```
                          ; demonstrate status light combinations

   0000                        org     0
   0000 3A2000                 lda     40Q                 ;opcode fetch, memory read x 3
   0003 322100                 sta     41Q                 ;opcode fetch, mem read x 2, mem write
   0006 312000                 lxi     sp,40Q              ;opcode fetch, mem read x 2
   0009 F5                      push    a                   ;opcode fetch, stack write x 2
   000A F1                      pop     a                   ;opcode fetch, stack read x 2
   000B DB10                    in      20Q                 ;opcode fetch, mem read, I/O input
   000D D310                    out     20Q                 ;opcode fetch, mem read, I/O output
   000F FB                      ei                          ;interrupts enabled
   0010 F3                      di                          ;interrupts disabled
   0011 76                      hlt                         ;halt
   0012                         end
```

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

```
  0: 072 040 000 062 041 000 061 040
 10: 000 365 361 333 020 323 020 373
 20: 363 166
```