```
                ; SIO (not 2SIO) echo test

 0000                   org     0
 0000 DB00      loop    in      00h             ;wait for character
 0002 0F                rrc
 0003 DA0000            jc      loop            ;nothing yet (negative logic)
 0006 DB01              in      01h             ;read the character
 0008 D301              out     01h             ;echo it
 000A C30000            jmp     loop
```

Here is the program in octal for easier entry into the Altair:

```
000: 333 000 017 332 000 000 333 001
010: 323 001 303 000 000
```

```
                ; SIO (not 2SIO) echo test with receive interrupts

 0000                   org     0
 0000 310001            lxi     sp,0100h        ;init stack pointer
 0003 3E01              mvi     a,01h           ;receive ints on
 0005 D300              out     00h
 0007 FB                ei                      ;enable 8080 interrutps

                ; The loop below represents "normal" processing a program may
                ;    be doing. We also verify that the accumulator does not
                ;    get changed by the interrupt routine.

 0008 00        loop    nop
 0009 00                nop
 000A 00                nop
 000B C30800            jmp     loop

                ; Interrupt service routine for RST7 is at 038h. This routine
                ;    saves the accumulator and PSW, then echoes the character.
                ;    If this interrupt is shared, then the commented statements
                ;    to check for a character would be included and used
                ;    to branch to a a 2nd device to check.

 0038                   org     038h            ;RST7 entry address
 0038 F5                push    a               ;save A and status flags
                ;       in      00h             ;verify a new character present
                ;       rrc                     ;lsb has new data flag
                ;       jc      nextDev         no character, try next device
 0039 DB01              in      01h             ;read the character
 003B D301              out     01h             ;echo it
 003D F1                pop     a               ;restore A and status flags
 003E FB                ei                      ;re-enable 8080 interrupts
 003F C9                ret
```

Here is the program in octal for easier entry into the Altair:

```
    0: 061 000 001 076 001 323 000 373
   10: 000 000 000 303 010 000

   70: 365 333 001 323 001 361 373 311
```