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Architectural Desktop
and Its Applications

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Introduction

Autodesk's Architectural Desktop is designed to aid the architect, designer, and drafter through all phases of construction document creation. From the earliest stages of conceptual design, through design development, and finally to the finished set of drawings, Architectural Desktop provides the appropriate tools for getting the job done. Architectural Desktop is a set of architectural tools built into the AutoCAD platform. With standard AutoCAD, you have tools such as lines, arcs, circles, and text to complete your design needs. With the addition of object-oriented tools known as Architecture, Engineering, and Construction (AEC) objects, the design process with Architectural Desktop is moved to a new level. The AEC objects are divided into the three major phases of workflow: conceptual design, design development, and documentation drawings. This text provides you with the real-world knowledge and skills needed to accomplish your architectural drawing needs using Architectural Desktop.

Architectural Desktop and Its Applications is a text providing complete coverage of Architectural Desktop. This text is designed to introduce you to the AEC objects and commands used in Architectural Desktop to complete a set of construction documents. The chapters are arranged in an easy-to-understand format, beginning with basic topics and working toward advanced subjects. This text makes the assumption that you have a basic understanding of AutoCAD, although the most important AutoCAD commands relevant to Architectural Desktop are discussed for beginning AutoCAD users and as a review for trained AutoCAD users. ***Architectural Desktop and Its Applications*** provides a detailed explanation of the Architectural Desktop tools that aid in producing professional and accurate drawings. This text is intended for anyone who wants to learn how to use Architectural Desktop effectively to create real-world construction documents and drawings and can be used in secondary, postsecondary, and technical schools. ***Architectural Desktop and Its Applications*** provides the beginning student and the drafting or architectural professional with a complete understanding of Architectural Desktop commands using professional drafting methods and techniques. All software commands are presented in a manner that shows the exact input to be used. This text also contains the following variety of valuable features that help make learning Architectural Desktop easy:

- It is easy to read, use, and understand.
- Learning objectives are provided at the beginning of each chapter to identify what you will learn as a result of completing the chapter.
- Commands are presented in a manner that shows the exact input you should use.
- Notes explain special, alternate, or related applications for using Architectural Desktop.
- Professional Tips provide tricks and tips for using Architectural Desktop.
- Exercises are provided throughout for you to practice as you learn Architectural Desktop.
- Residential and light commercial projects allow you to learn how to use Architectural Desktop in your drafting, engineering, or architectural field.
- Chapter Tests, included on the enclosed Student CD, provide you with the opportunity to review each chapter by answering questions related to the chapter content.

Format of This Text

The format of this text helps you learn how to use Architectural Desktop by example and through complete explanations of each feature. The Student CD also supports your learning. The Exercises allow you to practice while you learn specific content. The Student CD includes Chapter Tests, which provide you with an excellent way to review chapter content.

Accessing Architectural Desktop Commands

In addition to listing available command selection methods, all options are described within the text. For example, the **WALL** command can be accessed by picking **Design** > **Walls** > **Add Wall...** from the pull-down menu, picking the **Wall** tool in the **Design** tool palette, or typing WALLADD. When the command is presented as if it is typed at the keyboard, any available keyboard shortcut is given along with the full command name. One goal of this book is to show you all the methods of using Architectural Desktop commands so you can decide which methods work best for you.

Special Features

Architectural Desktop and Its Applications contains several special features that help you learn and use Architectural Desktop. These features are explained in the following sections.

Learning Objectives

Each chapter leads with learning objectives related to the chapter content. The following is an example of how the objectives are presented.

After completing this book, you will be able to do the following:

- Use Architectural Desktop to prepare drawings for residential and light commercial construction.
- Answer questions related to Architectural Desktop.
- Use Architectural Desktop and drafting-related terminology.
- Do Exercises as you learn Architectural Desktop.
- Use projects to learn Architectural Desktop and create construction documents.

AutoCAD Reviews

Architectural Desktop is a set of architectural tools built into the AutoCAD platform. With standard AutoCAD, you have tools such as lines, arcs, circles, and text to complete your design needs. AutoCAD commands relevant to Architectural Desktop are discussed for beginning AutoCAD users and as a review for trained AutoCAD users. AutoCAD Review features are provided where necessary to help you distinguish AutoCAD instruction from Architectural Desktop content. The more advanced AutoCAD content is found in the general discussion because you might need more than a quick refresher on these topics.

Exercises

An Exercise reference is provided after each Architectural Desktop topic or command lesson, and the Exercises can be found on the enclosed Student CD. The Exercises allow you to practice what you have just learned. Practicing Architectural Desktop applications is one of the most important keys to learning the program effectively. You should complete Exercises at a computer while using Architectural Desktop to reinforce what you have just studied. Some Exercises build on other Exercises, allowing you to develop construction documents as you learn Architectural Desktop. Exercises can be used as only practice or as classroom assignments.

Notes

Notes are another special feature of ***Architectural Desktop and Its Applications***. These features are placed throughout the text. Notes provide you with supplemental information related to the current topic and additional instruction about how features work.

Professional Tips

Professional Tips are another special feature of ***Architectural Desktop and Its Applications***. These features are placed throughout the text. Professional Tips provide you with professional tips and applications related to the current discussion topic, special features of Architectural Desktop, and advanced applications.

Chapter Projects

Drafting projects are one of the most important ways to complete and solidify your learning and understanding of Architectural Desktop. The projects allow you to put into practice what you have just learned. These drafting projects are different from the Exercises, because the Exercises focus on using the command currently being discussed. The Chapter Projects combine a variety of commands used in the current chapter and past chapters. The projects for every chapter are designed to provide Architectural Desktop practice for residential and light commercial construction. You or your instructor can select the projects relating directly to your specific course objectives. The projects provided in this text are real-world architectural design projects. These projects allow you to finish one complete set or several complete sets of construction documents for a residential or light commercial building as you progress through this text.

Basics through Advanced Coverage

Architectural Desktop and Its Applications covers basic and advanced topics in nearly every chapter. Chapter content begins with basic applications and progresses into advanced topics where appropriate. The basic material generally covers fundamental AutoCAD and Architectural Desktop applications, and the advanced coverage normally involves creating styles and other customization activities.

The content is well rounded for everyone at all levels of learning. The chapters are divided into the types of features used to create architectural drawings. The chapter organization follows the order an architect, a designer, or a drafter commonly uses when creating construction documents in an architectural office.

Students like the idea of having both the basic and advanced material in the same text. This approach benefits those who catch on quickly and want additional challenge. Even if the instructor chooses to cover only the basic material, those students who want to can explore on their own or seek extra credit, if appropriate with course objectives.

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About the Authors

Ron Palma is an Autodesk Certified Instructor and the owner and operator of 3D-DZYN in Canby, Oregon. Ron has over 20 years of experience in the architectural industry as a drafter, designer, lead project designer, and most recently, CAD Manager. As a CAD Manager, Ron has been implementing Autodesk Architectural Desktop for Alan Mascord Design Associates in Portland, Oregon, a leading residential design firm. He has also specialized in the professional training of companies and individuals on the Autodesk AEC product line for two Autodesk resellers, as well as an educator at Clackamas Community College and Portland Community College in Portland, Oregon. Ron continues to write professional training manuals and is a coauthor of the Goodheart-Willcox textbook *Architectural Drafting Using AutoCAD.*

David A. Madsen is Faculty Emeritus and a former Chairperson of Drafting Technology at the Autodesk Premier Training Center at Clackamas Community College, in Oregon City, Oregon. David was awarded Director Emeritus of the American Design Drafting Association. His education includes a Bachelor of Science degree in Technology Education and a Master of Education degree in Vocational Administration. During his teaching career, David was an instructor and a department chair at Clackamas Community College for nearly 30 years. In addition to having community college teaching experience, David was a Drafting Technology instructor at Centennial High School in Gresham, Oregon. David also has extensive experience in mechanical drafting, architectural design and drafting, and construction practices. He is a coauthor of several Goodheart-Willcox drafting and design textbooks, including *Architectural Drafting Using AutoCAD* and the *AutoCAD and Its Applications* series, and the author of *Geometric Dimensioning and Tolerancing.*

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