



Tube Power Supply

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Cautions

Although there is no high voltage inside the Illuminox Prime or cabling, the modules that it powers contain high voltages and components that may become hot during operation. Voltages as high as 300V DC are present on the module boards. To avoid serious injury or death, always mount powered modules in a rack before operating, and ensure that no fingers, other body parts, wires with insulation not rated 300V or higher, or other components can come into contact with their circuit boards. Before removing the modules or reaching inside the rack, ensure that power from the Illuminox Prime is turned off.

Setup

The standard Illuminox Prime requires 80 mm depth from the faceplate for cable routing. For shallow racks, it can be supplied with right angle connectors that reduce the depth to 51 mm but require space to the left or right side for cable attachment. This option is a special order; please contact Epicycloid for details.

Epicycloid tube modules get their power from the Illuminox through a shielded cable that comes with the module. This cable should not be cut or modified without consulting with Epicycloid, since its characteristics are an important part of the high voltage supply. Up to four modules can be powered at a time. To minimize electromagnetic interference, connect the end of the cable with the black sleeve to the Illuminox Prime and the end with the red sleeve to the Entubulator.

Power input to the Illuminox is through a screw-lock barrel connector on the front panel (5.5 mm OD, 2.1 mm ID, center positive). Push the connector in and then twist the locking ring clockwise by hand until it is tight. A 15 V power adapter with universal AC input is supplied with the module.

Operation

To prevent accidentally flipping the power switch off while in use, the switch has a locking mechanism. To turn it on or off, pull outward on the toggle and then move it to the desired position.

When you first turn on the switch, the Warmup light will illuminate and the Heater light will slowly get brighter. After 15-30 seconds for tube warmup, the Warmup light will go out and the Plate light will come on, indicating high voltage is being generated on the connected modules.

In normal operation the Plate, Heater, and Input On lights should be on and the Warmup light should be off. The outputs have self-resetting thermal protection devices, so an overload caused by a bad tube, problems with a module, or cable damage should not affect the other modules powered by the Illuminox.

Troubleshooting

If the Input On light does not illuminate or flickers, this indicates a problem with the external 15V power supply. Make sure its AC power connection is live and stable, and that the DC cable to the Illuminox is undamaged. If the problem persists the power brick may need replacement.

If the Warmup light stays on for longer than 30 seconds after power is turned on, or if it lights up again on its own, this indicates an internal fault in the power supply. Turn the switch off, wait 1 minute, and try turning on again. If the problem persists, disconnect all the module power cables at the Illuminox end and try again. If this allows the supply to power up normally, the problem may be in a module, cable, or tube. Turn off the power, connect a module, and power on again; if the problem only occurs with a particular module connected, check for damage to its cable or the circuit board, and check the tube's cold filament resistance with an ohmmeter.

If the Plate or Heater light does not come on, or turns off after illuminating, follow the same steps as for the Warmup light.