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INSTRUCTIONS

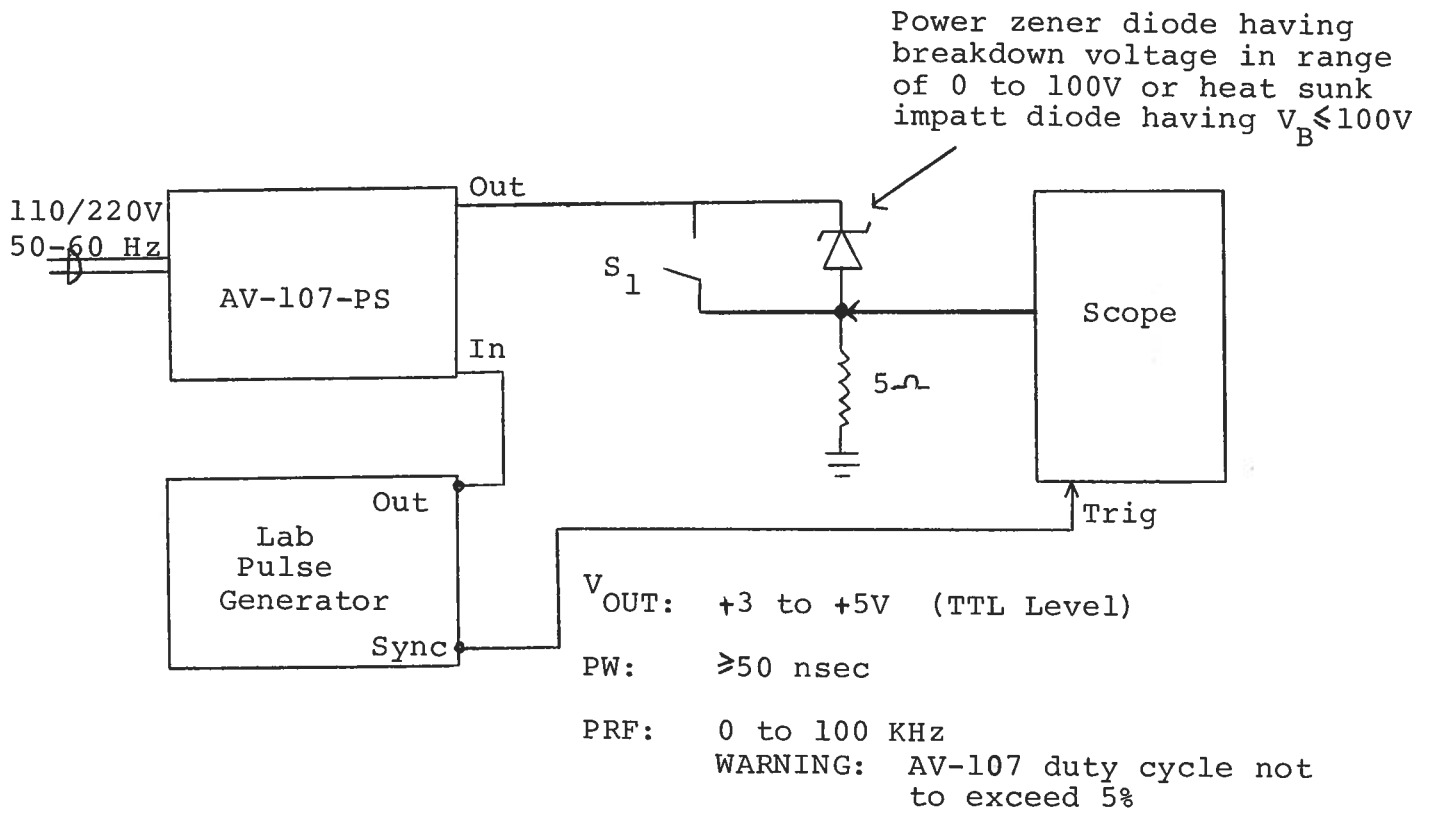
MODEL AV-107-PS PULSE GENERATOR

S.N.:

WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been disassembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

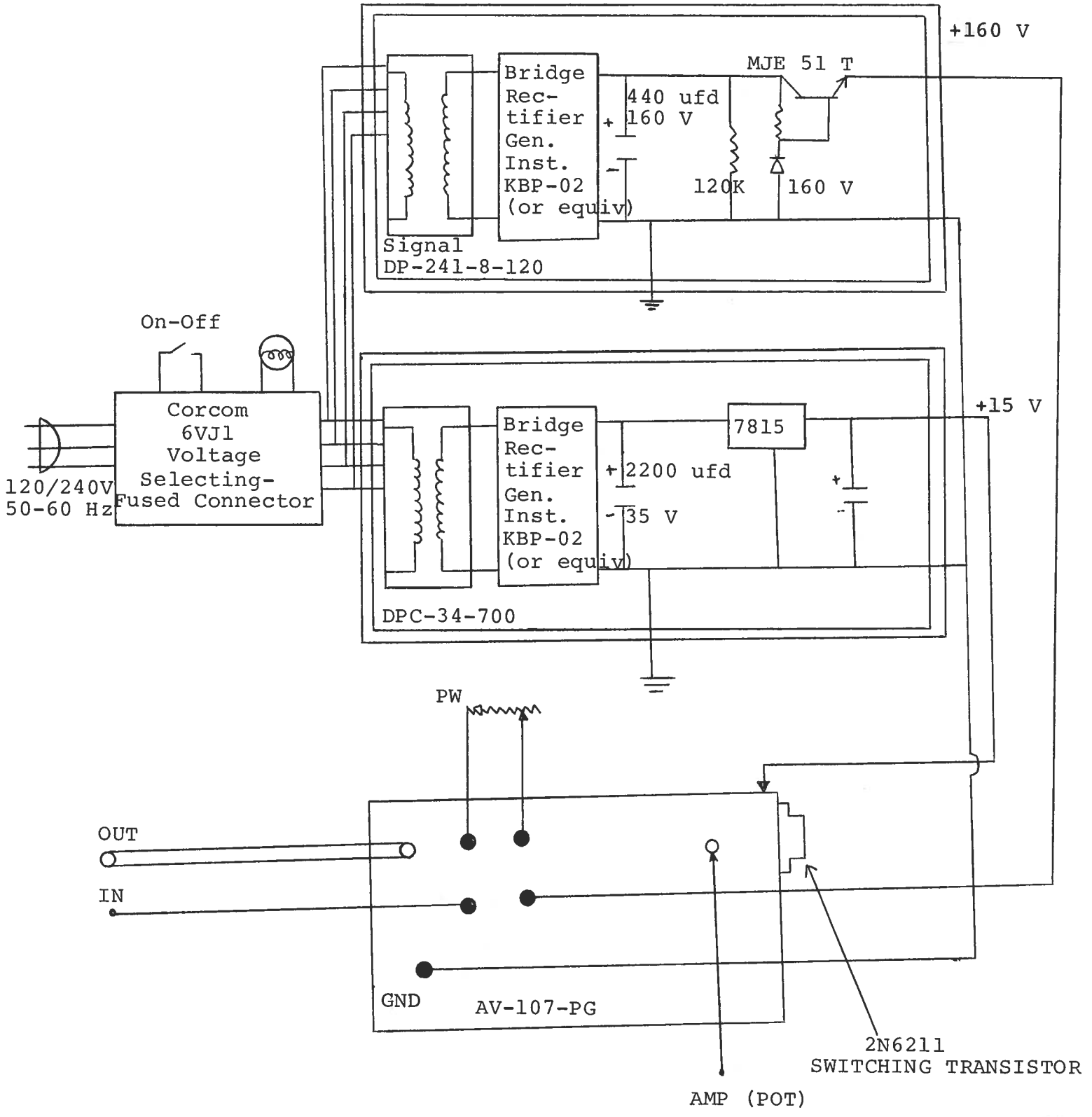
TEST ARRANGEMENT AND OPERATING INSTRUCTIONS



- 1) Set the ON-OFF switch in the OFF position and rotate the front panel pot AMP control to maximum counter clockwise and the PW control to maximum counter clockwise. Connect the diode load and shorting switch S1 as shown and connect to 50-60 Hz outlet. Set the scope gain at 5 volts/div (therefore 1 Amp/div).
- 2) Switch ON-OFF switch to ON position. The scope should read about 0.5 volts. Clockwise rotation of the AMP control will increase the output current to a maximum of at least 2.0 Amp (for load voltages in the range of 0 to 120 volts).
- 3) Rotate the PW pot clockwise to increase the output PW to a maximum of about 600 nsec.
- 4) With the output current set at any value in the range of 0 to 2.0 Amp, the change in scope reading should be barely detectable when the shorting switch S1 is alternately opened and closed.
- 5) CAUTION: The AV-107 unit will provide a maximum average output power of at least 12 watts so the load must be capable of dissipating this power.

B.

CIRCUIT DIAGRAM



REPAIR PROCEDURE

- 1) **WARNING:** Before attempting any repairs, note that potentials as high as 160 volts are employed in the chassis structure.
- 2) The pulse generator is constructed from the following basic subsystems or modules:
 - a) Metal chassis
 - b) Pulse generator module (AV-107-PG)
 - c) Power supply module (160 volts)
 - d) Power supply module (15 volts)

The three modules are interconnected as shown in the preceding figure.

- 3) If no output pulse is provided by the unit, turn off the prime power supply and remove the top cover panel by removing the four Phillips screws on the back of the instrument. Locate the 2N6211 and MJE51T transistors. Discharge the 160V bypass capacitors by briefly grounding the collector of the MJE51T transistor to ground via a 100 ohm resistor. Remove the 2N6211 transistor by removing the two 2-56 screws which secure it to the AV-107-PG module. Retain the two cylindrical plastic insulators located on the base and emitter leads. The 2N6211 is a 200V, 2 Ampere PNP transistor which can be checked on a curve tracer. Replace if found to be defective. The MJE51T can also be checked by turning on the prime power and noting the base and collector voltages which should be about 160 and 165 volts respectively. Replace if voltages differ significantly from above values. When replacing the 2N6211 transistor, insure that the plastic insulators are located on the base and emitter leads. If both transistors are replaced (or do not require replacement) and the unit still does not function properly, then the sealed AV-107-PG module is defective and must be replaced.