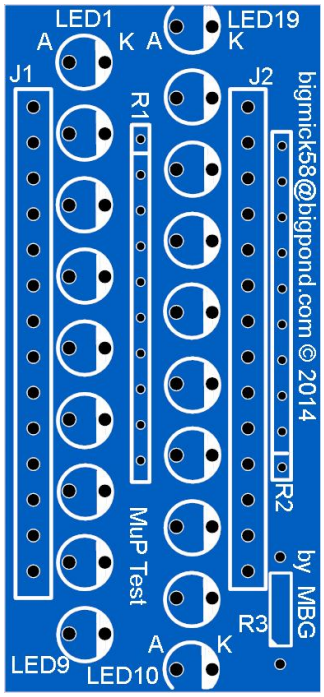
MuP-Test

(LED Tester)



MuP-Test is one of those deceptively simple ideas that can easily be overlooked as too simplistic to be of any practical use but I have found there is nothing more satisfying after building something to immediately be able to test that everything appears to be working as expected.

MuP-Test has 19 LEDs, one for each general I/O pin available on the MicroMite and has been designed specifically to test my version of the MicroMite hereafter called MuP.

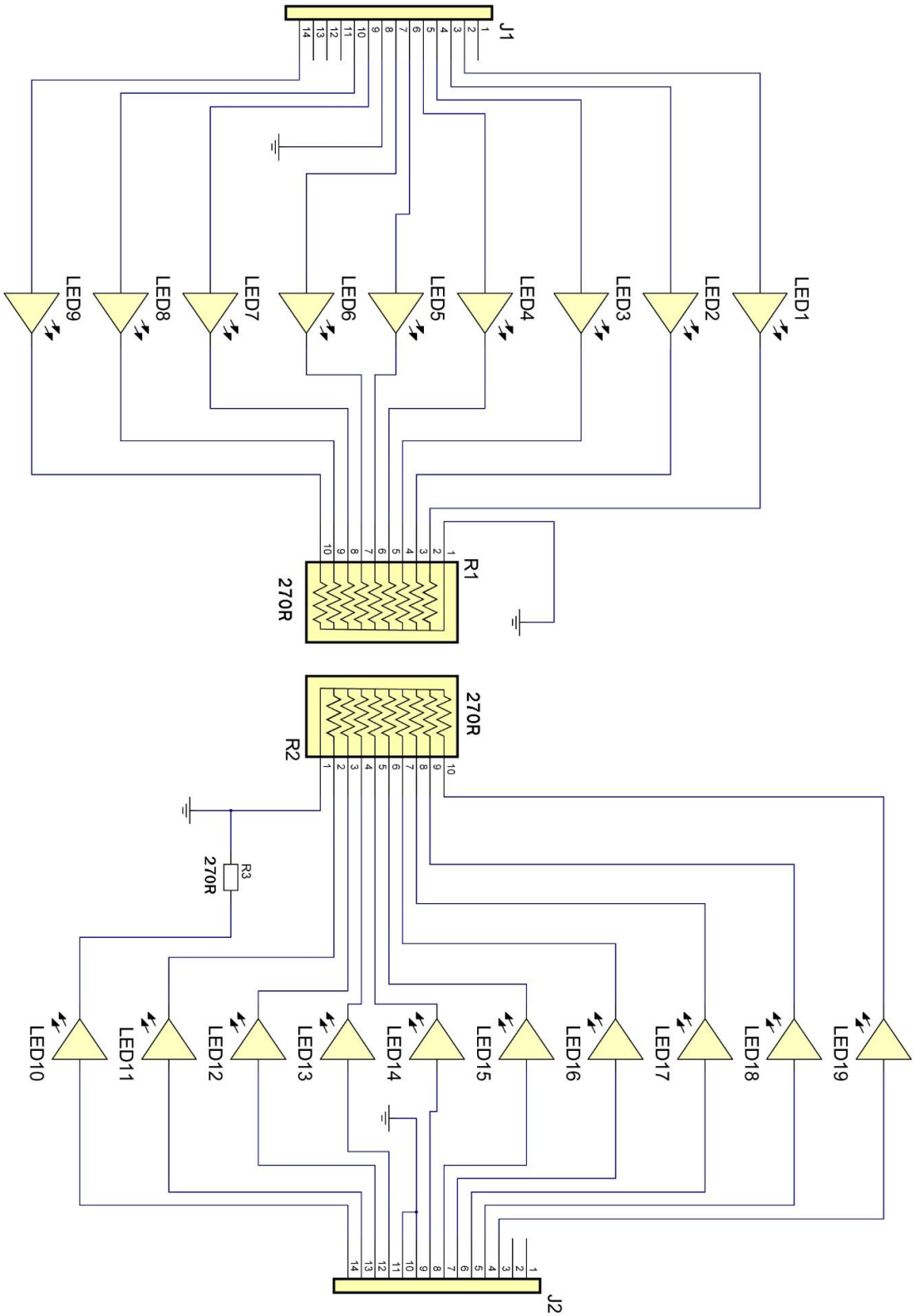
For further information on Geoff Graham's fantastic Micromite processor see:

http://geoffg.net/micromite.html

For further information on Mick's uMite PCB (MuP Ver2.) see the manual here:

http://www.users.on.net/~tassyjim/stuff/MuP%20PCB%20V2.pdf

Mup-Test Schematic:



Mup LED-Test

Bill of Materials

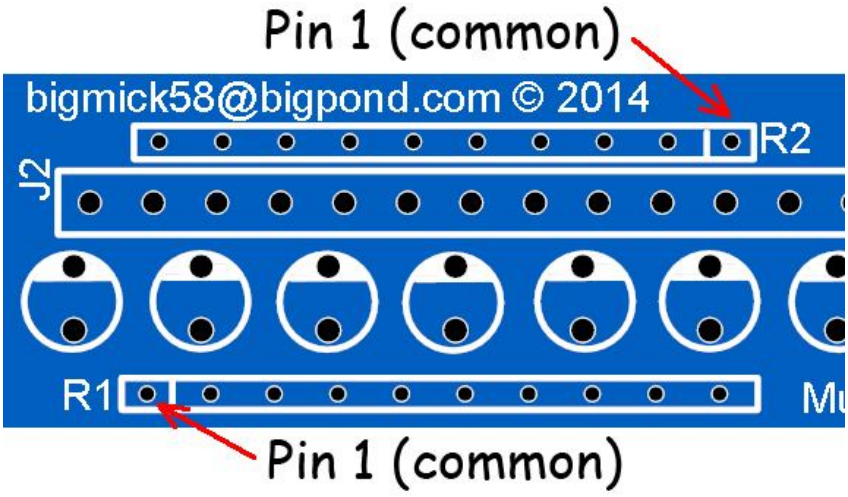
J1	14way header -Typically Female	Select to mate with your MuP
J2	14way header -Typically Female	Select to mate with your MuP
R1	270R 10pin Type -A Resistor Pack	9 Resistors, 1 common leg
R2	270R 10pin Type -A Resistor Pack	9 Resistors, 1 common leg
R3	270R 1/4W	5%
Led 1-20	3mm LED	Same batch for brightness consistency

Construction:

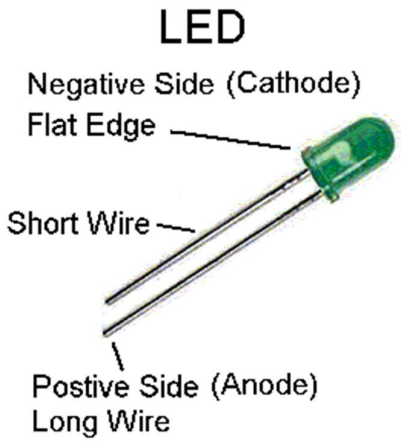
Building MuP-Test is very easy.

Start by soldering in the resistor networks R1 and R2, taking care that they are correctly orientated.

There is a small black dot, that indicates the Common leg of the resistor pack, that is identified on the overlay by the box around the pin, see below.



Next solder the sole resistor, R3, followed by the LEDs. The LEDs are polarity conscious and the Cathode is identified by the semicircular shading on the overlay. There are several ways to identify LED polarity.



The ANODE is usually the longer lead

The CATHODE usually is shorter and has a small flat edge.

Next mount the Female headers, J1 & J2, (or Male if your MuP has females fitted for J4 and J5) to the **UNDERSIDE** of the MuP-Test board being careful not to melt the LEDS with the iron. MuP-Test is now complete.

Testing your MuP with MuP-Test:

Plug the MuP-Test into your MuP (make sure that the LED1 and LED19 are towards the ICSP header, J1 of the MuP) and then run the following short piece of `brilliantly written' code on your MuP and watch the LEDs go through their routine.

You should see each LED on for 1/4sec then off for 1/4sec and light in turn, if an LED doesn't light or two LEDs light at the same time then there is something wrong with the soldering to your MuP (if Missing LED then an unsoldered pin, If 2 LEDs then a solder short)

```
For p=2 To 26
If p=8 Then p=9
If p=11 Then p=14
If p=19 Then p=21
SetPin p,8
Print p
lop:
Pin(p)=1
Pause 250
Pin(p)=0
Pause 250
' a$ = Inkey$
' If a$="" Then GoTo lop
Next p
Run
```

Have fun!! (which is what it all about)

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