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INSTRUCTIONS

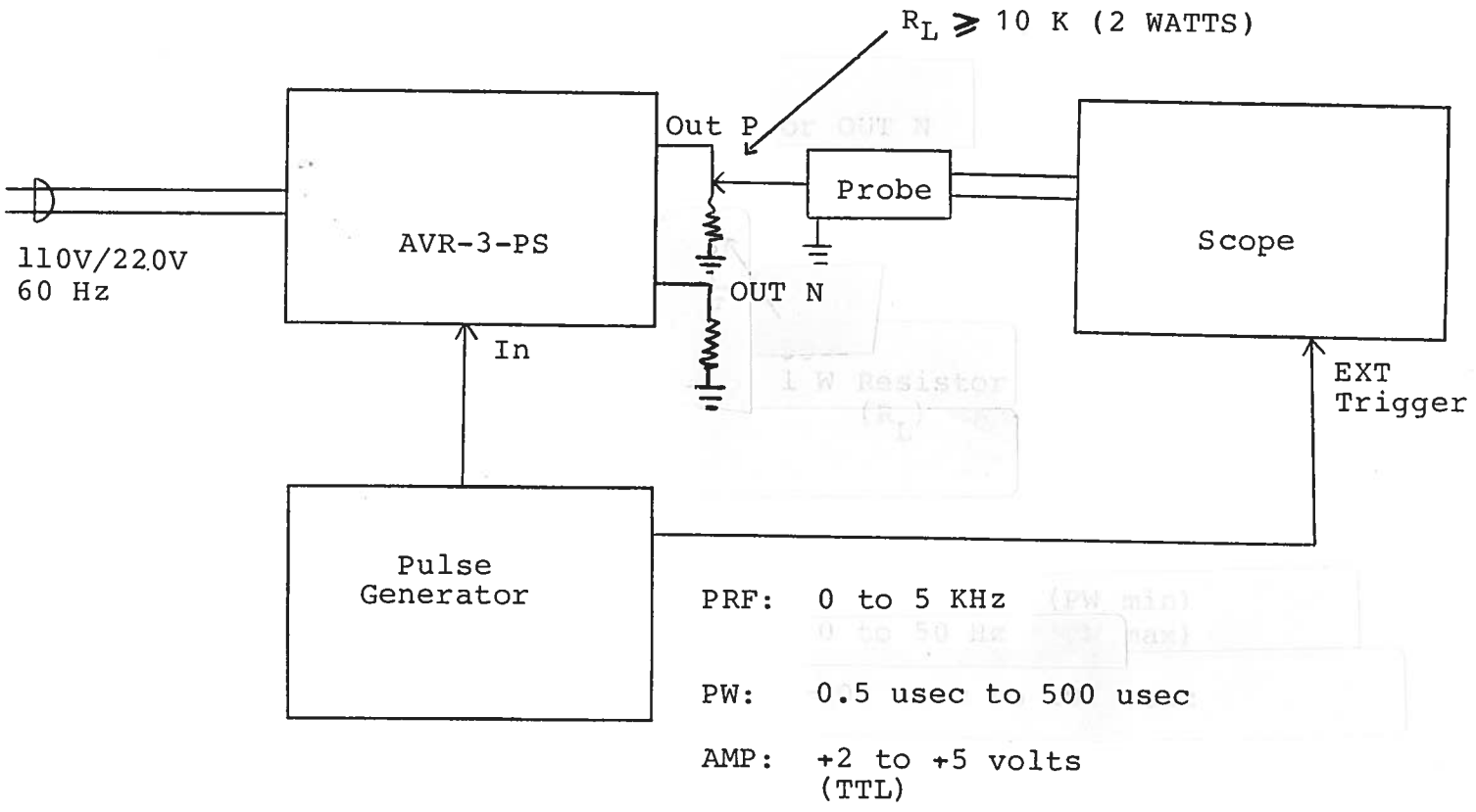
MODEL AVR-3-PS-PN-IMECB PULSE GENERATOR

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 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 100 MHz.

2) PW control, Mode A: The output pulse width is controlled by the one turn front panel pulse width control.

3) PW control, Mode B: The output pulse width is equal to the input trigger pulse width.

4) The output pulse amplitudes for the positive and negative outputs are controlled by means of the front panel one turn AMP P and AMP N controls.

5) The output PRF is equal to the input trigger pulse PRF.

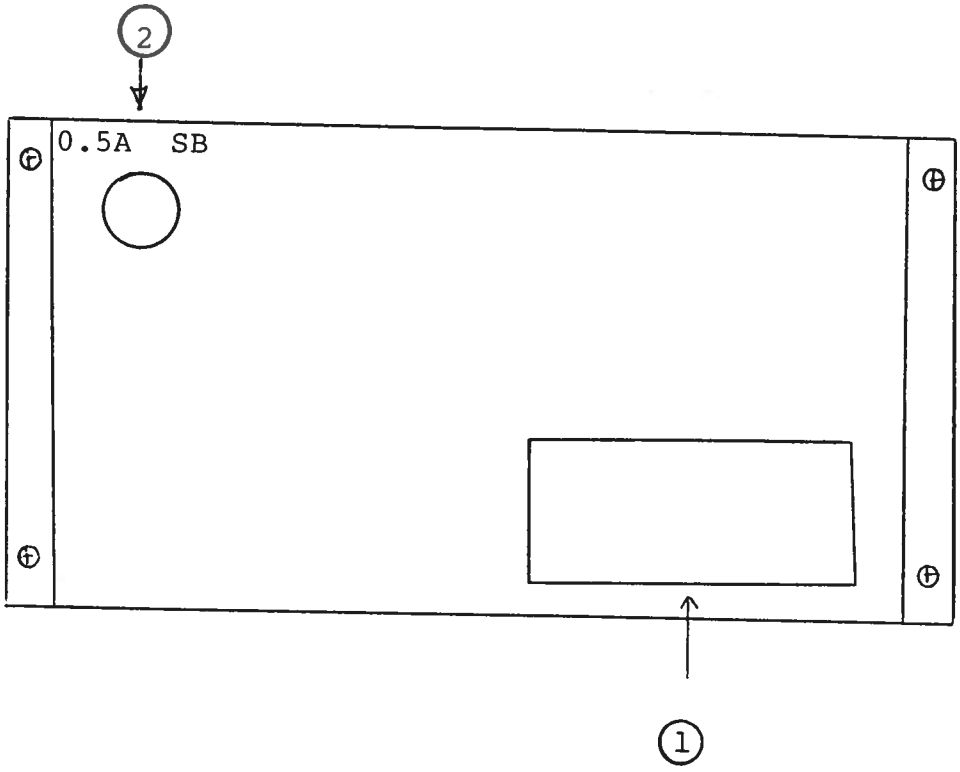
6) CAUTION:
   a) The output switching elements may fail if the unit is inadvertently operated into a short circuit (or into a low impedance such as 50 ohms). The switching elements are easily replaced in the field following the procedure outlined in the REPAIR Section.

   b) The output switching elements may fail if the duty cycle exceeds 25%

7) The AVR 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.

BACK PANEL CONTROLS

Fig. 2



(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.

(2) 0.5A SB. This fuse limits the DC prime power supplied to the output stage and will blow in the case of severe overloading. Do not exceed the duty cycle limits described in paragraph 12 of the general operating instructions.

POWER SUPPLY

Fig. 3a

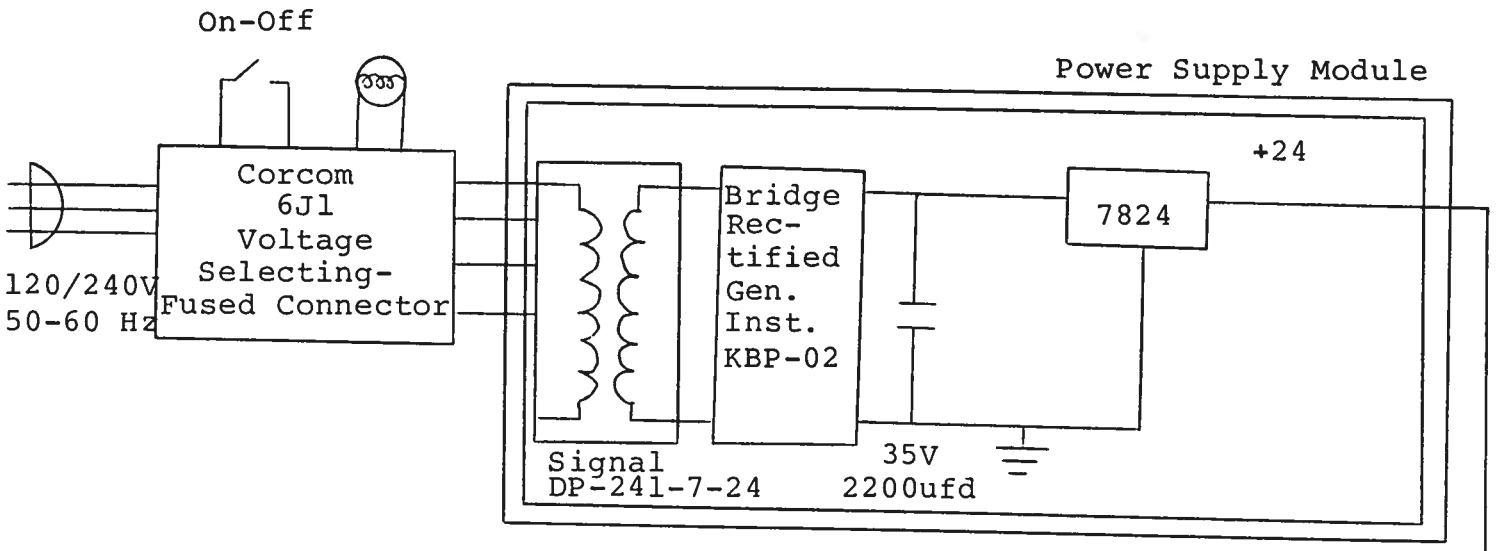


Fig. 3b

SYSTEM DESCRIPTION AND REPAIR PROCEDURE

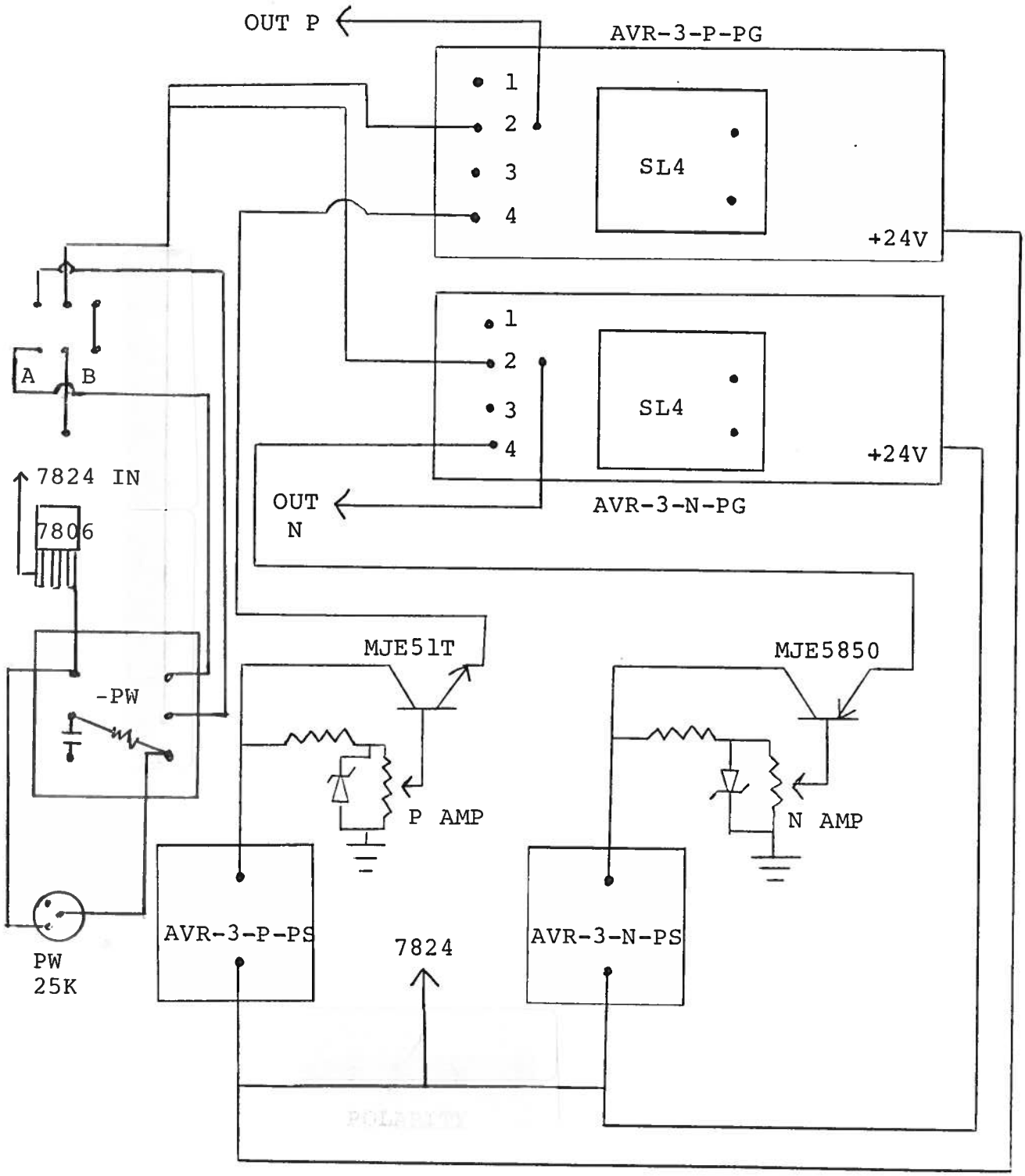
The AVR consists of the following basic modules:

1) AVR-3-IMECB pulse generator modules (-P and -N)
2) AVR-3-PW pulse width model +24V power supply board
3) AVR-3-PS power supply modules (-P and -N)

The modules are interconnected as shown in Fig. 4. In the event of an instrument malfunction, it is most likely that the rear panel 0.5A SB fuse or some of the output switching elements (SL4) may have failed due to an output short circuit condition or to a high duty cycle condition. The switching elements may be accessed by removing the cover plate on the bottom side of the instrument. NOTE: First turn off the prime power. The elements may be removed from their sockets by means of a needle nosed pliers. The SL4 is a selected VMOS power transister in a TO 220 packages and may be checked on a curve tracer. If defective, replacement units should be ordered directly from Avtech. When replacing the SL4 switching elements, take care to insure that the short lead (of the three leads) is adjacent to the black dot on the chassis.

Fig. 3b

SYSTEM BLOCK DIAGRAM



Schroff 08.18.89