

## **Libraries**

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# Chapter 1

## Libraries

### 1.1 Amiga® RKM Libraries: Preface

This edition of the Amiga ROM Kernel Reference Manual: Libraries provides the latest information on how to program the Amiga line of personal computers from Commodore. It has been updated for Release 2 of the Amiga operating system and covers the newest Amiga computer systems including the A3000.

This book is meant to help you learn how to program the Amiga. It assumes some previous experience with programming and familiarity with computers in general. Although it is not required, a knowledge of the C programming language will make it much easier to understand the material in this book. Most of the Amiga operating system is written in C (with the rest written in 68000 assembly language), hence C is the language used for the programming examples.

This book is intended for the following audiences:

- \* C and assembly language programmers who want to create application software for the Amiga line of personal computers.
- \* Amiga software developers who want to upgrade their software for Release 2 of the operating system.
- \* Anyone who wants to know more about how the Amiga system software works.

The Amiga system software is organized into related groups of functions called libraries. The same organization is used for this book. Here is a brief overview of the contents:

- \* Chapter 1, Introduction to Amiga System Libraries. A look at the Amiga software and hardware architecture with an introduction to the basic elements of Amiga programming.
  - \* Chapters 2-16, User Interface Libraries. An in-depth tutorial on how to create a graphic user interface for Amiga application software using Intuition and related modules including GadTools, Workbench, BOOPSI and ASL.
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- \* Chapters 17-26, Exec Library. The details on how Exec, the system's master module, controls the system with working examples of interrupt processing code, subtask creation, lists and queues, semaphores, message passing and signalling.
- \* Chapters 27-30, Graphic Libraries. A complete explanation of the functions in the graphic and layers library that drive the Amiga's display hardware with examples of text rendering, line drawing, animation and more.
- \* Chapters 31-37, Additional Libraries. Tutorials on how to use the Amiga commodities, DOS, IFFParse, keymap, translator and other important libraries in the operating system.
- \* Appendices. Special sections containing a debugging and troubleshooting guide plus a working example library for programmers who want to extend the capabilities of the operating system.

We suggest that you use this book according to your level of familiarity with the Amiga system. Beginners should read the first four chapters and try the examples to get the basics. Then browse through the Exec chapters to get a deeper understanding of how the system works.

Advanced Amiga programmers should read the chapters on new libraries like IFFParse and GadTools to find out what's new in Release 2. Also be sure to review the new Utility library to see how tag item lists have been used to implement many of the system improvements in Release 2.

There are four other manuals in the Amiga Technical Reference Series. The Amiga ROM Kernel Reference Manual:Devices is a companion book to this volume detailing how to write code for the Amiga's lower level I/O hardware. The Amiga ROM Kernel Reference Manual:Includes and Autodocs is an alphabetically organized reference of ROM function summaries and system include files. Both these books are required reading for the serious programmer.

Also available are the Amiga User Interface Style Guide, an application design specification and reference work describing how a standard Amiga application should look and feel; and the Amiga Hardware Reference Manual, an in-depth description of the custom chips and other hardware components underlying the Amiga's sophisticated design.