

Troubleshooting tips: courtesy of Jeffrey Crompton (NRCan)

- The PICKIT3 was not able to communicate with the PIC12 microchip using the zero force insertion socket that came with the PICKIT3. I had to use a breadboard instead. I have attached a picture of the wiring for the breadboard and the pinout for the PIC12. One way to check that it's working is that the voltmeter should jump to about 13V to initiate programming, which only happened when I connected the chip to the pickit using the breadboard. You can see how the breadboard connects to the PIC12 from the manuals that I sent (Figure 1.2 on the PICKIT3 manual and top of page 2 on the pic12 manual), which show the pinout diagrams, or you can look at the pictures that I sent and see the wiring in the list below.
 - In the breadboard pictures, the microchip is not inserted into the breadboard, but if it were, the 1st pin (VCC) should go into row three column E and the PIC will straddle the seem
 - Brown wire (MCLR/VPP) goes to slot 1 (with the arrow) on the PICKIT3
 - Red (VCC) goes to slot 2
 - Orange (VSS) goes to 3
 - Yellow (ICSPDAT) goes to slot 4
 - Green (ICSPCLK) goes to slot 5
 - Slot 6 on the PICKIT3 is left blank
 - That's a 10Kohm resistor on the breadboard and it connects pins 1 and 4 on the PIC12.
- Sometimes MPLABX won't communicate with the PICKET3.
 - Make sure all other USB ports are disconnected from your computer.
 - PICKIT3 might be expecting 4.75V rather than 5V, so in MPLABX click the Production tab at the top > set product configuration > customize. In the box click PICket3 in the categories window, then select "Power" from the "options categories" dropdown menu and change the reference voltage from 5 to 4.75V.
 - Try restarting MPLABX and reconnecting PICKET3
- For my setup, the FTDI friend would only communicate with ICs on the board after I cut the metal bridge for the preset 3V signal logic level and soldered the 5V option instead. The bridge for Pin 6 can be on DTR or RTS (not 100% sure), but I had mine on DTR. See attached picture
- The log_temp.ino program for more than 2 probes was leading to errors and although the probes were reading temperatures in the Arduino serial monitor there was an error getting temperature. I edited the script for 4 probes (attached) and you can add lines for 5 probes. In my script, there is no option to comment out lines for more or fewer probes and a more general script would be good. Salvatore also gave me an updated code to try and it should work better but I haven't had a chance to try it. For both programs, the .no files will need to live in a directory with the same name as the script (without the .ino extension in the name)
- Even with the 2 probe program, you might get an error logging data for the first many logging intervals, but sometimes everything starts magically working after a few hours and the logger will work continuously after that.





