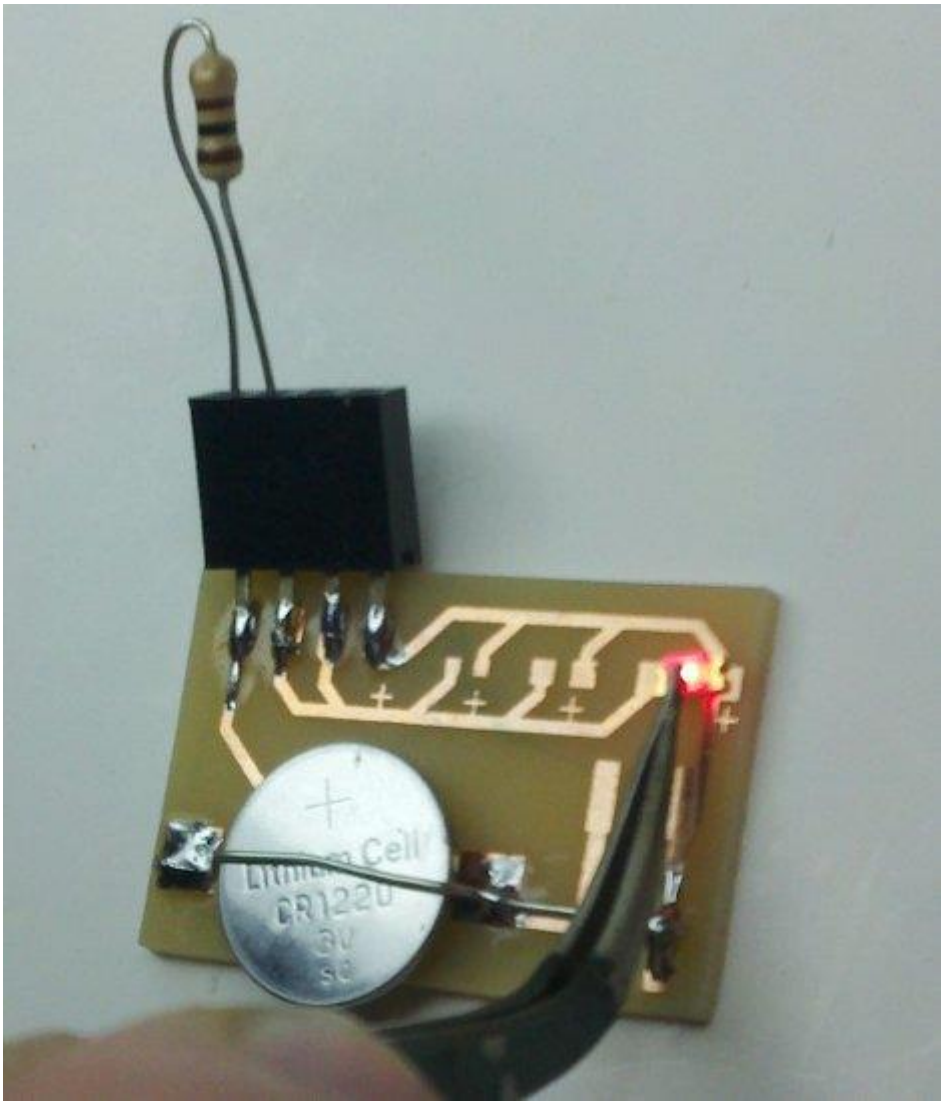
SMTTester



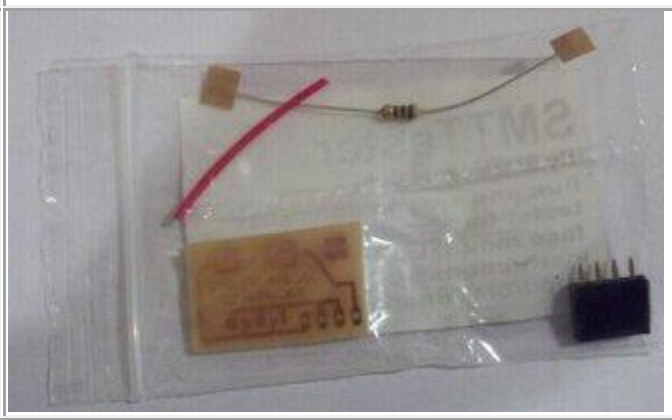
Step	Picture	Detail

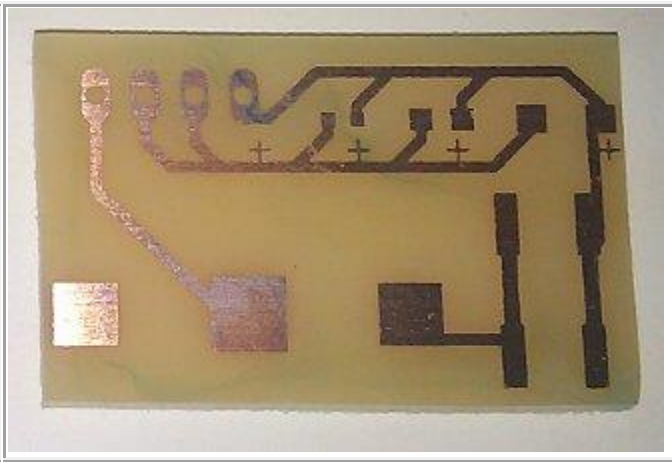
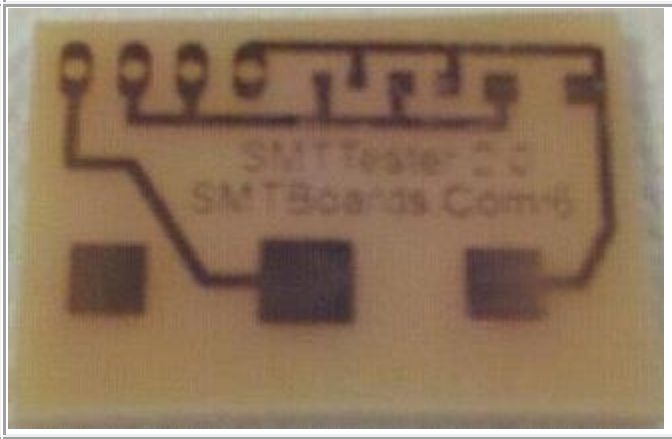
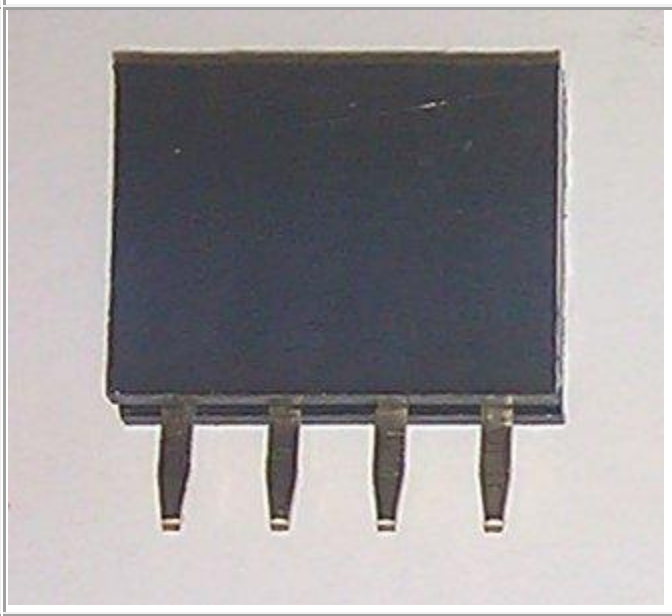
ABOUT

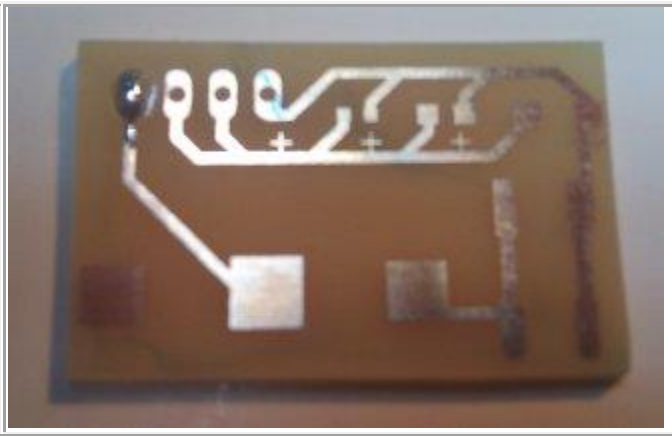
While designing SMTBoards.Com, I needed to test SMT LEDs.
My solution is the SMTTester, able to test 1210, 0805, and 0603 SMT LEDs.
I added the cabability to easily change out the resistor and test standard LEDs as well.

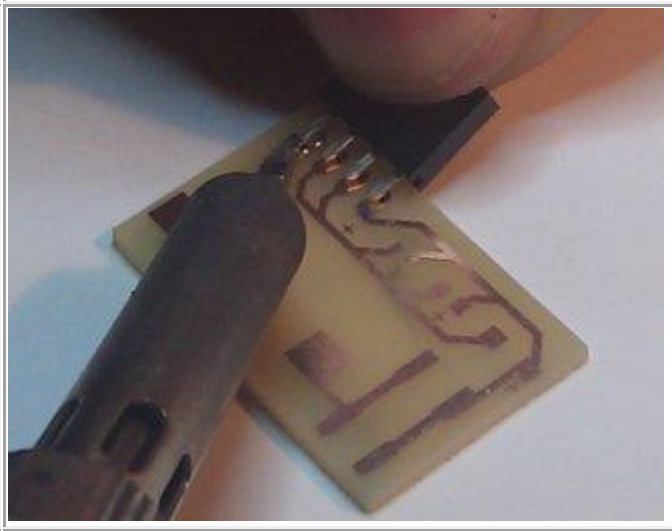
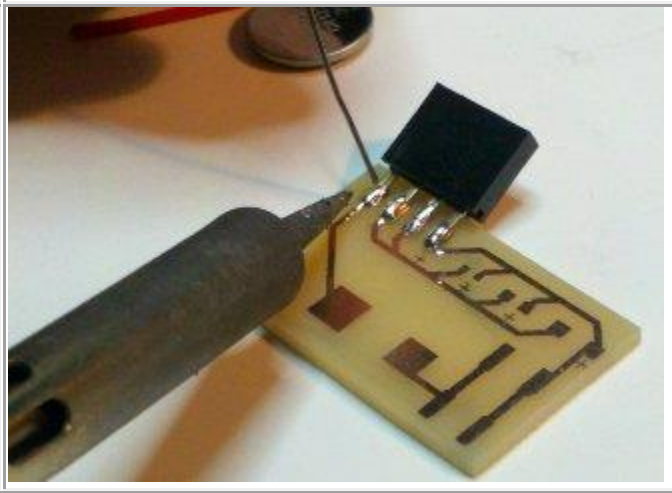
SMTTester designed by Charley Jones, PMP
aka Dataman
For SMTBoards.Com
3/2011

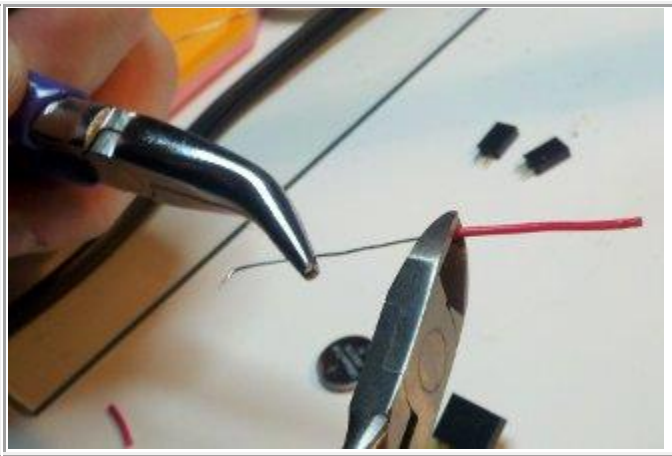
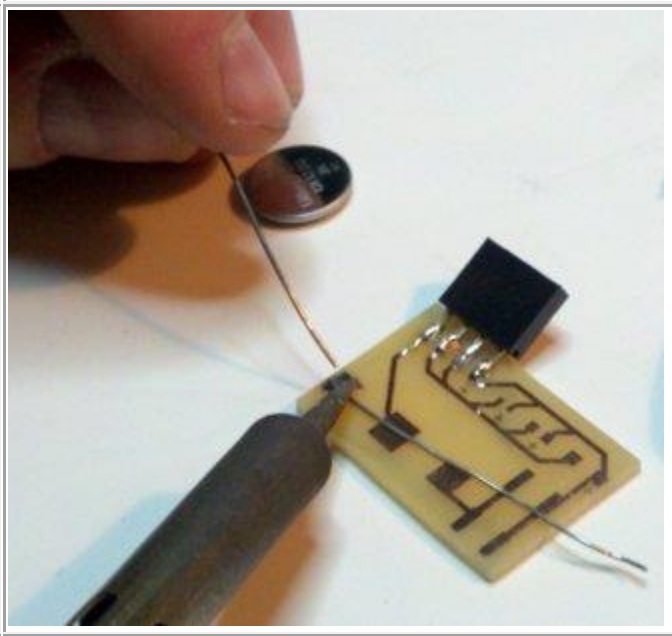
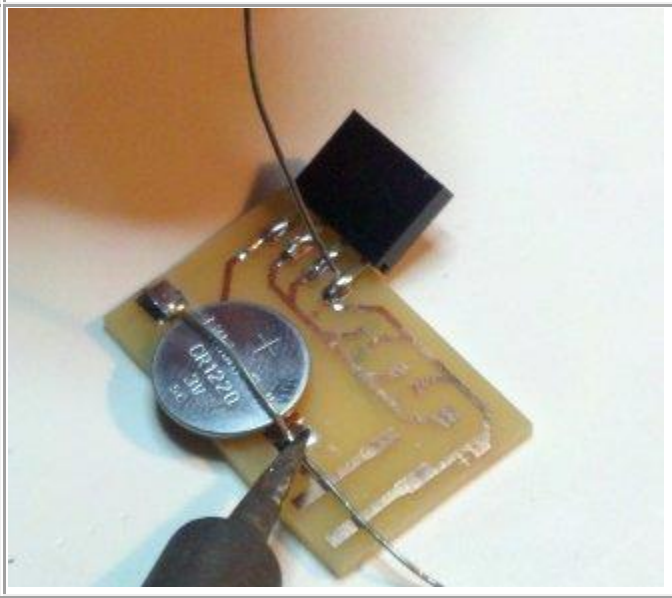
PARTS LIST

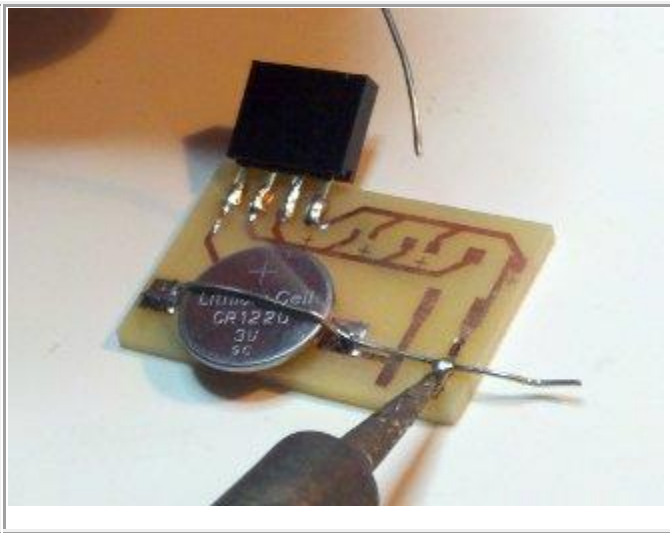
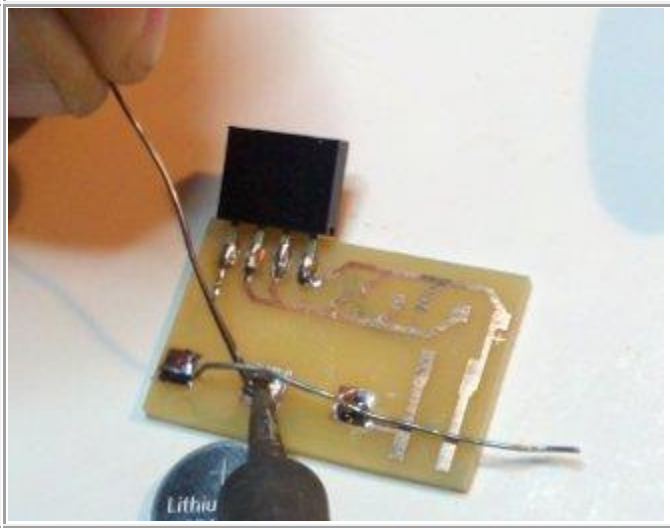
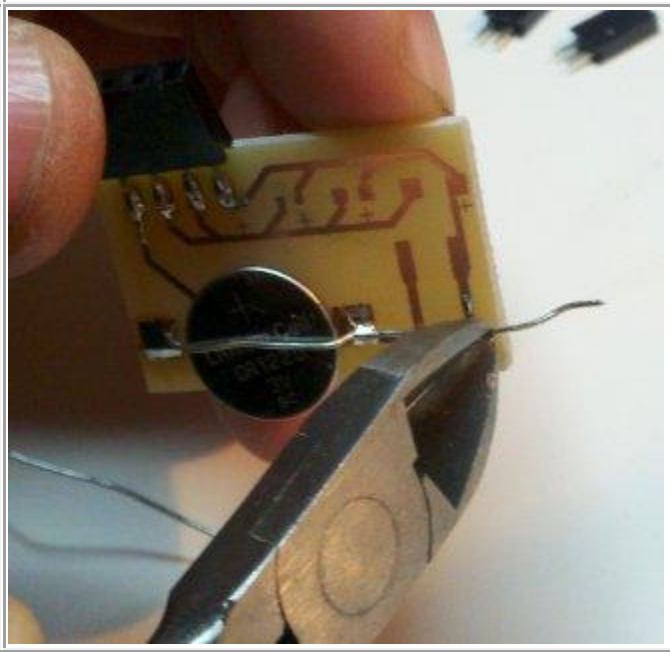
1		Kit as distributed Available soon.
1a		Kit Contents, Details follow.

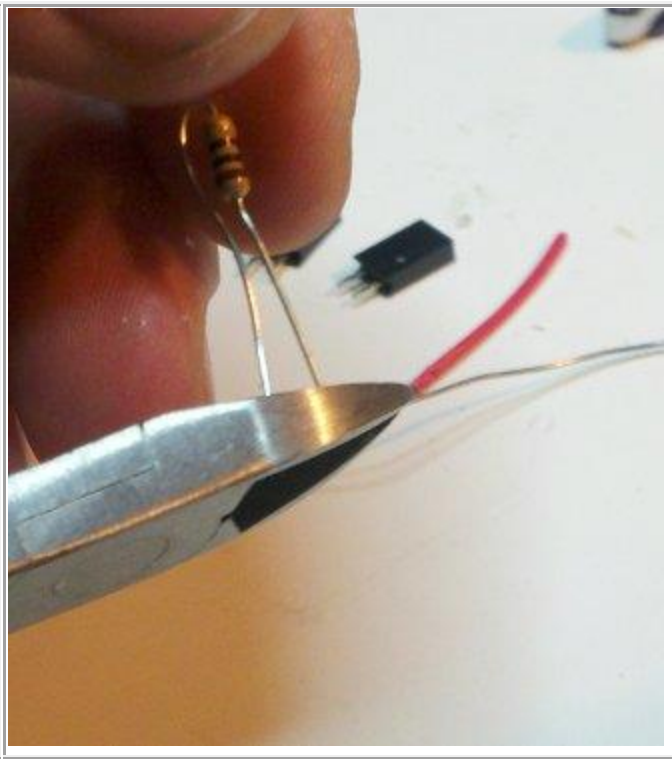
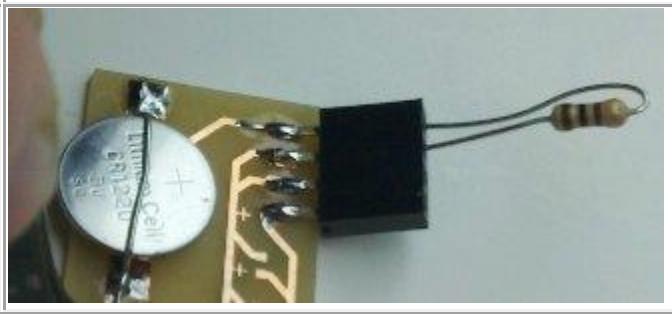
1b		SMTTester Board This is version 1 of the board, Originally there was to be button on the lower right 2 pads. We've omitted the button as not necessary in version 2.
1c		This version 2 of the board and omits the uneeded button.
1d		4 pin female header.
1e		Small strip of wire.

1f		100 ohmresistor 1/4 watt
REQUIRED / NOT PROVIDED		
2		CR1220 3V Battery.
ASSEMBLY INSTRUCTIONS		
3		Drop solder on pads as shown. If Lefty, you might choose to drop solder on the right pad, rather than the left.

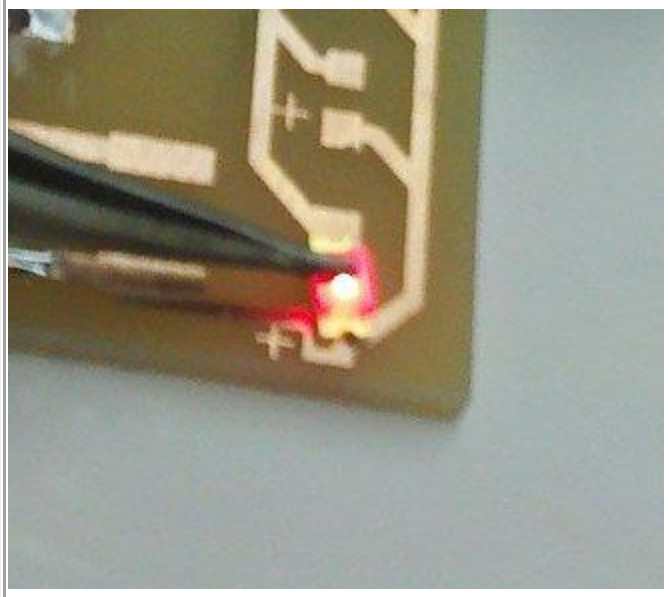
4		Bend the legs of the 4 pin connector by pressing them against the table surface. This will allow us to solder the connector at approximately a 45 degree angle to the board.
5		Now, heat the solder on the left most pin and tack the connector in place.
6		Finish soldering the connector in place by soldering from right to left. Finalized the leftmost solder as well.

7		Next, completely strip the short piece of wire included in the kit.
8		Solder one end of the wire to the left most pad.
9		Using the battery as a spacer, the + side up, bend the wire snugly around the battery and tack to the rightmost pad. Don't worry if the battery is a little loose, this will be corrected shortly. Note that the battery will not fully fit onto the board, it's designed to hang a little bit off.

10		Next, if you have a version 1.0 board, solder the tail of the wire to the rightmost pad. This was originally a button to turn the circuit on and off. This wasn't required as the circuit is normally open without any LEDs connected. Eliminating the button also simplified operation. Simply place the LED in place, press to test, and remove. This step is not required in the 2.0 board.
11		Tight up the battery next by creating a solder bump on the center pad. This should be a fairly good amount of solder. Fit the battery in place, + side up. Remove the battery and apply more solder if needed. Should be snug.
12		Trim off any remaining wire tail.

13		Bend the resistor as show, and trim the two leads to the same length.
14		Insert the resistor firmly into the two left most sockets. That's it for assembly, you're done!

USAGE INSTRUCTIONS

15		There are 3 sets of SMT pads, from left to right, 0603, 0805 and 1210. To test a SMT LED, place it over 2 pads, and press down. This is easiest done with a pair of tweezers. The pad marked + is the positive side. Place the LED in place, press to test, and remove. If you have the orientation of the SMT led correct, it should immediately light up. If not, try flipping it around. To preserve the battery, remove the LED after being tested. Prolonged testing will drain the battery.
16		To test standard LEDs, insert the LED into the 2 open pins on the right side of the 4 pin connector. The longer lead should be inserted into the right most socket, which is marked with the +. The LED will not be very bright, but will light. To preserve the battery, remove the LED after being tested. Leaving the LED in the tester will drain the battery.
11		To properly test a full range of LEDs, the Resistor is replaceable. 100 ohms was chosen as a good starting point, one which would not drain the battery too quickly. A

		really good LED calculator is located at: http://ledcalculator.net/. Remember this is a 3v circuit.