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INSTRUCTIONS

MODEL AV-155-PS-DUP3 PULSE GENERATOR

S.N.:

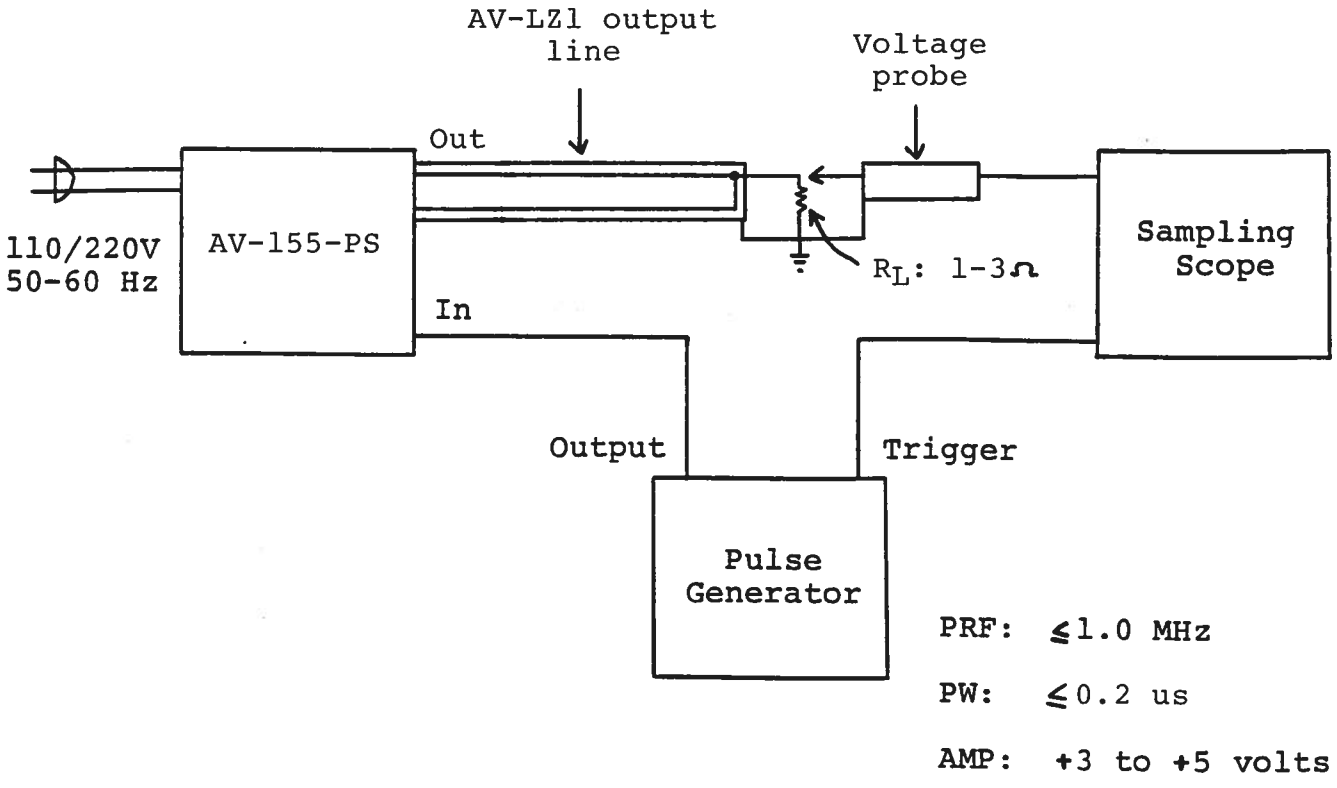
WARRANTY

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

MODEL AV-155-PS-DUP3 PULSE GENERATOR TEST ARRANGEMENT

(RESISTIVE LOAD, NO DIODE)



Notes:

1) The bandwidth capability of components and instruments used to display the pulse generator output signal (probes, cables, connectors, etc.) should exceed 100 MHz.

2) The TTL trigger signal controls the output PRF, PW and duty cycle.

3) WARNING: Model AV-155-PS may fail if triggered at a PRF greater than 1.0 MHz or if a non-TTL trigger signal is applied.

4) The output pulse width is equal to the input trigger pulse width and may be varied from 200 ns to DC.

5) The output pulse amplitude is controlled by means of the front panel ten turn AMP control.

6) To voltage control the output pulse amplitude, set the rear panel switch in the EXT position and apply 0 to +10V between terminal A and ground ($R_{IN} \geqslant 10K$).

7) The output DC offset is variable from +0 to -500 mA by means of the front panel ten turn OFFSET control.

8) The output offset may be voltage controlled by setting the rear panel switches in the EXT position and applying 0 to +10V between terminal A and ground ($R_{IN} \geqslant 10K$).

9) A low-inductance resistor should be used as the load. Note that an inductance of 50 nh will yield an inductance spike of about one Volt. With a low-inductance one Ohm load, the overshoot may be as high as 10%. The overshoot will significantly decrease as the load resistance is increased to 2 or 3 Ohms.

10) The flexible output transmission line (AVTECH Model AV-LZ1) may be changed by desoldering the line from the 1/16" glass epoxy circuit board which protrudes from the -PG module. The -PG module is accessed by removing the four Phillips screws on the back panel of the instrument. The top cover will then slide back (and off), thereby exposing the -PG module.

11) The AV-155-PS 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.

12) For additional assistance:

Tel: 1-800-265-6681
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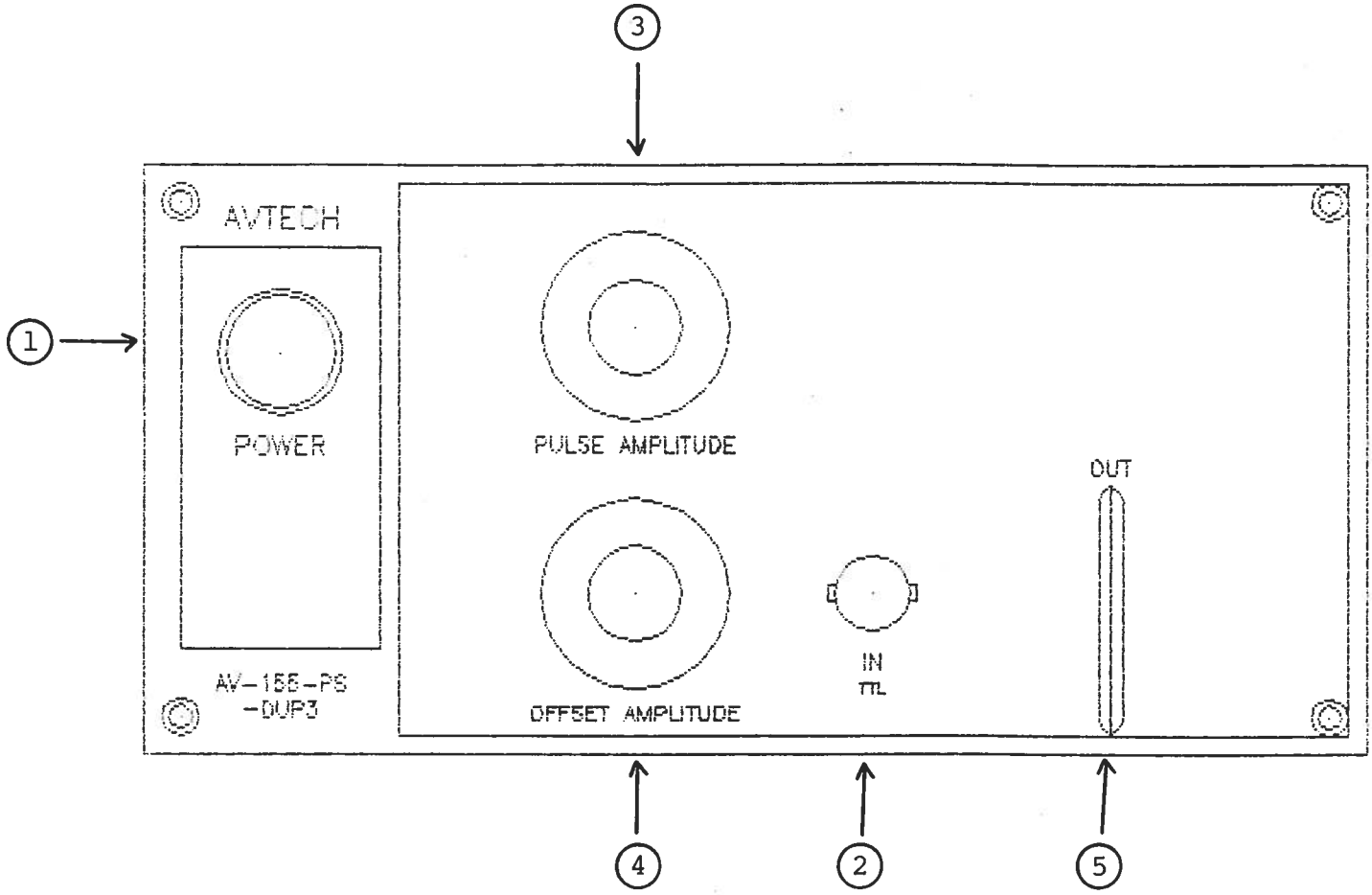
Fig. 2 FRONT PANEL CONTROLS



FRONT PANEL CONTROLS

1) POWER SWITCH. Applies power to all stages.

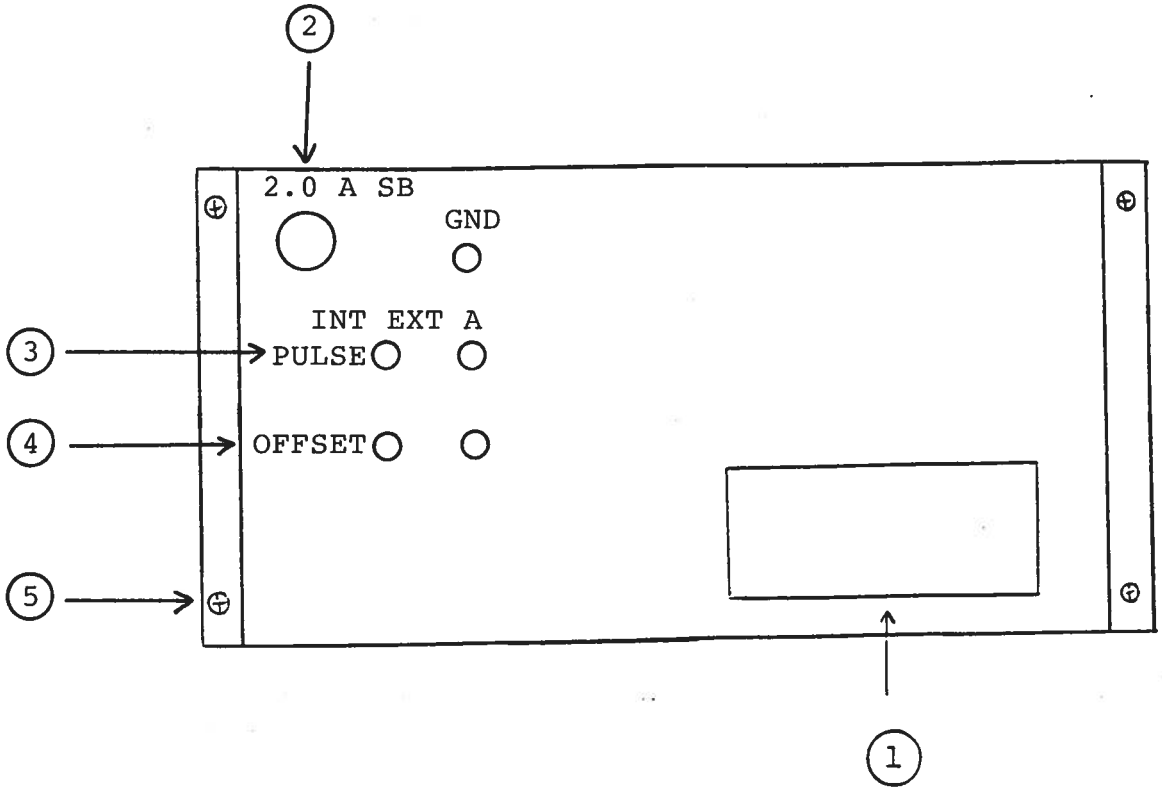
2) IN. TTL level trigger signal applied to BNC connector. Controls PW, PRF and duty cycle.

3) PULSE AMPLITUDE. Ten turn amplitude control varies output pulse amplitude from 0 to -1.5 Amps (useful to 2.0 Amps).

4) OFFSET AMPLITUDE. Ten turn offset control varies DC offset from 0 to -500 mA.

5) OUT. 1 meter long AV-LZ1 flexible output line protrudes from the front panel. Diode load and series matching resistor to be solder connected to end of line.

Fig. 3 BACK PANEL CONTROLS



BACK PANEL CONTROLS

1) Power Entry Module. Detachable line cord connects to this point. Also contains voltage selector card and line fuse (0.5 A SB).

2) 2.0 A SB Fuse. Limits current supplied to the output stage.

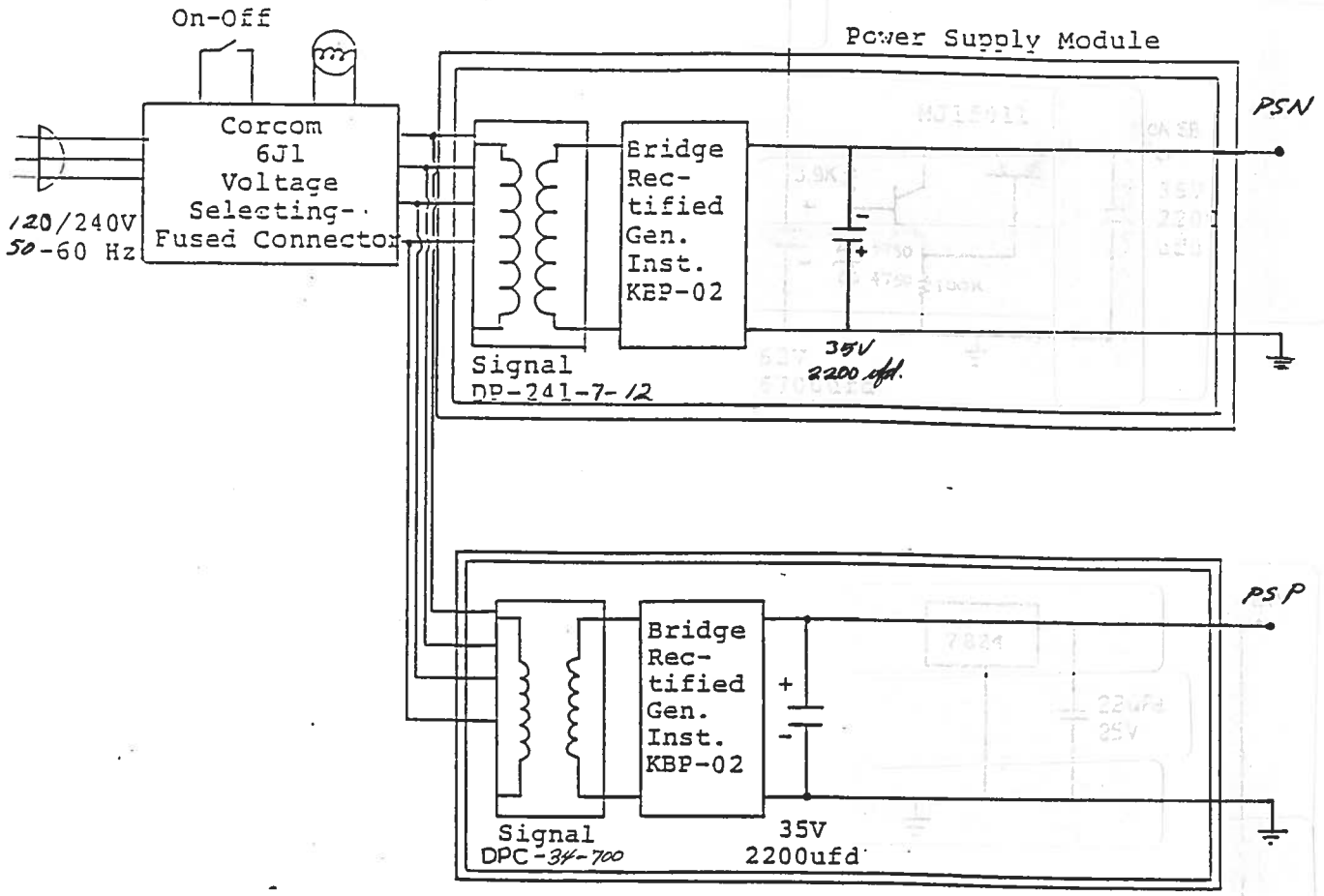
3) Pulse. To voltage control the output pulse amplitude, place the two-position switch in the EXT position and apply 0 to +10 Volts between the A terminal and ground.

4) Offset. To voltage control the output DC offset amplitude, place the two-position switch in the EXT position and apply 0 to +10 Volts between the A terminal and ground.

5) Cover Screws. To remove the top cover, remove the 4 Phillips screws and the top cover may then be slid back and off.

Fig. 4

POWER SUPPLY



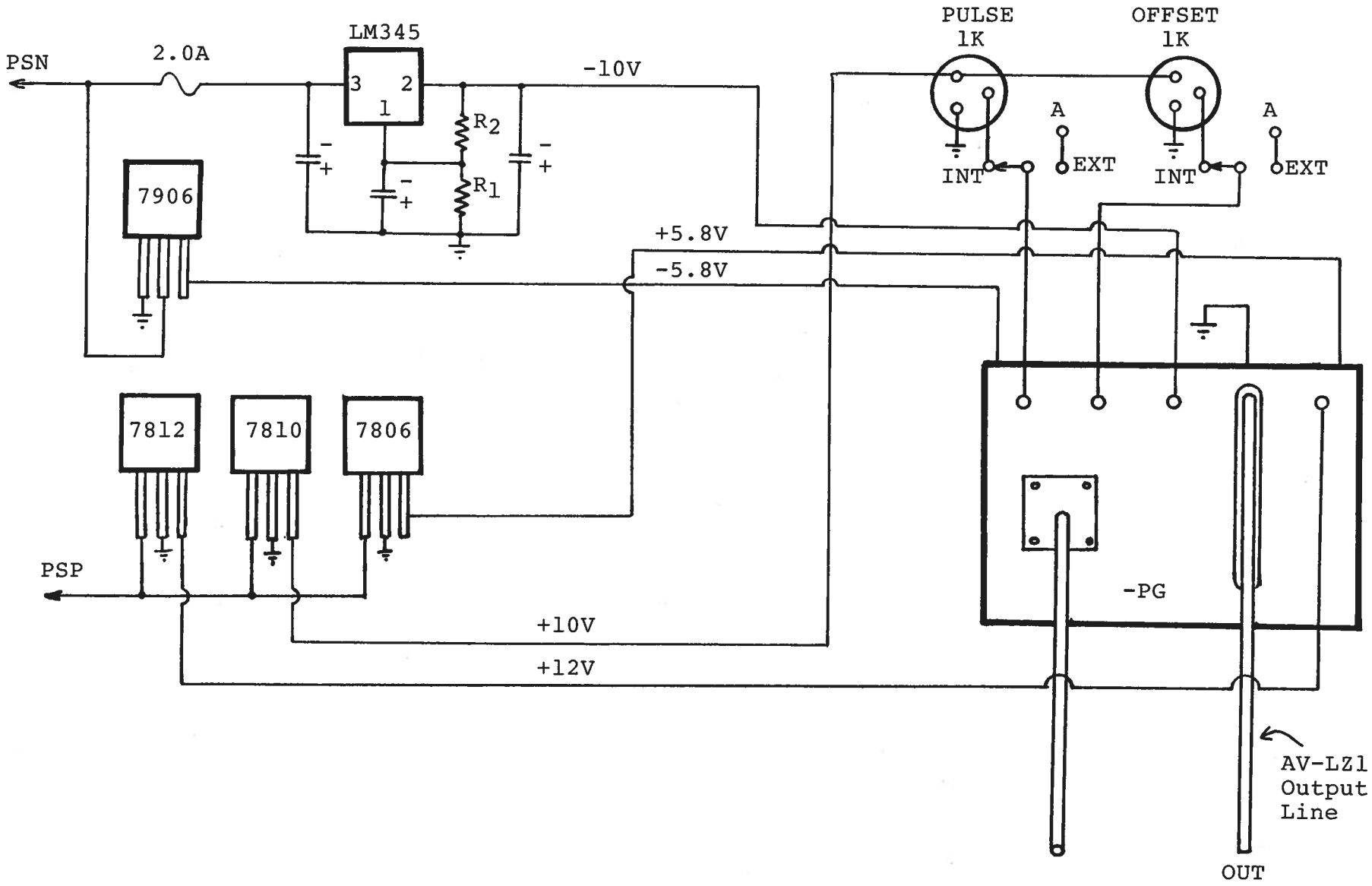


Fig. 5: AV-155-PS-DUP3 BLOCK DIAGRAM

SYSTEM DESCRIPTION AND REPAIR PROCEDURE

Model AV-155-PS-DUP3 consists of a pulse generator module (AV-155-DUP3-PG-N) and a power supply which supplies -10V, -5.8V, +12V and +5.8 Volts to the module. The power supply and block diagram are shown in Figs. 4 and 5.

If the instrument does not provide an output, check the line fuse and the 2.0 A SB fuse. If the fuses are not at fault, remove the top cover and check the -10V, -5.8V, +12V and +5.8 voltage level. If the voltage levels are correct then the -PG module is defective. The sealed -PG module must then be returned to AVTECH for repair or replacement.

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