## ONE-WIRE.BAS

*This module is part of the original MMBasic library. It is reproduced here with kind permission of Hugh Buckle and Geoff Graham. Be aware it may reference functionality which has changed or is deprecated in the latest versions of MMBasic.*

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'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
' Demonstrate how to use the one-wire functions
' Geoff Graham    July 2013
'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''


' use a defined function to get the temperature
' The sensor is connected to the pin 18
Print "The temperature is:" GetTemp(18)



'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
' Function to get the temperature from a Dallas DS18B20.
' The DS18B20 is connected to the pin specified by PinNbr
'''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
Function GetTemp (PinNbr)
  Local T1, T2, b, t
  OWReset PinNbr                          ' reset
  OWWrite PinNbr, 1, 2, &hcc, &h44        ' start conversion
  Pause 100
  t = Timer
  Do
    If Timer - t > 1000 Then Error "Sensor not responding"
    OWRead PinNbr, 4 , 1 , b              ' conversion done?
  Loop Until b = 1
  OWWrite PinNbr, 1, 2, &hcc, &hbe        ' command read data
  OWRead PinNbr, 2, 2, T1, T2             ' get the data
  GetTemp = ((T2 And &b111) * 256 + T1) / 16
  If T2 And &b1000 Then GetTemp = -GetTemp ' adjust if negative
End Function
```