

The IOBYTE resides at location 3, and the default value for the top of available RAM is determined from the monitor routine MEMCHK. Location 3283H contains JMP GTPAR, and after initialization the JMP instruction at location 3280H may be used to return to direct mode from user routines. The ROMSquared default value bytes are at locations 3286H to 328AH.

Section 3: Custom I/O Version

The Custom I/O version of XYBASIC allows XYBASIC to run on any 8080-based microprocessor, with or without an operating system, from either RAM or ROM. The Custom I/O version normally begins at 100H and assumes that RAM begins at 2000H (8K) for Integer XYBASIC and 4000H (16K) for Extended XYBASIC, but it may be specially ordered to begin at any specified location and to assume RAM beginning at any specified location. The delivery medium for Custom I/O versions may be paper tape (Intel HEX format), eight inch floppy disk (CP/M or ISIS-II compatible, single or double density), or programmed 2708 or 2716 EPROMs.

Before using the Custom I/O version of XYBASIC, the addresses of routines to perform elementary I/O operations must be patched into the JMP vector beginning at 118H, as explained below.

The IOBYTE is stored in the first byte of RAM (normally 4000H) for Custom I/O versions, and is set to 0 during initialization. Location 100H contains a JMP to the initialization routine, and may be used to restart XYBASIC (repeating the initialization dialog). Location 103H contains JMP GTPAR. Locations 106H through 162H contain various JMP instructions, as described below. The ROMSquared default value bytes are at locations 163H to 167H. After initialization, user routines may return to direct mode by branching to location 168H.

To perform input / output operations in the CP/M and ISIS-II versions, XYBASIC just makes calls through the operating system. In the Custom I/O version XYBASIC instead calls one of the user routines located below the base of XYBASIC, in a JMP vector at locations 118H through 15FH. As in the CP/M and ISIS-II versions, the user can use four logical devices: CONsole (input and output), ReaDeR (input only), PUNch (output only) and LiST (output only). The routines involved are:

CI (Console In)	Returns a character in the A register from the active CON device.
CO (Console Out)	Sends a character from the C register to the active CON device.
RI (Reader In)	Returns an 8-bit character in the A register from the active RDR device and returns Carry reset (0); when end of file occurs the Carry is set (1) and the A register returns 0.
PO (Punch Out)	Sends an 8-bit character from the C register to the active PUN device.
LO (List Out)	Sends a character from the C register to the active LST device.
CS (Console Status)	Returns 255 (0FFH) in the A register if a character has been typed on the active CON device, 0 if not.

The Custom I/O version of XYBASIC uses RI to LOAD programs, PO to SAVE programs, and the CONSOLE for all other I/O operations. All output is