Preface

Welcome to *Excel 2002 Power Programming with VBA*. If your job involves developing spreadsheets that others will use — or if you simply want to get the most out of Excel — you've come to the right place.

Why I Wrote This Book

Quite a few advanced Excel books are available, but this book is still the only one that deals with spreadsheet application development from a larger perspective. VBA is just one component (albeit a fairly large component) of application development. Excel is an extremely deep software product: It has many interesting features that lurk in the background, unbeknownst to the typical user. And you can use some of the well-known features in novel ways.

Millions of people throughout the world use Excel. I monitor the spreadsheet-related newsgroups on the Internet, and it's very clear to me that people need (and want) help in the areas that this book covers. My guess is that only five percent of Excel users really understand what the product is capable of. In this book, I attempt to nudge you into that elite company. Are you up to it?

What You Need to Know

This is not a book for beginning Excel users. If you have no experience with Excel, I recommend that you read either of the following books:

- *Excel 2002 for Windows For Dummies,* by Greg Harvey, is written for users who want to know just enough to get by, and want to be entertained in the process.
- *Excel 2002 Bible* (by yours truly) provides comprehensive coverage of all the features of Excel. It is meant for users of all levels.

To get the most out of this book, you should be a relatively experienced Excel user. I didn't spend much time writing basic how-to information. In fact, I assume that you know the following:

- How to create workbooks, insert sheets, save files, and so on
- How to navigate through a workbook
- How to use the menus and shortcut menus

- ✦ How to manage Excel's toolbars
- ✦ How to enter formulas
- ✦ How to use Excel's worksheet functions
- ✦ How to name cells and ranges
- ✦ How to use basic Windows features, such as file management techniques and the clipboard

If you don't know how to perform the preceding tasks, you may find some of this material over your head, so consider yourself warned. If you're an experienced spreadsheet user who hasn't used Excel 2002, Chapter 2 presents a short overview of what this product offers.

What You Need to Have

To make the best use of this book, you need a copy of Excel. Although the book was written with Excel 2002 in mind, most of the material also applies to Excel 2000 and Excel 97. If you use an earlier version of Excel, you're reading the wrong book. Most of the material in this book also applies to Excel for Macintosh. However, I did no compatibility testing with the Mac version, so you're on your own.

Any computer system that can run Windows will suffice, but you'll be much better off with a fast Pentium-based machine with plenty of memory. Excel is a large program, and using it on a slower system or a system with minimal memory can be extremely frustrating.

I recommend using a high-resolution video driver (800×600 is okay, 1024×768 is excellent, and 1600×1024 is sheer heaven). A standard VGA resolution will do in a pinch, but it just doesn't let you see enough on-screen.

To make use of the examples on the companion CD, you will also need a CD-ROM drive.

Conventions in This Book

Take a minute to skim this section and learn some of the typographic conventions used throughout this book.

Keyboard conventions

You need to use the keyboard to enter data. In addition, you can work with menus and dialog boxes directly from the keyboard — a method you may find easier if your hands are already positioned over the keys.

Input

Input that you type from the keyboard appears in boldface — for example, enter **=SUM(B2: B50)** into cell B51.

More lengthy input usually appears on a separate line in a monospace font. For example, I may instruct you to enter the following formula:

```
=VLOOKUP(STOCKNUMBER,PRICELIST,2)
```

VBA code

This book contains many snippets of VBA code, as well as complete procedure listings. Each listing appears in a monospace font; each line of code occupies a separate line. (I copied these listings directly from the VBA module and pasted them into my word processor.) To make the code easier to read, I often use one or more tabs to create indentations. Indentation is optional, but it does help to delineate statements that go together.

If a line of code doesn't fit on a single line in this book, I use the standard VBA line continuation sequence: At the end of a line, a space followed by an underscore character indicates that the line of code extends to the next line. For example, the following two lines are a single line of code:

```
If Right(ActiveCell, 1) = "!" Then ActiveCell _
  = Left(ActiveCell, Len(ActiveCell) - 1)
```

You can enter this code either on two lines, exactly as shown, or on a single line without the underscore character.

Functions, filenames, and named ranges

Excel's worksheet functions appear in uppercase monospace font, like so: "Enter a `SUM` formula in cell C20." VBA procedure names, properties, methods, and objects appear in monospace font: "Execute the `GetTotals` procedure." I often use mixed upper- and lowercase to make these names easier to read.

Mouse conventions

If you're reading this book, you're well versed in mouse usage. The mouse terminology I use is all standard fare: pointing, clicking, right-clicking, dragging, and so on.

What the Icons Mean

Throughout the book, I've used icons in the left margin to call your attention to points that are particularly important.

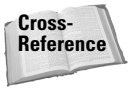
I use this icon to indicate that the material discussed is new to Excel 2002. If you're developing an application that will be used for earlier versions of Excel, pay particular attention to these icons.

I use Note icons to tell you that something is important—perhaps a concept that may help you master the task at hand or something fundamental for understanding subsequent material.

Tip icons indicate a more efficient way of doing something or a technique that may not be obvious.

These icons indicate that an example file is on the companion CD-ROM (see "About the Companion CD-ROM," later in the introduction). This CD holds many of the examples that I cover in the book, as well as a trial copy of my popular Power Utility Pak software.

I use Caution icons when the operation that I'm describing can cause problems if you're not careful.



I use the Cross Reference icon to refer you to other chapters that have more to say on a subject.

How This Book Is Organized

The chapters of this book are grouped into seven main parts. In addition, I've included a few appendixes that provide supplemental information.

Part I: Some Essential Background

In this part, I set the stage for the rest of the book. Chapter 1 presents a brief history of spreadsheets so that you can see how Excel fits into the big picture. In Chapter 2, I offer a conceptual overview of Excel 2002—quite useful for experienced spreadsheet users who are switching to Excel. In Chapter 3, I cover the essentials of formulas, including some clever techniques that may be new to you. Chapter 4 covers the ins and outs of the various files used and generated by Excel.

Part II: Excel Application Development

This part consists of just two chapters. In Chapter 5, I broadly discuss the concept of a spreadsheet application. Chapter 6 goes into more detail and covers the steps typically involved in a spreadsheet application development project.

Part III: Understanding Visual Basic for Applications

Chapters 7 through 11 make up Part III, and these chapters include everything you need to know to learn VBA. In this part, I introduce you to VBA, provide programming fundamentals, and detail how to develop VBA subroutines and functions. Chapter 11 contains tons of useful VBA examples.

Part IV: Working with UserForms

The four chapters in this part cover custom dialog boxes (also known as UserForms). Chapter 12 presents some built-in alternatives to creating custom UserForms. Chapter 13 provides an introduction to UserForms and the various controls you can use. Chapters 14 and 15 present many examples of custom dialog boxes, ranging from basic to advanced.

Part V: Advanced Programming Techniques

Part V covers additional techniques that are often considered advanced. The first three chapters discuss how to develop utilities and how to use VBA to work with pivot tables and charts. Chapter 19 covers the topic of event-handling, which enables you to execute procedures automatically when certain events occur. Chapter 20 discusses various techniques that you can use to interact with other applications (such as Word). Chapter 21 concludes Part V with an in-depth discussion of creating add-ins.

Part VI: Developing Applications

The chapters in Part VI deal with important elements of creating user-oriented applications. Chapters 22 and 23 provide information on creating custom toolbars and menus. Chapter 24 presents several different ways to provide online help for your applications. In Chapter 25, I present some basic information about developing user-oriented applications, and I describe such an application in detail.

Part VII: Other Topics

The five chapters in Part VII cover additional topics that you may find helpful. Chapter 26 presents information regarding compatibility. In Chapter 27, I discuss various ways to use VBA to work with files. In Chapter 28, I explain how to use VBA

to manipulate Visual Basic components such as UserForms and modules. Chapter 29 covers the topic of class modules. I finish the part with a useful chapter that answers many common questions about Excel programming.

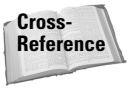
Appendixes

Five appendixes round out the book. Appendix A contains useful information about Excel resources online. Appendix B is a reference guide to all of VBA's keywords (statements and functions). I explain VBA error codes in Appendix C, and Appendix D is a handy ANSI code reference chart. The final appendix describes the files available on the companion CD-ROM.

About the Companion CD-ROM

The inside back cover of this book contains a CD-ROM that holds many useful examples that I discuss in the text. When I write about computer-related material, I emphasize learning by example. I know that I learn more from a well-thought-out example than from reading a dozen pages in a book. I assume that this is true for many other people. Consequently, I spent more time developing the examples on the CD-ROM than I did writing chapters.

The files on the companion CD-ROM are not compressed, so you can access them directly from the CD.



Refer to Appendix E for a description of each file on the CD-ROM.

All CD-ROM files are read-only files. Therefore, if you open a file from the CD-ROM and make any changes to it, you need to save it to your hard drive. In addition, if you copy a file from the CD-ROM to your hard drive, the file retains its read-only attribute. To change this attribute after copying a file, right-click the filename or icon and select Properties from the shortcut menu. In the Properties dialog box, click the General tab and remove the check mark from the Read-only checkbox.

About the Power Utility Pak Offer

Toward the back of the book, you'll find a coupon that you can redeem for a free copy of my popular Power Utility Pak software (normally $39.95). PUP is an award-winning collection of useful Excel utilities and many new worksheet functions. I developed this package exclusively with VBA.

I think you'll find this product useful in your day-to-day work with Excel, and I urge you to take advantage of this free offer. You can also purchase the complete VBA source code for a nominal fee. Studying the code is an excellent way to pick up some useful programming techniques.

You can take Power Utility Pak for a test drive by installing the 30-day trial version from the companion CD-ROM.

How to Use This Book

You can use this book any way you please. If you choose to read it cover to cover, be my guest. But because I'm dealing with intermediate-to-advanced subject matter, the chapter order is often immaterial. I suspect that most readers will skip around, picking up useful tidbits here and there. If you're faced with a challenging task, you might try the index first to see whether the book specifically addresses your problem.

Reach Out

The publisher and I want your feedback. After you have had a chance to use this book, please take a moment to visit the Hungry Minds, Inc. Web site to register your book and give us your comments. (See the "my2cents.hungryminds.com" page at the back of this book for more details.) Please be honest in your evaluation. If you thought a particular chapter didn't tell you enough, let me know. Of course, I would prefer to receive comments like "This is the best book I've ever read," or "Thanks to this book, I was promoted and now make $90,000 a year."

I get at least a dozen questions every day, via e-mail, from people who have read my books. I appreciate the feedback. Unfortunately, I simply don't have the time to reply to questions. Appendix A provides a good list of sources that *can* answer your questions.

I also invite you to visit my Web site, which contains lots of Excel-related material. Despite the massive attempts to make this book completely accurate, a few errors have probably crept into its pages. My Web site includes a list of any such errors. The URL is

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http://www.j-walk.com/ss/
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