CD-ROM
A Beginner's Guide
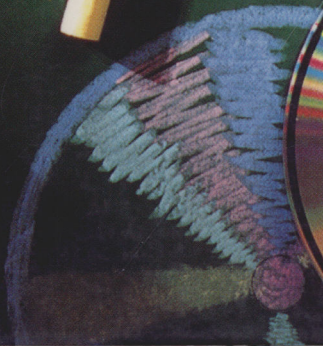
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Inside: The Best
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Sheldon Leemon

SYBEX

CD-ROM
A Beginner's Guide

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What's on the Companion CD?

This book includes a copy of *The Best of Media Clips©*, a sampler of high-quality photographs, digitized music, and video clips drawn from Aris Entertainment's "Media Clips" series. This disc will not only help you explore the multimedia capabilities of your new CD-ROM computer system, but you can also use the pictures and sounds in your own multimedia projects, subject to certain limitations (see Appendix C).

The pictures and sounds on this disc come from the following titles:

New York, NY™
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This disc runs on an IBM-compatible computer with Microsoft Windows or an Apple Macintosh with System 7 or greater. See Appendix C for installation instructions and tips on how to get the most out of this disc.

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Acknowledgments

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For Lenore

• •

wife, mother, proofreader, supermodel.
Who says you can't have it all?

Introduction

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This book may look like a computer book, and it's sure to be shelved in the computer section of the bookstore, but don't let that fool you—it's really a CD-ROM book. Computer books are for people who are interested in personal computers, or who have to use a computer for work. A CD-ROM book, on the other hand, is for anybody who likes music, literature, movies, games, television, art, or travel. It's for parents looking for a fun way to educate themselves and their children. It's for people who believe that knowledge is power, and who want that power at their fingertips. And yes, it's also for people who are interested in personal computers.

A CD-ROM drive provides information and entertainment exactly like a television, a VCR, or an audio CD player. In fact, it does more than all of these devices put together, because it combines text, pictures, music, and video with the intelligence of a personal computer. Unfortunately, the words "personal computer" are enough to scare some people away. Many people don't have the first notion of how to buy a computer, or even how to use one. Even people who own an older personal computer may be intimidated by the prospect of upgrading to a new kind of computing.

That's where this book comes in. It addresses the basic questions that most people have about CD-ROM: "What's in it for me?" "What will I need?" and "How do I use it?" in plain English—not Computerese.

Part One answers the question "Why do I need a CD-ROM drive?" It explains how CD-ROM technology has revolutionized the personal computer, turning it into a home entertainment and information center, and describes the various types of CD-ROMs and CD-ROM drives to give you an idea of just how versatile a medium CD-ROM really is. At the heart of this section, though, is a discussion of the many categories

of CD-ROM software, and the world of possibilities that opens up when you buy a CD-ROM drive.

Part Two addresses the more practical question "How do I get one?" It explains the various parts of a multimedia computer and what they do, and lays out the choices you face when buying, or upgrading to, a multimedia computer. You'll find specific suggestions on what to buy and where to buy it, which is just the kind of information you need to cope with a computer market that changes almost daily. Part Two also tells you how to install a CD-ROM drive, if you decide to do the job yourself.

Part Three answers the question "What do I do with it?" In addition to explaining how to install and use CD-ROM software, it discusses the various kinds of information you'll find on CD-ROMs, and shows you how to use that information in ways you might not have thought of before. It also provides troubleshooting and maintenance tips.

Part Four answers the question "What's available for CD-ROM?" It lists CD-ROM titles and drives, along with information about pricing and manufacturers. It also tells you what magazines you can buy to find the latest information on CD-ROM products. You'll find the software guide, which presents the best and most interesting CD-ROM products in each category, of special interest. With this list, you'll have a good idea of where to start when it comes time to pick a few CD-ROMs out of the thousands of available titles.

Of course, you'll also find lots of other goodies in this book. Not the least of these is the free companion CD tucked in its envelope on the front inside cover. *The Best of Media Clips* © disc is full of beautiful color photographs, music clips, mini-movies, and a player program that makes it easy to browse through them. Appendix C contains installation instructions and tips on how to make the most of it. The step-by-step instructions will give you the experience you need to use your CD-ROM software with confidence. While Appendix A contains a more complete glossary of terms, there's also a handy Jargon Decoder on the inside back cover to help you understand some of the terms used in advertising claims for CD-ROM drives. And in your quest for the perfect multimedia PC system, you'll find the equipment checklist in Appendix B especially helpful.

If you're attracted to CD-ROM software, don't let your inexperience with personal computers prevent you from experiencing an exciting new form of entertainment. Buy this book (if you haven't done so already), read it, and start enjoying your first CD-ROM drive.

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1. **How would you rate the overall quality of this book**

   ❑ Excellent
   ❑ Very Good
   ❑ Good
   ❑ Fair
   ❑ Below Average
   ❑ Poor

2. **What were the things you liked most about the book? (Check all that apply)**

   ❑ Pace
   ❑ Format
   ❑ Writing Style
   ❑ Examples
   ❑ Table of Contents
   ❑ Index
   ❑ Price
   ❑ Illustration
   ❑ Type Style
   ❑ Cover
   ❑ Depth of Coverage
   ❑ Fast Track Notes

3. **What were the things you liked *least* about the book? (Check all that apply)**

   ❑ Pace
   ❑ Format
   ❑ Writing Style
   ❑ Examples
   ❑ Table of Contents
   ❑ Index
   ❑ Price
   ❑ Illustration
   ❑ Type Style
   ❑ Cover
   ❑ Depth of Coverage
   ❑ Fast Track Notes

4. **Where did you buy this book?**

   ❑ Bookstore chain
   ❑ Small independent bookstore
   ❑ Computer store
   ❑ Wholesale club
   ❑ College bookstore
   ❑ Technical bookstore
   ❑ Other _____

5. **How did you decide to buy this particular book?**

   ❑ Recommended by friend
   ❑ Recommended by store personnel
   ❑ Author's reputation
   ❑ Sybex reputation
   ❑ Read book review in _____
   ❑ Other _____

6. **How did you pay for this book?**

   ❑ Used own funds
   ❑ Reimbursed by company
   ❑ Received book as a gift

7. **What is your level of experience with the subject covered in this book?**

   ❑ Beginner
   ❑ Intermediate
   ❑ Advanced

8. **How long have you been using a computer?**

   years _____
   months _____

9. **Where do you most often use your computer?**

   ❑ Home
   ❑ Work

   ❑ Both
   ❑ Other _____

10. **What kind of computer equipment do you have? (check all that apply)**

    ❑ PC Compatible Desktop Computer
    ❑ PC Compatible Laptop Computer
    ❑ Apple/Mac Computer
    ❑ Apple/Mac Laptop Computer
    ❑ CD ROM
    ❑ Fax Modem
    ❑ Data Modem
    ❑ Scanner
    ❑ Sound Card
    ❑ Other _____

11. **What other kind of software packages do you ordinarily use?**

    ❑ Accounting
    ❑ Databases
    ❑ Networks
    ❑ Apple/Mac
    ❑ Desktop Publishing
    ❑ Spreadsheets
    ❑ CAD
    ❑ Games
    ❑ Word Processing
    ❑ Communications
    ❑ Money Management
    ❑ Other _____

12. **What operating systems do you ordinarily use?**

    ❑ DOS
    ❑ OS/2
    ❑ Windows
    ❑ Apple/Mac
    ❑ Windows NT
    ❑ Other _____

13. On what computer-related subject(s) would you like to see more books?

_____

_____

_____

_____

14. Do you have any other comments about this book? (Please feel free to use a separate piece of paper if you need more room)

_____

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Decoding the Jargon

When you go shopping for a CD-ROM drive or multimedia update kit, you're likely to hear a lot of advertising claims. Unfortunately, most of these claims sound like they're in a foreign language! If you aren't fluent in techno-babble, this jargon decoder should help you figure out which advertising claims are important, and which are important-sounding nonsense.

Access Time   The time it takes, measured in milliseconds, to switch from reading information at one location on the disc to reading information at another location. Usually, the two are one-third of the way across the disc from each other—this is called the "1/3 stroke access time." Typical access times range from 250–400ms—the lower the number, the faster the drive is able to retrieve information when searching through an encyclopedia or other reference.

Buffer   Memory inside the CD-ROM drive that is used for temporary storage. The computer can retrieve frequently-used information much faster from the buffer than from the disc. Buffer sizes range from 64KB to 1MB. Generally, a bigger buffer means somewhat better performance.

Caddy Loading   This system requires you to insert each CD-ROM into a plastic case called a caddy before you load it into the drive. It provides some added protection, but also some added expense and inconvenience. The other common loading system is tray loading, which is the one used by audio CD players.

Double-Speed   A CD-ROM drive that transfers information at twice the speed of an audio CD player (about 300Kbps). These are today's "average" drives, but will soon be replaced by quad-speed models.

External Drive   A CD-ROM drive that mounts on the outside of the computer. These drives are more expensive and require extra space, but are portable and can be added to a laptop computer with no room for an internal drive.

Interface   The circuit board that physically connects the CD-ROM drive to your computer and transfers information from one to the other. This interface can be a separate card that plugs into the computer, or part of your sound card or hard drive controller. A 16-bit interface transfers information more quickly than an 8-bit one. The most common types of interfaces are SCSI (the fastest and most expensive), IDE (a little slower but less expensive), and Proprietary (the slowest interface, and the most obsolete).

Decoding the Jargon (continued)

Internal Drive   A CD-ROM drive that mounts inside the computer itself. These drives are more convenient and less expensive, but aren't portable.

MTBF   Mean Time Between Failure, measured in hours (1 year = 8,760 hours). This is approximately the length of time you can expect the drive to work before it needs to be repaired.

Quad-Speed   A CD-ROM drive that transfers information at four times the speed of an audio CD player (about 600Kbps). Today's fastest drives, quad-speed models aren't much more expensive than double-speed drives—they're your best buy.

Single-Speed   A CD-ROM drive that transfers information at the same speed as an audio CD player (about 150Kbps). These first-generation drives are now completely obsolete. Don't buy a single-speed drive, regardless of how cheap it is.

Triple-Speed   A CD-ROM drive that transfers information at three times the speed of an audio CD player (about 300Kbps). These drives are rare, since most companies went directly from double-speed to quad-speed technology. You should, too.

Transfer Rate   The speed at which a CD-ROM drive transfers information to your computer. It is typically measured in kilobytes per second (Kbps).

Meaningless Claims

The following is a list of features available on almost all CD-ROM drives. You'd have to go out of your way to find a drive that didn't include them, so don't let them influence your purchase decision.

PC Level 1 or 2   Meets the minimum standards for IBM-compatible multimedia computers, as set forth by the Multimedia Marketing Council.

Multisession   The ability to read Photo CDs with two or more sets of pictures that were recorded at different times.

Photo CD-compatible   The ability to read special CD-ROMs developed by Kodak for storing photographs.

XA-ready   Meets the XA standard for storing information on a CD-ROM. In practical terms, it means Photo CD-compatible (see above), since Photo CDs are just about the only type of discs that follow the XA standard.