



**Personal System/2
and Personal Computer
BIOS Interface
Technical Reference**

First Edition (September 1991)

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Preface

This technical reference provides information about the Basic Input/Output System (BIOS) and Advanced BIOS (ABIOS) interfaces. It is intended for developers who provide hardware or software products to operate with IBM* products.

You should understand the concepts of computer architecture and programming before using this publication.

Warning: The term "Reserved" is used to describe certain signals, bits, and registers. Use of reserved areas can cause compatibility problems, loss of data, or permanent damage to the hardware.

This technical reference is divided into two parts: **BIOS** and **Advanced BIOS**.

BIOS contains the following:

Section 1, "Introduction to BIOS," provides an overview of BIOS, interrupts, parameter passing, data areas, and read-only memory (ROM) tables. It also describes how to determine the system-BIOS version date.

Section 2, "Interrupts," contains detailed information about how interrupts function across the IBM Personal System/2* and Personal Computer* product lines. Exceptions between products are noted.

Section 3, "BIOS Data Areas," contains detailed information about regular data areas.

Section 4, "ROM Tables," contains detailed information about ROM tables for system- and adapter-ROM BIOS.

Section 5, "Additional Information," contains information about sharing interrupts in IBM Personal System/2 and Personal Computer products. It also contains information about adapter-ROM calls, video compatibility, and multitasking provisions.

Section 6, "System Identification," contains information about system-identification bytes.

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Section 7, "Scan Code/Character Code Combinations," contains information about keyboard keys and scan code/character code combinations.

Advanced BIOS contains the following sections:

Section 1, "Introduction to Advanced BIOS," provides an overview of Advanced BIOS, data structures, initialization, transfer conventions, interrupt processing, and extending ABIOS.

Section 2, "Data Structures," contains detailed information on the common data area, function transfer tables, device blocks, and how these ABIOS data structures are used.

Section 3, "Initialization," describes the ABIOS steps and the operating-system steps that are necessary to make the ABIOS interface operational.

Section 4, "Transfer Conventions," describes the methods that are used to transfer control to ABIOS-device routines. The request block, the ABIOS transfer convention, and the operating-system transfer convention are described.

Section 5, "Additional Information," contains detailed information on interrupt processing; adding, patching, extending, and replacing ABIOS; and operating-system implementation considerations.

Section 6, "Interfaces," describes the interfaces that are supported by ABIOS.

System-specific hardware- and software-interface information for IBM systems and for IBM diskette drives, fixed disk drives, adapters, and other options is contained in separate technical reference publications.