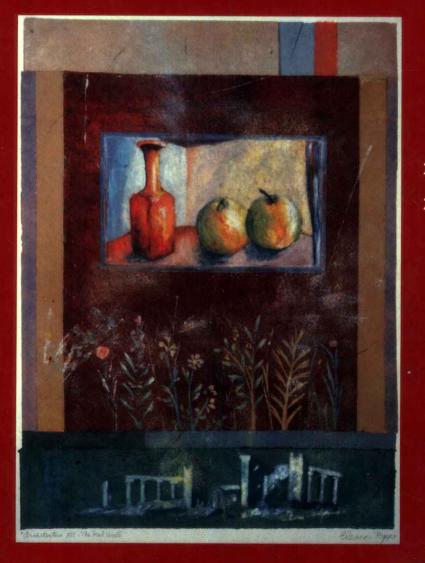
# The PRACTICAL guide to

# Lotus 1-2-3

for DOS



Covers all releases from 2.0 through 2.4 & 3.0 through 3.4

Patrick Bultema



# The Practical Guide to Lotus 1-2-3

for DOS

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## **Publisher's Preface**

In 1989, Lotus 1-2-3 release 3.0 became available. This release offered some important new features including three-dimensional spreadsheets. Although release 3.0 was intended to replace release 2.01, it soon became apparent that the demand for release 2 was going to continue. As a result, Lotus Development Corporation decided to provide an upgrade for release 2.01 called release 2.2. This release also offered some important new features including a cell linking feature, but it retained its one-dimensional nature.

Since then, Lotus Development Corporation has provided two upgrade paths. Lotus release 2.2 has been upgraded twice (releases 2.3 and 2.4), and release 3.0 has been upgraded twice (releases 3.1 and 3.4). Besides the enhancements that have been provided by each of these upgrades, add-in programs like WYSIWYG, Smartlcons, Backsolver, and the Macro Library Manager have been included with the recent releases, and each of these programs provides some new features.

The trouble with all of these enhancements is that they've made *Lotus 1-2-3* more difficult to master. They've added more options to the menus, which were already several layers deep and wide, so it's harder to find the options you're looking for. They've made it harder for you to identify the essential features that you need to master. And they've made it harder for you to figure out which advanced features you need and which ones you should avoid using.

In short, the Lotus 1-2-3 enhancements of the last five years have been a mixed blessing. Yes, they've provided some new capabilities that most Lotus users can benefit from. But they've also created new instructional and reference problems that I don't think have been adequately addressed by the training and book publishing industries. As a result, most Lotus users today aren't taking full advantage of the enhancements of the last five years. And most Lotus users today aren't working more productively than they were five years ago.

That's why we've kept two goals in mind in writing this book. The first goal is to teach you how to use the *Lotus* features that you need for your projects as quickly and easily as possible. That includes the basic features of the early releases of *Lotus* as well as the advanced features of all the *Lotus* releases. The second goal is to provide a reference that's quick and easy to use...whether you're looking up an advanced feature that's completely new to you or a basic feature that you don't use often enough to have memorized.

#### How this book differs from all the other Lotus books on the shelf

During the last five years, so many *Lotus* books have been published that trying to select the right book for your requirements can be a difficult job. So let me quickly tell you some ways in which this book differs from the others on the shelf.

First, this book has a unique modular organization that lets you read the chapters in whatever sequence you prefer. That means you can learn whatever you need to learn when you need to learn it. If you study the table of contents, you can see that most of the chapters are based on the skills that a *Lotus* user needs to perform, not on the command structure of *Lotus*. That makes it easier for you to find the chapter that teaches the skills that you need for a specific requirement.

Second, we believe our book will help you learn more quickly than you can with any competing book. That's made possible by the modular organization of our book and our emphasis on summaries and illustrations. Although other books will help you learn *Lotus* too, most of them force you to learn at a frustratingly slow pace. Often, in fact, the pace is so slow that you decide that new functions and features aren't worth learning, so you stay with the ones you already know. With this book, though, you can learn a new *Lotus* skill any time you have ten minutes to spare.

Third, we believe our book is the most efficient Lotus reference book that's currently available. This again is made possible by the book's modular organization and our emphasis on summaries and illustrations. Because most of the chapters present the skills for a single purpose or a single feature, you can usually find everything you need to know in a single chapter. Then, you just have to look through the summaries and illustrations to find the information that you need.

Last, we believe this is the most practical *Lotus* book that you can find. That's why we call it *The Practical Guide to Lotus 1-2-3*. In each chapter, you not only learn specific *Lotus* skills, but you get practical advice on when and how best to use them. To keep the practical perspective, this book doesn't teach every option of each command because some just waste your time. But if you want to learn how to use all of the commands, functions, and features that let you get more done in less time, this book is for you.

#### What this book does

This book presents all of the functions and features that are available with any Lotus 1-2-3 release from 2.0 through 2.4 and from 3.0 through 3.4. It also presents six of the seven add-in programs that come with releases 2.4 and 3.4. And it presents all of the functions, features, and add-in programs with a practical perspective so you can easily decide which ones you should be using for your projects.

If you look at the table of contents, you can see that this book is divided into five sections. Section 1 presents the skills that every *Lotus* user should master because these are the skills that help you work smarter and faster. Section 2 presents the skills that you need for special purposes such as working with large spreadsheets, sorting the data in a spreadsheet, and linking cells between spreadsheets. Most *Lotus* users

need some but not all of these skills. Section 3 presents the skills that you need for making effective business presentations that include graphs. And section 4 presents three features that definitely aren't for everybody: including the macro feature, the database feature, and the *Smartlcons* feature. Then, the one chapter in section 5 presents practical advice for upgrading to a later *Lotus* release if you're not satisfied with the release you have and for upgrading your PC if you're not satisfied with the *Lotus* performance that you're getting from it.

To help you get the maximum benefit from this book, all of the chapters are written as independent modules. That means you can skip to any chapter in the book without reading the previous chapters. If, for example, you want to know how to import data from a database program into *Lotus*, you can skip to chapter 12. If you want to learn how to use add-in programs, you can skip to chapter 14. If you want to learn how to use a mouse and the *Smartlcons* with *Lotus*, you can skip to chapter 21. If you want to learn how to protect the cells in a spreadsheet so you can have someone else update it with no fear of lost formulas, you can skip back to chapter 9. And if you want to learn how to use *Lotus* to access data from an external database like a *dBase IV* or *Paradox* database, you can skip ahead to chapter 20.

#### How the summaries and illustrations help

To help you learn more easily, this book is packed with summaries and illustrations. In each chapter, you get summaries of the commands and keystrokes for the functions and features that are presented. You get examples of how the *Lotus* commands work, including before and after screen images. And you get step-by-step procedures so there's no mistaking what you have to do to perform a function. Summaries and illustrations like these make it easy for you to learn from this book, even when you're not at your PC.

But the summaries and illustrations are more than just learning aids. They're also the best reference materials we know of. If, for example, you want to use the /Data Fill command to enter a sequence of values into a range of cells, figure 1-6 shows you how to do that. If you want to sort the data in a range of cells, figures 10-1 through 10-5 show you what you need to know. And if you want to review all of the commands for setting defaults, figures 15-1 through 15-3 give you the summaries you need. Normally, when you use the figures for reference, you don't have to read the related text because the figures tell you everything you need to know.

#### Who this book is for

This book is designed for people who want to get more from Lotus 1-2-3. That includes the people who have recently taken a beginning course in Lotus and are now ready to learn more about Lotus. But it also includes the many thousands of people who have been using Lotus for years and still haven't mastered the Lotus skills that will help them get more done in less time.

What are the prerequisites for using this book? A minimum set of *Lotus 1-2-3* skills. In general, that means you should already know how to create, print, and save a simple spreadsheet. And it means that you should already know how to retrieve and modify an existing spreadsheet.

To find out whether you have the minimum set of skills, you can read the Introduction to this book. It reviews the skills that the book assumes that you have. If you can read and understand this introduction, you are ready for this book. And if you already know how to use another spreadsheet program, but not *Lotus 1-2-3*, you can probably learn the minimum set of *Lotus* skills from this introduction.

If you can't understand everything in the introduction, though, you need to learn more about Lotus 1-2-3. The best way to do that is to take the tutorial that's presented in the companion book to this one: The Least You Need to Know About Lotus 1-2-3. If you are already familiar with Lotus 1-2-3 or some other spreadsheet program, you can complete this tutorial in three hours or less. And if you're a complete novice to PCs and to spreadsheet software, you can complete this tutorial in six hours or less. When you complete the tutorial, you're ready for this book.

In terms of hardware and software, this book is for anyone who uses *Lotus* for DOS, not *Windows*, on a PC with a hard disk. That includes users of all releases of *Lotus* from 2.0 through 2.4 and from 3.0 through 3.4. Because subsequent releases of *Lotus* probably won't have much effect on the skills presented in this book, you should be able to use this book with newer *Lotus* releases too.

#### Conclusion

We wrote this book because we don't think that any of the competing *Lotus* books have reached acceptable standards for training and reference in the 90's. In particular, other books don't do an adequate job of presenting the new features and add-in programs of the more recent *Lotus* releases. Within these pages, we've tried to raise the standards for *Lotus* books.

For those of you who may be interested, all of our books are developed by staff, not free-lance, writers so we have complete control over the quality of our books. In this case, the first draft of the manuscript was written by Pat Bultema, who left for another job before he completed the project. At that point, Michael Farino stepped in to write some additional topics and chapters and to provide the technical expertise for the completion of the project. Fortunately, some synergy resulted from the combination of perspectives and talents, so I think we ended up with a better book than we would have otherwise.

If you have any comments or criticisms, we would enjoy hearing from you. That's why there's a postage-paid comment form at the back of the book. I thank you for reading this book. And I sure hope it helps you work smarter, faster, and with more satisfaction. If it does, please drop me a note.

Mike Murach, Publisher Fresno, California January 15, 1993

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#### Introduction

# What you should know how to do before you start using this book

This book is designed for someone who has a minimum set of *Lotus* 1-2-3 skills. In general, that means you should already know how to create, print, and save a simple spreadsheet. And it means that you should already know how to retrieve and modify an existing spreadsheet.

To make sure that you have the minimum set of skills, this introductory chapter reviews the skills that the book assumes that you already have. If you already know how to use *Lotus 1-2-3*, you'll probably pick up a few ideas in this introduction that will help you improve your efficiency right away. If you already know how to use another spreadsheet program, but not *Lotus 1-2-3*, you can probably learn the minimum set of *Lotus* skills from this introduction. Either way, if you can read and understand this introduction, you are ready to benefit from this book. Then, you can read any chapter in this book to learn new skills or to refresh your memory about how to use a skill that you haven't quite mastered.

If you can't understand everything in this introduction, though, you need to learn more about *Lotus 1-2-3*. The best way to do that is to take the tutorial that's presented in the companion book to this one: *The Least You Need to Know About Lotus 1-2-3*. If you are already familiar with *Lotus 1-2-3* or some other spreadsheet program, you can complete this tutorial in three hours or less. And if you're a complete novice to PCs and to spreadsheet software, you can complete this tutorial in six hours or less.

Although *Lotus* 1-2-3 is the official name of the spreadsheet program that this book covers, many people use just the name *Lotus* to refer to *Lotus* 1-2-3. As a result, I'll use just *Lotus* whenever that is appropriate from now on. As you can imagine, using this abbreviation will save hundreds of repetitions of the numbers 1-2-3 in the remainder of this book.

#### How to start Lotus and how to tell what release you're using

Of course, you should already know how you start *Lotus*. How you do that depends on how your PC is set up. If your PC displays a menu or a shell program when you start it up, you can probably start *Lotus* by selecting an option from a menu. If your PC displays the DOS command prompt, you may be able to start *Lotus* by entering a batch file command like 123 at the command prompt:

C:>123

But if that doesn't work, you can always start *Lotus* by entering a series of commands like this at the command prompt:

D:>c: C:>cd \123 C:\123>123

When Lotus starts, it should display a spreadsheet screen like the second one in figure I-1. In some Lotus books or manuals, you'll see the spreadsheet referred to as a worksheet. You'll also see the spreadsheet screen referred to as the worksheet screen. In this book, though, I will use the terms spreadsheet and spreadsheet screen exclusively.

Some PCs, though, are set up so *Lotus* starts with the Access System menu shown in the first screen in figure I-1. Then, to get to the spreadsheet screen, all you have to do is press the Enter key. This selects the first option in the menu that leads to the spreadsheet screen. To start the Access System menu from the DOS command prompt, you usually enter *lotus* instead of 123 like this:

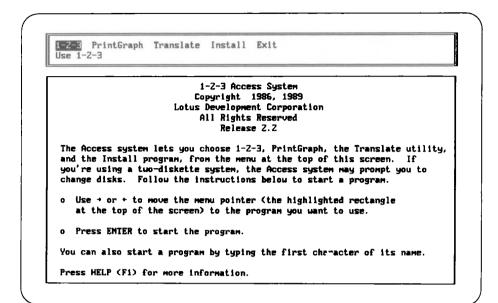
C:>cd \123 C:\123>lotus

When Lotus starts with the Access System menu screen, you can easily tell which release of Lotus is installed on your PC. In figure I-1 for example, the Access System menu screen shows that it is release 2.2. But even when Lotus starts with the spreadsheet screen, it first displays a temporary screen that indicates the release number. This screen is displayed for a few seconds, and then it's replaced by the spreadsheet screen.

The *Lotus* releases that are currently in use range from 2.0 through 2.4 and from releases 3.0 through 3.4. These releases are presented in more detail in chapter 22. For now, though, you should realize that this book works for all of these releases. That way, you can use this book no matter which release of *Lotus* you're using.

To make it easier to refer to the releases from 2.0 through 2.4, I will refer to them as the 2.X releases whenever that is appropriate. Similarly, I'll refer to the releases starting with 3.0 as the 3.X releases. Today, Lotus Development Corporation is continuing to develop both the 2.X and 3.X releases so both should be available for many years to come.

### The Access System menu



### The spreadsheet (or worksheet) screen

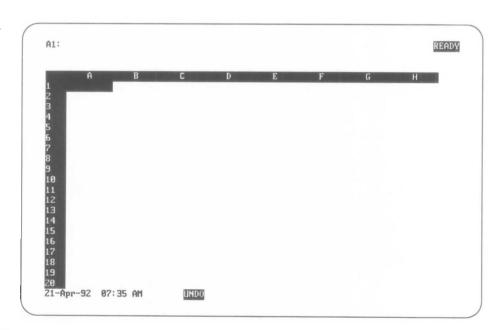


Figure I-1 The two starting screens for release 2.2 of Lotus 1-2-3

#### How to handle variations in the spreadsheet screen from one release of Lotus to another

In this book, all of the spreadsheet screens are for release 2.2 unless some other release is specifically identified. I'm using screens for that release because they are less cluttered than the screens for some of the later releases. So if you're using release 2.2 or an earlier release, your starting spreadsheet screen will look like the one in figure I-1. If you're using one of the later releases of *Lotus*, though, your starting screen will have some additional features. Although these additions shouldn't affect the way you use *Lotus*, you should at least know what they are.

**Variations for releases 2.3 and 2.4** If you're using *Lotus* release 2.3 or 2.4, you'll see five small symbols on the right side of the spreadsheet screen. They are designed for use with the mouse. If you use *WYSIWYG* with release 2.4, you'll see an entire column of symbols on the right side of the screen. These symbols, called *icons*, are also designed for use with a mouse. In chapter 21, you can learn how to use the mouse and the icons with these releases of *Lotus*.

**Variations for the 3.X releases** If you're using one of the 3.X releases, the information in the upper left of the screen will look like this:

#### A:A1:

Here, the A: means that you're working on the first spreadsheet. These versions of *Lotus* allow you to work on more than one spreadsheet at a time. You'll also see an A over the column of numbers on the left side of the screen. In chapter 11, you can learn how to work on more than one spreadsheet at a time. There, you'll see that *Lotus* uses the letters B, C, and so on to identify the other spreadsheets.

If you use WYSIWYG with one of the 3.X releases, you can use a mouse for some operations. If you use WYSIWYG with release 3.4, you'll see a column of symbols on the right side of the screen. These symbols, called icons, are designed for use with a mouse. In chapter 21, you can learn how to use the mouse and the icons with WYSIWYG.

#### How to interpret the Lotus spreadsheet screen

To make sure that you know all of the terms that apply to the *Lotus* spreadsheet screen, figure I-2 presents them. Here, you can see that the main portion of the screen consists of vertical *columns* and horizontal *rows*. The columns are identified by letters, and the rows are identified by numbers. Although you can see only 20 rows in this screen, *Lotus* provides for rows numbered from 1 to 8192. Similarly, although you can see only five *columns*, *Lotus* provides for a total of 256. The first 26 are labeled A through Z, the next 26 from AA through AZ, the next 26 from BA through BZ, and so on to IV.

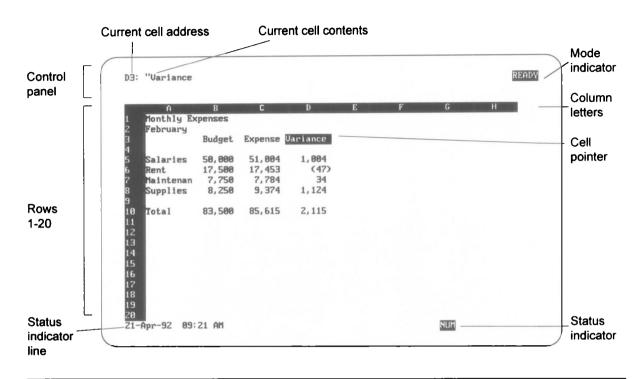


Figure I-2 The terms that apply to the Lotus spreadsheet screen

The intersection of a column and a row is called a *cell*. Each cell can be identified by a *cell address* that consists of its column letter and row number. Thus, A1 is the address of the cell in the first column and first row, and C4 is the address of the cell in the third column and fourth row.

The *cell pointer* is the highlight on the screen that points to just one cell. This cell is called the *current cell*. In figure I-2, the cell pointer is on D3 so the current cell is D3.

The top three lines of a spreadsheet screen are called the *control panel*. This panel consists of information that changes as you work with a spreadsheet. In figure I-2, the information on the left side of the panel gives the cell address of the current cell. On the right side of the panel, the *mode indicator* indicates that *Lotus* is ready for the next operation. This indicator changes as you perform specific operations.

The bottom line of a spreadsheet screen is called the *status indicator line*. On the left side of this line, you'll usually see the current date and time as in figure I-2. On some systems, though, you may see the file name for the spreadsheet that's in use instead of the date and time.

To the right of the file name or the date and time, you may find one or more *status indicators*. In figure I-2, the NUM status indicator is shown; in figure I-1, the UNDO indicator is shown. When the UNDO indicator is on,

you can "undo" the last change that you made to the spreadsheet you're working on by pressing the F4 key while you hold down the Alt key. In chapter 3, you'll learn how to turn off this feature if it is on, and you'll learn why we recommend that you keep it off.

#### How to use the keyboard with Lotus

Two kinds of keyboards are in use today: the 84-key keyboard and the 101-key keyboard. On the right side of both keyboards is a ten-key numeric pad. To use these numeric pads correctly, you have to know how the Num-lock key works.

If you study the numeric pads, you can see that each numbered key within the numeric pad also has a control function, with the exception of the 5-key. For instance, the 7-key is also the Home key; the 8-key is also the Up arrow key; and the 9-key is also the Page-up (PgUp) key. Then, if the Num-lock light is on, each of the keys represents its decimal value or the decimal point. If the Num-lock light is off, each of the keys represents its control function. To turn the Num-lock light on or off, you press the Num-lock key.

Because this doubling up of keyboard meanings can cause some entry errors, most people prefer the 101-key keyboard. Here, the control functions of the numeric pad are duplicated on control keys that are located between the typewriter keys and the numeric pad. Then, if you keep the Num-lock light on, you can use the control pad for control functions and the numeric pad for numeric entries. Because *Lotus* normally requires that you use control functions along with numeric data entry, the 101-key keyboard is especially useful for *Lotus* applications.

Figure I-3 summaries the control keys that you'll use most frequently with *Lotus*. The Arrow keys move the cell pointer around the spreadsheet. The pointer moves one cell in the direction of the arrow for each keystroke. In contrast, the Page-up and Page-down keys move the cell pointer up or down a full screen with each keystroke. Similarly, the Tab key and the Shift+Tab keystroke combination (that means you press the Tab key while you hold down the Shift key) moves the cell pointer a full screen to the right or left with each keystroke. And the Ctrl+Right arrow and the Ctrl+Left arrow combinations also move the cell pointer a full screen to the right or left.

To return the cell pointer to cell A1 with a single keystroke, you press the Home key. The counterpart to this is the combination of the End and Home keys. In this case, you press the End key; then, you press the Home key (you don't hold one down while you press the other). This moves the cursor to the lower right corner of the spreadsheet. That's the cell that's at the intersection of the right-most column and the lowest row that are used by the spreadsheet.

When you use the Num-lock key to turn the Num-lock light on, the NUM indicator appears in the status indicator line at the bottom of the *Lotus* screen.

Keys	Function
Arrow key	Move the cell pointer one cell in the direction of the arrow.
Page-up	Move the cell pointer up one screen.
Page-down	Move the cell pointer down one screen.
Tab	Move the cell pointer one screen to the right.
Shift+Tab	Move the cell pointer one screen to the left.
Ctrl+Right arrow	Move the cell pointer one screen to the right.
Ctrl+Left arrow	Move the cell pointer one screen to the left.
Home	Move the cell pointer to the home position (A1).
End Home	Move the cell pointer to the cell that is at the intersection of the bottom row and the right-most column that are used in the spreadsheet.
Num-lock	Turn the Numeric lock function on if it's off; turn it off if it's on.
Scroll-lock	Turn the Scroll lock function on if it's off; turn it off if it's on. When Scroll-lock is off, the cell pointer moves when you press the Arrow keys. When Scroll-lock is on, the cell pointer stays where it is and the entire window moves. Usually, you'll want to leave this off.
F1	Access the Lotus Help feature.
F2 ·	Edit a label, value, or formula.
1	Access the Lotus menu system.
Esc	Cancel an operation or go back one step within a command or menu.

Figure I-3 Some of the control keys that affect Lotus operations

Similarly, the Caps-lock key turns the Caps-lock light on or off. When it's on, the typewriter keyboard is set so all letter keystrokes enter capital letters instead of lowercase letters. Then, the CAPS status indicator appears in the status indicator line.

The Scroll-lock key works like the other lock keys in that it turns the Scroll-lock light on or off. If it's on, the SCROLL indicator appears in the status indicator line. To appreciate what this key does, you need to experiment with it on your PC because it's hard to describe. Normally, though, you won't want to use this feature so you'll probably keep the

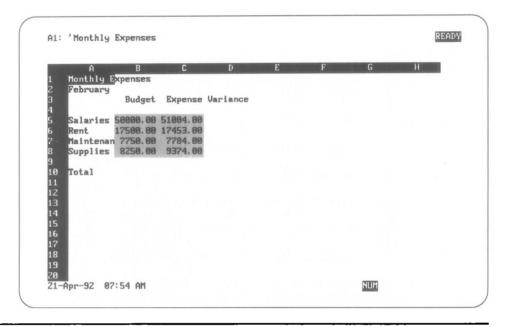


Figure I-4 The labels (unshaded) and values (shaded) of the expense spreadsheet

Scroll-lock light off. As a result, I won't say any more about this feature in this book.

The keys numbered from F1 through F10 on the 84-key keyboard and from F1 through F12 on the 101-key keyboard are called *function keys*. Two of the most useful of these are the F1 and F2 keys. You use the F1 key to access the *Lotus* Help feature and the F2 key to edit the entry in a cell.

The last two keys in this summary are the Slash (/) key and the Esc (Escape) key. The Slash key is used to access the *Lotus* menu system. The Esc key can be used to cancel an operation or a command.

#### How to enter labels into a spreadsheet

If you've used *Lotus* before, you should already know how to enter labels into a spreadsheet. In the spreadsheet in figure I-4, for example, the labels are the cell entries that aren't shaded.

A *label* is used for descriptive purposes. It can't be operated upon numerically. To enter a label into a cell, you type the letters or numbers that the label contains. As you type the entry, *Lotus* displays it in the second line of the control panel at the top of the screen. Then, you press the Enter key to put the label into the current cell.

If you make any mistakes as you type the label, you can use the Backspace key to erase characters so you can type the correct ones. Similarly,