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INSTRUCTION MANUAL

SERIES A600

**TRAVELING WAVE
TUBE AMPLIFIERS**

LogiMetrics, INC.

121-03 Dupont Street
Plainview, New York 11803

SECTION I
INTRODUCTION

1-1. SCOPE OF MANUAL

1-2. This manual contains instructions for the use and maintenance of the Series A600 Traveling Wave Tube (TWT) Amplifiers (figure 1-1), manufactured by LogiMetrics, Inc., Plainview, New York 11803. The manual includes a general description of the instrument, operating instructions, theory of operation, maintenance information, and parts list.

1-3. PURPOSE AND USE OF EQUIPMENT

1-4. The Series A600 Traveling Wave Tube (TWT) Amplifiers are used to linearly amplify microwave signals. The instruments will amplify both CW and modulated signals, and are capable of operation from remote locations. The Series A600 TWT Amplifiers can be used with most microwave signal generators and modulators. Typical uses are general laboratory equipment to increase dynamic range measurements and as part of radar and communication systems.

1-5. GENERAL DESCRIPTION

1-6. The Series A600 Traveling Wave Tube Amplifiers, hereafter referred to as the A600, are self-contained instruments suitable for bench or rack use. The A600 units are 220VAC, 3-phase powered and consist of a panel, a chassis, internal TWT, frame, and covers. The panel serves as a mounting for the controls and monitoring meters. The covers enclose and protect the internal components of the equipment.

1-7. EQUIPMENT SPECIFICATIONS

1-8. Table 1-1 lists the equipment specifications for the Series A600.

TABLE 1-1. EQUIPMENT SPECIFICATIONS

Model	Frequency Range (GHz)	Minimum Gain (dB)	Maximum N. F. (dB)	Minimum Power Output (watts)
A600/P	0.5 - 1.0	30	35	250
A600/L	1.0 - 2.0	30	35	200
A600/S	2.0 - 4.0	40	35	200
A600/SC	2.6 - 5.2	45	35	200
A600/CX	4.8 - 9.6	40	35	200
A600/H	7.0 - 11.0	40	35	200
A600/X	8.0 - 12.4	40	35	200
A600/XU	8.5 - 17.0	35	35	150
A600/U	12.0 - 16.0	40	35	200

TABLE 1-1. EQUIPMENT SPECIFICATIONS (Continued)

Characteristic	Specification
Spurious AM Residual AM	At least 40 dB below rated output, typically 46 dB.
Input/Output Impedance	50 ohms, VSWR 2.5:1 maximum.
Load VSWR	2.5:1 maximum.
Input Connector	Type "N" to 8 GHz. Type "SMA" above 8 GHz.
Output Connector	Type "N" to 8 GHz. Waveguide above 8 GHz.
GENERAL	
Power	220VAC, 50 to 60 Hz, 3-Phase, 2.6 kW.
Dimensions	14"H x 19"W x 25"D.
Weight	150 lbs maximum.
Cooling	Internal forced air.
Operating Temperature	0° to +50°C.
Storage Temperature	-10°C to +65°C.
OPTIONS	
03	Sensing of excessive VSWR to protect TWT when VSWR exceeds allowable level.
07	Internal Pin Diode Switch.