

ERRATA - LCD Fluid Level Monitor  
*Nuts & Volts*, October 2003

A kind reader pointed out that there are errors in Figures 3 and 5. I sincerely apologize to anyone who may have had difficulty understanding or constructing the project due to these errors. The mistakes were entirely my own, not those of the editorial staff at *Nuts & Volts*.

This document includes the corrected figures.

The following clarifications may also assist readers duplicating the project.

### Probe Construction

The copper tube of the probe is to be grounded. It forms the outside of the probe capacitor. The inside part of the capacitor is the loop of wire. The bottom of the loop is at the bottom of the tube, and the top of the loop extends out of the top of the tube, where the wires are stripped, soldered together, and connected to the "probe" input of the circuit.

The quality of the wire insulation is important, as none of the uninsulated wire can contact the fluid. Use the best insulation you can find - Teflon insulated wire (Digi-Key and other sources) would probably be good. I have also used Tefzel aircraft wire. I'd recommend finding out about those and also Kapton, and wires designated THW or XHHW. As I am not an expert on insulation I cannot make a firm recommendation.

### Probe Protection Resistor

The 470 ohm resistor shown in the article is not really necessary, as during idle periods all the comparator pins are configured as outputs with zero volts out, so a probe short to ground will do no damage. The resistor was a feature of an alternate design in which the probe capacitor was charged to the battery voltage, and then allowed to discharge through a resistor. For space reasons the alternate design was not presented.

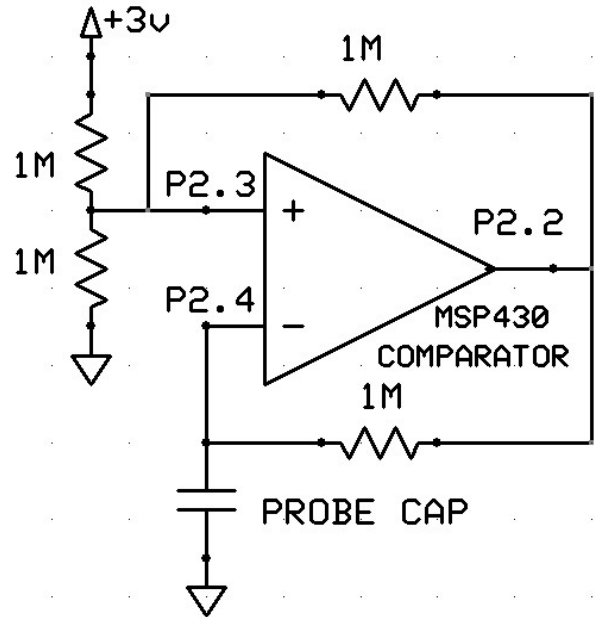


Figure 3

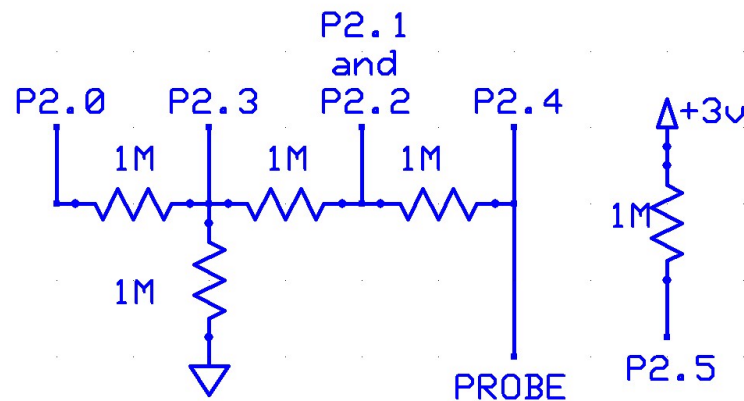


Figure 5