

## K149A, K149B, K150 Hardware Modification

When these kits are placed into a reset state, the programming voltages all appear in the programming socket and ICSP pins. This will happen when the board is turned on and MicroPro is not connected, and when MicroPro resets the board.

To stop this from happening it is suggested to use the modification as shown below.

This requires the addition of three (3) 3K3 1/4W resistors.

These are placed on the PIC pins 11, 12 and 13 to ground as shown in the diagram below. These can be soldered underneath the PCB

Please remove the PIC16F628 chip before attempting to solder the resistors in place.

After soldering the resistors, replace the PIC chip and apply power. Verify that there are no voltages present in the programming socket.

Run MicroPro and test your board by trying to program a chip.

