AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS

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

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

INSTRUCTIONS

MODEL AV-155-PS-P-LPRA PULSE GENERATOR

S.N.:

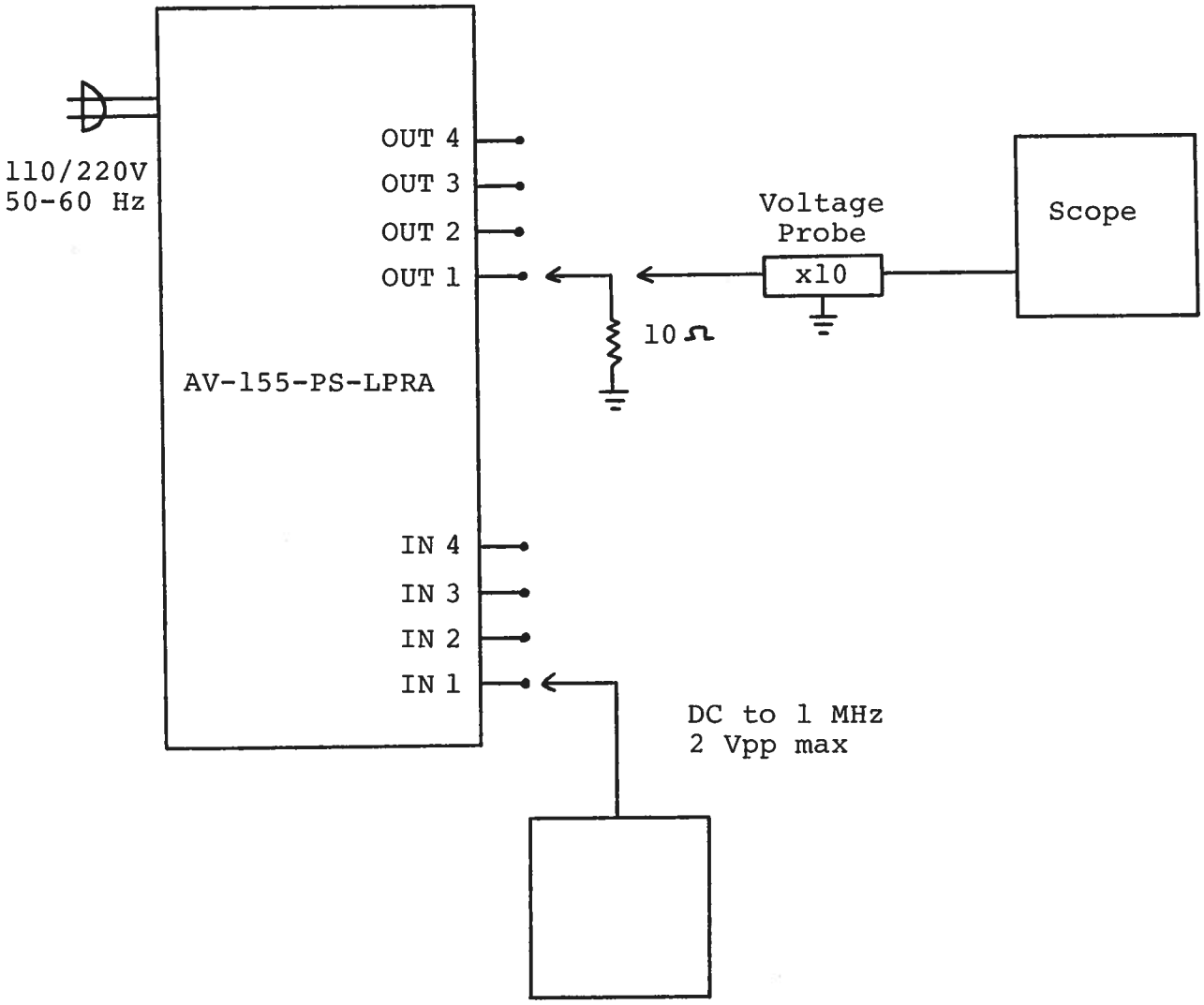
WARRANTY

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-LPRA DRIVER

TEST ARRANGEMENT

(RESISTIVE LOAD, NO DIODE)



Notes:

1) The bandwidth capability of components and instruments used to display the output signal (probes, cables, connectors, etc.) should exceed 20 MHz.

2) Connect a 10 Ohm resistive load and set the DC offset control to about 5.0. A DC output voltage of about +1.0 Volts (i.e. 100 mA) should be indicated on the scope. The load may be connected to any number of the outputs and no input is necessary.

3) Apply a 1 Volt peak to peak sinusoid to an input having a corresponding output which is loaded in 10 Ohms. The frequency should be in the range of DC to 1.0 MHz. The scope should indicate an output waveform with a minimum value of about 0 Volts and a maximum value of about 2 Volts (a modulation factor of 100 mA/volt).

4) CAUTION: The DC offset should be set above zero before applying the sinusoidal modulation to insure that the output signal is positive at all times.

5) 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.

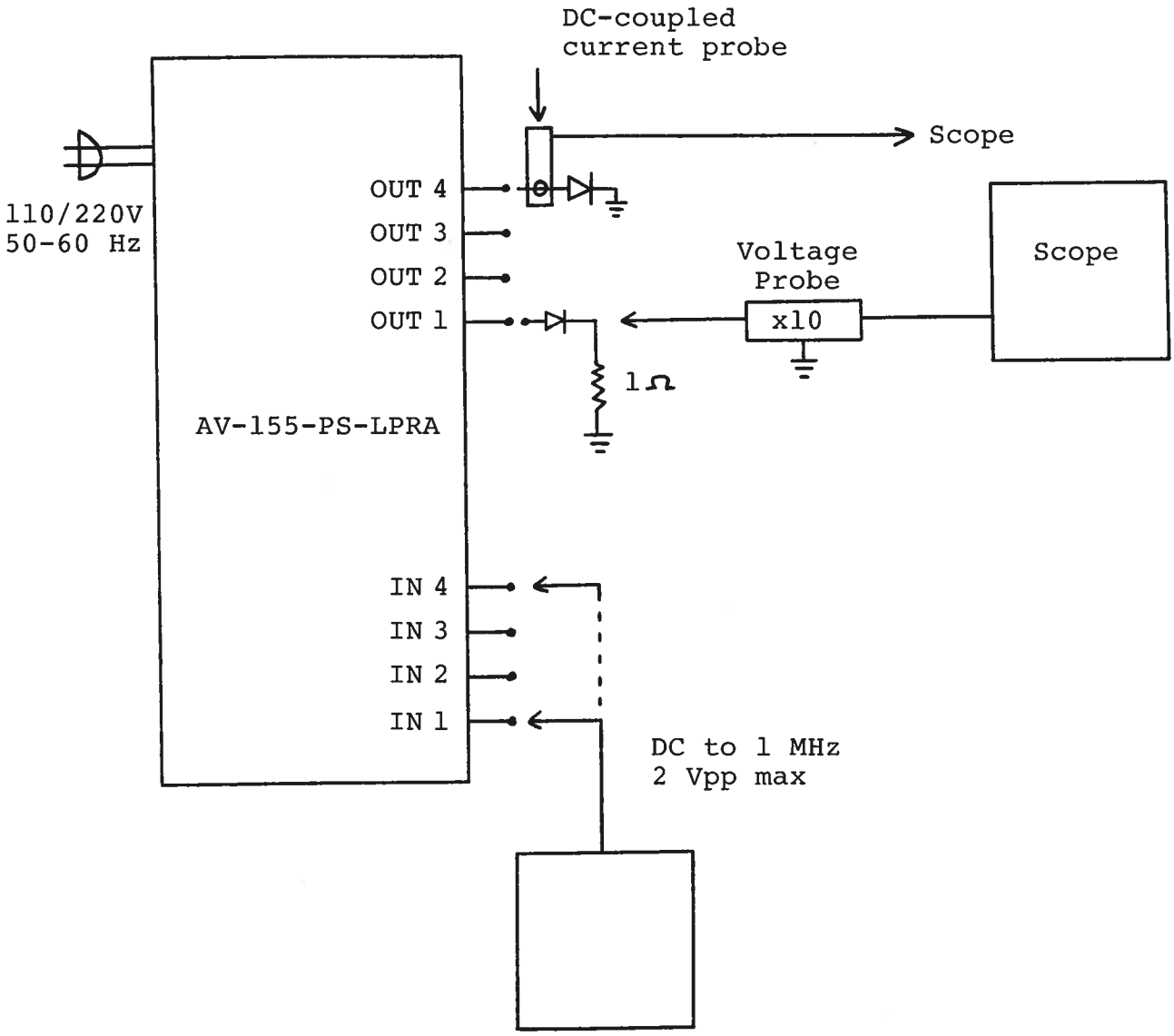
6) For additional assistance:

Tel: 1-800-265-6681
Fax: (613) 226-2802

Fig. 2 MODEL AV-155-PS-LPRA DRIVER

TEST ARRANGEMENT

(DIODE LOAD)



Notes:

1) The bandwidth capability of components and instruments used to display the output signal (probes, cables, connectors, etc.) should exceed 20 MHz.

2) Connect a diode with a 1 Ohm current sensing resistor and a voltage probe or simply a diode with a DC-coupled current probe.

3) Set the DC offset at about 5.0. A DC output current of 100 mA should be indicated by the probes.

4) Apply a 1 Volt peak to peak sinusoid to an input having a corresponding loaded output. The frequency should be in the range of DC to 1.0 MHz. The scope should indicate an output waveform with a minimum value of about 0 mA and a maximum value of about 200 mA (a modulation factor of 100 mA/volt).

5) CAUTION: The DC offset should be set above zero before applying the sinusoidal modulation to insure that the output signal is positive at all times (to avoid damage to the diode and to the driver).

6) 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.

7) For additional assistance:

Tel: 1-800-265-6681
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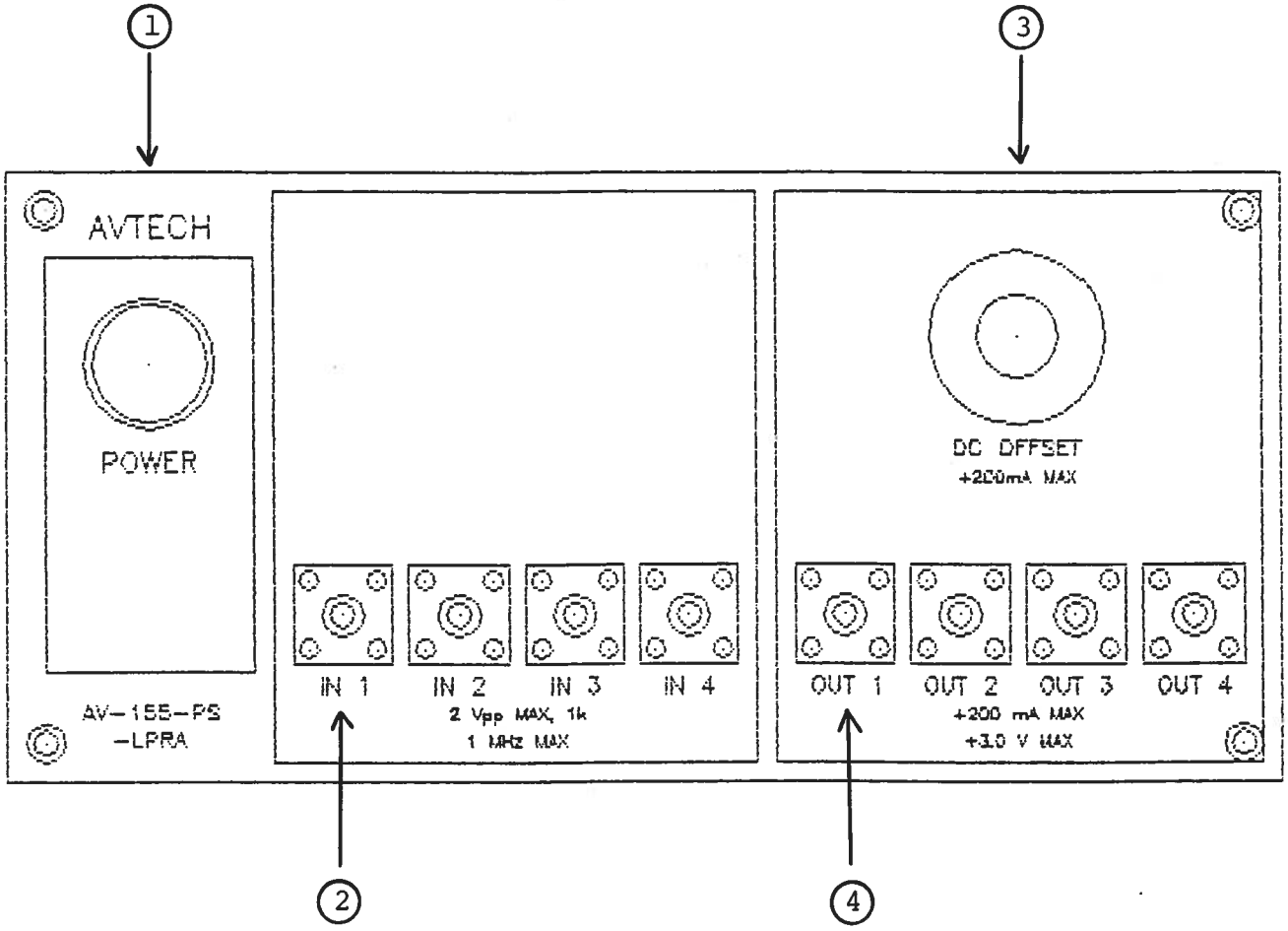
Fig. 3 FRONT PANEL CONTROLS



FRONT PANEL CONTROLS

1) POWER SWITCH. Applies power to all stages.

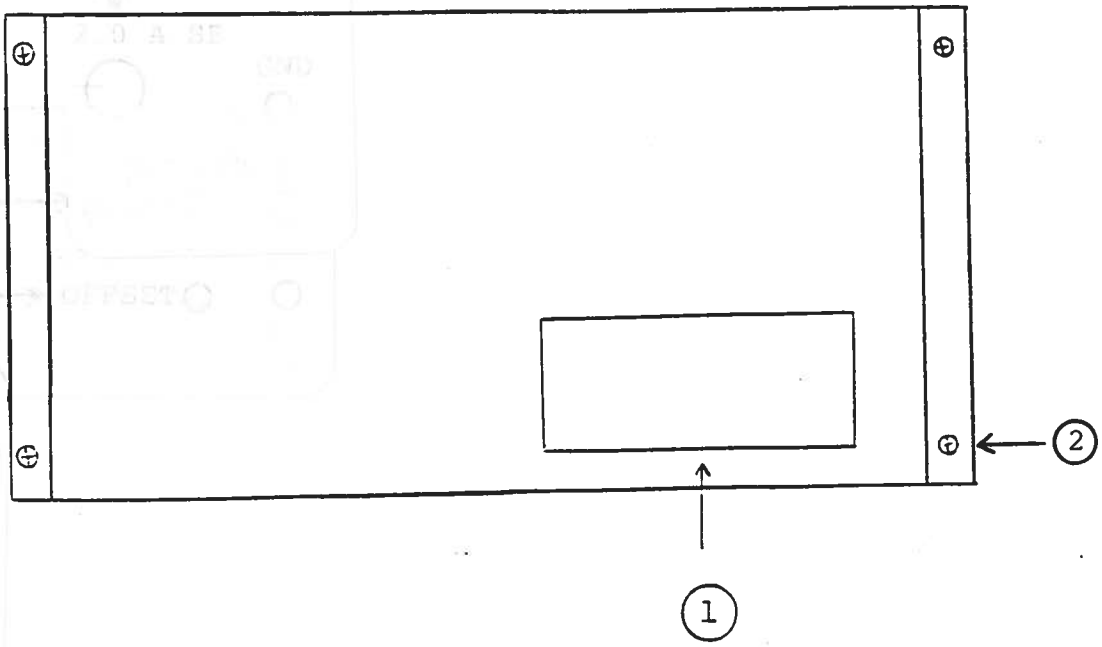
2) IN (x4). DC to 1.0 MHz sinusoid applied to SMA connectors (Vpp max 2 Volts).

3) OFFSET AMPLITUDE. Ten turn offset control varies DC offset, or all 4 outputs, from 0 to +200 mA.

4) OUT (x4). Diode load connects to SMA connectors. 50 Ohm cable length not to exceed 6' and peak output current not to exceed 200 mA. Peak output voltage not to exceed 3.0 Volts.

Fig. 4

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

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June 7, 1993.

Paul Binun
Laser Power Research
12777 High Bluff Drive
San Diego, CA 92130

Tel: 619-755-0700
Fax: 619-259-9093

Dear Paul:

Following our telephone conversation of June 3, I am pleased to provide a price and delivery quotation for a 4-channel constant current laser diode driver meeting the following specifications:

Model designation:	AV-155-PS-P-LPRA.
Number of output channels:	Four.
Output DC offset:	0 to +200 mA to 0 to +3 Volts (via a single ten turn control).
Modulation bandwidth:	1 MHz.
Number of modulation inputs:	Four.
Modulation factor:	2 Volts peak to peak produces 200 mA. (peak to peak).
Modulation input impedance:	1 K.
Peak output current:	200 mA.
Output rise, fall time:	$\leq$ 50 ns.
Package size:	4" x 8" x 12".

.../2

Connectors:	AM Input:	SMA (4).
	OUT:	SMA (4). Connect laser diodes directly to output SMA. Cable length should not exceed 6".
Prime power:		120/240V, 50-60 Hz.
Other:		See AV-150-C series, page 95, Cat. No. 8.
Price:		$2,495.00 US each, FOB destination.
Delivery:		30 days ARO.

Thank you for your interest in our products. Please call me again (1-800-265-6681) if you require any additional information.

Yours truly,

Dr. Walter Chudobiak
Chief Engineer

WC:pr
Encl. Cat. No. 8
Cat. No. 8S1
Price list

06.22.93