



Program Below

' -----[ Title ]-----------------------------------------------------------

' Process Control - Tachometer.bs2

' Measures RPM of Fan

' {$STAMP BS2}

' {$PBASIC 2.5}

' -----[ Declarations ]----------------------------------------------------

Opto\_SW PIN 8 ' Opto-Reflector

Sampled PIN 9 ' Indicator to indicate sampling

Opto\_Count VAR Word ' Count from opto-reflective switch

RPM VAR Word ' Calculated RPM

SP\_Data VAR Word ' Data returned from StampPlot

CyclesPerRev CON 1

' -----[ Initialization ]--------------------------------------------------

PAUSE 500 ' Connection stabilizing time

DEBUG CR,"!RSET",CR, ' Reset StampPlot

"!CLRC",CR, ' Clear any text on plot

"!SPAN 0,10000",CR ' Set Y-Axis span

' Label text boxes

DEBUG "!O lblData = Sample Time\n (mSec)", CR,

"!O txtData = 1000", CR,

"!O txtR = ", CR,

"!O txtY = ", CR,

"!O txtG = Sampled", CR,

"!O Stat1 = Counts:", CR,

"!O Stat2 = RPM:", CR,

"!O txtFileName = Tach1", CR

DEBUG "!O Meter = 0,0,10000,0,10000", CR ' Set SP meter

DEBUG "!RSET", CR ' Reset after configuring

LOW Sampled

' -----[ Main Routine ]----------------------------------------------------

DO

GOSUB ReadSP

GOSUB ReadTach

GOSUB DisplayData

LOOP

ReadSP:

DEBUG "!READ (txtData)",CR ' Request data from StampPlot

DEBUGIN DEC SP\_Data ' Accept returning data The program stops working here

RETURN

ReadTach:

COUNT Opto\_SW,SP\_Data,Opto\_Count ' Measure counts per unit time

TOGGLE Sampled ' Toggle LED to show sample done

RPM = Opto\_Count \* (60000 / SP\_Data) / CyclesPerRev ' Calculate RPM

RETURN

DisplayData:

DEBUG DEC RPM,CR ' Analog data of RPM

DEBUG IBIN Sampled, CR ' Digital trace of samples

DEBUG "!O Stat1 = Counts: ", DEC Opto\_Count, CR ' Update controls

DEBUG "!O Stat2 = RPM: ", DEC RPM, CR

DEBUG "!O METER =", DEC RPM, CR ' Update SP Meter

DEBUG "!O ImgG = ", BIN Sampled, CR

RETURN