

Mastering AutoCAD® 2008 and AutoCAD LT® 2008

George Omura



Wiley Publishing, Inc.

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and AutoCAD LT® 2008**

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Best regards,
Neil Edde

A handwritten signature in black ink, appearing to read 'Neil Edde', with a stylized, flowing script.

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To my two wonderful sons, Arthur and Charles, and to Susan, who helps me to put things in perspective.

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You can see the handiwork of Paul Richardson (not the same Paul Richardson who did the technical editing) and Christine Merredith of Technical Publications in the sidebars that discuss the San Francisco Main Library. Thanks also go to the architectural firms of Pei Cobb Freed & Partners and Simon Martin-Vegue Winkelstein Morris Associated Architects for generously granting permission to reproduce drawings from their design of the San Francisco Main Library.

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And a great big thank you to my family and friends, who have always been a source of inspiration and understanding.

Foreword

Congratulations!

As someone interested in AutoCAD or AutoCAD LT, or as someone who uses one of those products to make a living as many do, you have truly made a worthwhile investment.

First of all, it's all there. You are not going to get a more comprehensive guide than the one you hold in your hands. Everything from the basics of AutoCAD to programming in AutoLISP and VBA to installing and setting up AutoCAD is covered.

Moreover, the information is well-organized. Both the contents at a glance and a comprehensive index make retrieving information you need a cinch.

My personal favorites are the real-world AutoCAD drawings that are available for download. As every designer knows, there is no better way to learn than by doing, and the drawings are an excellent tool to guide you through a series of exercises available with each chapter in the book.

Don't let the size of the book intimidate you. The book is written to be comprehensive, but I don't believe anyone uses all the features in AutoCAD. Pick out the tools that you want to learn about and proceed from there, or if you are interested in learning new things, pick a different topic each week to learn about.

Whether you're new to AutoCAD or a veteran, you will undoubtedly find this book to be an excellent resource.

Now the only question left is: what will you design?

Abhi Singh
AutoCAD Product Manager
Autodesk, Inc.

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Introduction

Welcome to *Mastering AutoCAD 2008 and AutoCAD LT 2008*. As many readers have already discovered, this book is a unique blend of tutorial and reference that includes everything you need to get started and stay ahead with AutoCAD. With this edition, you get coverage of the latest features of both AutoCAD 2008 and AutoCAD LT 2008, plus the latest information on new features.

How to Use This Book

Rather than just showing you how each command works, this book shows you AutoCAD 2008 in the context of a meaningful activity. You'll learn how to use commands while working on an actual project and progressing toward a goal. This book also provides a foundation on which you can build your own methods for using AutoCAD and become an AutoCAD expert. For this reason, I haven't covered every single command or every permutation of a command response. You should think of this book as a way to get a detailed look at AutoCAD as it's used on a real project. As you follow the exercises, I encourage you to also explore AutoCAD on your own, applying the techniques you learn to your own work.

Both experienced and beginning AutoCAD users will find this book useful. If you aren't an experienced user, the way to get the most out of this book is to approach it as a tutorial—chapter by chapter, at least for the first two parts of the book. You'll find that each chapter builds on the skills and information you learned in the previous one. To help you navigate, the exercises are shown in numbered steps. To address the needs of all readers worldwide, the exercises provide both U.S. (feet/inches) and metric measurements.

After you've mastered the material in Parts 1 and 2, you can follow your interests and explore other parts of the book in whatever order you choose. Part 3 takes you to a more advanced skill level. There, you'll learn more about storing and sharing drawing data and how to create more complex drawings. If you're interested in 3D, check out Part 4. If you want to start customizing right away, go to Part 5. You can check out Chapters 27 and 28 at any time because they give you general information about sharing AutoCAD files with your coworkers and consultants. Chapter 28 focuses on AutoCAD's Sheet Set Manager, which offers a way to organize your multisheet projects.

You can also use this book as a ready reference for your day-to-day problems and questions about commands. Optional exercises at the end of each chapter will help you review and look at different ways to apply the information you've learned. Experienced users will also find this book a handy reference tool.

Finally, if you run into problems using AutoCAD, see the "When Things Go Wrong" section in Appendix B. You'll find a list of the most common issues that users face when first learning AutoCAD.

AutoCAD 2008 and AutoCAD LT 2008

Autodesk has released both AutoCAD 2008 and AutoCAD LT 2008 simultaneously. Not surprisingly, they're nearly identical in the way they look and work. You can share files between the two programs with complete confidence that you won't lose data or corrupt files. The main differences are that LT doesn't support all the 3D functions of AutoCAD 2008, nor does it support the customization tools of AutoLISP and VBA. But LT still has plenty to offer in both the productivity and customization areas. And because they're so similar, I can present material for both programs with only minor adjustments.


 ACAD
only

When a feature is discussed that is available only in AutoCAD 2008, you'll see the AutoCAD Only icon.

You'll also see warning messages when tutorials vary between AutoCAD 2008 and LT. If only minor differences occur, you'll see either a warning message or directions embedded in the tutorial indicating the differences between the two programs.


 LT
only

In the few instances in which LT has a feature that isn't available in AutoCAD 2008, you'll see the LT Only icon.

I've also provided work-around instructions wherever possible when LT doesn't offer a feature found in AutoCAD 2008.

Getting Information Fast

I've included plenty of tips and warnings:

TIP Tips are designed to make practice easier.

WARNING Warnings steer you away from pitfalls.

Also, in each chapter you'll find more extensive tips and discussions in the form of sidebars set off from the main text. To encourage you along the way, some of the sidebars show you how topics in each chapter were applied to a real-world project, the San Francisco Main Library. Together, the tips, warnings, and sidebars provide a wealth of information I have gathered over years of using AutoCAD on a variety of projects in different office environments. You may want to browse through the book, just reading these notes, to get an idea of how they might be useful to you.

Another quick reference you'll find yourself turning to often is Appendix C, which contains descriptions of all the dimension settings with comments on their uses. If you experience any problems, you can consult the "When Things Go Wrong" section in Appendix B.

What to Expect

Mastering AutoCAD 2008 and AutoCAD LT 2008 is divided into five parts, each representing a milestone in your progress toward becoming an expert AutoCAD user. Here is a description of those parts and what they will show you.

Part 1: The Basics

As with any major endeavor, you must begin by tackling small, manageable tasks. In this first part, you'll become familiar with the way AutoCAD looks and feels. Chapter 1, "Exploring the AutoCAD and AutoCAD LT Interface," shows you how to get around in AutoCAD. In Chapter 2, "Creating Your First Drawing," you'll learn how to start and exit the program and how to respond to AutoCAD commands. Chapter 3, "Setting Up and Using AutoCAD's Drafting Tools," tells you how to set up a work area, edit objects, and lay out a drawing. In Chapter 4, "Organizing Objects with Blocks and Groups," you'll explore some tools unique to CAD: symbols, blocks, and layers. As you're introduced to AutoCAD, you'll also get a chance to make some drawings that you can use later in the book and perhaps even in future projects of your own. Chapter 5, "Keeping Track of Layers, Blocks, and Files" shows you how to use layers to keep similar information together and object properties such as line-types to organize things visually.