How to Project:

Electrical terminal block

Every model railroad, regardless of scale has the need to distribute electrical power to multiple places. The distribution could be for track power (AC or DC), power for lighting to structures, power for accessories, switches or any other item on your layout that needs some form of low voltage electricity. Finding a simple, organized approach to wiring is a key element to having a reliable model train layout.

We have found that using commonly available items form a hardware or home improvement store you can make an electrical power distribution block in under 10 minutes using tools you likely already have for under $8.

Material needed

- 8x10 piece of Lexan or Plexiglas (makes four blocks)
- 23 position electrical bus bar (makes one block)

- **Step 1**

We will be cutting the 8 x 10 piece of plastic stock down to 4 pieces 3.5” by 5” allowing you to make 4 terminal blocks from one piece of plastic. Measure and mark out the cut lines on the plastic sheet as noted in the drawing to the right. Using a straight edge like a small square helps to get the lines straight. We suggest using 3.5” instead of 4” as it fits nicely on your bench work if you have used 2x4 and/or 1x4 in your construction and doesn’t leave any exposed pointed corners.

- **Step 2**

Cutting plastics is best done by scoring along a straight edge the material several times with a utility knife, then snapping the piece along the scored line over a hard edge like the edge of a table to create a clean break. Align the sheet along the edge of the workbench and using a small square helps to get a straight cut.
Step 3

In this step we will drill 4 holes in the cut down plastic to provide mounting holes.

Pick a drill bit that is slightly larger than the diameter of the screws you will be using for mounting the blocks.

Clamp the plastic down to your bench inserting a piece of scrap wood between the plastic and the bench so you can drill thru the plastic without drilling in to your work bench.

Drill four holes in the plastic coming in about 1/8” to 1/4” from each side.

It is best to keep the drill bit moving a a high speed and drill all the way thru in a smooth motion, using slower speed can sometimes cause the plastic to crack, especially if you use Plexiglas in stead of Lexan.

Step 4

Each 23 position bus bar needs to be cut in half to make two pieces with 12 connections each. The bar actually has 25 threaded positions, but only has screws for 23. We will be cutting out the middle threaded opening to create the two halves with threaded openings12 each. Clamp the buss bar down to the edge of the bench, or use a vise to hold it securely. Use a Dremel rotary tool with a cutting wheel, or some other metal cutting tool of your choice to cut thru the bus bar.

When making the cut, it is best to cut on either side of the center threaded opening so that you create a smooth end to each half, this will take two cuts. To fully use all 12 positions, you will need to add one additional screwed to the buss bar, additional screws are available in the same area of the store as the original bus bar.

Step 5

Take the two 12 position pieces of the bus bar, and glue them on to the 3.5” x 5” piece of plastic you cut and drilled the holes in before. We suggest you use a super glue, we like Gorilla Glue brand super glue. Let dry before use.

When you use this for power distributions, all the connections on either bus bar are electrically connected to each other, but isolated from the other bus bar. Use one side for plus (hot, +, red) and one side for minus (ground, -, black).