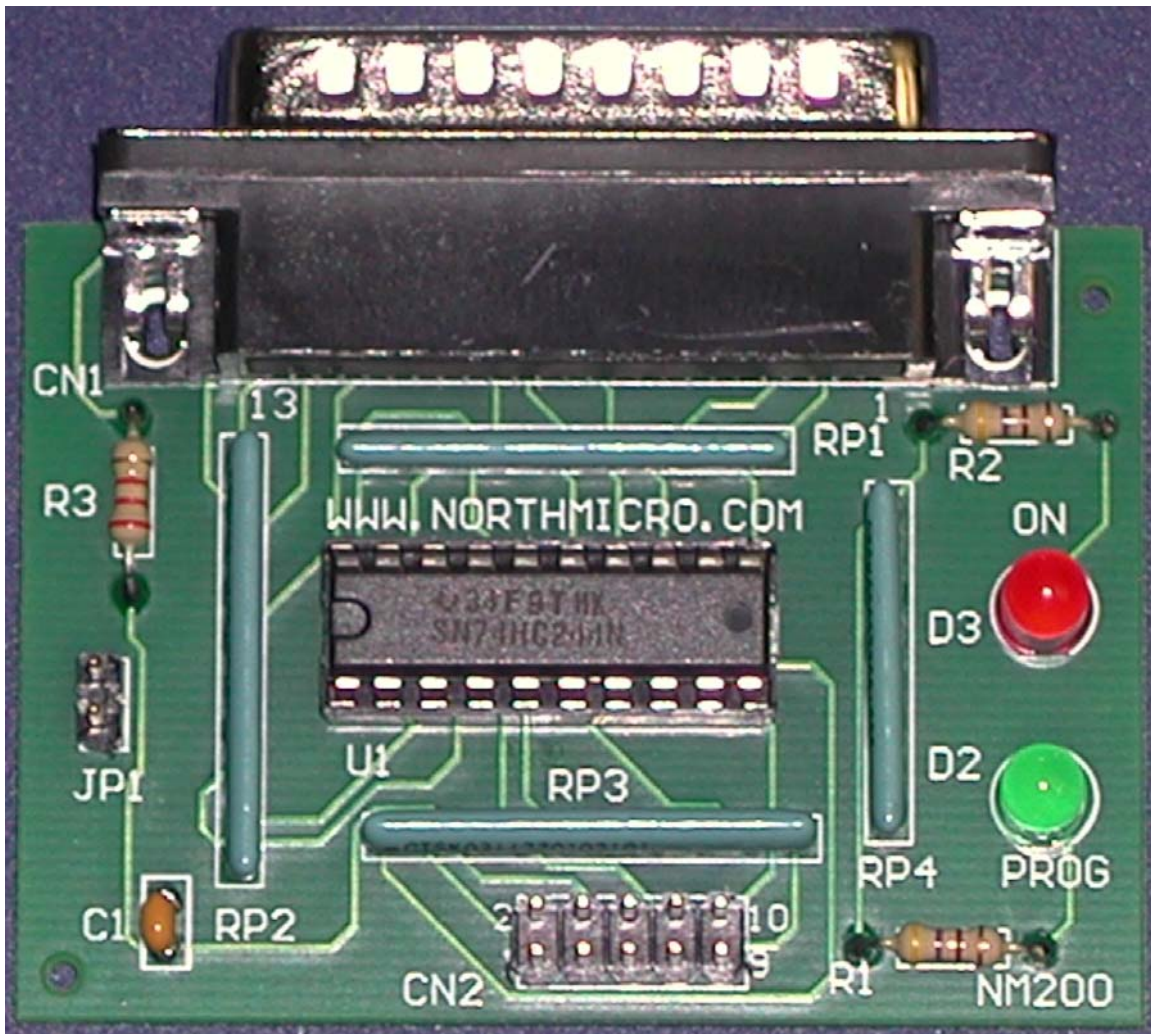


NM200: MAX44 - Altera FPGA/CPLD Programmer
Assembly Manual



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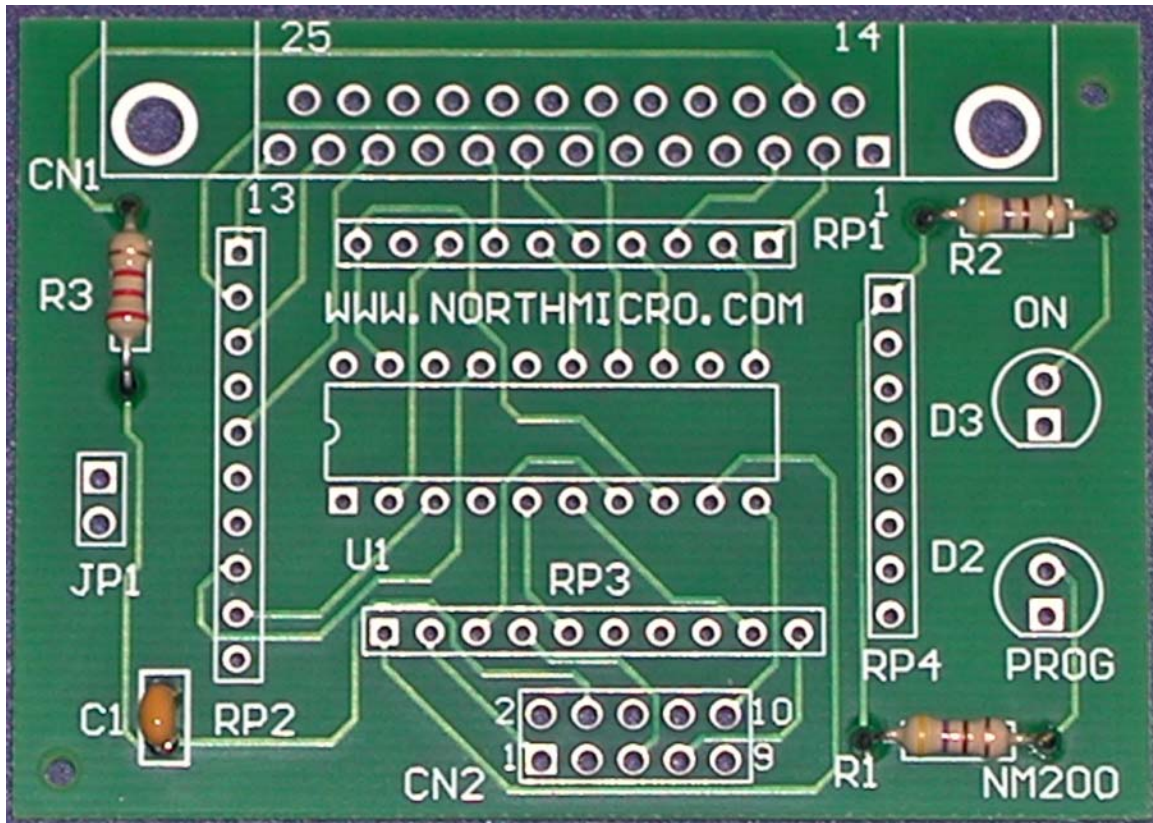
Solder the following resistors into place:

470 Ω in R1 (yellow-violet-brown-gold)

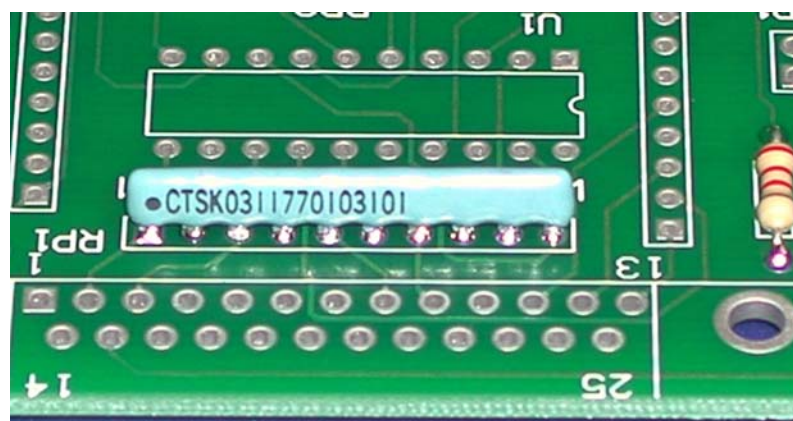
470 Ω in R2 (yellow-violet-brown-gold)

2.2k Ω in R3 (red-red-red-gold)
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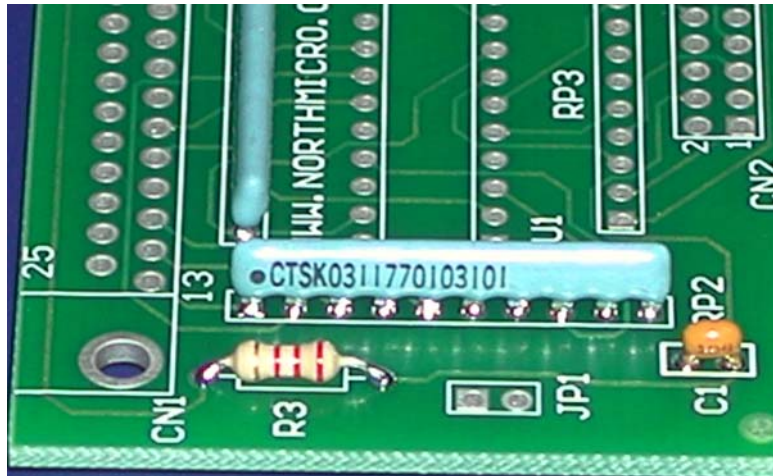
Solder in the 0.1 μ F capacitor in C1.



Insert the 1st resistor pack into RP1. Note the end with the dot goes into the square hole in RP1. Solder the resistor pack in place.



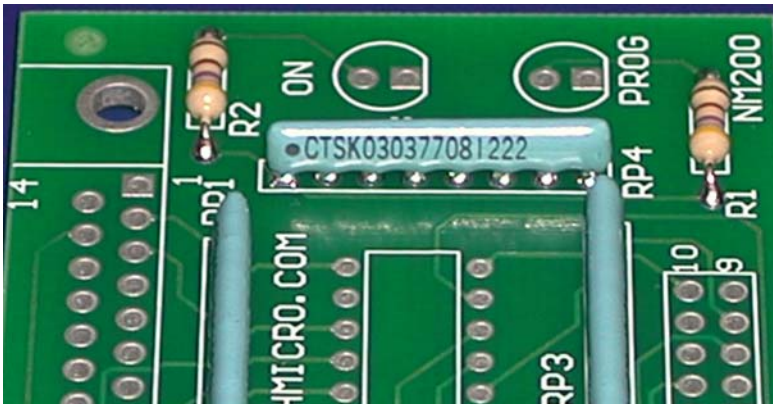
Solder in the 2nd resistor pack into RP2. The end with the dot goes into the side with the square hole in the circuit board.



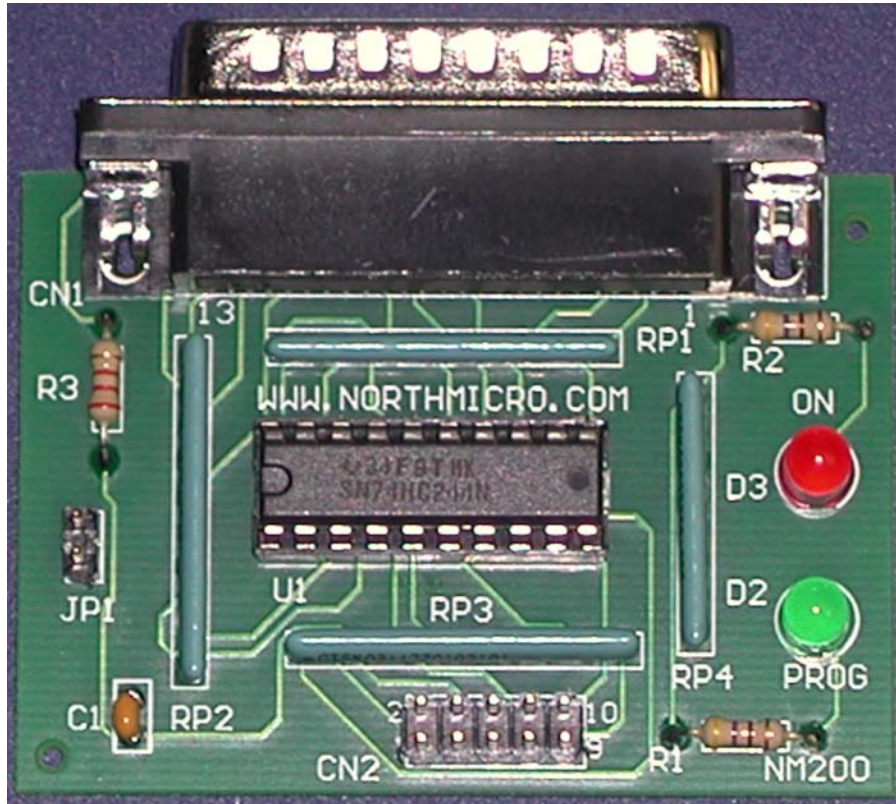
Solder in the 3rd resistor pack into RP3. The end with the dot goes into the side with the square hole in the circuit board.



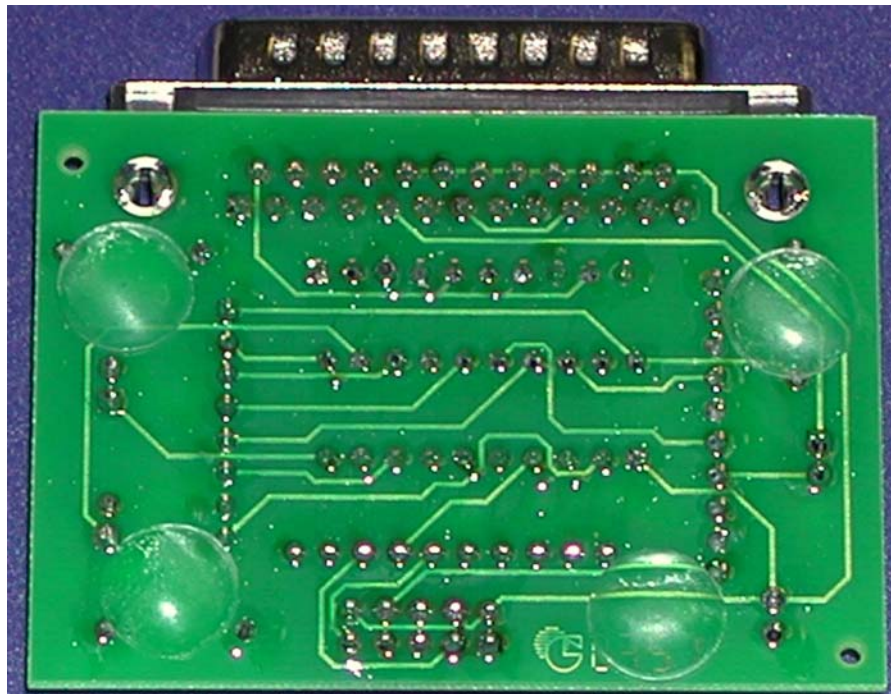
Solder in the 4th resistor pack into RP4. The end with the dot goes into the side with the square hole in the circuit board.



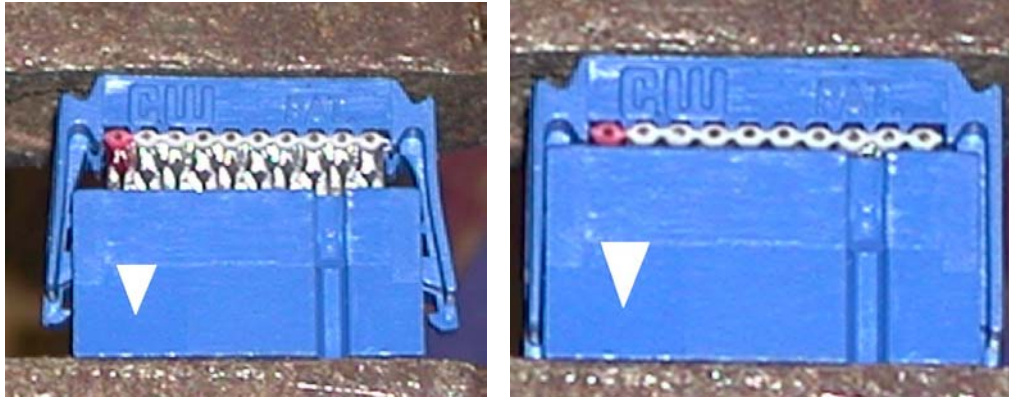
Insert the 74HC244N IC into the 20 pin socket. Make sure that the notch in the end of the IC lines up with the notch in the socket.



Mount the rubber feet.



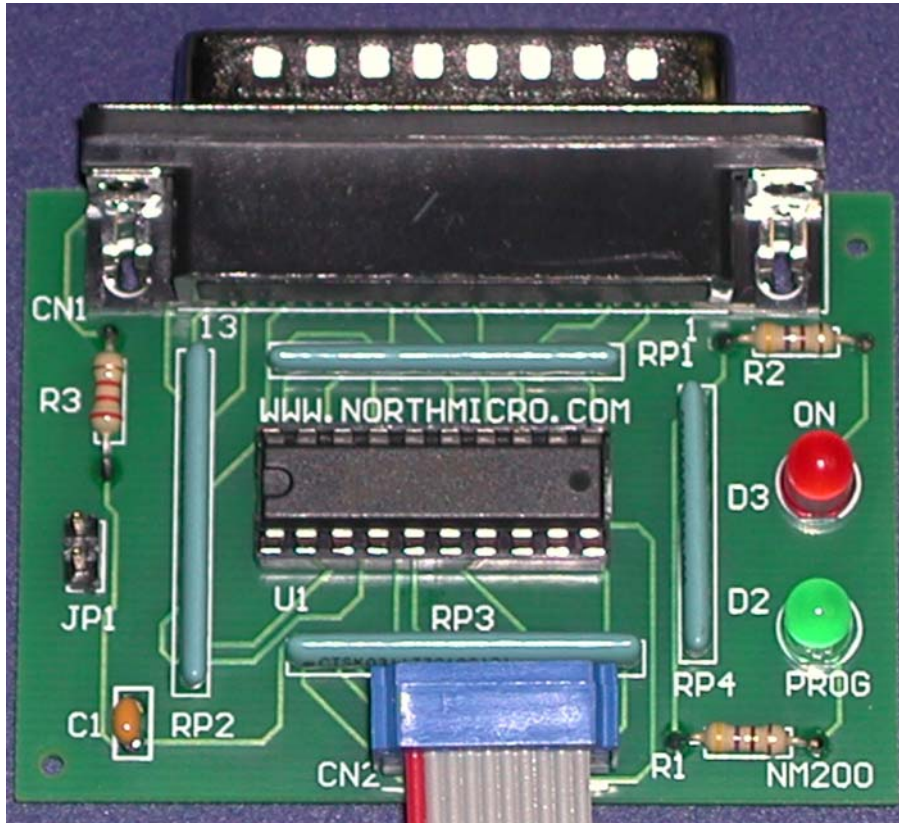
Place the cable connector into a vice or pliers that can press evenly across the entire connector. Insert the 10 pin cable into the cable connector so that the red stripe of the cable is aligned with the triangle on the connector. The cable should be flush with the end of the connector. Hold the cable in place and slowly close the vice. As soon as the connector is touching both sides of the cable, stop. **Caution: Do not over tighten or you will break the connector.**



Repeat the process with the second cable connector at the other end of the cable. Note that both cable connectors face the same direction. The triangles on each cable align with the red stripe on the cable.



Plug in the programmer cable into CN2 so that the red stripe is facing the pin 1 and 2 markings on CN2.



Congratulations. Your NM200 programmer is complete.

Parts List:

R1, R2	470Ω resistor		D2	Green led
R3	2.2KΩ resistor		CN2	5x2 header
C1	0.1uF capacitor		JP1	2 pin header
RP1, RP2, RP3	100Ω -10 pin resistor pack		CN1	DB25
RP4	2.2KΩ – 8 pin resistor pack		U1	74HC244N IC
U1	20 pin IC socket			Rubber Feet x 4
D3	Red led			Cable Connectors x 2
				Cable