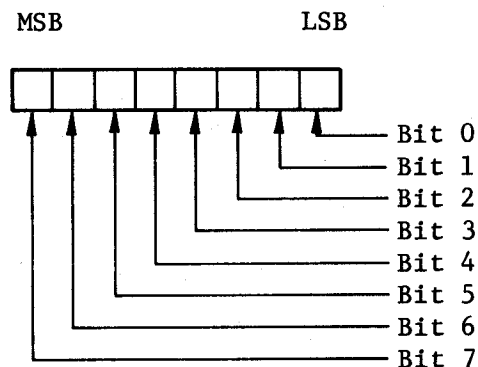


Notes Concerning this Manual

(1) In this manual, numeric values are expressed using the following formats (however, this does not necessarily apply to the lists included in the Programmer's Guide, Vol. 1 BIOS listings).

Decimal	Hexadecimal	Binary
1	01H	01B
9	09H	01001B
14	0EH	01110B
255	0FFH	011111111B
257	0101H	0100000001B

(2) Bit positions within bytes are represented as follows.



(3) BIOS numbers

The Programmer's Guide, Vol. 1 BIOS listings are composed of five sections which are numbered BIOS1, BIOS2, BIOS3, BIOS4, and BIOS5. The section titles and structure of these basic BIOS programs are outlined below.

BIOS1: BIOS Entry Addresses and Common Data Area
This program is located in resident memory beginning at address 0F600H; containing the entry points to the various BIOS routines, it constitutes the nucleus of BIOS.

BIOS2: Device Input and Device Interrupts
This program is loaded into the system bank area beginning at address 0H. It contains the jump table for jumps to BIOS within the system bank and routines for processing (1) input from the console; (2) output to devices other than the console, RS-232C interface, and printer; and (3) interrupts for flexible disk read/write operations, the keyboard, and main board RS-232C interface card.

BIOS3: Console Output

This program is loaded into the system bank area beginning at address 0E00H. It consists of the routine for output processing to the console.

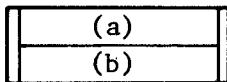
BIOS4: Peripheral Device Control

This program is loaded into the system bank area beginning at address 03000H. It consists of routines for processing interrupts from the RS-232C interfaces and light pen, and for controlling interrupt masks.

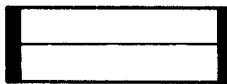
BIOS5: Printer Control

This program is loaded into the system bank area beginning at address 04000H. It consists of the hard copy, printer output, and PSET routines.

(4) Meaning of flowchart symbols



This symbol indicates a subroutine. The subroutine name (same as the label in the assembly list) is indicated in (a) and processing performed is indicated in (b). Specifications for subroutines indicated by this symbol are included in Chapter 2.



This symbol also indicates a subroutine. Subroutines indicated by this symbol are explained in Chapter 1.



This symbol is a flowchart connector; the label of the connected program (same as the label in the assembly list) is indicated in (c), and the BIOS number of the program is indicated in (d).

Example



This example indicates connection or entry to RSIN in BIOS4.



"Next page"

When "Next page" is indicated adjacent to this symbol, the connection is to another point in the same flowchart on the next page.

**QX-10 MultiFonts CP/M
Programmer's Guide
Vol. 2**

**Programming
Support Manual**

EPSON

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Preface

The QX-10 MultiFonts CP/M Programmer's Guide, Vol.2 explains the internal logic of the basic input/output system (BIOS) for 63K MultiFonts CP/M and provides material to support programming. This manual should be carefully read by those using assembly language for software development.

This manual is composed of 4 chapters. Chapter 1 explains operation of the various BIOS routines. Chapter 2 describes specifications of other subroutines used inside BIOS, and Chapter 3 discusses interrupt processing routines. Chapter 4 provides a variety of information regarding display support, using the memory banks, keyboard control, and so forth.

Also included are Appendices, including memory maps and information related to the I/O byte, BIOS common data area, I/O port addresses, and interrupt levels.

This manual does not provide any details on the hardware of the QX-10 or the pin assignments of its interface ports. For this information, see the "QX-10 Technical Manual - Principles of Hardware Operations."

Before going on to these chapters, read the introductory material provided in the "Notes Concerning this Manual" section which precedes Chapter 1. This section presents several items of information which will help you to make the best use of this manual.

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