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```
' *****  
' * Frequency Counter with 7Seg LED ATTiny2313-20PC  
' * 2007.9.29 by JN3XBY ex. JA6IRK  
' *  
' *****
```

```
Dim Intcnt As Long  
Dim Scancnt As Byte  
Dim Seg0 As Byte  
Dim Seg1 As Byte  
Dim Seg2 As Integer  
Dim Seg3 As Integer  
Dim Seg4 As Long  
Dim Seg5 As Long  
Dim Data7segd As Byte  
Dim Dispcnt As Byte  
Dim Freq As Long  
Dim Freqd As Long
```

```
Dim Cntflag As Bit  
Dim Fcnt1 As Long  
Dim Intcnt0 As Integer
```

```
Dim Segtmp1 As Long  
Dim Segtmp2 As Long  
Dim Segtmp3 As Long  
Dim Segtmp4 As Long  
Dim Segtmp5 As Long
```

```
Ddrb = &B11111111  
Portb = 0  
Ddrd = &B1011111  
Portd = &B0000000
```

```
' *****  
' * TIMER INT INIT & START  
' *****
```

```
Config Timer0 = Timer , Prescale = 8 ' 0.16mS at 12.8MHz  
On Ovfo Tim0_int  
Enable Ovfo  
Config Timer1 = Counter , Edge = Falling , Noise Cancel = 1  
On Ovfi Cnt1_ovf  
Enable Ovfi  
Enable Interrupts
```

```
Timer1 = 0  
Start Timer1
```

Main:

```
    If Cntflag = 1 Then  
        Fcnt1 = Fcnt1 * 65536  
        Freq = Fcnt1 + Freq  
  
        Intcnt0 = 1023  
        Fcnt1 = 0  
  
        Freqd = Freq * 1250  
        Freqd = Freqd / 1280  
  
        Gosub Leddisp  
  
        Start Timer1  
        Start Timer0  
        Cntflag = 0  
    End If  
  
    Goto Main
```

Leddisp:

```
    Seg5 = Freqd / 100000  
    Segtmp1 = Seg5 * 100000  
    Segtmp1 = Freqd - Segtmp1
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Seg4 = Segtmp1 / 10000
Segtmp2 = Seg4 * 10000
Segtmp2 = Segtmp1 - Segtmp2
Seg3 = Segtmp2 / 1000
Segtmp3 = Seg3 * 1000
Segtmp3 = Segtmp2 - Segtmp3
Seg2 = Segtmp3 / 100
Segtmp4 = Seg2 * 100
Segtmp4 = Segtmp3 - Segtmp4
Seg1 = Segtmp4 / 10
Segtmp5 = Seg1 * 10
Seg0 = Segtmp4 - Segtmp5

Return

'*****
' * TIMER INT COUNTER SUBROUTINE
'*****
Tim0_int:
  Gosub Timerintsub
  Return

Timerintsub:

  If Intcnt0 <> 0 Then
    Intcnt0 = Intcnt0 - 1
  Else
    Stop Timer1
    Stop Timer0
    Freq = Timer1
    Timer1 = 0
    Cntflag = 1
  End If

  If Dispcnt = 0 Then
    Data7segd = Lookup(seg0 , 7segd)
    Portd = &B1000000
  ElseIf Dispcnt = 1 Then
    Data7segd = Lookup(seg1 , 7segd)
    Portd = &B0010000
  ElseIf Dispcnt = 2 Then
    Data7segd = Lookup(seg2 , 7segd)
    Portd = &B0001000
  ElseIf Dispcnt = 3 Then
    Data7segd = Lookup(seg3 , 7segd)
    Portd = &B0000100
  ElseIf Dispcnt = 4 Then
    Data7segd = Lookup(seg4 , 7segd)
    Data7segd = Data7segd And &B11101111
    Portd = &B0000010
  ElseIf Dispcnt = 5 Then
    Data7segd = Lookup(seg5 , 7segd)
    Portd = &B0000001
    If Seg5 = 0 Then Portd = 0
  End If

  Dispcnt = Dispcnt + 1
  If Dispcnt = 6 Then Dispcnt = 0

  Portb = Data7segd

Return

'*****
' * Counter1 INT Subroutine
'*****
Cnt1_ovf:
  Fcnt1 = Fcnt1 + 1
  Return

'*****
' * 7seg LED DISPLAY DATA
'*****
7segd:
Data &B00010010 , &B10011111 , &B00110001 , &B00010101 , &B10011100 , &B01010100 , &B01010000 ,

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&B00011111 , &B00010000 , &B00010100 , &B01111000 , &B01110000 , &B11111001 , &B11010001

' a:b7, b:b6, c:b5, dot:b4, d:b3, e:b2, g:b1, f:b0

' Seg0:d6, Seg1:d4, Seg2:d3, Seg3:d2, Seg4:d1, Seg5:d0