



**AVTECH ELECTROSYSTEMS LTD.**

NANOSECOND WAVEFORM ELECTRONICS  
SINCE 1975

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**INSTRUCTIONS**

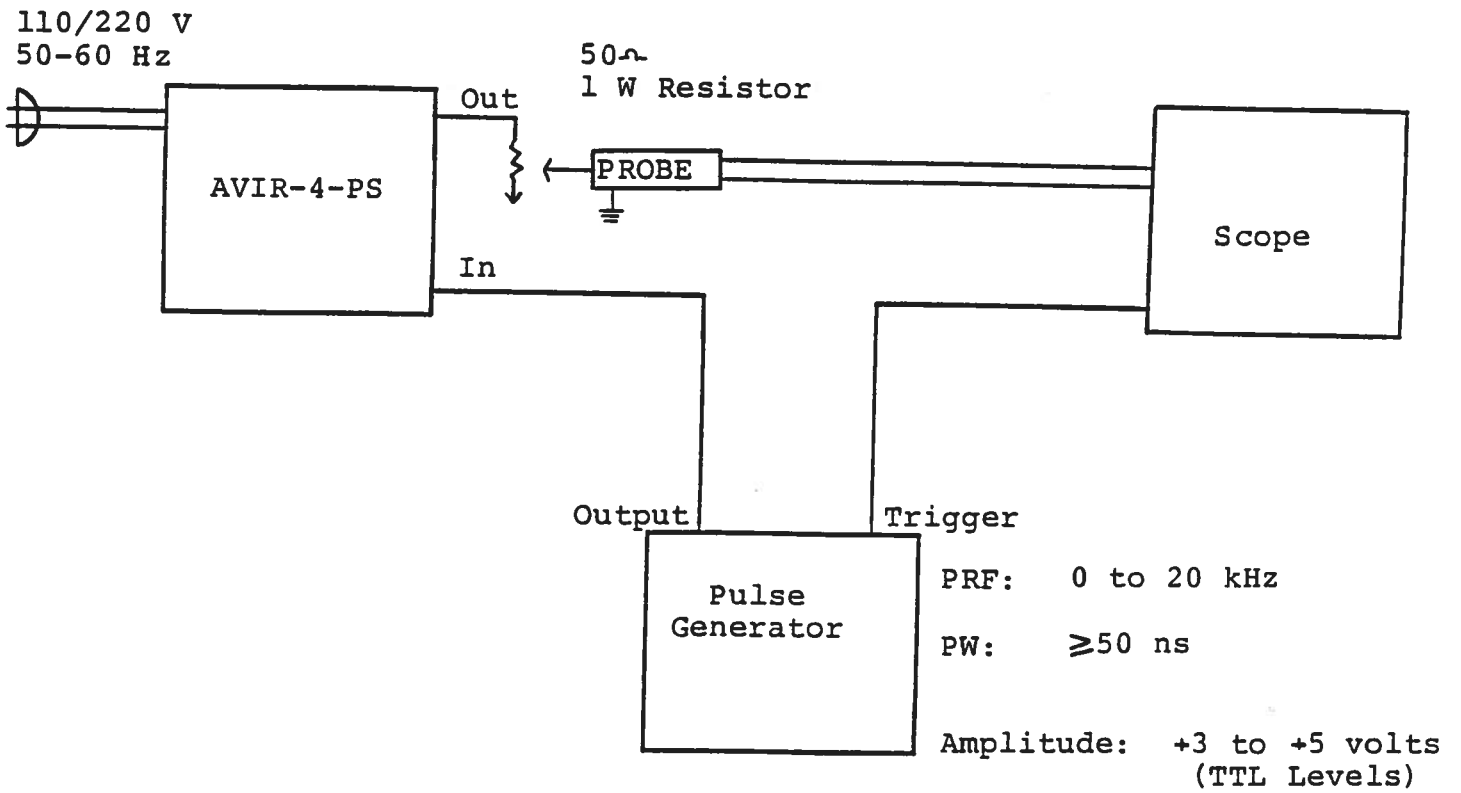
**MODEL AVIR-4-PS PULSE GENERATOR**

**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.

MODEL AVIR-4-PS PULSE GENERATOR TEST ARRANGEMENT



Notes:

- 1) The equipment should be connected in the general fashion shown above. Since the AVIR unit provides an output pulse rise time as low as 1 ns, a fast oscilloscope (at least 1000 MHz and preferably 2000 MHz) should be used to display the waveform.
- 2) The output PRF is equal to the input trigger pulse PRF.
- 3) **WARNING:** Model AVIR-4 may fail if triggered at a PRF greater than 20 kHz.
- 4) The output amplitude is controlled by means of the one turn AMP potentiometer (ten turn for -AT option units).
- 5) The output pulse width is controlled by the one turn PW control (ten turn for -PWT option units) and a two-position range switch as follows:  
  
2 - 10 ns  
10 - 200 ns
- 6) This unit is protected by an automatic overload protective circuit which controls the front panel overload light. If the unit is overloaded (by operating at an exceedingly high duty cycle), the protective circuit will turn the output of the instrument OFF and turn the indicator light ON. The light will stay ON (i.e. output OFF) for about 5 seconds after which the instrument will attempt to turn ON (i.e. light OFF) for about 1 second. If the overload condition persists, the instrument will turn OFF again (i.e. light ON) for another 5 seconds. If the overload condition has been removed, the instrument will turn on and resume normal operation. Overload conditions may be removed by:
  - 1) Reducing PRF (i.e. switch to a lower range)
  - 2) Reducing pulse width (i.e. switch to a lower range)Note that the overload light may come on when the prime power is applied. The light will extinguish after a few seconds and the unit will then function normally.
- 7) 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.
- 8) For additional assistance:

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## SYSTEM DESCRIPTION AND REPAIR PROCEDURE

The AVIR-4-PS consists of two pulse generator modules (PG1 and PG2), a -15 Volt power supply module (PS-15), an overload module (OL-471), two output control modules (-EA and -TFR) and a power supply board which supplies +24 Volts (600 mA max) to the pulse generator module. In the event that the unit malfunctions, check the rear panel fuses and then remove the instrument cover by removing the four Phillips screws on the top side 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 +24V 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 one of the sealed modules has probably failed and the unit should be returned to Avtech for servicing.

Aug. 13/96

-AT

Disk: AVIR

-PWT

Name: AVIR4PS.INS