BRET ELLIS

FIRST LOOK AT . . .

MACINTOSH AND SYSTEM 7

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First Look at...
Macintosh and System 7

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First Look at Macintosh and System 7

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Preface

Many computer texts are designed to be read from the first page to the last. Others are written for a particular discipline. Still others attempt to cover every possible computer topic.

First Look at Macintosh and System 7 is unique in that it follows the traditional Macintosh approach. Its intuitive and easy-to-use methodology makes learning fun and interactive.

First Look at Macintosh and System 7 will quickly get you "up to speed" with the program's most useful features. With a comprehensive command summary at the end of the book, reference is quick and easy.

ORGANIZATION

First Look at Macintosh and System 7 is divided into two parts: "The Basics" and "Getting Your Money's Worth." "The Basics" is written as an introduction for beginning computer users. "Getting Your Money's Worth" unveils the new world of System 7—the newest computer operating system for the Macintosh.

Each lesson contains the following features:

- A list of objectives, followed by an overview of the lesson
- A hands-on tutorial that guides you through specific functions and commands
- A lesson summary
- A lesson command summary that includes the page number where each command was first introduced
- A self-test that reinforces learning

Small icons appear throughout the text. These icons represent concepts or ideas that merit special attention:

This icon alerts you to common program pitfalls.

Look for this icon to show you how to save time and increase your productivity.

This icon is especially valuable if you are new to the Macintosh environment and need special pointers.

Look to this icon for references to information that is not covered in the book.

When the topic needs a little more discussion, typically the kind that you would get from a friend or colleague, you will see this icon.

Often, the best way to learn is to do. This icon means "try it." It provides you with hands-on experience.

FIRST LOOK AT... SERIES

This book is part of the First Look at... series, which consists of titles designed to cover the most popular commercial software packages.

The purpose of each book in this series is to provide an inexpensive, quick, and complete learning tool that you can use for ready reference after you've completed the tutorial. At the end of each book, the comprehensive summary of commands, arranged alphabetically, makes reference easy. It is assumed that you have access to the complete software package and all its features.

In a minimum number of pages, each book covers the most commonly used features of a particular program—enough to equip students with fundamental proficiency in a short time.

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Writing and producing a book requires many people. For those that were involved from the beginning of the first few draft pages to the final copy, thank you. Specifically, a warm thanks to Roger Howell, Steve Mitchell,

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Finally, but not least: thanks to my family, Laurel, Spencer, Lauren, and Michael. Thanks to Laurel for keeping the home front quiet while I was composing this work and for supporting me during the long nights; to my parents; and to my dog, Max, for providing the seed thoughts that sprouted into some of the metaphors found in this book.

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PART 1

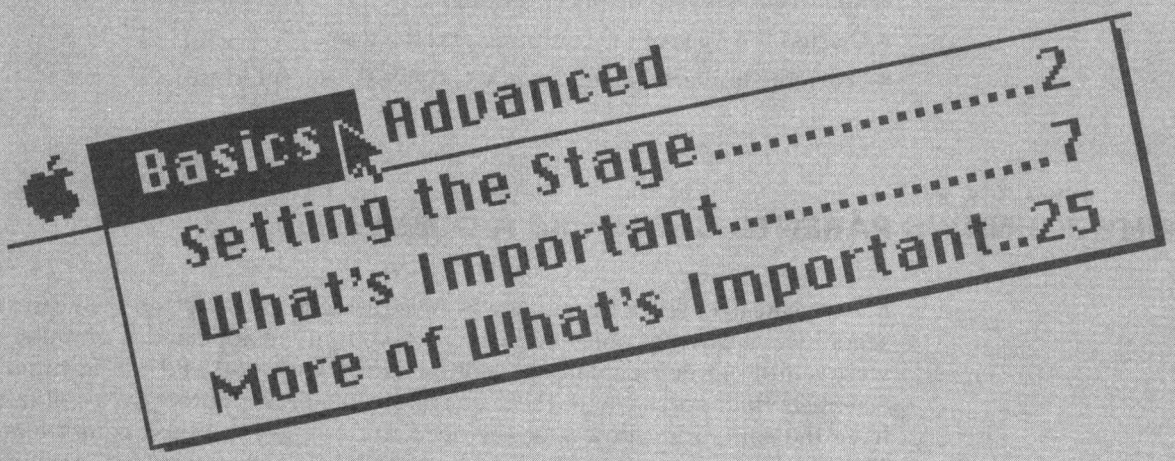
THE BASICS

If you are

- **New to computers**
- **New to the Macintosh**
- **Interested in a quick review**
- **Waiting for the next show to begin**

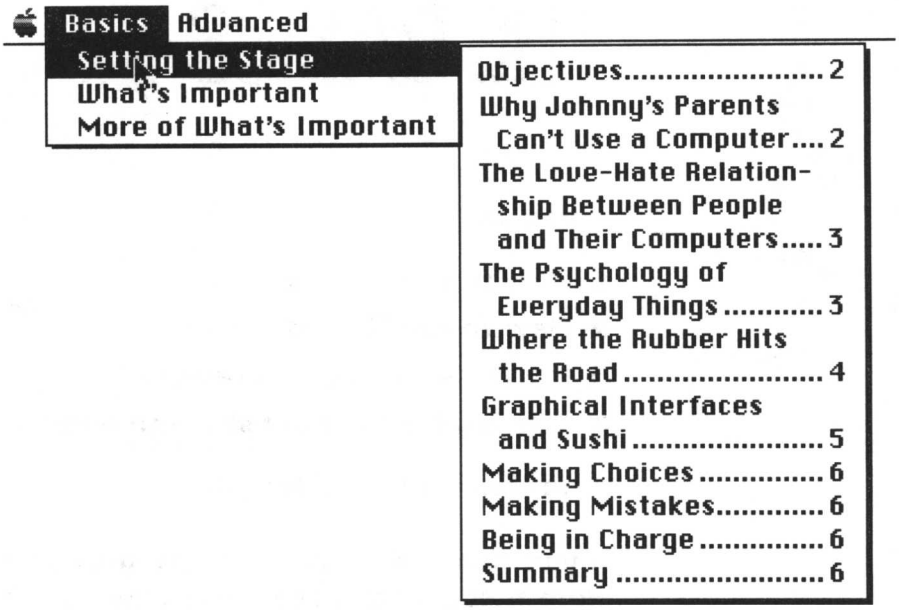
then this section is for you.

If you don't fit in any of these groups, then briefly skim these pages. For some new time-saving hints, skip to the second part, "Getting Your Money's Worth." (See you there.)



LESSON ONE

Setting the Stage



OBJECTIVES

In this lesson you will:

- Remove the mystique of computing.
- Discuss the roles of the computer and the user.
- Learn the universal elements of a Graphical User Interface.

WHY JOHNNY'S PARENTS CAN'T USE A COMPUTER

Many years ago, when the snow was twice as deep as today and the nearest school was nearly 20 miles away by foot, computers appeared. Computers were simply large calculators—not designed with you and me in mind. Scientists that worked with these enormous metal computing boxes didn't have the computing power or the need to design easy-to-use computers. Their primary interest was to maximize the limited "horsepower," or computer power, they had available.

It is difficult to compare today's computing power to that of a few years ago. However, even with the increase in computing power, many people still think that the computer is a mystical magical box—something that only computer scientists or their offspring could use. Thus for many years Johnny's parents had negative experiences with computers or had read enough about computers to know that they would never be able to use them.

Times are changing though—and happily, I might add. Among other points that George Orwell did not get right in his book *1984* was the mass distribution of new computing ideas. This new idea has as its central theme the notion that the user is in control of the computer, rather than the other way around. Coincidentally, it was the Mac that formally introduced these new computing ideas to the public.

THE LOVE-HATE RELATIONSHIP BETWEEN PEOPLE AND THEIR COMPUTERS

The computer got a bad rap. Maybe you have heard some of these all-too-familiar phrases: "Sorry, the computer's down." "That #@*#! computer made another mistake." "Computers are going to replace people." Computers are well-behaved, housebroken machines. With proper treatment and precautions, they will continue to do everything you ask, and, I might add, they never have "little accidents" in the living room.

As the dog has been "man's best friend" for centuries, so too the computer is beginning to be "man's best friend." The distance between the vocabulary of the computer and a human is narrowing at an increasingly rapid pace. This decreasing gap is due to people dedicated to the study of humans and how they relate to their environment.

THE PSYCHOLOGY OF EVERYDAY THINGS

Donald A. Norman is one of those dedicated scientists who would ask a question such as, Why can't light switches correspond visually to the placement of the lights? In his book *The Psychology of Everyday Things,* Norman poignantly illustrates that, traditionally, the user is not in mind when the devices are designed.

If an error is possible, someone will make it. The designer must assume that all possible errors will occur and design so as to minimize the chance of the error in the first place, or its effects once it gets made. Errors should be easy to detect, they should have minimal consequences, and, if possible, their effects should be reversible.

Norman goes on to discuss a seemingly new idea, user-centered design. He states that the designer should

- Use both knowledge of the world and knowledge in the head
- Structure tasks to be simple
- Design for error
- Standardize

The reason that Johnny's parents can't use a computer and why they often become frustrated when they do has a lot to do with the design of the computer. The next sections show how Apple has developed and continues to develop computers with the user in mind.

WHERE THE RUBBER HITS THE ROAD

Sometime in the early development of the Mac, Apple developed a standard for user interface design. Here are the standards that were and still are the governing principles for every part of the Mac computer system.

The Ten Macintosh Commandments

I. *Metaphors or symbols from the real world.* Concrete, simple metaphors provide people with a set of expectations to apply to computer environments. Whenever appropriate, audio and visual effects can support the metaphors.

II. *Direct manipulation.* Each user action has a perceptible response, and the operating system provides feedback to verify the effect of the action. For example, icons move when users drag them. In the Mac interface, people don't have to trust that abstract commands entered in a text-based interface do what they promise. This means that when users choose the Bold command, a word changes immediately to boldface—in comparison with other operating systems, in which users type in commands and wait to see the results when the document is printed.

III. *See and point (not remember and type).* Users rely on recognition, not recall, so entities are visible when possible. People don't have to remember anything the computer already knows, such as which commands are available.

IV. *Consistency.* Effective applications are internally consistent and consistent with other applications.

V. *WYSIWYG (what you see is what you get).* There is no significant difference between what users see on the screen and what is printed.

VI. *User control.* Users, not the computer or the application, initiate and control all actions.

VII. *Feedback and dialog.* Users get feedback about all interactions with the computer, and it is immediate feedback when possible. This communication is brief, direct, and expressed in the user's vocabulary rather than the programmer's.

VIII. *Forgiveness.* As users explore the interface, their actions are generally reversible, so that people explore and learn by doing. Users are able to identify in advance any actions that aren't reversible.

IX. *Perceived stability.* Users feel comfortable in a computer environment that remains understandable and familiar rather than one that changes randomly.

X. *Aesthetic integrity.* Visually confusing or unattractive displays detract from the effectiveness of human-computer interactions. Therefore, different things, such as folders and documents, should look different on the screen. Also, users should be able to control the superficial appearance of their computer workplaces to display their own style and individuality. Messes are acceptable only if users make them. Applications aren't allowed this freedom.

GRAPHICAL INTERFACES AND SUSHI

Shortly before starting this text, I was discussing some of its finer principles with a colleague while eating at a sushi bar for the first time. After a few moments at the bar, I drew some correlations between sushi and a good graphical user interface (GUI).

- What I saw was what I got. Or in other words, it tasted just the way it looked. In GUI terms this is called what you see (on the screen) is what you get (on the printer). Often this is referred to as WYSIWYG, or "wisee-wig."
- After trying several different selections from the floating boats, I became familiar with color, size, and presentation of the food. A good graphical user interface is consistent—there are no surprises.

In addition to WYSIWYG and consistent user interfaces, there are other indications of a *user-friendly* system. According to a booklet called "Getting Started with Your Macintosh," as a user of a Mac you can make your own choices, you can make mistakes, and you are in charge.

MAKING CHOICES

The Mac treats you as an individual. With the Mac you can choose the easiest or most useful method for you. During your excursion through this book, you'll see shortcuts you'll want to remember. Other commands are intuitive just as designed. The neat thing is that it's okay to be you.

MAKING MISTAKES

Designing the Mac programs with the expectation that you may make a mistake is important. The Mac is also very resilient to damage.

All you need to learn are a few key points about saving your work, protecting your disks, and taking care of your computer. Following the guidelines within this book will help you avoid losing your work.

BEING IN CHARGE

By design, and according to the user interface principles, you are in the driver's seat. This can be a frightening responsibility. Do not worry. The computer is very understanding—after all, it was designed for use by humans like you and me.

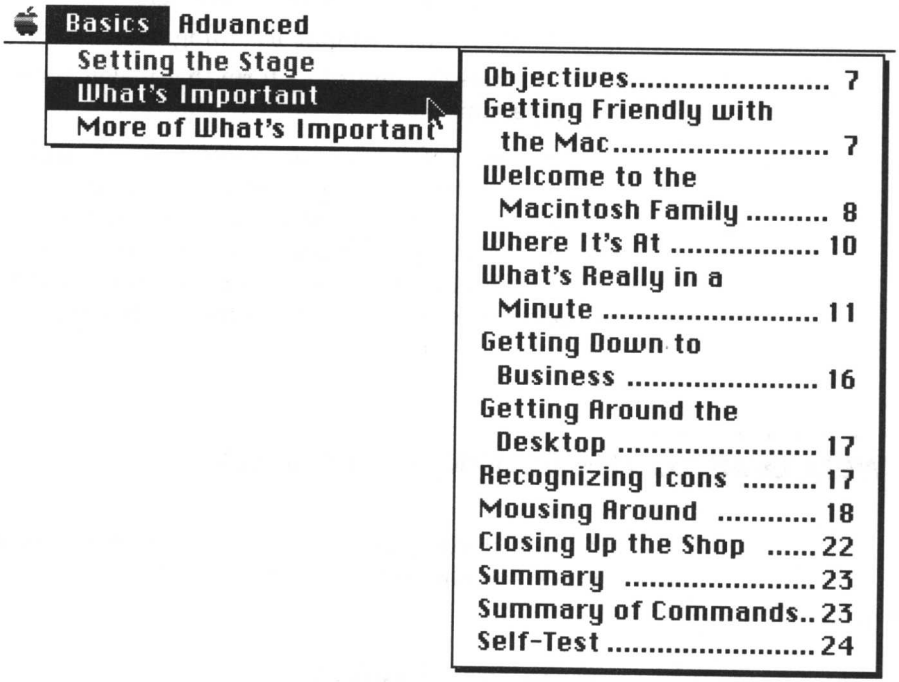
All you need to do is get reacquainted with some symbols and concepts that are part of your everyday life. In the next lesson you'll learn you already know more than you thought about computing.

■ *SUMMARY*

You have learned that computers used to be difficult to use but no longer are —well, maybe some aren't. You've also seen that from the very beginning, the user was intended to be at the center of the Mac's design.

LESSON TWO

What's Important



OBJECTIVES

In this lesson you will:

- Identify the typical parts of any Mac computer.
- Get acquainted with some familiar friends: icons.
- Be able to pilot a small rectangular box with a depressible switch on the top (in layperson's terms, learn how to use a mouse).
- Learn how to begin and end a session with your Mac.

This chapter includes some hands-on exercises. You should have a Mac and a 3.5" floppy disk to begin this chapter.

GETTING FRIENDLY WITH THE MAC

Computers have been around for several decades. Even the most primitive

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