

; Interrupt Acknowledge Cycle Demo

```
0000                org      0
0000 310001         lxi      sp,400Q        ;init stack pointer
0003 3E03           mvi      a,3           ;reset the ACIA
0005 D310           out      20Q
0007 3E95           mvi      a,225Q        ;8n1 rcv ints on
0009 D310           out      20Q
000B FB            ei                  ;enable 8080 interrupts
```

; Idle loop

```
000C 00            loop     nop
000D 00            nop                ;demo with hlt here as well
000E C30C00        jmp      loop
```

; Interrupt service routine for RST7 is at 70 octal.

```
0038                org      70Q           ;RST7 entry address
0038 DB11           in       21Q           ;input clears device interrupt
003A FB            ei                  ;re-enable 8080 interrupts
003B C9            ret
```

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

```
000: 061 000 001 076 003 323 020 076
010: 225 323 020 373 000 000 303 014
020: 000
```

```
070: 333 021 373 311
```