DeskCNC Controller Board
2nd Generation

Dimensions of Board are 2.5 in wide by 2 in high
w/ 4, .125 dia mounting holes.

Connections

Setting up 2nd gen controller

1.   Determine if you have 1st or 2nd gen controller and set menu Setup - Machine Setup -
             Machine - 2nd Gen Controller option.

2.   Toggle power to Controller. If Blue LED is Steady, it is waiting to be reprogrammed
             and this must be done before anything else.
                 If Blue LED flashes or flickers, then it is OK, so hit menu Controller - Reset.
                 If no LED, then you do not have power going into Controller.
         The controller can be powered by 9Vdc UNregulated supply OR 5Vdc REGULATED
             supply to the appropriate terminals.

3.   Check PORT setting in Machine Setup. Use a Straight Through DB9 Serial Cable. A
             Null Modem Serial cables will not work.

3.   Check bottom Status Bar- If there is a problem this will give more info.

rwc 25/03/05

4.   If software starts in Machine Mode then Controller was detected correctly. Software will start in E-stop. Click E-stop button. If status bar displays 'Limit Switch Hit' and jog buttons are still disabled, then the Estp terminal needs to be grounded.

5.   If Controller is detected and jog buttons OK , but no movement, then check the coordinate display - if coords are 'moving' then Controller is OK and look for problem in Step/Direction wiring to motor Drivers.

Reprogramming 2nd generation controller

Before reprogramming, check E-stop configuration

1) The E-stop switch must be a normally closed type.
2) Test the controller board by running a wire from 'In I/O' connector estp to ground. You should be able to jog if you do this.
3) If the E-stop screen button is depressed, no motion will occur.
4) The controller software normally comes up in E-stop. Press reset to release it and then you should be able to jog.
5) Make sure that under Setup-Machine, Setup-probe, that the probe is disabled.
6) Verify that if you have a recent version of the software (later than 2.090 or so), that you have correctly configured the controller under machine for 2nd gen if you have that board, or unchecked of you have a 1st gen board.
7) Don't try to run any programs until you are able to jog around with the jog keys, using either the arrows on the keyboard or the buttons on the screen.

Forced firmware reprogram procedure, 2nd generation board:

(You will need access to the controller 'in I/O' connector for this procedure).

1) Start Windows
2) Start the controller electronics (Blue light flashing on the controller)
3) Apply a short from the 'in I/O' Start pin to ground
4) Start DeskCNC software. As the software starts up, the blue light on the controller will stop flashing and remain on steadily.

5) Remove the short between Start and ground.

The firmware in the controller will then be automatically reprogrammed from DeskCNC. This may take a minute or two.

If you have fitted the cycle start button then it will be a normally open switch, connecting the Start pin to ground, so you can use this instead of the shorting link.

After reprogramming, close DeskCNC and restart the controller board.