

INSTRUCTIONS

MODEL AVI-V-PS-N-OS 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 assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

## TECHNICAL SUPPORT

Phone: 613-226-5772 or 1-800-265-6681

Fax: 613-226-2802 or 1-800-561-1970

E-mail: [info@avtechpulse.com](mailto:info@avtechpulse.com)

World Wide Web: <http://www.avtechpulse.com>

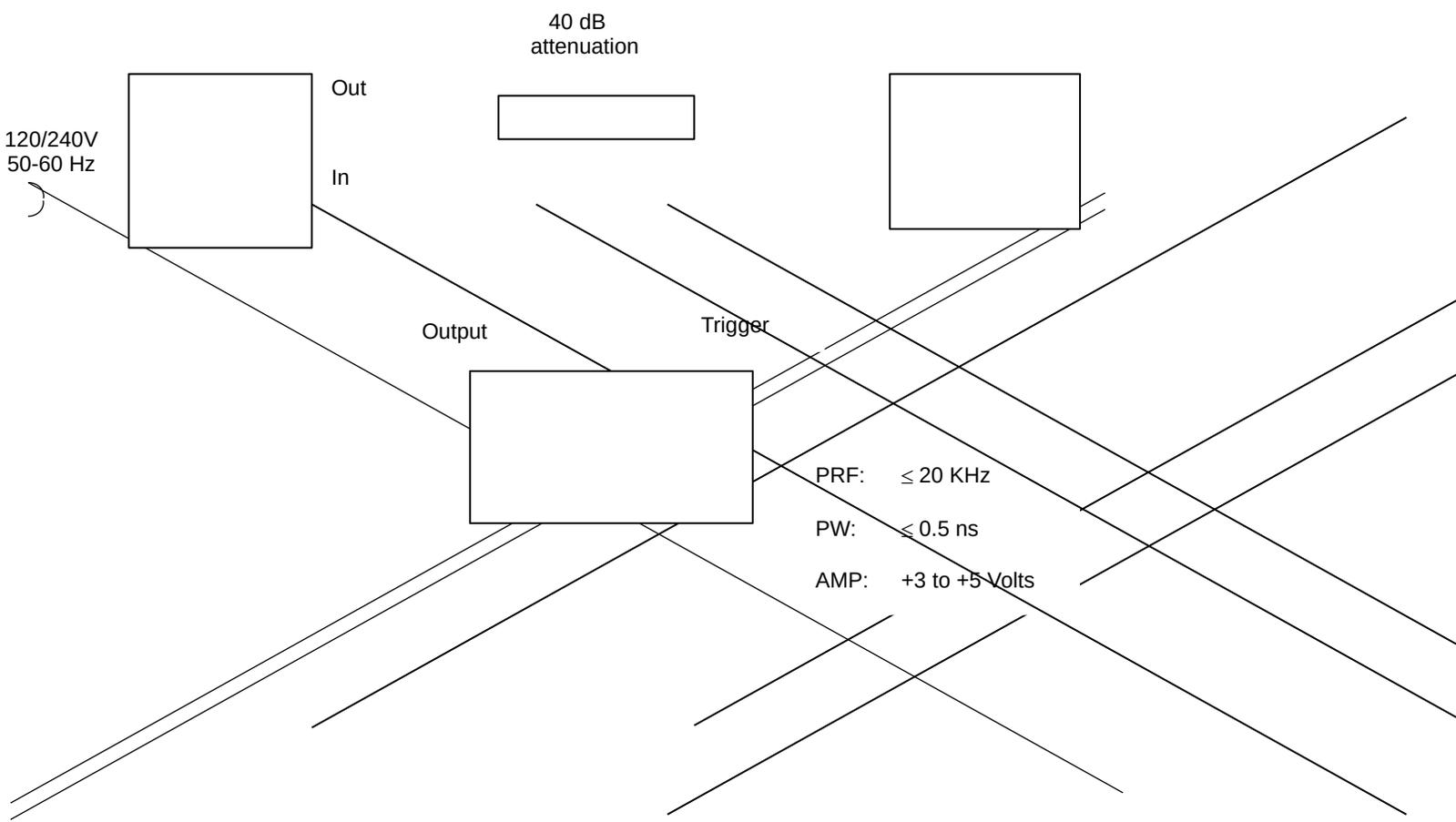


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Manual Reference: /fileserver1/officefiles/instructword/avi/AVI-V-PS-N-OS-eda-fig.doc, created January 29, 2001

FIG. 1: PULSE GENERATOR TEST ARRANGEMENT



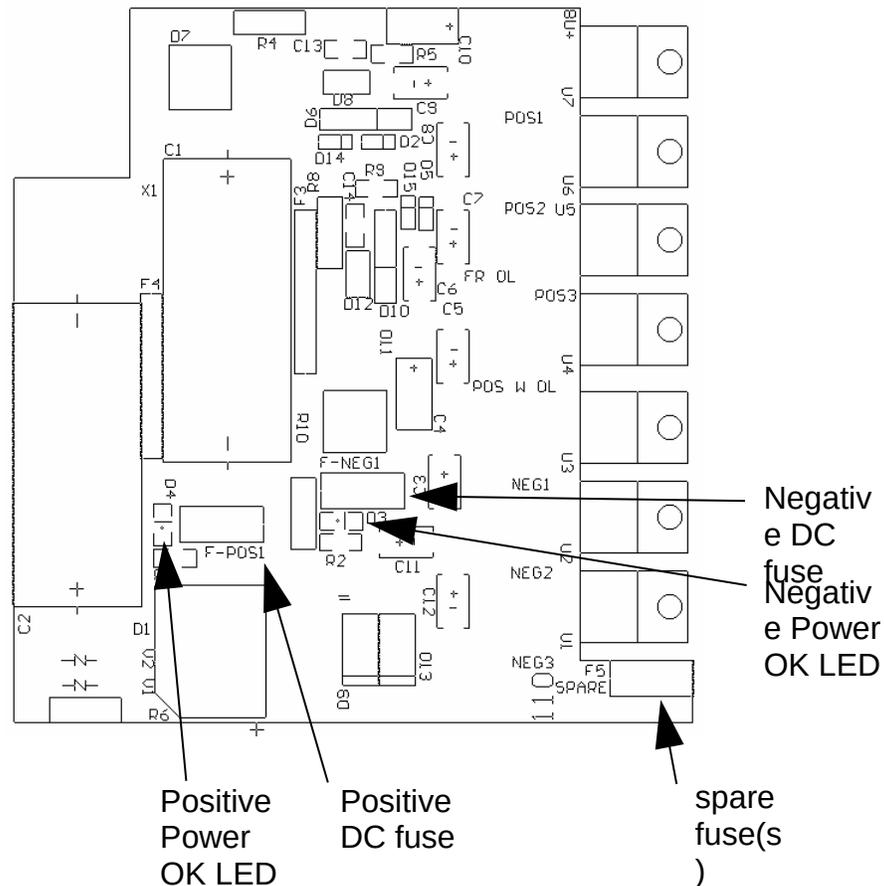
## GENERAL OPERATING INSTRUCTIONS

- 1) The bandwidth capability of components and instruments used to display the pulse generator output signal (attenuators, cables, connectors, etc.) should exceed several gigahertz.
- 2) The use of a 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 AVI-V pulse generator can withstand an infinite VSWR on the output port.
- 5) WARNING: Model AVI-V may fail if triggered at a PRF greater than 20 KHz.
- 6) The output pulse width is controlled by means of the one-turn potentiometer (PW). The pot should initially be set mid-range and the pulse width adjusted using an oscilloscope. The output will degenerate to an impulse and eventually vanish, as the pot is turned fully counter-clockwise.
- 7) The output amplitude is controlled by means of the one-turn potentiometer (AMP). The output pulse width may reduce by as much as 5 nsec when the output amplitude is varied from maximum to near zero.
- 8) To DC offset the output pulse connect a DC power supply set to required DC offset value to the back panel terminals marked O.S. The maximum attainable DC offset voltage is +50 volts. (option).
- 9) MONITOR OUT M. Provides an attenuated (x10) coincident replica of the main positive output pulse to fifty ohms. (option).
- 10) Dual Polarity Option. To invert the output of the AVI 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.

## POWER SUPPLY AND FUSE REPLACEMENT

This instrument has three main fuses (plus one or two spares). One, which protects the AC input, is located in the rear-panel power entry module, as described in the “Rear Panel Controls” section of this manual. If the power appears to have failed, check the AC fuse first.

The other two fuses (plus one or two spares) are located on the internal DC power supply, as shown below:



The positive fuse and one of the spare fuses on this circuit board are 1.5A slow-blow fuses, Littelfuse part number R45201.5. (This fuse can be ordered from Digikey, [www.digikey.com](http://www.digikey.com). The Digikey part number is F1344CT-ND). The negative fuse is a 0.5A slow-blow fuse (Littelfuse R452.500, Digikey part number F1341CT-ND).

If you suspect that the DC fuses are blown, follow this procedure:

1. Remove the top cover, by removing the four Phillips screws on the top cover and then sliding the cover back and off.
2. Locate the two "Power OK" LEDs on the power supply circuit board, as illustrated above.
3. Turn on the instrument.
4. Observe the "Power OK" LEDs. If the fuses are not blown, the two LEDs will be lit (bright red). If one of the LEDs is not lit, the fuse next to it has blown.
5. Turn off the instrument.
6. If a fuse is blown, use needle-nose pliers to remove the blown fuse from its surface-mount holder.
7. Replace the fuse.

PERFORMANCE CHECK SHEET