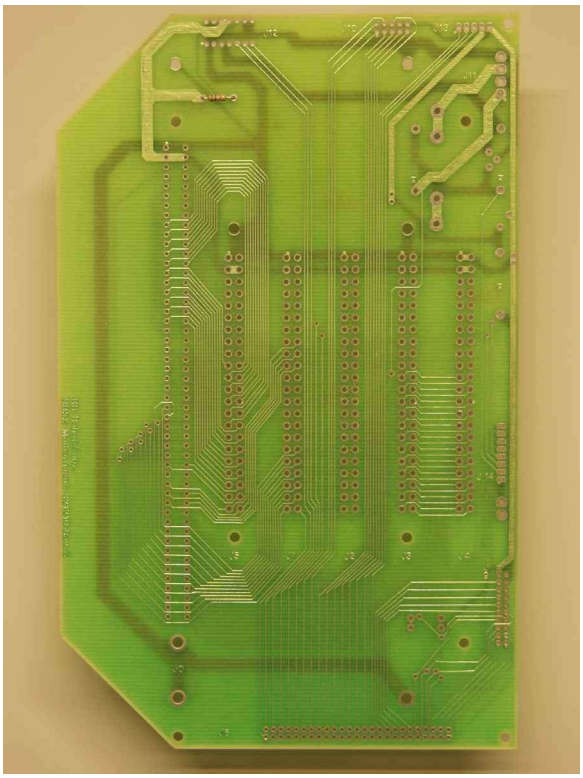
Motherboard Assembly Instructions

Before beginning, you will need the following parts:

Part #	Qty.	Location	Description
30xx-xxxxx	1		Printed Circuit Board, Motherboard
2000-430xx	1	R1	Resistor, 1K Ohm 5% 1/4W
2000-43002	2	R2, R3	Resistor, 430K Ohm 5% 1/4W
2000-58000	2	D1, D3	Diode IN5402
2000-22xxx	1	C1	Capacitor, 1000uF 20% 16V
2000-xxxxx	1	F1	Fuse, 1A 3AG
2000-xxxxx	2	??	Fuse Clips
2000-xxxxx	1	J0	Edge Connector, 100 pin 0.1” spacing
2000-xxxxx	5	J1-J5	Edge Connector, 44 pin 0.145” spacing
2000-xxxxx	1	J6	Connector, 50 pin (2x25) 0.1” spacing w/locking ears
2000-xxxxx	1	J9	Connector, 20 pin (2x10) 0.1” spacing w/locking ears
2000-xxxxx	1	J10	Connector, 10 pin (2x5) 0.1” spacing w/locking ears
2000-xxxxx	1	J11	Connector, 4 pin (1x4) 0.154” spacing
2000-3400x	1	J12	Socket, 14-pin DIP
2000-340xx	1	J13	Header, 5 pin (1x5) 0.1”spacing
2000-340xx	1	J14	Header, 8 pin (1x8) 0.1”spacing w/missing pin
2000-340xx	1	J19	Header, 2 pin (1x2) 0.154” spacing

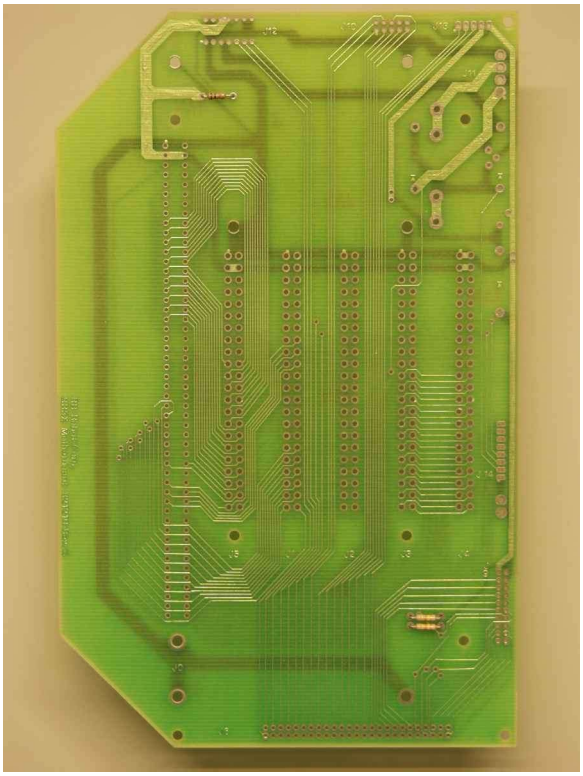
Refer to Figure 1.

( ) Install one 1K ohm (Brown-Black-Red) resistor (R1).



Refer to Figure 2.

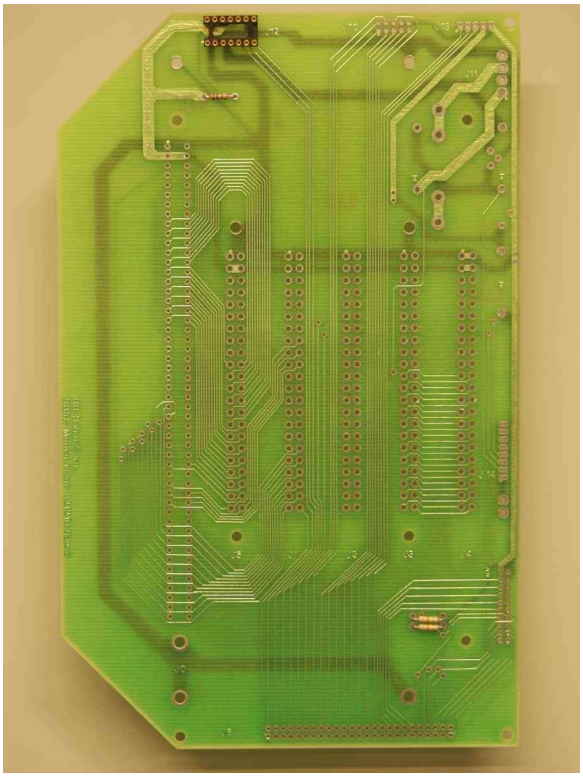
( ) Install two 430K ohm (Yellow-Orange-Yellow) resistors (R2, R3).



Refer to Figure 3.

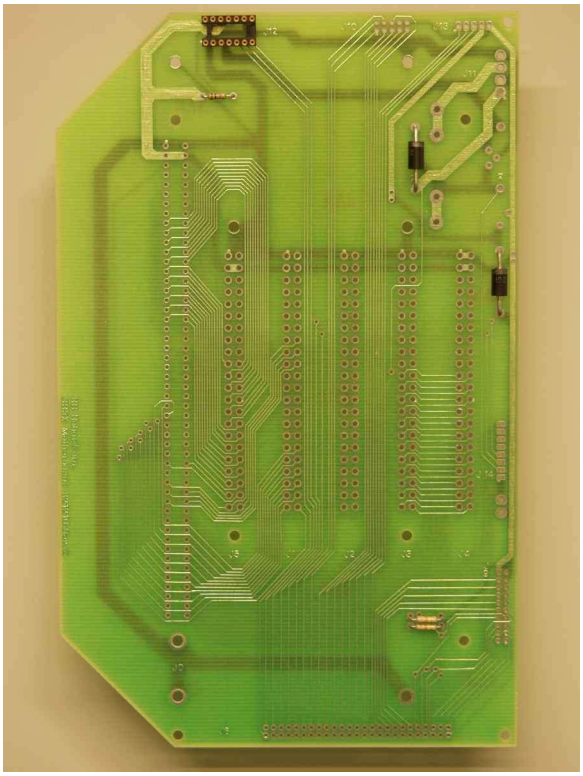
( ) Install 14-pin DIP socket at J12. Ensure proper orientation; pin 1 is closest to bevelled edge of the circuit board, and marked with a small dot.

Assembly tip: solder two of the corner pins then check how flush the socket is to the board. It's much easier to reseat the socket with 2 pins soldered than 14.



Refer to Figure 4.

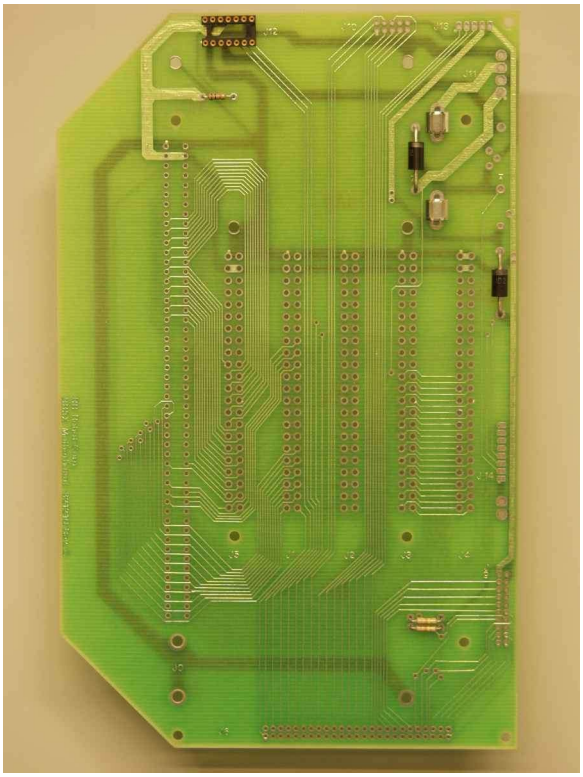
( ) Install 2 IN5402 diodes at D1 and D3 with the bands at the top of the board (note orientation marks on the circuit board in-between the vias).



Refer to Figure 5.

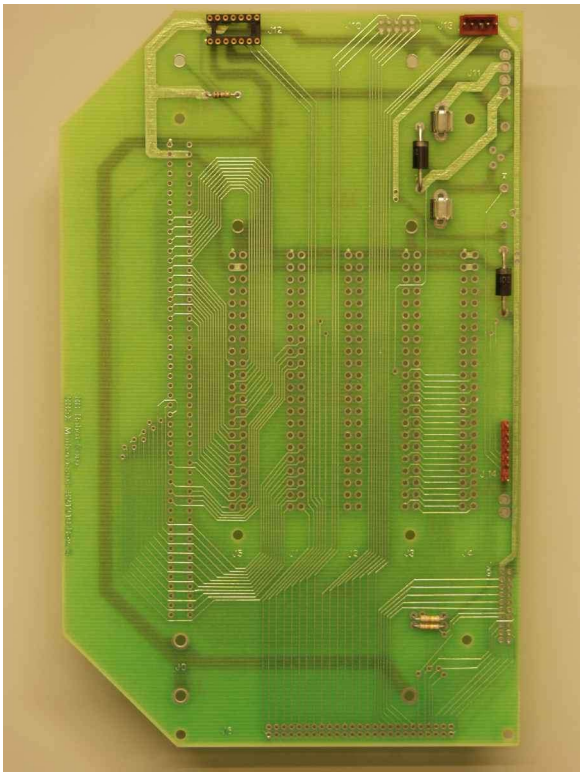
( ) Install fuse clips. The closed end of each clip should be on the outer edge of the assembly.

Assembly tip: align the clips by placing them on the fuse before placing them in the board and soldering them down. This will ensure a proper fit for later.

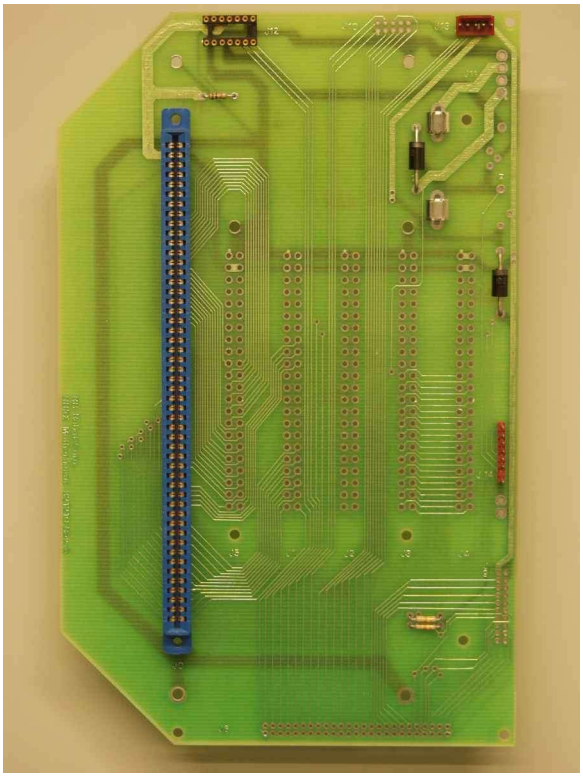


Refer to Figure 6.

( ) Install connectors J13 and J14. Observe proper orientation - J13 has a plastic keying lip that should be at the top of the board. J14 has a missing pin that should be towards the bottom of the board.



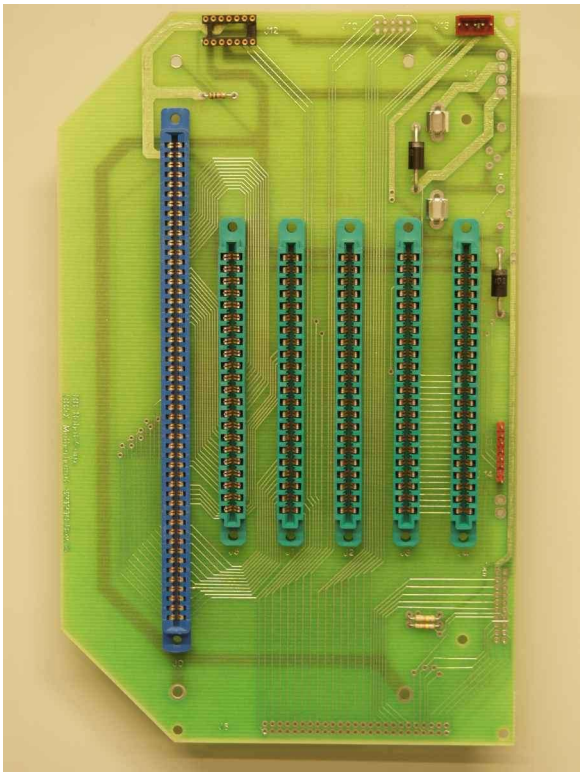
Refer to Figure 7.



( ) Install 100-pin edge connector J0. Pin 1 is at the top of the board. The pins are thin and easily bent. Check pin alignment before inserting the connector, and inspect the bottom of the board, looking for all 100 pins to stick through. Any pins that are not visible from the bottom of the board pins are likely to be bent under the connector. If this happens, remove the connector and carefully straighten any bent pins with a pair of pliers. Reinstall the connector, being especially careful not to rebend the same pins.

Assembly tip: solder the 2 pins at each end first, then check how flush the connector is to the board before soldering the remaining 96 pins. It's much easier to reseat the connector with 4 pins soldered than all 100.

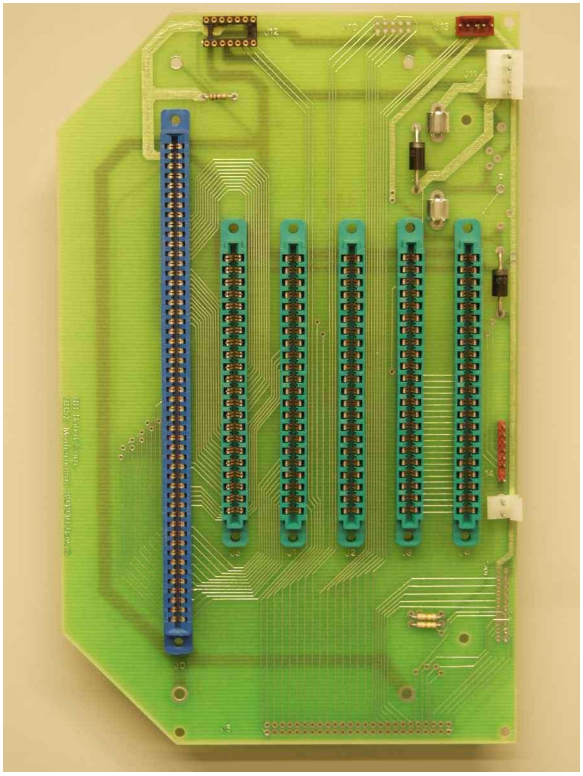
Refer to Figure 8.



( ) Install 44-pin edge connectors J1 through J5. Pin 1 is at the top of the board. As with the 100-pin connector in the previous step, check for bent pins before installing connectors, and inspect from the bottom before soldering.

Refer to Figure 9.

( ) Install connectors J11 and J19. Observe proper orientation. Both connectors have keying tabs that should be on the right edge of the circuit board.

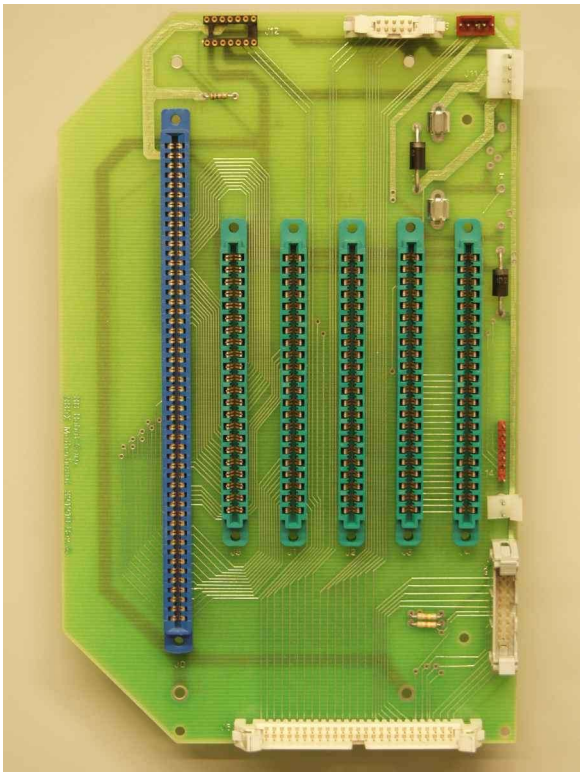


Refer to Figure 10.

( ) Install 10-pin locking connector at J10. Observe orientation. Pin 1 is towards the left, the keying slot in the connector faces the bottom of the circuit board.

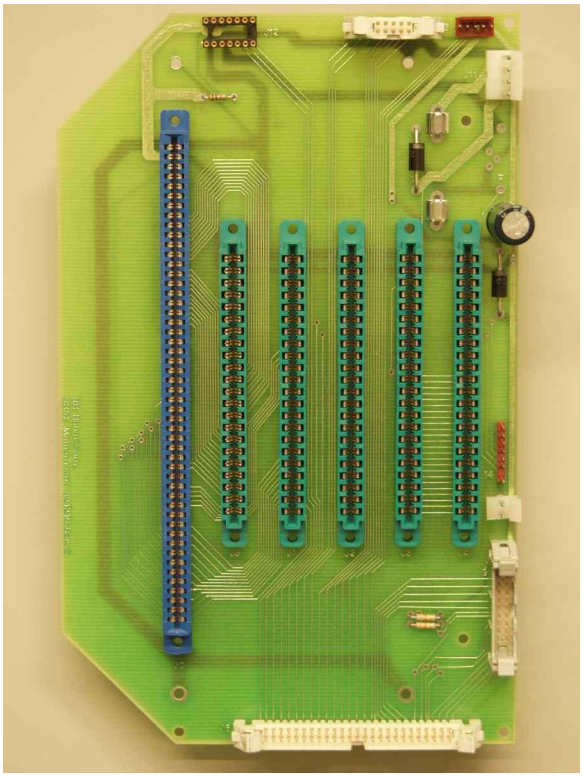
( ) Install 20-pin locking connector at J9. Observe orientation. Pin 1 is towards the bottom; the keying slot in the connector faces the right edge of the circuit board.

( ) Install 50-pin locking connector at J6. Observe orientation. Pin 1 is towards the left; the keying slot in the connector faces the bottom of the circuit board.



Refer to Figure 11.

( ) Install 1000uF Capacitor at C1. Observe polarity. The negative lead is towards the right edge of the circuit board.



This concludes the assembly of your Motherboard sub-assembly.