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The Apple® II Circuit Description

Winston Gaylor

Essential for serious Apple hobbyists and service technicians, this classic reference provides the reader with detailed circuit descriptions of the Apple II and Apple II+ mother-board, including the keyboard and power supply. Compares all revisions, including timing diagrams for major signals.

176 Pages, 8½ x 11, Comb-bound
ISBN: 0-672-21959-X
No. 21959, \$22.95



Apple® IIc Programmer's Reference Guide

David L. Heiserman

Designed for the experienced as well as the beginning programmer, this book is organized to be used as a textbook and a reference source. It makes learning easier and more efficient by describing each principle as it is programmed in Applesoft BASIC and ProDOS®, then illustrating that same principle in terms of monitor and machine language programming.

533 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22422-4
No. 22422, \$24.95



Apple® Assembly Language Programming

Malcolm Whapshott

This complete course in assembly language programming lets the beginner learn with self-paced instruction about the essentials of this widely-used, easy-to-use language. It includes detailed explanations and exercises, including using the built-in subroutines of your machine.

The software contains a full-featured assembler. Requires: Apple II (with Applesoft), II Plus, IIe, or IIc; disk drive and monitor.

Topics covered include:

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Book and Software Package, one disk with 224-page documentation, 8 x 10
ISBN: 0-8104-7120-5
No. 47120, \$34.95



Apple® Programmer's Handbook

Paul Irwin

Learn assembly language programming in this single volume covering essential Apple data. Helps save program development time and increases programming effectiveness. Contains dozens of tested "stock" routines organized by topics and a detailed memory map. Just the thing to get you started in assembly language on the Apple.

480 Pages, 5½ x 8½, Comb-bound
ISBN: 0-672-22175-6
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Basic Apple® BASIC

James S. Coan

A complete guide to Applesoft BASIC. Begins with basic concepts such as entering data, obtaining output, and planning programs. Then advances to numeric and string arrays, sequential and random access files, lo-res and hi-res graphics. Alternate techniques for programming in Apple Integer BASIC are also described.

256 Pages, 7 x 9¾, Softbound
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AppleWriter™ Cookbook

Don Lancaster

Another in the popular series of Don Lancaster cookbooks, this volume includes the latest ProDOS® Version 2.0 details for both the Apple® IIc and IIe.

It is a compendium of everything that has been asked for by callers to the Gila Valley Apple Growers Association, ranging from bare beginner questions through full source code capturing and full expansion for hackers.

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- Tearing into ProDOS AppleWriter Version 2.0
- Capturing ProDOS AppleWriter Version 2.0 Source Code

352 Pages, 7½ x 9¾, Softbound
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I Speak BASIC to My Apple,® Second Edition

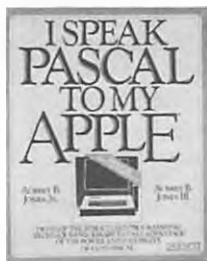
Aubrey B. Jones, Jr.

This complete computer literacy course can teach beginners with no previous computer experience the basics of BASIC language programming and the operation of an Apple computer. Each detailed lesson defines key terms and provides programming examples and exercises, all written in Apple-specific BASIC.

249 Pages, 8½ x 11, Softbound
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Teacher's Manual

254 Pages, 8½ x 11, Softbound
ISBN: 0-8104-6198-6
No. 46198, \$18.95



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Jones and Jones

Take full advantage of Apple Pascal and the benefits of a disciplined, logical language with this authoritative text and teacher's manual. Using a step-by-step approach you can master subjects such as Pascal structured and unstructured data types and procedures and functions.

320 Pages, 6 x 9, Softbound
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Teacher's Manual:

320 Pages, Three Disks and Manual, 6 x 9, Softbound
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Ruth K. Witkin

Whether you manage time, materials, paperwork, or people, you can't afford to waste any resources. AppleWorks is an integrated software package that helps you better manage your business. This book will help you apply this popular software program to your specific requirements.

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- Creating a Simple Mailing List
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- Cutting and Pasting

320 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22441-0
No. 22441, \$17.95



Programming the Apple IIGS in C and Assembly Language

Mark Andrews

This book allows readers to take advantage of the added power, speed, graphics, and sound capabilities of the IIGS—the evolutionary upgrade to the highly successful Apple IIe computer.

This single source gives programmers what is needed to program the Apple IIGS in C and to integrate assembly language to speed up or "supercharge" the programs.

The first half of the book is devoted to basic programming techniques and to an overall look at the Apple IIGS. The second half concentrates on intermediate and advanced programming techniques and is complete with useful type-and-run programs.

Topics covered include:

- Introducing the Apple IIGS
- Programming the Apple IIGS in Assembly Language
- Programming the Apple IIGS in C
- The 65C816 Microprocessor
- Addressing
- Using the Apple IIGS Assembler-Editor
- The Apple Programmer's Workshop
- The IIGS Toolbox
- Apple IIGS Graphics:
- Windows
- Menus
- Dialogs
- Apple IIGS Sound Synthesizer

Mark Andrews is an assembly language programmer for the Apple IIGS at Apple Computer, Inc. He has written eight books about computers and computer programming.

448 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22599-9
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Working with AppleWorks™

Campbell and Redden

Working with AppleWorks discusses and explores the capabilities and flexibilities of AppleWorks. Every feature of this powerful software program—word processing, spreadsheets, and database applications—is fully explored. The authors explain how each component of the program works and provide invaluable tips, shortcuts, and cautions for applying this package to your own specific needs.

It is clearly written so that the computer novice or veteran user can immediately utilize AppleWorks for a variety of applications. From writing letters to creating financial statements and sophisticated databases, the step-by-step instructions will enable you to harness AppleWorks' powers efficiently and effectively.

This handbook begins by introducing you to the basic workings of AppleWorks and integrated software.

Topics covered include:

- Introduction and Overview
- The Word Processor
- The Spreadsheet
- The Data Base
- Putting Things Together
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- Appendices: Word Processor Commands, The Data Base Commands, Spreadsheet Commands and Functions, Printer Options, Disk Operations, ASCII Character Codes, Questions and Answers, and Printer Problems

320 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6759-3
No. 46759, \$18.95

COMMODORE



Basic Commodore 64® BASIC

James S. Coan

Here's the key to using and enjoying the Commodore. It is a fast-reading guide to operation and programming. The approach is simple and direct: start with short computer programs, master them quickly, add a new capability, and watch as the desired effect on the program is created and illustrated. Special features and advanced programming techniques are explained.

272 Pages, 7 x 9 3/4, Softbound
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No. 46456, \$17.95



Commodore 64® BASIC Programming

Glentop/Honeyfold

This unique utility package—Honey-Aid—adds 27 commands to Commodore 64 BASIC. With it you can program and debug your own programs more readily with auto-line numbering and full renumbering.

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Commodore 64® & 128® Programs for Amateur Radio & Electronics

Joseph J. Carr

The electronics hobbyist, programmer, engineer, and technician will enjoy the task-oriented programs for amateur radio and electronics in this book.

This book contains two general categories of programs—amateur radio technology and general electronics—that will simplify programming tasks when incorporated into the custom-designed software programs provided. It also makes full use of the analytical potential of the personal computer with 42 practical programs including amateur radio programs.

Topics covered include:

- Antenna Calculations
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- Transmission Line
- Impedance Matching Networks
- Satellite Dish Antenna
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- Capacitors in Series or Parallel
- Inductors in Series or Parallel
- RLC Networks
- Operational Amplifier Circuits

Joseph Carr, an electrical engineer, has written over 43 books and more than 200 magazine articles.

256 Pages, 5 1/2 x 8 1/2, Softbound
ISBN: 0-672-22516-6
No. 22516, \$14.95



Commodore 64® Programmer's Reference Guide

Commodore Computer

A Top Ten best-seller since its introduction, this programmer's working tool and reference source is packed with professional tips and information on exploring your Commodore 64. The perfect companion to your C-64 User's guide, this manual presents detailed information on everything from graphics and sound to advanced machine language techniques.

The most complicated topics are explained with many sample programs and an easy-to-read writing style and each program has been carefully pre-tested with programming needs in mind. Designed to help you get the most out of your Commodore 64, the book is a "must-buy" for everyone from the beginner to the advanced programmer.

Topics covered include:

- Introduction and Applications Guide
- BASIC Programming Rules
- BASIC Language Vocabulary
- Programming Graphics on the Commodore 64
- Programming Sound and Music on Your Commodore 64
- BASIC to Machine Language
- Input/Output Guide
- Appendices: Screen Display Codes, Music Note Values, Error Messages, Chip Specifications, Commodore 64 Quick Reference Card, Schematic Diagram of the Commodore 64

486 Pages, 5 1/2 x 8 1/2, Softbound
ISBN: 0-672-22056-3
No. 22056, \$19.95



Commodore 64® /128® Assembly Language Programming

Mark Andrews

Here is the first complete book about assembly language for the Commodore 64 and 128 computers. Much more than a reference book, it's a hands-on tutorial that will guide you easily through the complete programming process.

Concentrating on three of the most popular assemblers—Commodore 64, Merlin 64, and Panther C64—this step-by-step guide shows you how to design a personal character set; write joystick-controlled action games; draw on-screen, high-resolution graphics; convert numbers from one base to another; mix BASIC and machine language; and program music and sound.

Topics covered include:

- Introduction to Assembly Language
- By the Numbers
- In the Chips
- Writing an Assembly Language Program
- Running an Assembly Language Program
- Addressing the Commodore
- Looping and Branching
- Programming Bit by Bit
- Assembly Language Math
- Memory Magic
- High-Resolution Commodore Graphics
- Drawing Pictures in High-Resolution Graphics
- Customizing a Character Set
- Programming Sprites in Assembly Language
- Commodore 64/128 Music and Sound

322 Pages, 7 1/2 x 9 3/4, Softbound
ISBN: 0-672-22444-5
No. 22444, \$15.95



Commodore 128[®] Assembly Language Programming

Mark Andrews

For the first time in print, this book reviews the fundamentals of Commodore 128 assembly language and discusses its unusual memory configuration.

Detailing the finer qualities of the 6510/8502 assembler, it concentrates on how to program the assembler and how to use its many features. More specific than BASIC, this language provides the programmer with a more sophisticated vehicle to access the hardware features of any computer.

Topics covered include:

- Introducing Commodore 128 Assembly Language
- Exploring the Binary, Hexadecimal, and Decimal Number Systems
- The 8502 Microprocessor
- Writing and Running Assembly Language Programs
- Addressing Modes of the 8502
- Looping and Branching in the C-128 Assembly Language
- Performing Single-Bit Operations on Binary Numbers
- How the C-128 Adds, Subtracts, Multiplies, and Divides
- Managing the C-128's Memory
- Introducing C-128 High-Resolution Graphics and Joystick Operations
- Advanced High-Resolution Graphics
- Trade Secrets—How to Write a Superfast Graphics Program
- A High-Resolution Sketching Program for the C-128
- Commodore C-128 Music and Sound
- Programming Sprites in Assembly Language
- The 80-Column Commodore

400 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22541-7
No. 22541, \$15.95



Commodore 128[®] Reference Guide for Programmers

David L. Heiserman

This book is *the* authoritative guide for programmers: from the beginner who wants to know about the C-128's power to the advanced programmer who requires specific information about the Commodore 128. Covering BASIC as well as assembly language programming, it thoroughly describes the operating system, hardware and software specifics, and input/output features of the computer.

Beginning with an explanation of elementary topics and proceeding through special programming applications, you will learn how to maximize your computer's built-in capabilities.

Topics covered include:

- General Operating Procedures
- BASIC Operations and Programming Procedures
- DOS Operating and Programming Procedures
- Monitor and Assembly Language Procedures
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- Text Screen Procedures
- Bit-Mapped Graphics Procedures
- Sprite Animation Procedures
- Sound and Music Procedures
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- Joystick, Paddle, Light Pen, and Mouse Procedures
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- Memory Management Procedures
- Appendices: Number-System Base Conversions, Derived Trigonometric Functions

568 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22479-8
No. 22479, \$19.95



The Waite Group's Inside the AMIGA[®] with C, Second Edition

John Berry

Everyone who has recently upgraded their AMIGA computer system, or is thinking about doing it, needs this revised edition of *Inside the AMIGA with C*. The book covers the AmigaDOS™ operating system in greater detail, and is compatible with the new AmigaDOS 1.2. Paying particular attention to the AMIGA 500, the book presents special AMIGA graphics features including sprites, Genlock, and blitter objects, with updated information on Intuition™.

Like the original book, code listings in each chapter are carefully constructed both as practical routines and as instructional examples for beginning to intermediate C programmers. The new edition features several new programs that demonstrate the use of color palettes and registers and a software toolkit that contains a library of C routines to create and manage screens, windows, input from gadgets, and control graphics.

Topics covered include:

- The AMIGA Programming Environment
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- Drawing in Intuition
- Animating the Sprites
- Programming Sound
- Artificial Speech
- Programming with Disk Files

400 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22625-1
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I Speak BASIC to My Commodore 64[®]

Aubrey B. Jones, Jr.

This comprehensive introduction to the Commodore 64 contains detailed lessons for beginners of all ages. The book has been classroom tested and is an effective teaching aid for groups or individual study.

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Teacher's Manual

251 Pages, 8½ x 11, Softbound
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The Official Book for the Commodore 128[®] Personal Computer

Waite, Laforc, and Volpe,
The Waite Group

This book examines Commodore's powerful computer with its three different operating modes in 64, 128, and CP/M.® It details how to create graphics and animation and to use the 64 mode to run thousands of existing Commodore 64 programs. It also shows how to program in three-voice sound and how to use spreadsheets, word processing, the database, and much more.

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GENERAL INTEREST



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Mark J. Robillard

The first technical book that stresses the systems approach to the design of robots, this book expands on its predecessor, *Microprocessor Based Robotics*.

Throughout the book the reader will find in-depth examples of robot systems hardware and software. Throughout the hardware discussions, a philosophy to design by is presented.

256 Pages, 8½ x 11, Softbound
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Artificial Intelligence: The Search for the Perfect Machine

Laurence Stevens

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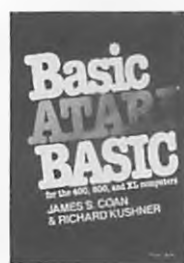
ATARI® ST Logo

Martin Sims

Experience new dimensions of art, mathematics, physics, and the frontier of artificial intelligence with this guide to Logo commands and procedures. Both the newcomer and experienced user will be challenged by the power of Logo including exercises to extend their new skills and creative thinking.

Recursion, nested procedures, instruction lists, random variables, and more are covered.

272 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6529-9
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Basic ATARI® BASIC

Coan and Kushner

A complete guide to ATARI BASIC adapted from the best-selling *Basic Apple® BASIC*. Takes you from beginning concepts to more advanced ones in machine operation and programming techniques. Offers over 80 programs—all conveniently indexed. Lo-res and hi-res graphics are fully covered.

340 Pages, 7 x 9¾, Softbound
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Basic Robotic Concepts

John M. Holland

This valuable resource thoroughly covers the four most central subjects of robotics—motion control, manipulators, mobility, and vision—in an easy-to-understand manner, with clear explanations. It starts with simple concepts and moves to more complex concepts with many detailed illustrations. Information is presented on the latest developments in important areas such as energy systems, carriage systems, navigation techniques, development, and programming methods.

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The CAD/CAM Primer

Daniel Bowman

Computers have always been good at generating reams of alpha-numeric printed information. Now computer graphics allow us to condense this multitude of printouts into easily understood pictures. Learn the basics about computer-assisted design and manufacture and its probable impact on our lives.

160 Pages, 8½ x 11, Softbound
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Computer-Aided Logic Design

Robert M. McDermott

This reference uses practical, everyday examples such as burglar alarms and traffic light controllers to explain both the theory and the technique of electronic design. CAD topics include common types of logic gates, logic minimization, sequential logic, counters, self-timed systems, and tri-state logic applications. Packed with practical information, this is a valuable source book for the growing CAD field.

448 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22436-4
No. 22436, \$25.95



Computer Communication Techniques

Brooner and Wells

It is increasingly desirable for stand-alone microcomputers to communicate with the outside world. This book covers data transfer techniques, hardware matching, standards and protocols, networking, information services, videotex, teletext, software, and what's necessary to use them. Includes UART spec sheets, information sources, an ASCII code chart, a glossary, and many illustrations.

144 Pages, 6 x 9, Softbound
ISBN: 0-672-21998-0
No. 21998, \$15.95



Computer Connection Mysteries Solved

Graham Wideman

This book provides the hows and whys of connecting a personal computer to its peripherals. It provides an introduction to the machinery available: printers, MDI, Centronics, video hookups, and the RS-232.

The principles, techniques, and case studies will assist users who deal with a variety of system configurations. Simple cookbook solutions are presented early so novices do not need to get into the more technical problems.

272 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22526-3
No. 22526, \$18.95



Computer Dictionary, Fourth Edition

Charles J. Sippl

This updated and expanded version of one of Sams' most popular references is two books in one—a "browsing" dictionary of basic computer terms and a handbook of computer-related topics. Containing over 12,000 terms and definitions with scores of illustrations and photographs, it clarifies micro, mini, and mainframe terminology. The 1,000 new entries in this edition focus on the RAF classifications.

576 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22205-1
No. 22205, \$24.95



Computer Electrical Power Requirements

Mark Waller

This in-depth examination of power regulation problems offers solutions that will help control electrical power input for mini, mainframe, and microcomputers. As a result, permanent and expensive damage to computers can be avoided.

Field engineers, technicians, and computer repair and maintenance professionals involved in problems with computer electrical power will benefit from this book. Its discussion of power regulators and how they can best be implemented to provide "clean power" for computers is especially valuable.

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- Grounding
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- Transient Suppression
- Isolation and Distribution
- Voltage Regulation
- M-G Sets, RUPS, and UPS
- Batteries for UPS Systems
- PC Power
- Appendices: The Future, Glossary, Bibliography

Mark Waller is the national sales manager for Computer Power Systems, a subsidiary of Emerson Electric. Specializing in products that control and improve electrical power problems in a computer environment, he has written a number of computer and electronics articles.

250 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22561-1
No. 22561, \$19.95



Crash Course in Artificial Intelligence and Expert Systems

Louis E. Frenzel, Jr.

Artificial intelligence (AI) is one of the fastest growing segments of the computer business. It can make your computer easier to use and far more powerful.

This practical, application-oriented course in AI takes a broad, complex subject and explains it concisely so that it is easily understood. The book covers important concepts and techniques.

368 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22443-7
No. 22443, \$19.95



Crash Course in Microcomputers, Second Edition

Louis E. Frenzel, Jr.

This unique crash course approach to microcomputers is for those who need to know about microcomputers and programming but do not have time for excess detail. In addition to teaching BASIC programming, it uses photos, illustrations, and applications to clarify potential misunderstandings.

320 Pages, 8½ x 11, Comb-bound
ISBN: 0-672-21985-9
No. 21985, \$21.95



Desktop Publishing Bible

James Stockford, Editor
The Waite Group

Publish high-quality documents right on your desktop with this "bible" that tells you what you need to know—everything from print production, typography, and high-end typesetters, to copyright information, equipment, and software.

In this collection of essays, experts from virtually every field of desktop publishing share their tips, tricks, and techniques while explaining both traditional publishing concepts and the new desktop publishing hardware and software.

Topics covered include:

- Publishing Basics: Traditional Print Production, Conventional Typography, Case Studies in Selecting a Publishing System, and a Comparison of Costs for Desktop and Conventional Systems
- Systems: The Macintosh, PC, MS-DOS, An Overview of Microsoft Windows, Graphics Cards and Standards, Monitors, Dot and Laser Printers, UNIX, and High-End Work Stations
- Software: Graphics Software, Page Layout Software, Type Encoding Programs, PostScript, and JustText
- Applications: Newsletters, Magazines, Forms, Comics and Cartooning, and Music

480 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22524-7
No. 22524, \$24.95

GENERAL INTEREST



Data Communications: A Manager's View

John Seaman, Editor

Managers and data communications professionals wanting to stay abreast of the latest developments in building information networks need this compilation of articles from *Computer Decisions* magazine.

It includes discussions of electronic mail, microcomputer executive workstations, distributed data processing, policy, networking hardware, and cost-cutting measures.

416 Pages, 6 x 9, Softbound
ISBN: 0-8104-6329-6
No. 46329, \$19.95



Experiments in Artificial Intelligence for Microcomputers, Second Edition

John Krutch

This second edition illustrates how artificial intelligence can be applied to a variety of practical activities (expert systems, natural language processing, and game playing) using BASIC. It also shows how to create poetry and develop psychological analyses. This step-by-step instructional text includes the major elements necessary to acquire a thorough understanding.

176 Pages, 5 1/2 x 8 1/2, Softbound
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Expert Systems in Artificial Intelligence

Thomas C. Bartee, Editor

This book is a collection of essays for the professional-level business person, analyst, or computer scientist working with artificial intelligence and/or expert systems. Written by leading authorities in AI and expert systems, it highlights the application of AI in finance, communications, space, and military systems.

The book covers in detail problem solving, knowledge representation, and natural-language processing. AI founders review the genesis, development, and funding of their field. Industry experts present an excellent overview of the basic principles behind expert systems and examine the directions of current development.

Topics covered include:

- Space Applications of AI
- Expert Systems for Financial Applications
- Artificial Intelligence for Communications Systems
- Problem Solving Using Artificial Intelligence Systems
- Natural Languages
- Knowledge Representation
- Artificial Intelligence Techniques and C2I Applications
- History of AI Development at DARPA and ONR
- The Early Years
- Expanding AI Research and Founding ARPANET
- AI During IPTO's Middle and Later Years
- Current AI Research
- AI Development as Sponsored by ONR

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Ken Stonecipher

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Learn how to define project requirements and match them to robot capabilities—all with an eye toward cost effectiveness and economy of design. Explore the relationship of artificial intelligence to robot performance.

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- Microcomputer Control Systems
- Robotic System Specification Considerations
- End Effectors
- Manipulator Control System
- Design Factors
- Joint Arm Kinematics Definitions
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- Memory Sizes and Their Impact on Future Project Success
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- Robot Graphic Representation Systems
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The book defines key terms, explains machine functions, and provides programming examples, exercises, and summaries. All instructions and examples are written in TRS-80-specific BASIC.

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E. G. Brooner

Localized computer networks are a versatile means of communication. In this book you'll learn how networks developed and what local networks can do; what's necessary in components, techniques, standards, and protocols; how some LAN products work and how real LANs operate; and how to plan a network from scratch.

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Mastering AI Tools and Techniques

Ernest R. Tello

This is a complete guide to AI fundamentals for anyone using IBM PC, AT, and System 2 computers. Suitable for programmers and nontechnical professionals alike, it presents the basic concepts of AI in addition to surveying some of the most exciting and advanced AI research projects.

The book highlights descriptions and evaluations of state-of-the-art natural language processing software, expert system tools, and AI programming languages such as LISP, Prolog®, and Smalltalk™, with special sections on C, Ada®, and Modula-2®. It covers a wide range of systems, from low-cost introductory to the most advanced, and includes a chapter devoted completely to building an expert system, as well as a directory of AI firms. Its comprehensive coverage of AI tools and products offers something for everyone with an interest in AI including computer users, programmers, and students.

Topics covered include:

- Introduction to Artificial Intelligence
- Natural Language/Systems
- Decision Modeling Systems
- Learning Expert Systems
- Professional Expert System Tools
- Advanced Expert System Tools
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- Fundamental Concepts of AI Systems
- Developing an Expert System
- Advanced AI Concepts and Research
- Appendix: Directory of AI Firms

480 Pages, 7½ x 9¾, Softbound
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Modem Connections Bible

Curtis and Majhor, The Waite Group

This book describes modems, how they work, and how to hook ten well-known modems to nine name-brand microcomputers. A handy Jump Table shows where to find the appropriate connection diagram and applies the illustrations to eleven more computers and seven additional modems. It also features an overview of communications software, an explanation of the RS-232C interface, and a section on troubleshooting.

192 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22446-X
No. 22446, \$16.95



Printer Connections Bible

Marble and House,
The Waite Group

This book contains all the information necessary to make the proper connections to get a printer printing. It focuses on the hardware side of connecting, particularly the main interface—the cable itself.

Avoid hours of frustration with this easy-to-follow format including tables and diagrams, information about various printers, computers and software, printer technology, and cables and connectors.

240 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22406-2
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Understanding Digital Computers

Forrest Mims, III

This book is for computer users and prospective computer users who want to understand the fascinating circuits and principles behind the digital computer.

You will discover the basics of binary, sequential, and arithmetic logic and the power of computer memories and memory devices from magnetic tape and floppy disks to magnetic bubbles and laser disks.

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Programmer's Reference Guide to Expert Systems

David Hu

This reference guide is for intermediate level programmers who wish to integrate artificial intelligence techniques, particularly expert systems technology, into their programs. It highlights the uses and advantages of Smalltalk, LISP, and Prolog, three computer languages used in AI/expert system applications, and includes illustrative real-world examples.

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8088 Assembler Language Programming: The IBM® PC, Second Edition

Willen and Krantz

Written for those programmers who are familiar with high-level languages such as BASIC and Pascal, this book shows you how to write machine language software for the IBM PC. It also serves as an excellent introduction to the more intricate art of assembler language programming. Also included is detailed information about the internal structure of the PC, including the Intel 8088 microprocessor.

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For readers who already know how a data base performs, this time-saving guide explores the tricks that make dBASE II and dBASE III respond to their needs. In an effort to get the most out of dBASE II and dBASE III and apply these systems to specific business needs, it describes how to detect and correct errors, sort files, create new and useful programs, and manipulate data.

256 Pages, 7½ x 9¾, Softbound
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No. 22349, \$21.95



The Best Book of: Framework™

Alan Simpson

Here are practical examples and applications to unleash Framework's frames, word processor, spreadsheet, and other features. This reference illustrates how to access national information systems; interface with WordStar®, dBASE II® / III®, and Lotus® 1-2-3®, use Framework macros; and program with FRED™, Framework's programming language. It is clear, concise, and perfect for any first-time user of Framework.

362 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22421-6
No. 22421, \$21.95



The Best Book of: Lotus® 1-2-3®, Second Edition

Alan Simpson

This tutorial book steps readers through the various functions of the program and shows them how to use Version 2.0 in today's business environment. Each chapter within a section allows newcomers to be productive immediately.

Topics covered include functions and formulas, worksheet formatting, copying ranges, worksheet files, graphs, database management macros, and custom menus.

350 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22563-8
No. 22563, \$21.95



The Best Book of: Microsoft® Works for the PC

Ruth K. Wilkin

Written with the new user of Microsoft Works in the MS-DOS® environment in mind, this step-by-step guide examines the program's wide variety of features. It uses a combination of in-depth explanations and hands-on tutorials to show the business professional or home user how to apply the software to enhance both business and personal productivity.

Clearly written and easy to understand, this book explains how to use such varied applications as the word processor with mail merge, the spreadsheet with charting, the database with reporting, communications, and integration. For each application the author provides a detailed overview of the hows and whys followed by practical examples that guide the reader easily from idea to finished product. Quick-reference charts, summaries, and end-of-chapter questions and answers enhance the learning process, and each example is illustrated at important developmental stages.

Topics covered include:

- Spreadsheet Essentials
- Exploring the Spreadsheet Menus
- About Formulas and Functions
- Charting Your Spreadsheet
- Exploring the Chart Menus
- Database Essentials
- Filling a Database
- Exploring the Database Menus
- Word Processor Essentials
- Exploring the Word Processor Menus
- Integration Essentials
- Communications Essentials
- Exploring the Communications Menus

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Alan Simpson

With all its power and flexibility for calculating, storing, and sorting information, Multiplan is still one of the most popular programs available.

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Alan Simpson

This book introduces Symphony. It illustrates how to create, edit, and format documents with word processing; figure taxes and amortize loans with the spreadsheet; display graphs and produce slides with graphics; and create a mailing list with the data base manager. It also shows how to transfer spreadsheets and programs to other computers and interface with other programs like Lotus® 1-2-3® and dBASE II® / III®.

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**The Best Book of:
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Vincent Alfieri

From the author of the best-selling *Mastering WordStar*,® this hands-on tutorial provides step-by-step explanations of all WordPerfect features from simple to advanced.

Perfect for beginners, it offers clear and extensive coverage of merge-printing; explores powerful writing aids such as automatic table of contents creation, index generation, and user-defined macros; and contains a thorough discussion of printer setups and the new laser printers.

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- Using the Math Features
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- Different Formats in a Document
- Pagination and Page Formatting
- Text and Column Blocks
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- Fill-In Documents
- Macros
- File Management
- Sorting by Paragraphs, Lines, Words, and Numbers
- Merge Printing: Form Letters, Form Mailings, Fill-In Forms, Advanced Uses, and Beyond Merge Printing

464 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-46581-7
No. 46581, \$21.95



**The Best Book of:
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Vincent Alfieri

The Best Book of: WordStar includes all of the more than 125 enhancements and revisions found in Version 4.0.

Readers who want to get the most from WordStar, the most popular word-processing program ever published, are guided step-by-step through a series of real-life problems—from opening a file to sending personalized letters and from simple correspondence to complex tables.

This text shows how to import and export WordStar files to and from 1-2-3 and dBASE III PLUS. It provides a thorough explanation of how to use WordStar with laser printers, specifically the HP Laserjet series, and familiarizes the reader with math capability, and shorthand macros.

Topics covered include:

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- Formatting Essentials
- Moving, Copying, and Deleting Blocks
- Finding and Replacing
- Keyboard Macros and Other Shortcuts
- Fun with Multiple Formats
- Editing Features
- Working with DOS and File Management
- Headers, Footers, and Page Numbering
- Controlling the Page
- Boilerplates, Format Files, and Document Assembly
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- Conditional Merge Printing
- Automated Document Assembly
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- Working with Laser Printers

576 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-48404-8
No. 48404, \$19.95



**dBASE III PLUS™
Programmer's Library**
Joseph-David Carrabis

Written for intermediate to advanced programmers, this book shows how to quickly build a library of dBASE III PLUS code that can be reused many times with only minor modifications. The author reveals universal patterns for editing, adding, deleting, finding, and transferring records in databases, so that dBASE III PLUS tools can be adapted to a variety of applications.

The book has two major parts. The first provides kernels of code that can be used in applications as varied as dental records keeping, fundraising, small business management, and newsletter subscription systems. The second part shows the code necessary to handle such systems, and how kernels and modular programming help you set them up.

Topics covered include:

- What Is a Library?
- The Basic Kernels of Code
- Database Designs
- Advanced Kernels
- Inventory Systems
- Client/Personnel Record Keeping
- Subscription and General Accounting Systems
- Appendices: Clipper Versions of dBASE III PLUS Listings, and dBASE III PLUS Commands, Functions and Abbreviations

Joseph-David Carrabis is a consultant, author, and lecturer in the microcomputer field. He has designed specialized Lotus® 1-2-3®, WordStar®, Javelin, dBASE II®, dBASE III®, and Framework™ tutorials for various industry training programs.

536 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22579-4
No. 22579, \$21.95



**dBASE III PLUS™
Programmer's Reference
Guide**
Ed Jones

Offering a unique approach to dBASE III PLUS, this book provides such options as menu design, instructions for restructuring programs for added speed, and sample turnkey applications for tracking inventory.

It is a complete reference guide to the many new programming features of this software package.

This reference guide explains in detail how dBASE commands are used for creating a database, adding and editing records, displaying data, and other introductory aspects of this powerful programming language.

Topics covered include:

- Introduction to dBASE III PLUS
- Programming Basics
- Program Flow
- Memory Variables
- System Design
- User Input and Output
- Adding and Modifying Records
- Managing the Database
- Debugging Strategies
- Programming for Network Users
- Command Reference

Ed Jones is an experienced dBASE consultant and author of several successful dBASE books.

448 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22509-3
No. 22509, \$19.95



Discovering KnowledgeMan™
Micro Data Base Systems, Inc.

Here's a dynamic, powerful learning tool that quickly shows you how to use the *KnowledgeMan* information management system. Introduces its data management and spreadsheet capabilities, and goes on to teach you how to use each feature by actually working with the program in a step-by-step approach. Excellent tutorial.

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ISBN: 0-672-22415-1
No. 22415, \$19.95



IBM® BASIC from the Ground Up
David E. Simon

In this complete guide to the BASIC language for the IBM PC, the author assumes the reader has no prior experience with computers.

He starts with the fundamentals such as "What is Programming?" and works through games and simulations, graphics, file handling, programming tricks, and much more.

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No. 46350, \$19.95



Hard Disk Management Techniques for the IBM®
Joseph-David Carrabis

This is a resource book of in-depth techniques on how to set up and manage a hard disk environment directed to the everyday "power user," not necessarily the DOS expert or programmer.

Each fundamental technique, based on the author's consulting experience with Fortune 500 companies, is emphasized to help the reader become a "power user." This tutorial highlights installation of utilities, hardware, software, and software applications for the experienced business professional working with a hard disk drive.

Topics covered include:

- Introduction to Hard Disks
- Hard Disks and DOS
- Backup and What You Need to Know
- Service and Maintenance
- Setting Up a Hard Disk
- Organizing a Hard Disk
- Hard Disk Managers
- Utilities to Manage Hard Disks, Find Files, UNERASE Files, Recover Damaged Files, Speed Up Disk Access, and Restore and Backup Disks
- Maintenance Utilities
- Security Utilities

472 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22580-8
No. 22580, \$22.95



IBM® Graphics from the Ground Up
David E. Simon

An excellent adaptation of the highly successful *IBM BASIC from the Ground Up*, this book starts with a "What is graphics programming?" approach, then works through games, simulations, file handling, and programming.

Most exercises require very little math background and no prior computing experience. Important information on how to modify BASIC programs is also included.

352 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6375-X
No. 46375, \$19.95



The IBM® PC and PCjr™ Computer Workout
Software Lab East

The perfect book for children seven and older to learn computer terms, programming tips, and problem-solving skills. The "workout" consists of 40 crossword puzzles, word searches, and mix-and-match games. Children will learn to sequence the steps in a flowchart, enter codes and break codes, write missing lines from short programs, and enter programs.

64 Pages, 8½ x 11, Softbound
ISBN: 0-8104-6384-9
No. 46384, \$2.95



IBM® PC & PC XT User's Reference Manual, Second Edition
Gilbert Held

Expanded to include the more powerful PC XT, this second edition contains the most up-to-date information available on the IBM PC. From setup through applying and modifying the system, this book continues to provide users with clear, step-by-step explanations of IBM PC hardware and software—complete with numerous illustrations and examples.

Highlights of the second edition include instructions for using DOS 3.1 and upgrading a PC to an XT; information on the customized hardware configuration of the PC and XT; explanations on how to load programs on a fixed disk and how to organize directories; and material on available software, including compilers.

Topics covered include:

- Hardware Overview
- System Setup
- Storage Media and Keyboard Operation
- The Disk Operating System
- Fixed Disk Organization
- BASIC Overview
- BASIC Commands
- Data File Operations
- Text and Graphics Display Control
- Batch Processing and Fixed Disk Operations
- Audio and Data Communications
- Introduction to TopView
- Appendices Include: ASCII Code Representation, Extended Character Codes, BASIC Error Messages, and Programming Tips and Techniques

496 Pages, 7 x 9¾, Softbound
ISBN: 0-672-46427-6
No. 46427, \$26.95



**IBM® PC AT
User's Reference Manual**
Gilbert Held

Includes everything you need to know about operating your IBM PC AT—how to set the system up, write programs that fully use the AT's power, organize fixed-disk directories, and use IBM's multitasking TopView.

Includes a BASIC tutorial for beginners and includes several fixed disk organizer programs—all clearly described, explained, and illustrated.

453 Pages, 7 x 9¼, Softbound
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**IBM® PC Programs in
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Gilder and Gilder

An IBM PC version of *BASIC Computer Programs in Science and Engineering*, this is an instant software library of over 100 programs that help students, engineers, and scientists solve their toughest problems.

Programs cover calculations in general math, basic electricity and electronics, computer-aided design of amplifiers, active and passive filters, and more.

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**IBM® PCjr™ Assembler
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David C. Willen

Incorporate the speed and power of assembler language programming into your IBM PCjr.

After a grounding in the fundamentals of bits, bytes, numbering systems and information storage, the book proceeds with a crystal-clear dissection of 8088 architecture and a thorough examination of the PCjr's BIOS, DOS and macro assembler. Accomplishing assembler control of the system board, display, modem and disk I/O follow.

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Charles D. Sternberg

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Charles D. Sternberg

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Each program has a description of its functions and operation, a listing in BASIC, sample data, and at least one sample run.

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No. 46376, \$15.95



Inside dBASE III®
National Training Systems, Inc.
Jay M. Sedlik, Ph.D., Editor

With this self-training package and dBASE III software, any microcomputer user, pro, or novice can learn to create and use dBASE III files. Requires: IBM® PC, XT, AT or PC compatible, 256K (minimum), two disk drives, dBASE III software, 80-column monochrome monitor, MS DOS® or PC DOS™ version 2.0 or greater. Book and software package, one disk with book and user's reference manual.

196 Pages, 8¾ x 11¼,
Wire-bound
ISBN: 0-8104-7380-1
No. 47380, \$49.95



**Interfacing to the IBM®
Personal Computer**
Lewis C. Eggebrecht

The IBM PC's open architecture lends itself to external device interfacing. Learn from the lead designer and architect of the IBM PC how to exploit this capability. Includes design tips and examples, many subroutines for interfacing, and BASIC programs to explain interfacing functions.

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ISBN: 0-672-22027-X
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Managing With dBASE III®
Michael J. Clifford

This book takes a personal, practical approach to this popular software. It explains such features as dBASE III, memo and date fields, filters and paths, the new PICTURE and RANGE statements, and the SET RELATION TO method of linking files. It also gives programming strategies for using dBASE III to control inventory, manage accounts payable and receivable, update client files, and produce business graphics.

412 Pages, 7½ x 9¼, Softbound
ISBN: 0-672-22455-0
No. 22455, \$22.95



Lotus® 1-2-3® Financial Models

Tymes, Dourden, and Praetl

With this book, Lotus 1-2-3 users will learn to create models for calculating and solving personal and business finance problems using Version 2.0! This book shows how to avoid frustration and delay in setting up individual formulas and allows users to perform any spreadsheet calculation in minutes.

This revision of the popular 1-2-3® *from A to Z* includes numerous models or templates for the Lotus user, each preceded by a brief explanation of how the model works and how it can be altered. More advanced business models and an increased emphasis on macros as well as the inclusion of Version 2.0 make this book ideally suited to the business user.

Whether calculating a complex statistical analysis or a home heating analysis, readers can use this book as the one source for the guidance and tools needed to do spreadsheet calculations in the most efficient manner possible.

Topics covered include:

- Personal Models
- Business Models
- Advanced Business Models

Elna Tymes is an experienced computer book author in California with a number of successful books to her credit including *Mastering Appleworks* and *1-2-3 from A to Z*.

300 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-48410-2
No. 48410, \$19.95



Macro Programming for 1-2-3®

Daniel N. Shaffer

This book reveals the uses of 1-2-3 Release 2's powerful built-in programming language. With Release 2's expanded macro language, 1-2-3 users can better automate and control routine or tedious worksheet functions, saving time, effort, and keystrokes.

The author shows how to create more accurate, more powerful worksheets that are also easier to use. Concentrating on the practical application of macros, this book gives the reader step-by-step hands-on experience through examples and exercises.

Topics covered include:

- Using Range Names
- Using the Automatic Typing Features of 1-2-3
- Using the Programming Features of 1-2-3
- Easy Data Entry, Results Display, Report Printing, Graphing, Data Storage, and Retrieval
- Making Your Worksheets More Powerful
- Appendices: Summary of Macro Commands, Using the New String Functions, Differences Between Release 1A and 2.0

Dan Shaffer is president of Shaffer & Shaffer of Columbus, Ohio, a computer consulting and book development firm providing services to corporations and government agencies as well as to the banking and insurance industries. He is the author/co-author of six computer science books including the advanced tutorial *1-2-3 Revealed*.

304 Pages, 7½ x 9¾, Softbound
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Microsoft® C Programming for the IBM®

Robert Lafore, The Waite Group

Programmers using the Microsoft C compiler can learn to write useful and marketable programs with this entry level book on Microsoft C programming.

This title is a tutorial geared specifically to the IBM PC family of computers. Unlike other introductory C titles, it is written for the Microsoft C compiler. It provides special coverage of IBM features such as sound, color graphics including CGA and EGA, keyboard, telecommunications, and character graphics.

Topics covered include:

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- Keyboard and Cursor
- Structures, Unions, and ROM BIOS
- Memory and the Monochrome Display
- CGA and EGA Color Graphics
- Files
- Serial Ports and Telecommunications
- Larger Programs
- Advanced Variables
- Appendices: Supplementary Programs, Hexadecimal Numbering, IBM Character Codes, and a Bibliography

Robert Lafore is author of *Assembly Language Primer for the IBM PC* and co-author of the very successful *Official Book for the Commodore 128® Personal Computer* and *Soul of CP/M.®*

704 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22515-8
No. 22515, \$24.95



Mastering WordStar®

Vincent Allieri

Easily the equivalent of a top-notch course in WordStar, you'll find this volume quickly moves from real-life applications of WordStar basics to the most advanced uses of its awesome word processor power. Go from basic correspondence to complex tables.

Totally task-oriented, the book includes extensive examples, exhaustive appendices, and training on its companion MailMerge.®

415 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6305-9
No. 46305, \$21.95



Microsoft® Word for the IBM® PC

Lieberman and Gioe

This easy-to-follow text, containing hundreds of screen illustrations, explores this word processing package in detail. It includes a disk that saves typing time and lets users work through examples. Based on version 2.0 it shows how to enter, revise, format and print text and gives all the shortcuts and advanced techniques for print merging, speed formatting, style sheets, and multiple windows.

544 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22348-1
No. 22348, \$29.95



PC LAN Primer

*Kleeman, Anderson, Angermeyer,
Fisher, McCoy, The Waite Group*

PC LAN Primer explores the Token Ring—the grand strategy to tie together IBM® micros, minis, and mainframes with local area networks providing the communication feature.

Emphasizing PC LAN (micro to micro) and the Token Ring (mainframe/mini to micro), this primer is a valuable introduction and reference for anyone with an intermediate level of experience in PC DOS™ 2.1 and 3.0.

240 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22448-8
No. 22448, \$22.95



Personal Publishing with PC PageMaker®

Terry M. Ulick

Here is everything you need to know about PC PageMaker to design publications. It shows you how to select and use type, work in multicolumn and multipage layouts, create graphs, and merge text with graphic elements.

This handbook introduces all the equipment needed to assemble a personal publishing system to create professional-looking typeset journals, advertisements, brochures, and other publications.

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QuickC™ Programming for the IBM

Carl Townsend

This book is an entry-level tutorial for the beginning C programmer who desires to develop programs using the Microsoft® QuickC compiler. It will also acquaint the business professional or serious user with the basic aspects of programming in C.

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Topics covered include:

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Lon Poole

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Turbo C® Programming for the IBM®

Robert Lafore, The Waite Group

This entry-level text teaches readers the C language while also helping them write useful and marketable programs for the IBM PC, XT, AT, and PC/2.

This tutorial is based on Borland's new Turbo C compiler with its powerful integrated environment that makes it easy to edit, compile, and run C programs. The author's proven hands-on intensive approach includes example programs, exercises, and questions and answers and covers CGA and EGA graphic modes.

The fundamentals of C programming are followed by intermediate concepts of arrays and pointers, data structures, and use of the C library. Finally, advanced topics, such as assembly language interfacing using DOS and ROM routines are addressed, all in the context of the IBM programming environment.

Topics covered include:

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LANGUAGES



Ada®: An Introduction to Program Design and Coding
Amoroso and Ingargiola

This text provides a thorough description of Ada—the standard language of the Department of Defense. As a complete but easily-read guide to the language, it stresses concepts of Ada and illustrates a collection of clear and useful annotated examples.

It is ideally suited for programmers experienced in software development languages and those who design programs and write codes.

368 Pages, 7 3/4 x 9 1/2, Hardbound
ISBN: 0-672-22523-9
No. 22523, \$32.95



Advanced C Primer ++
Stephen Prata, The Waite Group

This primer provides the growing audience of intermediate to advanced C programmers with the information necessary to program at an advanced level. It presents an overview of advanced programming concepts and outlines how to use these advanced concepts in an MS-DOS®/PC-DOS™ environment. It also illustrates uses of C in a UNIX® and XENIX® environment.

512 Pages, 7 1/2 x 9 3/4, Softbound
ISBN: 0-672-22486-0
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Advanced Turbo Prolog® Programming
Dan Shafer

This advanced look at Turbo Prolog offers a wealth of information on high-level topics that are not clearly explained in the documentation that accompanies the software.

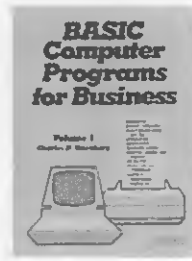
The natural follow-up to Shafer's *Turbo Prolog Primer*, this book gives intermediate to advanced programmers who already understand the fundamentals of this AI language the highlights of its more complex features.

Topics covered include:

- Turbo Prolog and the Outside World
- Modular Project Development
- Constructing a Turbo Prolog Toolbox
- Appendices Include: Turbo Prolog's Vocabulary and Grammar, Turbo and Other Prologs: A Predicate Comparison, Converting Between "Standard" Prolog and Turbo Prolog, Annotated Bibliography, Prolog and Predicate Logic, and Glossary

Dan Shafer is a technical book author with such Sams books as *Artificial Intelligence Programming on the Macintosh™* and *Turbo Prolog Primer* to his credit. Shafer specializes in AI programming, especially Prolog. In his monthly newsletter, *Visions: The Shafer Report*, he analyzes future technological trends and impacts.

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Both volumes of BASIC Computer Programs for Business provide a wealth of practical business applications and are a must for small businesses and entrepreneurs utilizing micros.

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Charles D. Sternberg

This book includes over 70 complete programs for use on a daily basis for critical facets of a business operation—each can be easily modified to meet your business needs. All of the programs are fully documented and demonstrated. A description of its application and operation, a listing in BASIC, a symbol table, sample data, and carefully formatted examples of printed output accompany each program.

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Charles D. Sternberg

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BASIC Programming Primer, Second Edition
Waite and Pardee, The Waite Group

The cornerstone of the Sams/Waite Primer series, this classic text contains a complete explanation of the fundamentals of the language, program control, and organization. Appendices provide information on numbering systems, a comparison of different BASIC programs, and the ASCII character code set.

384 Pages, 6 x 9, Comb-bound
ISBN: 0-672-22014-8
No. 22014, \$19.95



C Primer Plus, Revised Edition

Mitchell Waite, Stephen Prata, and Donald Martin, *The Waite Group*

This revised and expanded edition of a best-seller presents everything you should know to begin programming in the exciting C language, now used by over 80 percent of the software community. The book is organized for quick learning and encourages problem solving through questions and exercises.

The authors have updated the text with information on C++, AT&T's successor to C, which is used for object-oriented programming. They also explain what is new in the ANSI C language standard and how to write programs that conform to it.

Topics covered include:

- Structure of a Simple C Program
- Variables, Constants, and Data Types
- Character Strings, *define*, *printf*, and *scanf*
- Operators, Expressions, and Statements
- Input/Output Functions and Redirection
- Choosing Alternatives: *if*, *else*, Relational and Conditional Operators
- Loops and Other Control Aids
- How to "Function" Properly
- Storage Classes and Program Development
- The C Preprocessor
- Arrays and Pointers
- Character Strings and String Functions
- Structures and Other Data Delights
- The C Library and File I/O
- Bit Fiddling, Keywords, Binary Numbers, IBM® PC Music, and More

576 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22582-4
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C Programmer's Guide to Serial Communications

Joe Campbell

This book offers a comprehensive examination and unprecedented dissection of asynchronous serial communications. Written for C programmers and technically advanced users, it contains both theoretical discussion of communications concepts and a practical approach to program design for the IBM® PC and Kaypro environments.

The author introduces a startling advance in the art of programming—the "virtual" UART—which he uses to develop a highly portable C programming library that outperforms costly commercial products; provides functions for fast CRC calculation, XMODEM file transfer, XON/XOFF control, and much more.

Topics covered include:

- The ASCII Character Set
- Fundamentals of Asynchronous Technology
- Errors and Error Detection
- Information Transfer
- Modems and Modem Control
- The UART—A Conceptual Model
- Real-World Hardware: Two UARTs
- The Hayes Smartmodem
- Designing a Basic Serial I/O Library
- Portability Considerations
- Timing Functions
- Functions for Baud Rate and Data Format
- RS-232 Control
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- Smartmodem Programming
- XMODEM File Transfers
- CRC Calculations
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672 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22584-0
No. 22584, \$26.95



C with Excellence: Programming Proverbs

Henry Ledgard with John Tauer

C programmers will learn how to increase their programming skills and to write carefully constructed and readable programs with this handbook on C programming. Its clear and concise style provides both the novice and the expert programmer with guidelines or "proverbs" for writing high-quality, error-free software.

The reader familiar with the fundamentals of C, BASIC, or Pascal will be able to apply these principles to develop systems and application software as well as write C programs that can be easily ported from one microcomputer to another.

After introducing the 24 "proverbs" and their applications, this handbook focuses on the entire development process from conceptualizing to coding, documenting, testing, debugging, and maintaining and modifying programs.

Topics covered include:

- Programming Proverbs
- Structure Is Logic
- Coding the Program
- Global Variables, Selecting Names, Recursion, and Efficiency
- Top-down Programming
- Appendices Include: Summary of Program Standards and a Program for Kriegspiel Checkers

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ISBN: 0-672-46294-X
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COBOL Elements of Programming Style

Fuori, Gaughran, Gioia, and Fuori

This practical, self-instructional guide covers all aspects of programming in COBOL for the beginning and experienced programmer.

Using this step-by-step approach almost anyone can build the problem-solving skills needed to write complete and efficient COBOL programs. It has more than 75 program examples, each representing a business data processing task.

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Hi-Res Graphics and Animation Using Assembly Language

Leonard L. Malkin, Ph.D.

Explore the secrets of double hires and color graphics and learn how to create startlingly detailed animated graphics.

This book for Apple® II users shows the secrets of producing professional graphics and other applications including vertical and horizontal movement, internal animation, paddle and joystick controls, collisions and explosions, and the animation of multiple shapes.

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ISBN: 0-8104-6758-5
No. 46758, \$18.95

LANGUAGES



Mastering Expert Systems with Turbo Prolog®

Carl Townsend

This book details how to design expert systems with Turbo Prolog using tutorial examples, numerous practical examples, and program listings. Written for the intermediate to advanced user, it provides all the design elements necessary to create an expert system.

It moves from concept to application including a complete expert system illustration. The last chapter shows the certainty factors and design elements needed for additional applications.

Topics covered include:

- Fundamentals
- Introduction to Expert Systems
- Using Turbo Prolog
- The Prolog Language
- Using Rules
- Creating a User Interface
- Using Data Bases
- Controlling the Flow of Execution
- Using Complex Data Structures
- Special Prolog Techniques
- Developing Programs with Turbo Prolog
- The Expert Systems
- Types of Expert Systems
- Search Strategies
- Defining the Goal and Domain
- Representing the Knowledge
- Knowledge Acquisition
- Dealing with Uncertainty
- Appendices: Program Listings, Glossary, Resource Listing, and Turbo Prolog and other Prologs

Carl Townsend has published 18 books. He is a full-time writer and consultant.

272 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22568-9
No. 22568, \$19.95



Mastering Turbo Pascal® 4.0, Second Edition

Tom Swan

This book is suited for both beginners and experienced programmers and developers. Its encyclopedic organization makes the information easy to find and use, and the comprehensive coverage of all Turbo Pascal's features makes it a valuable addition to any programmer's library.

The tutorial is written with the same attention to detail as the first edition, and includes enhanced sample program listings, key word lists, summaries, and questions and answers. The revision also provides program amplifications and more advanced programming topics such as units, large memory models, and assembly language linkage.

Topics covered include:

- Programming by Example
- Data—What a Program Knows
- Action—What a Program Does
- Divide and Conquer
- Adding Structure to Data
- Files
- Pointers, Lists, and Trees
- More about Numbers
- Strings, Displays, and Graphics
- Advanced Techniques
- IBM PC and DOS Particulars
- CP/M Particulars
- Turbo Pascal Encyclopedia
- Appendices: Turbo Pascal Railroad Diagrams, Compiler Directives, ASCII Character Codes, Bibliography, Answers to Selected Exercises, and Program Index

Tom Swan has been writing about computer programming for nearly ten years, and his most recent book, *Mastering Turbo Pascal Files* continues to be a top seller.

650 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-48421-8
No. 48421, \$22.95



Mastering Turbo Pascal Files

Tom Swan

This book demonstrates how to produce full-scale, integrated, power-user-type programs that use graphics, database access, cursor control, editing, menus, and windows.

This is an advanced guidebook and reference for professional and semi-professional programmers working with Borland International's Turbo Pascal for the IBM® PC. It explains how to use Turbo Pascal to create command and menu-driven applications for dealing with file management, data compatibility, text processing, games, graphics, and communications.

Mastering Turbo Pascal Files details how to write programs to read and write disk files of all kinds and explains the recent advances in disk storage devices, including 3.5-inch microfloppies, WORM drives, and others. Dozens of complete, tested, and practical programs are provided, as is Swan's personal collection of file programming "packages."

Topics covered include:

- File Fundamentals
- In Sequence and At Random
- Text and the Single Character
- Files in the Raw
- Directing the Directory
- Problems of a Sort
- Searches for Tomorrow
- Multi-User Mysteries

Tom Swan's books have sold more than 50,000 copies, including *Mastering Turbo Pascal*, which continues to be a top seller. Swan has also published dozens of articles in leading technical magazines such as *PC World* and *Personal Computing*.

320 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22592-1
No. 22592, \$18.95



Modula-2® Primer

Stan Kelly-Boole

This new addition to the Sams primer series provides the first-time Modula-2 user with the vital features of the Modula-2 language. It provides a tutorial approach to Modula-2 and illustrates the relationship between Pascal and Modula-2.

The book provides many complete program examples using Logitech's Modula-2 compiler for the IBM® PC/XT/AT®.

472 Pages, 7½ x 9¾, Softbound
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No. 22560, \$19.95



Modula-2® Programming

Kaplan and Miller

Written to be independent of specific computer systems, this introduction to the module concept contains more than 125 field-tested examples of module programming. It also features a discussion of standard library modules and their functions in I/O operations.

Requiring an understanding of programming concepts, it is ideal for programmers familiar with Pascal, PL/1, C, or FORTRAN 77.

240 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6480-2
No. 46480, \$21.95



Pascal Primer

Fox and Waite, The Waite Group

Waite creates a new standard with the *Pascal Primer*. Now you can generate powerful programs in UCSD™ Pascal. Let this primer swiftly guide you through Pascal program structure, procedures, variables, decision-making statements, and numeric functions. Includes useful examples and quizzes with answers, along with eight quick-reference appendices.

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ISBN: 0-672-21793-7
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Pascal Programs for Data Base Management

Tom Swan

Here is one of the most practical comprehensive treatments of data base management. It contains PDBS (Pascal Data Base System), a suite of 35 short, UCSD-compatible Apple Pascal programs for creating, reformatting, updating, storing, and sorting a relational data base.

The user can program, correct, and begin using a function after typing just a few screens of code.

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Pascal Programs for Games & Graphics

Tom Swan

This outstanding collection of 22 unusually sophisticated games and graphics helps users realize Apple Pascal's full potential.

The powerful graphics editor enables users to custom-design character sets, change pictures up to full screen, and print a hard copy of the finished pictures as easily as working with text. Learn to design new alphabets, too.

224 Pages, 7 x 9¼, Softbound
ISBN: 0-8104-6271-0
No. 46271, \$17.95



Pascal Programs in Science and Engineering

Gilder and Barrus

This text contains 112 Apple Pascal programs to tackle problems that confront students. Programs are organized into three sets: general math such as derivatives, integrals, curve fitting; basic electricity and electronics; computer-aided design of amplifiers, power supplies, and active and passive filters. All programs are ready to run, easy to modify.

350 Pages, 6¾ x 9¾, Softbound
ISBN: 0-8104-6265-6
No. 46265, \$21.95



Pascal with Excellence

Ledgard with Tauer

Improve your software programs with this easy-to-read book of key concepts in structured programming.

The proverbs cover such concerns as conceptualizing, coding, documenting, testing, debugging, and maintaining and modifying programs. Each proverb is followed by examples of good and bad program segments and is then put to the test in a scenario of top-down programming.

256 Pages, 7 x 9¼, Softbound
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No. 46490, \$16.95



The BASIC Conversions Handbook for Apple®, Commodore®, TRS-80®, and ATARI® Users, Second Edition

Brain, Oviatt, Paquin, and Stone

If you've ever wanted to use a program on your machine, but it was not written for your machine, this book is for you! Because software follows the same logic, no matter what brand of machine, programs written for one microcomputer will work on just about any other microcomputer if the language differences are compensated for.

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Programming in C, Revised Edition

Stephen G. Kochan

This timely revision provides complete coverage of the C language, including language features and over 90 program examples. The comprehensive tutorial approach teaches the beginner how to write, compile, and execute programs and teaches the experienced programmer how to write applications using features unique to C.

Program examples include a step-by-step explanation of all the procedures involved. The book covers all the essentials of C, including program looping, decision-making, arrays, functions, structures, character strings, bit operations, enumerated data types, and ANSI C.

Topics covered include:

- Introduction and Fundamentals
- Writing a Program in C
- Variables, Constants, Data Types, and Arithmetic Expressions
- Program Looping
- Making Decisions
- Arrays
- Functions
- Structures
- Character Strings
- Pointers
- Operations on Bits
- The Preprocessor
- Working with Larger Programs
- Input and Output
- Miscellaneous and Advanced Features
- Appendices: Language Summary, ANSI Standard C, Common Programming Mistakes, the UNIX C Library, Compiling Programs under UNIX, the Program LINT, the ASCII Character Set

476 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-48420-X
No. 48420, \$24.95

LANGUAGES



Topics in C Programming

Kochan and Wood

Here is the most advanced and comprehensive coverage of the maturing C market. This sequel to *Programming in C* describes in detail some of the most difficult concepts in the C language—structures and pointers. It also explores the standard C library and standard I/O library, dynamic memory allocation, linked lists, tree structures, and dispatch tables.

Experienced C programmers can examine the UNIX System Interface through discussions on controlling processes, pipes, and terminal I/O. *Topics in C Programming* also explains how to write terminal-independent programs, how to debug C programs and analyze their performance, and how to use "make" for automatic generation of a programming system.

Topics covered include:

- Structures and Pointers
- The Standard C Library
- The Standard I/O Library
- UNIX System Interface
- Writing Terminal Independent Programs with "curses" Library
- Debugging C Programs
- Generating Programs with "make"

Stephen Kochan and Patrick Wood, formerly of Bell Laboratories, are the principals of a UNIX/C consulting firm called Pipeline Associates. Together they have authored such best-sellers as *Programming in C*, *Exploring the UNIX System*, *UNIX Shell Programming*, and *UNIX System Security*.

528 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-46290-7
No. 46290, \$24.95



Turbo Pascal® 4.0 Developer's Library

Rought and Hoops

This book provides a comprehensive system of easy-to-use Pascal routines that are ideal for intermediate to advanced Pascal users. Developers will benefit from the high performance and flexibility of the integrated library to create professional software applications compatible with the new Turbo Pascal compiler.

Providing an environment that any developer can readily use, the fully integrated library of routines contains operations for string manipulation, screen display operations, keyboard management, data entry screens, menu management, printer control, time and data manipulation, and file management.

Topics covered include:

- Global Constants, Types, and Variables
- Functions and Procedures
- Retrieve File System Functions and Procedures
- Novell Networking Functions and Procedures
- Sample Applications and Templates
- Using the Libraries with Turbo Pascal 4.0
- Appendices: Cross Reference of Routines by Category, Order of Routine Inclusion, Bibliography, Reader Feedback

Edward Rought and Thomas Hoops are co-owners of a software development and marketing firm. They have several commercial products on the market and contract for custom software packages.

450 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22635-9
No. 22635, \$24.95



Turbo Prolog® Primer, Revised Edition

Dan Shafer

This primer introduces the language of artificial intelligence—and the new Version 1.1 of Turbo Prolog. It carefully examines the elements of the language, including how programming in Turbo Prolog differs from programming in other, more traditional languages such as Pascal or C.

Programmers who want to explore the power of Prolog, as well as expand their knowledge of artificial intelligence and expert systems, will appreciate the hands-on approach. There are numerous programs that are ready to type in and run on any PC or compatible machine.

Topics covered include:

- Examining and Setting up Turbo Prolog
- The Turbo Prolog Editor
- The Structure of a Turbo Prolog Program
- Facts and Queries
- Making Logical Connections
- Using Rules in Intelligent Prolog Programs
- Creating a Full Turbo Prolog Program
- Equality and Matching
- Arithmetic, Structures, and Lists in Turbo Prolog
- Strings and Type Conversion
- Input and Output
- Screens and Windows
- Sound and Graphics
- Databases in Turbo Prolog
- Controlling Program Flow
- Turbo Prolog Debugging Techniques
- Computer Directives
- Appendices: Glossary, Turbo and Other Prologs, Suggestions for Further Reading

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VSAM: Concepts, Programming, and Design

Ranade and Ranade

Virtual Storage Access Method: the latest versatile and powerful access method for IBM® operating systems.

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No. 22546, \$44.95



Z-80 and 8080 Assembly Language Programming

Kathe Spracklen

This book is an extensive introductory look at assembly language programming for the 8080 and Z-80 processors. It provides just about everything the applications programmer needs to know to get the most out of his or her machine.

192 Pages, 6 x 9, Softbound
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Artificial Intelligence Programming on the Macintosh™

Dan Shuler, *The Waite Group*

This author presents the fundamentals of artificial intelligence (AI) programming theory and techniques through a step-by-step introduction to the next frontier in computer usage. The programming student and hobbyist will be fascinated by the possibilities of music generation, robotics, and problem solving...all available through AI on today's microcomputers.

304 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22447-X
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C Programming Techniques for the Macintosh™

Mednieks and Schilke

C—an elegant, fast, and easy language—is steadily growing in popularity. This book combines C programming with the Macintosh ROM toolkit to provide Mac programmers with a wealth of valuable information.

It is a comprehensive introduction to the C programming language, as developed for the Macintosh environment. Users should have intermediate-level programming knowledge and experience with other languages like BASIC.

336 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22461-5
No. 22461, \$18.95



Macintosh™ Programming Techniques

David C. Willen

Take advantage of the power and versatility of Microsoft® BASIC 2.0 on your Macintosh computer and get the most from its unique user interface. Learn how to write Macintosh applications using BASIC, and at the same time increase your knowledge of programming structures that allow access to the Macintosh user interface mechanisms. Written in a tutorial style, the author concentrates on the various features of BASIC by function.

400 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22411-9
No. 22411, \$22.95



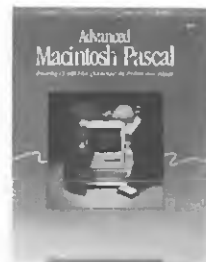
Macintosh™ User's Guide

Gordon McComb

Get started in computing with the revolutionary Apple® Macintosh using this guidebook. Start with an elementary overview of the first real computer for the people, and advance to a sophisticated level of knowledge.

Become familiar with what the Macintosh can do for you, the special features of the mouse, the unique disk system, MacPaint™, MacWrite™, the software, and much more.

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Comb-bound
ISBN: 0-672-22328-7
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Advanced Macintosh™ Pascal

Paul Goodman

Beginning where most Pascal books leave off, this book introduces programmers to the advanced skills needed to produce "real" applications.

Not only does this book discuss Pascal's "power" structures, thoroughly examining sets, pointers, and records, it also covers basic and advanced QuickDraw routines, data types, programming techniques, and how to use the Macintosh Toolbox.

304 Pages, 7¾ x 9¾, Softbound
ISBN: 0-672-46570-1
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Basic Microsoft® BASIC for the Macintosh™

Coan and Coan

Develop a solid foundation in programming of Microsoft BASIC with step-by-step instructions, sample programs, and screen illustrations that guide you in writing control routines, subroutines, and complete programs quickly and easily.

Learn how to access Macintosh QuickDraw, ROM, highlight short and simple programs with additional capabilities, save memory with options base, initialize options, and much more.

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No. 46558, \$19.95



dBASE Mac® Programmer's Reference Guide

Edward C. Jones

This detailed guide for using and programming in dBASE for the Macintosh® was written especially for those who need to take full advantage of the program's available power.

This book highlights programming applications using modular code to develop complete applications for any purpose. It provides a detailed explanation of how to use the relational powers of the software, as well as how to add and edit records with full error tracking and data verification, system design, and file transfer from DOS.

Current DOS dBASE users will learn how to take advantage of the unique Macintosh graphical interface when they program or use dBASE Mac.

Topics covered include:

- Creating and Modifying Files
- Working with Display Views
- Managing Data
- Working with Related Files
- Building Applications
- System Design
- Procedural Flow in a dBASE Mac Procedure
- Adding and Modifying Records Under Procedural Control
- User Input and Output
- dBASE Mac for dBASE III Programmers
- Sample/Design Applications
- Appendix: dBASE Mac Commands

300 Pages, 7¾ x 9¾, Softbound
ISBN: 0-672-48416-1
No. 48416, \$19.95

MACINTOSH



The Excel™ Advanced User's Guide

Richard Loggins

This guide provides the means to produce integrated systems of spreadsheet and supporting data that greatly increase productivity and efficiency.

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Dan Shafer

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- Card, Text, and Data Management
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- Graphics Commands and Visual Effects
- Sound and Music Basics
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- Commands
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- Tools and Programming Aids

Dan Shafer, writer of nearly a dozen computer books, has earned a reputation as an author who presents difficult ideas in an easy-to-understand manner. His current titles include *Turbo Prolog Primer, Revised Edition* and *AI Programming on the Macintosh*.

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- Coexistence
- Managing the Network
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Stephen L. Michel is a software evaluator and manager for a major computer vendor and has worked with TOPS since its early development. A contributor to *The Macintosh Bible*, Stephen has also written magazine articles for *Computer Currents* and is an editor for *CD ROM Review*.

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Terry M. Ulick

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Lasselle and Ramsay

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Kurt J. Schmucker

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Programming the 68000
Rosenzweig and Harrison

This prime resource for programmers fully examines the power of the Motorola 68000 microprocessor. It details the assembly language processes of coding, editing, compiling, linking, and resource compiling, with thorough explanations of the 68000 instruction set and addressing modes.

It features many example routines and shows how to code a simple electronic spreadsheet called *SimpleCalc*.

416 Pages, 7¼ x 9¼, Softbound
ISBN: 0-8104-6310-5
No. 46310, \$24.95

MICROPROCESSORS



The 68000: Principles and Programming
Leo J. Scanlon

The Motorola 68000 is the first 16-bit microprocessor to have a 32-bit international architecture. Increasing interest in 16-bit chips makes an understanding of this CPU essential for microcomputer professionals and hobbyists alike.

The book starts with fundamental material and gradually introduces more complex topics to help the reader fully understand the 68000 in an orderly manner. From a brief overview of the features of the chip and background information to the instruction set and addressing modes to the processing states, privilege states, and exception structure of the 68000, the book provides thorough coverage of this versatile chip.

Topics covered include:

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- Cross Macro Assembler
- The 68000 Instruction Set
- Mathematical Routines
- Lists and Look-Up Tables
- 68000 Microprocessor Chip Hardware
- Processing States, Privilege States, and Exceptions
- Fundamentals of Interfacing
- 68000 System Development Support
- Appendices: ASCII Character Set, Instruction Execution Times, Hexadecimal/Decimal Conversion Tables, Summary of the 68000 Instruction Set

Leo J. Scanlon is Documentation Manager for the Microelectronic Devices business segment of Rockwell International, and is the author of *6502 Software Design*.

240 Pages, 5½ x 8½, Softbound
ISBN: 0-672-21853-4
No. 21853, \$16.95



68000, 68010, 68020 Primer
Kelly-Boote and Fowler
The Waite Group

Beginning with an introduction to the 68000 chips, this book introduces the novice or experienced programmer to the instruction set and addressing modes common to the 68000 family. It progresses to the architecture of the chips, how to program in assembly language, how to utilize the 68000 to its fullest, how code mapping works, how to use various instructions and registers, and how the chips are used in multi-user systems.

Actual programming examples are presented throughout the book to reinforce learning with a handy tear-out instruction card for quick reference at the computer. This book contains everything the programmer needs to know about the 68000 family of microprocessor chips.

Topics covered include:

- Basic Microprocessor Concepts
- The M68000 Family
- M68000 Programmer's Models
- M68000 Instruction Set—First Steps
- M68000 Instruction Set—Advanced Topics
- Miscellaneous M68000 Instructions
- The MC68010
- The MC68020
- Appendices: M68000 Instructions—Number of Operands, M68000 Addressing Mode Types, M68000 Instructions/Legal Modes, M68000 Instruction Summary, M68000 Resources, ASCII Table

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Stephen P. Morse

This revised edition has been updated to provide novices and professionals alike with a thorough introduction to Intel's 8086 and 8088 microprocessors.

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How to Program and Interface the 6800
Andrew C. Staugaard, Jr.

This highly structured learning text teaches you all phases of 6800 operation and interfacing. Each chapter clearly indicates the educational objectives, then explains the material concisely. Comprehension is tested with review questions and experiments are provided for hands-on reinforcement.

416 Pages, 5½ x 8½, Softbound
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Basic Microprocessors and the 6800

Ron Bishop and the Motorola Semiconductor Group

This volume provides two books in one: a basic guide to microprocessors for the beginner, and a complete description of the M6800 system for the engineer. Each chapter is followed by a problem section.

272 Pages, 6 x 9, Softbound
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Microprocessor Based Robotics

Mark J. Robillard

This book serves to prepare the designer, experimenter, or scientist-to-be for the new challenge of robotics.

In view of this, the book has been divided into five sections, each section answering one discipline. Under these sections are individual chapters covering specific subjects. In all chapters, actual construction hands-on projects are included along with any necessary programming information.

224 Pages, 8½ x 11, Softbound
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Programmable Controller Handbook

Robert E. Wilhelm, Jr.

Bridging the gap between theory and application, this book examines numerous cases of programmable controller applications and programs.

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- Input/Output Structures
- Input/Output Configurations
- The Central Processing Unit
- Power Systems and Supplies
- Relay Ladder Programming
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- Equality and Mathematics
- Data Manipulation
- Bit Manipulation
- Special Languages and Instructions
- Programming Terminals
- Programmable Controller Communications
- Programmable Controller Peripherals and Support Devices
- Selection and Purchase of a Programmable Controller
- Assembly, Installation, and Maintenance
- Selected Programming Applications and Routines
- Glossary of Common Programmable Controller Terms

736 Pages, 7 1/4 x 10, Hardbound
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Programming & Interfacing the 6502, with Experiments

Marvin L. DeJong

Here's a closer look at the 6502, the first 8-bit CPU to gain wide acceptance in the personal microcomputer marketplace. Actually two books in one, this volume begins with assembly language programming and concludes with interfacing techniques. Flowcharts and logic diagrams are used extensively to aid comprehension. A series of related experiments reinforce the concepts presented.

Topics covered include:

- Introduction to Microcomputers
- Writing and Executing Simple Programs Using Data Transfer Instructions
- Simple Input/Output Techniques
- Logical Operations
- Arithmetic Operations
- Branches and Loops
- Register-Shift Instructions
- Indexed Addressing
- Subroutines, the Stack, and Interrupts
- Interval Timers
- Address Decoding
- Control Signals, Output Ports, and Applications
- Data Bus, Buffering, and Applications
- Appendices: Decimal, Binary, and Hexadecimal Number Systems; Instruction Set Summary; Microcomputer Technical Data; Pin Configurations of Frequently Used Chips

416 Pages, 5 1/2 x 8 1/2, Softbound
ISBN: 0-672-21651-5
No. 21651, \$17.95



Systems Design with Advanced Microprocessors

John Freer

Rather than taking a theoretical approach, this book provides comprehensive, practical design specifications for many popular 32-bit microprocessors now being used by design engineers.

It discusses only 32-bit microprocessors that are available in volume. The Motorola MC68020 and the Inmos T414 transputer are covered extensively because they represent two major trends in processor architecture. The differences between these two microprocessors are also emphasized.

This will be an important reference for systems designers, engineering/marketing managers of microprocessor-based products, and students of engineering or computer science.

Topics covered include:

- New Architectures and Design Features
- Survey of Advanced Microprocessors, Including the Intel 80386 Chips
- Motorola MC68020
- Inmos T414 Transputer
- 32-Bit Backplane Buses
- Memory and Storage Devices
- Communications Interfaces
- Software Options and Development Systems
- Design Factors
- Alternative System Architectures
- Appendices Include: Motorola MC68020 Data, Inmos T414 Data, and a Glossary of Microprocessor Technology

288 Pages, 7 1/2 x 10, Softbound
ISBN: 0-672-22595-6
No. 22595, \$26.95



The Z-80 Microcomputer Handbook

William Barden, Jr.

This handy reference will answer your questions about the Z-80 Zilog CPU. Completely covers hardware, software, machine use, and assembly language, with examples drawn from five different Z-80 microcomputers.

Topics covered include:

- Z-80 Architecture
- Interface Signals and Timing
- Addressing Modes
- Instruction Set
- Flags and Arithmetic Operations
- Interrupt Sequences
- Interfacing Memory and I/O Devices to the Z-80
- Z-80 Assembler
- Moving Data—Load, Block Transfer, and Exchange Groups
- Arithmetic and Logical Operations—8- and 16-Bit Arithmetic Group, Decimal Arithmetic
- Shifting and Bit Manipulation—Rotate and Shift, Bit Set, Reset, and Test Groups
- List and Table Operations—I/O and CPU Control Groups
- Z-80 Programming—Commonly Used Subroutines
- Zilog, Inc. and Other Z-80 Microcomputer Systems
- Appendices: Z-80 Electrical Specifications, 8080 and Z-80 Instructions Compared, Z-80 Instructions, Binary and Hexadecimal Representation, ASCII Character Code, Z-80 Microcomputer Manufacturers

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Advanced UNIX® — A Programmer's Guide

Stephen Prata, *The Waite Group*

This advanced guidebook goes beyond the basics of UNIX and spells out the details of the system's key components and various programming mechanisms. It shows how to use simple and complex commands, including the Bourne shell, shell scripts, loops, and system calls; how to create UNIX graphics; how to allocate and structure data in memory; and how to maximize the C-UNIX interface.

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CP/M® Bible: The Authoritative Reference Guide to CP/M

Waite and Angermeyer,
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Already a classic, this highly detailed reference manual puts CP/M's commands and syntax at your fingertips. Instant one-stop access to all CP/M keywords, commands, utilities, and conventions are found in this easy-to-use format. If you use CP/M, you need this book.

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CP/M® Primer, Second Edition

Waite and Murtha, *The Waite Group*

This tutorial companion to the *CP/M Bible* is highly acclaimed and widely used by novices and advanced programmers alike. Includes the details of CP/M terminology, operation, capabilities, and internal structure, plus a convenient tear-out reference card with CP/M commands. This revised edition allows you to begin using new or old CP/M versions immediately in any application.

152 Pages, 7 x 9, Softbound
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Kate O'Day, *The Waite Group*

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Christopher L. Morgan, *The Waite Group*

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The heart of XENIX, the kernel, is explored in detail and a terminal device driver is created. The reader will see how to bring up XENIX with different devices, from printers to LANs, receiver interrupts, blocking, flushing, and how to compile and test a new custom kernel.

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- Filters
- System Variables
- Screen and Keyboard
- Files and Directories
- Process, Control
- Device Drivers
- Advanced Tools for Programmers

Chris Morgan of The Waite Group is a professor of mathematics and computer science and Director of the Computer Graphics Lab at California State University. He has authored several books about computers and languages.

336 Pages, 7½ x 9¼, Softbound
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Steven Simrin

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- Debug
- Link
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- MS-DOS Commands
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Angermeyer and Jaeger, The Waite Group

This useful guide is written expressly for programmers with a working knowledge of 8088 ALC, who want to learn tricks for getting their software running in the MS-DOS environment.

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Soul of CP/M:® How to Use the Hidden Power of Your CP/M System

Waite and Lafore, The Waite Group

Recommended for those who have read the *CP/M Primer* or who are otherwise familiar with CP/M's outer layer utilities. This companion volume teaches you how to use and modify CP/M's internal features, including how to modify BIOS and use CP/M system calls in your own programs.

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Angermeyer, Fahringer, Jaeger, and Shafer, The Waite Group

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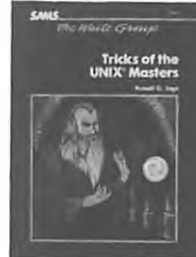
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The Waite Group, a developer of computer, science, and technology books, leads the field with its strong line of MS-DOS titles.

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Russell G. Sage, The Waite Group

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Using a "cookbook" approach, a wide range of topics is discussed. Valuable working examples of a number of important UNIX and C utilities and tools are included.

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Topics covered include:

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- File Management
- Task Management
- Personal Management
- Administrative Security
- Hacking the System
- Cracking Security
- Bits and Pieces: Programs, Scripts, Shell Script Bugs and Tricks, Terminal Tricks

Russell G. Sage is a software designer for Olivetti Advanced Technology Center.

416 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22449-6

No. 22449, \$24.95



UNIX® Communications

Anderson, Costales, and Henderson, The Waite Group

For UNIX users who need to communicate with other users and other systems, this book takes up where the standard UNIX documentation leaves off, demystifying a sometimes bewildering array of programs, options, and settings. The authors show you step by step how to use, control, and program UNIX communications tools, give examples of their use, and show how they all fit together.

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- Conferencing with *write* and *talk*
- USENET, the UNIX Bulletin Board System
- Reading and Posting News
- Newswriting and Net Etiquette
- Using UUCP Programs to Send Files

The Waite Group, an acknowledged leader in the development of computer books, has produced over 70 titles, including such best-sellers as *C Primer Plus* and *Tricks of the UNIX® Masters*.

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OPERATING SYSTEMS



UNIX® Papers The Waite Group

UNIX Papers is a collection of select papers written by well-known UNIX experts on a broad range of the more advanced and cutting-edge topics including security, communications, and standards for the operating system. It reveals many little-known tips and techniques.

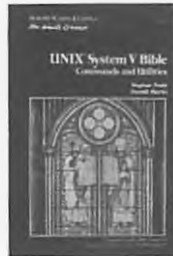
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UNIX® Primer Plus Waite, Martin, and Prata, The Waite Group

Another excellent Waite book. For those who want to learn about the amazing UNIX operating system, this primer presents UNIX in a clear, simple, and easy-to-understand style. This classic is fully illustrated and includes two handy removable summary cards to keep near your computer for quick reference.

416 Pages, 7¼ x 9½, Softbound
ISBN: 0-672-22028-8
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UNIX® System V Bible Prata and Martin, The Waite Group

You'll never have to open the UNIX manual again! This is a comprehensive reference to UNIX commands and utilities, focusing on the basic and advanced command groups found in standard UNIX System V manuals.

Commands are listed alphabetically and explained in down-to-earth language. Each entry states the purpose of a command, what it does, and how it is used. A graduated set of example programs goes far beyond the UNIX manuals, showing you each command in several different situations.

Features of this unique resource include:

- Detailed Table of Contents for Quick Reference
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- Friendly Format for Beginning and Advanced Users
- Coverage of All Major UNIX Features
- Guidance to UNIX Command Idiosyncrasies

The Waite Group is noted for its strong line of books on C and UNIX. Stephen Prata and Donald Martin are co-authors of *UNIX Primer Plus* and collaborated with Mitchell Waite on the best-selling *C Primer Plus* and *UNIX System V Primer*.

528 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22562-X
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The UNIX® Shell Programming Language Manis and Meyer

This advanced programming guide emphasizes the Bourne shell, while including the C shell and the Korn shell as well. It demonstrates how the powerful UNIX shell programming language is creating a revolution in programming. This system's versatility and utility are apparent in that the book's many easy-to-use example programs can be run on any computer.

300 Pages, 7½ x 9¾, Softbound
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UNIX® System V Primer, Revised Edition Waite, Martin, and Prata, The Waite Group

This primer provides a comprehensive overview and introduction to the UNIX System V operating system for the beginning UNIX user. It gives the reader review questions and exercises at the terminal, for an applied, hands-on approach to learning not found in other books on the subject.

456 Pages, 7½ x 9¾, Softbound
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VM/CMS Handbook Howard Posdick

This handbook is the first on the market to provide the mainframe audience with an overview of this important IBM® operating system, VM/CMS—Virtual Machine/Conversational Monitor System.

In this book, computer professionals, programmers, and MIS managers operating mainframe computer systems will find detailed coverage of the VM/CMS program development environment, including software components.

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- The Virtual Machine Environment
- Communicating with Other Users
- Program Development with VM/CMS
- VM/CMS Command Languages
- VM/CMS Software
- VM/CMS and the Future
- Appendices: A Roadmap to the VM/CMS Manuals, CMS Commands Summary, and Summary of Selected CP Commands

420 Pages, 7½ x 9¾, Hardbound
ISBN: 0-672-46790-9
No. 46790, \$32.95



Exploring the UNIX® System

Kochan and Wood

Everything you need to know to maximize the true potential of the UNIX operating system is covered in this book. It teaches you how to use the UNIX system, including the newer UNIX System V, Release 2 version. It provides a vast assortment of commands that perform small, well-defined functions along with the tools needed to combine these commands to perform more sophisticated functions.

Topics covered include:

- Introduction
- What Is an Operating System?
- The UNIX File System
- Getting Started
- Using the UNIX System
- The Old Shell Game
- Screen Editing with *vi*
- In the Office
- Program Development
- Security
- Communications
- Administrating Your System
- Appendices Include: For More Information, Overview of Commands, Complete Command Summary, Administrative Commands, Comparison of *sh* and *csh*, Adding New Users

Stephen Kochan and Patrick Wood are experts in UNIX and C and have authored several books in the UNIX Library. After working for Bell Laboratories they began Pipeline Associates, a company that provides training services to the UNIX and C community, as well as specializing in UNIX system security training, consulting, and auditing software.

380 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6268-0
No. 46268, \$22.95



UNIX® Shell Programming

Kochan and Wood

Here's a complete, easy-to-understand introduction to UNIX shell programming. The book covers all the features of the standard shell, including the System V, Release 2 shell and the newer Korn shell. Many complete, practical programs are included, and the exercises provide reinforcement for each new shell application.

You'll learn to use the shell and its functions effectively; apply tools like *sed*, *cut*, *grep*, *sort*, and *tr*; use the shell to tailor the UNIX environment to your own individual requirements and customize UNIX commands; write programs in the Korn shell; and use the C shell.

Topics covered include:

- A Review of the UNIX System
- What the Shell Is and What It Does
- Shell Programming Tools
- Writing Your Own Commands and Shell Variables
- Writing Shell Programs
- How to Set Up Program Loops
- Reading Data
- Your Environment
- Parameters
- The Rolo Program
- The Korn Shell
- The C Shell

432 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6309-1
No. 46309, \$24.95



UNIX® System Administration

Fiedler and Hunter

This is an essential guide for everyone who runs a UNIX operating system—UNIX owners, operators, and administrators. It contains the tricks and shortcuts to making your system run easier.

The book begins with a system overview and then proceeds through setting up file systems, adding and removing users from the system, and improving system security. Troubleshooting charts and ready-to-run programs are included.

Topics covered include:

- The System Administrator's Overview of UNIX
- Bringing Up the System
- Checking the File System
- Where Everything Is and How to Find It
- Mounting and Unmounting File Systems
- Shutting Down the System
- Adding and Removing Users for the System
- Backups
- Security
- Terminals
- Printers on the UNIX System
- Modems and an Even Bigger World
- Shell Programming
- Assorted Administration Tips
- Appendices Include: Where to Learn More, Talking to the Outside World, A Typical UUCP Connection

336 Pages, 7 x 9¾, Softbound
ISBN: 0-8104-6289-3
No. 46289, \$24.95



UNIX® System Security

Wood and Kochan

This practical guide to system security describes and provides programs for administering passwords, security auditing, checking file permissions, securing terminals, DES data encryption, and setting up a restricted environment. Sources for the programs described are included.

If you're a UNIX user, administrator, or potential UNIX buyer, this excellent reference contains everything you need to know to make your system secure and keep it that way.

300 Pages, 7¼ x 10, Hardbound
ISBN: 0-8104-6267-2
No. 46267, \$34.95



UNIX® Text Processing

Dougherty and O'Reilly

This practical, in-depth reference presents a range of useful UNIX tools that facilitate such word processing functions as format design, printing, and editing. It introduces the tools and illustrates how they can work together to create large writing projects such as technical manuals, reports, and proposals. With the examples in this text you can put your knowledge to work immediately.

680 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-46291-5
No. 46291, \$26.95

TROUBLESHOOTING & REPAIR



Apple® II Plus/IIe Troubleshooting & Repair Guide

Robert C. Brenner

This manual is structured to make it quick and easy for either the novice or the experienced technician to locate and correct most computer failures.

It introduces troubleshooting and repair in easy-to-understand terms and proceeds step-by-step through the diagnostic techniques for microcomputer hardware.

The appendices provide a wealth of backup information including step-by-step disassembly and reassembly instructions, conversion tables, specification data sheets, and system configuration record and repair sheets.

Topics covered include:

- Basic Troubleshooting
- The Apple II Plus Described
- Apple II Plus Operations
- Specific Troubleshooting and Repair, Apple II Plus
- Apple IIe Described
- Apple IIe Operations
- Specific Troubleshooting and Repair, Apple IIe
- Routine Preventive Maintenance
- Advanced Troubleshooting

256 Pages, 8½ x 11, Softbound
ISBN: 0-672-22353-8
No. 22353, \$19.95



Commodore 128® Troubleshooting & Repair

John Heilborn

This book is a step-by-step "how-to" manual written for the owner or operator of a Commodore 128. From hobbyist to service technician, users at all levels will find the information necessary for properly maintaining and repairing the C-128 computer.

Another in the successful consumer-oriented troubleshooting and repair series for Sams, this book covers diagnostic techniques, operation, hardware, preventive maintenance, required tools, data sheets, assembly and disassembly instructions, and a comprehensive glossary. The book explains the inner workings of the Commodore 128 and shows you how to avoid problems through proper care and maintenance.

Topics covered include:

- A Look at the Commodore 128
- Commodore 128 Systems and Subsystems
- Troubleshooting Techniques
- Digital Logic Circuits
- Troubleshooting a System That Doesn't Work
- Troubleshooting a Poor Video or No Video
- Troubleshooting a Defective Keyboard
- Troubleshooting Input/Output Problems
- Preventive Maintenance
- Appendices: Integrated Circuit/Pinouts, Board Layout, I/O Ports, System Specifications, and Commodore Keyboard Codes

160 Pages, 8½ x 11, Softbound
ISBN: 0-672-22554-9
No. 22554, \$19.95



Commodore 64® Troubleshooting & Repair Guide

Robert C. Brenner

Repair your Commodore 64 yourself, simply and inexpensively. Troubleshooting flowcharts let you diagnose and remedy the probable cause of failure. A chapter on advanced troubleshooting shows the more adventuresome how to perform complex repairs. Some knowledge of electronics is required.

256 Pages, 8½ x 11, Softbound
ISBN: 0-672-22363-5
No. 22363, \$19.95



Commodore® 1541 Troubleshooting & Repair Guide

Mike Peltier

This guide provides troubleshooting and repair procedures for the Commodore 64® or VIC 20™ with a 1540, 1541, or 1542 disk drive. It is comprehensive and detailed, offering easy-to-follow, step-by-step instructions. It presents the theory and general operation of the disk drive and points out some common disk drive problems. The diagrams will help readers isolate their disk drive problems.

200 Pages, 8½ x 11, Softbound
ISBN: 0-672-22470-4
No. 22470, \$19.95



How to Maintain and Service Your Small Computer

Stephenson and Cahill

Simple repairs can be diagnosed without a trip to the repair store. This book shows you some easy maintenance and operating procedures that will likely reduce problems and down-time. If the problem is more major, then you can apply the skill learned here when dealing with the repair shop for professional servicing. Some basic electronic knowledge is required.

Topics covered include:

- Today's Equipment—A Service Profile
- Servicing Your Equipment—the Options
- Environment and Operating Procedures—Reducing Potential Problems
- Preparation—Skills, Documentation, and Tools
- Troubleshooting Strategy and Skills
- Troubleshooting
- Disk Drives
- Servicing Printers
- Troubleshooting the Main Computer and Keyboard
- Modems, Monitors, Cassette Recorders, and Game Controllers
- Troubleshooting Power Supplies
- Appendices Include: Resistor Color Code, IC Manufacturers' Numbering Systems, Mail-Order Parts Dealers, Pinouts and Base Diagrams, and Troubleshooting Chart

224 Pages, 8½ x 11, Softbound
ISBN: 0-672-22016-4
No. 22016, \$17.95

TROUBLESHOOTING & REPAIR



IBM® PC Peripheral Troubleshooting and Repair

C. J. Brooks

Technically oriented personal computer owners, service technicians, students, and hobbyists can learn to service and repair computer peripherals with this step-by-step procedures manual.

Using a cookbook approach, this book presents the basic theory of operation, hardware descriptions, preventive maintenance, and troubleshooting and repair procedures for IBM computer peripherals. Flowcharts, block diagrams, lists of replacement parts, and many illustrations make basic repairs clear.

Reference is made to COMPUTERFACTS™ technical service data from Howard W. Sams when relevant.

Topics covered include:

- Basic Computer Organization
- Troubleshooting Basics
- Disk Drives/Hard Disk Drives/Floppy Disk Drives
- Monitors: IBM Monochrome
- Input Devices: Keyboards, Keypads, and Pointing Devices
- Printers/Impact Printing/Non-Impact Printing
- Modems

C. J. Brooks, an instructor of electronics at National Institute of Technology, is the author of a text on integrated circuits and currently is working on two additional educational texts.

320 Pages, 8½ x 11, Softbound
ISBN: 0-672-22529-8

No. 22529, \$19.95



IBM® PC Advanced Troubleshooting & Repair

Robert C. Brenner

Here is in-depth, advanced data for troubleshooting and repair of the IBM PC. This technical book complements the circuit-tested COMPUTERFACTS™ service data with its descriptive text and expanded circuit explanations.

This book provides more sophisticated data than the author's earlier text, *IBM® PC Troubleshooting & Repair Guide*. It details PC operation and gives a full description of how to use test equipment with PC repair. Troubleshooting programs help locate failures while numerous oscilloscope screen photos and drawings help to identify problems.

Topics covered include:

- System Overview
- Detailed System Operation
- Troubleshooting Techniques
- Preliminary Service Checks
- Detailed Circuit Troubleshooting/Analysis: Power Supply, System Board, Monochrome Monitor/Printer Adapter, Color Graphic Monitor Adapter, Keyboard, Disk Drive Adapter, and Disk Drives (A & B) Type 1
- Appendices: Disassembly Instructions, Reassembly Instructions, Adjustments to System Board and Power Board, Schematic Notes, Switches & Jumpers, and Safety Precautions & Warnings.

Robert Brenner has written several successful computer repair titles for Howard W. Sams, including those for IBM PC, Apple® II Plus/IIe, and Commodore 64®, as well as a repair book for VCRs.

304 Pages, 8½ x 11, Softbound
ISBN: 0-672-22590-5
No. 22590, \$24.95



IBM® PC Troubleshooting & Repair Guide

Robert C. Brenner

Keep your IBM PC in top operating condition with this handy reference. Its pages of schematics, photos, and block diagrams will help to identify problems and zero-in on the malfunctioning component quickly, for reduced down-time.

Easy-to-understand circuit diagrams and simple instructions written in a clear, concise style allow you to make most repairs with few or no tools.

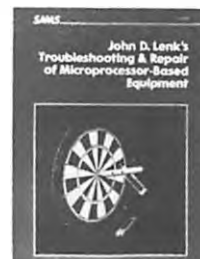
Technicians, hobbyists and even computer novices will feel comfortable with the complex world of electronic troubleshooting. Discover how learning can be interesting and rewarding.

Topics covered include:

- The IBM PC Described
- IBM PC Operations
- Basic Troubleshooting
- Specific Troubleshooting & Repair for the IBM PC
- Preventive Maintenance
- Advanced Troubleshooting Techniques
- Appendices: IBM PC Data Sheet, Chip Information Chart, System Unit Disassembly Instructions, System Unit Reassembly Instructions, Keyboard and Disk Drive Disassembly and Reassembly Instructions, Replacing Surface-Mounted Components on the System Board, Summary of Cautions and Notes, ASCII Code Chart, and a Hexadecimal-to-Decimal Conversion Chart

Robert Brenner is a specialist in microelectronic applications and is an avid computer enthusiast.

208 Pages, 8½ x 11, Softbound
ISBN: 0-672-22358-9
No. 22358, \$19.95



John D. Lenk's Troubleshooting & Repair of Microprocessor-Based Equipment

John D. Lenk

This text provides a simplified, practical system of troubleshooting for the many types of microprocessor-based electronic devices. Concentrating on the basic approach to troubleshooting, the book includes numerous procedures and "tricks" that can be effective in diagnosing, isolating, and locating faults in microprocessor circuits.

Written primarily for working technicians and field service engineers, it is also an excellent guide for students and hobbyists.

Topics covered include:

- Microprocessor Test Equipment
- Problems in Troubleshooting Microprocessors
- Troubleshooting the Gate and IC
- Stimulus-Response Testing
- Vcc and Ground Shorts from Unexpected Causes
- Flip-Flop Troubleshooting
- Register Troubleshooting
- Current Flow Analysis
- Wired-AND and Wired-OR Troubleshooting
- Using the Logic Analyzer
- Step-by-step Procedure for Troubleshooting the VCR

John D. Lenk is one of the industry's foremost authorities on electronics and troubleshooting.

176 Pages, 8½ x 11, Softbound
ISBN: 0-672-22476-3

No. 22476, \$21.95



Audio IC Op-Amp Applications, Third Edition

Walter G. Jung

The classic book in its field, this new update includes devices such as the OP-27/37, as well as new applications circuitry to illustrate current trends of use. Included is a brief section on differential input/output IC devices, IC applications in car stereo chips and audio testing, with over 70 pages of industry data.

336 Pages, 5 1/2 x 8 1/2, Softbound
ISBN: 0-672-22452-6
No. 22452, \$17.95 ✓



Basics of Audio and Visual Systems Design

Raymond Wadsworth

Newcomers to the audio-visual industry will find indispensable information presented here. System designers, architects, contractors, equipment suppliers, teachers, consultants—all will find these NAVA-sanctioned fundamentals pertinent to system design procedures. Topics include image format, screen size and performance, front versus rear projection, projector output, audio, and the effective use of mirrors.

128 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22038-5
No. 22038, \$15.95



Audio Production Techniques for Video

David Miles Huber

This reference book examines the important role that audio plays in video production. It is a well-rounded assessment of the equipment, techniques, and technology required to understand and create in today's world of media production.

Bridging the gap between the currently merging technologies of audio and video production, this book outlines modern audio production and post-production techniques for video. It thoroughly covers the often confusing and misunderstood time code, electronic editing, digital audio, multi-track audio, and live broadcast stereo.

Unlike any other book on the market, this book addresses the specific needs of the audio track in video tape production and the new audio-for-video standards set for the industry.

Topics covered include:

- The Audio Tape Recorder/Video Tape Recorder
- Synchronization
- Audio Production for Video
- Audio Post-Production for Video
- Introductory Electronic Editing Techniques
- Appendices Include: Preventing and Troubleshooting Time Code Problems; Definitions and Standards of SMPTE, VITC, and Pilo System

David Miles Huber co-authored the very successful second edition of *Modern Recording Techniques*.

368 Pages, 7 1/2 x 9 3/4, Softbound
ISBN: 0-672-22518-2
No. 22518, \$29.95



CD-I and Interactive Videodisc Technology

Lambert and Sallis, Editors

This comprehensive reference guide explains how to program interactive videodiscs, CD-I, and other state-of-the-art analog and digital interactive formats.

It analyzes the hardware needed and procedures involved in producing and playing back CD-I including the anticipated time frames, costs, and sources for obtaining CD-I equipment, authoring tools, and mastering information.

224 Pages, 7 1/2 x 9 3/4, Softbound
ISBN: 0-672-22513-1
No. 22513, \$24.95



Modern Recording Techniques, Second Edition

Runstein and Huber

For both engineers and students, this revised edition is a valuable guide to state-of-the-art developments and practices in the recording industry. It reflects all the latest equipment, controls, acoustics, and digital effect devices being used in modern recording studios. It also explores the marriage of video and audio multi-track studios and illustrates sound and studio capabilities and limitations.

384 Pages, 7 1/2 x 9 3/4, Softbound
ISBN: 0-672-22451-8
No. 22451, \$24.95



Handbook for Sound Engineers: The New Audio Cyclopaedia

Glen Ballou, Editor ✓

The most authoritative audio reference on the market, this book offers the professional engineer or technician a one-stop guide to the complete field.

Editor Glen Ballou and 13 other audio authorities have written the 31 chapters that are combined into 7 parts as follows:

- Acoustics—Fundamentals; Psychoacoustics; Small Room Acoustics; Common Factors; Acoustic Design; Recording Studio Design; Rooms for Speech, Music, and Cinema; Open Plan Rooms
- Electronic Components for Sound Engineering—Resistors, Capacitors, and Inductors; Transformers; Tubes, Discrete Solid-State Devices, and Integrated Circuits; Heat Sinks, Wire, and Relays
- Electroacoustic Devices—Microphones; Loudspeakers, Enclosures, and Headphones
- Audio Electronic Circuits and Equipment—Amplifiers; Attenuators; Filters and Equalizers; Delay; Power Supplies; Constant- and Variable-Speed Devices; VU and Volume Indicator Meters and Devices; Consoles and Systems
- Recording and Playback—Disk, Magnetic, and Digital
- Design Applications—Sound System Design; Systems for the Hearing Impaired; the Broadcast Chain; Image Projection
- Measurements—Audio Measurements; Fundamentals and Units of Measurements

1,264 Pages, 8 x 10, Hardbound
ISBN: 0-672-21983-2
No. 21983, \$79.95



Introduction to Professional Recording Techniques

Bruce Bartlett

The John Woram Audio Series

This all-inclusive introduction to the equipment and techniques for state-of-the-art recording—whether in residences or professional studios or on location—offers a wealth of valuable information on topics not found in other books on audio recording.

Geared primarily for the audio hobbyist or aspiring professional, this book delivers a comprehensive discussion of recording engineering and production techniques, including special coverage of microphones and microphone techniques, sampling, sequencing, and MIDI. It provides up-to-date coverage of monitoring, special effects, hum prevention, and spoken-word recording, as well as special sections on recognizing good sound and troubleshooting bad sound.

Topics covered include:

- The Recording and Reproduction Chain
- Simple Home Recording
- Setting Up the Studio
- Microphones and Microphone Techniques
- Control-Room Techniques
- On-Location Recording
- Judging the Recording
- Appendices include: dB or not dB, Introduction to SMPTE Time Code, and Further Education

Bruce Bartlett is an experienced audio professional with over 100 articles to his credit, including articles on recording techniques published in *Modern Recording & Music* magazine.

416 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22574-3
No. 22574, \$24.95



The Microphone Manual: Design and Application

David Miles Huber

This excellent reference bridges the gap between the equipment manufacturer and the microphone user by clearly introducing and explaining microphone design, characteristics, and theory. The book is written for intermediate to advanced audio users, professional audio and video technicians and engineers, and students. The latest microphone technology—including wireless microphones, clip and boundary microphones, electrical characteristics of the microphone, single and stereo microphone placement techniques—is fully detailed and illustrated.

Topics covered include:

- Basic Theory of Operation
- The Microphone Transducer
- Microphone Characteristics
- Electrical Interface-Cable/Connector
- Microphone Accessories
- Fundamentals of Single-Microphone Techniques
- Fundamentals of Stereo-Microphone Techniques
- Applied Microphone Techniques in Music Production
- Applied Microphone Techniques in Video/Film Production
- Speech and Music Reinforcement
- Appendices: The Use of Omnidirectional Microphones for Modern Recording, Microphone Techniques for Predictable Tonal Balance Control, the PZM™ Boundary Booklet, Listing of Popular Professional Microphones, Glossary of Microphone Terms

336 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22598-0
No. 22598, \$29.95



Musical Applications of Microprocessors, Second Edition

Hal Chamberlin

This expanded and revised edition covers analog, digital, and microprocessor sound and music synthesis. Its nonmathematical language makes the material accessible to musicians and computer users, as well as engineers.

New synthesis techniques, nonlinear waveshaping, Vosim, and the Fourier transform are covered and supported with program listings in BASIC and 68000 assembly language.

816 Pages, 6¼ x 9¼, Hardbound
ISBN: 0-672-45768-7
No. 45768, \$39.95



Principles of Digital Audio

Ken C. Pohlmann

Starting with the fundamentals of numbers, sampling and quantizing, you'll get a look at a complete audio digitization system and its various components. You'll also explore storage mediums and learn how digital data is read and processed through demodulation, error detection and correction, digital/audio conversion and output filtering.

288 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22388-0
No. 22388, \$21.95



Sound System Engineering, Second Edition

Don and Carolyn Davis

Like the first edition, this comprehensive text will provide you with useful information for the day-to-day work of designing sound systems—with much more material and in-depth coverage of subjects. It is a practical manual that carefully examines methods of accurately predicting such variables as acoustic gain, clarity of sound, and required electrical input power while plans are still on the drawing board.

Discover problems that might occur in a sound system as it evolves through design, installation, equalization, operation, and maintenance.

Topics covered include:

- Audio Systems
- Mathematics for Audio Systems
- Using the Decibel
- Impedance Matching
- Interfacing Electrical and Acoustics Systems
- Loudspeaker Directivity and Coverage
- The Acoustic Environment
- Large-Room Acoustics
- Small-Room Acoustics
- Designing for Speech Intelligibility
- Designing for Acoustic Gain
- Microphones
- Loudspeakers and Loudspeaker Arrays
- Using Delay Devices
- Installing the Sound System
- Equalizing the Sound System
- Audio and Acoustic Instrumentation
- Putting it All Together
- Specifications

688 Pages, 7½ x 9¾, Hardbound
ISBN: 0-672-21857-7
No. 21857, \$39.95

BASIC ELECTRICITY & ELECTRONICS



**ABC's of Electronics,
Fourth Edition**
Earl Jacob Waters

This self-contained tutorial on the fundamentals of electronics is the revision of the highly successful third edition.

Other books address the subject of electronics on varying levels, but this is one of the few that uses a self-instructional format. It is concise yet covers a broad range of topics. It is written so that readers can understand electronics without getting involved with heavy mathematics.

The many illustrations and review questions make this an excellent, quick introduction to such electronics concepts as atoms and electrons, magnetic forces, and basic electronic components and their applications. Computer basics are also covered.

Topics covered include:

- The Electron
- Electricity and Magnetism
- Impedance to Current Flow
- Electron Tubes
- Solid-State Physics
- Solid-State Diode
- Transistors
- Integrated Circuits
- Basic Amplifier Circuits
- Operational Amplifiers
- Radio Frequency Production
- Radiation of Radio Frequency Waves
- Digital Circuits
- Computer Basics

F.J. Waters has authored nine electronics books and has written numerous articles for *Radio Electronics* magazine. Mr. Waters most recently wrote language programs for the U.S. Army Finance and Accounting Center.

232 Pages, 5½ x 8½, Softbound
ISBN: 0-672-22553-0
No. 22553, \$12.95



Basic AC Circuits
Fulton and Rawlins

Basic AC Circuits continues the tradition of the *Basic Electricity Series* of self-paced, individualized learning. The text covers concepts, terms, and the mathematics required to understand AC circuit problems, simple or complex.

Using an easy-to-understand format, the book is designed to improve your analysis techniques so that you can ultimately predict and control ac circuit behavior in a system. Detailed objectives begin each lesson and numerous examples illustrate the basic concepts and principles as they are introduced. Finally, those concepts are applied to practical problems so that solutions become more apparent. A set of questions at the end of each chapter help you evaluate your progress as you learn.

Topics covered include:

- Introduction to Alternating Current
- AC and the Sine Wave
- The Oscilloscope and Its Use
- The Sine Wave and Phase
- Resistive Circuits
- Capacitance
- RC Circuit Analysis
- Inductance and Transformers
- RL Circuit Analysis
- RC and RL Time Constants
- RLC Circuit Analysis
- Phasor Algebra
- Complex RLC Circuit Analysis
- Resonance

560 Pages, 7½ x 9½, Hardbound
ISBN: 0-672-27025-0
No. 27025, \$24.95



**Basic Electrical Power
Distribution, Volume 1**
Anthony J. Pansini

This popular two-volume training course includes most types of equipment used in a typical power distribution system. Volume 1 provides a step-by-step explanation of the journey of electricity from generator to consumer, then goes on to describe and illustrate components of the system, including poles and line equipment.

120 Pages, 6 x 9, Softbound
ISBN: 0-8104-0818-X
No. 40818, \$12.95



**Basic Electrical Power
Distribution, Volume 2**
Anthony J. Pansini

Volume 2 of this course begins with an extensive discussion of underground construction and equipment and goes on to describe manholes, cables, service factors and equipment, substations, and street lighting. Like Volume 1, it is profusely illustrated with diagrams, graphs, and tables, many of them new to this edition. It includes an introduction to principles of electricity.

128 Pages, 6 x 9, Softbound
ISBN: 0-8104-0819-8
No. 40819, \$12.95



**Basic Electricity/Electronics,
Volume 1: Basic Principles,
Second Edition**
Training and Retraining, Inc.

With this text students learn the basic concepts of electricity and electronics. The 15 chapters take the student from an introduction to circuit fundamentals through discussions of meters, the telephone, schematic diagrams, resistors, transistors, soldering, transformers, capacitors, crystal diodes, and vacuum tubes to descriptions of the operation of radio and television transmitters and receivers.

320 Pages, 5½ x 8½, Softbound
ISBN: 0-672-21501-2
No. 21501, \$11.95

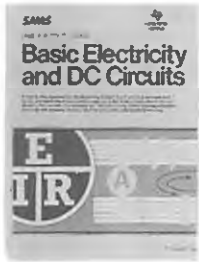


**Basic Electricity/Electronics,
Volume 2: How AC & DC
Circuits Work, Second Edition**
Training and Retraining, Inc.

This text builds on the basic information contained in Volume 1 by giving detailed information on the operation of AC and DC circuits. Includes a complete discussion of DC series circuits, DC parallel circuits, series-parallel circuits, electromagnetism, alternating current, resistance calculations, effects of inductance, RL circuits, effects of capacitance, RC circuits, RLC circuits, and transformer action.

318 Pages, 5½ x 8½, Softbound
ISBN: 0-672-21502-0
No. 21502, \$11.95

BASIC ELECTRICITY & ELECTRONICS



Basic Electricity and DC Circuits, Second Edition
Oliva and Dale

This comprehensive text provides the important concepts, terms, and related mathematics the beginning student needs to understand basic electricity. Text is reinforced with worked-out examples. From basic definitions through advanced concepts and applications, this book is designed with the reader in mind.

921 Pages, 7½ x 9½, Hardbound
ISBN: 0-672-27023-4
No. 27023, \$24.95



Basic Electricity and an Introduction to Electronics, Third Edition
Howard W. Sams Editorial Staff

Extensive two-color illustrations and frequent questions and answers enhance this introduction to electronics. The mathematics of electrical calculations are clearly presented, including Ohm's law, Watt's law, and Kirchhoff's laws. Other topics include cells and batteries, magnetism, alternating current, measurement and control, and electrical distribution.

208 Pages, 8½ x 11, Softbound
ISBN: 0-672-20932-2
No. 20932, \$11.95



Basic Electricity, Revised Edition, Volumes 1-5
Van Valkenburgh, Nooger & Neville, Inc.

This complete, illustrated course for mastering the fundamentals of electricity for beginners offers thorough, comprehensive coverage in clear, concise terminology. You'll learn how electricity is produced, why it behaves in certain ways in circuits, and how it is measured, controlled, and used. The combined 5-volume edition is an excellent choice for reference or library use.

736 Pages, 6¼ x 9¼, Hardbound
ISBN: 0-8104-0881-3
No. 40881, \$42.95



Basic Electricity, Revised Edition, Volume 1
Van Valkenburgh, Nooger & Neville, Inc.

Begin your study with Volume 1 of the Basic Electricity Series and learn what electricity is, how it flows, how it is measured, and how it is produced and used. A brief study of Ohm's law is also included, along with a table of elements. Each chapter includes a review, self-test questions, and problem solutions and experiments.

128 Pages, 6 x 9, Softbound
ISBN: 0-8104-0876-7
No. 40876, \$12.95



Basic Electricity, Revised Edition, Volume 2
Van Valkenburgh, Nooger & Neville, Inc.

Electric circuits, Ohm's law, resistance, and Thevenin's and Norton's theorems are each discussed in Volume 2. In a concise, textual method, the authors advance from the history of circuits, through their many and varied uses today. Troubleshooting hints for DC series and parallel circuits are included at the end of the book.

152 Pages, 6 x 9, Softbound
ISBN: 0-8104-0877-5
No. 40877, \$12.95



Basic Electricity, Revised Edition, Volume 3
Van Valkenburgh, Nooger & Neville, Inc.

Volume 3 of the Basic Electricity Series will provide the beginner with basic information on alternating currents and provide the experienced electrician with a good review of the subject. Learn about AC meters, resistance, inductance and capacitance in AC circuits. A review of the material presented is included with a troubleshooting drill on simple AC circuits.

144 Pages, 6 x 9, Softbound
ISBN: 0-8104-0878-3
No. 40878, \$12.95



Basic Electricity, Revised Edition, Volume 4
Van Valkenburgh, Nooger & Neville, Inc.

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Electricity One, Revised Second Edition

Harry Mileaf, Editor

Volume one of this complete course in the fundamentals of electricity introduces the general principles and applications of electricity. A brief, lucid treatment of atomic theory prepares the reader to clearly grasp the vital concepts of electrical charges and electron theory. Discussion of the theory of magnetism leads into an explanation of electromagnetism.

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Harry Mileaf, Editor

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BASIC ELECTRICITY & ELECTRONICS



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Harry Mileaf, Editor

Beginning with the concept of the electronic signal, this complete course examines electronic circuits in detail from a functional point of view. Each self-contained unit is appropriate for class or as a reference or refresher text. The step-by-step presentation provides all necessary theory and important applications in seven concise volumes.

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Electronics Two, Revised Second Edition

Harry Mileaf, Editor

This book describes the functional units or "electronic building blocks," of electronic devices. Each building block is explained in terms of its effects on the signal and its relationship to the other stages. Consideration is given to the power supply, oscillators, amplifiers, modulators, demodulators, mixers, and combinations to form complete equipment.

128 Pages, 6 x 9, Softbound
ISBN: 0-8104-5955-8
No. 45955, \$12.95



Electronics Four, Revised Second Edition

Harry Mileaf, Editor

Electronics Four promotes a complete understanding of the theory, operation, design, and function of semiconductors and integrated circuits. A concise background of atomic and electron theory demonstrates how the elements of diodes and transistors, described in detail, are used to produce desired effects on electronic signals. All parameters are carefully outlined, and attention is given to stabilization and compensation factors.

160 Pages, 6 x 9, Softbound
ISBN: 0-8104-5957-4
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Electronics Six, Revised Second Edition

Harry Mileaf, Editor

This volume of the Electronics Series explains and describes oscillators, multivibrators, modulators, mixers, converters, detectors, and discriminators. Tube and transistor versions are considered throughout with circuit diagrams provided for both types. The configuration, operation, and function of each of these essential "electronic building blocks" is detailed.

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Electronics One, Revised Second Edition

Harry Mileaf, Editor

Electronics One introduces electronics as the "study of how electricity is used to show, tell or otherwise inform." The concept of the electronic signal is fully developed, with explanations of how various characteristics such as amplitude, phase, and frequency can be used to carry signal intelligence. All forms of signal modulation are considered in this volume, with specific sections on frequency mixing and harmonics.

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Electronics Three, Revised Second Edition

Harry Mileaf, Editor

Volume three provides a comprehensive discussion of electron tubes, beginning with the fundamental theory of their operation. Diodes, tetrodes, and pentodes receive particular emphasis, and a detailed comparison of their functions is given in terms of their effects on electronic signals. Consideration is given to bias, coupling, and impedance matching.

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Electronics Five, Revised Second Edition

Harry Mileaf, Editor

This book is a comprehensive discussion of power supplies and amplifiers. Power supply circuits and how they rectify, filter, transform, and regulate the input power are examined in depth. The primary amplifiers are described in detail and amplifier circuits are discussed in terms of their configurations, capabilities, and uses. Both transistor and tube types are given consideration.

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Electronics Seven, Revised Second Edition

Harry Mileaf, Editor

Electronics Seven examines all important auxiliary circuits and antennas. The purpose and operation of AVC, AGC, limiter, clipper, separator, AFC, counter, gating, and time-delay circuits are detailed and illustrated with circuit diagrams. Significant tubespace and transistor-type variations are indicated. The principles of antenna operation are considered, and attention is given to antenna arrays.

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- Central Processor Fundamentals
- The Central Control Unit
- Memory Systems and Devices
- Stored Program Control and Call Handling Operations
- Switching Networks, Master Control Center, and Power System
- Electronic Switching Systems for Suburban and Rural Areas
- Digital Telephony

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Basic Telephone Switching Systems, Second Edition

David Talley

This comprehensive text explains the principles of telephone switching systems. It includes data on new signaling and switching techniques, E & M signaling interface for electronic central offices, and automatic number identification methods used in step-by-step, panel, and crossbar systems. CCIS and CCSS are explained along with tandem centers, modern traffic service positions, and automatic message accounting functions.

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Seybold and Samples

The traveller's friend and valuable business tool, cellular mobile phones have become increasingly popular and have undergone many technological changes. This guide will assist current and prospective users in purchasing, leasing, or renting systems best suited to their needs.

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Martin Clifford

Complex electronic security systems are not just extensive, but also expensive. Elaborate measures are not required. This book helps you protect against burglary, theft, and armed robbery anywhere, with a wealth of practical advice and information on simple self-protection devices.

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CONSUMER ELECTRONICS



Electronic Telephone Projects, Second Edition

Anthony J. Carisi

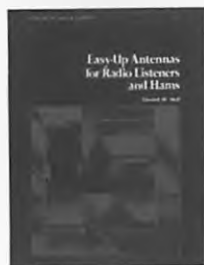
If you want to enhance your telephone but can't find what you're looking for, why not do it yourself? This book shows how to make 22 creative projects that turn a telephone into a favorite household tool. It begins with an introduction to telephone operations and legal requirements for connecting equipment to phone company lines, then introduces the techniques and devices used in the various projects.

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- Conferencer
- Telephone Beacon
- Automatic Bell Cutoff
- The Babysitter
- Telephone Computer Memory
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Eduard M. Noll

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- International Antenna Dimension Tables for Radio Listeners
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- Antennas for the Novice Operator
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Topics covered include:

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- Unit Hums, Will Not Start
- Unit Runs, Will Not Cool
- Dial and Cycle Defrost Refrigerators
- The No-Frost Refrigerator-Freezer
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- Freezing with Fire—The Gas Refrigerator

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This is the authoritative guide for the technically-oriented hobbyist. It details the satellite services available and demonstrates how to access and use the non-video transmissions on your satellite receiver.

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Mark Long

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Dave Ingram

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- The Ins and Outs of Packet Radio Operations
- Packet Networks, Bulletin Boards, and HF Linking Concepts
- Packet Radio, Oscar Satellites, and Electronic Mailboxing
- Packet Portable: It Goes Where You Go
- Packet Radio Tomorrow: A Look Ahead

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William I. Orr, Editor

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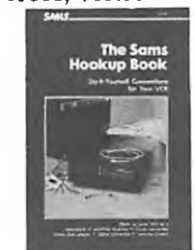


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The Sams Hookup Book: Do-It-Yourself Connections for Your VCR

Howard W. Sams Engineering Staff

This step-by-step guide provides all the information needed for both simple and complex hookups of home entertainment equipment. It offers instructions to hookup a video cassette recorder to a TV, cable converter, satellite receiver, remote control, block converter, or video disc player.

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The Satellite TV Handbook

Anthony T. Easton

This handbook shows how to cut cable TV costs in half, see blacked-out TV shows, and pick up live and unedited network TV shows. It is for anyone who has considered starting a minicable system or plugging into video-supplied college courses, business news, and children's networks. It also discusses how to buy or build and aim satellite antennas.

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Satellites Today

Baylin and Gale

This general introduction discusses key concepts of the fascinating universe of satellite communications. The history of satellite communications, the cost of satellite systems, system components, legal questions that have been and remain to be decided, and up-to-date coverage of the latest developments in satellites are all examined here in terms any lay person could understand.

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Gerry L. Dexter, Editor

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- An Overview of the Numbers Stations Mystery
- Challenges and Changes in Medium-Wave Listening
- FM DX'ing
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The 25 contributors are known by the shortwave listening community for their area of expertise.

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ISBN: 0-672-22519-0
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Lon McQuillin

This book contains real-world applications for those who want to learn how video production really works. Preproduction planning, creativity and organization, people handling, single and multi-camera studio and on-location production, direction techniques, editing, special effects, and distribution of the finished production are addressed.

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Graf and Sheets

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- Manufacturers' Data Sheets
- US Patents and Scrambling Systems
- Technical Data

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ISBN: 0-672-22499-2
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178 IC Designs & Applications

Robert M. Mendelson

Most integrated circuits used in the design of appliances, projects, and electronic devices are linear IC's. This book promotes a complete understanding of these linear IC's.

Contains complete collections of IC's, each with its own illustration. Basic designs and applications are presented, demonstrating how they are used in power supplies, operational amplifiers, waveform generators, amplifiers, communications, and more.

208 Pages, 6 x 9, Softbound
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The 555 Timer Applications Sourcebook With Experiments

Howard M. Berlin

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Don Lancaster

Revised by Howard M. Berlin

The second edition of CMOS Cookbook is an update of the classic best seller. Like the first edition, it is written at a beginning-intermediate level with a minimum of math.

The book includes everything you need to know to use Complimentary Metal-Oxide Semiconductor integrated circuits. It features the latest CMOS series of devices and subfamilies with tabular comparisons to earlier versions. A TTL and CMOS interfacing and functional equivalency conversion chart is included as is an explanation of interfacing CMOS with ECL and other logic types. Over 50 new devices have been added to the numeric and function listings. New chapters on LED/LCD display interfacing, IC memories, and PLAs complete this revision.

Topics covered include:

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- Logic
- Multivibrators
- Clocked Logic: JK and D Flip-Flops
- Counters and Shift Registers
- CMOS Op-Amps, Analog Switches, and Phase-Locked Loops
- Digital Displays
- IC Memories and Programmable Logic Arrays
- Getting It All Together
- Appendices: TTL-to-CMOS Conversion Chart and Some Product Sources

528 Pages, 5 1/2 x 8 1/2, Softbound
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GENERAL INTEREST



Crash Course in Electronic Technology

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This third book of the successful Howard W. Sams "Crash Course" series will help hobbyists, technicians, students, and laypersons learn the basics of electricity and electronics.

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Topics covered include:

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- Principles of Magnetism and Electricity
- Resistors and Resistive Circuits
- Inductance and Transformers
- Capacitance and Capacitors
- Resonance and Filters
- Diodes and Transistors
- Amplifiers
- Operational Amplifiers
- Oscillators
- Pulse Techniques
- Power Supplies
- Amplitude and Frequency
- Industrial Control
- Test Equipment and Troubleshooting

Lou Frenzel is an experienced electronics engineer, educator, and author. He has written several computer and electronics books, including *Crash Course in Digital Technology* and *Crash Course in Microcomputers*.

400 Pages, 8½ x 11, Softbound
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Design of Op-Amp Circuits With Experiments

Howard M. Berlin

This book provides an experimental approach to the understanding of op-amp circuits. Thirty-five experiments illustrate the design and operation of linear amplifiers, differentiators and converters, voltage and current converters, and active filters.

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Design of Phase-Locked Loop Circuits With Experiments

Howard M. Berlin

Learn more about TTL and CMOS devices. This book contains a wide range of lab-type experiments that reinforce the textual introduction to the theory, design, and implementation of phase-locked loop circuits using these technologies.

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No. 21545, \$12.95



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J. Richard Johnson

Featuring more than 300 worked examples and 900 practice problems, *Electric Circuits* is written for electrical/electronics students in colleges and technical institutes. The text covers electricity and the structure of matter, basic and complex circuits and vectors, DC and AC measurements, complex networks, and much more. Practice problems include schematic diagrams emphasizing alternate solutions.

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No. 40655, \$38.95



Electronic Instruments, Third Edition

Dale R. Patrick

This book will help technicians understand and learn to use electronic instruments, including the latest digital instruments and computer-based systems used in industry today.

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272 Pages, 8½ x 11, Softbound
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Stephen D. Kasten

Breadboarding can be fun. Learn contemporary construction design methods for building your working prototypes. Discusses IC-based and microcomputer-related schematics and ideas for evaluation and testing. Techniques include wire-wrapping, designing, making, and using double-sided PC boards; fabricating enclosures, connectors, and wiring; and screen printing the panels, chassis, and PC boards.

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Electronic Test Instruments: A User's Sourcebook

Robert Witte

Going beyond the details of how to operate test equipment, this book explains why a particular instrument is used for a task, how it works, and what is being measured.

From simple meters to spectrum analyzers, this manual offers practical techniques and shortcuts that illustrate how to use the latest digital instruments necessary for understanding, designing, or troubleshooting electronic circuits and systems.

272 Pages, 5½ x 8½, Softbound
ISBN: 0-672-22483-6
No. 22483, \$14.95



Electro-Optical Communications Dictionary
Bodson and Botez, Editors

Advances in laser, computer, process, and manufacturing technologies have all contributed greatly to the growth and development of the electro-optical communications field. This reference enables users with those varying backgrounds to achieve understanding and use the precise terminology associated with electro-optical communications.

176 Pages, 6 1/4 x 9 1/4, Hardbound
ISBN: 0-8104-0961-5
No. 40961, \$24.95



Electrostatic Discharge Control
Bhar and McMahon

This text explores electrostatic discharge (ESD), its impact on electronic components, and measures used to control it. The authors offer practical information to control static discharge and subsequent component damage in manufacturing.

This is also a guide for implementing an ESD control program, including criteria for protective materials and equipment, and development of personnel training programs.

244 Pages, 6 x 9 1/4, Hardbound
ISBN: 0-8104-5689-3
No. 45689, \$16.95



Fiber Optics Communications, Experiments, and Projects
Waldo T. Boyd

Another Blacksburg tutorial teaching new technology through experimentation, this book teaches light beam communication fundamentals, introduces the simple electronic devices used, and shows how to participate in transmitting and receiving voice and music by means of light traveling along slender glass fibers.

224 Pages, 5 1/2 x 8 1/2, Softbound
ISBN: 0-672-21834-8
No. 21834, \$15.95



First Book of Modern Electronics Fun Projects
Art Salsberg, Editor

Novice and seasoned electronics buffs will enjoy these 20 fun and practical projects from the pages of *Modern Electronics* magazine. Electronics hobbyists are introduced to many project-building areas. The necessary tools for each project accompany the step-by-step instructions, illustrations, photos, and circuit drawings.

176 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22503-4
No. 22503, \$12.95



Forrest Mims' Circuit Scrapbook II
Forrest Mims, III

This is a compilation of nearly 70 projects found in the tremendously popular column by Forrest Mims, "Electronics Notebook"—from the pages of *Modern Electronics*. Each column explores a specific area of electronics in depth, but no prior knowledge is assumed. Each project and experiment is unique. This book will be useful for work in laboratories, at technical schools and universities, and for the avid hobbyist.

272 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22552-2
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Fun Way Into Electronics, Volume 1
Dick Smith

The first of three volumes, this book provides projects as instructional building blocks for the beginner to experience electronics on a "fun" level.

20 simple electronic projects assume no prior knowledge of electronics or building projects. Components are fully illustrated with instructions for connecting into the circuit. Projects include a transistor tester, electronic siren, and a CB radio receiver.

72 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22548-4
No. 22548, \$9.95



Fun Way Into Electronics, Volume 2
Dick Smith

The 20 projects in this second volume begin where Volume 1 left off. More practical, complex, and professional looking, these projects include a universal timer, wireless microphone, home intercom, and a mosquito repeller. The projects are educational and completely safe and have been fully tested by electronics experts.

128 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22549-2
No. 22549, \$9.95



Fun Way Into Electronics, Volume 3
Dick Smith

Now that you're an avid hobbyist, you'll want to tackle the advanced projects in Volume 3 of the *Fun Way Into Electronics* set of books. These projects are based around an IC, ranging from simple timers to more complex digital counters and include a mini synthesizer and color organ.

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96 Pages, 8 1/2 x 11, Softbound
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No. 22550, \$9.95

GENERAL INTEREST



Handbook of Electronics Tables and Formulas, Sixth Edition

Howard W. Sams Engineering Staff

Already a classic, this revised edition is *the* reference book for engineers, technicians, hobbyists, and everyone involved in the field of electronics. This expanded and updated sixth edition reflects the recent developments in the rapidly changing electronics industry. New in this edition you'll find computer programs for calculating electrical and electronics equations and formulas.

280 Pages, 7½ x 9¾, Softbound
ISBN: 0-672-22469-0
No. 22469, \$19.95



How to Read and Interpret Schematic Diagrams

J. Richard Johnson

This book teaches step-by-step the recognition of schematic symbols, their use and function in diagrams, and the interpretation of these diagrams for design, maintenance, and repair of electronic equipment.

The author takes the reader logically through the fundamentals of schematic diagrams including component symbols and diagram formation and functional flow and block diagrams.

210 Pages, 6 x 9, Softbound
ISBN: 0-8104-0868-6
No. 40868, \$12.95



How to Read Schematics, Fourth Edition

Donald E. Herrington

This update of a standard reference features expanded coverage of logic diagrams and a chapter on flow charts. Beginning with a general discussion of electronic diagrams, the book systematically covers the various components that comprise a circuit. It explains logic symbols and their use in digital circuits, interprets sample schematics, analyzes the operation of a radio receiver, and explains the various kinds of logic gates.

272 Pages, 5½ x 8½, Softbound
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IC Op-Amp Cookbook, Third Edition

Walter G. Jung

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The new edition has been greatly expanded in terms of device coverage in keeping with state-of-the-art advancements. Numerous charts make selecting data on a particular device much easier. Applications are discussed both in terms of their range and scope, and in terms of the appropriate applicable devices reflecting the latest technology.

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ISBN: 0-672-22453-4
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IC Timer Cookbook, Second Edition

Walter G. Jung

You can learn lots of ways to use the IC timer in this easy-to-use second edition, which includes many new IC devices. Ready to use applications are presented in practical working circuits. All circuits and component relationships are clearly defined and documented.

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IC User's Casebook

Joseph J. Carr

Hobbyists will have fun and save money by constructing the more than 100 projects and circuits, covering linear and digital devices, timers, and general devices. Each chapter is project-oriented using a casebook approach, which spells out all the steps needed to design projects of a similar nature.

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Instrumentation Training Course: Pneumatic Instruments, Second Edition

Patrick and Patrick

Pneumatic instrumentation is increasingly popular. This book clearly and concisely presents the theory, construction, alignment, installation, and operation of a variety of pneumatic control instruments. Well-illustrated, specific manufacturers' examples enhance your understanding of the subject matter.

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Modern Dictionary of Electronics, Sixth Edition
Rudolf F. Graf

This comprehensive electronics dictionary clearly and accurately defines more than 23,000 technical terms dealing with computers, microelectronics, communications, semiconductors, and fiber optics. Over 3500 new entries and 5000 definitions, including abbreviations, cross-references, and acronyms have been added, making this sixth edition the most up-to-date, all-inclusive electronics dictionary in the world.

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Christopher J. Bowick

Enjoy the benefits of two books in one. Use this in cookbook fashion as a catalog of useful circuits or as a reference manual. It clearly presents a user-oriented approach to the design of RF amplifiers and impedance matching networks and filters.

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Second Book of Modern Electronics Fun Projects
Art Salsberg, Editor

Have fun, save money, and sharpen your technical skills with this unique and useful collection of electronic projects.

Each project has been built and tested by experts who share their electronics adventures with you. Parts lists include where-to-buy information for parts and, when available, for printed-circuit boards and complete parts kits.

192 Pages, 8 1/2 x 11, Softbound
ISBN: 0-672-22504-2
No. 22504, \$12.95



Pascal for Electronics and Communications
Richard Meadows

This is the book for hobbyists, students, and engineers who wish to learn to write programs in standard Pascal.

With this book, the reader will learn to apply programming to common analytical and circuit-design problems in electronics and communication engineering through hands-on examples. Exercises and problems appear at the end of each chapter.

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Practice Problems in Number Systems, Logic, and Boolean Algebra
Edward Bukstein

This workbook is a 64-lesson introduction to digital computer mathematics, covering various number systems, converting numbers from one system to another, and some common codes. The implementation of Boolean algebra in electronic gating and inverting circuits also is covered.

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GENERAL INTEREST



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Graf and Whalen

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Anthony Bishop

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Transistor Fundamentals, Volume 2

Brite and Pike,
Training & Retraining, Inc.

This introductory text explains transistor principles, voltage, current, resistance, inductance, capacitance, and circuitry. It provides all the information you'll need to develop a firm understanding of solid-state electronics and troubleshooting techniques.

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TTL Cookbook

Don Lancaster

An early Lancaster effort that is still a tech classic, this is a complete look at TTL, including what it is, how it works, how it's interconnected, how it's powered, and how it's used in many practical applications. No technician's library is complete without it.

336 Pages, 5½ x 8½, Softbound
ISBN: 0-672-21035-5
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Tube Substitution Handbook, Twenty-First Edition

Howard W. Sams Engineering Staff

This guide contains more than 6,000 receiving tube and 4,000 picture tube substitutes in both color and black and white. Also includes 300 industrial substitutions for receiving tubes, and 600 communications substitutes. Includes pinouts. Special Piggyback Edition: Includes a regular handbook plus a pocket-size handbook for carrying ease.

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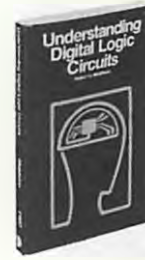
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Robert G. Middleton

Designed for the service technician engaged in radio, television, or audio troubleshooting and repair, this book painlessly expands the technician's expertise into digital electronics. Beginning with digital logic diagrams, the reader is introduced to basic adders and subtractors, flip-flops, registers, and encoders and decoders. Memory types are also discussed in detail.

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ISBN: 0-672-21867-4
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TROUBLESHOOTING & REPAIR



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Avis J. Evans

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Topics covered include:

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- Microcomputer Fundamentals
- Meet the Main Chips
- Software and the Diagnostic Program
- Using Basic Digital Troubleshooting Instruments
- The Logic Analyzer
- An In-Circuit Emulator
- Signature Analysis
- Repair Checkout and Preventive Maintenance

Al Evans has written three books on technology and holds an MS from East Texas State University. He has taught troubleshooting for twenty years.

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Gerald Schweizer

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The Home Satellite TV Installation and Troubleshooting Manual

Baylin and Gale

This is a complete, authoritative manual covering the selection, installation, and troubleshooting of home satellite TV systems. It is written in a clear, concise style making it suitable for service technicians and dealers, as well as home hobbyists.

Discover the fundamentals of satellite broadcasting theory, how a satellite works, and the frequencies involved.

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Compact Disc Troubleshooting & Repair

Heller and Bentz

Here is a complete, and concise introduction to the field of compact disc players and digital signal processing. It takes a comprehensive look at the hardware of the CD system and provides the necessary audio and digital background.

Useful for the beginning audio/video technician as well as the more experienced technician and hobbyist, this book clearly explains the audio signal including such problem areas as signal to noise, channel separation, and frequency response.

Basic digital theory is discussed first. Then more advanced information—such as hardware, lasers, circuits, adjustments and troubleshooting, controls, motor drives, laser pickups, focus servos, and tracking—is presented.

Topics covered include:

- The Audio Signal
- Problems in Signal Processing
- Basic Digital Theory
- The CD Modulation System
- The Construction of the Compact Disc
- The Overview of the System
- The Laser Pickup
- Detailed CD Circuit Descriptions
- Handling of Disc and Player
- Adjustments
- Troubleshooting
- The CD-ROM
- Glossary of Terms

208 Pages, 8½ x 11, Softbound
ISBN: 0-672-22521-2
No. 22521, \$19.95



John D. Lenk's Troubleshooting & Repair of Audio Equipment

John D. Lenk

This manual provides the most up-to-date data available and a simplified approach to practical troubleshooting and repair of major audio devices. It will enable both the beginning and the intermediate level technician or hobbyist to apply tips and tricks to any specific equipment.

208 Pages, 8½ x 11, Softbound
ISBN: 0-672-22517-4
No. 22517, \$21.95



Ku-Band Satellite TV: Theory, Installation, and Repair

Baylin and Gale

This book is a complete step-by-step guide to the theory, installation, and servicing of Ku-Band satellite receivers for engineers, laymen, and hobbyists alike.

Written in an understandable, easy-to-read manner, this book offers a comprehensive look at the theory and practice underlying this rapidly growing discipline of modern satellite communication.

Satellite components are discussed and equipment selection guidelines are given.

368 Pages, 8½ x 11, Softbound
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TROUBLESHOOTING & REPAIR



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Joseph G. Sloop (EIA)

Use this introductory text to learn how to quickly isolate a television servicing problem and then troubleshoot that section to repair your TV in a minimum number of steps. The book uses block diagrams and troubleshooting charts to help guide you through the information. It covers the basic math required for TV servicing, covers test equipment, discusses the importance of public relations and emphasizes safety for the technician.

228 Pages, 8½ x 11, Softbound
ISBN: 0-672-21859-3
No. 21859, \$16.95



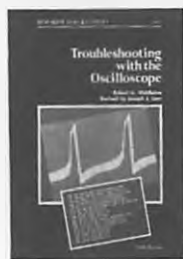
Television Symptom Diagnosis, An Entry into TV Servicing, Second Edition

Richard W. Tinnell

This easy-to-use text provides you with a basis for entry-level servicing of monochrome and color TV sets. It focuses on identification of abnormal circuit operations and symptom analysis.

It teaches the skills necessary for any technician.

176 Pages, 8½ x 11, Softbound
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Troubleshooting with the Oscilloscope, Fifth Edition

Robert G. Middleton

Revised by Joseph J. Carr

This book can help technicians and hobbyists maximize their use of the oscilloscope and "painlessly" familiarize them with the wide selection of scopes now available.

Readers learn to use the oscilloscope to make and save money by repairing electronic equipment. They can also keep up on the latest advances in technology with this step-by-step guide.

This fifth edition emphasizes digital troubleshooting and applications and features the "what, why, and how-to" of the time-domain analyzer, data-domain analyzer, and logic-state analyzer. Specific facts of television receiver troubleshooting are included.

Topics covered include:

- Introduction to the Oscilloscope
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- Using Oscilloscope Probes
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- Signal Tracing in the TV Sync Section
- Troubleshooting the TV AFC and Horizontal Oscillator Section
- Waveform Tests in the Horizontal Sweep Section
- Troubleshooting in the TV Vertical Sweep Section
- Signal Tracing in the TV Sound-IF and Audio
- Special Oscilloscopes and Their Applications
- Digital Logic Troubleshooting with the Oscilloscope

256 Pages, 5½ x 8½, Softbound
ISBN: 0-672-22473-9
No. 22473, \$16.95



VCR Troubleshooting & Repair Guide

Robert C. Brenner

With approximately 25 million video cassette recorders on the market, this long-awaited book will help owners repair these popular machines when they break down.

This helpful troubleshooting guide is for the electronics hobbyist, layperson, or technician who needs a preventive maintenance and troubleshooting reference for VCRs. Limited electronics experience is required to use it, but more sophisticated service and repair functions are discussed, and valuable information for the service technician is included.

Topics covered include:

- Introduction
- Principles of Video Recording
- The VCR System Described
- Basic VCR Troubleshooting Techniques
- Troubleshooting Specific Problems
- VCR Preventive Maintenance
- Appendix and Glossary of VCR Terms

Robert Brenner is a specialist in microelectronic applications as well as troubleshooting and repair of electronic equipment. He is also the author of the best-selling troubleshooting and repair books for the Apple®, IBM®, and Commodore 64®.

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Thomas C. Bartee, Editor-in-Chief

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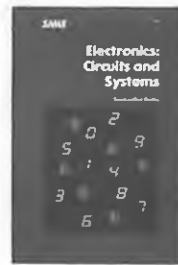
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Robert J. "Bert" Murphy

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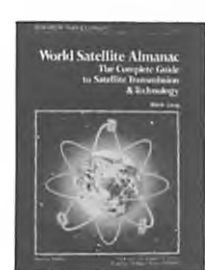
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R.J. "Bert" Murphy has worked over 20 years in this industry for, among others, GTE Communication Systems. Currently Vice-President of Network Engineering for National Digital Services, he works with corporations seeking to integrate their private network to optimize networks. He has written articles on various telecommunications subjects for technical journals and the IEEE.

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Mark Long has written several best-selling books and over 100 magazine and newspaper articles on satellite technology.

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William Ribbens is professor of Electronic Engineering at the University of Michigan and conducts research in automotive electronics.

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Gilbert Held is Chief of Data Communications for the United States Office of Personnel Management.

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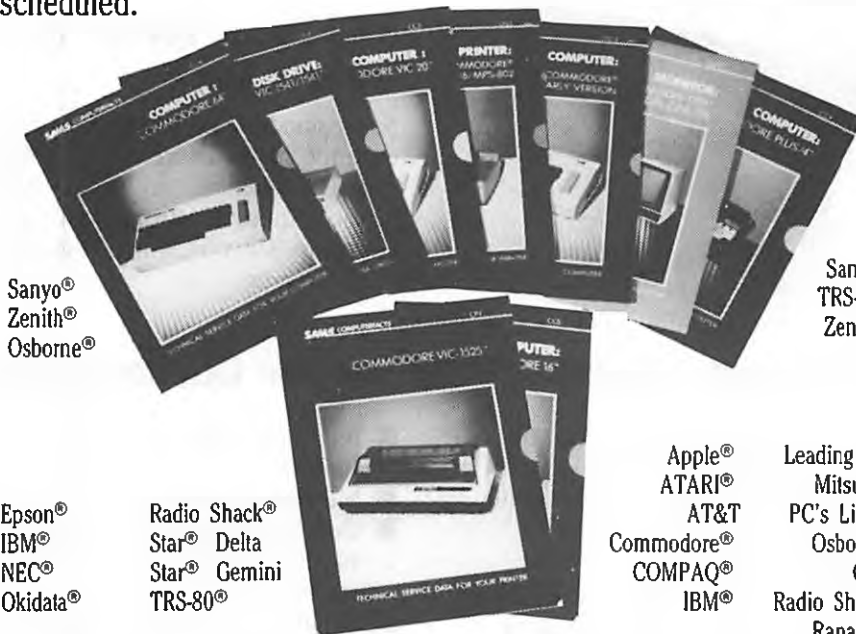
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