

```

;I/O DEVICE COMMANDS
00CF = MODE EQU 0CFH ;SET USART MODE
0025 = CMD EQU 025H ;SELECT NORMAL USART

```

```

;CODE GENERATION FOR RST INSTRUCTIONS
0000 ORG 0H ;RST 0
0000 C34000 JMP INIT ;INITIALIZE ON RESTART
0008 ORG 8H
0008 C9 RET
0010 ORG 10H
0010 C9 RET
0018 ORG 18H
0018 C9 RET
0020 ORG 20H
0020 C9 RET
0028 ORG 28H
0028 C9 RET
0030 ORG 30H
0030 C9 RET
0038 ORG 38H
0038 C9 RET

```

```

;DEVICE INITIALIZATION
0040 ORG 40H
0040 3ECF INIT: MVI A,MODE
0042 D3ED OUT CCTL ;SET USART MODE
0044 3E25 MVI A,CMD
0046 D3ED OUT CCTL ;SEND USART COMMAND WORD
0048 C300A0 JMP XYBASIC ;BEGIN XYBASIC

```

;I/O DEVICE DRIVERS

```

;CONSOLE STATUS
004B DBED CSTAT: IN CCTL ;READ STATUS
004D E602 ANI RBR ;MASK TO CHARACTER READY
004F C8 RZ ;NOT READY, RETURN 0 IN A
0050 3EFF MVI A,OFFH ;READY, RETURN OFFH IN A
0052 C9 RET

```

```

;CONSOLE IN
0053 DBED CONIN: IN CCTL ;READ STATUS
0055 E602 ANI RBR ;MASK TO CHARACTER READY
0057 CA5300 JZ CONIN ;WAIT IF NOT READY
005A DBEC IN CIN ;READ THE CHARACTER
005C C9 RET

```

```

;CONSOLE OUT
005D DBED CONOUT: IN CCTL ;READ STATUS
005F E601 ANI TBA ;MASK TO BUFFER AVAILABLE
0061 CA5D00 JZ CONOUT ;WAIT IF NOT AVAILABLE
0064 79 MOV A,C ;CHARACTER TO A
0065 D3EC OUT COUT ;WRITE THE CHARACTER
0067 C9 RET

```

```

;PUNCH OUT, DEFINED TO SEND CHARACTERS TO CONSOLE
005D = PUNOUT EQU CONOUT

```