

Rat Pac Dimmers

Troubleshooting Guide

Power Issues:

In the case where there is no power to the dimmer pack or the outputs, proceed to evaluate functions of the following components.

Fuses

Processor Module 'Lunchbox' - 10x1.2, 12x1.2 5x2.4, 6x2.4

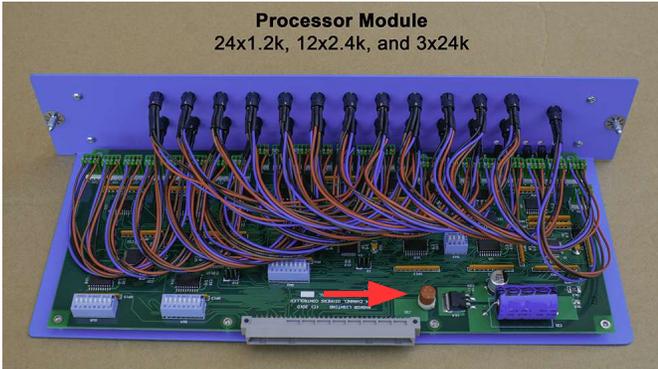


-Before proceeding to check any other components in the pack, be sure that all fuses are in place and not blown. Checking that a fuse is still in working condition requires that continuity be checked by placing one lead at one end of the fuse and the other lead on the opposing side.

-Rat Pac 'Lunchbox' style dimmers have 2 fuses on the main processor board.

- The larger 12x2.4k, 24x1.2k, and 3x24k units have 1 fuse on the processor unit, 1 fuse on the backplane board inside the case, and 3 fuses on the rear panel.

Processor Module 24x1.2k, 12x2.4k, and 3x24k



Backplane Board 24x1.2k, 12x2.4k, and 3x24k



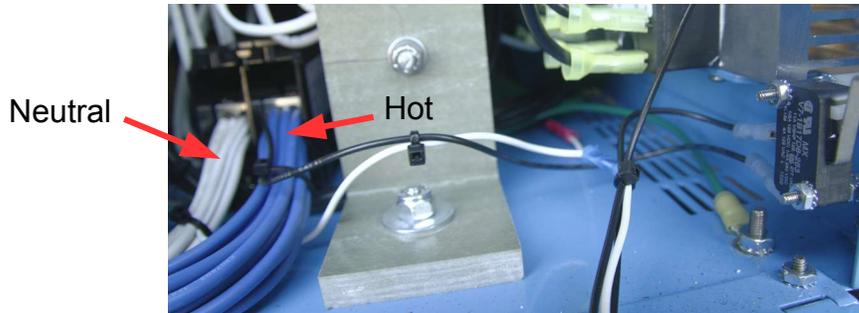
Rear Panel 24x1.2k, 12x2.4k, 3x24k



Power Block

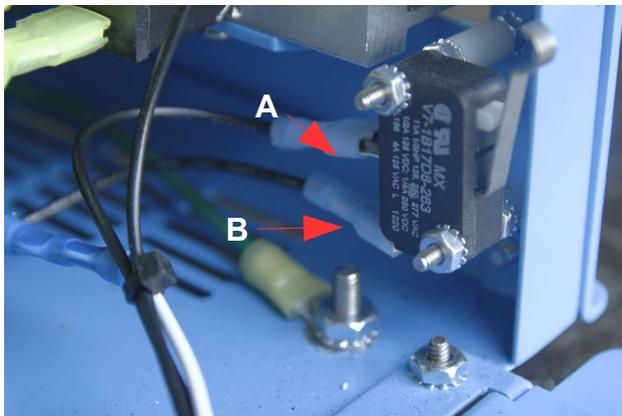
The power block is supplied by a pair of 2 gauge wires coming directly from the 100 Amp Bates input.

- Ensure that the necessary amount of power is being supplied consistently through the 'Neutral' and 'Hot' terminals of the power block by using an OHM METER.
- Be sure to check that both wires are safely secured via hex screw and that there is no connection causing a short between the Hot and Neutral terminals.



The opposing side of the power block contains Hot and Neutral leads which distribute power to all output terminals, breakers and electronic components in the dimmer. Both the Neutral and Hot terminals contain an extra 18 gauge lead which is responsible for supplying power to the processor board.

- Proceed checking that all wire leads are securely fastened in their terminals with minimal exposing wire.



This tab's function is to cut off power to the processor whenever the dimmer door is open as a safety precaution. However, if the trip switch is not securely fastened on both ends, whether it be the crimp on the black lead to the 9 pin power input or the lug connecting to the top of the trip switch, the power will not be able to be supplied to the processor as the circuit is remaining open.

-The **top tab** of the trip switch (**A**) connects to an 18 gauge wire leading from the trip switch to the 9 Pin power connector on the processor. If there is a bad or no connection, the trip switch will not be allowed to supply the processor with power.

-The hot lead can be located as the black 18 gauge wire coming out of the power block connecting to the **bottom tab** of the black trip switch (**B**), located at the bottom right opening of the door.

-The white neutral wire can be identified as the 18 gauge wire which leads from the power block to be tied in to the fan with a clear wire nut, leaving an extra 18 gauge wire which also leads to the 9 pin power input of the processor.

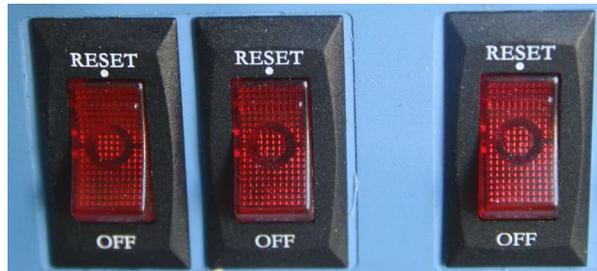
-It is important that the wire nut be checked for a good crimp and that there is not too much tension, which may lead to a neutral lead becoming loose. Continuity may also be checked to ensure the connection has not been compromised by placing one lead of the OHM meter on the power block and the other to the neutral input of the 9 pin.

-To ensure that there is a good connection from the power block to the processor proceed by checking continuity, placing one lead of the OHM meter on the power block and the other on the power input of the 9 pin on the processor.

-Be sure to hold down the spring tab on the trip switch allowing for a closed circuit. By pressing down and releasing the spring tab of the trip switch during this process, the function of the trip switch is also checked that it has not been damaged or compromised.

B/O: In the case of a bad output refer to the following checklist.

Breakers



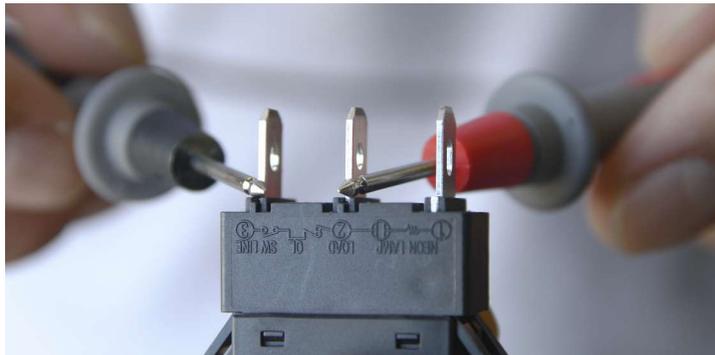
The 10 Amp breakers provided with the “lunch box” dimmers are the first thing you want to check when dealing with channels suddenly not having any output. These breakers may be blown and need to be replaced, causing a consistently open circuit to that individual output.

-The easiest way to tell if the breaker is blown without opening the dimmer is by the “look and feel” technique.

-While power is being provided to the pack, each breaker is installed with a neon light inside. If the neon light is not glowing inside the switch this is an easy way to tell if the breaker has been blown. Also, flip the breaker back and forth from “off” to “reset”, comparing it to a breaker on a channel with no issues.

-The breaker sticking or being noticeably more difficult to switch back and forth is another sign that the internals may be blown or melted.

-If no issues are found after the “look” and “feel” technique, proceed by removing the power to the dimmer and opening the pack, first checking that all leads are properly attached and have not come loose or disconnected.



By placing the OHM meter on the load and line tabs of the breaker and checking for continuity while at the “reset” position, the breaker can be checked if it has been blown. The load and line tabs can be identified by the tab indications on the side of the breaker. The breaker does not require removal for this test.