HVP
High Voltage Products. High Voltage Experts.

ULTRAVOLT, INC.®

Operator Manual – BT-GP Series
High Voltage Power System (AC Input)

Important Notice

Only trained personnel should install and service this unit.
Mains voltages are present within the electronics enclosure and extreme care should be taken when servicing.

1) Do not operate the equipment uncovered.
2) Switch off and allow time for capacitors to discharge at the high voltage output before servicing.

Note: This equipment must be earthed for safe operation.

Specification

Input Voltage:	90 to 264VAC universal AC input
Fuses:	2.5A F (x2)
Efficiency:	>70%
Output Voltage:	0 to 10kV, 20kV or 30kV DC with respect to ground.
Polarity:	Positive or Negative
Rated Output Current:	1.0mA
Rated Output Power:	30W
Ripple:	<0.01% peak to peak at full load
Voltage Regulation:	<0.01% over specified load range
Temperature Coefficient:	<100ppm/°C

Protection:	Overload and Short-circuit faults will cause the unit to operate in Constant Current mode (Max. Current <= 2mA) Arcing faults will cause the unit to shut down and re-start until the fault is cleared.
Voltage Adjustment:	Output voltage can be adjusted by the 10-turn potentiometer on the front panel
Voltage Monitor:	A 3½ digit LED meter on the front panel. The display resolution is 100 volts.
Connections:	The input connection to the unit is by means of an IEC fused inlet. The output connection is by means of a UltraVolt proprietary connector: a mating half and suitable high voltage cable is supplied.
Working Temperature:	0 to +40°C
Storage Temperature:	-20°C to +60°C
Humidity:	<90%
Dimension (LxWxH):	12.01 L x 7.99 W x 4.33 H in (305.0 L x 203.0 W x 110.0 H mm)
Weight:	6.17lbs (2.8kg)

Operation

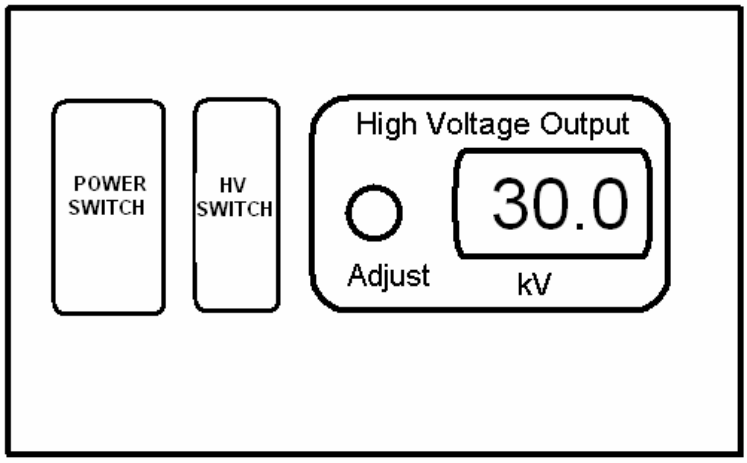
Check the following items before operation:

1. The power supply is clean and dry.
2. No unnecessary object is near the high voltage output connector or high voltage load.
3. Turn the voltage potentiometer fully anticlockwise. This will adjust the high voltage output to zero when the power supply is switched on.

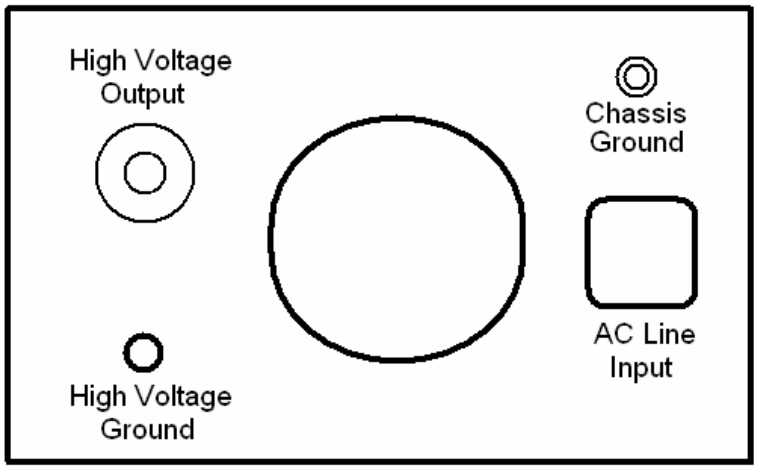
4. When connecting a load ensure that the output current returns through the ground bolt or the 0.15in (4mm) terminal on the rear panel.

One switch on the front panel switches on the mains input; a second switch enables the high voltage output.

Once power is applied, the unit is ready for immediate operation. Adjust the potentiometer to achieve the required output voltage. The reading on the front panel meter shows the high voltage output measured via a resistor divider network.



Front Panel



Back Panel