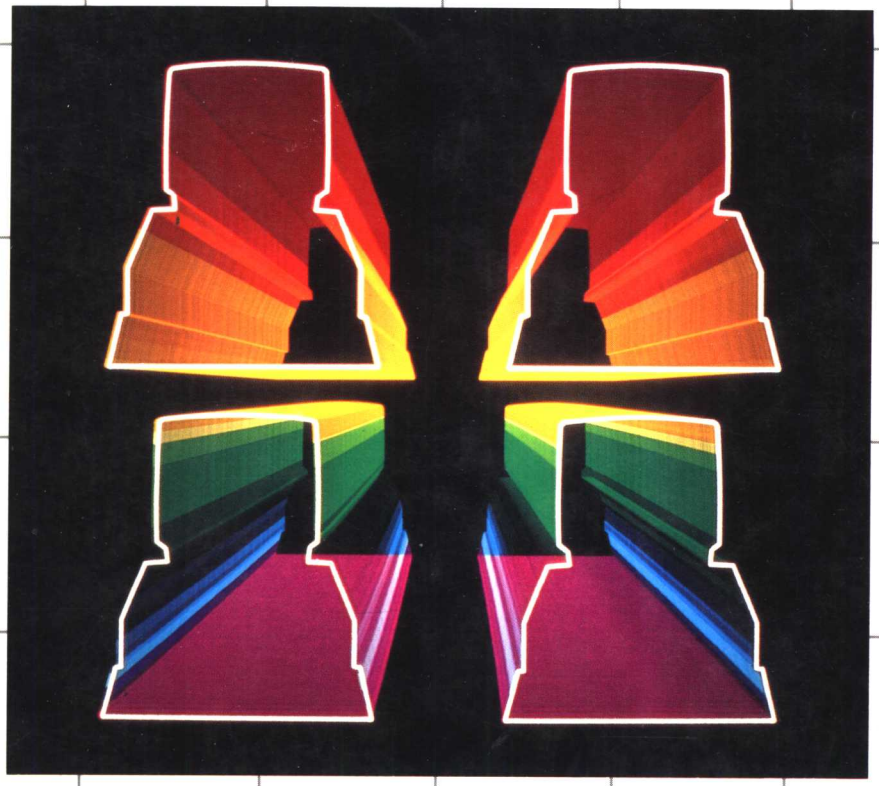
DYNAMICS OF

SUPERCALC4®



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DOW JONES-IRWIN SOFTWARE GUIDES

DYNAMICS OF SUPERCALC4

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Introduction

WHAT THIS BOOK IS ABOUT

This book is about SuperCalc4®, a state-of-the-art spreadsheet program developed by Computer Associates International, Inc. As an integrated program with spreadsheet, data management, and graphics capabilities, it is ideally suited to any business or industry situation where information is in the form of numbers and their relationships.

Until the development of spreadsheet programs and microcomputers, the most common means of analyzing numbers was by means of columnar paper, this column-and-row format being adapted to business analyses such as sales and profit projections, budget preparations, and reviews of financial performance. But as any manager, accountant, or financial analyst knows, there are more potential problems with manual worksheets than just the entering, cutting, pasting, recopying, and reducing pages of row-and-column reports. A simple arithmetic error can require an hour or more of recalculation; a "what-if" analysis may require tedious calculation; the addition of a new row or column of data is a significant (and non-productive) task.

Spreadsheet programs have changed all that. Once the business user masters the techniques of using a spreadsheet program, the tasks of data analysis are greatly simplified. Days formerly

spent on budget preparation are reduced to just a few hours; hours previously needed for worksheet changes are reduced to minutes.

A spreadsheet program such as SuperCalc4 provides an electronic means of storing and retrieving columns and rows of numbers. The relationship between numbers (expressed by formulas) can also be stored, and financial and statistical functions may be calculated and evaluated. Graphs based on spreadsheet data can be scaled, labeled, and displayed almost instantly. The spreadsheet and its accompanying graphs are readily transferred either to a microcomputer monitor, or, through a printer, into hard copy form.

There have been several versions of SuperCalc. First came (plain) SuperCalc® in 1980, followed by SuperCalc2® released in 1983 by Sorcim Corporation. SuperCalc3® was released in 1984, and SuperCalc4 in 1986. SuperCalc4 is compatible with SuperCalc3: it can load, read, and edit SuperCalc3 spreadsheets. It can also create spreadsheets that SuperCalc3 can read.

WHO THIS BOOK IS WRITTEN FOR

This book is written for the person who is planning to use a spreadsheet to increase personal or business productivity. It will be of particular interest to managers, professionals, small business owners, consultants, accountants, financial analysts, educators, and students.

While designed for quick reference for the busy reader, it is also suitable for more leisurely learning. It may be adopted as a text or reference book for commerce or business programs in colleges and universities, and for use in professional seminars.

This book is written mainly for users of SuperCalc4. However, because of the compatibility between SuperCalc3 and SuperCalc4, it is also suitable for SuperCalc3 users. Whichever of these versions you are using, you will find it easy to follow the instructions and explanations in the book. Certain functions, however, are only available in SuperCalc4.

The material in this book can be learned by a first-time user in conjunction with the *SuperCalc4 User's Guide & Reference Manual*, or it may be used independently of the manual. If you already have working knowledge of SuperCalc4 or other spreadsheet programs, the part on advanced topics and the part on practical business applications will be your main focus.

If you do not own SuperCalc4, but are considering buying a copy, this book will help you make a purchase decision. Part One will help you understand the power and features of SuperCalc4. Then, scanning through the sample business applications in Part Three, you will discover how you can use SuperCalc4 for specific purposes.

This book is not designed to replace the excellent *SuperCalc4 User's Guide & Reference Manual* from Computer Associates International, Inc. Rather, this book describes the dynamics of SuperCalc4 and goes beyond the basics of the reference manual to give a wealth of practical hints and examples.

FEATURES OF SUPERCALC4

SuperCalc4 runs on the IBM® Personal Computer™ and compatible microcomputers. The program provides three integrated functions: electronic spreadsheet, data management, and graphics. These functions are considered integrated because any changes made to a spreadsheet will be automatically reflected in associated graphs, while data management functions are applied directly to the spreadsheet. Integrated functions are desirable because they reduce the amount of work required each time changes are made.

SuperCalc4 encompasses the following features:

- A comprehensive set of arithmetic, calendar, financial, logical, and special built-in functions.
- Extensive formatting capabilities, including eight user-definable numeric display formats.
- Easy-to-use graphics capable of being displayed on both monochrome and color monitors.
- Comprehensive data management functions.
- Powerful facility to link several spreadsheets together for comprehensive applications.
- Efficient use of computer memory using sparse matrix memory management techniques.
- Sideways printing for wide spreadsheets.
- Support of the Intel 8087 and 80287 coprocessors for fast computations.

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- Fast iterative calculations by recalculation of affected cells only.
- Support of forward and absolute references in calculations.
- A powerful macro facility.
- Local Area Network (LAN) support.

APPLICATIONS OF SUPERCALC4

SuperCalc4 can be used in almost any situation where there are columns and rows of numbers that are related. Almost all financial reporting models such as income statements or balance sheets fall into this category. Spreadsheet programs are equally useful where the relationships between numbers are subject to analysis. Ratio analysis performed on financial statements is one such example. SuperCalc4 is perhaps most useful for conducting "what-if" analyses. That is, once a set of mathematical relationships is built using a spreadsheet program, it can be quickly recalculated using different sets of numbers.

Portfolio management models that analyze the return on investment using different assumptions for interest rate and stock market indices are examples of such "what-if" models. Cash flow projection models that depend on different assumptions about cash flows and interest costs are also applications for which a spreadsheet program is preferable to hand calculations.

SuperCalc4 is also ideal for many planning activities. For example, sales and revenue projection, cost benefit analysis, budget preparation, and variance analysis in cost management are all suitable applications. Financial modeling, such as present value analysis, the computation of an effective rate of return for investments, and bond amortization calculations can all be performed efficiently using SuperCalc4.

The data management functions of SuperCalc4 enable the user to keep name and address files and inventory lists effectively and economically.

SuperCalc4 can also be used to draw business graphs such as line graphs, bar graphs, pie charts, and point graphs in a form suitable for presentation in reports or meetings.

This book focuses on business applications. A major part is devoted to practical examples with completely developed spreadsheet templates ready for adaptation to your business problems.

HOW THIS BOOK IS ORGANIZED

This book is organized into three parts. Part One, Basic Techniques with SuperCalc4, reviews the key features of SuperCalc4 and provides a framework for understanding the application of spreadsheet techniques. If you have no prior experience with a spreadsheet program, you will find this part a very useful introduction to SuperCalc4 and to spreadsheets in general. It may be used with or without the *SuperCalc4 User's Manual.* If you have prior experience with other spreadsheet programs, this part will help you get up to speed with SuperCalc4. If you have used an older version of SuperCalc, this part can help you learn the new features of the program.

Part Two, Advanced Features, is designed for someone who has already mastered the basics of SuperCalc4, whether by previous experience or by working through Part One and some additional practice. The advanced features of SuperCalc4 covered include the many types of functions (e.g., financial, logical, and statistical); windows and titles; calculations, referencing, and sorting operations; basic and advanced macros; displaying, printing, and plotting graphs; data management features; consolidating spreadsheets and using templates; and exchanging SuperCalc4 data with other programs. The macro facility is described in detail, including material on macro programming and a starter collection of tried and tested macros to form the basis of your own macro library.

Part Three, Sample Business and Personal Applications, provides detailed practical application models for the business environment, as well as several models that can be adapted to more personal use. Included are model spreadsheets for income statements, balance sheets, and ratio analysis; cash flow projection; management of loan amortization, fixed assets, and stock portfolios; personnel management; and accounts receivable and aging reports. For additional interest, this part of the book also includes model applications for checkbook register and bank reconciliation, personal net worth and estate planning, and a personal running log.

Appendix A explains procedures for printing a wide spreadsheet by use of the SIDEWAYS® printing utility provided on the SuperCalc4 Utility diskette. Appendix B provides a complete list of SuperCalc4 function names. Appendix C summarizes features introduced in SuperCalc4 version 1.10. A topic index to all parts of the book is also provided.

CONVENTIONS USED IN THIS BOOK

The names of keys you press are indicated as follows: <**Caps Lock**> indicates pressing the key labeled "Caps Lock" on the keyboard, and <**Return**> indicates pressing the key labeled "Enter," "Return," "Retrn," or "↵."

All SuperCalc4 commands are spelled out in detail as they would appear on-screen. For example, the command to move the cell block B1:B2 to cell D1 is indicated in boldface **/Move,Block, B1:B4,D1** whereas the actual keys you press in SuperCalc4 for this command are **/mbb1:b4,d1**. By reading the entire command rather than just the keystrokes, you will find the text easier to follow and will learn the commands faster. Showing the complete command also reduces the chance of error.

All cell addresses are shown in upper case to make them stand out. For example, **B1:B4** is shown for cells B1 to B4 when the actual cell address you type could be either **B1:B4** or **b1:b4**.

Finally, if you are relatively new to the computer keyboard, remember not to type the letter l for 1 (one), or the letter O when you mean 0 (zero). Likewise, be careful about the cell reference A11 (A-eleven)) and the word All.

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