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INSTRUCTIONS

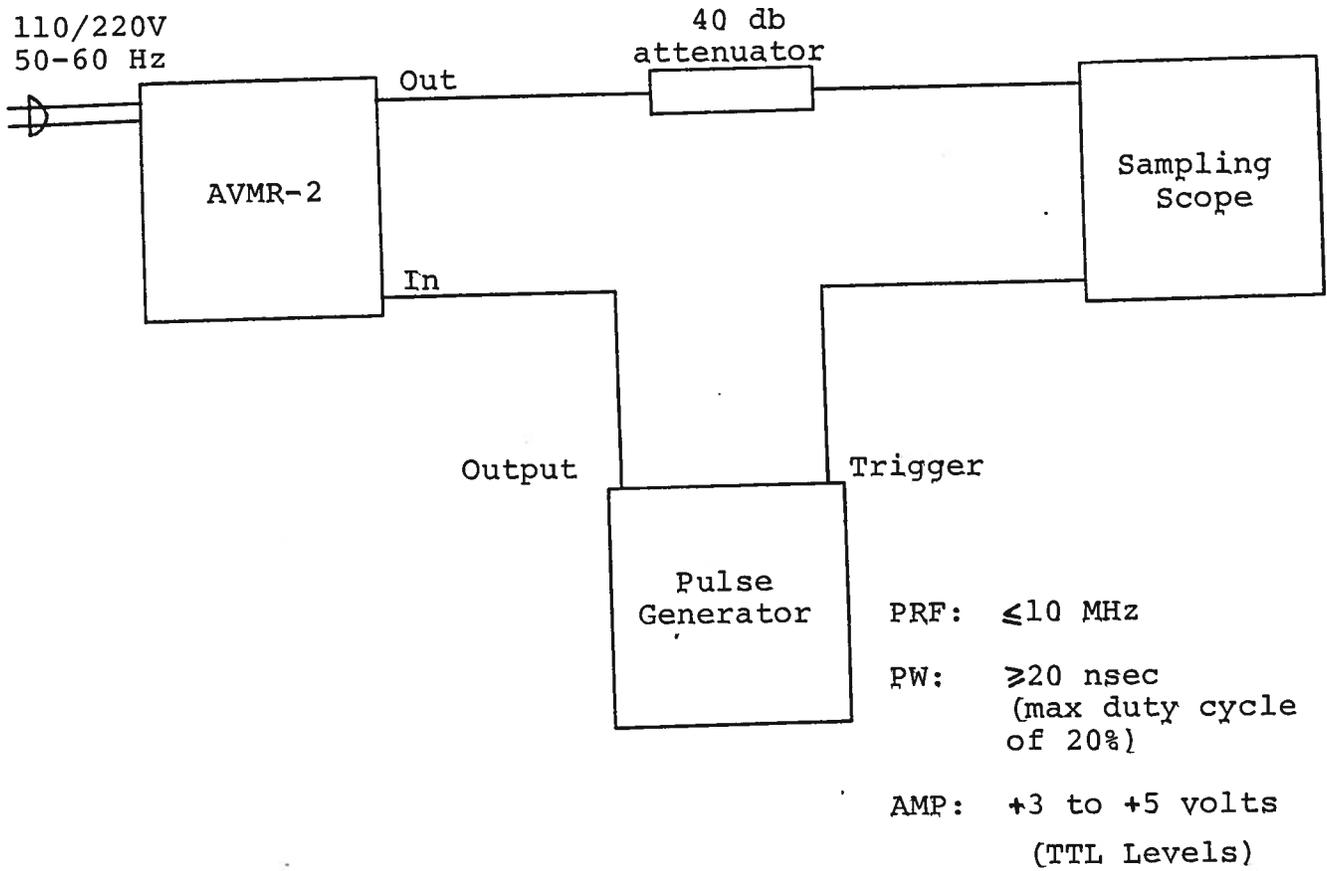
MODEL AVMR-2-PS-OT-TRF-M1 PULSE GENERATOR

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 AVMR-2 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 one gigahertz.
- 2) The use of 40 db attenuator will insure a peak input signal to the sampling scope of less than one volt.
- 3) When triggering the AVMR-2 from a high speed lab pulse generator it may be necessary to shunt the input to the AVMR-2 by a 50 ohm resistor to eliminate reflection which may interfere with the operation of the lab pulse generator.
- 4) 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.
- 5) WARNING: Model AVMR-2 may fail if triggered at a PRF greater than 10 MHz or if the duty cycle exceeds 20% or if the PW exceeds 200 nsec.
- 6) The output amplitude is controlled by means of the one turn potentiometer (AMP).
- 7) The output pulse width is controlled by means of the one turn potentiometer (PW).
- 8) With the TR-TF switch in the L position, the unit provides an output rise and fall time of 300 psec. With the TR-TF switch in the H position, the rise and fall time is about 3 nsec. (option). The TR-TF switch connects to the mainframe by means of a meter long cable.
- 9) The required output DC offset voltage is applied to the rear panel QS solder terminals (± 50 volts, 100 mA max). (For units without the OT or EO options).
- 10) For units with the OT option, the DC offset is variable from +5 to -5V by the front panel offset control.
- 11) To voltage control the output pulse width, remove the jumper wire between banana plugs A and B on the back panel and apply 0 to +10V to connector B ($R_{TN} \geq 10K$). (EW option).
- 12) To voltage control the output amplitude, remove the jumper wire between banana plugs A and B on the back panel and apply 0 to +10V to connector B ($R_{TN} \geq 10K$). (EA option).

- 13) Dual Polarity Option (for units without the OT or EO options).

To invert the output of the AVMR unit, connect the AVX-3-T unit to the OUT port. An inverted pulse is then obtained at the OUT port of the AVX-3-T unit. To offset the inverted pulse, apply the required DC level to the DC terminal of the AVX-3-T unit.

- 14) Dual Polarity Option (for units with the OT or EO options).

To invert the output of the AVMR unit, connect the AVX-3-T unit to the OUT port. An inverted pulse is then obtained at the OUT port of the AVX-3-T unit. To offset the inverted pulse, connect a lead from the rear panel OS OUT banana plug to the DC terminal of the AVX-3-T unit. The DC offset at the output of the AVX-3-T unit is then controlled by the front panel OFFSET control.

- 15) The monitor output (-M) provides a 20 db attenuated coincident replica of the main output. (option).

- 16) The AVMR-C 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 AVMR-2-PS consists of a pulse generator module (AVMR-2-PG) and a power supply board which supplies +24 volts (600 mA max) to the pulse generator module. In the event that the unit malfunctions, remove the instrument cover by removing the four Phillips screws on the back 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 +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

