I2C

Reference:UM10204.pdf

Slave-address is 7bit.
This is placed to [bit7-bit1].
In case of h78, write is b11110000(hF0) and read is b11110001(hF1).
Please refer UM10204.pdf  in case of 10bit-address.

When PropForth4.6, _eewrite is below;

```
: _eewrite
        80 8 0
        do
                2dup and
                if
                        _sdah
                else
                        _sdal
                then
                _sclh _scll 1 rshift
        loop
        2drop
         _sdai _sclh _sda? _scll _sdal _sdao        <-- When scl is high, sda?
;
```

This is Forth word.

On PropForth5.5 _eewrite is assembler word.

```
¥ _eewrite ( c1 -- t/f ) write c1 to the eeprom, true if there was an error
¥
¥
:asm
                jmp     # __x0C
__x02sda
                h20000000
__x03scl
                h10000000
__x04delay/2
                hD
¥ this delay makes for a 400kHZ clock on an 80 Mhz prop
¥
__x0Edelay/2
                mov     $C_treg6 , __x04delay/2       <-- 4ticks
__x0D
                djnz    $C_treg6 , # __x0D            <-- 4ticks
```

```
__x0Fdelayret
                ret                     <-- 4ticks
¥
__x0C
                mov     $C_treg3 , # h8
¥
__x0B
                test    $C_stTOS , # h80        wz
                muxnz   outa , __x02sda
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
¥
                or      outa , __x03scl
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
                jmpret  __x0Fdelayret , # __x0Edelay/2
¥
                andn    outa , __x03scl
                shl     $C_stTOS , # 1
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
¥
                djnz    $C_treg3 , # __x0B
¥
                andn    dira , __x02sda
                test    __x02sda , ina  wz
                muxnz   $C_stTOS , $C_fLongMask
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
¥
                or      outa , __x03scl
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
                jmpret  __x0Fdelayret , # __x0Edelay/2
¥
                andn    outa , __x03scl
¥
                jmpret  __x0Fdelayret , # __x0Edelay/2
                andn    outa , __x02sda
                or      dira , __x02sda
¥
¥
                jexit
¥
;asm _eewrite
```

__x0Edelay/2 is 60ticks[4 + (4 X 13) + 4].
1-clock pulse is 240ticks(60 X 4)

In case of 80MHz(5MHz Xtal), 3usec. Clock frequency is 333.3kHz.
In case of 96MHz(6MHz Xtal), 3usec. Clock frequency is 400kHz.

And acknowledge is incorrect on _eewrite of PF5.5.
When clock-pulse is High, it should get SDA.
Refer section3.1.6 on UM10204.pdf.

But I have never get acknowledge-error by using current _eewrite.
Maybe this will be fix on next version.

!! I have acknowledge-error touch-sense-controller(RN6011). But I think this chip is broken.