



*Powerful Induction Heating YOU Can Afford!*

## Neon Roy Instructions

The Neon Roy is based on the Roy 1200 open-source induction heater. There are some major differences, however. Instead of the standard high-current output transformer, the Neon Roy has a high voltage, low current transformer. This travels by umbilical to the pistol-grip output head, which acts as a tank circuit, creating very high current pulses. This in turn is used to magnetize the flux concentrator ferrite.

In order to make everything as compact as possible, the Neon Roy was designed as a low duty-cycle machine. This means that it needs a lot of 'off time' between uses. Standard pumping times for neon are what we designed it around.

Operation is simple: bombard as normal, but with higher pressures (this will allow the glass to heat faster). When temperature has been reached, open main vacuum valve. Use the Neon Roy to heat the non-tubulated electrodes first, then the tubulated. Simple as that!

-DO NOT use the Neon Roy to heat objects other than neon and cold cathode electrodes! This can cause very high power to flow, which, even if only for a short period of time, can destroy the electronics.

-DO NOT use the Neon Roy for extended periods. There is no thermal protection in the flux concentrator head. If the ferrite gets to be uncomfortable to touch, let it cool for at least 10 minutes.

-DO NOT drop the output head! The ferrite material is brittle and will certainly break. We strongly suggest purchasing spare ferrites, which are easily replaceable in the field.

-DO NOT open the flux concentrator head! It is glued shut because high voltage is present. There are no serviceable parts inside. If your unit stops working, unplug it immediately and contact Fluxeon for repair service.

-DO NOT open the base unit. Again, there is high voltage present, both high frequency as well as line voltage. Opening the Roy power supply will void the warranty.

If the Neon Roy breaker trips after a short period of 'on time', that means it's over-loaded. This should only happen with 120 or 250mA electrodes. When the unit is over-loaded, you will hear the magnetic circuit breaker (the main power switch) begin to buzz. The breaker will trip within seconds.

There are two solutions: 1) open up the gap on the ferrite a little, or 2) begin heating on the end of the electrode (away from the leads), and slowly work your way up. When the electrode begins to glow red, it has passed the Curie point and will draw less energy.

If the breaker trips instantly, the transistors are damaged. Unplug the heater and contact Fluxeon for repair service. [support@fluxeon.com](mailto:support@fluxeon.com) or 901-290-FLUX (3589).