

The Rev 1.2 version of the IC tester pc board includes several small changes. Only these changes are discussed here.

- 1) On page 1 of the schematic, jumpers JP1 and JP2 were added for bypassing the RS-232 level converter. If you are using a USB-to-serial converter that works with 5V signals, you **must not** install U3. Place solder blobs on these two jumpers to short across them. **(Do not do this if U3 is installed)** Legacy RS-232 serial communication uses +/-12V for signaling. USB uses 5 volts or less. If you install U3 and then connect a USB-to-serial adapter, it will most likely be damaged by the 12V levels generated by U3. Note: Although the schematic shows a MAX232 for U3, the parts list calls out a HIN232, which was designed to work with 0.1uF caps. If you want to use a MAX232, then you will need to use 1uF capacitors instead for C3-C7.
- 2) On page 3 of the schematic, the unused section of dual op amp U7 is now terminated by resistors R86 and R87. In ten years of selling this kit I have never heard of anyone having any problem due to this op amp not being terminated. But it was easy to add the two resistors, so I did it. These resistors can be 1/4W 5% types.
- 3) On page 2 of the schematic, a "Power" LED (D40) has been added to show when the whole circuit is powered. (Not when the IC being tested is powered) If the LED forward voltage is 1.7 volts, a 330 ohm resistor (R89) will give an LED current of 10 mA. Different color LED's have different forward voltages, and some people may want the LED dimmer or brighter. So feel free to adjust the value of R89 up or down a little. With modern LED's 10-15 mA should be enough current for the LED. 1/4W 5% resistor should be fine here. Note that the solder mask around the bottom of the LED holes is still in place, due to an error in the KiCAD footprint. If you lift the LED up off of the pcb, you can solder the leads on the top side of the board. Alternatively you can scrape the solder mask away around the holes on the bottom with an X-acto blade. It may also be possible to remove it with nail polish remover or Goof Off, but I have not tried this.

No other changes were made to the pc board, aside from adding a note about placing the chip to be tested, adding an additional mounting hole, and changing the revision and date.