

**AVTECH ELECTROSYSTEMS LTD.**

**NANOSECOND WAVEFORM ELECTRONICS  
ENGINEERING . MANUFACTURING**

□ P.O. BOX 285  
OGDENSBURG  
NEW YORK  
13669  
(315) 472-5270

X  
□ BOX 5120 STN. "F"  
OTTAWA, ONTARIO  
CANADA K2C 3H4  
(613) 226-5772  
TELEX 053.4591

INSTRUCTIONS

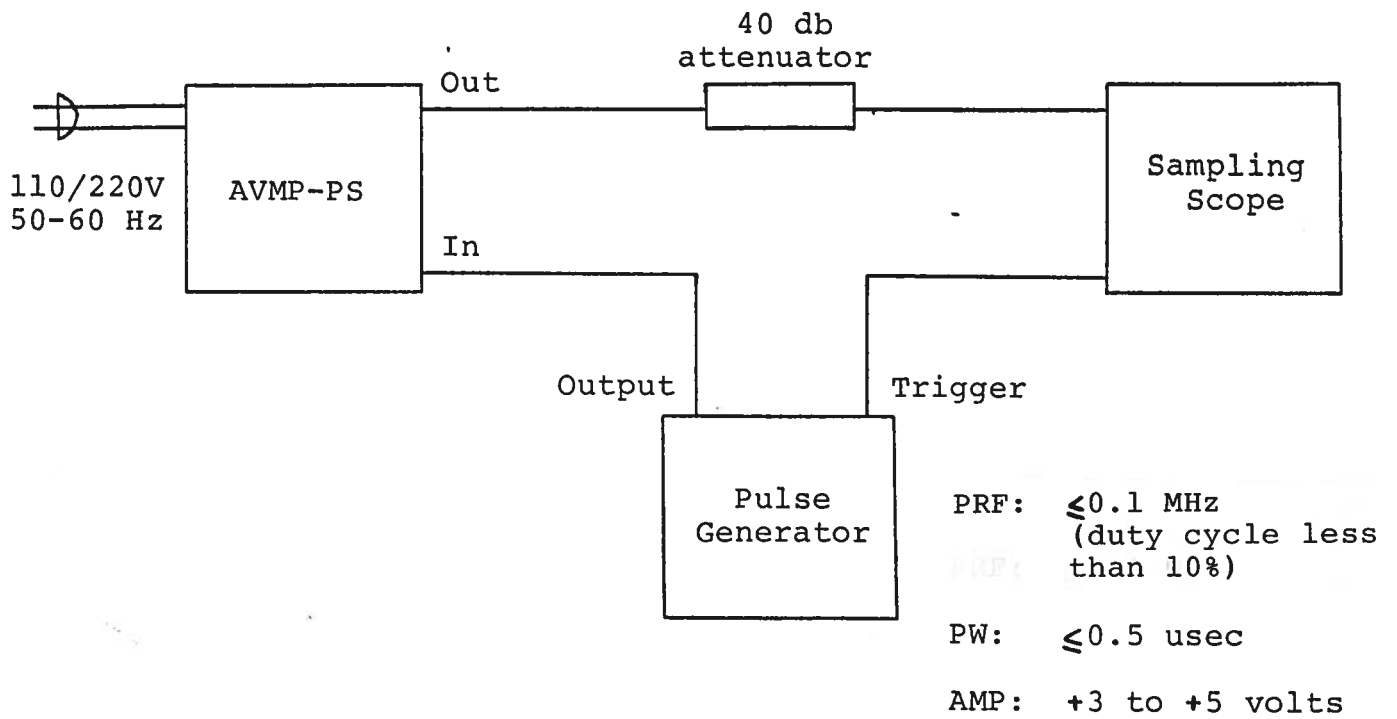
MODEL AVMP-1A-PS-F-W-GGB1 PULSE GENERATOR

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.

MODEL AVMP-PS PULSE GENERATOR TEST ARRANGEMENT



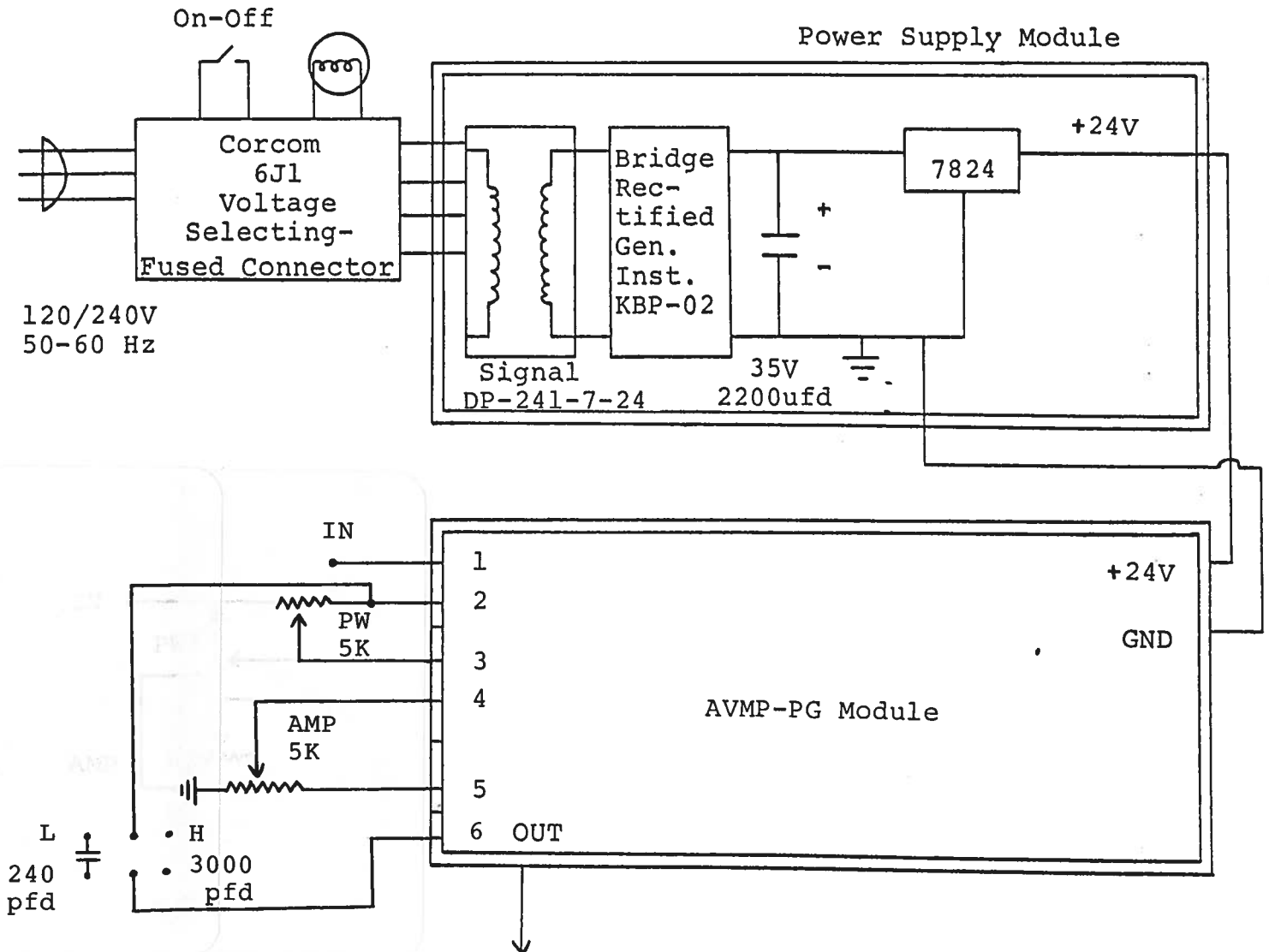
Notes:

- 1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed ten gigahertz.
- 2) The use of 40 db attenuator will insure a peak input signal to the sampling scope of less than one volt.
- 3) In general, the source pulse generator trigger delay control should be set in the 0.1 to 1.0 usec range. Other settings should be as shown in the above diagram.
- 4) The Model AVMP-PS pulse generator can withstand an infinite VSWR on the output port.
- 5) WARNING: Model AVMP may fail if triggered at a PRF greater than 0.1 MHz or with the output duty cycle greater than 10%.
- 6) The output pulse width is controlled by means of the one turn potentiometer (PW) and the two position range switch (LOW: 40 nsec to 1.0 usec, HIGH: 200 nsec to 10 usec). The pot should initially be set maximum clockwise and the pulse width adjusted using an oscilloscope.
- 7) The output pulse amplitude is controlled by means of the one turn potentiometer (AMP). The pulse width may change by several nanoseconds as the output amplitude is reduced from maximum to minimum. Therefore it is convenient to first set the desired amplitude and then set the desired pulse width. Rotation of the PW pot causes the position of the falling edge of the pulse to change.
- 8) Some properties of the output pulse may change as a function of the amplitude pot setting. For some demanding applications, it may be desirable to use a combination of external attenuators and the amplitude pot to achieve the desired output amplitude.
- 9) The unit can be converted from 110 to 220V 50-60 Hz operation by adjusting the voltage selector card in the rear panel fused voltage selector cable connector assembly.

## SYSTEM DESCRIPTION AND REPAIR PROCEDURE

The AVMP-PS consists of a pulse generator module (AVMP-PG) and a power supply board which supplies +24 volts (600 mA max) to the pulse generator module. In the event that the AVMP-PS unit malfunctions, remove the instrument cover by removing the four Phillips screws on the back of the unit. The top lid may then be slid off. Measure the voltage at the +24V pin of the PG module. If this voltage is substantially less than +24 volts, unsolder the line connecting the power supply and PG modules and connect 50 ohm 10 W load to the PS output. The voltage across this load should be about +24 V DC. If this voltage is substantially less than 24 volts the PS module is defective and should be repaired or replaced. If the voltage across the resistor is near 24 volts, then the PG module should be replaced or repaired. The sealed PG module must be returned to Avtech for repair (or replacement).

SYSTEM BLOCK DIAGRAM



Schroff 02.29.88

