

THE COMPLETE LOTUS 1-2-3[®] RELEASE 3 HANDBOOK

Greg Harvey

- The Best Step-by-Step Training
- Tutorial & Reference Format
- Covers Graphics and Add-In Programs
- 3-D Spreadsheets

The Complete Lotus 1-2-3[®] Release 3 Handbook



Greg Harvey



San Francisco • Paris • Düsseldorf • London

Acquisitions Editor: Dianne King
Editor: Tanya Kucak
Technical Editor: Jon Forrest
Word Processors: Scott Campbell and Deborah Maizels
Book Designer and Chapter Art: Suzanne Albertson
Technical Art: Jeffrey James Giese
Screen Graphics: Delia Brown
Typesetter: Elizabeth Newman
Proofreaders: Patsy Owens and Hilda van Genderen
Cover Designer: Thomas Ingalls + Associates
Cover Photographer: David Bishop
Screen reproductions produced by XenoFont

dBASE II, dBASE III, dBASE III PLUS, and dBASE IV are trademarks of Ashton-Tate Corporation.
DIF, Freelance Plus, Data Lens, LICS, LMBCS, Lotus 1-2-3, Lotus Developer Tools, Magellan, Manuscript, Symphony, and VisiCalc are trademarks of Lotus Development Corporation.
EGA, IBM, OS/2, PS/2, and VGA are trademarks of International Business Machines Corporation.
Epson FX-80/100 is a trademark of Epson America, Inc.
Excel, MS-DOS, Multiplan, SYLK, and Word are trademarks of Microsoft Corporation.
Hercules Graphics Card Plus and Hercules Monochrome Graphics Card are trademarks of Hercules Computer Technology, Inc.
HP LaserJet and HP LaserJet Series II are trademarks of Hewlett-Packard Corporation.
Norton Commander and Norton Utilities are trademarks of Peter Norton Computing, Inc.
PC Tools Deluxe is a trademark of Central Point Software.
SideKick is a trademark of Borland International.
WordPerfect is a trademark of WordPerfect Corporation.
WordStar is a trademark of WordStar International.
XenoFont is a trademark of XenoSoft.

SYBEX is a registered trademark of SYBEX, Inc.

TRADEMARKS: SYBEX has attempted throughout this book to distinguish proprietary trademarks from descriptive terms by following the capitalization style used by the manufacturer.

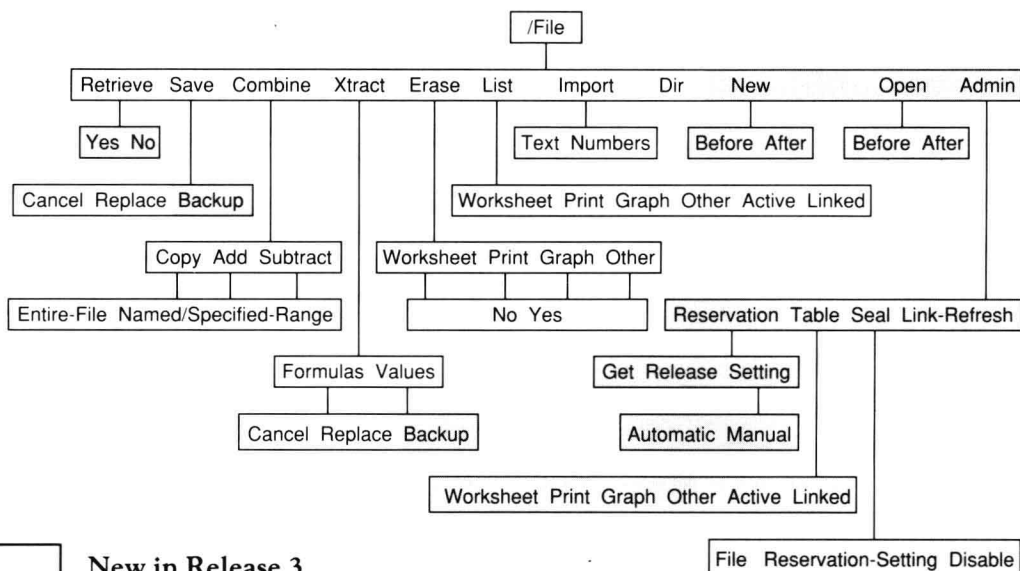
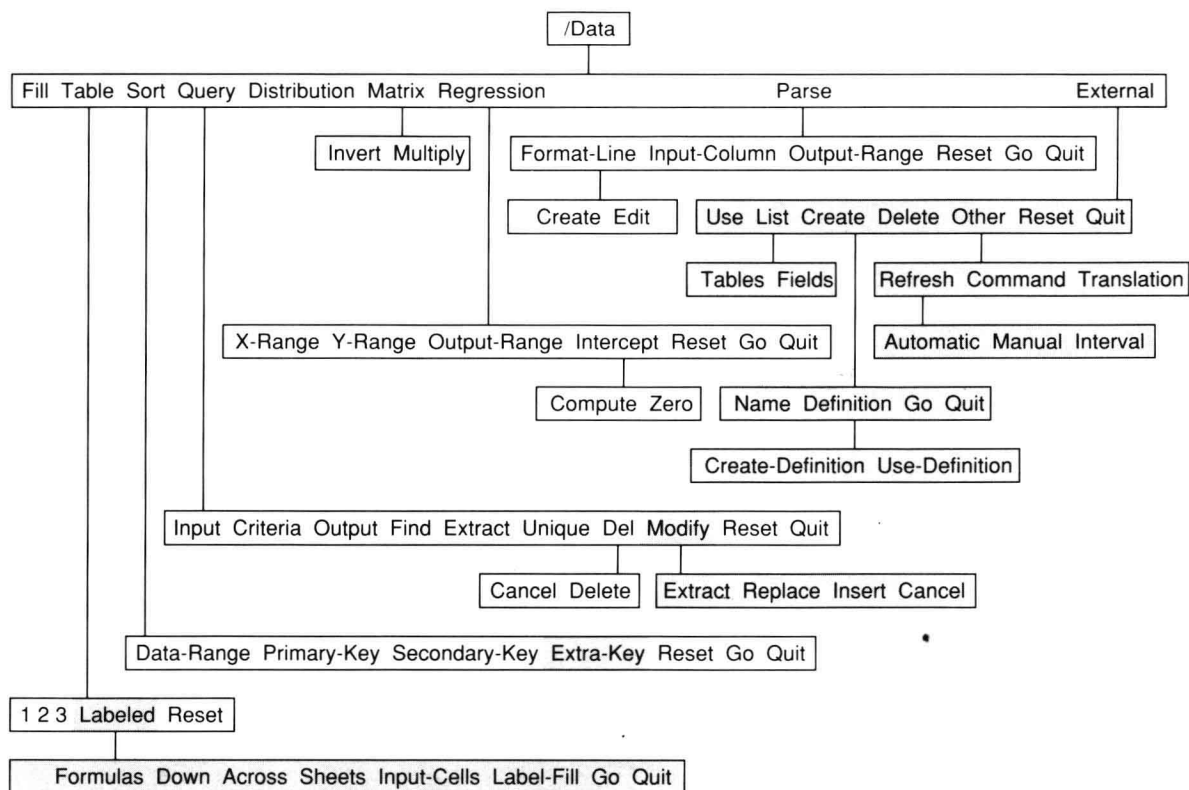
SYBEX is not affiliated with any manufacturer.

Every effort has been made to supply complete and accurate information. However, SYBEX assumes no responsibility for its use, nor for any infringement of the intellectual property rights of third parties which would result from such use.

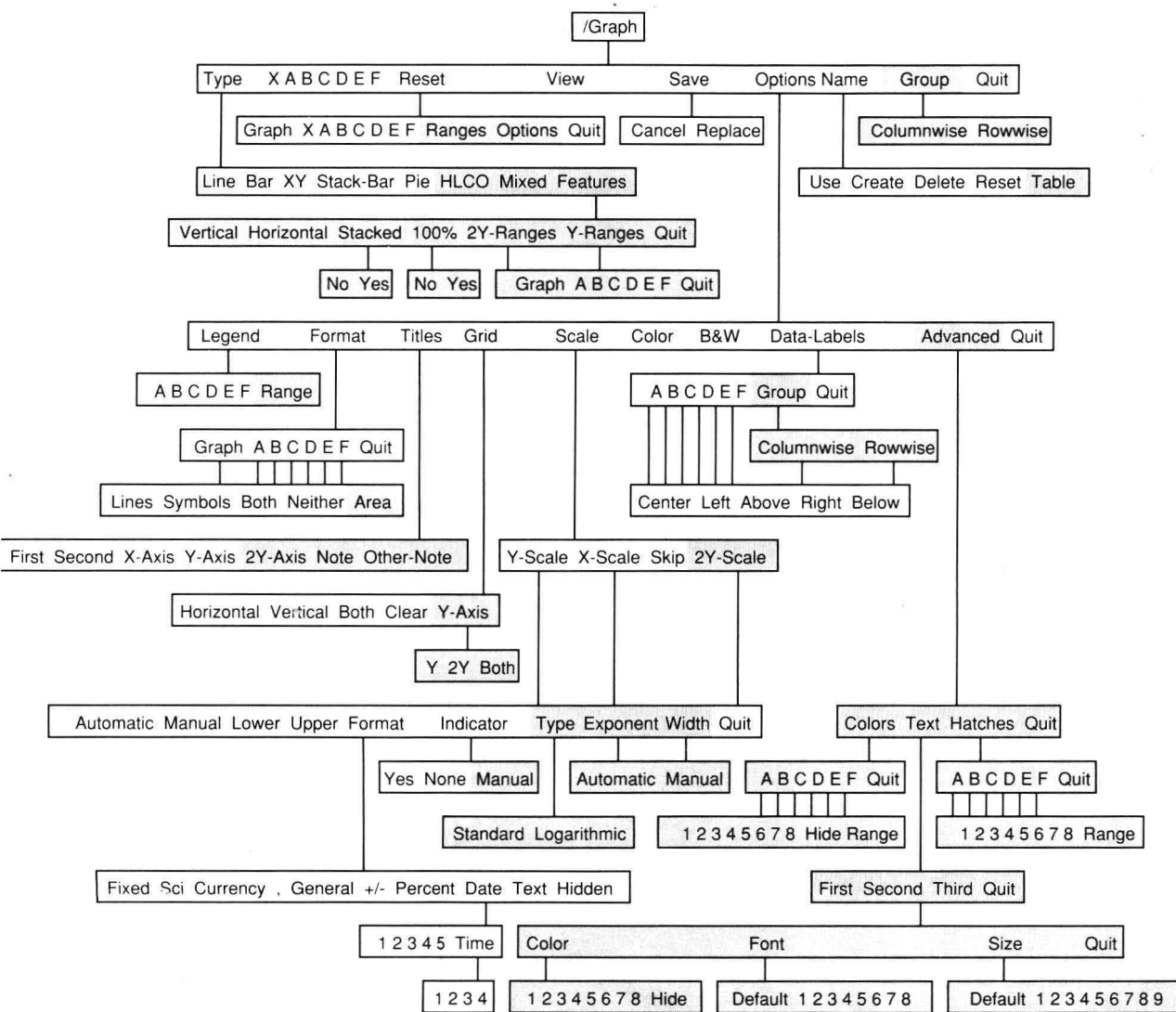
Copyright©1990 SYBEX Inc., 2021 Challenger Drive #100, Alameda, CA 94501. World rights reserved. No part of this publication may be stored in a retrieval system, transmitted, or reproduced in any way, including but not limited to photocopy, photograph, magnetic or other record, without the prior agreement and written permission of the publisher.

Library of Congress Card Number: 89-52064
ISBN: 0-89588-600-6
Manufactured in the United States of America
10 9 8 7 6 5 4 3 2 1

Lotus 1-2-3 Menu Trees



New in Release 3



The Complete
Lotus 1-2-3 Release 3
Handbook

To

Douglas Hergert

who got me started in writing computer books

and

Shane Gearing

who inspires me to keep at it

Acknowledgments

I wish to express my deepest gratitude to all the people involved in this project. First of all, I wish to thank all the talented people who worked on the book for SYBEX: Scott Campbell and Deborah Maizels, word processors; Elizabeth Newman, typesetter; Patsy Owens and Hilda van Genderen, proof-readers; Suzanne Albertson, book designer and layout artist; Jeffrey James Giese, technical art; Delia Brown, screen graphics; and Jon Forrest, technical editor. In addition, a special thanks to Tanya Kucak, whose proficiency in developmental and copy editing as well as her wonderful sense of humor are ever appreciated.

At Lotus Development Corporation, I wish to thank John Shepard, who helped me immensely in the planning stages, Lisa Kosciuk and Mary Beth Rettger in 1-2-3 Beta administration, Allison Parker for Freelance Plus, Martha Isham for Magellan, and last but not least, all the folks on the Beta telephone support lines who so competently dealt with all my questions.

Introduction

The Complete Lotus 1-2-3 Release 3 Handbook represents a new kind of learning aid for mastering the features of Release 3 of 1-2-3. It is a handbook both in the sense of providing you with a “handy” means for quickly learning the features of the program, and being a book you will want to keep “at hand” as you begin to transfer your understanding to your own work.

To help you find the information that you need as quickly as possible, you will find that each chapter begins with a listing of all the major topics it contains, showing the page where the topic can be found. To help you make the most of the information introduced in the chapter, each chapter ends with a Summary that contains sections on troubleshooting and essential techniques.

The Troubleshooting section uses the question-and-answer format that I often follow in my 1-2-3 training classes. Here, you may well find the answer to why you are encountering a particular problem as well as how to go about solving it. The Essential Techniques section in each Summary gives you step-by-step instructions for the most commonly used tasks covered in that chapter. Refer to this part of the chapter whenever you just want to review the steps for a particular task in 1-2-3.

To facilitate the transfer of “book” knowledge into practical 1-2-3 skills, the handbook also contains a *complete* introductory course to Release 3 of 1-2-3. This course covers all facets of 1-2-3, including the spreadsheet, graphics, database, and keystroke and command-language macros. It follows the organization and methodology that I have been successfully using to train business people from all backgrounds and in all lines of work for the last few years. As such, it is designed to give you practice in the most efficient ways for performing all the tasks in 1-2-3.

The special features of the handbook include:

- Each chapter contains hands-on exercises developed specifically to illustrate and explore the particular aspect of 1-2-3 that is being discussed in the chapter. These exercises give detailed instructions so that you can complete this course on your own, even if you are brand-new to 1-2-3 and without the benefit of an instructor.

- Each chapter Summary includes a Review section that lists the key terms covered in the chapter with which you should be familiar, and fill-in-the-blank questions that you can use to test your understanding. In addition, most chapters contain Further Exercises that you can use to deepen your understanding and further develop your skills.
- Key characteristics, features, and function keys in 1-2-3 are emphasized throughout the text by enclosing them in a shaded box.

Note that you should complete the exercises in chapter order, as you will find that later chapters make use of files that are created in earlier chapters. If you wish to skip around, you might want to consider ordering the sample files disk that contains all the files used in the book (see the disk offer at the end of the book for information on how to do this). That way, you will have all the files you need to complete any exercise in the handbook without having to do them in the order in which they appear. This also eliminates the need to complete an exercise that covers a part of the program with which you are already familiar just to have a file that is used somewhere later on.

■ Who Should Use This Handbook

This handbook is designed to meet the needs of experienced Release 2.01 and 1A users who have just upgraded to Release 3, as well as brand-new users with no prior 1-2-3 experience. As a new user, you will find that your exploration of 1-2-3 starts out literally from square one (that is, cell A:A1), and slowly and steadily builds chapter by chapter and lesson by lesson.

If you have some experience with 1-2-3 or have just upgraded to Release 3, you can use the book more selectively, as you would any reference. To do this, use the chapter openers to help you find specific topics of interest. Also, look for the notes in the text, which contain valuable tips on using standard features as well as information on using more advanced features of 1-2-3.

Regardless of your background, you should be able to use this book to become familiar and comfortable with all major features of Release 3 of 1-2-3. Because of the structured nature of the handbook, you should be able to quickly come up to speed on the use of all features you need in your work. After you have attained initial mastery of the basics, you will then find the handbook to be a valuable reference in your day-to-day usage of 1-2-3.

Trainers and teachers will also find that the handbook can be used effectively as the text for formal and informal training and educational courses on Release 3.

■ Organization of the Handbook

The handbook is organized in five parts. Each part introduces a group of related chapters presenting the relevant 1-2-3 commands and functions in the way most people use them. In each chapter, you will also find hands-on exercises designed to give valuable practice with these commands and features.

Part I: Mastering the 1-2-3 Spreadsheet

Part I provides an in-depth introduction to the 1-2-3 worksheet in seven chapters. This part begins by acquainting you with the electronic worksheet: what it is and how it can be used. You will learn how to move about the worksheet, add and edit data, work with cell ranges, create formulas, use built-in functions, and consolidate and link worksheets.

- **Chapter 1: The Worksheet Environment** provides a thorough introduction to the 1-2-3 worksheet display, commands, and keyboard. This is the place to start if you are new to 1-2-3.
- **Chapter 2: Techniques for Adding and Editing Data** covers moving about the worksheet, and entering and editing data of all types (labels, values, dates, and times).
- **Chapter 3: Building the Worksheet Step by Step** introduces you to the routine tasks involved in building your own worksheets. Here, you get hands-on experience with creating an income statement worksheet from start to finish. You also learn how to convert your worksheet into a template that you can use to quickly generate new income statements.
- **Chapter 4: Cell Ranges: The Key to Managing Worksheet Data** introduces you to cell ranges and their uses in the worksheet. Here, you learn how to name ranges, protect the worksheet, and use the various /Range commands.
- **Chapter 5: Formulas and Functions: Performing Calculations** covers the creation and use of formulas in the worksheet.

Here, you learn how to copy formulas as well as how to use 1-2-3's variety of built-in @functions.

- **Chapter 6: Three-Dimensional Worksheets: Creating the Complete Picture** teaches you how to manipulate three-dimensional worksheet files. In this chapter, you will also learn how to use windows and titles, and change column widths, as well as insert and delete worksheets, columns, and rows.
- **Chapter 7: Linking and Transferring Data between Worksheet Files** introduces you to consolidating data from multiple worksheet files and extracting worksheet data into a file of their own. Here, you will learn how to create formulas that link values from other worksheet files.

Part II: Generating Reports and Graphs

Part II covers the presentation aspects of 1-2-3 in two chapters. You will learn how to prepare and print worksheet reports and business graphs.

- **Chapter 8: Mastering Printing and Producing Reports** provides comprehensive coverage of all aspects of printing worksheet data. Here, you will learn how to create and format reports to your specifications.
- **Chapter 9: Representing Data Graphically** covers the creation and printing of business graphs in 1-2-3. Here, you learn how to give your worksheet data more impact by representing them pictorially.

Part III: Data Management and Analysis in 1-2-3

Part III consists of two chapters that concentrate on managing and analyzing data in the worksheet. The first chapter of this part introduces you to creating 1-2-3 database tables. The second chapter in this part acquaints you with formal data analysis, including what-if analysis, frequency distribution, and linear regression.

- **Chapter 10: The Database Environment** introduces you to all aspects of creating, maintaining, and querying database tables in Release 3. This chapter includes information on sorting the data

and setting up criteria for searching data, and an introduction to the built-in database functions and using external databases.

- **Chapter 11: Data Analysis: What-If and Predictive** teaches you how to use 1-2-3's powerful data-analysis tools. Here, you learn how to perform what-if analysis with data tables, calculate frequency distributions, perform matrix arithmetic, and make predictions with regression analysis.

Part IV: File Management and Organization

Part IV concerns all aspects of file housekeeping and file translation. It is divided into two chapters, the first of which covers all aspects of maintaining and managing the files you create in 1-2-3, and the second of which introduces you to ways that you can transfer data to and from 1-2-3.

- **Chapter 12: Organizing and Maintaining Your Files** teaches you how to organize your files into directories, protect them with passwords, change directories and list files according to type, erase unwanted files, and use the /System command to go to DOS so you can format new disks and make backup copies of your 1-2-3 files.
- **Chapter 13: Translating Files: Exchanging Data between 1-2-3 and Other Programs** introduces you to data exchange between 1-2-3 and other software programs. Here, you learn how to import data into the worksheet with /File Import and /Data Parse, how to export data as text files with /Print File, and how to use the Translate program to convert files directly into formats that can be used by other popular software programs.

Part V: Extending the Power of 1-2-3 through Macros

Part V provides you with a thorough introduction to all aspects of creating and using macros in two chapters. The first chapter in this part familiarizes you with keystroke macros: what they are and how they are used. The second chapter of this part acquaints you with the Lotus Command Language and its collection of advanced macro commands that further extend your ability to automate and customize the way you use 1-2-3.

- **Chapter 14: The Macro Environment: Automating and Customizing Your Work in 1-2-3** provides a step-by-step introduction to keystroke macros. Here, you learn how to plan, create,

and execute a variety of commonly used utility macros. Having created these macros in a macro library, you then learn how to use them in new and existing worksheets.

- **Chapter 15: Introduction to the Lotus Command Language** acquaints you with the advanced macro commands in the Lotus Command Language. Here, you learn how to use these commands to further automate and customize your work in 1-2-3. The macro exercises in this chapter give you practice with branching and looping, calling subroutines, and setting up a completely menu-driven interface to automate database maintenance.

Appendices

The handbook also contains these five appendices:

- **Appendix A: Installation and Memory Usage** gives you detailed instructions on how to install 1-2-3. Here, you will also find information on how Release 3 uses your computer's memory and how you can create larger worksheets by adding extra memory to your computer.
- **Appendix B: Modifying the Program Defaults** gives you information on how to permanently change 1-2-3's default settings. Specific defaults covered here include changing the help method, turning off the beep, changing the display of negative numbers, designating a new directory for temporary files, and changing the graph file type from Metafile to PIC.
- **Appendix C: Networking 1-2-3** acquaints you with the networked version of Release 3. It gives you information on how you use its reservation system to get and release control of the worksheet files shared on the network.
- **Appendix D: LMBCS (Lotus Multibyte Character Set) Tables** covers the use of the Compose key (Alt-F1) to enter special symbols into your worksheet. It also contains tables that list the codes and compose sequences for Groups 0 and 1 in the Lotus Multibyte Character Set.
- **Appendix E: Answer Key to Review Questions** presents the answers to all fill-in-the-blank review questions found in the Test

Your Knowledge section at the end of every chapter. Use this appendix to see how well you did after you try to answer the questions on your own.

On the endpapers (the inside front and back covers of the book), you will find the **Lotus 1-2-3 Menu Trees** containing menu maps that show you all the options on each Release 3 command menu. Refer to these maps as you learn new commands on menus with which you are unfamiliar.

■ What's New in Release 3

Release 3 incorporates many new and exciting features while retaining the familiar menu structure of the previous version. Among the most important new features are:

- No copy protection
- Background worksheet recalculation to enable you to keep working while a worksheet is being recalculated
- Undo feature, which enables you to restore your worksheet to the way it was before you made your last change
- Three-dimensional worksheet files, which enable you to organize large worksheets into consecutive pages rather than have to work all within one enormous worksheet
- File linking, which enables you to use data stored in a worksheet file on disk in a formula in the current worksheet
- Run key (Alt-F3), which lets you run any macro, thus allowing you to name macros with range names longer than \A through \Z
- Search and replace feature added to /Range command
- Record key (Alt-F2), which gives you access to the record buffer, thus allowing you to copy specific recorded keystrokes in your worksheet to be used as macros
- Several new graph types and automatic graphing, as well as the ability to print graphs without leaving 1-2-3
- Advanced printing options that enable you to assign fonts to parts of your report, and to control the orientation, line spacing, and pitch without resorting to setup codes

- New window options that enable you to view parts of up to three worksheets at one time, as well as split the screen into two windows that allow you to view data in your worksheet alongside the current graph
- Built-in network support with concurrency controls for sharing data files

Contents at a Glance

Introduction	xxi
PART I Mastering the 1-2-3 Spreadsheet	
1 The Worksheet Environment	4
2 Techniques for Adding and Editing Data	34
3 Building the Worksheet Step by Step	68
4 Cell Ranges: The Key to Managing Worksheet Data	111
5 Formulas and Functions: Performing Calculations	165
6 Three-Dimensional Worksheets: Creating the Complete Picture	229
7 Linking and Transferring Data between Worksheet Files	273
PART II Generating Reports and Graphs	
8 Mastering Printing and Producing Reports	321
9 Representing Data Graphically	377
PART III Data Management and Analysis in 1-2-3	
10 The Database Environment	447
11 Data Analysis: What-If and Predictive	515
PART IV File Management and Organization	
12 Organizing and Maintaining Your Files	565
13 Translating Files: Exchanging Data between 1-2-3 and Other Programs	596
PART V Extending the Power of 1-2-3 through Macros	
14 The Macro Environment: Automating and Customizing Your Work in 1-2-3	634
15 Introduction to the Lotus Command Language	681
APPENDICES	
A Installation and Memory Usage	756
B Modifying the Program Defaults	766
C Networking 1-2-3	772
D LMBCS (Lotus Multibyte Character Set) Tables	776
E Answer Key to Review Questions	790
Index	798