AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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INSTRUCTIONS

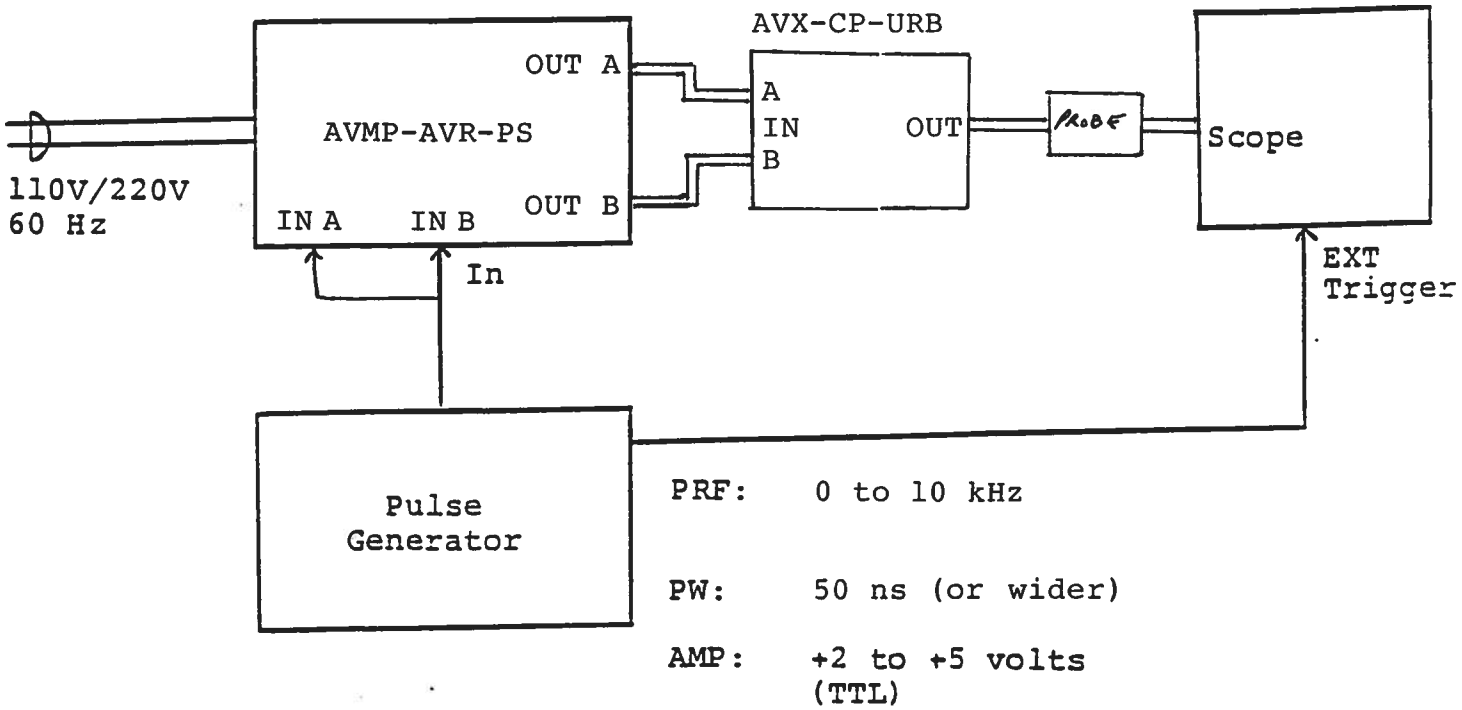
MODEL AVMP-AVR-PS-URB PULSE GENERATOR

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 dissembled, 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.

Fig. 1 TEST ARRANGEMENT



GENERAL OPERATING INSTRUCTIONS

1) The equipment should be connected in the general fashion shown above. Since OUT A provides an output pulse rise time of less than 0.2 ns, a fast oscilloscope (at least 10 GHz) should be used to display the waveform.

   CAUTION:

   a) This unit requires a well defined 50 Ohm load impedance. The output waveform will be distorted if the impedance differs substantially from 50 Ohms.

   b) It is critically important that OUT A (or OUT B) of the mainframe be connected only to IN A (or IN B) on the AVX-CP-URB unit. A cross connection will result in damage to both units. Such failures are not covered by the warranty.

2) The output PRF is equal to the input trigger pulse PRF. CAUTION: The PRF must not exceed 10 kHz.

3) Output A amplitude is variable from 0 to +3 Volts while output B is variable from 0 to +300 Volts. Care should be taken to insure that the scope, the load resistor and any attenuators used can withstand this high voltage (see Fig. 2).

4) The output pulse width for output A is variable from 10 ns to 100 ns via the pulse width A control. The output pulse width for output B is variable from 100 ns to 200 ns using the front panel PW B control (see Fig. 2).

5) The relative delay between OUT A and OUT B may be varied from 1 to 2 us using the delay B one turn control.

6) The output amplitude for A may be increased to 10 Volts by removing the 10 dB attenuator pad located on the output of the PGA module (see top cover removal instructions).

7) Either A or B (or both) may be turned off using the front panel trigger ON-OFF two position switch.

8) The two channels in the mainframe are completely separate and may be used separately (without the AVX-CP-URB combiner). Note the OUT A provides a 1 Volt (approx) forward bias to the A IN port of the AVX-CP-URB unit. When operating without the AVX-CP-URB unit, this bias may be turned off using the OSA two position switch on the PGA module (see top cover removal instructions).

9) OVERLOAD . An automatic overload protective circuit 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:

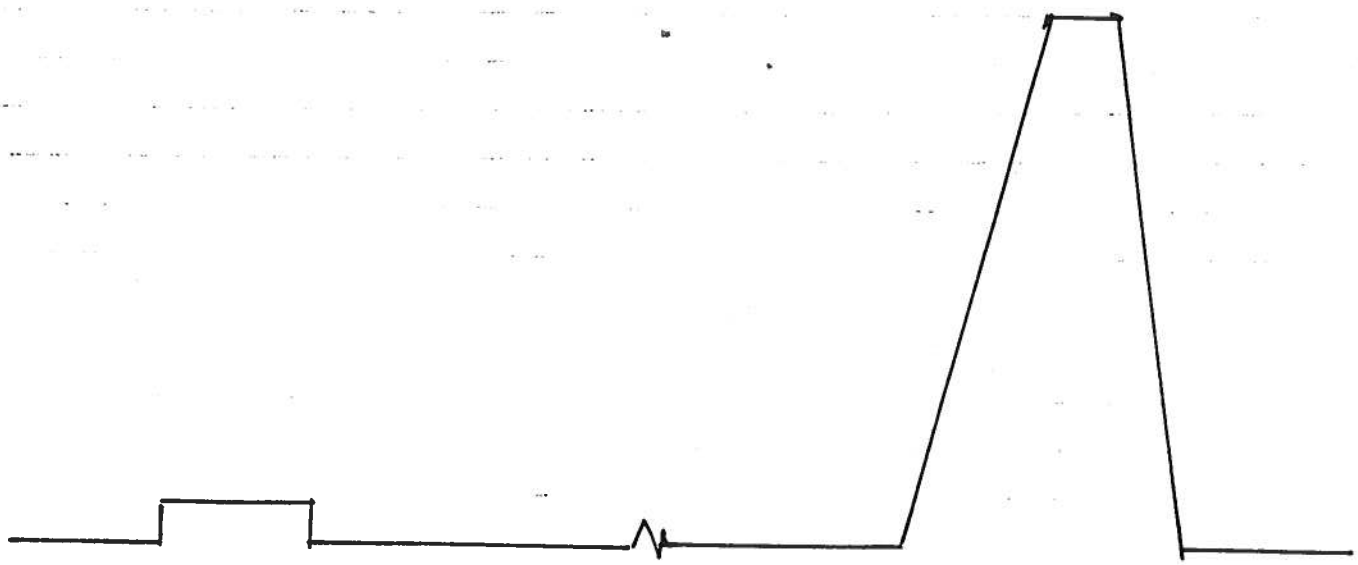
   1) Reducing PRF (i.e. switch to a lower range)
   2) Reducing pulse width (i.e. switch to a lower range)
   3) Removing output low load impedance (if any)
   4) Reducing the output amplitude (i.e. switch to a lower range)

   The overload light may illuminate when the prime power is first applied. The light will extinguish after a few seconds and the unit will then operate normally.

10) The unit can be converted from 120 to 240V 50-60 Hz operation by adjusting the voltage selector card in the rear panel fused voltage selector-cable connector assembly.

11) For additional assistance:

Tel: 613-226-5772
Fax: 613-226-2802



PULSE A
3-10 VOLTS
10-100 NS
200 PS RISE TIME

PULSE B
300 VOLTS
100 NS
40 NS RISE TIME

Fig 2 AMMP-AVR-A-PS-URB OUTPUT WAVEFORMS.

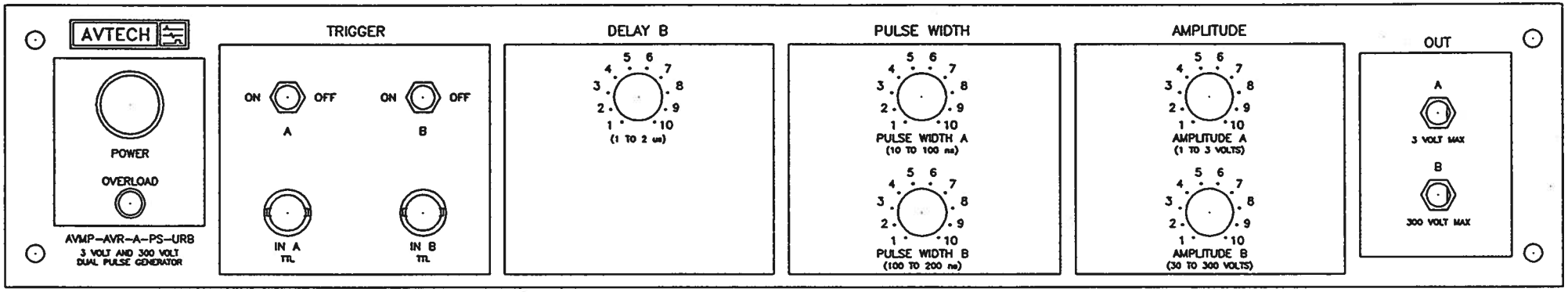


Fig. 3 FRONT PANEL CONTROLS

TOP COVER REMOVAL AND RACK MOUNTING

1) The interior of the instrument may be accessed by removing the four Phillips screws on the top panel. With the four screws removed, the top cover may be slid back (and off).

2) The -R5 rack mount kit may be installed after first removing the one Phillips screw on the side panel adjacent to the front handle.

July 10/97

-R5

Disk: AVMP

Name: AVRPSURB.INS