NeoLoch   SRAM & SRAM II Blade

Assembly Instructions
(3/23/2018)

Your kit should contain the following items. If you find a part missing, please contact NeoLoch for a replacement.

Kit Contents	SRAM PCB	SRAM II PCB
Printed circuit board	1	1
1 – 40 pin socket	1	1
1 – 18 pin socket	1	1
3 – 0.1uF Ceramic Capacitors	3	3
1 – 1.0 uF Electrolytic Capacitor	1	1
1 – 2.2uF capacitor	1	1
1 – 390 Ohm Resistor (Orange, White, Brown)	1	1
6 – 1K Ohm Resistor (Brown Black Red)	6	7
4 – 10K Ohm Resistor (Brown Black Orange)	4	4
1 – 2x5 rectangle green LED	1	1
6 – 2n4401 NPN transistors	6	7
1 – Reed Relays (Polarized)	1	1
1 – PIC16F1519 microcontroller	1	1
1 – MCP23008 port expander	1	1

When assembling the board you'll notice that some pads are square while the others are round. The square pad is a pin 1 indicator and will aid in the board's assembly.
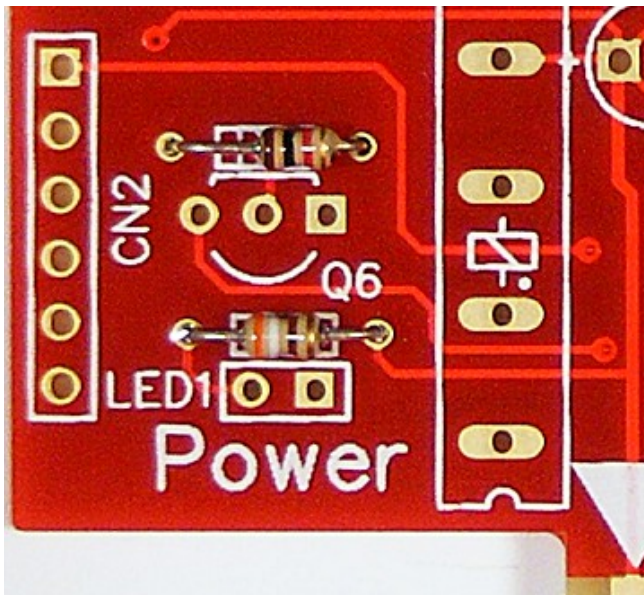
Assembly Instructions

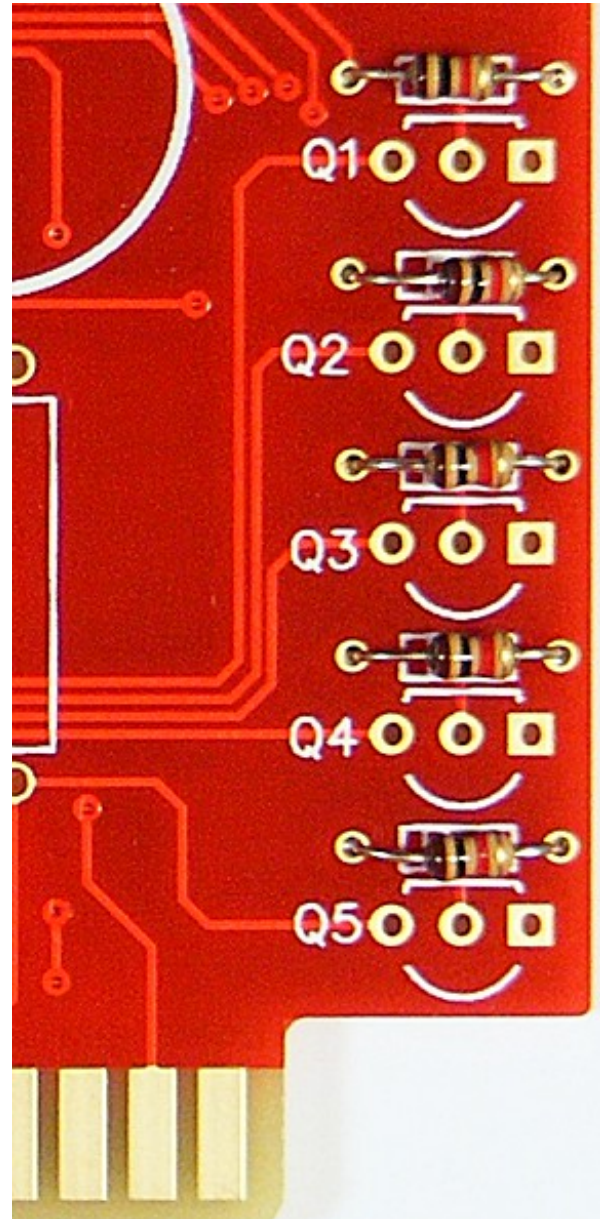Most of the board will progress from the lowest profile parts to the highest.

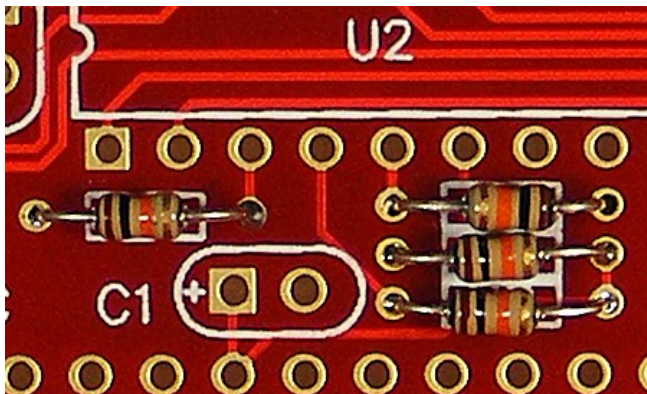**Step 1:** Solder the 390Ω (Orange, White, Brown) resistor into R10.
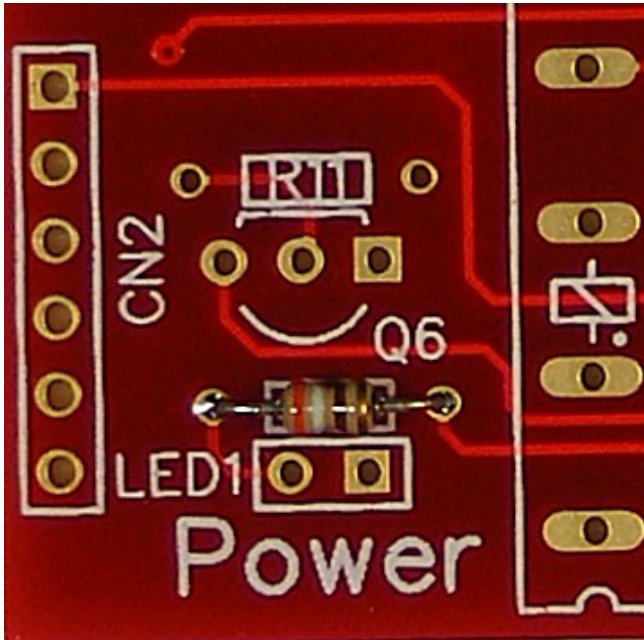
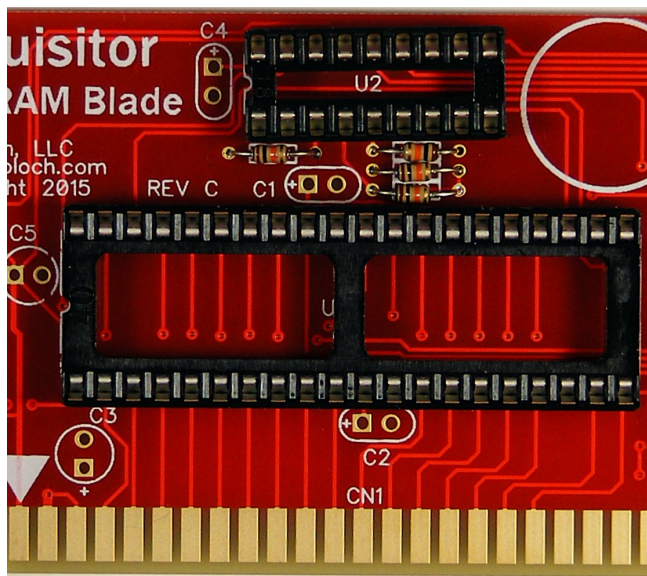**Step 2:** Solder a 1KΩ (Brown, Black, Red) resistor into R11.

Step 3: Solder the remaining 1KΩ (Brown, Black, Red) resistor into R4, R5, R6, R7, and R8. And R12 for SRAM II PCB (not shown).

Step 4: Solder the 10KΩ (Brown, Black, Orange) resistor into R1, R2, R3 and R9.
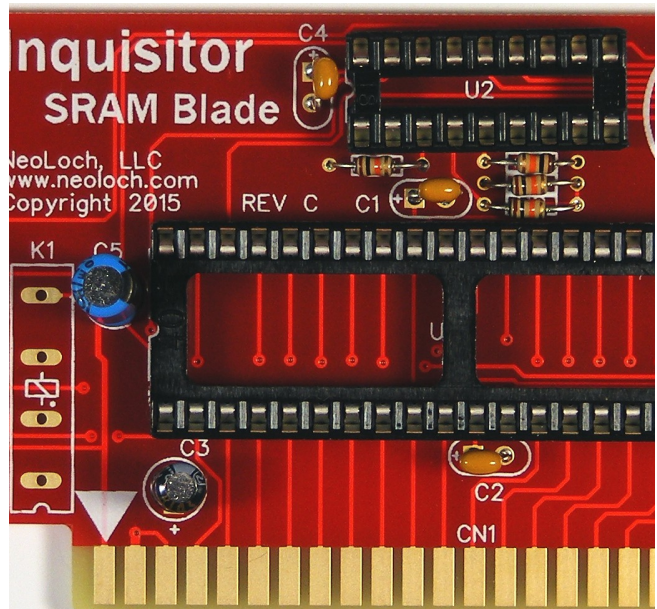

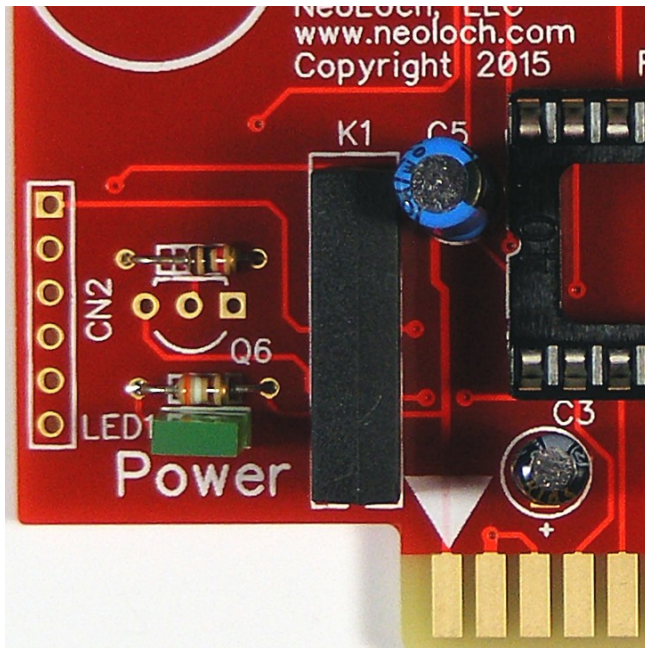**Step 5:** Solder the 40 pin socket into U1 and the 18 pin socket into U2.

Step 6:

- Solder the 0.1uF capacitors into C1, C2 and C4.
- Solder the 1.0uF capacitor into C5. The longer lead is the positive side and goes in the hole with the square pad.
- Solder the 2.2uF capacitor into C3. The longer lead is the positive side and goes in the hole with the square pad.
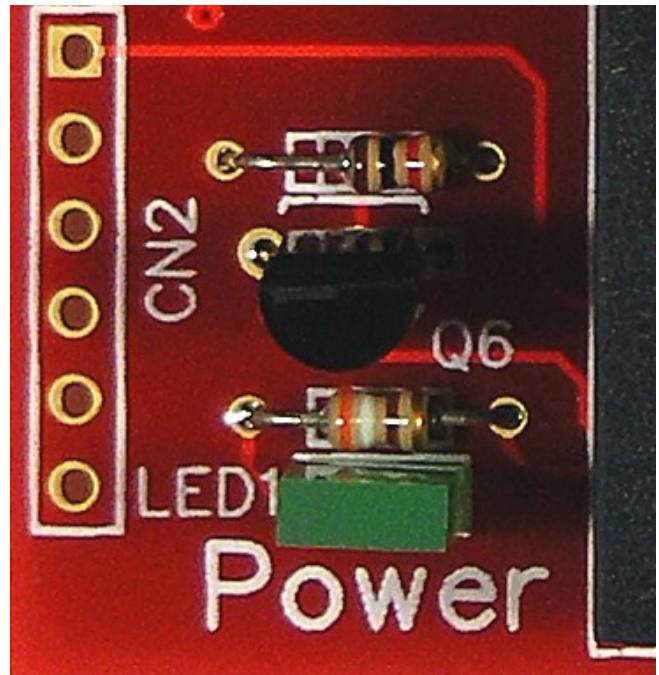
Step 7: To Solder the reed relay into K1 you'll need to take care as the relay has a built in suppression diode, so the relay is polarized.

There is a small notch on the side of the relay that indicates pin 1. Pin 1 of the relay goes into the hole that is closest to the silkscreen notch on the PC board.

The relays will make a low clicking sound when being turned off. If the tester isn't working as it should after assembly is complete, listening for this click can help troubleshoot the relays as a possible cause.

Step 8: Solder the LED into LED1, the short lead is the cathode (pin 1) and goes in the hole with the square pad.

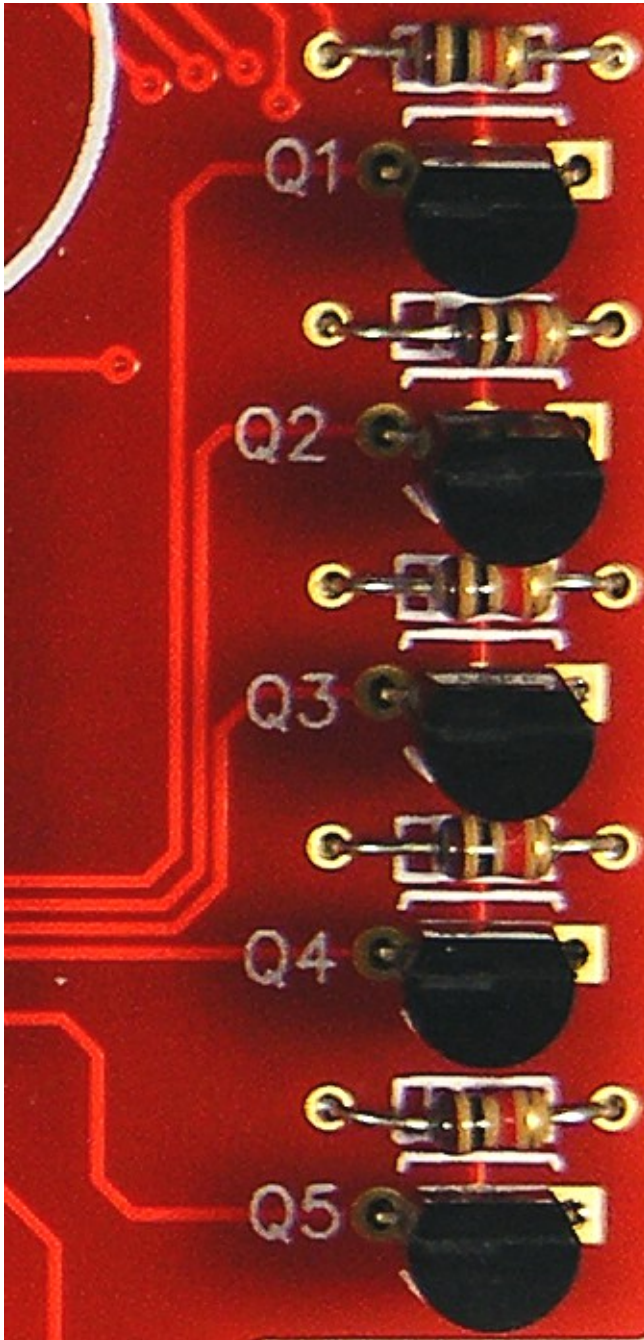**Step 9:** Solder in the first transistor into Q6.

NOTE: If a transistor is overheated it can, and probably will, be damaged. The best way to avoid this problem is solder one lead and then give the transistor a several seconds to cool before soldering the next lead.
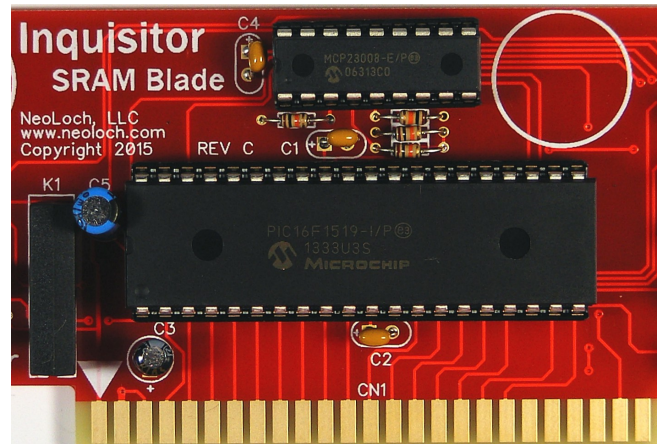
Step 10: Solder in the remaining transistors into Q1 through Q5. And Q7 for SRAM II PCB (not shown).

Step 11: Install the PIC16F1519 and the MCP 23008 ICs into their respective sockets.

This completes the assembly of the SRAM blade. Now you can insert the blade into the Inquisitor core module and test the blade to make sure everything is working as intended.

Please refer to the user manual for instructions on inserting the blade and testing SRAM.

Troubleshooting

If your board doesn't work, try these solutions before contacting NeoLoch for assistance.

LCD Screen is Blank:
- Adjust the contrast using the potentiometer .
- Check and make sure all the LCD connections are properly soldered to the main PCB.

Tester Fails to Test Correctly:

1. Check to make sure that the ground and power pin are being supplied correctly. Check for proper voltage supply.

2. Check all the solder joints to make sure nothing was missed. If even a single pin isn't soldered correctly on the ZIF socket or the 40 pin socket, the tester won't work correctly.

3. If the tester still doesn't work, it's possible your PIC isn't programmed. Though we make every effort to make sure the processor is programmed before leaving, a mistake does happen from time to time. If you have access to a PICkit, try programming the PIC with the current firmware available from our website. You can find it on the information page for LCD RAM tester . If you don't have access to a programmer, then contact NeoLoch directly for further assistance.

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