

# About This Book

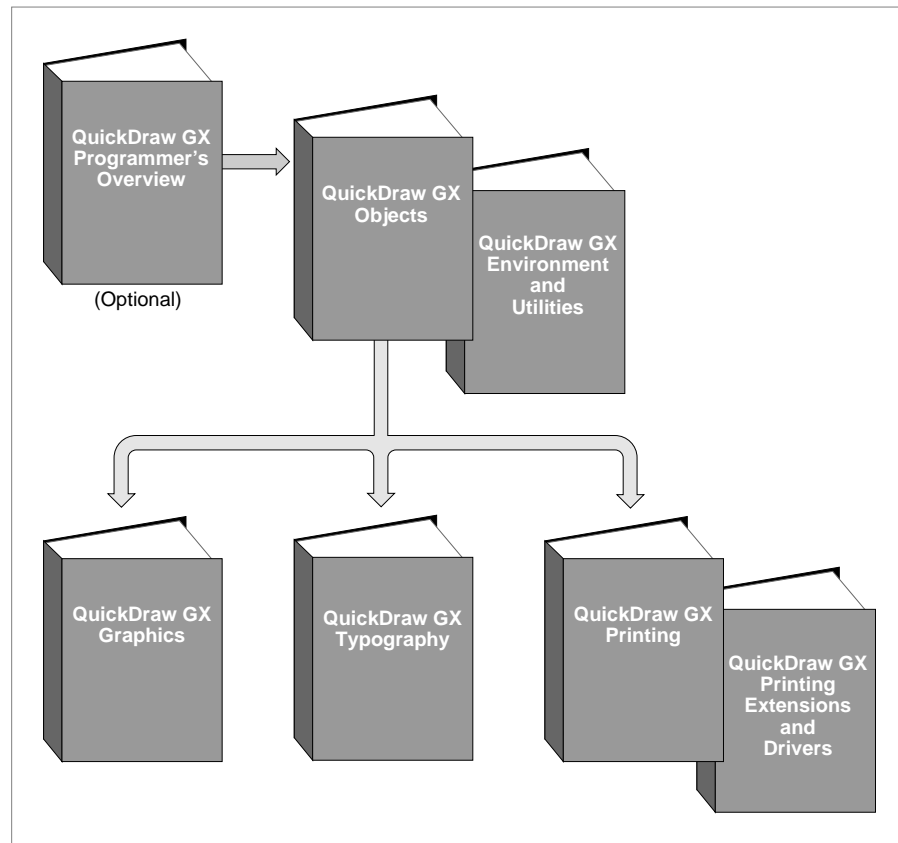
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QuickDraw GX is an integrated, object-based approach to graphics programming on Macintosh computers. This book, *Inside Macintosh: QuickDraw GX Environment and Utilities*, describes a wide variety of QuickDraw GX application-development topics.

For application programming purposes, QuickDraw GX augments or replaces the capabilities of some of the Macintosh system software managers documented in other parts of *Inside Macintosh*. In particular, The Memory Management capabilities, as described in the chapter “QuickDraw GX Memory Management,” augment the Macintosh Memory Manager described in *Inside Macintosh: Memory*. In addition, some of the mathematical functions described in the chapter “QuickDraw GX Mathematics” replace functions described in the “Mathematical Utilities” chapter of *Inside Macintosh: Operating System Utilities*. However, QuickDraw GX and other parts of Macintosh system software coexist without conflict and you can use both in the same program. Furthermore, the functions described in the chapter “QuickDraw GX and the Macintosh Environment” provide you with an interface to certain Macintosh system software capabilities outside the scope of QuickDraw GX.

Before you read this book, you should already be familiar with *Inside Macintosh: QuickDraw GX Objects*. Figure P-1 shows the suggested reading order for the QuickDraw GX books. A pictorial overview of *Inside Macintosh*, including the QuickDraw GX suite of books, appears on the inside back cover.

Figure P-1 Roadmap to the QuickDraw GX suite of books



## What to Read

Each chapter in this book describes a separate topic that does not rely on any other chapter for its understanding. As a result, the chapters of this book may be read in any order.

- **QuickDraw GX and the Macintosh Environment.** This chapter describes those aspects of QuickDraw GX that relate specifically to the Macintosh Toolbox, Macintosh programming environment, and Macintosh image data format.
- **QuickDraw GX Memory Management.** This chapter describes the aspects of QuickDraw GX memory management that your application can control. Read this chapter if you want to understand how QuickDraw GX memory works or to supplement QuickDraw GX memory management operations.

- **Errors, Warnings, and Notices.** This chapter describes the errors, warnings, and notices that can be posted by QuickDraw GX functions and how you can manipulate them. In addition, this chapter describes how you can use application-defined handlers to provide alternative or complementary processing of errors, warnings, and notices.
- **QuickDraw GX Debugging.** This chapter describes QuickDraw GX debugging functions and the GraphicsBug debugging utility that you should use when you are writing and debugging applications.
- **Collection Manager.** This chapter describes the Collection Manager, which provides an abstract data type you can use to store collections of information. Read this chapter if you need to work with some advanced features of QuickDraw GX printing, including print dialog boxes, or if you want to create collections for purposes specific to your application.
- **Message Manager.** This chapter describes the Message Manager, which is a part of the message-passing printing architecture of QuickDraw GX. Read this chapter if you want to use the Message Manager to develop printing extensions or printer drivers.
- **QuickDraw GX Stream Format.** This chapter describes the format of the compressed data stream that results when the QuickDraw GX `GXFlattenShape` function is used. It also describes the use of such data streams by print files and portable digital documents (PDDs). Read this chapter if you need to uncompress QuickDraw GX stream format data and cannot use the QuickDraw GX `GXUnflattenShape` function.
- **QuickDraw GX Mathematics.** This chapter describes QuickDraw GX number formats, number-format conversions, mathematical functions, and functions that operation on mappings (transformation matrices). Read this chapter if your application requires the explicit use of any of the mathematical capabilities of QuickDraw GX.

## Chapter Organization

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Most chapters in this book follow a standard general structure. For example, the chapter “QuickDraw GX and the Macintosh Environment” contains these major sections:

- “About QuickDraw GX and the Macintosh Environment.” This section provides an overview of the Macintosh interface and describes the QuickDraw-to-QuickDraw GX translator.
- “Using QuickDraw GX in the Macintosh Environment.” This section describes how you can test for the presence and version of QuickDraw GX and use the Macintosh interface functions. It describes how to use the most common functions, gives related user interface information, provides code samples, and supplies additional information.

- “QuickDraw GX and the Macintosh Environment Reference.” This section provides a complete reference for the topics described in this chapter by describing their related constants, data types, and functions. Each function description follows a standard format, which gives the function declaration; a description of every parameter; the function result, if any; and a list of errors, warnings, and notices. Most function descriptions give additional information about using the function and include cross-references to related information elsewhere.
- “Summary of QuickDraw GX and the Macintosh Environment Reference.” This shows the C interface for the constants, data types, and functions associated with the Macintosh interface and the QuickDraw-to-QuickDraw GX translator.

## Conventions Used in This Book

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This book uses various conventions to present certain types of information.

### Special Fonts

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All code listings, reserved words, and the names of data structures, constants, fields, parameters, and functions are shown in Courier (`this is Courier`).

When new terms are introduced, they are in **boldface**. These terms are also defined in the glossary.

### Types of Notes

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There are several types of notes used in this book.

#### Note

A note formatted like this contains information that is interesting but possibly not essential to an understanding of the main text. The wording in the title may say something more descriptive than just “Note”; for example, “Terminology Note.” ◆

#### ▲ WARNING

Warnings like this indicate potentially serious problems that you should be aware of as you design your application. Failure to heed these warnings could result in system crashes and loss of data. ▲

## Numerical Formats

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Hexadecimal numbers are shown in this format: 0x0008.

The numerical values of constants are shown in decimal, unless the constants are flag or mask elements that can be summed, in which case they are shown in hexadecimal.

## Type Definitions for Enumerations

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Enumeration declarations in this book are commonly followed by a type definition that is not strictly part of the enumeration. You can use the type to specify one of the enumerated values for a parameter or field. The type name is usually the singular of the enumeration name, as in the following example:

```
enum gxDashAttributes {
    gxBendDash          = 0x0001,
    gxBreakDash         = 0x0002,
    gxClipDash          = 0x0004,
    gxLevelDash         = 0x0008,
    gxAutoAdvanceDash  = 0x0010
};
typedef long gxDashAttribute;
```

## Development Environment

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The QuickDraw GX functions described in this book are available using C interfaces. How you access these functions depends on the development environment you are using.

Code listings in this book are shown in ANSI C. They suggest methods of using various functions and illustrate techniques for accomplishing particular tasks. Although most code listings have been compiled and tested, Apple Computer, Inc., does not intend for you to use these code samples in your applications.

## Developer Products and Support

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APDA is Apple's worldwide source for hundreds of development tools, technical resources, training products, and information for anyone interested in developing applications on Apple platforms. Customers receive the *APDA Tools Catalog* featuring all current versions of Apple development tools and the most popular third-party development tools. APDA offers convenient payment and shipping options, including site licensing.

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Apple Computer, Inc.

P.O. Box 319

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