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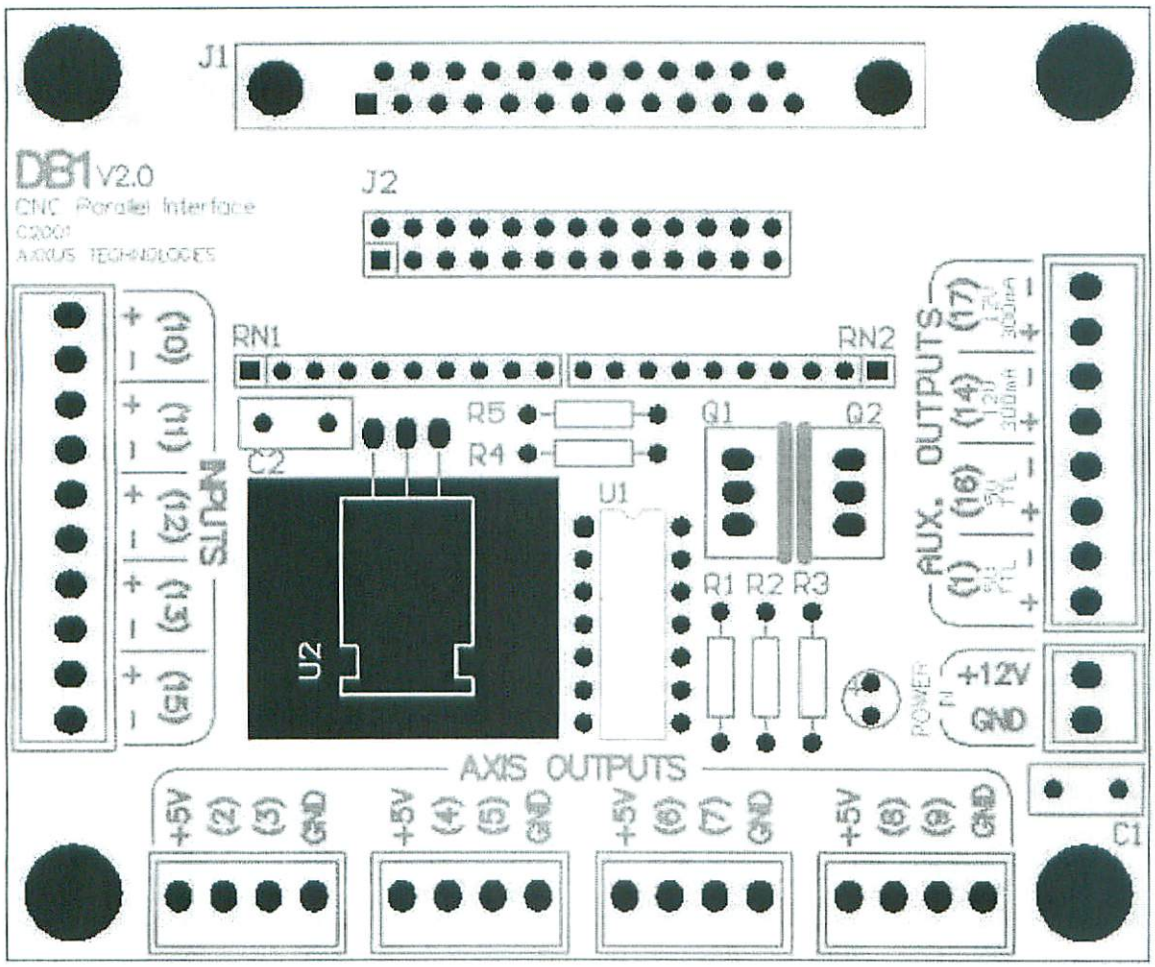
DB1V2.0 CNC Parallel Port Interface



Connection information:

WARNING

The use of CNC equipment is inherently dangerous and proper care and safety procedures should be followed at all times. Do not power up your CNC controller electronics before the controller software is loaded and ready. Failure to do so may result in unwanted axis movement and/or relay operation.

NOTE: Axxus Technologies/Deans Hobby CNC is not responsible for loss or damage caused by the improper use of this equipment. You should always use a computer with a separate board for a parallel port. If you do make a mistake, and damage your parallel port during testing, you can easily replace it. Always turn the power off when connecting or disconnecting anything to the DB1.

The following information is a general outline of how the DB1V2.0 parallel interface should be used. Since every user application is unique, it would be impossible to provide specific wiring information for every user. The connection of the DB1 is quite simple and all connections are clearly marked on the printed circuit board. If there are any specific questions, please contact Axxus Technologies at deanc@v-wave.com .

Power Supply

The DB1V2.0 requires a 12V power supply. The current rating of the power supply should be at least 1A. This will provide ample current to drive the two 12V relays as well as the regulated 5V circuit. If no relays are being used, then a 400 mA supply will be sufficient.

Axis Outputs

Output pins 2 through 9 are grouped together as the axis outputs. Most CNC control software packages can be configured to output step and direction signals to these pins. Other non configurable packages usually use these pins by default. The pins are used in the following pairs: 2-3, 4-5, 6-7, 8-9. If you have a choice, it doesn't matter which pin in each pair is used for step and which is used for direction, just as long as the drivers are connected to the correct output. The DB1V2.0 also has a general purpose +5V supply and a ground for each group of axis pins. These are to provide a logic power supply for stepper drivers if required. Some drivers will need both +5V and a ground connection. Others such as Gecko drives will only require +5V or ground, but not both. Another use for the 5V supply could be to power encoders when the DB1 interface is used with stepping servo drives.

Click here for generic driver hookup small big
Click here for Gecko 201/210 hookup small big
Click here for Gecko 320/340 hookup small big

Aux. Outputs

The Aux. outputs are pins 1, 16, 14, and 17. Pins 14 and 17 are amplified using power mosfets to directly drive any 12V relay with an input current draw of 300mA or less. The relay coil can be directly connected to these pins. Pins 1 and 16 are 5V outputs and can be used to connect with TTL devices such as transistors, logic gates, or microprocessors.

Click here for Auxiliary Output hookup small big

Inputs

Many software packages will allow the connection of limit, home , and emergency stop switches. Input pins 10, 11, 12, 13, and 15 are used to connect switches to the parallel interface. These pins of the parallel port are pulled up to 5V. To provide a low logic level, the pins are grounded through the switch. Although switches are not sensitive to polarity, the input screw terminals are marked with a plus and minus sign to indicate which pin is pulled high and which is ground. Some trial and error may be necessary to get the inputs to perform as required. Configure the software to be active on "high" or active on "low" as required for your application. Another alternative is to use normally open switch contacts or normally closed contacts to achieve the correct results.

Click here for input switch hookup small big

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