

echoed to LO if <control-P> is typed. Because programs are SAVED and LOADED in XYBASIC's internal format, SAVE and LOAD will not operate correctly unless the PUN and RDR routines pass full 8-bit bytes, without manipulation of the parity bit.

Each I/O routine first checks the IOBYTE and then branches to the desired user-implemented device through the JMP vector at 118H to 15FH. The user must patch a JMP to a device driver into the appropriate location in the vector for each device he implements. The driver routines should always leave unchanged all registers not specifically used by the routine. Notice that each user CONSOLE device must have Console Status implemented (as well as Console In and Console Out) for XYBASIC to operate correctly. If Console Status is not implemented correctly, you will be unable to interrupt program execution by typing <control-C>!

Section 6 of Chapter I above explains the use of the ASSIGN command and IOBYTE function to change and interrogate the system IOBYTE, determining which physical device implements a logical device.

It is possible to run a Custom I/O version of XYBASIC under CP/M or ISIS-II, by patching the jump vector accordingly. However, doing so makes it difficult to SAVE and LOAD programs as disk files.

Device Driver Locations

The locations of each I/O routine or driver are given in the code below. The JMP vector starting at 106H allows the user access to XYBASIC's I/O system (with devices selected by the IOBYTE), and should NOT be patched by the user. The JMP at location 160H is executed when you type <control-B>, and should be patched to specify the entry point to your monitor or operating system.

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ORG      100H
JMP      XYBASIC      ;start of XYBASIC
JMP      GTPAR      ;GTPAR (to get CALL parameters) @ 103H

;JMP VECTOR FOR I/O SYSTEM (do not patch)
JMP      CI          ;console in @ 106H
JMP      CO          ;console out @ 109H
JMP      RI          ;reader in @ 10CH
JMP      PO          ;punch out @ 10FH
JMP      LO          ;list out @ 112H
JMP      CS          ;console status @ 115H

;JMP VECTOR FOR USER-DEFINED DEVICES (to be patched)
JMP      UC0I        ;user console 0 in @ 118H
JMP      UC1I        ;user console 1 in @ 11BH
JMP      UC2I        ;user console 2 in @ 11EH
JMP      UC3I        ;user console 3 in @ 121H
JMP      UC0O        ;user console 0 out @ 124H
JMP      UC1O        ;user console 1 out @ 127H
JMP      UC2O        ;user console 2 out @ 12AH
JMP      UC3O        ;user console 3 out @ 12DH

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