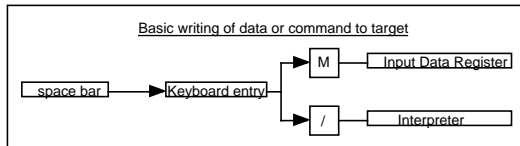


## DATASHAKE TOOL

<u>Keyboard Commands</u>	
Space bar	Enter value
M or m	Send value as data
/	Send value as command
<RETURN>	Print last value buffer
T or t	Set DS port delay parameter
!	reset chip
?	Display menu

All address and values are hexadecimal and are byte wide



The "T" command allows modification of the delay time used in the DS port interface. The delay parameters are entered and displayed as two bytes that are the values used for the outer and inner delay loops respectively. The maximum delay achievable is 197383 clock cycles (49 ms assuming 4 MHz clock) and the minimum delay is 13 clock cycles (3.25 us assuming 4 MHz clock) including the subroutine call. For any given target, there will be a minimum delay below which operation is not possible, for delays slightly above this, operation may be unreliable. With very long delays, operation may be very slow, possibly taking minutes to transfer a byte. There will be some delay values that are difficult for the target to sample, and these should be avoided. A good delay to start with is twice the shortest delay that works.

```

shortdelay:
    mov    delayc, delayreg1
outerloop:
    mov    secondelay, delayreg2
innerloop:
    dec    secondelay
    brne  innerloop
    dec    delayc
    brne  outerloop
    ret
  
```

Minimum command set:

1R Write data to register A

2R Read data from register A

4A Write EEPROM data to memory location A within current page, for devices with EEPROM.

5A Read EEPROM data from memory location A within current page, for devices with EEPROM.

Note: Assumes a 16 byte page. If there is more than one page of EEPROM, a page addressing mechanism must be defined for the target device.

80 Read firmware version number in two bytes as [Version],[revision].

A = address, 0..F  
X = don't care

Data format:

Data is sent in 9 bits words, containing a control bit followed by one byte of data.

When a word is received with the control bit clear, the associated byte is stored in the incoming data buffer.

When a word is received with the control bit set, the associated byte is interpreted as a command.

Commands may include an embedded parameter. For example, in command "2F", the "2" in the high nybble indicates that the command is a register read command and the "F" in the low nybble indicates that it is register "F" that is to be read.

In some commands, only the high nybble is used, and thus the value of the low nybble is unimportant. These commands may be recognized "X" in the low nybble as listed here. For example, the command "8X" could be sent as "88", "80", or any other byte in which the high nybble is "8" and the same result would be produced in any case.