

There are 2 basic configurations of the Rotating Arena:

- Mouse setup
- Rat setup

Mouse setup uses shock grid for the shock delivery. Both poles of the Constant Current Source are connected to the Rotating Arena interface. From there, the current is passed to the Scrambler, which converts the 2 pole stimulus into 5 pole stimulus by switching the current into different pairs of outputs. The shock grid is organized in quintuplets of 5 rods, so first rod is connected to the sixth rod, second rod to the seventh, etc. This way the shock is distributed to the whole grid.

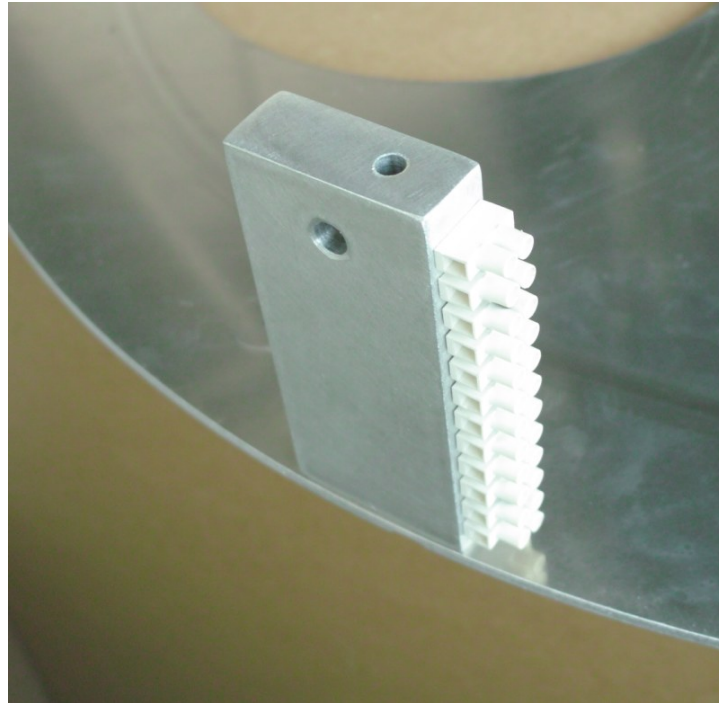
Rat setup uses circular stainless steel arena top as a shock ground and a cable running from the ceiling to the rat as a positive current pole. The positive pole is usually connected to the pin attached to the rat's back using low impedance electrode. During the shock, current passes through the low impedance electrode and the rat to the stainless steel arena top. In the rat setup, the Current Source output is connected to the Control Box. Its ground is distributed to the Arena Signal cable to the Rotating Arena and its positive pin is distributed to the CAFELED cable and the CAFELED board, where shocking cable gets connected.

#### Arena assembly

Step 1 The plastic connector gets connected to the aluminum ring using 2 screws.

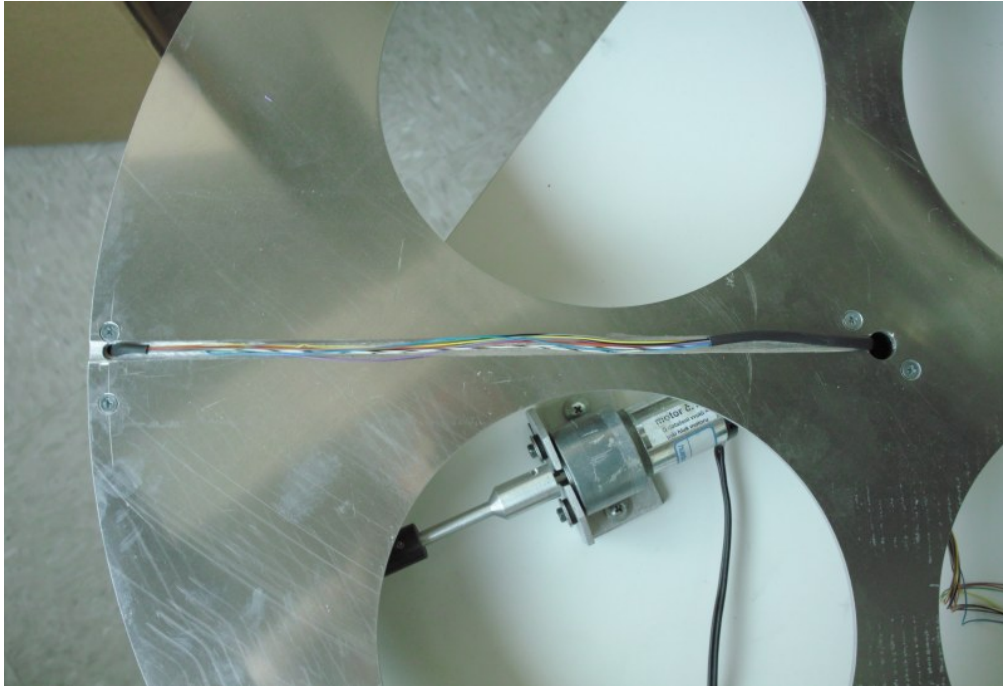


Step 2 On the side of the aluminum ring, there are 3 holes next to each other. These are used for connecting the arena LED holder and the signal distributing connector.

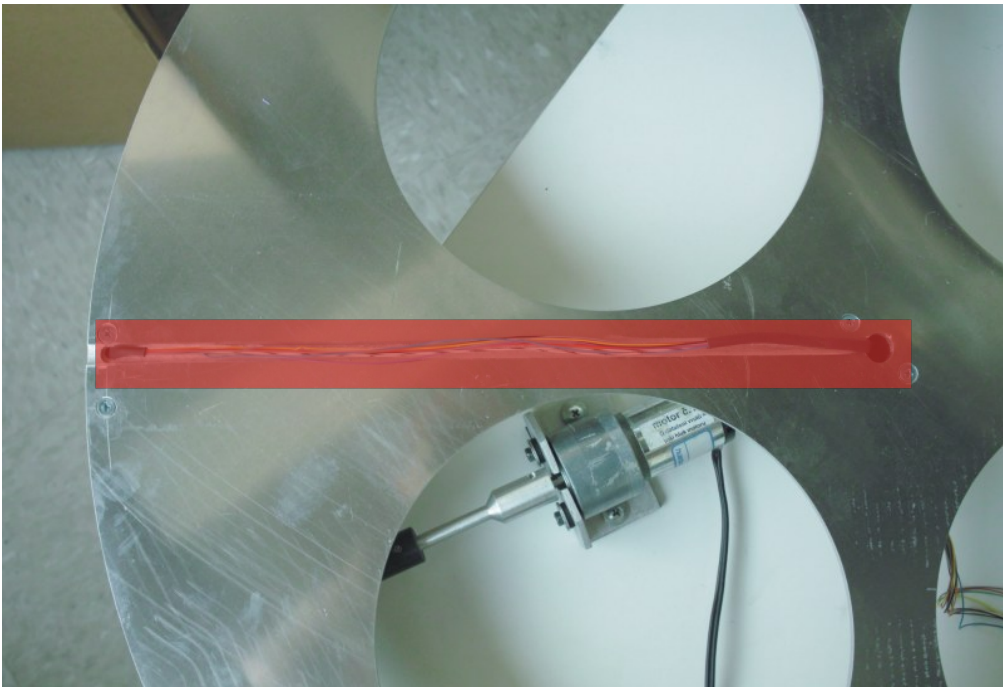


Step 3 After the aluminum ring is assembled, it gets placed to the top of the arena base (white triangular base with legs). Please notice, that the plastic connector, which was attached in the Step 1 has two gaps. These have to fit onto 2 screws on the top of the arena base.

Wires coming from the top of the arena base go through the aluminum disc, through the gap in the disc into the hole at the end of the disc. From there, they pass through the arena LED holder.



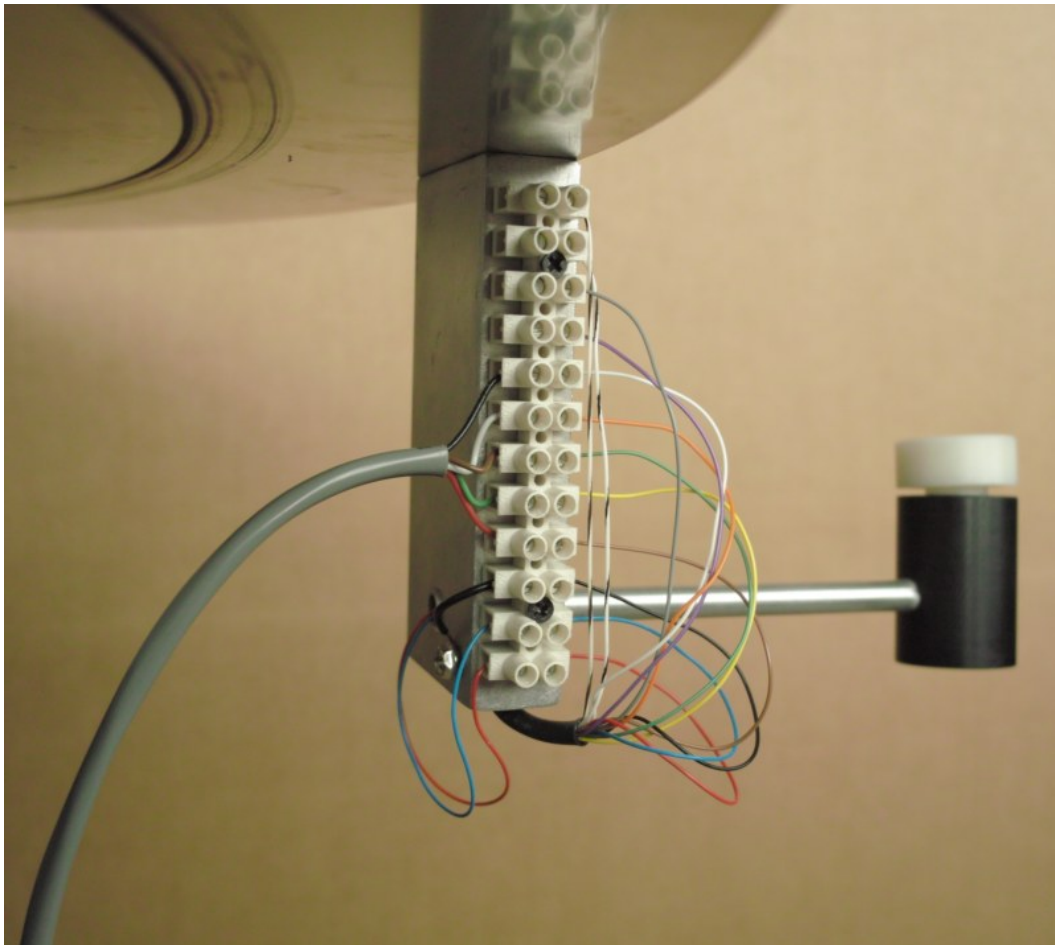
After wires are placed, they have to be fixed in the gap. Duck tape works the best.

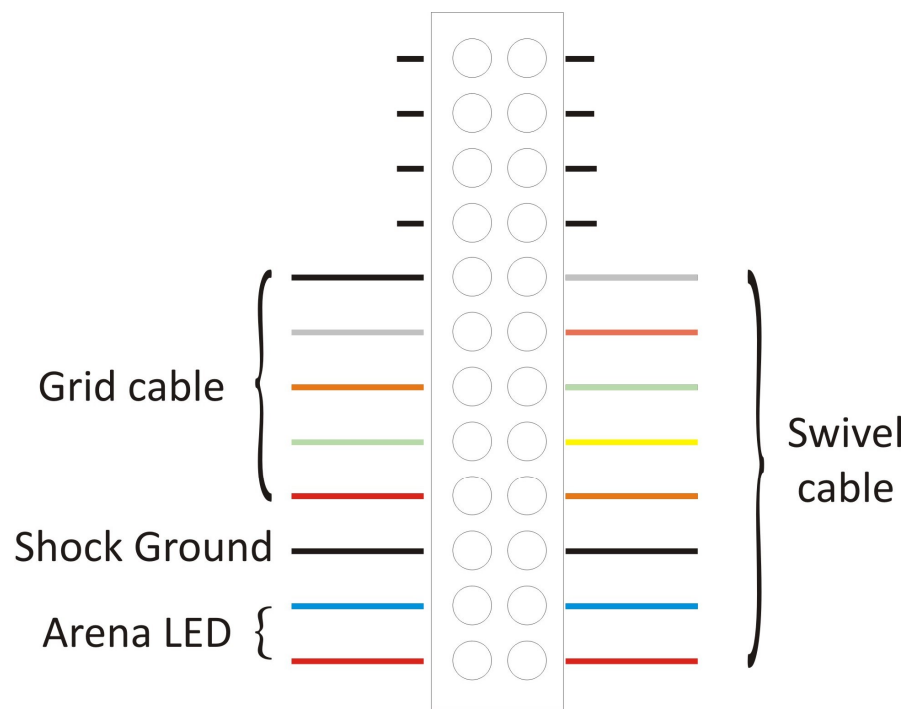


Step 4 Wires passing through the arena LED holder are connected to the screw terminal (as shown on the following images). There are 3 groups of wires:

- Arena LED – provides power for the Arena LED
- Shock Ground – Connects Current Source ground (negative pole) to the arena surface (rat setup)
- Grid Cable – Connects the scrambler output to the arena grid (mouse setup)

Note: For the rat setup, you don't need to connect the Grid Cable.





-	-
-	-
-	-
-	-
Black	White (grid shock pin 5)
White	Orange (grid shock pin 4)
Brown	Green (grid shock pin 3)
Green	Yellow (grid shock pin 2)
Red	Brown (grid shock pin 1)
Black	Black (shock GND)
Blue	Blue (arena LED -)
Red	Red (arena LED +)

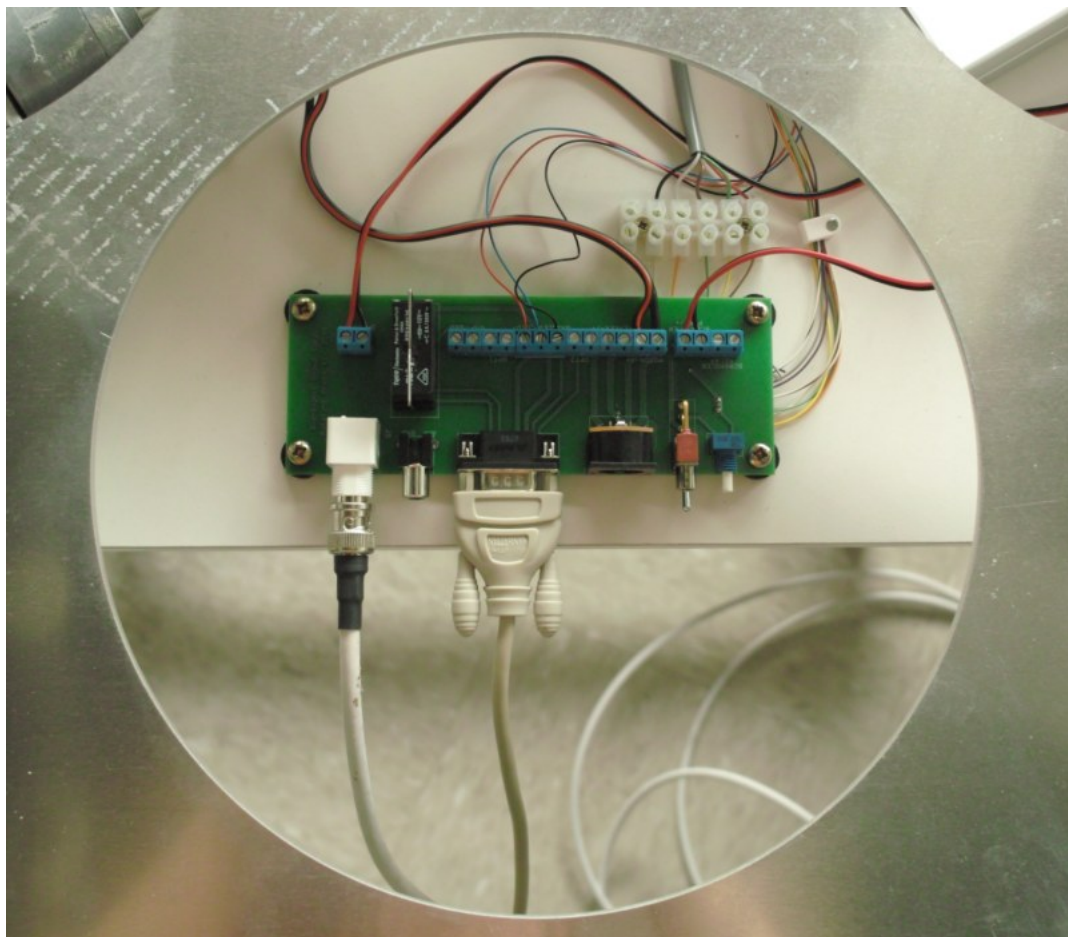
Step 5 For the rat setup, place the stainless steel top on the top of the aluminum ring and secure it using 4 nuts and washers.



For the mouse setup, you need to connect the Scrambler to the Arena distribution board. There are 3 cables to connect:

- Scrambler power (circular 2 pin power jack)
- Current Input (circular 2pin RCA connector)
- Current Output (circular 5pin DIN connector)





Step 6 (mouse setup only) When the grid is used, the rectangular stainless steel pad is placed on the top of the aluminum ring. The whole grid is made of 2 parts, which needs to be placed next to each other to the stainless steel pad and connected in the middle using a small connector board.



The grid is connected to the screw terminal using 5 pin cable.

