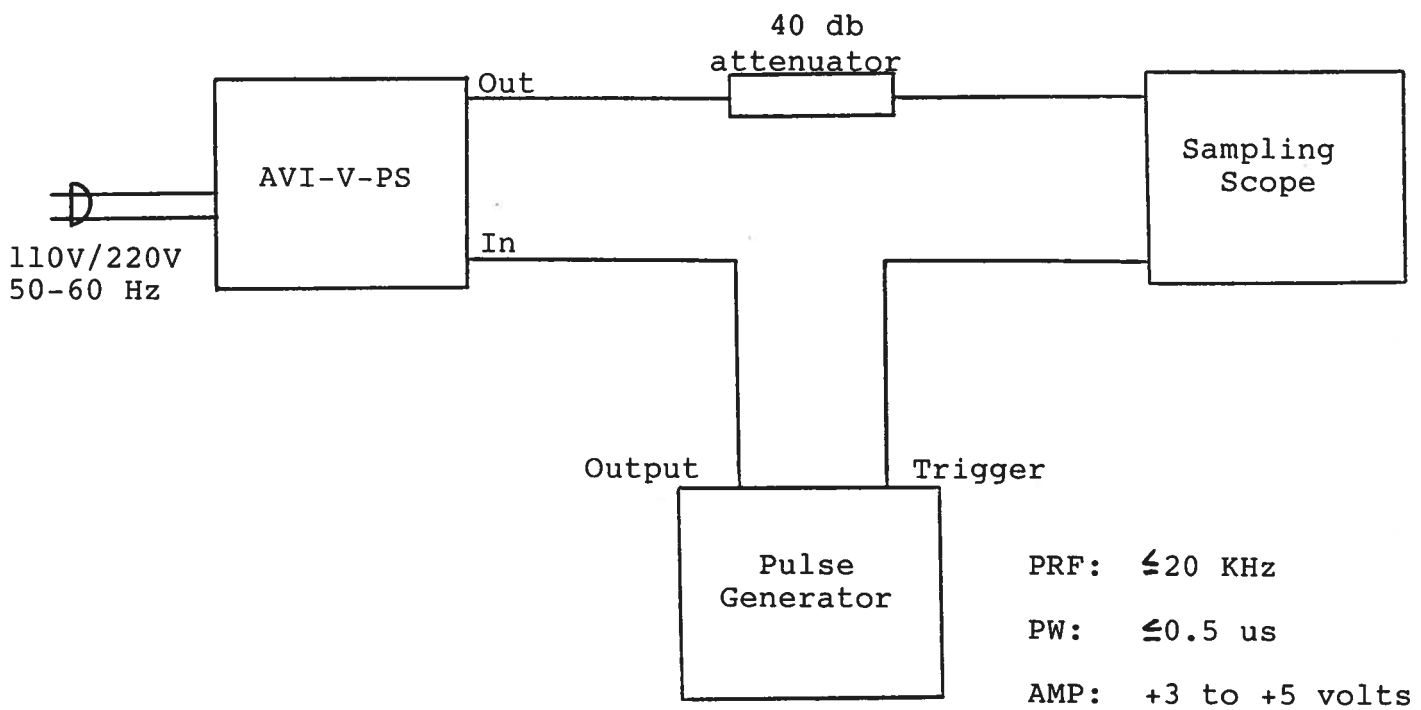## INSTRUCTIONS

MODEL AVI-V-PS-RU1 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.

MODEL AVI-V-PS PULSE GENERATOR TEST ARRANGEMENT

```
                                    40 db
                                  attenuator

          ┌──────────┐  Out   ┌──────────┐         ┌──────────┐
          │          │────────│          │─────────│          │
  ─┤D──── │ AVI-V-PS │        └──────────┘         │ Sampling │
          │          │                             │  Scope   │
110V/220V │          │  In                         │          │
50-60 Hz  └──────────┘────────┐         ┌──────────└──────────┘
                              │         │
                         Output         Trigger
                              ┌─────────┐
                              │         │         PRF:  ≤20 KHz
                              │  Pulse  │
                              │Generator│         PW:   ≤0.5 us
                              │         │
                              └─────────┘         AMP:  +3 to +5 volts
```

Notes:

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 us 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) <u>WARNING</u>: 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 ns when the output amplitude is varied from maximum to near zero.

7A) 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).

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) <u>MONITOR OUT M</u>. Provides an attenuated (x10) coincident replica of the main positive output pulse to fifty Ohms. (option).
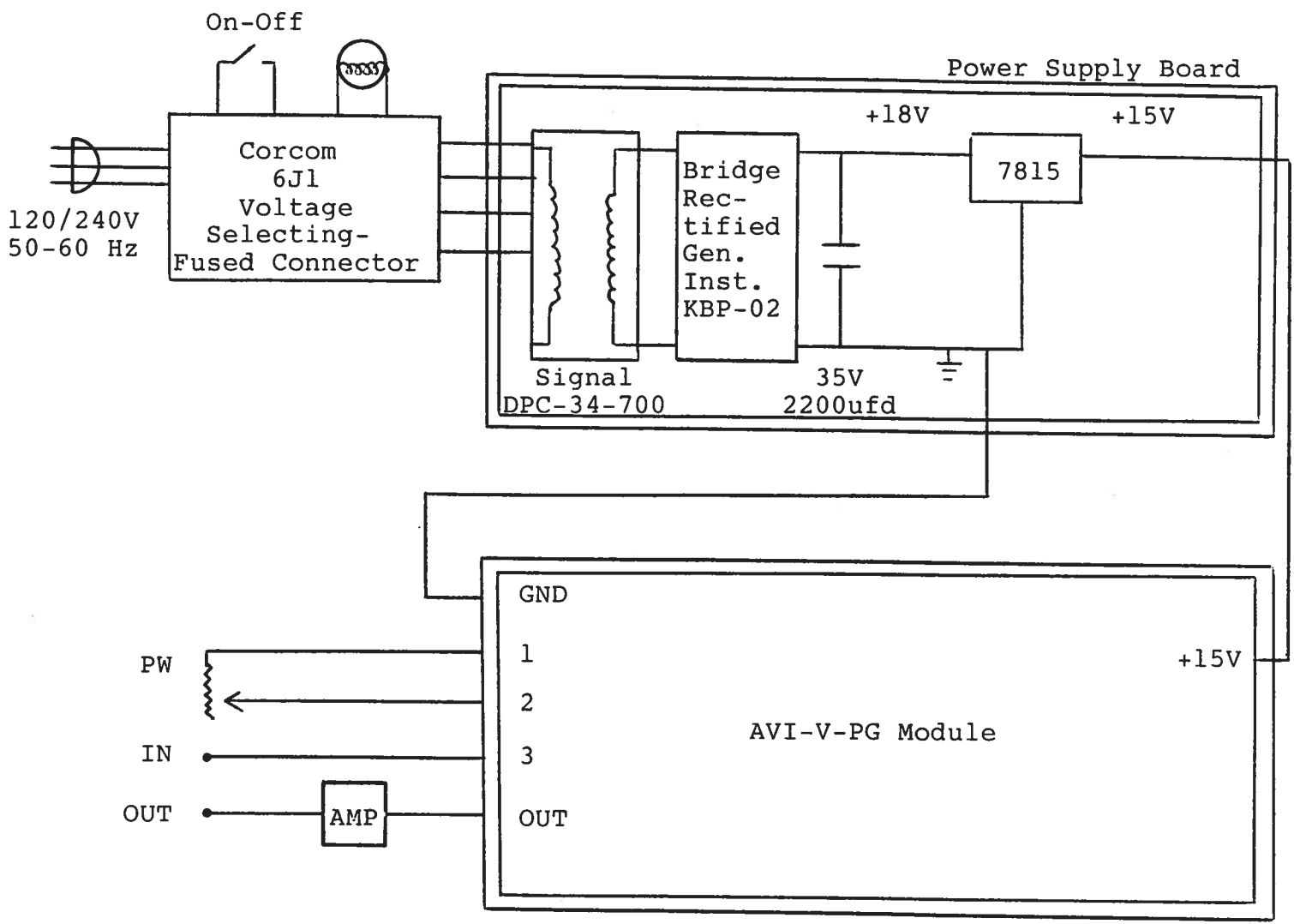
10) <u>Dual Polarity Option</u>. To invert the output of the AVI unit, connect the AVX-3-T unit to the OUT port. An inverted pulse is then obtained at the OUT port of the AVX-3-T unit. To offset the inverted pulse, apply the required DC level to the DC terminal of the AVX-3-T unit.

11) For additional assistance:

Tel: (613) 226-5772
Fax: (613) 226-2802

SYSTEM BLOCK DIAGRAM AND REPAIR PROCEDURE

SYSTEM DESCRIPTION AND REPAIR PROCEDURE

The AVI-V-PS consists of a pulse generator module (AVI-V-PG) and a power supply board which supplies +15 Volts (600 mA max) to the pulse generator module. In the event that the AVI-V-PS unit malfuctions, remove the instrument cover by removing the 4 Phillips screws on the back panel of the unit. The top cover may then be slid off. Measure the voltage at the +15 V pin of the PG module. If this voltage is substantially less than +15 Volts, unsolder the line connecting the PS and PG modules and connect 50 Ohm 10 W load to the PS output. The voltage across this load should be about 15 V DC. If this voltage is substantially less than 15 Volts the PS module is defective and should be repaired or replaced. If the voltage across the resistor is near 15 Volts, then the PG module should be replaced or repaired. The sealed PG module must be returned to Avtech for repair (or replacement).

Dec. 13/94

- EA
- OS
- M
- PN

Disk : AVI

Name : AVI\VPSRU1.INS