```spin
'this is the taos reference spin file
'this spin file is a bunch of methods that will have a selected
'pin number inputed (Pin). This Pin must be the P# pin on the propeller that's
'connected to the taos OUT pin. This is designed to have multiple taos sensors connected
' but all the S2, S3, and LEDs are connected to the other taos S2, S3, LED. This will minimize
'i/o count. one taos will use 4 pins, two taos will use 5 pins, three taos will use 6 pins...etc

'S2|S3  Selected Color
'0 |0    Red
'0 |1    Blue
'1 |0    Clear
'1 |1    Green
'=================
'LED= pinD
'S2 = pinE
'S3 = pinF
'out = pinC
'
'S0|S1  frequency Scaling
'0 |0    power off TCS3200
'0 |1    Scaling 1:50
'1 |0    Scaling 1:5
'1 |1    Scaling 1:1 (default)
CON

  taosS2 = 16      'remember pin 16 is pin P16..same for rest
  taosS3 = 17
  LED    = 18


PUB period(Pin, color) : Microseconds | cnt1, cnt2
''returns microseconds, has cnt1, cnt2 internal vars
''input is taos OUT pin connected on microcontroller Ppin
''color: 0 = clear, 1 = red, 2 = blue, 3 = green

  dira[Pin]~  'this is the frequency uc input pin (OUT on the taos)

  dira[taosS2]~~ 'color selection set them to output
  dira[taosS3]~~

  dira[LED]~~
  outa[LED]~~     'Have the LED on while this method is running

  if color == 0
    outa[taosS2]~~
    outa[taosS3]~


  if color == 1
    outa[taosS2]~
    outa[taosS3]~


  if color == 2
    outa[taosS2]~
    outa[taosS3]~~


  if color == 3
    outa[taosS2]~~
    outa[taosS3]~~
```

```
    waitpne(0, |< Pin, 0)                                  ' Wait For Pin To Go HIGH
    cnt1 := cnt                                            ' Store Current Counter Value
    waitpeq(0, |< Pin, 0)                                  ' Wait For Pin To Go LOW
    cnt2 := cnt                                            ' Store New Counter Value
    Microseconds := (||(cnt1 - cnt2) / (clkfreq / 1_000_000)) >> 1      ' Return Time in µs


    outa[LED]~

'PUB colorDetermine(Pin) : colorViewing  'future function to determine what color taos is looking at



'todo - this colorDetermine will be what other spins call on taos.colorDetermine(taosOutPinPN)
'this method will determine the color the selected taos is currently viewing by using period(a,b) method above
```