

PVM12 OPERATING INSTRUCTIONS FOR VARIABLE HIGH VOLTAGE HIGH FREQUENCY SINGLE ENDED PLASMA DRIVER

FEATURES

OUTPUT: Variable 1 to 15kV
FREQUENCY: Variable 20 to 50kHz
CURRENT: Reactance limited
INPUT: 12 VOLTS DC @ 3 Amps MAX
SAFETY: Short-Circuit Protected with Auto 4 Amp Fuse Blown when Overloaded

PRECAUTIONS

Do not use near pacemakers or other similar electronic equipment. Energized display may radiate RF energy into nearby objects—including people! This may produce annoying burns and shocks. Product must be installed by experienced personnel.

SPECIAL NOTES

1. Undersized displays of smaller electrical capacity may cause overload due to excessive output voltage. It is suggested to use our MODEL #NEON21 for these smaller displays.
2. The over voltage is a result of high Q currents. A suitable load will add resistance reducing this circuit Q. Undersized loads may cause premature transformer failure.
3. Unit contains an internal factory set power limit control. Do not adjust without consulting factory—**warranty will be voided.**

INSTRUCTIONS

1. Connect HV lead to display—
CAUTION: lead must not be near any conductive objects OR the ground wire.
2. Connect grounds.
3. Connect PVM12 to power and flip POWER SWITCH to "on." Slowly adjust POWER CONTROL clockwise for desired effect. You will note a point where the input current peaks indicating system resonance. Maximum power output and display effect now occurs. **Note:** low-capacity loads (such as small displays) may tune to a peak frequency. This is because the display is resonant—check power supply and display for excessive heat (uncomfortably hot to touch). If this occurs, adjust power control slightly away from this setting to avoid overheating due to resonance.
4. Allow to run for 1 hour and check that unit remains slightly warm.
5. Turn lights "off" to see and eliminate any corona.
6. Check display for excessive heat. Turn power down if necessary as it is possible to overpower. Unit has a 3 to 4 amp fuse and will blow if severely overloaded.

EARTH GROUND (FOR EXTERNAL HV DEVICE)

WHITE-STRIPE LEAD IS POSITIVE (+)

HV LEAD TO DISPLAY

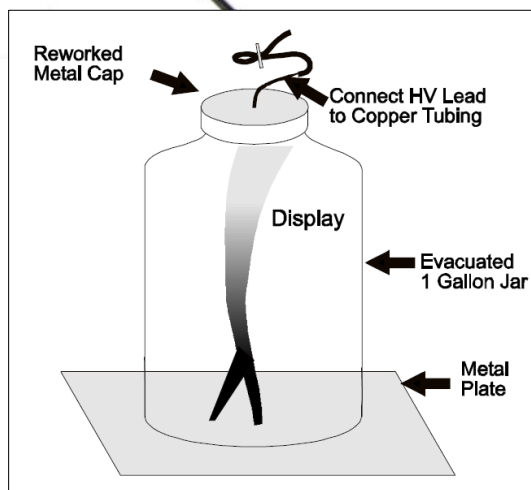
ON/OFF POWER SWITCH

POWER CONTROL (WITH INSULATING RUBBER SHAFT TO PREVENT ANNOYING BURNS)

12V DC INPUT JACK, CENTER POST (+)

12V DC INPUT WIRE

EARTH GROUND (FOR PVM12 CIRCUITRY)



PLASMA JAR EXPERIMENT

Jar is sealed via a small washer pinching the folded rubber hose. This method provides an excellent temporary seal that is easily removed for repumping, etc.

Connection is made to copper tube via clip or tight wire twist.

Metal base plate is necessary to provide electrical capacity for sustaining plasma current.

Adjust power control knob for maximum display. Note sharp peak in adjustment.

Do not leave on for extended periods of time until you check for heating of supply and jar.

Hold a household fluorescent lamp near the jar and note it lighting! This is a neat demonstration for a science project.

It is suggested to use a variable voltage supply capable of producing up to 16 volts at 2 amps for powering plasma jars obtained from the factory. 12 volts may not provide the proper effect without repumping the jar.

A pumped ready to use 1 gallon jar is available. Call for price and availability.