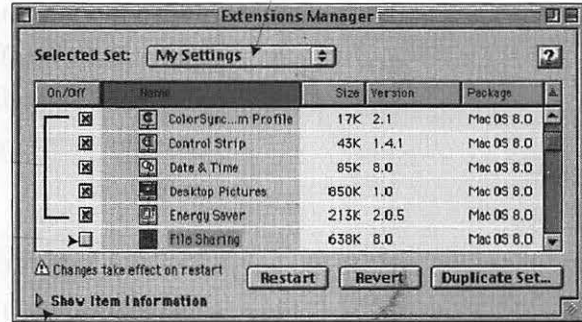


If you're having a problem with a program, such as it stopping or bombing whenever you try to open a file, try starting your machine with all the extensions turned off. You can do this by holding down the Shift key at startup.

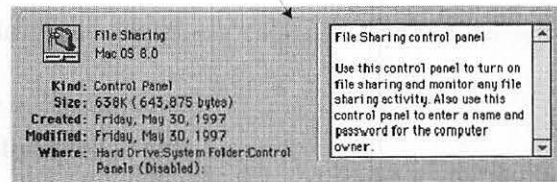
These Extensions are On.

This Extension is Off.

Extensions that are On/Off can be saved into Sets that can be accessed later

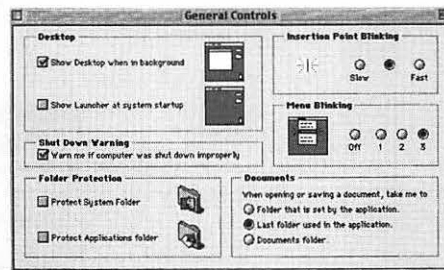


Click here to see more information about the selected Extension.



GENERAL CONTROLS

General Controls allows the customizing of certain features you see on the desktop, as well as permitting folder protection.



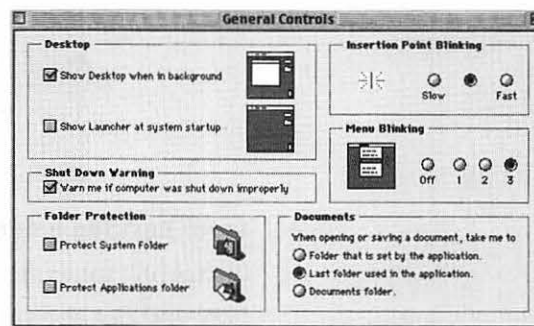
- **Show Desktop when in background** — eliminates from view all the distracting folders and icons on the desktop when you're in an application, and not at Finder level.
- **Show Launcher at system startup** — is the only way to get the Launcher to appear on the desktop at startup. You cannot put a Launcher alias in the Startup Items of the **System Folder**. It doesn't work.
- **Insertion Point Blinking** — When the cursor is in a text block, it blinks. This is where you set the blinking speed for slow, medium, or fast.

- **Menu Blinking** — Some applications have menus that blink and you can set the number of times it blinks, or turn the blinking off.
- **Warn me if computer was shut down improperly** — if your computer locks up and you have to do an emergency abort, when you start up again, you will see a warning window telling you the computer was shut down improperly. If you prefer not having this warning, you turn it off here.
- **Protect System Folder** — prevents the accidental Trashing of the **System Folder** and its contents, with a warning.
- **Protect Applications Folder** — prevents the accidental Trashing of the Applications folder and its contents, with a warning.
- **Documents** — when you are opening or saving a document, you have three choices of where the computer does its placement.



Using General Controls

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **General Controls** control panel icon. You will see the **General Controls** window.



2. Click on the **Show Desktop when in background** button to turn it Off.
3. Click-hold on the Apple Menu icon (colored apple at the top left of your screen), and scroll to highlight the **Calculator** to activate it.
4. When the **Calculator** appears, what happens to the desktop? Do you see any icons in the background? The desktop filled with icons has been

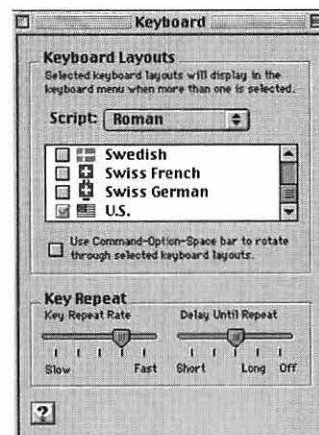
turned off because it is in the background behind the **Calculator**, which is the current application choice.

5. Go to the Applications Menu (the colored icon in the top right corner of your screen). Pull this menu down and select **Finder**. Now, what has happened to the desktop? The desktop (Finder) is now the current selection, so it is not in the background.
6. Go back to the Applications Menu and choose **Calculator**. Observe how the desktop icons disappear. Close the **Calculator** by clicking its top left button.
7. Go back to the Applications Menu and select **Finder**. You will see the **General Controls** window again. Click on the **Show Desktop when in background** button to turn it back On.
8. Close the control panel by clicking the upper left button of the window.

KEYBOARD

The **Keyboard** control panel has two sections in which to make desired choices. The **Keyboard Layouts** pertains to people who do international work, and need the keyboard to reflect the language they are typing in. If you have no use for another language to type in, it is best to leave this section alone.

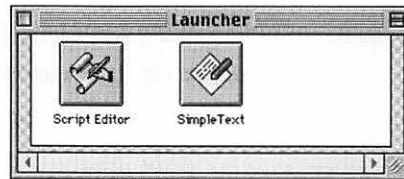
Key Repeat is an option to customize how the keyboard keys react to your typing speed. The default settings are the best for the average user. If you want speed and delay between keystrokes to change, you should experiment with the settings.



LAUNCHER

The **Launcher** control panel is a valuable accessory. Its only function is to make the actual **Launcher** window appear at the bottom of your screen.

This is done by going to the **Control Panels** folder in the **System Folder**. If the **Launcher** control panel icon is double-clicked, the **Launcher** will appear.

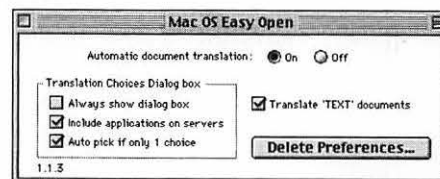


It is a very useful item for accessing your applications, documents, and folders. More about the Launcher is discussed elsewhere in the book.

MAC OS EASY OPEN

Often you will be given a floppy disk from other computer users (especially from PC to Mac) that contain files you do not have the application for. **Mac OS Easy Open** analyzes the incoming file and gives you a listing of equivalent applications that could open the file, especially if it is only a text file.

You can make your own selections to the options for quicker accessing of incoming documents.

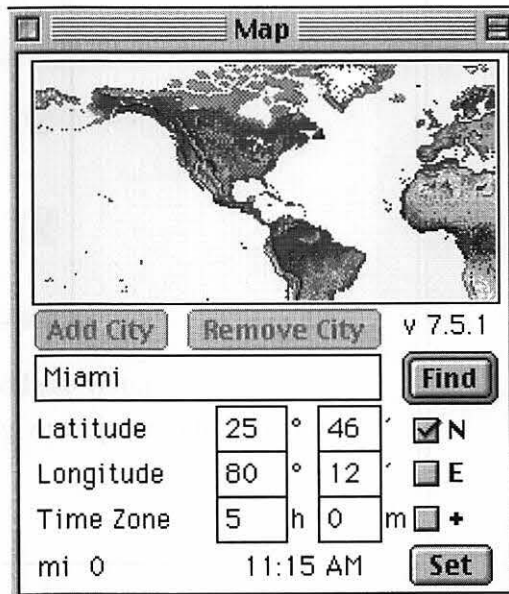




If you know the latitude and longitude of your location, you can add it to the map. It's very cool to know where you are at all times, and checking the map will show you where you are relative to Madagascar, India, and other very important places.

MAP

The **Map** control panel gives you a visual look at the globe and can tell you specific information of latitude, longitude, time zones, etc., for a desired location. It is an added attraction to see the points specified blink on the globe in the control panel.



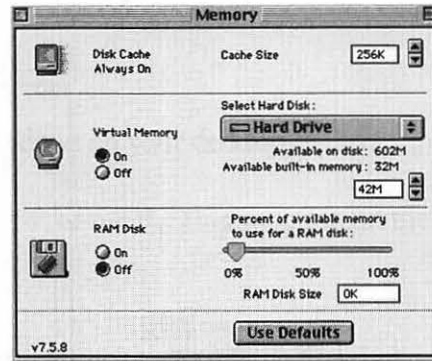
MEMORY

The **Memory** control panel pertains to RAM (Random Access Memory) in your computer. RAM memory is one of the most needed, and at the same time, misunderstood aspects of a computer. RAM memory and Hard Drive storage memory are two very different elements of computer operation.

We will not go deeply into RAM memory, but we will offer these notes.

Disk Cache is an extra RAM memory pocket that the computer uses to store items temporarily while it is operating. Depending on how much RAM your computer is equipped with, you do not need a tremendous amount of cache. From 512K to 2000K is more than enough. You should certainly contact the company you bought the computer from to know a more exact amount you can set the cache for.

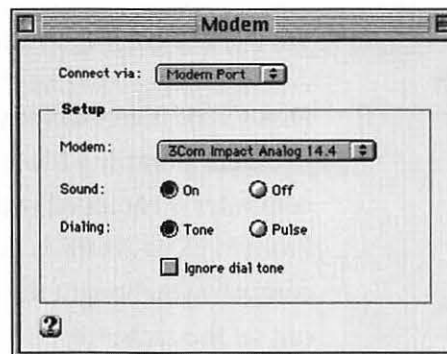
Virtual Memory is a makeshift way of utilizing a segment of your hard disk's permanent memory as RAM. Some applications do not run well under Virtual Memory, and if you do not have the available memory on your hard disk, it is not a good idea to have Virtual Memory on. Again, consult the company who sold you the computer to know more about its requirements.



Ram Disk is a rarely used option that utilizes an external disk for extra RAM memory. It is best just to ignore this option, unless you are a power user.

MODEM

If you have a modem, the **Modem** control panel should be set to **Modem Port**. The **Setup** requires that you choose the modem, or equivalent, from the **Modem** submenu of names and styles. If you desire sound, such as ringing as the modem attempts to connect, leave **Sound** on. The default **Dialing** is set for **Tone**, unless your modem software requires a different setting.



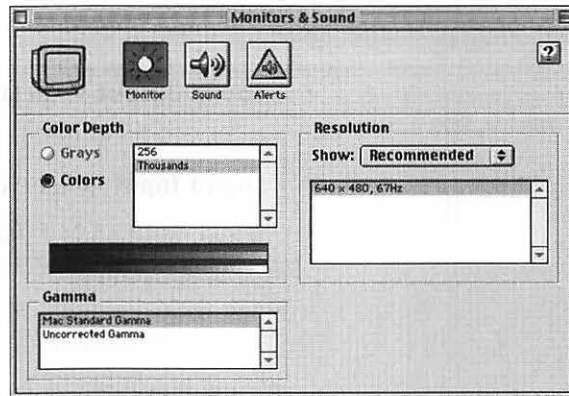


If you want really good sound, add a couple of regular speakers to your Macintosh. It cranks with good speakers!

MONITORS & SOUND

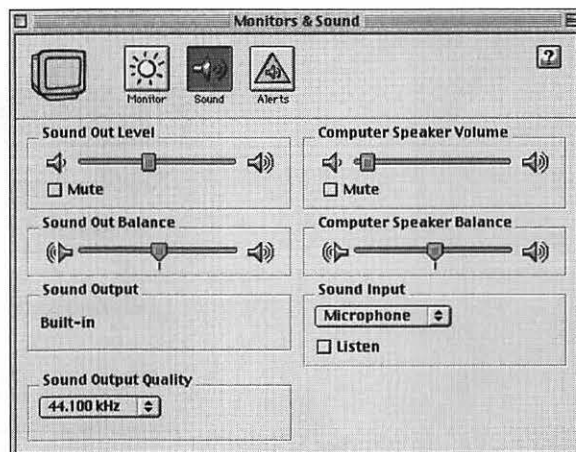
The **Monitors & Sound** control panel has three sections: **Monitor**, **Sound**, and **Alerts**.

The **Color Depth** is the only option you should change, and only if you need to. The depth can be changed from **Grays** to **Colors**. In **Colors**, you can choose from 256 levels to Thousands. Some monitors will offer millions. The more colors a monitor displays, the slower it refreshes (another word for redrawing). This may not be true if your system is equipped with a specialized graphics display card.



SOUND

The **Sound** section lets you customize the output and input of sounds it creates or uses.

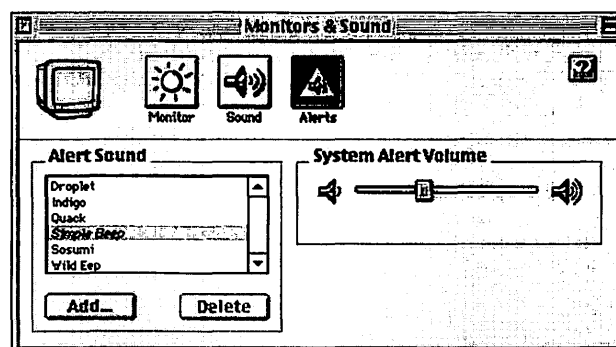


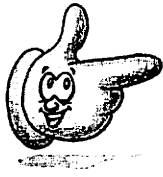
- **Sound Out Level** — controls the volume of computer sounds other than the Alert sounds. This could be Speech effects, or sounds that games make.
- **Sound Out Balance** — controls the balance of the sounds, if this is available on your computer.
- **Computer Speaker Volume** — adjusts the volume on external speakers, if you have them hooked up to your computer.
- **Computer Speaker Balance** — adjusts the balance of the external speakers.
- **Sound Output** — defaults to **Built-in**.
- **Sound Input** — lets you select the source of sound input. It can come either from an external microphone, or from an internal CD.



ALERTS

The warning alert sound you hear can be changed to others listed in the **Alert Sound** list. When you click on each one, you will hear its sound to determine if you like it or not. The volume of the alert sounds can be adjusted with the **System Alert Volume** slider.



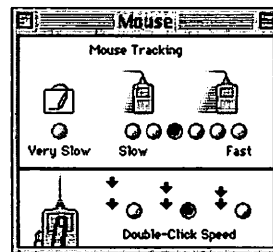


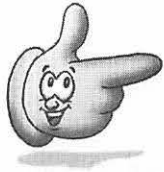
Managing the Alert Sounds

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Monitors & Sounds** control panel icon. Select the **Alerts** option.
2. There are several options in the **Alert Sound** list. Click on each one of these sounds. As you click, you will hear the sound.
3. With any one of the sounds selected, move the **System Alert Volume** slider back and forth to adjust the sound volume.
4. Choose the Alert Sound you like, and set the volume.
5. Close the **Monitors & Sound** control panel.

MOUSE

The **Mouse** control panel adjusts the speed that the arrow pointer/cursor travels across the screen as you move the mouse. This is **Mouse Tracking**. The **Double-Click Speed** buttons control the speed that you need to double-click the mouse button to activate clicked items. It defaults to the medium speed.



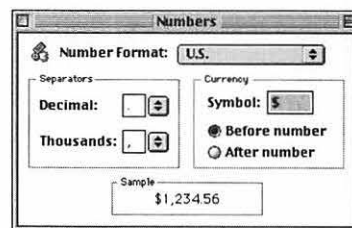


Managing the Mouse Controls

1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Mouse** control panel icon.
2. Click the **Very Slow** option. Do not press the mouse button. Merely move the pointer arrow around the screen. Is this painfully slow? Most artists with electronic drawing tablets use this for their pen cursor.
3. Click the button above **Slow**. Now move the pointer arrow around the screen. Still too slow?
4. Click the button above **Fast**, then move the pointer arrow around.
5. The default speed is the third button from **Slow**, which would be about medium. Set the **Mouse Tracking** at this speed, or at whichever speed you feel comfortable with.
6. Close the **Mouse** control panel by clicking the upper left button of the dialog box.

NUMBERS

If you are working on text items that require special character formats, decimals, dollar (\$) symbols, then the **Numbers** control panel gives you these necessary characters.



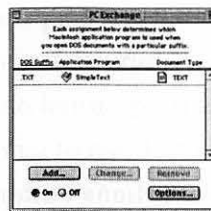


We don't know about you, but we have a hard time if we change the numbers setting so that there aren't decimals in the right place, and commas don't appear when the numbers are in the thousands. We're bad with numbers, anyway.

PC EXCHANGE

If you're on your Macintosh computer, and someone hands you a PC formatted floppy disk with information on it, what do you do? Answer: just insert the disk into your floppy drive. The control panel **PC Exchange**, which is on by default, acknowledges the PC disk and reads it as if it were a Macintosh disk.

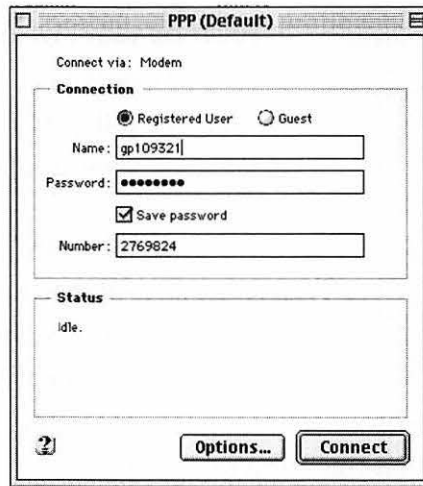
You can customize PC Exchange to assign Macintosh applications to open the PC files. Press **Add** when you want add more formats to the PC Exchange list. You will see a new window that says "Assign an application to a DOS suffix:" You then type in the DOS suffix and go to a folder that contains the appropriate application that can open the type of file assigned. **OK** is then clicked to add this to the list.



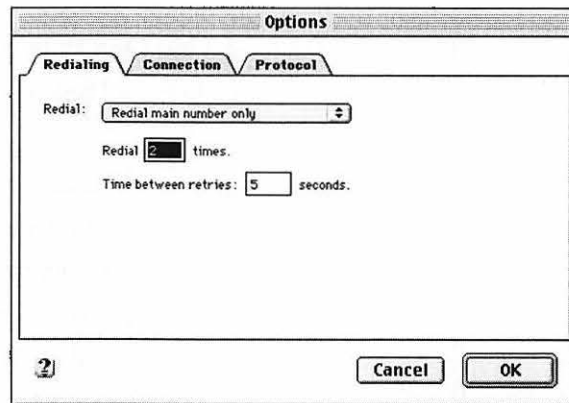
PC Exchange has On/Off buttons, as well as **Change** to modify an item, **Remove** to delete it, and **Options** to make further customizing choices.

PPP

The **PPP** Control panel is used to connect with commercial internet providers, or with other networks within your organization. For information about setting up the PPP control panel, be sure to contact your internet service provider, or commercial on-line service, such as AOL or Compuserve. Here's a picture of the control panel:

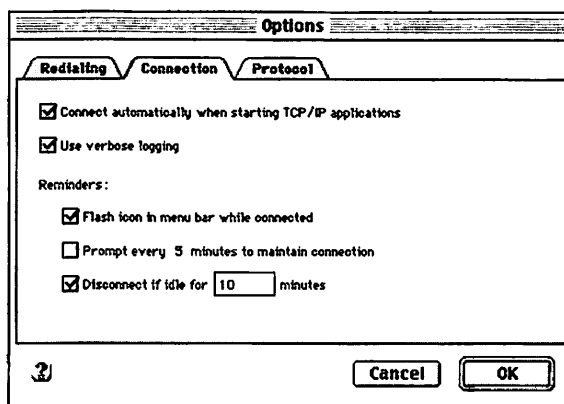


From the PPP control panel, you enter your User Name, a password, and the telephone number that you use to access your specific service. You can have multiple settings stored on your system, which allows you to use different providers for different services. You can also access an **Options** dialog box by clicking the **Options** button:

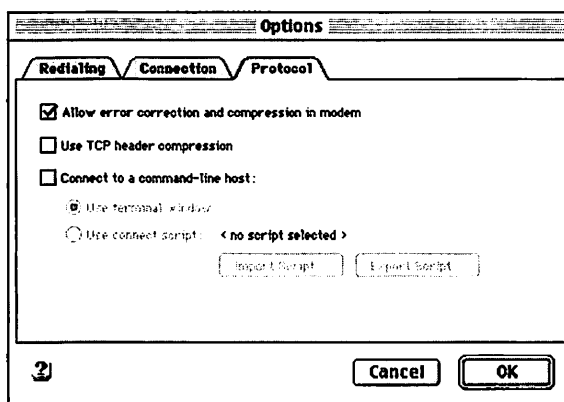


This dialog allows you to set the number of times the system tries to redial the number (in case it's busy or not answering).

The **Connection** dialog (accessed by clicking on the **Connection** tab at the top of the **Options** dialog) gives you a place to set up the actual connection to your service provider. The “Connect Automatically” option logs on to your service provider anytime you launch a program like Netscape Navigator, Microsoft Internet Explorer, or an email program. It will also let you automatically log off in case you forget that you’re on the internet and leave your house or something:

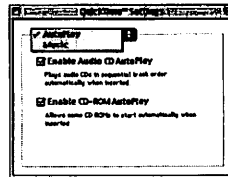


The **Protocol** tab is an area where you might need to talk to your service provider before selecting the proper settings:



QUICKTIME™ SETTINGS

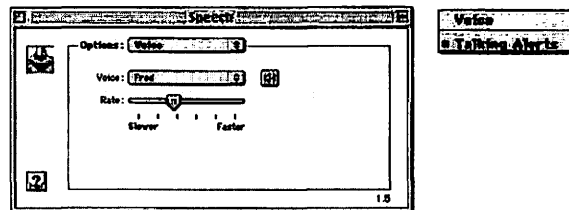
The QuickTime™ Settings control panel offers the choice of playing or starting your CDs automatically. You can click on the appropriate buttons to toggle the AutoPlay either On or Off.



SPEECH

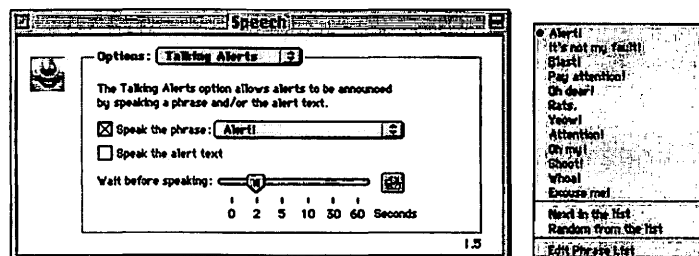
Some applications such as SimpleText have speech features. They will speak the selected text in various voices that you can choose. Also, the rate that the voice speaks can be adjusted.

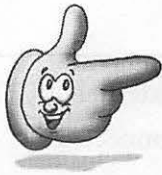
The **Options** pop-up menu lets you choose from either a voice that speaks selected text, or the Talking Alerts.



TALKING ALERTS

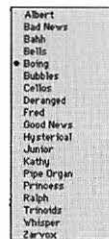
The **Talking Alerts** are vocal sounds or words that warn you of certain mishaps. The **Speak the phrase** submenu has various alert phrases that are often quite humorous, such as "Rats" or "Yeow!"





Experimenting with Speech

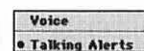
1. Open the **System Folder** of your hard drive, and open the **Control Panels** folder by double-clicking its icon. Double-click on the **Speech** control panel icon.
2. The **Options** will be set to **Voice**. If you click-hold on the Voice menu, under Options, you will see a list of the voices to choose from.



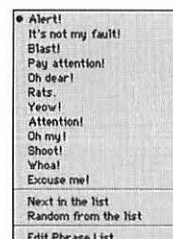
Experiment with the voices by choosing one, then click on the speaker icon to the immediate right of the Voice menu.



3. Set the Options menu for **Talking Alerts**.



4. Click on **Speak the phrase**. In the menu to the right of this option, you will see a list of alerts to choose from.



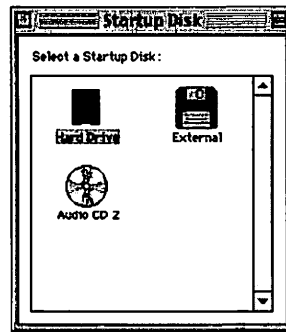
5. Set the **Wait before speaking** to 0 (zero) for immediate results. Experiment by selecting an alert, then clicking the speaker icon to the right of this option. You will hear the alert. When finished, Close the control panel.

STARTUP DISK

The **Startup Disk** control panel shows you the various external or CD drives that you can startup from, if your computer has them connected.

Be aware that these drives must have functional System Folders with all the necessary files in order for a new startup to take place from them.

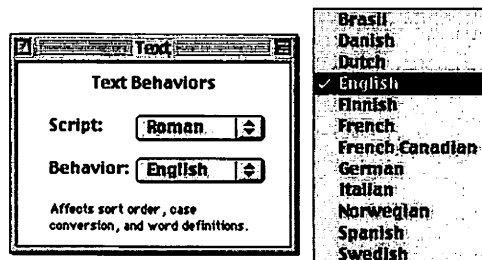
It is suggested that you do not modify this unless you are sure that you need to startup from a drive **other** than your main hard drive.



TEXT

The **Text** control panel is only for those who are dealing in international languages, such as these shown here.

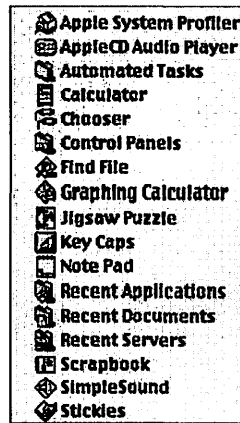
If you are typing a document in a language other than English, you can choose the language from the **Behavior** submenu.



The Apple Menu

The Apple Menu, represented by the colored apple located in the extreme upper left corner of your screen, is a quick and easy means to access documents, folders, applications and utilities that could be scattered throughout your system. The convenience of the Apple Menu is that it is available most of the time, no matter what application or document you are in.

When Macintosh OS 8 is installed, it creates several standard items that would prove useful. They will be discussed after a look at the Apple Menu and how to use it to your advantage.



How do you get items into the Apple Menu, or take them out? The controlling folder is known as **Apple Menu Items**, located in the **System Folder**. If you open the **System Folder**, and **View** it "As List," alphabetically, the **Apple Menu Items** folder will be at the top of the name list.

So as not to disturb, or lose, certain valuable documents or applications, it is best to create an alias of the item and place it into the **Apple Menu Items** folder.



System Folder



System Folder alias



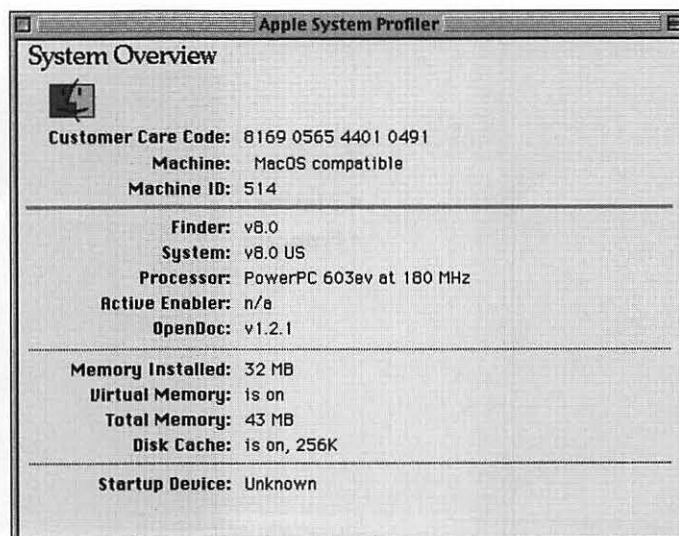
Managing the Apple Menu

1. At the desktop, go up to the colored apple in the upper left corner of your screen. Click-hold on the apple. You will see the objects that reside in the **Apple Menu Items** folder.
2. Several of the items have triangles pointing to the right. These are folders that contain more items. Drag the mouse down to highlight any of these items and you will see the contents.
3. Do not select anything in the Apple Menu. Go to the **System Folder** and open it. Use the desktop menu **View->As List** to see the items alphabetically. You will see the folder **Apple Menu Items**.
4. Keep the **System Folder** open on the desktop. Go to the Trash icon in the lower right of your screen. Single-click on the Trash icon to select it.
5. With the Trash icon selected, go up to **File->Make Alias** in the menu bar. The alias "*Trash alias*" will appear.
6. Drag this alias to touch the **Apple Menu Items** folder icon in the **System Folder**.
7. Now go up to the actual Apple Menu in the upper left corner and click-hold on the apple. Scroll down the menu to see if the Trash alias is present.
8. Make no selections from the Apple Menu. Go back to the **System Folder** and single-click on the **Apple Menu Items** folder to select it. Press Command-M (keyboard shortcut) to **Make Alias** of the **Apple Menu Items** folder. The alias will appear just below the original. Drag this alias out of the **System Folder** and onto your desktop.
9. Close the **System Folder**.
10. Still on the desktop, double-click on the Apple Menu Items alias. The folder from the **System Folder** will appear. Drag the **Jigsaw Puzzle** item out of the folder, onto your desktop.
11. Close the **Apple Menu Items** folder.

12. Access the Apple Menu at the top of your screen. Scroll through the menu and look for **Jigsaw Puzzle**. It will not be present, because you removed it. Make no selections, and go back to the desktop. Locate the **Jigsaw Puzzle** you dragged to the desktop.
13. Drag the **Jigsaw Puzzle** over to touch the Apple Menu Items alias. This will place the puzzle back into the Apple Menu. To make sure, go back and access the Apple Menu at the top of your screen.
14. Scroll down the menu and see if the **Jigsaw Puzzle** is back.
15. On your desktop, place the Apple Menu Items alias in a convenient location, so that you can access its folder more readily.
16. For clean-up purposes, double-click on the Apple Menu Items alias to open its folder. Drag the Trash alias you placed there earlier to touch the actual Trash icon. You want to Trash it. You cannot place items in the Trash through the Apple Menu.

APPLE SYSTEM PROFILER

The **Apple System Profiler** is a profile or data analysis of your computer and its specifications. It tells you code and processor numbers, amount of RAM memory, and other pertinent data. Use this only if you are interested in the inner workings of your computer.



APPLE CD AUDIO PLAYER

The **Apple CD Audio Player** is a great means of playing musical CDs on your computer. It is very convenient to use if you want background music of your choice while you work. The playing of a CD does not affect or interrupt any other operations you might be involved in. It is purely in the background.

To Play, Stop or Eject a CD is accomplished just by the simple clicking of the buttons shown. Other data, such as elapsed time, is shown as the selection plays.

- Normal — The Normal button is the standard sequence listed on the CD. The selections will play in this order.
- Shuffle — The Shuffle button will randomly shuffle and select items on the CD to play. The list will show below the buttons. Each time you press the button, it will reshuffle the selections.
- Program — Program allows you to drag the selections to the sequence you want to hear. When Program is clicked, the list divides into a Tracks side, and a Playlist side. You merely drag the tracks you prefer over to the Playlist. Then, when you press the Play button, you will hear only the chosen tracks.



AUTOMATED TASKS

Automated Tasks are preprogrammed scripts that can perform several operations, saving you the time of having to do it manually. If you want more information, choose “About Automated Tasks” from the submenu.

If you get into the Scripting act of programming, you can make your own tasks and place them here for future use.



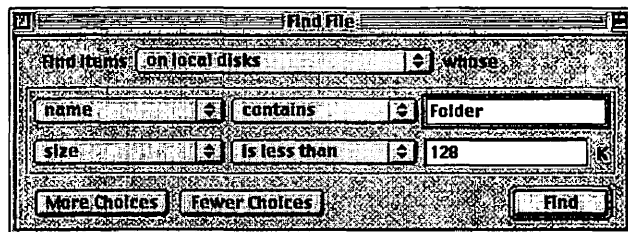
CALCULATOR

The Calculator is a small, pop-up program that allows you to click its keys the same as you would press the keys of an actual hand-held calculator. Remember that the “ \times ” symbol is the symbol for multiply. The “/” symbol is to divide.

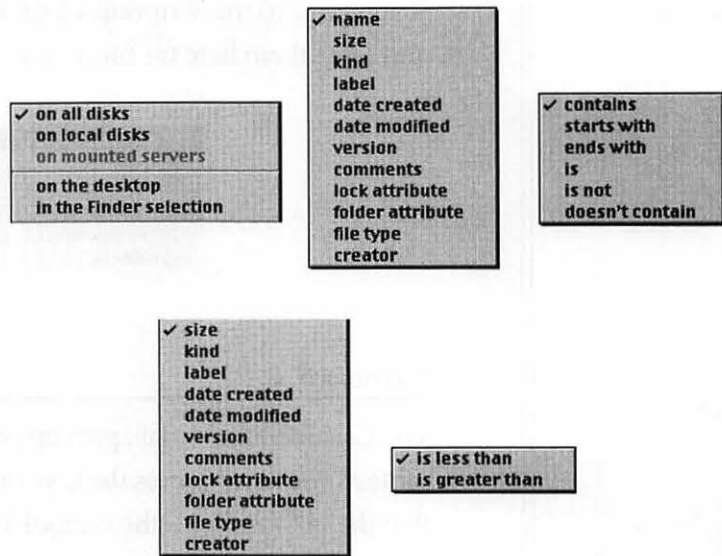


FIND FILE

Reviewing what you’ve learned, items can be moved, renamed, accidentally Trashed, or lost in many different ways. You will probably rely on **Find File** quite a bit when this happens.

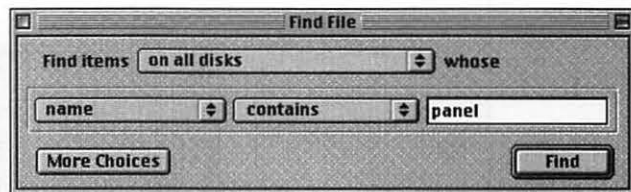


The specifications you can search by are extensive. Find by name, size, date created, locked, etc. You can specify that the string of text starts with, ends with, contains, doesn't contain certain criteria. The size, kind, label, etc., can be searched for, and the number of file size "is less/greater than."



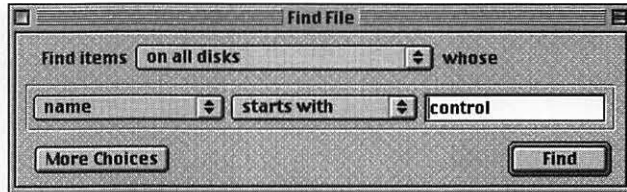
Using Find File

1. Go to the Apple Menu and scroll down to Find File and launch it.
2. The **Find File** dialog box will appear on your desktop. You will need to set specifications and click **Find** to see how Find File operates.
3. Here is a setting to find items that the **name contains** the word "panel." Make these setting in **Find File**, then press **Find**.

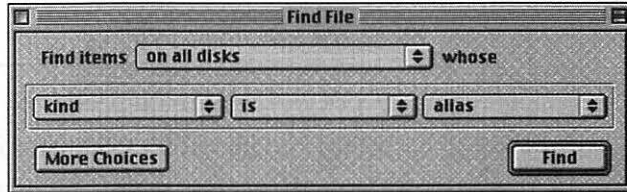


Those items found that fit this criteria will appear in a separate window underneath the first **Find File** window.

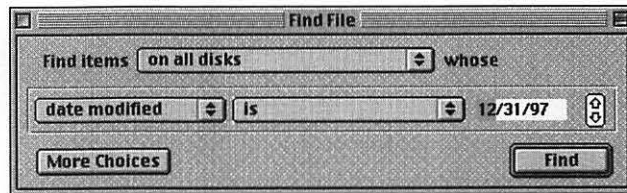
4. Go back to the top **Find File** window and make these settings, then press **Find**. It will find items that the **name starts with** “control.”



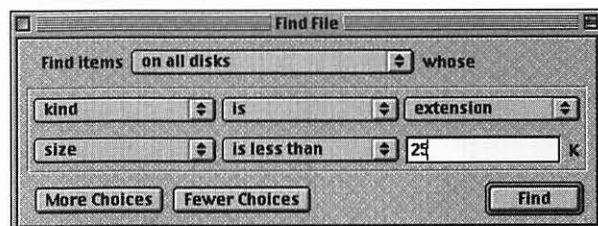
5. Go back to the top **Find File** window and make these settings, then press **Find**. It will find items that the **kind is an alias**.



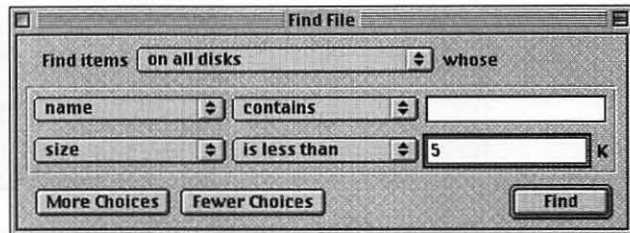
6. Go back to the top **Find File** window and make these settings, then press **Find**. It will find items that the **date modified is** the current date you set with the up/down arrow buttons.



7. Go back to the top **Find File** window and click on the **More Choices** button. You will see the **size and is less than** option. Make these settings, then press **Find**. It will find items that the **kind is** with an **extension**, and its **size is less than 25**.



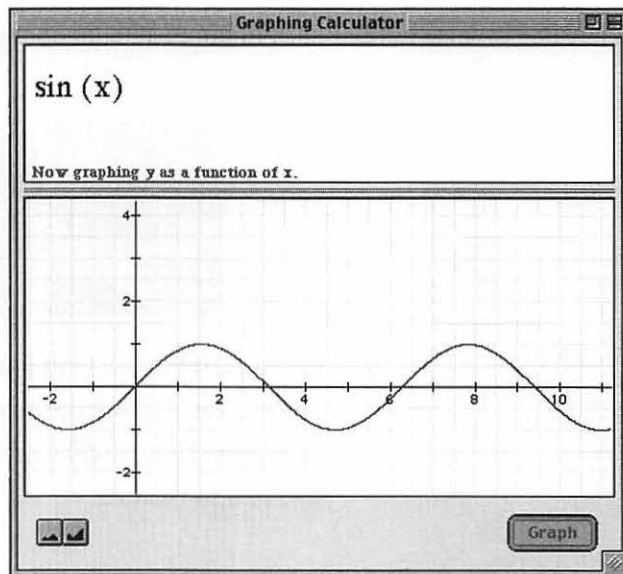
- Go back to the top **Find File** window and make these settings, then press **Find**. It will find all items (nothing specified) that the **size is less than 5**.



- The exercise is finished. You have seen how Find File operates, and how you choose the settings. Close both of the **Find File** windows.

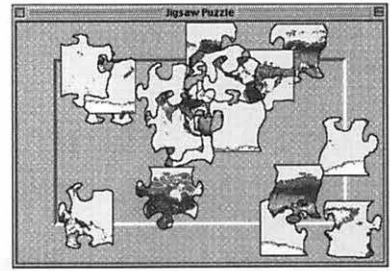
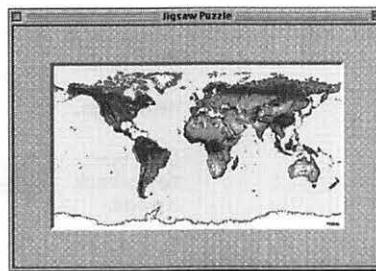
GRAPHING CALCULATOR

Since we're not math heads, the best thing we can tell you about this fairly weird and incredible calculator is to tell you to go through the self-running demo that comes with it. Good thing, too.



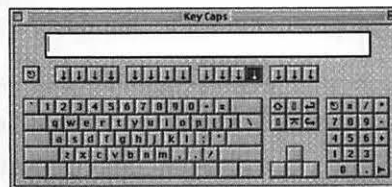
JIGSAW PUZZLE

The Jigsaw Puzzle is a map of the world, shown here (left). To begin the puzzle, you must go up to the menu bar and pull down its **Option** menu and select **Start New Puzzle**. You will be given the choice of selecting the sizes of the puzzle pieces. The puzzle will split up so that you can move the pieces around to put the picture back together. You can also paste your own picture to customize.



KEY CAPS

There are many characters in the fonts that you might need, such as accents, the apple icon, or international symbols. **Key Caps** shows the different characters available from fonts you choose from the menu bar at the time **Key Caps** is on your screen.

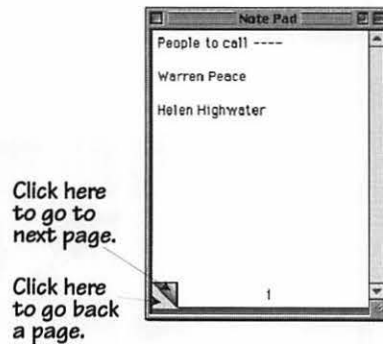


To see the various characters, the keyboard of **Key Caps** can be clicked. The corresponding symbol will appear in the **Key Caps** window above its keyboard. If you hold the Shift or the Option key, you will see what characters go with the key you press. You can also hold the Shift and Option keys together and get more characters.

Key Caps is simply a guide to show the hidden characters of various fonts. Then, when you are using the font, if you hold Shift or Option, or both, you get the character designated in **Key Caps**.

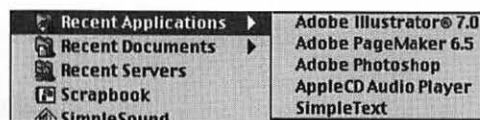
NOTE PAD

The **Note Pad** is a convenient electronic note pad to keep notes, phone numbers, addresses, etc., that you need quick access to. There are several note pages that come standard with MAC OS 8. You flip through these pages by clicking the left corner flap. To back up through the pages, you click the area next to the flap, as show here. To create an additional page, you go to the **File** menu and pick **New Note**.



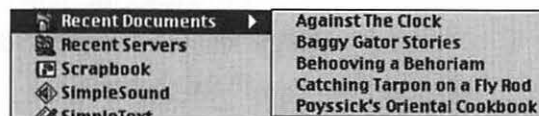
RECENT APPLICATIONS

The computer system keeps track of when applications are launched. When they do, the system makes an alias of the application and puts it into this folder that appears in the Apple Menu. This is another handy use of aliases, because you can instantly launch an application that was used previously again.



RECENT DOCUMENTS

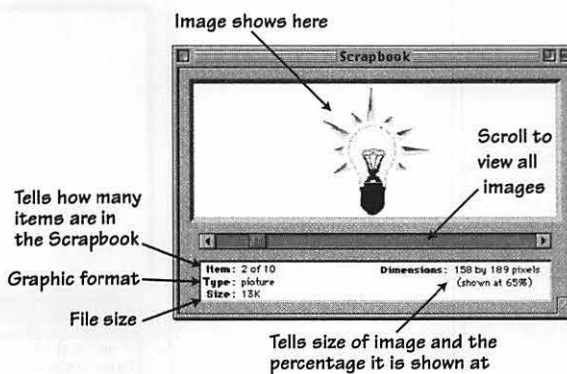
The same way the system keeps track of applications that are launched, it makes an alias of documents opened and puts it into this folder. If you want to go back to a document that was used earlier, and don't want to dig through the folders to find it, you can access it here.



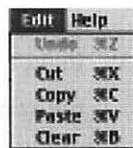
SCRAPBOOK

The **Scrapbook** is a storage file in which to keep text and images. To put text/images into the **Scrapbook**, the item must be in the Clipboard, Copied from a different source. **Scrapbook** is then accessed and the item pasted.

The **Scrapbook** shows the pasted image, and gives other information. To see all the items stored, you use the scrollbar to view them, one by one.

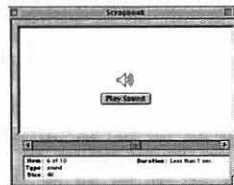
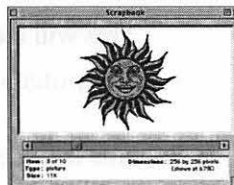
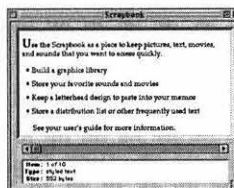


To remove an item from the **Scrapbook**, you can use either **Cut** or **Clear** from the **Edit** menu when **Scrapbook** is active.



The Scrapbook can hold three file formats:

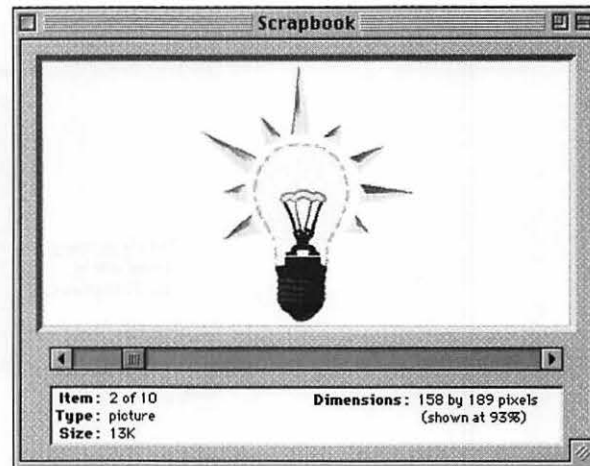
- Text
- Graphics
- Sound





Using the Scrapbook

1. At the desktop, go to the Apple Menu, and scroll down to the **Scrapbook**. Highlight it and release the mouse button to launch it. You will see the **Scrapbook** window.



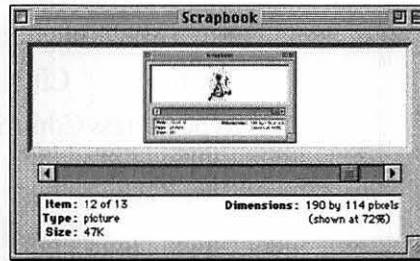
2. Scroll through the selections to see the objects that are stored there. Stop when you reach the Party Hat image.
3. Press Command-Shift-3 which will take a snapshot of the desktop while the **Scrapbook** is open.
4. Go to your Hard Drive folder and look for a file called "Picture 1." Double-click on the file's icon.



This will launch SimpleText, the resident word processor of the Apple computer, which can also show snapshots taken of the desktop.

5. You will see the desktop, with the Scrapbook, as captured when you took the snapshot. With the cursor in the SimpleText document, drag a border surrounding the image of the Scrapbook. Copy the marquee'd image.

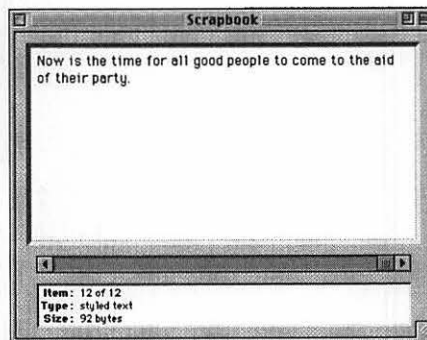
Press Command-V to Paste the image into the Scrapbook.



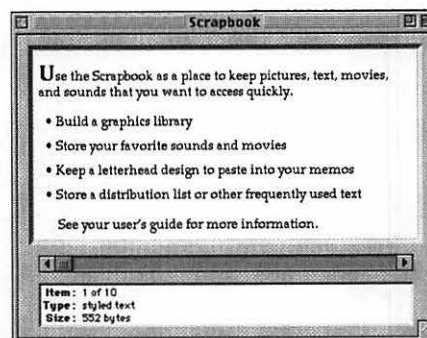
6. Use the Applications Menu to go to SimpleText. Press Command-N to create a new document, which will have the cursor in it. Type the words:

"Now is the time for all good people to come to the aid of their party."

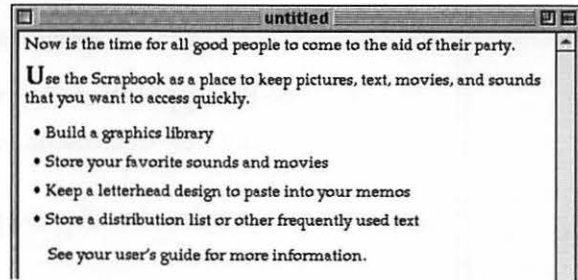
7. Highlight this text with the cursor, and press Command-C to Copy the text to the Clipboard.
8. Use the Apple Menu to go back to the **Scrapbook**. Press Command-V to Paste the copied text into the **Scrapbook**.



9. Scroll to the beginning of the **Scrapbook** to find the text item.

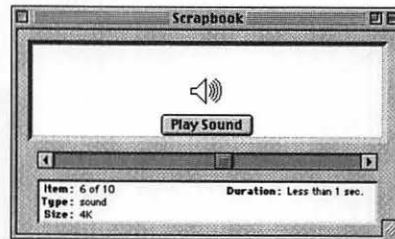


Press Command-C to Copy this text to the Clipboard. Use the Applications Menu to go to the SimpleText document where you typed "Now is the time . . ." Click the cursor inside the document after the phrase you typed. Press Command-V to Paste the Scrapbook text into the document.



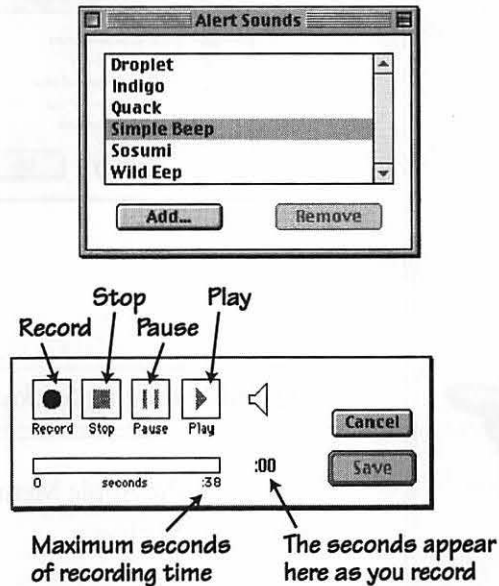
10. In the Scrapbook, scroll to the left until you come to the Sound item. Press the Play Sound button you see in the viewing box.

11. Close the **Scrapbook** window.



SIMPLESOUND

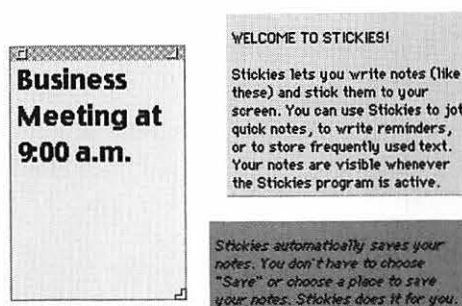
Your computer comes with six standard Alert Sounds. SimpleSound is a utility that allows you to record your own Alert Sounds. But, you must have a special microphone that plugs into your particular model of computer. Read the documentation that came with your computer to find out the type of microphone you need. One microphone does not fit all models.



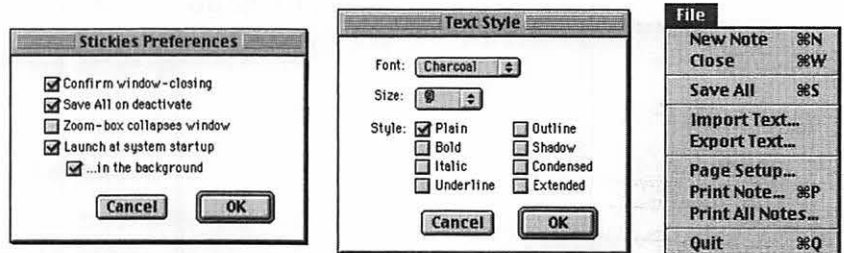
STICKIES

When Post-it Notes™ came out, people went bonkers with sticky notes that could be stuck anywhere, for people to read.

All kidding aside, they are extremely handy, and now, in this computer age, even the computer must have its own version. The version is called Stickies. They are small notes, very similar to the Note Pad, that can be located on your screen as if stuck there with an adhesive backing.

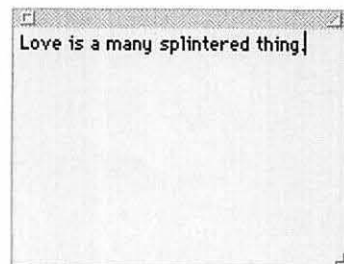


Stickies have a few more features than the Note Pad. They can have their type fonts and size changed, they can be saved, imported and exported, and can appear on your desktop at Startup, to act as a reminder of an appointment or something you need to remember.



Using and Managing Stickies

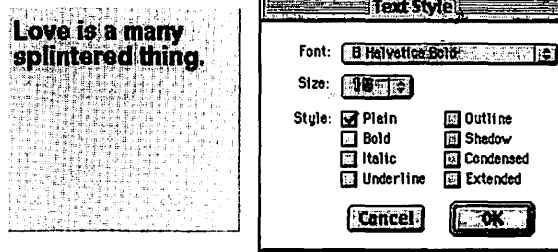
1. Go to the Apple Menu and scroll down to the bottom of the menu to access Stickies.
2. You will see several of the default Stickies, advertising what Stickies are all about. Close each one of these, and when warned about closing them, do not save them. You want to start a fresh with a new Stickey.
3. With the other Stickies gone, and still in the Stickey application, go to the **File** menu and select **New Note**.
4. An empty Stickey will appear on the desktop. Click the cursor inside this Stickey note, and type "Love is a many-splintered thing."



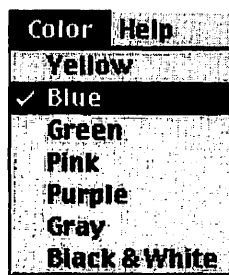
5. Highlight the text and go up to the menu bar to pull down the **Note** menu. You want to access the **Text Style** selection.



6. Set the Font for Helvetica Bold, and the Size to 18. Click **OK**.



7. Deselect the text, but click on the Sticker itself. Go to the menu bar and pulldown the **Color** menu.



This will change the color of your Sticker. Set it to any other color that appeals to you.

8. Leave this Sticker intact, and go back to the **File** menu to create a **New Note**. An empty Sticker will appear. Go to New Note three more times and create three more empty Stickers.
9. Select each empty Sticker and go to the **Color** menu to color them all different colors.
10. Click on each of these empty Stickers and type whatever text you desire in them. Highlight the text in each and use the **Note**->**Text Style** to set the font and size to different settings.

11. Go to the **Edit->Preferences** dialog box and click on the **Launch at system startup** button
12. Do not Save your Stickies. This does not matter, until you try to close each Stickie. With the Stickies spread around your screen, go to the desktop and do a **Special->Restart**.
13. When you computer starts again, and you come back to the desktop, you will see your Stickies. This is one way of having reminders appear for the next time you use the computer.
14. **Close** each Stickie, without saving.



The Macintosh was the first popular computer to have networking built in at the factory. Today's computers often come equipped with Ethernet, which is the name of a very popular networking hardware and software combination. The original networking scheme built into the Macintosh was called AppleTalk. It is still built into the Mac, but most people in commercial environments use Ethernet as their networking method.

Talking with Other Computers

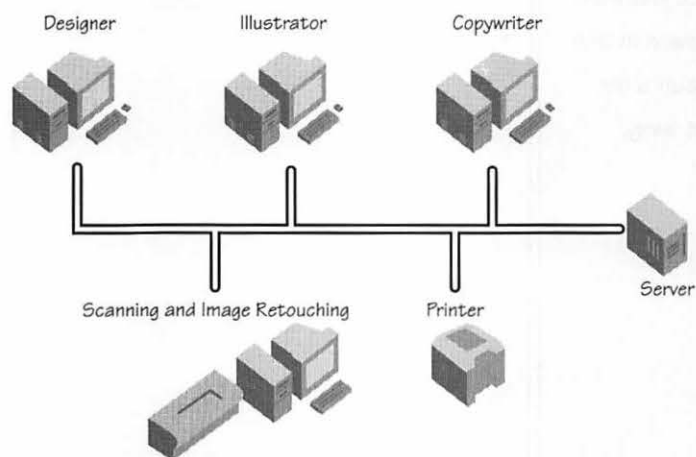
The ability to communicate directly with someone else's computer is called *networking*. Networking is a special function that uses a combination of hardware and software. The hardware is built into your Macintosh, and the software is installed when you first set up your computer.

NETWORKS

The first issue concerning networking is a built-in ability to let other people see your system. This is called *File Sharing*. You can let people see absolutely anything that happens to be on your hard drive(s), or you can let people see only what you want them to. In most cases (since we all have our little secrets), you will be limiting access to certain folders or drives. This way your secret stuff remains secret, and your public stuff is readily accessible to other people you might be working with.

A computer network is like a long line with different items "hanging" off it. These items can be computers, printers, specialized modems, and other types of devices.

Many networks are built around something called a *Server*. A server is a computer that isn't used by individual operators running regular applications. Servers are meant to be resources available to anyone working on the network, and can provide centralized storage, or be used to run special programs, like automation software, databases full of images, common text, and similar items.



Networks allow people working together in a group to share files, programs, and even centralized resources, such as printers or servers.



In some of the screen images we use in the book, there's a small icon in the menu bar:



It's highly likely that you don't have this icon visible in your menu bar, because it's a commercially available program called *Stuffit*. Written by a company called Aladdin Software, it's a very popular utility program that allows you to compress files. Compression is important when you have to move files around a lot over modems and the internet, or if you just want to save some space. In this case, you can stuff a file before you put it away.

Using your Macintosh on a network is quite easy — like most other functions on the machine, it's just a matter of pointing and clicking. As a matter of fact, you really don't need a complex network and expensive file servers to network two or more Macintosh computers. All you need is the appropriate cabling (talk to your computer dealer for more information about setting up a mini-network) and you can get started. Any two Macs can talk to each other right out of the box with an \$8 cable.

SETTING UP AUTHORIZED USERS AND GROUPS

There are two types of people that can access your machine, once you turn file sharing on (which we'll get to in a minute). The first type is called a *guest* and the second is an *authorized user*. Guests are anonymous users — anyone that's connected to the network in your offices or building can access the system. Authorized users are people who need a password — that only you can change — to access the system.

There are times when you might let anyone on the network access certain stuff: pictures, text, logos, and the like. Another instance where guest access might be OK is when you're setting up a server that contains stuff that everyone in the company needs.

Most of the time, though, you will set up each user as they need to access your system. This way, you can deny them access simply by turning off their access privileges.

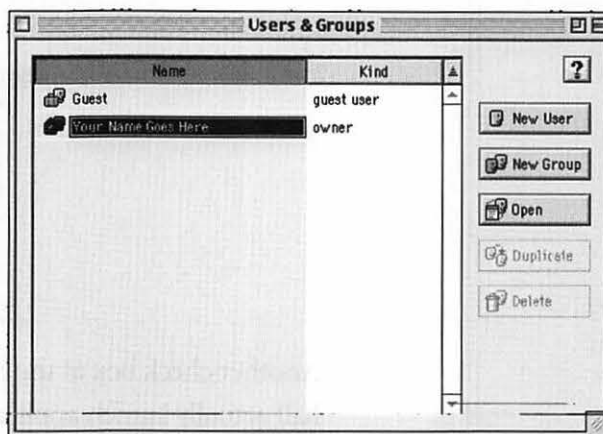


Setting Up Users

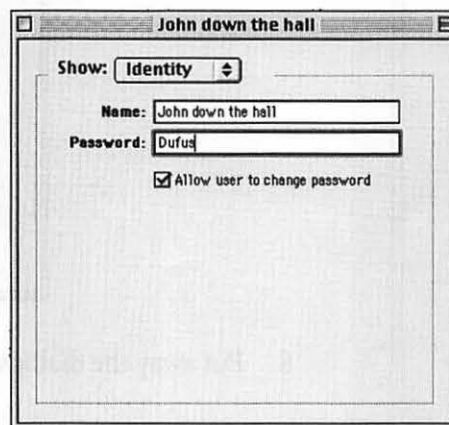


For security purposes, if you're going to allow people access to your computer, you shouldn't let them change their own passwords. All environments operate slightly differently concerning network security, but in most larger companies, only certain network managers can change passwords, set up sharing, or allow access to specific machines and devices on the network. Security can be a major issue, but it's not within the scope of this work. We do suggest, though, that you check with management before setting up a network (if you're working in a company environment).

1. Go to your control panels, and select **Users & Groups**. The **Users & Groups** dialog box will appear:



2. All Macintoshes that use file sharing or work on a network need to have an owner. You can type in your name as the owner of this system.
3. Click the **New User** button. Add a user named **John down the hall**. Assign him an appropriate password. (You can always check the little box and let him change it if he wants):



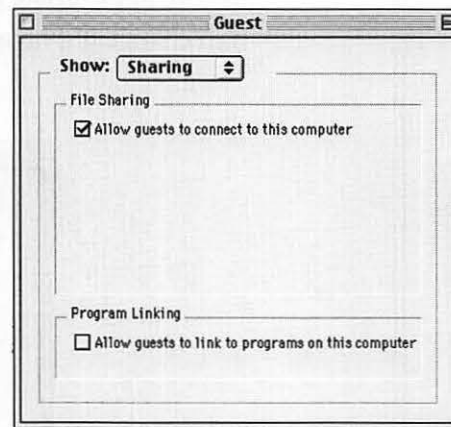
4. Before you put away this dialog box, click the **Show** pop-up menu at the top of the window. Select **Sharing** from the list:



5. This dialog allows you to turn sharing on or off for this specific user. This lets you have some users with access privileges, and others without:



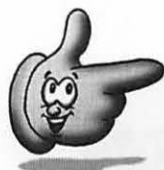
6. Another check box at the bottom of the window would let John down the hall actually launch applications from your system. This is rarely a good idea, though, so we suggest you leave it alone for now.
7. Put away this dialog, and double-click **Guest**. Check the **Sharing** setup and make sure that guests can access your computer:



8. Put away the dialogs when you're done.

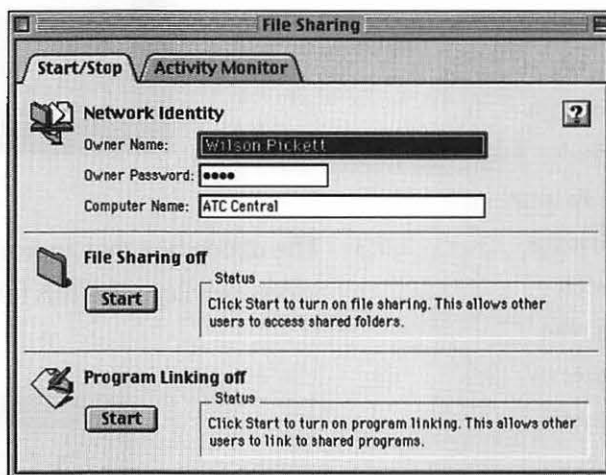
FILE SHARING

Now that you've set up users and guests, you can provide them with access to specific areas of your system. To do this, you have to turn file sharing on, so that it's active in memory. You do this by accessing the **File Sharing** control panel.

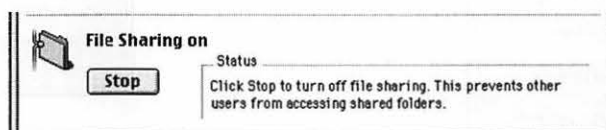


Turning on File Sharing

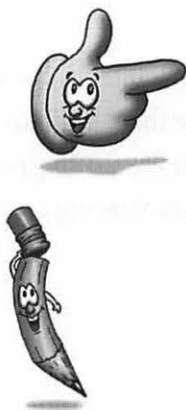
1. Select **File Sharing** from the **Control Panels** menu. The **File Sharing** dialog box will appear. It has two tabs: one for turning sharing on or off, and another that you can use to monitor activity on your system.



2. You can see the Owner's name, their password (which you cannot see since it's blocked out), the name of the computer (which you can change), and several buttons. Click the **Start** button. You will see a brief message that says that file sharing is starting up, and then the icon will change:



3. Put away the dialog boxes when you're done — they don't have to be visible for File Sharing to work.

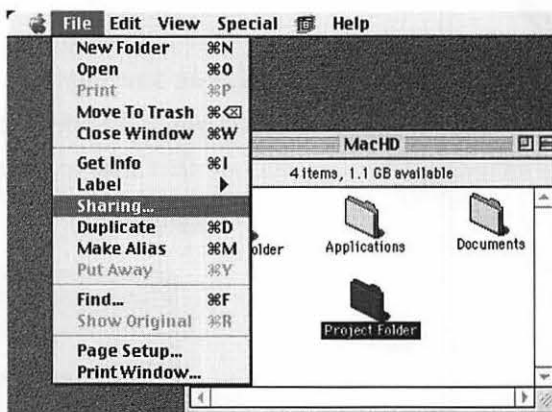


It might seem to be a super idea to buy one version of an expensive program and allow two or two thousand users to access it — simply by clicking that little “Program Sharing” button. It’s not that easy though. First, and most importantly, the people who write programs know about the button, and their stuff won’t work on more than one machine at a time — even though you might think it will.

Secondly, letting someone run an application from your computer means that they will be using your CPU (central processing unit) to do the work of two machines. This translates to your system running verrrry slowly — if at all. Only certain types of programs lend themselves to this type of use (we haven’t found any yet).

Sharing a Folder

1. Highlight the **Project Folder** that you created early on in the course. As you probably remember, there are several folders — most containing files — within this folder.
2. Go to the **File** menu and select **Sharing**:



3. The dialog box that appears provides you with the ability to set all sorts of access privileges for this folder:



4. First of all, check the **Can't move, rename, or delete this item** box. This means that no one can accidentally (or otherwise) delete, rename, hide, or lose this folder.



You can access any system on the network simply by going to the **Chooser** and selecting **AppleTalk**. All the available machines on the network will show in the window:



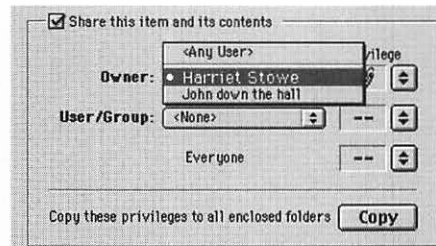
At this point, all you have to do is double-click, and sign on as a guest, or as a registered user (which will require a password). Once you do, the folder or hard drive will appear on your desktop — just like any other.

You can tell that a folder or drive is being shared, because their icons change to show that they're connected to the network:

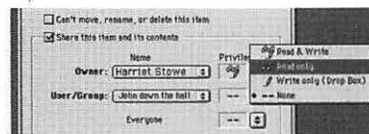


Project Folder

- Next, click **Share this item and its contents**. That will activate the **Owner** and **User/Group** sections of the dialog. It's here where you can get fancy. First, you can change the **Owner** of this specific folder (the one that gets to change stuff like passwords and access privileges):



- For example, if you click on the button to the right (the one that's called *Privileges*), you can change the way a specific user can interface with this folder:



- Or, let everyone (except you and old dufus) be able to put stuff into this folder — like a public drop box — but not read from it:



- Lastly, the **Copy** button lets you set all the folders inside the **Project Folder** to the same privileges as this one. You also have the option of setting them all individually. When you're done, put the dialog box away.



Notes:

Final Review



CHAPTERS 1 THROUGH 3:

In *Basic Macintosh Operations: An Introduction to the Macintosh*, you have learned much about the functionality of this highly popular workstation. Now that you've completed the course, you should:

- ✓ Know the components that make up your Macintosh. These include: the hardware components, such as the monitor; storage, including internal and external hard drive; and external storage devices like floppy disks, Zip drives, and CD-ROMs. You should also understand the difference between an operating system, an application program, and data files.
- ✓ Be familiar with the use of the Macintosh Help system, including several ways of finding answers or guidance on specific issues.
- ✓ Know how to control a Window; how to position it, resize it, and close it.
- ✓ Know about the Menu bar, and how to select or access functions both there and from the keyboard.
- ✓ Understand folders; how to create them, organize them, nest them, change their views, and how to turn them into pop-up menus.
- ✓ Know how to start a simple application, how to format type elements, how to save files, and how to throw them away when you don't need them anymore.
- ✓ Understand how to access the printer(s) connected to your computer through the use of the Chooser, and how to print a file.
- ✓ Understand the Apple Menu, and how to use some of the tools and access the applications that it offers.
- ✓ Be comfortable controlling your working environment, through the use of control panels such as General Controls, Time and Date, Desktop Pictures, Monitors & Sound, and others.
- ✓ Understand the use of Launcher, and how to use aliases to minimize keystrokes, reduce the number of times you have to click the mouse, and generally organize your desktop.
- ✓ Be able to connect your machine to others that are on the same network, and know how to control access privileges for folders and files that reside on your system.

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4/1

A job printed using four colors of ink on one side of the sheet, and one color of ink on the other.

4/4

A job printed with four colors of ink on both sides of the sheet. A full four-color project. See *process colors, subtractive color*.

Acetate

A plastic material used to block or expose specific portions of a layout through "windows" cut from the material by a stripper. The resultant "masks" are used to generate film separations for generating printing plates.

Achromatic

By definition, having no color; therefore, completely black or white or some shade of gray.

Acrobat

This program by Adobe Systems, Inc. converts any document from any Macintosh or Windows application to PDF format, which retains the page layout, graphics, color, and typography of the original document. It is widely used for distributing documents online because it is independent of computer hardware. The only software needed is a copy of Acrobat Reader, which can be downloaded free.

Adaptive Palette

A sampling of colors taken directly from an image, and used in a special compression process usually used to prepare images for the world wide web.

Additive Color Process

The additive color process is the process of mixing red, green, and blue light to achieve a wide range of colors, as on a color television screen. See *Subtractive Color*.

Adjacent Color

The eye will respond to a strong adjacent color in such a way as to affect the perception of the particular color in question. That is, a color having different adjacent colors may look different than it does in isolation. Also referred to as metamorphism.

Adobe Systems Incorporated

A major software developer responsible for the creation of the PostScript page description language (see *PostScript*), used in almost all graphic arts environments. PostScript resides in a printer or Raster Image Processor (see *Raster Image Processor*) and is used to convert graphics from the screen to high-resolution output. Adobe also develops the highly popular Photoshop, Illustrator, PageMaker, and Premiere graphics and video applications, in addition to a range of others.

Airbrush

A tool driven by compressed air that applies a very fine spray of color to artwork to produce various effects. Its effects are simulated in digital illustration and imaging programs.

Algorithm

A specific sequence of mathematical steps to process data. A portion of a computer program that calculates a specific result.

Alley

The white space, or margin, between columns on a page.

Alpha Channel

An 8-bit channel of data that provides additional graphic information, such as colors or masking. Alpha channels are found in some illustration or graphics programs, and are used in video production.

ANSI

The American National Standards Institute. ANSI establishes and publishes industry standards in many fields including data transmission and graphics.

Anti-aliasing

A graphics software feature that eliminates or softens the jaggedness of low-resolution curved edges.

Apple Computer, Inc.

A computer manufacturer based in Cupertino, California. Apple was responsible for the development of the Macintosh computer and the first Postscript-equipped laser printer, which ushered in the "desktop publishing" revolution.

Archival storage

The process of storing data in a totally secure and safe manner. Archiving differs from backup in that it's meant to be used to restore entire systems or networks, rather than providing quick and easy access to specific files or folders.

Art

Illustrations and photographs in general; that is, all matter other than text that appears in a mechanical.

Artifact

By definition, something that is artificial, or not meant to be there. An artifact can be a blemish or dust spot on a piece of film, or unsightly pixels in a digital image.

Ascender

Parts of a lower-case letter that exceed the height of the letter "x". The letters b, d, f, h, k, l, and t have ascenders.

ASCII

The American Standard Code for Information Interchange, which defines each character, symbol, or special code as a number from 0 to 255 (8 bits in binary). An ASCII text file can be read by any computer, and is the basic mode of data transmission on the Internet.

ATM (Adobe Type Manager)

A utility program which causes fonts to appear smooth on screen at any point size. It's also used to manage font libraries.

Author's Alterations (A/As)

Changes made to the copy by the author after typesetting, and thus chargeable to the author.

Backing Up

The process of making copies of current work or work-in-progress as a safety measure against file corruption, drive or system failure, or accidental deletion. Backing up work-in-progress differs from creating an archive (see *Archiving*) for long-term storage or system restoration.

Backslant

A name for characters that slant the opposite way from italic characters.

Banding

A visible stair-stepping of shades in a gradient.

Banner

A large headline or title extending across the full page width, or across a double-page spread.

Baseline

The implied reference line on which the bases of capital letters sit.

Bézier Curves

Curves that are defined mathematically (vectors), in contrast to those drawn as a collection of dots or pixels (raster). The advantage of these curves is that they can be scaled without the "jaggies" inherent in enlarging bitmapped fonts or graphics.

Binding

In general, the various methods used to secure signatures or leaves in a book. Examples include saddle-stitching (the use of staples in a folded spine), and perfect-bound (multiple sets of folded pages sewn or glued into a flat spine).

Bit (Binary Digit)

The smallest unit of information in a computer, representing one of two conditions, ON or OFF; HIGH or LOW, etc. Eight bits comprise one byte. One byte can represent any text character.

Bitmap

A rectangular array of dots that, taken together, form an image. Bitmap file formats include: .BMP, .DIB, .GIF, .PCX and .TIFF (see *Raster Graphics*).

Bitmapped

An image formed by a grid of dots or pixels whose curved edges have discrete steps because of the approximation of the curve by a finite number of pixels.

Black

The absence of color; an ink that absorbs all wavelengths of light.

Blanket

The blanket, a fabric coated with natural or synthetic rubber wrapped around the cylinder of an offset press, transfers the inked image from the plate to the paper.

Bleed

Page data that extends beyond the trim marks on a page. Illustrations that spread to the edge of the paper without margins are referred to as "bled off."

Blind Emboss

A raised impression in paper made by a die, but without being inked. It is visible only by its relief characteristic.

Blow up

An enlargement, usually of a graphic element such as a photograph.

Body Copy

The text portion of the copy on a page, as distinguished from headlines.

Boldface

A heavier, blacker version of a typeface.

Bond

A sized (coated) writing paper used for business or personal stationery that normally has significant rag (cotton) content.

Border

A continuous line that extends around text; or a rectangular, oval, or irregularly-shaped visual in an ad.

Bounding Box

The imaginary rectangle that encloses all sides of a graphic, necessary for a page layout specification.

Brightness

1. A measure of the amount of light reflected from a surface. 2. A paper property, defined as the percentage reflection of 457-nanometer (nm) radiation. 3. The intensity of a light source. 4. The overall percentage of lightness in an image.

Bug

See *Logo*

Bullet

A marker preceding text, usually a solid dot, used to add emphasis; generally indicates that the text is part of a list.

Burn

1. To expose an image onto a plate. 2. To make copies of ROM chips or CD-ROMs. 3. To darken a specific portion of an image through photographic exposure.

Byte

A unit of measure equal to eight bits (decimal 256) of digital information, sufficient to represent one text character. It is the standard unit measure of file size. (See also *Megabyte*, *Kilobyte*, and *Gigabyte*).

Calibration Bars

A strip of reference blocks of color or tonal values used to check the registration, quality, density, and ink coverage during a print run.

Calibration

Making adjustments to a color monitor and other hardware and software to make the monitor represent as closely as possible the colors of the final printed piece.

Callout

A descriptive label referenced to a visual element, such as several words connected to the element by an arrow.

Camera Ready

A completely finished mechanical, ready to be photographed to produce a negative from which a printing plate will be made.

Cap Line

The theoretical line to which the tops of capital letters are aligned.

Caps and Small Caps

A style of typesetting in which capital letters are used in the normal way, while the type that would normally be in lower case has been changed to capital letters of a smaller point size. A true small-caps typeface does not contain any lower-case letters.

Caps

An abbreviation for capital letters.

Caption

The line or lines of text that identify a picture or illustration, usually placed beneath it or otherwise in close proximity.

CD-ROM

A device used to store approximately 600MB of data. Files are permanently stored on the device and can be copied to a disk but not altered directly. ROM stands for Read-Only Memory. Equipment is now available on the consumer market for copying computer files to blank CD-ROMs.

Character Count

The number of characters (letters, figures, signs or spaces) in a selected block of copy. Once used to calculate the amount of text that would fit on a given line or region when physically setting type.

Choke

See *Trapping*

Chooser

A part of the Macintosh operating system that permits selection of a printer or other peripheral device. Chooser is also used to access resources on a network.

Chroma

The degree of saturation of a surface color in the Munsell color space model.

Chromaticity Diagram

A graphical representation of two of the three dimensions of color. Intended for plotting light sources rather than surface colors. Often called the CIE diagram.

Cicero/Didot Point

The cicero is a unit of horizontal distance slightly larger than the pica, used widely in continental Europe. A cicero equals 0.178 inches, or 12 Didot points.

CIE (Commission Internationale de l'Eclairage)

An international group that developed a universal set of color definition standards in 1931.

CIE Diagram

See *Chromaticity Diagram*

Clip Art

Collections of predrawn and digitized images stored on disk that can be pasted into word processing and DTP documents.

Clipboard

The portion of computer memory that holds data that has been cut or copied. The next item cut or copied replaces the data already in the clipboard.

Cloning

Duplication of pixels from one part of an image to another.

CMS

See *Color Management System*

CMYK (Cyan, Magenta, Yellow, Black)

The process colors (subtractive primaries) used in color printing. The letter K stands for "Key," although it is commonly used to refer to the Black ink that is added to the three colors when necessary. When printing black text as part of a four-color process, only the black ink is used. A normal four-color separation will have a plate for each of the four colors. When combined on the printed piece, the half-tone dots of each color give the impression of the desired color to the eye.

Coated

Printing papers having a surface coating (of clay or other material) to provide a smoother, more even finish with greater opacity.

Cold type

Type produced by photographic or digital methods, as opposed to the use of molten metal as in the old Linotype machine.

Collate

To gather separate sections or leaves of a publication together in the correct order for binding.

Color Balance

The combination of yellow, magenta, and cyan needed to produce a neutral gray. Determined through a gray balance analysis.

Color Bars

See *Color Control Strip*

Color Cast

The modification of a hue by the addition of a trace of another hue, such as yellowish green, pinkish blue, etc. Normally, an unwanted effect that can be corrected.

Color Chart

A printed chart of various combinations of CMYK colors used as an aid for the selection of "legal" colors during the design phase of a project.

Color Control Strip

A printed strip of various reference colors used to control printing quality. This strip is normally placed outside the "trim" area of a project, as a guide and visual aid for the pressman.

Color Conversion

Changing the color "mode" of an image. Converting an image from RGB to CMYK for purposes of preparing the image for conventional printing.

Color Correction

The process of removing casts or unwanted tints in a scanned image, in an effort to improve the appearance of the scan or to correct obvious deficiencies, such as green skies or yellowish skin tones.

Color Gamut

The range of colors that can be formed by all possible combinations of the colorants of a given reproduction system (printing press) on a given type of paper.

Color Key

An overlay color proof of acetate sheets, one for each of the four primary printing inks. The method was developed by 3M Corporation and remains a copyrighted term.

Color Management System

A process or utility that attempts to manage color of input and output devices in such a way that the monitor will match the output of any CMS-managed printer.

Color Model

A system for describing color, such as RGB, HLS, CIELAB, or CMYK.

Color Picker

A function within a graphics application that assists in selecting a color.

Color Proof

A printed or simulated printed image of the color separations intended to produce a close visual simulation of the final reproduction for approval purposes.

Color Scanner

See *Scanner*

Color Separation

The process of splitting an image or PostScript into cyan, magenta, yellow, and black components for offset printing.

Color Sequence

The color order of printing the cyan, magenta, yellow, and black inks on a printing press. Sometimes called rotation or color rotation.

Color Space

Because a color must be represented by three basic characteristics depending on the color model, the color space is a three-dimensional coordinate system in which any color can be represented as a point.

Color Temperature

The temperature, in degrees Kelvin, to which a blackbody would have to be heated to produce a certain color radiation. (A "blackbody" is an ideal body or surface that completely absorbs or radiates energy.) The graphic arts viewing standard is 5,000 K. The degree symbol is not used in the Kelvin scale. The higher the color temperature, the bluer the light.

Color Transparency

A positive color photographic image on a clear film base that must be viewed by transmitted light. It is preferred for original photographic art because it has higher resolution than a color print. Transparency sizes range from 35mm color slides up to 8x10in. (203x254mm).

Colorimeter

An optical measuring instrument designed to measure and quantify color. They are often used to match digital image values to those of cloth and other physical samples.

Column rule

A thin vertical rule used to separate columns of type.

Comp

Comprehensive artwork used to present the general color and layout of a page.

Compose

To set copy into type, or lay out a page.

Compression

A digital technique used to reduce the size of a file by analyzing occurrences of similar data. Compressed files occupy less physical space, and their use improves digital transmission speeds. Compression can sometimes result in a loss of image quality and/or resolution.

Condensed Type

A typeface in which the width of the letters has been reduced. Condensed type can be a specific font, or the result of applying a percentage of normal width by a formatting command.

Continuous Tone

An image such as an original photograph in which the subject has continuous shades of color or gray tones through the use of an emulsion process. Continuous tone images must be screened to create halftone images in order to be printed.

Contrast

The relationship between the dark and light areas of an image.

Copy

Any material furnished for reproduction such as text or illustrations. As a verb, the computer command to copy data to the clipboard in preparation for pasting it to another location.

Copyfitting

Fitting a certain body of text to a given area by changing the font size, leading, justification, or some other parameter.

Copyright

Ownership of a work by the originator, such as an author, publisher, artist, or photographer. The right of copyright permits the originator of material to prevent its use without express permission or acknowledgement of the originator. Copyright may be sold, transferred, or given up contractually.

CorelDraw

A popular drawing program originally designed for the Windows environment, but now available as a Macintosh program. Corel is known to create files that can cause printing and/or output problems in many environments.

Creep

An unwanted movement of the blanket of an offset printing press that causes registration problems.

Cromalin

A single-sheet color proofing system introduced by DuPont in 1971 and still quite popular in the industry. It uses a series of overlaid colorants and varnish to simulate the results of a press run.

Crop Marks

Printed lines used for final trimming of a printed page.

Cropping

The elimination of parts of a photograph or other original that are not required to be printed.

Dash

A short horizontal rule of varying lengths used to indicate a pause or clause in a sentence; see *En-dash* and *Em-dash*.

DCS (Desktop Color Separation)

An EPS file format that creates one file for each of the four primary printing inks, and a fifth file that contains a thumbnail of the image. DCS files are used for building pages with layout programs; when the file is output, the small placement image is discarded, and the four high-resolution files are automatically substituted. This reduces the need to move large, high-resolution files around a network.

Default

A specification for a mode of computer operation that operates if no other is selected. For example, the default font size might be 12 point, or a default color for an object might be white with a black border.

Densitometer

An electronic instrument used to measure optical density. Reflective (for paper) and transmissive (for film) versions are available.

Density

The ability of a material to absorb light. In film, it refers to the opacity of a specific area of the image. A maximum density of 4.0 refers to solid black. Improper density in film images can result in washed-out or overly-dark reproduction.

Descender

The part of a lower-case letter that extends below the baseline (lower edge of the x-height) of the letter. The letters y, p, g, and j contain descenders.

Desktop

1. The area on a monitor screen on which the icons appear, before an application is launched. 2. A reference to the size of computer equipment (system unit, monitor, printer) that can fit on a normal desk; thus, desktop publishing.

Desktop Publishing (DTP)

Use of a personal computer, software applications, and a high-quality printer to produce fully composed printed documents. DTP is, in reality, an incorrect term these days. In the early days of Macintosh and PostScript technology, the term Desktop Publishing inferred that the materials produced from these systems was somehow inferior (as opposed to *professional* publishing). Now, the overwhelming majority of all printed materials – regardless of the quality – are produced on these systems, up to and including nationally famous magazines, catalogs, posters, and newspapers.

Dialog Box

A window in a computer application that – in most cases – presents an opportunity for the user to enter information relative to the process that they're executing. A dialog box might ask, for example, how many copies of a document you

want to print, or what size a circle should be, or what color. Dialog boxes are an integral part of today's graphic user interfaces – both on the Macintosh and on Windows-based systems.

Digital Camera

A camera which produces images directly into an electronic file format for transfer to a computer.

Digital

The use of a series of discrete electronic pulses to represent data. In digital imaging systems, 256 steps (8 bits, or 1 byte) are normally used to characterize the gray scale or the properties of one color. For text, see *ASCII*.

Digital Proofs

Digital proofs are representations of what a specific mechanical will look like when output and reproduced on a specific type of printing press. The difference with a digital proof is that it is created without the use of conventional film processes and output directly from computer files.

Dingbat

A font character that displays a picture instead of a letter, number or punctuation mark. There are entire font families of pictographic dingbats; the most commonly used dingbat font is *Zapf Dingbats*. There are dingbats for everything from the little airplanes used to represent airports on a map, to telephones, swashes, fish, stars, balloons – just about anything.

Direct-to-plate

Producing printing plates directly from computer output without going through the film process.

Disk

A computer data storage device, either "floppy," "hard," or a high-capacity removable disk, that stores data magnetically.

Disk Operating System (DOS)

Software for computer systems that supervises and controls the running of programs. The operating system is loaded into memory from disk by a small program which permanently resides in the firmware within the computer. The major operating systems in use today are Windows95 and WindowsNT from Microsoft, the Macintosh OS from Apple Computer, and a wide range of UNIX systems, such as those from Silicon Graphics, SUN Microsystems, and other vendors.

Dithering

A technique used in images wherein a color is represented using dots of two different colors displayed or printed very close together. Dithering is often used to compress digital images, in special screening algorithms (see *Stochastic Screening*) and to produce higher quality output on low-end color printers.

Document

The general term for a computer file containing text and/or graphics.

Dongle

A security device that usually plugs into your keyboard or printer port, that allows copy-protected software to run on your system. Such protected software will only run on systems with the dongle present. This prevents a single copy of software from running on any but one machine at a time.

Dot Gain

The growth of a halftone dot that occurs whenever ink soaks into paper. This growth can vary from being very small (on a high-speed press with fast-drying ink and very non-porous paper) to quite dramatic, as is the case in newspaper printing, where a dot can expand 30% from its size on the film to the size at which it dries. Failure to compensate for this gain in the generation of digital images can result in very poor results on press. Generally speaking, the finer the screen (and therefore, the smaller the dot) the more noticeable dot gain will be.

Double-page Spread

A design that spans the two pages visible to the reader at any open spot in a magazine, periodical, or book.

Double-Click

Two clicks of a mouse button in rapid succession that are interpreted as the command to open an application, file, or folder.

Downloadable Fonts

Typefaces that can be stored on disk and then downloaded to the printer when required for printing.

DPI (Dots Per Inch)

The measurement of resolution for page printers, phototype-setting machines and graphics screens. Currently graphics screens use resolutions of 60 to 100 dpi, standard desktop laser printers work at 600 dpi, and imagesetters operate at more than 1,500 dpi.

Dragging

The process of moving an object on the screen by clicking on it with the mouse, moving the cursor to another location, then releasing the button.

Drop Cap

A large initial cap, usually set down into the block or body of normal text. Excellent examples of ornate drop caps (called illuminated initials) can often be seen in manuscripts illustrated by hand in the Middle Ages.

Drop Shadow

A duplicate of a graphic element or type placed behind and slightly offset from it, giving the effect of a shadow.

Drum Scanner

A color scanner on which the original is wrapped around a rotary scanning drum. See *Scanner*.

DTP

See *Desktop Publishing*

Duotone

The separation of a black-and-white photograph into black and a second color having different tonal values and screen angles. Duotones are used to enhance photographic reproduction in two-, three-, or sometimes four-color work. Often the second, third, and fourth colors are not standard CMYK inks.

Dye

A soluble coloring material, normally used as the colorant in color photographs.

Dye Transfer

A photographic color print using special coated papers to produce a full color image. Can serve as an inexpensive proof.

Electrostatic

The method by which dry toner is transferred to paper in a copier or laser printer, and liquid toners are bonded to paper on some large-format color plotters.

Element

The smallest unit of a graphic, or a component of a page layout or design. Any object, text block, or graphic might be referred to as an element of the design.

Elliptical Dot Screen

A halftone screen having an elliptical dot structure.

Em Dash

A dash – often used in place of parentheses or commas to break a sentence – that is usually equal to the point size. For example, in 10 point type, an em dash would be 10 points wide. Formerly the width of a capital M in a particular font; this definition is still used by some type foundries.

Em Space

A space usually equal to the current point size; in 10 point type, an em space should be 10 points wide. Formerly the width of a capital M in a given font; this definition is still used by some type foundries. Hot lead typesetters often used this space as the standard distance for a paragraph indent.

Embedding

1. Placing control codes in the body of a document. 2. Including a complete copy of a text file or image within a desktop publishing document, with or without a *link* (see *Linking*).

Emulsion

The coating of light-sensitive material (silver halide) on a piece of film.

En Dash

A dash – often used in hyphenated word pairs – that is usually half the width of an em dash.

En Space

A space that is usually equal to half the width of an em space.

EPS (Encapsulated PostScript)

A file format used to transfer PostScript data within compatible applications. An EPS file normally contains a small thumbnail that's used to display the image when it's placed into position within a mechanical or used by another program. EPS files can contain text, vector artwork, and images.

Ethernet

A set of software protocols widely used in network communications.

Excel

A spreadsheet application produced by Microsoft; available separately or as part of Microsoft Office.

Exception dictionary

A file, used within a spell-checking or hyphenation process, that provides exceptions to standard spelling or justification rules.

Expanded Type

Also called extended, a widened version of a typeface design. Type may be extended artificially within a DTP application, or designed as such by the typeface designer. See also *Condensed Type*.

Export

To save a file generated in one application in a format that is readable in another application.

Extension

A modular software program that extends or expands the functions of a larger program. A folder of Extensions is found in the Macintosh System Folder.

Fill

To add a tone or color to the area inside a closed object in a graphic illustration program.

Film

Non-paper output of an imagesetter or phototypesetter.

Filter

In image editing applications, a small program that creates a special effect or performs some other function within an image.

Flat

A group of individual camera-ready pages mounted in the proper order and ready for photographing to produce a signature plate.

Flat Color

Color that lacks contrast or tonal variation.

Flatbed Scanner

A scanner on which the original is mounted on a flat scanning glass. See *Scanner*.

Flexography

A rotary letterpress process printing from rubber or flexible plates and using fast drying inks. Mainly used for packaging.

Floating Accent

A separate accent mark that can be placed under or over another character. Complex accented characters such as in foreign languages are usually available in a font as a single character.

Flop

To make a mirror image of visuals such as photographs or clip art.

Flush Left

Copy aligned along the left margin.

Flush Right

Copy aligned along the right margin.

Folder

1. The digital equivalent of a paper file folder, used to organize files in the Macintosh and Windows operating systems. The

icon of a folder looks like a paper file folder. Double-clicking it opens it to reveal the files stored inside. 2. A mechanical device which folds preprinted pages into various formats, such as a tri-fold brochure.

Font

A font is the complete collection of all the characters (numbers, uppercase and lowercase letters and, in some cases, small caps and symbols) of a given typeface in a specific style; for example, Helvetica Bold.

Force Justify

A type alignment command which causes the space between letters and words in a line of type to expand to fit within a line. Often used in headlines, and sometimes used to force the last line of a justified paragraph, which is normally set flush left, to justify.

Four-color Process

See *Process Colors*

FPO

"For Position Only": a low-resolution graphic or simple box to designate the location of a graphic in the final file.

Frame

In desktop publishing, an area or block into which text or graphics can be placed.

FreeHand

A popular vector-based illustration program available from Macromedia.

Full Measure

A line set to the entire line length.

Galley Proof

Proofs, usually of type, taken before the type is made up into pages. Before desktop publishing, galley proofs were hand-assembled into pages.

Gamma Correction

1. Adjusting the contrast of the midtones in an image. 2. Calibrating a monitor so that midtones are correctly displayed on screen.

Gamma

A measure of the contrast, or range of tonal variation, of the midtones in a photographic image

Gamut

See *Color Gamut*

GASP

Acronym for Graphic Arts Service Provider, a firm that provides a range of services somewhere on the continuum from design to fulfillment.

GCR (Gray component replacement)

A technique for adding detail by reducing the amount of cyan, magenta, and yellow in chromatic or colored areas, replacing them with black.

GIF - Graphics Interface File

A CompuServe graphics file format that is used widely for graphic elements in Web pages.

G (Gigabyte)

One billion (1,073,741,824) bytes (2^{30}) or 1,048,576 kilobytes.

Global Preferences

Preference settings which affect all newly created files within an application.

Gradation

A smooth transition between black and white, one color and another, or color and no-color.

Gradient

A fill pattern that goes from dark to light or light to dark, or from one color or shape to another.

Grain

Silver salts clumped together in differing amounts in different types of photographic emulsions. Generally speaking, faster emulsions have larger grain sizes.

Graininess

Visual impression of the irregularly distributed silver grain clumps in a photographic image, or the ink film in a printed image.

Gray Balance

The values for the yellow, magenta, and cyan inks that are needed to produce a neutral gray when printed at a normal density.

Gray Component Replacement

See *GCR*

Gray Scale

An image containing a series of tones stepped from white to black that is used for monitoring tone reproduction.

Grayscale

An image composed in grays ranging from black to white, usually using 256 different shades of gray.

Greeking

1. A software technique by which areas of gray are used to simulate lines of text below a certain point size. 2. Nonsense text use to define a layout before copy is available.

Grid

A division of a page by horizontal and vertical guides into areas into which text or graphics may be placed accurately.

Group

To collect graphic elements together so that an operation may be applied to all of them simultaneously.

GUI

Acronym for Graphical User Interface, the basis of the Macintosh and Windows operating systems.

Guides

Lines created in layout application programs to assist in aligning various design elements.

Gutter

The white space between two facing pages. Sometimes used interchangeably with *Alley* to describe the space between columns on a page.

Hairline Rule

The thinnest rule that can be printed on a given device. A hairline rule on a 1200 dpi imagesetter is 1/1200 of an inch; on a 300 dpi laser printer, the same rule would print at 1/300 of an inch.

Halftone

An image generated for use in printing in which a range of continuous tones is simulated by an array of dots that create the illusion of continuous tone when seen at a distance.

Halftone Tint

An area covered with a uniform halftone dot size to produce an even tone or color. Also called *tint* or *screen tint*.

Hanging Indent

Formatting text so that the first line is not indented, and all subsequent lines within the paragraph are indented. Often used with bullets.

Hanging punctuation

Punctuation marks such as quotation marks that are set outside the text block; similar to a hanging indent.

Hard Copy

A tangible permanent image such as an original, a proof, or a printed sheet.

Hard Drive

A rigid disk sealed inside an airtight transport mechanism that is the basic storage mechanism in a computer. Information stored may be accessed more rapidly than on floppy disks and far greater amounts of data may be stored.

Hard Return

A manual line ending (created by pressing the Return or Enter key) that denotes the end of a paragraph.

Header

A fixed body of copy that appears at the top of each page of a section of a book. It may contain variable quantities such as page number, time, date, or file name.

Hide

A command in DTP applications that will render certain elements on the screen invisible, but will not remove them from the file.

High Key

A photographic or printed image in which the main interest area lies in the highlight end of the scale.

High Resolution File

An image file that typically contains four pixels for every dot in the printed reproduction. High-resolution files are often linked to a page layout file, but not actually embedded in it, due to their large size.

Highlights

The lightest areas in a photograph or illustration.

HLS

Color model based on three coordinates: hue, lightness (or luminance), and saturation.

HSV

A color model based on three coordinates: hue, saturation and value (or luminance).

HTML (HyperText Markup Language)

The language, written in plain (ASCII) text using simple tags, that is used to create Web pages, and which Web browsers are designed to read and display. HTML focuses more on the logical structure of a page than its appearance.

Hue

The wavelength of light of a color in its purest state (without adding white or black).

Hyperlink

An HTML tag that directs the computer to a different Anchor or URL (Uniform Resource Locator). The linked data may be on the same page, or on a computer anywhere in the world.

Hyphenation Zone

The space at the end of a line of text in which the hyphenation function will examine the word to determine whether or not it should be hyphenated and wrapped to the next line.

Icon

A small graphic symbol used on the screen to indicate files or folders, activated by clicking with the mouse or pointing device.

Illustrator

A vector editing application owned by Adobe Systems, Inc.

Imagewriter

A raster-based laser device used to output a computer page-layout file or composition at high resolution onto photographic paper or film, from which to make printing plates.

Import

To bring a file generated within one application into another application.

Imposition

The arrangement of pages on a printed sheet, which, when the sheet is finally printed, folded and trimmed, will place the pages in their correct order.

Indent

A typographical technique that lines up the beginnings or ends of lines at a position other than the preset margin.

Indexing

In DTP, marking certain words within a document with hidden codes so that an index may be automatically generated.

Indexed Color Image

An image which uses a limited, predetermined number of colors; often used in Web images. See also *GIF*.

Initial Caps

Text in which the first letter of each word (except articles, etc.) is capitalized.

Inline Graphic

A graphic that is inserted within a body of text, and may be formatted using normal text commands for justification and leading; inline graphics will move with the body of text in which they are placed.

Intensity

Synonym for degree of color saturation.

International Paper Sizes

The International Standards Organization (ISO) system of paper sizes is based on a series of three sizes A, B and C. Series A is used for general printing and stationery, Series B for posters, and Series C for envelopes. Each size has the same proportion of length to width as the others. The nearest ISO paper size to conventional 8-1/2 x 11 paper is A4.

ISO

The International Standards Organization.

Italics

A version of a typeface designed with letters slanted to the right.

Jaggies

Visible steps in the curved edge of a graphic or text character that results from enlarging a bitmapped image.

JPG or JPEG

A compression algorithm that reduces the file size of bitmapped images, named for the Joint Photographic Experts Group, an industry organization that created the standard; JPEG is a "lossy" compression method, and image quality will be reduced in direct proportion to the amount of compression.

Justification

The alignment of text along a margin or both margins..

Kelvin (K)

Unit of temperature measurement based on Celsius degrees, starting from absolute zero, which is equivalent to -273 Celsius (centigrade); used to indicate the color temperature of a light source.

Kerning

Moving a pair of letters closer together or farther apart, to achieve a better fit or appearance.

Key (Black Plate)

In early four-color printing, the black plate was printed first and the other three colors were aligned (or registered) to it. Thus, the black plate was the "key" to the result.

Kilobyte (K, KB)

1,024 (2¹⁰) bytes, the nearest binary equivalent to decimal 1,000 bytes. Abbreviated and referred to as K.

Knockout

A shape or object printed by eliminating (knocking out) all background colors. See *Overprinting*.

L*a*b

The lightness, red-green attribute, and yellow-blue attribute in the CIE Color Space, a three-dimensional color mapping system.

Landscape

Printing from the left to right across the wider side of the page. A landscape orientation treats a page as 11 inches wide and 8.5 inches long.

Laser printer

A high quality image printing system using a laser beam to produce an image on a photosensitive drum. The image is transferred to paper by a conventional xerographic printing process. Current laser printers used for desktop publishing have a resolution of 600 dpi. Imagesetters are also laser printers, but with higher resolution and tight mechanical controls to produce final film separations for commercial printing.

Layer

A function of graphics applications in which elements may be isolated from each other, so that a group of elements may be hidden from view, locked, reordered or otherwise manipulated as a unit, without affecting other elements on the page.

Layout

The arrangement of text and graphics on a page, usually produced in the preliminary design stage.

Leading ("leding")

Space added between lines of type. Usually measured in points or fractions of points. Named after the strips of lead which used to be inserted between lines of metal type. In specifying type, lines of 12-pt. type separated by a 14-pt. space is abbreviated "12/14," or "twelve over fourteen."

Leaders

A line of periods or other symbols connecting the end of a group of words with another element separated by some space. For example, a table of contents may consist of a series of phrases on separate lines, each associated with a page number. Promotes readability in long lists of tabular text.

Letterspacing

The insertion or addition of white space between the letters of words.

Library

In the computer world, a collection of files having a similar purpose or function.

Ligature

Letters that are joined together as a single unit of type such as oe and fi.

Lightness

The property that distinguishes white from gray or black, and light from dark color tones on a surface.

Line Art

A drawing or piece of black and white artwork, with no screens. Line art can be represented by a graphic file having only one-bit resolution.

Line Screen

The number of lines per inch used when converting a photograph to a halftone. Typical values range from 85 for newspaper work to 150 or higher for high-quality reproduction on smooth or coated paper.

Linen Tester

A magnifying glass designed for checking the dot image of a halftone. See *Loupe*.

Linking

An association through software of a graphic or text file on disk with its location in a document. That location may be represented by a "placeholder" rectangle, or a low-resolution copy of the graphic.

Linotype

A typesetting machine (now obsolete) that injected hot metal into a line of molds to produce lines of type. After printing, the type was melted and used again.

Linotype-Hell

The manufacturer of imagesetters such as the Linotronic that process PostScript data through an external Raster Image Processor (RIP) to produce high resolution film for printing.

Lithography

A mechanical printing process used for centuries based on the principle of the natural aversion of water (in this case, ink) to grease. In modern offset lithography, the image on a photosensitive plate is first transferred to the blanket of a rotating drum, and then to the paper.

Logo

A graphic element normally used as a design to represent a company or product.

Lossy

A data compression method characterized by the loss of some data.

Loupe

A small free-standing magnifier used to see fine detail on a page. See *Linen Tester*.

Lowercase

The uncapitalized letters of the alphabet; so named when type was composed by hand, and the small letters were in the lower part of the type case.

LPI

Lines per inch. See *Line Screen*.

Luminosity

The amount of light, or brightness, in an image. Part of the HLS color model.

LZW

The acronym for the Lempel-Ziv-Welch lossless data- and image-compression algorithm.

M, MB (Megabyte)

One million (1,048,576) bytes (2²⁰) or 1,024 Kilobytes.

Macro

A set of keystrokes that is saved as a named computer file. When accessed, the keystrokes will be performed. Macros are used to perform repetitive tasks.

Manuscript (MS or Mss)

The original written or typewritten work of an author submitted for publication.

Margins

The non-printing areas of page, or the line at which text starts or stops.

Mark up

To prepare copy for a compositor, setting out in detail all the typesetting instructions, or to denote corrections on a printed proof.

Mask

To conform the shape of a photograph or illustration to another shape such as a circle or polygon.

Masking

A digital technique that blocks an area of an image from reproduction by superimposing an opaque object of any shape.

Master Page

A page that holds repeating elements of a layout, such as guides or graphics.

Match Print

A color proofing system used for the final quality check.

Mechanical

A pasted-up page of camera-ready art that is to be photographed to produce a plate for the press.

Mechanical Dot Gain

See *Dot Gain*

Medium

A physical carrier of data such as a CD-ROM, video cassette, or floppy disk, or a carrier of electronic data such as fiber optic cable or electric wires.

Megabyte (MB)

A unit of measure of stored data equaling 1,024 kilobytes, or 1,048,576 bytes (10^{20}).

Megahertz

An analog signal frequency of one million cycles per second, or a data rate of one million bits per second. Used in specifying computer CPU speed.

Menu

A list of choices of functions, or of items such as fonts. In contemporary software design, there is often a fixed menu of basic functions at the top of the page that have pull-down menus associated with each of the fixed choices.

Menu-driven

Programs which allow the user to request functions by choosing from a list of options.

Metafile

A class of graphics that combines the characteristics of raster and vector graphics formats; not recommended for high-quality output.

Metallic Ink

Printing inks which produce an effect of gold, silver, bronze, or metallic colors.

Midtones or Middletones

The tonal range between highlights and shadows.

Mock-up

The rough concept or layout of a publication or design.

Modem

An electronic device for converting digital data into analog audio signals and back again (MODulator-DEMulator.) Primarily used for transmitting data between computers over analog (audio frequency) telephone lines.

Moiré

An interference pattern caused by the out-of-register overlap of two or more regular patterns such as dots or lines. In process-color printing, screen angles are selected to minimize this pattern.

Monochrome

An image or computer monitor in which all information is represented in black and white, or with a range of grays.

Monospace

A font in which all characters occupy the same amount of horizontal width regardless of the character. See also *Proportional Spacing*.

Montage

A single image formed by assembling or compositing several images.

Mottle

Uneven color or tone.

Mss

See *Manuscript*

Multimedia

The combination of sound, video images, and text to create a "moving" presentation.

Network

Two or more computers that are linked to exchange data or share resources. The Internet is a network of networks.

Neutral

Any color that has no hue, such as white, gray, or black.

Neutral Density

A term that describes images or filters that are gray with no apparent hue.

Noise

Unwanted signals or data that may reduce the quality of the output.

Non-breaking Space

A typographic command that connects two words with a space, but prevents the words from being broken apart if the space occurs within the hyphenation zone. See *Hyphenation Zone*.

Nonreproducible Colors

Colors in an original scene or photograph that are impossible to reproduce using process inks. Also called out-of-gamut colors.

Normal Key

A description of an image in which the main interest area is in the middle range of the tone scale or distributed throughout the entire tonal range.

Norton Utilities

A software product that provides programs for maintaining a computer's hardware or software; for example, locating and restoring a file that was accidentally "erased."

Nudge

To move a graphic or text element in small, preset increments, usually with the arrow keys.

Oblique

A slanted character (sometimes backwards, or to the left), often used when referring to italic versions of sans-serif typefaces.

OCR (Optical Character Recognition)

A special kind of scanner software that provides a means of reading printed characters on documents and converting them into digital codes that can be read into a computer as actual editable text rather than pure images.

Offset

In graphics manipulation, to move a copy or clone of an image slightly to the side and/or back; used for a drop-shadow effect.

Offset Lithography

A printing method whereby the image is transferred from a plate onto a rubber-covered cylinder from which the printing takes place (see *Lithography*).

OLE

Object Linking and Embedding, a software technique that permits linking an object in a document to its original file and enabling automatic updating. OLE applications may be OLE containers (able to accept OLE documents) or OLE servers (able to create OLE documents), or both.

Opacity

1. The degree to which paper will show print through it. 2. Settings in certain graphics applications that allow images or text below the object whose opacity has been adjusted, to show through.

OPI

Open Prepress Interface, a software device that is an extension to PostScript that replaces low-resolution placeholder images in a document with their high-resolution sources for printing.

Optical Disks

Video disks that store large amounts of data used primarily for reference works such as dictionaries and encyclopedias.

Orphan

The last line of a paragraph that appears alone at the top of a column or page.

Outline

A typeface in which the letters have outlines only and no fill.

Overlay

A transparent sheet used in the preparation of multicolor mechanical artwork showing the color breakdown.

Overprint Color

A color made by overprinting any two or more of the primary yellow, magenta, and cyan process colors.

Overprinting

Allowing an element to print over the top of underlying elements, rather than knocking them out (see *Knockout*). Often used with black type.

Page Description Language (PDL)

A special form of programming language that describes both text and graphics (object or bit-image) in mathematical form. The main benefit of a PDL is that makes the application software independent of the physical printing device. PostScript is a PDL, for example.

Page Layout Software

Desktop publishing software such as PageMaker or QuarkXpress used to combine various source documents and images into a high quality publication.

Page Proofs

Proofs of the actual pages of a document, usually produced just before printing, for a final quality check.

PageMaker

A popular page-layout application produced by Adobe Systems.

Palette

1. As derived from the term in the traditional art world, a collection of selectable colors. 2. Another name for a dialog box or menu of choices.

Panose

A typeface matching system for font substitution based on a numeric classification of fonts according to visual characteristics.

Pantone Matching System

A system for specifying colors by number for both coated and uncoated paper; used by print services and in color desktop publishing to assure uniform color matching.

Pasteboard

In a page layout program, the desktop area outside of the printing page area, on which elements can be placed for later positioning on any page.

PCX

Bitmap image format produced by paint programs.

PDF (Portable Document Format)

Developed by Adobe Systems, Inc. (and read by Adobe Acrobat Reader), this format has become a de facto standard for document transfer across platforms.

PDL

See *Page Description Language*

Perfect binding

A common method of binding paperback books in which the pages are glued directly to the binding.

Perspective

The effect of distance in an image achieved by aligning the edges of elements with imaginary lines directed toward one to three "vanishing points" on the horizon.

Photoshop

The Adobe Systems image editing program commonly used for color correction and special effects on both the Macintosh and PC platforms.

Pi Fonts

A collection of special characters such as timetable symbols and mathematical signs. Examples are Zapf Dingbats and Symbol. See also *Dingbats*.

Pica

A traditional typographic measurement of 12 points, or approximately 1/6 of an inch. Most DTP applications specify a pica as exactly 1/6 of an inch.

PICT/PICT2

A common format for defining bitmapped images on the Macintosh. The more recent PICT2 format supports 24-bit color.

Pixel

A picture element – the smallest dot or unit on a computer monitor or in a bitmapped image.

Plate

Paper, polyester, or metal sheet used in a printing press to transfer an image onto paper.

PMS

See *Pantone Matching System*

PMT

Photo Mechanical Transfer – positive prints of text or images used for paste-up to mechanicals.

Point

A unit of measurement used to specify type size and rule weight, equal to (approximately, in traditional typesetting) 1/72 inch.

Polygon

A geometric figure consisting of three or more straight lines enclosing an area. The triangle, square, rectangle, and star are all polygons.

Portrait

Printing from left to right across the narrow side of the page. Portrait orientation on a letter-size page uses a standard 8.5-inch width and 11-inch length.

Positive

A true photographic image of the original made on paper or film.

Posterize, Posterization

The deliberate constraint of a gradient or image into visible steps as a special effect; or the unintentional creation of steps in an image due to a high LPI value used with a low printer DPI.

Postprocessing Applications

Applications, such as trapping programs or imposition software, that perform their functions after the image has been printed to a file, rather than in the originating application.

PostScript

A page description language developed by Adobe Systems, Inc. that describes type and/or images and their positional relationships upon the page; the resulting file is processed by a RIP (see *Raster Image Processor*) into a format a laser printer or imagesetter can understand.

PPD

Acronym for PostScript Printer Definition file, the information that ensures that output remains within the capabilities of the selected output device.

PPI

Pixels per inch; used to denote the resolution of an image.

Prepress

All work done between writing and printing, such as typesetting, scanning, layout, and imposition.

Preferences

A set of defaults for an application program that may be modified.

Prepress Proof

A color proof made directly from electronic data or film images.

Primary Colors

Colors that can be used to generate secondary colors. For the additive system (i.e., a computer monitor), these colors are red, green, and blue. For the subtractive system (i.e., the printing process), these colors are yellow, magenta, and cyan.

Printer Command Language

PCL — a language, that has graphics capability, developed by Hewlett Packard for use with its own range of printers.

Printer fonts

The image outlines for type in PostScript that are sent to the printer.

Printer's Spreads

Pages arranged so that, when printed as spreads and assembled, the pages appear in the proper order. For example, the front and back covers are printed on a spread, the inside front and inside back covers are printed on another spread, etc.

Process Colors

The four colors (cyan, magenta, yellow, and black) that are combined to print a wide range of colors. When blended, they can reproduce many, but not all of the colors found in nature. See also *CMYK*.

Profile

A file containing data representing the color reproduction characteristics of a device determined by a calibration of some sort.

Proof

A representation of the printed job that is made from plates (press proof), film, or electronic data (prepress proofs). It is generally used for customer inspection and approval before mass production begins.

Proportional Spacing

A method of spacing whereby each character is spaced to accommodate the varying widths of letters or figures, thus increasing readability. Books and magazines are set proportionally spaced, and most fonts in desktop publishing are proportional. With proportionally spaced fonts, each character is given a horizontal space proportional to its size. For example, a proportionally spaced "m" is wider than an "i."

Pt.

Abbreviation for point.

Pull Quote

A phrase extracted from the copy and used as a graphic to break up a quantity of text visually, and to call attention to an important point.

QuarkXPress

A popular page-layout application.

Queue

A set of files input to the printer, printed in the order received unless otherwise instructed.

QuickDraw

Graphic routines in the Macintosh used for outputting text and images to printers not compatible with PostScript.

Ragged Left

See *Flush Right*

Ragged Right

See *Flush Left*

RAM

Random Access Memory, the "working" memory of a computer that holds files in process. Files in RAM are lost when the computer is turned off, whereas files stored on the hard drive or floppy disks remain available.

Raster

A bitmapped representation of graphic data.

Raster Graphics

A class of graphics created and organized in a rectangular array using bitmaps. Often created by paint software, fax machines, or scanners.

Raster Image Processor (RIP)

That part of an imagesetter that converts the page information from the Page Description Language into the bitmap pattern that is applied to the film or paper output.

Rasterize

Converting mathematical and digital information into a series of dots by an imagesetter for the production of negative or positive film or paper output

Ray Tracing

A software technique for rendering the surface of a reflecting object realistically by tracing the light rays from the source of illumination to the eye of the viewer.

Reader's Spreads

A two-page spread as seen by the reader after printing and collation; thus, the two pages may have been printed in separate locations on the signature.

Reference Marks

Symbols such as the asterisk (*), dagger, double dagger, section mark (§), and paragraph mark (¶) used in text to direct the reader to a footnote.

Reflective Art

Artwork that is opaque, as opposed to transparent, that can be scanned for input to a computer.

Registration

Aligning plates on a multicolor printing press so that the images will superimpose properly to produce the required composite output.

Registration Color

A default color selection that can be applied to design elements so that they will print on every separation from a PostScript printer. "Registration" is often used to print identification text that will appear outside the page area on a set of separations.

Registration Marks

Small crosshairs on film used to align the individual layers of film separations.

Resolution

The number of dots or pixels per inch of a monitor or output device.

Retouching

Making selective manual or electronic corrections to images.

Reverse Out

To reproduce an object as white, or paper, within a solid background, such as white letters in a black rectangle.

RGB

Red, Green, Blue, the additive primary colors used to create images on a computer monitor or television screen.

Rich Black

A process color consisting of solid black with one or more layers of cyan, magenta, or yellow.

Right Reading

A positive or negative image that is readable from top to bottom and from left to right.

Right-Click

Clicking the right mouse button on a Windows system, usually to reveal a pop-up menu. A Macintosh mouse has only one button.

RIP

See Raster Image Processor

River

An accidental and undesirable pattern of white space between words in text that appears to flow from one corner to another.

ROM

Read Only Memory, a semiconductor chip in the computer that retains startup information for use the next time the computer is turned on.

Roman Type

The primary serif typeface of a family.

Rosette

The pattern created when color halftone screens are printed at traditional screen angles.

Rotation

Turning an object at some angle to its original axis.

RTF

Rich Text Format, a text format that retains formatting information lost in pure ASCII text.

Rubylith

A two-layer acetate film having a red or amber emulsion on a clear base used in non-computer stripping and separation operations.

Ruler

Rulers displayed at two sides of the working space on a monitor that show measurements in units that can be selected in the set-up process.

Running Head

A line of type at the top of a page that repeats the same information. Also called header.

S/S (Same Size)

An instruction to the printer to reproduce at the same size as the original.

Sans Serif

Sans Serif fonts are fonts that do not have the tiny lines that appear at the top of and bottom of letters.

Saturation

The intensity or purity of a particular color; a color with no saturation is gray.

Scaling

The means within a program to reduce or enlarge the amount of space an image will occupy by multiplying the data by a scale factor. Scaling can be proportional, or in one dimension only.

Scanner

A device that electronically digitizes images point by point through circuits that can correct color, manipulate tones, and enhance detail. Color scanners will usually produce a minimum of 24 bits for each pixel, with 8 bits each for red, green, and blue.

Screen

To create a halftone of a continuous tone image (See *Halftone*).

Screen Angle

The angle at which the rulings of a halftone screen are set when making screened images for halftone process-color printing. The equivalent effect can be obtained electronically through selection of the desired angle from a menu.

Screen Frequency

The number of lines per inch in a halftone screen, which may vary from 85 to 300.

Screen Printing

A technique for printing on practically any surface using a fine mesh (originally of silk) on which the image has been placed photographically. Preparation of art for screen printing requires consideration of the resolution of the screen printing process.

Screen Shot

A printed output or saved file that represents data from a computer monitor.

Screen Tint

A halftone screen pattern of all the same dot size that creates an even tone at some percentage of solid color.

Script

A typeface designed to imitate handwriting.

SCSI

Small Computer Systems Interface, a standard software protocol for connecting peripheral devices to a computer for fast data transfer.

Selection

The act of placing the cursor on an object and clicking the mouse button to make the object active.

Self-Cover

A cover for a document in which the cover is of the same paper stock as the rest of the piece.

Serif

A line or curve projecting from the end of a letter form. Typefaces designed with such projections are called serif faces.

Service Bureau

A business that specializes in producing film for printing on a high-resolution imagesetter.

Set Solid

Type set with no extra spacing between the lines; for example, 12-pt. type with 12-pt. leading, or 12/12.

SGML

Standard Generalized Markup Language, a set of semantics and syntax that describes the structure of a document (the nature, content, or function of the data) as opposed to visual appearance. HTML is a subset of SGML (see *HTML*).

Sharpness

The subjective impression of the density difference between two tones at their boundary, interpreted as fineness of detail.

Sheet Fed

A printing press that prints single sheets of paper rather than from a continuous roll.

Shortcut

1. A quick method for accessing a menu item or command, usually through a series of keystrokes. 2. The icon that can be created in Windows95 to open an application without having to penetrate layers of various folders. The equivalent in the Macintosh is the "alias."

Show

The opposite of "Hide," a toggle command. For example, the tabs and paragraph marks in a text document can either be shown or hidden by clicking on an icon in the toolbar.

Sidebar

Supplementary text positioned at the side of a page.

Signature

A group of pages ganged together on a large, single sheet for printing, usually comprising an individual section of a publication.

Silhouette

To remove part of the background of a photograph or illustration, leaving only the desired portion.

Skew

A transformation command that slants an object at an angle to the side from its initial fixed base.

Small caps

A type style in which lowercase letters are replaced by uppercase letters set in a smaller point size.

Smart Quotes

The curly quotation marks used by typographers, as opposed to the straight marks on the typewriter. Use of smart quotes is usually a setup option in a word processing program or page layout application.

Snap-to (guides or rulers)

An optional feature in page layout programs that drives objects to line up with guides or margins if they are within a pixel range that can be set. This eliminates the need for very precise, manual placement of an object with the mouse.

Soft Font

See *Downloadable Font*

Soft or Discretionary Hyphen

A hyphen that is coded for display and printing only when formatting of the text puts the hyphenated word at the end of a line.

Soft Return

A return command that ends a line but does not apply a paragraph mark that would end the continuity of the style for that paragraph.

Spectrophotometer

An instrument for measuring the relative intensity of radiation reflected or transmitted by a sample over the spectrum.

Specular Highlight

The lightest highlight area that does not carry any detail, such as reflections from glass or polished metal. Normally, these areas are reproduced as unprinted white paper.

Spine

The binding edge at the back of a book that contains title information and joins the front and back covers.

Spot Color

A color not created by CMYK separations, usually specified by a Pantone swatch number. A spot color is printed by mixing given proportions of various inks in accordance with the percentages given by the Pantone number.

Spread

Two facing pages that can be worked on as a unit, and will be viewed side by side in the final publication.

Stacking Order

The order of the elements on a page, wherein the topmost item will obscure the items beneath it.

Standard Viewing Conditions

A prescribed set of conditions under which the viewing of originals and reproductions are to take place, defining both the geometry of the illumination and the spectral power distribution of the light source.

Standing Cap

A large capital letter sharing baseline with the adjoining text but rising above it. See *Drop Cap*.

Standoff

The distance between a graphic and the text that wraps around it. See *Wrap*.

Stat

Photostat copy.

Stet

Used in proof correction work to cancel a previous correction. From the Latin, "let it stand."

Stipple

Black and white line art where shading is accomplished by the placement of pinpoint dots.

Stochastic Screening

A method of creating halftones in which the size of the dots remains constant but their density is varied; also known as frequency-modulated (or FM) screening.

Stripping

The preparation and assembling of film prior to platemaking.

Stroke, Stroking

Manipulating the width or color of a line.

Stuffit

A file compression utility used in the Macintosh environment.

Style

A set of formatting instructions for font, paragraphing, tabs, and other properties of text.

Style Sheet

A file containing all of the tags and instructions for formatting all parts of a document; style sheets create consistency between similar documents.

Subhead

A second-level heading used to organize body text by topic.

Subscript

Small-size characters set below the normal letters or figures, usually to convey technical information.

Substitution

Using an existing font to simulate one that is not available to the printer.

Substrate

The paper or any other generally flat material upon which an image is printed.

Subtractive Color

Color which is observed when light strikes pigments or dyes, which absorb certain wavelengths of light; the light that is reflected back is perceived as a color. See *CMYK* and *Process Color*.

Superscript

Small characters set above the normal letters or figures, such as numbers referring to footnotes.

Swash Letters

Letters with extra flourishes usually used in logos, headlines, or as initial caps.

Swatch

A sample of a set of papers, inks, etc. that may be provided in physical form, or appear as a menu in a word processing or illustration application program.

Syntax

The rules that govern the structure of statements in a computer language, or in a language in general.

System Folder

The location of the operating system files on a Macintosh.

Tabloid

A paper size 11 inches wide and 17 inches long.

Tabular

Text set in columns or tables.

Tagged Image File Format (TIFF)

A common format used for scanned or computer-generated bitmapped images.

Tags

The various formats in a style sheet that indicate paragraph settings, margins and columns, page layouts, hyphenation and justification, widow and orphan control and other parameters.

Template

A document file containing layout and styles by which a series of documents can maintain the same look and feel.

Text Attribute

A characteristic applied directly to a letter or letters in text, such as bold, italic, or underline.

Text Block

A set of characters that may be manipulated as a group.

Text File

A file containing text in ASCII format that does not contain style formatting.

Text Type

Typefaces used for the main text of written material. Generally no larger than 14 point in size, and variable with the type of publication.

Text wrap

See *Wrap*

Text

The characters and words that form the main body of a publication.

Texture

1. A property of the surface of the substrate, such as the smoothness of paper. 2. Graphically, variation in tonal values to form image detail. 3. A class of fills in a graphics application that give various appearances, such as bricks, grass, etc.

Thin Space

A fixed space, equal to half an en space or the width of a period in most fonts.

Thumbnails

1. The preliminary sketches of a design. 2. Small images used to indicate the content of a computer file.

Tick Mark

A small mark at right angles to the axis of a graph that indicates the location of a certain measurement; such as tick marks indicating the numbers 1, 2, 3, etc.

TIFF

See *Tagged Image File Format*

Tight

A characteristic of text in which the characters are set very close together.

Tile

1. A type of repeating fill pattern. 2. Reproduce a number of pages of a document on one sheet. 3. Printing a large document overlapping on several smaller sheets of paper.

Tint

1. A halftone area that contains dots of uniform size; that is, no modeling or texture. 2. The mixture of a color with white.

Tip In

The separate insertion of a single page into a book either during or after binding by pasting one edge.

Toggle

A command that switches between either of two states at each application. Switching between Hide and Show is a toggle.

Tone

Any variation in lightness or saturation while hue remains constant.

Toolbox

An on-screen mouse-operated palette that allows the user to choose from a selection of tools available in computer application programs.

Tracking

Adjusting the spacing of letters in a line of text to achieve proper justification or general appearance.

Transfer Curve

A curve depicting the adjustment to be made to a particular printing plate when an image is printed.

Transparency

A full color photographically produced image on transparent film.

Transparent Ink

An ink that allows light to be transmitted through it.

Trapping

Compensating for potential gaps between two adjoining colors because of misregistration.

Trim

After printing, mechanically cutting the publication to the correct final dimensions. The trim size is normally indicated by marks on the printing plate outside the page area.

TrueType

An outline font format used in both Macintosh and Windows systems that can be used both on the screen and on a printer.

Type 1 Fonts

PostScript fonts based on Bézier curves encrypted for compactness that are compatible with Adobe Type Manager.

Type Family

A set of typefaces created from the same basic design but in different weights, such as bold, light, italic, book, and heavy.

Typesetting

The arrangement of individual characters of text into words, sentences, and paragraphs.

Typo

An abbreviation for typographical error. A keystroke error in the typeset copy.

Typographer

A specialist in the design of printed matter and generally an expert in type and letterforms.

Typography

The design and planning of printed matter using type.

U&l

An abbreviation for UPPER and lower case. Also the name of a popular design publication.

UCR (undercolor removal)

A technique for reducing the amount of magenta, cyan, and yellow inks in neutral or shadow areas and replacing them with black.

Undertone

Color of ink printed in a thin film.

Unsharp Masking

A digital technique (based on a traditional photographic technique) performed after scanning that locates the edge between sections of differing lightness and alters the values of the adjoining pixels to exaggerate the difference across the edge, thereby increasing edge contrast.

Uppercase

The capital letters of a typeface as opposed to the lowercase, or small, letters. So called because when type was hand composed, the capital letters resided in the upper part of the type case.

Utility

Software that performs ancillary tasks such as counting words, defragmenting a hard drive, or restoring a deleted file.

Varnish Plate

The plate on a printing press that applies varnish after the other colors have been applied.

Varnishing

A finishing process whereby a transparent varnish is applied over the printed sheet to produce a glossy or protective coating, either on the entire sheet or on selected areas.

Vector Graphics

Graphics defined using coordinate points, and mathematically drawn lines and curves, which may be freely scaled and rotated without image degradation. Two commonly used vector drawing programs are Illustrator and FreeHand.

A class of graphics created using mathematically described geometric shapes that overcomes the limitations of bitmapped graphics.

Velox

Strictly, a Kodak chloride printing paper, but used to describe a high-quality black & white print of a halftone or line drawing.

Vertical Justification

The ability to automatically adjust the interline spacing (leading) to make columns and pages end at the same point on a page.

Vignette

An illustration in which the background gradually fades into the paper; that is, without a definite edge or border.

Visible Spectrum

The wavelengths of light between about 380 nm (violet) and 700 nm (red) that are visible to the human eye.

Watermark

An impression incorporated in paper during manufacturing showing the name of the paper and/or the company logo. A "watermark" can be applied digitally to printed output as a very light screened image.

Web Press

An offset printing press that prints from a roll of paper rather than single sheets.

Weight

1. The thickness of the strokes of a typeface. The weight of a typeface is usually denoted in the name of the font; for example, light, book, or ultra (thin, medium, and thick strokes, respectively). 2. The thickness of a line or rule.

White Space

Areas on the page which contain no images or type. Proper use of white space is critical to a well-balanced design.

White Light

Light containing all wavelengths of the visible spectrum.

Widow

First line of a paragraph that appears alone at the bottom of a column or page.

Window Shade

A type of text block used in certain applications, such as PageMaker. Windowshades have handles at the top and bottom which, when dragged with the mouse, will reveal or conceal text.

Wizard

A utility attached to an application or operating system that aids you in setting up a piece of hardware, software, or document.

Word Break

The division of a word at the end of a line in accordance with hyphenation principles.

Word Processor

A desktop publishing application program designed for creating and formatting text, but not for page layout.

Word Space

The space inserted between words in a desktop publishing application. The optimal value is built into the typeface, and may usually be modified within an application.

Word Wrap

In word processing, the automatic adjustment of the number of words on a line of text to match the margin and hyphenation settings, resulting in shifting a word to the next line as required.

Wrap

Type set on the page so that it wraps around the shape of another element.

WYSIWYG (pronounced "wizzywig")

An acronym for "What You See Is What You Get," meaning that what you see on your computer screen bears a strong resemblance to what the job will look like when it is printed.

X-height

The height of the letter "x" in a given typeface, which represents the basic size of the bodies of all of the lowercase letters (excluding ascenders and descenders).

Xerography

A photocopying/printing process in which the image is formed using the electrostatic charge principle. The toner replaces ink and can be dry or liquid. Once formed, the image is sealed by heat. Most page printers currently use this method of printing.

Zero Point

The mathematical "origin" of the coordinates of the two-dimensional page. The zero point may be moved to any location on the page, and the ruler dimensions change accordingly.

Zip

1. To compress a file on a Windows-based system using a popular compression utility. 2. A removable disk made by Iomega (a Zip disk) or the device that reads and writes such disks (a Zip drive).

Zooming

The process of electronically enlarging an image on a monitor to facilitate detailed design or editing.

Macintosh™

BASIC

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