



The Circuit Diagram

The circuitry required to drive the two stepper motors is straightforward, two SAA 1027 driver chips being used to provide the correct coil energising sequence to each motor. As the driver chips operate at 12v and user port signals from your micro are only 5v, an additional buffer chip is used to isolate the 12v circuitry from the computer and translate the low voltage user port signals into the higher voltage signals needed by the driver chips. In the next instalment we shall show how the circuit board connects to the motors and D plug and how to make the correct connections with the computer's user port

The Project: Building The Board

- Cut the board to size (24 strips x 35 holes) and make the track cuts as shown in the diagram.
- Solder in the three chip sockets first and then all the wire links.
- Solder in the four resistors. It does not matter which way around these are fitted onto the board.
- The two 0.1µ F capacitors can also be fitted in either orientation, but the large 1000 µF smoothing capacitor must be fitted with the positive terminal at the side of the board with the two chips.
- Now fit the chips in position, making sure that they are the right way around. The end of the chip with a notch in it should be at the side of the board with the two chip sockets.
- Check the whole board very carefully. Check not only that all the components are correctly positioned, but also that there are no blobs of solder bridging across adjacent tracks. It is a good idea to run a sharp knife along the gap between each track to clear away any solder debris.

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