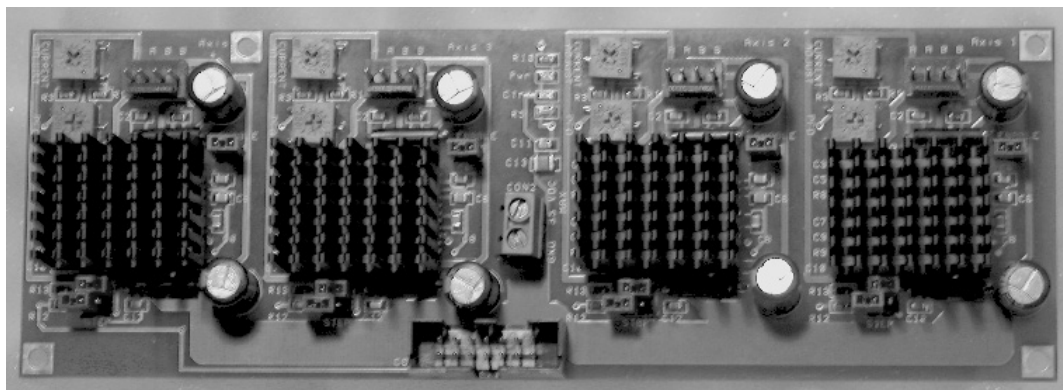


Carcken 4 Axis Stepper Motor Driver Board



Maximum Motor Voltage is 35 Volts dc, Maximum Current is 2.0 Amps

Motor Connections (for each axis): AA to one motor coil pair, BB to the other pair. For a 6 wire stepper motor, then each pair of coils will be in series, the centre wires will not be connected. For an eight wire motor, then the coil pairs may be connected in series or in parallel, depending on the current requirements of the motor. Ensure windings are in phase. To reverse motor direction, reverse one pair of connections only, either BB or AA.

Con1: Step/direction pulses from controller board at TTL voltage level. Pin 1 (square solder pad) is to bottom left of the connector in the illustration above, pin 2 is the top left, etc., as indicated below.

2 4 6 8 10 12 14
1 3 5 7 9 11 13

Pin 1 Axis 4 step (square solder pad)
Pin 2 Axis 3 dir
Pin 3 Axis 4 dir
Pin 4 Axis 3 step
Pin 5 +5v
Pin 6 +5v
Pin 7 Gnd
Pin 8 Gnd
Pin 9 Not Connected
Pin 10 Not Connected
Pin 11 Axis 1 step
Pin 12 Axis 2 dir
Pin 13 Axis 1 dir
Pin 14 Axis 2 step

Con2: Main DC supply connection - ensure correct polarity, and less than 35V.

Enable: jumper closed to enable controller, open to disable (allows manual movement). You may wish to connect a switch instead of the jumper.

Step: Pair of jumpers - both on is full step, both off is 1/8 step, with half and quarter step with one on.

Current Adjust Potentiometer: 1.0 A full CCW to 2.0 A full CW.

PFD Potentiometer: 'Percent Fast Decay'. Usually set to somewhere in the mid position. The specification sheet for the A3977 (data sheet 26184.22A) available at www.allegromicro.com has more detailed information.

24/12/03