The Volt Vette Project

Chapter 43

Digital Dashboard, part 3

The astute reader will have noticed that the circuit board in part 2 is different from the circuit board in part 1.

I seem to have left out some important information.

Let me backtrack.
The display board can not read the data from the Link 10, so in between the two I need a "translator" board. And yes, this makes the dash more difficult to build.

For the translator, I start with a blank board. This is much, much cheaper than a circuit board with all the wiring "printed" on to the surface of the board. The trade off is this: a blank board must be wired by hand; and if that hand has never done anything like this before, then you can count on the project taking much, much...., much longer to complete.

Having failed to master wire wrapping, I'm forced to learn how to solder circuit boards. I already know how to solder copper water pipe, but a blow torch is not recommended for diodes and resistors. I need to buy a new tool set.

In the photo above, you can see my new soldering pen in its holder.
The 3 yellow probes will be used to poke tiny parts into place. Next is a coil of thin solder in a tube. Last, and most important to me, is a spool of desoldering braid. The braid acts like an eraser, enabling me to redo a bad connection.
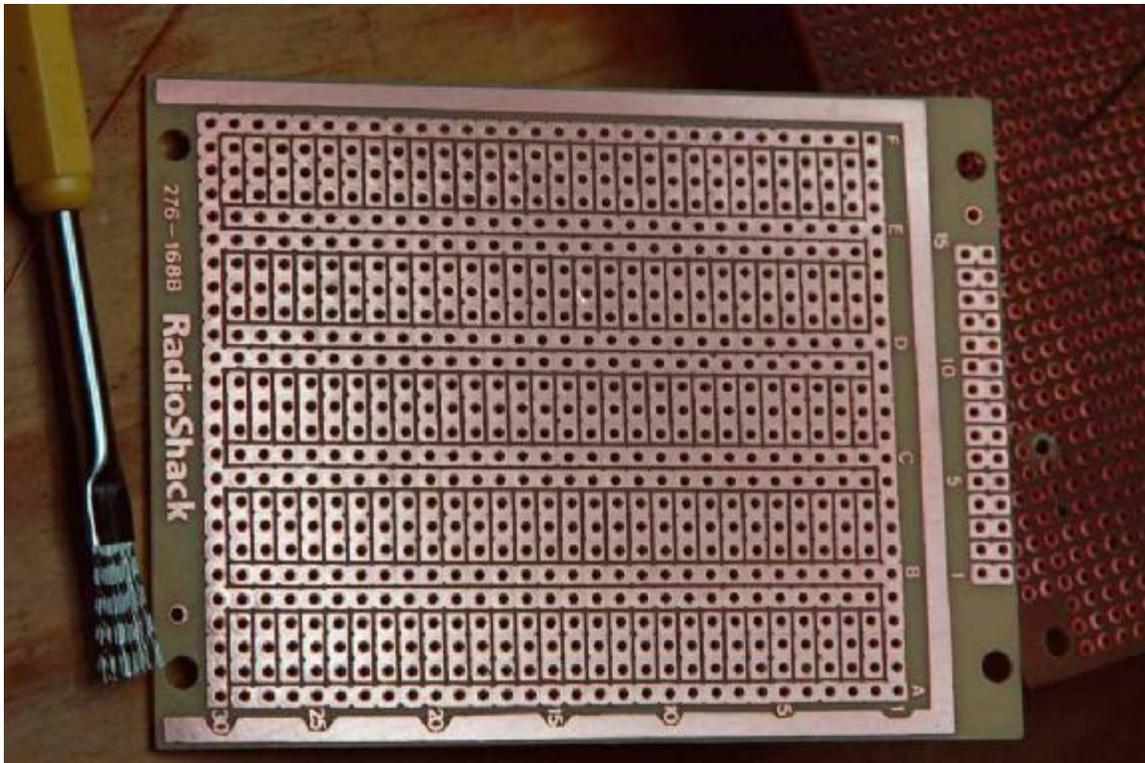
I pick a copper-plated board that has many of its holes grouped in twos and threes.
These holes are only 1/10 of an inch apart.
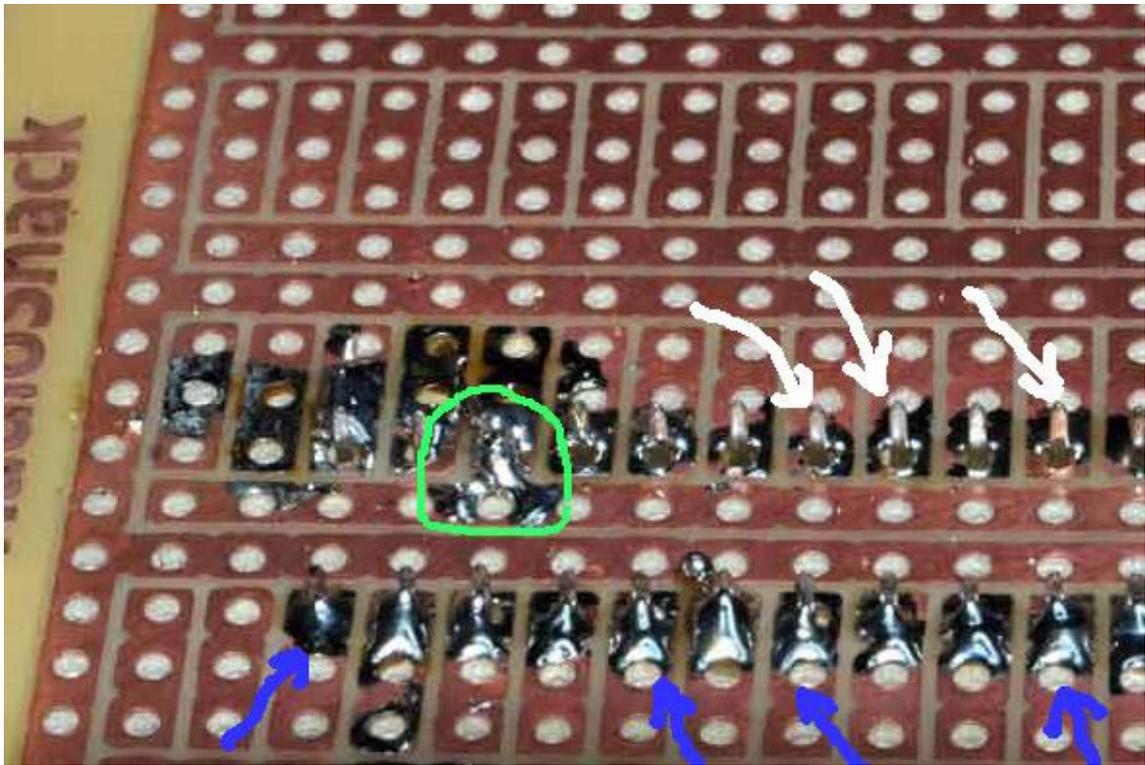
I heat up the soldering pen and have at it.

The white arrows show where I used too little solder, making for a poor connection.

The green circle shows where I used too much solder, making a possible short circuit.

The blue arrows show where I got it right. The solder is wrapped all the way around the wires without spilling over the lines.
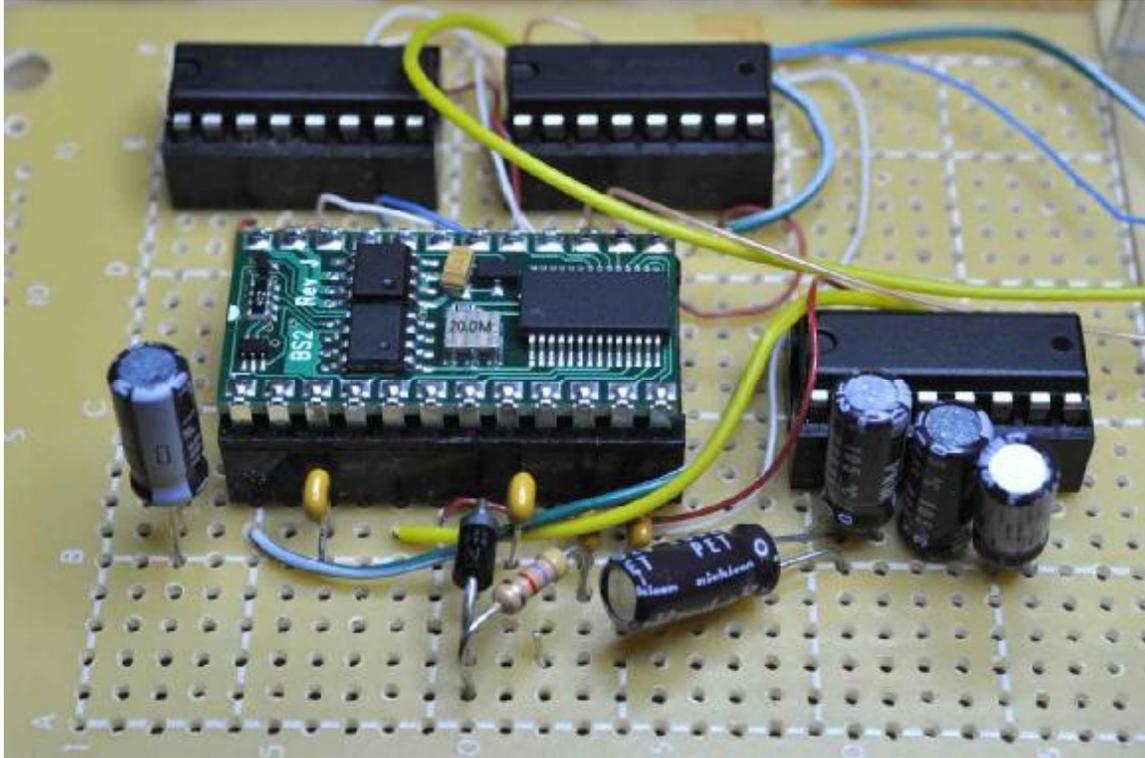
Here is how things look on the "top side" of the board. The microprocessor is the biggest tiny thing on the board.
I use 6 different colors of wire to help me keep track of what went where.
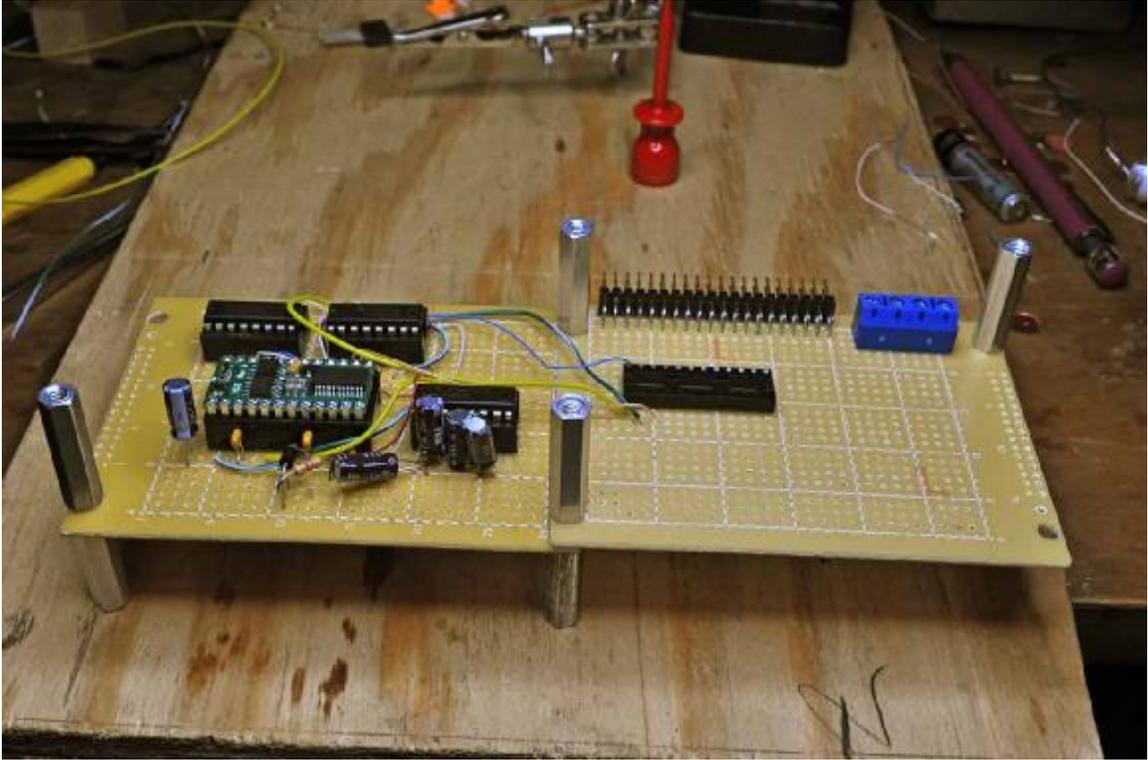
But I quickly run out of room and bolt a second board to the first.

Next: My bullet-proof battery charger fails.