# INSTRUCTIONS

## MODEL AV-155C-NASA2 LASER DIODE DRIVER

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 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

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FIG. 1: MODEL AV-155C LASER DIODE DRIVER TEST ARRANGEMENT
(1N5819 AND 1 OHM RESISTOR SIMULATING A LASER DIODE LOAD)

# GENERAL OPERATING INSTRUCTIONS

1) The bandwidth capability of components and instruments used to display the pulse generator output signal (probes, cables, connectors, etc.) should exceed 50 MHz. It is recommended that 2N5819 diode and a 1 Ohm non inductive resistor be used as the test load as shown in the drawing.

2) The +15 VDC supply should have a 1.5 Amp current rating, particularly if the driver is operated at near maximum pulse widths.

3) The module must be bolted to a heatsink capable of dissipating about 20 Watts.

4) The SYNC out may be used to trigger the display scope. The SYNC output provides +3 Volt square wave (50% duty cycle) to $R_L$ > 1K or +300 mV to 50 Ohms.

5) MONITOR OUT. The SMA "M" output connector adjacent to the output terminal provides a voltage waveform replica of the output current waveform as follows:

$$R_L \geq 1K$$

$$I_{OUT} = 1\ V_{MON} \qquad \text{(Volts, Amp)}$$

$$R_L = 50\ \text{Ohms}$$

$$I_{OUT} = 10\ V_{MON} \qquad \text{(Volts, Amp)}$$

6) The output amplitude is controlled by the one turn Amp pot.

7) The output pulse width is controlled by the three position range switch and the one turn PW pot.

8) The output PRF is controlled by the three position range switch and the one turn PRF control.

9) CAUTION: The unit may be damaged if the output duty cycle exceeds 50%.

10) When connecting a laser diode load, it is recommended that a 1N5819 diode be placed across the laser diode to protect against reverse potentials; i.e. the anode of the 1N5819 should contact the cathode of the laser

diode (while the cathode should contact the anode). Take care to insure that the load voltage does not exceed three Volts.

11) For additional assistance:

Tel: (613) 226-5772
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ORIGINAL QUOTATION

# PERFORMANCE CHECK SHEET