

Imaging Associates International

## Make Your Own ThermoSense Mk1.

### ==== Wire Details ====

First Step:-

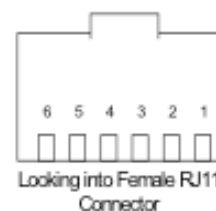
This is the hardware you need to purchase. It is also available as a kit from Imaging Associates International

A -----The Blue Snail ( Maxim 9490R#)

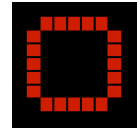
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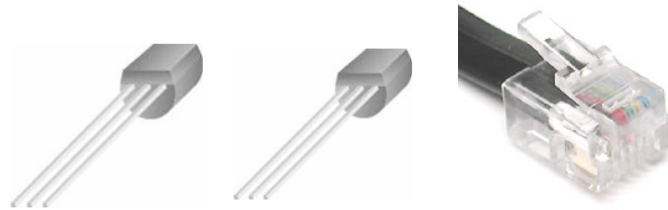
PIN	SIGNAL NAME	DESCRIPTION
1	V <sub>DD</sub>	5VDC Output
2	GND	Power Ground
3	OW	1-Wire Data
4	GND_OW	1-Wire Return
5	SUS <sub>O</sub>	USB Suspend Output
6	N.C.	No Connection



The USB Male plugs into your computer.



The RJ11 output from the Snail will have to be connected to two of our 1 wire Dallas/Maxim DS 18B20 1 wire sensors via an RJ11 telephone cable.



You will have to cut one end of the cable's connector off and strip and bare the wires for solder connection by two of it's wires to the Maxim DS 18B20 1 wire sensor.

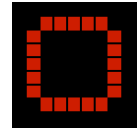
Note: Some RJ11 Cables and their associated connector sometimes have Two wires & often 4 Wires. We Only Need Two.

A ----- Two Wire RJ11 Connector to Snail.

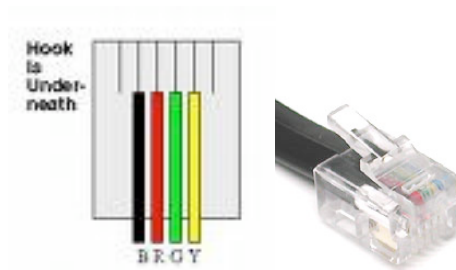
This RJ11 male connector only has two pins 3 & 4.

Pin 3 will connect to the "1 wire data line" of the temperature sensor Dallas DS 18B20 which is **pin 2** : with a wire whose color is WHITE.

Pin 4 will connect to the " 1 wire return line" of the temperature sensor DS 18B20 which is **pin 1** : with a wire whose color is BLACK.



B----- Four Wire RJ11 Connector to Snail.



**Note: Hook is Underneath as you look down on it!**

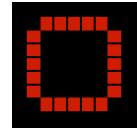
So from left to right we have spaces 1,2,3,4,5, &6.

But only four wires are provided.

We use pins 3 & 4.

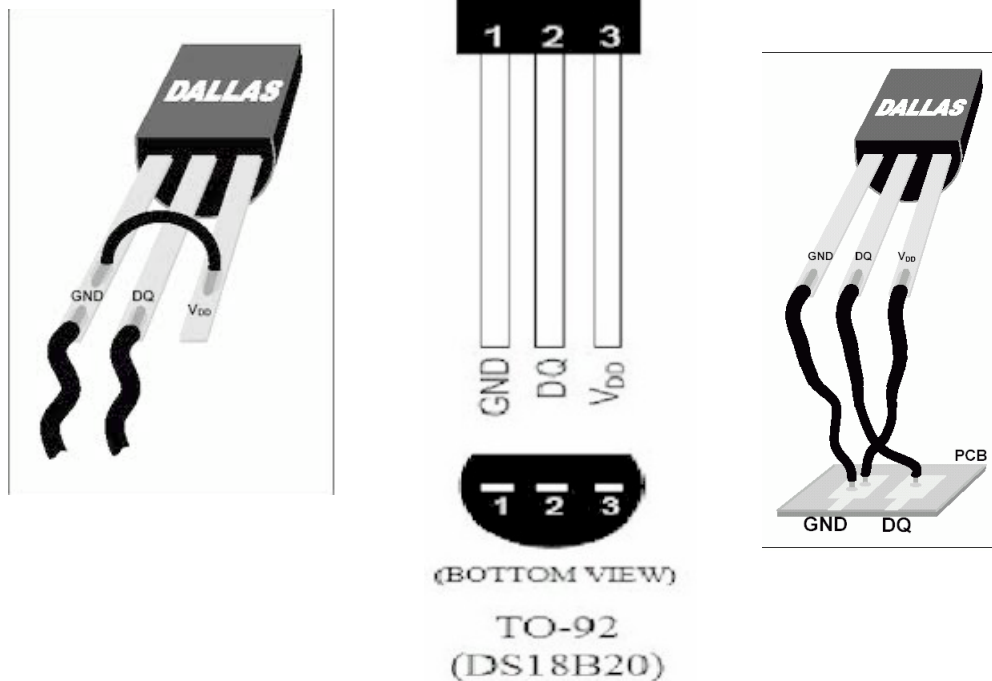
We use **pin 3 (Red)** and **pin 4(Green)**

For us pin 3 & pin 4 must be connected to our 1 wire temperature Sensor DS 18B20.

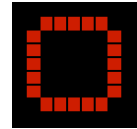


C The Maxim/Dallas 18B20 Sensor.

For our application pin 1 & 3 of the Sensor shown below must be connected together --- a PCB is not necessary.



V<sub>DD</sub> --Power supply Voltage  
DQ--Data In/Out  
GND ground



So note .

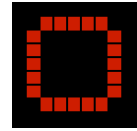
The **Red RJ11(3)** lead connects to pin 2 of the DS 18B20.

The **Green RJ11(4)** lead connects to pins 1&3 of the DS 18B20 which are connected together.

Now Use the Free ThermoSoft Mk1 Software to test your connections -----You must have Two DS 18B20 sensors connected .

1) Of course our free ThermoSoft Mk1----- Download from [www.sustainabilitymeasurement.com](http://www.sustainabilitymeasurement.com).

Application Notes & our suggested interesting Experiments are also available for free.



===== Note =====

**\* You may download and use the free ThermoSoft Mk1 software even if you do not buy anything from Imaging Associates International.**

**\* A Component only kit is available from us IAI -Kit-k1**



**\* A more comprehensive Kit is available IAI-Kit-k2**

