

Blue Lantern Modules DIY 6 Channel Stereo Mixer AKA BMX

Instructions for Control PCB

1. Install (18) 20K value resistors on the silk screen side. Use long nose pliers to help pull the leads of the resistors so that the resistor lays flat on the pcb.
2. Install (4) 150k value resistors on the silk screen side. These are on the left side of the pcb.
3. Install (12) 120k value resistors.
4. Install (6) 4K7 value resistors.
5. Install (6) 1K value resistors.
6. Install (8) 47uf value electrolytic capacitors. These capacitors are setup up for non-polar audio use.
7. Install (1) 40 Pin single row male header on the silk screen side.
8. Install (1) 10 pin single row male header on the silk screen side. This header is made by cutting off 10 pin size from a 40 pin header.
9. Install (1) 3 pin single row male header for the headphone jack pcb. This header is also made from a 40 pin header.
10. Install brass standoffs on the silk screen side. The screws should be on the pcb side with no graphics or silkscreen.
11. Solder on the toggle switches first before any other hardware. The switches will determine front panel depth for the control board.
12. Next solder on the plastic shaft 100k 'skinny' pots.
13. Then finally place the mono jacks. Looking from the top, the ground leg should face to the right. Double check that the jacks are facing the correct direction. You are simply placing them on the pcb, not soldering yet.
14. Also place four 100k pots that are for master main level and phones level. You are also not soldering these yet. It is best to use a washer to help with the depth between the pot and the panel.
15. Gentle place the front panel on the control board and align everything. Use some toggle switch nuts to secure the panel to the control board. Now turn the panel over and solder the jacks. Push the 4 potentiometers flush against the front panel, you can also screw the nut to help with this. Once ready solder the last pots.

Instructions for the Main Mixer PCB

1. Solder all the resistors. On the bottom there are (2) resistors above the words 'Stereo Mixer'. It is recommended to change those to value 4.7k instead on 10k. This determines how loud the headphone amp will be. Using 4.7k brings the headphone amp to a better, softer range.
2. Solder on all capacitors.
3. Solder on the (6) IC sockets or directly solder on the (6) dual op amps. I recommend using NE5532 op amp.
4. Solder on both 1N5819 next to the power header location.
5. Solder on the power IDC 'Euro Format' header. You can use 10 pin or 16 pin depending on your needs.
6. Finally solder on a 40 pin female single row header. Also install the 10 pin female header.

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7. Carefully use cutters to help remove the phono jack pcb from the main mixer board. This is located under the BLM computer logo.
8. Solder the female 3 pin header onto the headphone jack. The PCB is for a tayda ¼" phono jack jack. Otherwise if you used another panel jack for the headphones, make sure it is for stereo. You can use the 3 hole location on the control board pcb to connect your jack with wires.
9. Once everything is soldered you can install the Main Stereo pcb with the control board pcb.
10. On the front panel please install the four knobs, jack nuts, and the rest of the toggle switch nuts.



