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INSTRUCTIONS

MODEL AV-141C1-PS AMPLIFIER

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.

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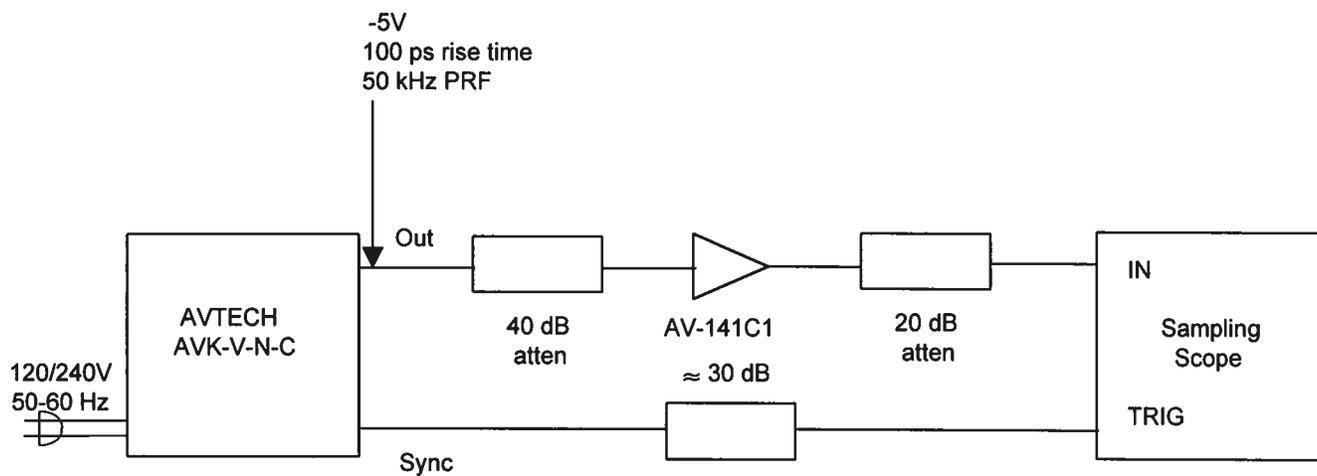
Manual Reference: Q:\office\instructword\AV-141\141C1-PS.doc, created January 4, 2000

MODEL AV-141C1-PS GENERAL INSTRUCTIONS

The Model AV-141C1-PS amplifier is designed to amplify bipolar nanosecond rise time baseband pulses in the pulse width range of about 2.0 ns and higher and CW signals in the frequency range of DC to 800 MHz. The basic specifications for the unit are as follows:

Gain:	> 20 dB
Peak output voltage:	± 3 Volt
Rise time:	< 700 ps
Impedance level:	50 Ohms nominal
Bandwidth:	DC to 800 MHz
Max. Noise figure:	4 nV $\sqrt{\text{Hz}}$
Prime power:	120/240 Volt, 50-60 Hz
Connectors:	SMA

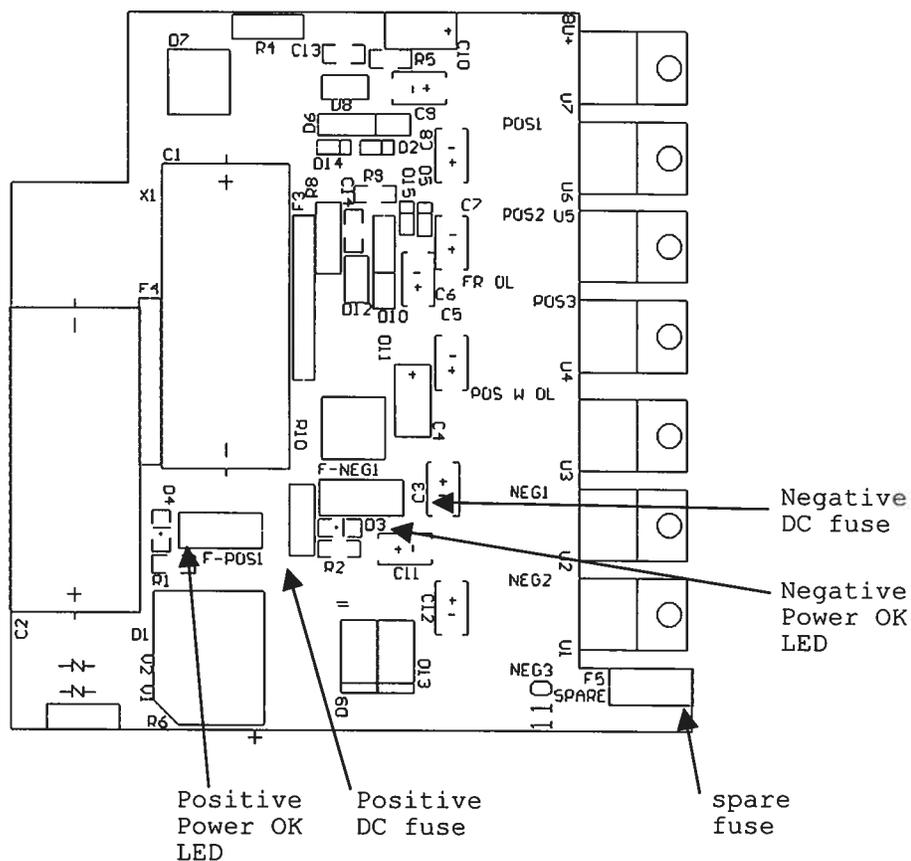
- 1) The DC offset on the output may be set to zero by making minor adjustments to the OS trim pot on the "OUT" end of the amplifier module. Remove the chassis top cover (by removing the four Phillips screws on the back panel) to access the amplifier module.
- 2) The pulse mode operation of the unit was tested using the arrangement shown in Fig. 1.
- 3) **CAUTION:** The unit may be damaged if the input voltage exceeds ± 300 mV, the input is not protected. Failures due to overvoltage application are not covered by the warranty.

FIG. 1: AMPLIFIER TEST ARRANGEMENT

POWER SUPPLY AND FUSE REPLACEMENT

This instrument has three fuses (plus one spare). 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 spare) are located on the internal DC power supply, as shown below:



The spare fuse may be used to replace one of the other fuses, if required.

The three fuses on this circuit board are 0.5A slow-blow fuses, Littlefuse part number R452.500. (This fuse can be ordered from Digikey, www.digikey.com. The Digikey part number is 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.