



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

□ P.O. BOX 265
OGDENSBURG, NY
U.S.A. 13669-0265
TEL: (315) 472-5270
FAX: (613) 226-2802

TEL: 1-800-265-6681
FAX: 1-800-561-1970

e-mail: info@avtechpulse.com
<http://www.avtechpulse.com>

□ P.O. BOX 5120 STN. F
OTTAWA, ONTARIO
CANADA K2C 3H4
TEL: (613) 226-5772
FAX: (613) 226-2802

INSTRUCTIONS

MODEL AVIR-1-PS- FOICA-ECL-EA-EW 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

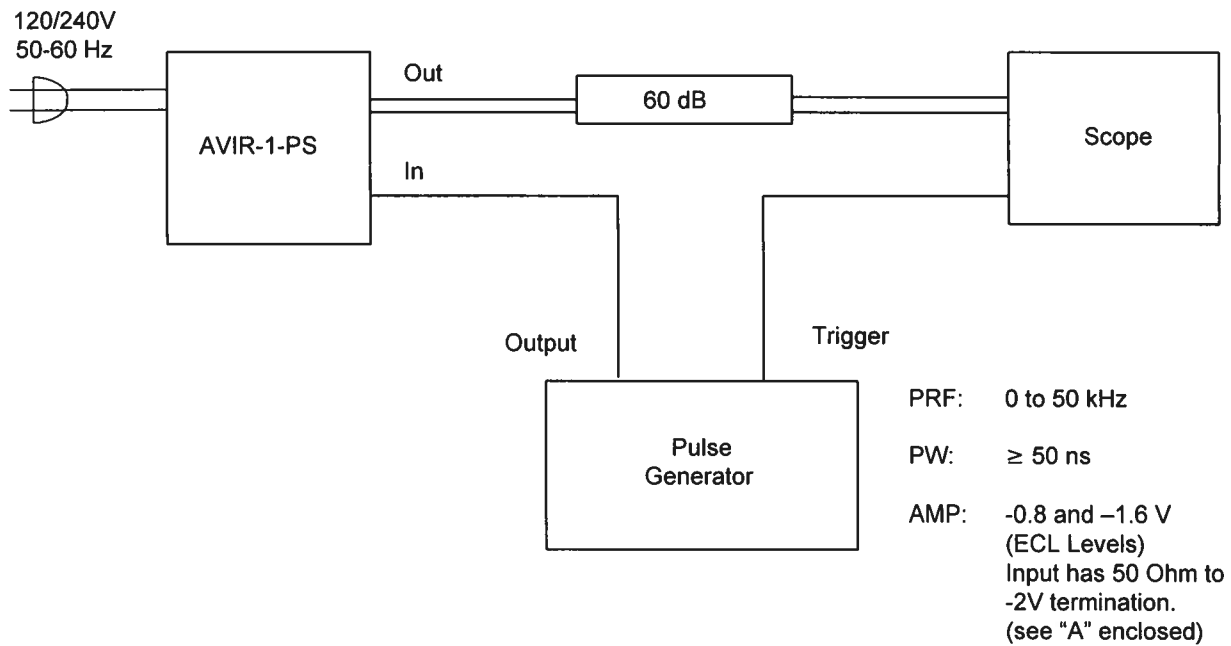
Fax: 613-226-2802 or 1-800-561-1970

E-mail: info@avtechpulse.com

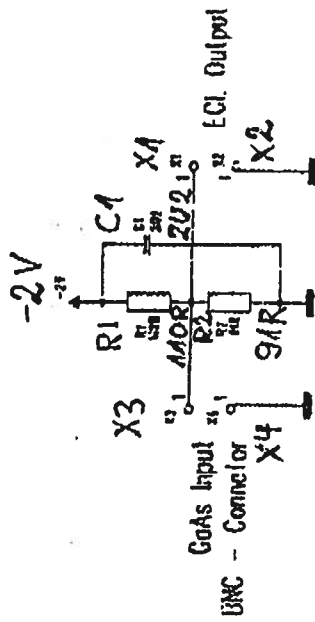
World Wide Web: <http://www.avtechpulse.com>

TABLE OF CONTENTS

WARRANTY	2
TABLE OF CONTENTS	3
FIG. 1: PULSE GENERATOR TEST ARRANGEMENT	4
GENERAL OPERATING INSTRUCTIONS	6
FIG. 3: BACK PANEL CONTROLS	7
BACK PANEL CONTROLS	8
POWER SUPPLY AND FUSE REPLACEMENT	9
PERFORMANCE CHECK SHEET	11

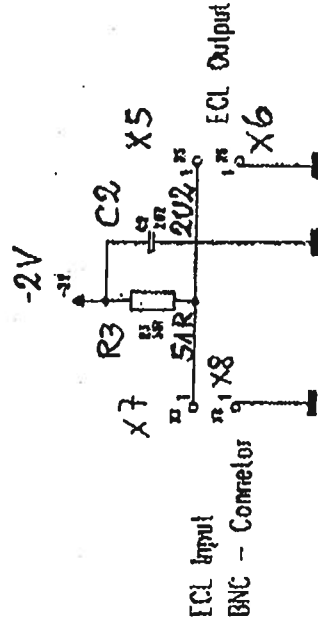
FIG. 1: PULSE GENERATOR TEST ARRANGEMENT

This input circuit



(A)

instead of this original one



(B)

Bessy GmbH
 Klaus Ludwig
 Lentzeallee 100
 14195 Berlin

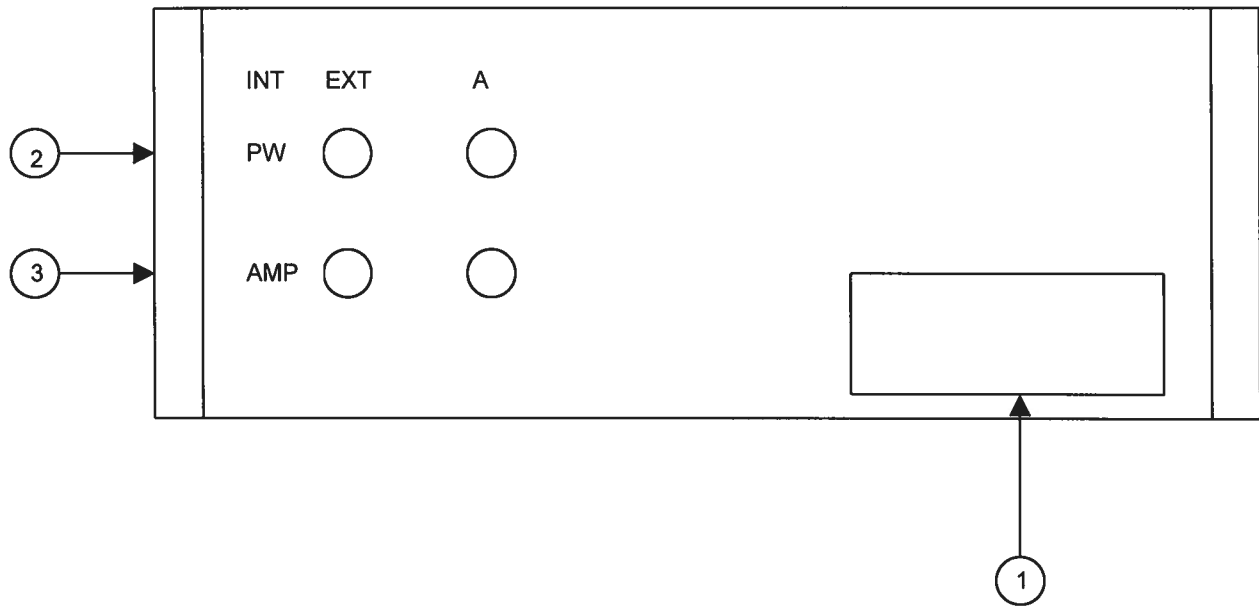
Title		No.	
260799 LU		1	
GoAs - ECL Pulsconverter		1	
BESSY GMBH		1	
Total		1	
Date		1985	
Author		K. Ludwig	
Reviewer		K. Ludwig	
Checked		K. Ludwig	
Approved		K. Ludwig	
Drawn		K. Ludwig	
Scale		1:1	
Sheet		1 of 1	

GENERAL OPERATING INSTRUCTIONS

- 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. Note that the unit requires a 50 Ohm load. A 60 dB attenuator is recommended.
- 2) **CAUTION.** This unit requires a well defined 50 Ohm load and it may fail if operated into a short circuit or into an open circuit. Such failures are not covered by the warranty.
- 3) The output PRF is equal to the input trigger pulse PRF.
- 4) **WARNING:** Model AVIR-1 may fail if triggered at a PRF greater than 50 kHz.
- 5) The output amplitude is controlled by means of the one turn AMP potentiometer. To voltage control the output amplitude, set the rear panel switch in the EXT position and apply 0 to +10V to connector B ($R_{IN} \geq 10K$). (EA option).
- 6) The output pulse width is controlled by the one turn PW control. To voltage control the output pulse width, set the rear panel switch in the EXT position and apply 0 to +10V to connector A ($R_{IN} \geq 10K$). (EW option).
- 7) 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.
- 8) For additional assistance:

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Fax: (613) 226-2802
Email: info@avtechpulse.com

FIG. 3: BACK PANEL CONTROLS



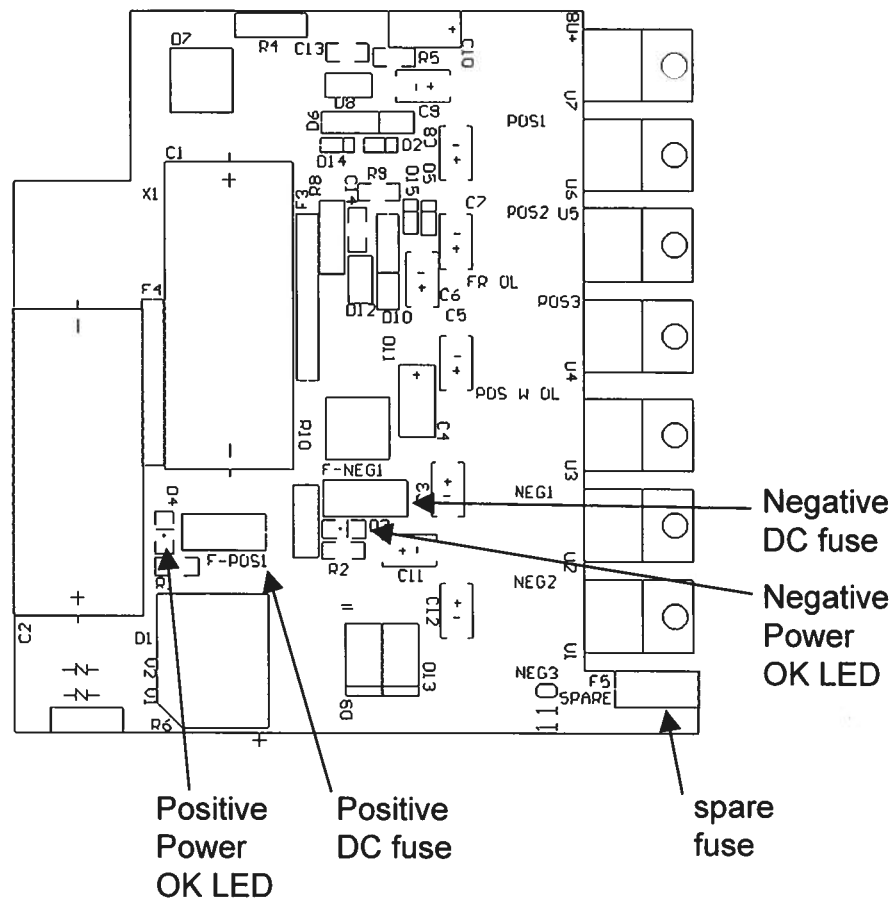
BACK PANEL CONTROLS

- (1) FUSED CONNECTOR, VOLTAGE SELECTOR. The detachable power cord is connected at this point. In addition, the removable cord is adjusted to select the desired input operating voltage. The unit also contains the main power fuse (0.5 A SB).
- (2) PW. To voltage control the output pulse width, set the switch in the EXT position and apply 0 to +10V to connector A ($R_{IN} \geq 10K$). (EW option).
- (3) AMP. To voltage control the output amplitude, set the switch in the EXT position and apply 0 to +10V to connector A ($R_{IN} \geq 10K$). (EA option).

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.