



LPA-9600

1 KILOWATT POWER AMPLIFIER

LPA-9500

500 WATT POWER AMPLIFIER



The Sunair LPA-9500 and LPA-9600 are proven solutions in communications applications where rugged and reliable high power amplifiers are required. The amplifiers combine solid-state RF power amplification and control technology to produce reliable HF power at continuous duty. The LPAs interface directly with the 9000D series of radios and transmitters, and operate over a frequency range of 1.5 MHz to 30 MHz, delivering rated output for a load VSWR up to 2:1 over the full-temperature operating range, with graceful degradation for load VSWR up to 3:1. The amplifiers are protected from damage due to load VSWR above 3:1 and short or open circuits.

The Sunair LPA-9500 and LPA-9600 use two and four amplifier power supply modules, respectively, capable of producing over 300W each, which allow the units to deliver conservative averages of 500W and 1kW. The approach of combining power supplies and amplifiers in modular form produces considerable redundancy and protection against failures. Should there be a failure in one of the LPA-9600 RF/PS modules, the unit will automatically switch to 500W operation. The LPA-9500 provides selectable power of 500W or 250W, while the LPA-9600 provides selectable power of 1kW or 500W; and both units allow bypass operation.

Advanced built-in-test (BITE) capability, along with status indicators of power, individual PA voltages and currents, are all

microprocessor-controlled. In the event of malfunction, the amplifiers automatically select the next lowest safe operating level, activate a warning light, and display the cause on the front panel. The amplifiers' intuitive modular design allows for ease of maintenance and upgrade throughout the equipment life cycle at minimal expense. Thousands are in daily service as integral components of critical strategic communications solutions worldwide.

GENERAL

Frequency Range	1.5 – 30 MHz
Power Output	* LPA-9600: 1000 W PEP and Average * LPA-9500: 500 W PEP and Average
Duty Cycle	Continuous
Intermodulation Distortion	36 dB Below PEP
Harmonic Distortion	60 dB Below PEP
Band Change Time	10 ms Maximum
Output Impedance	50 Ω Unbalanced
Load VSWR	* Rated Power $\leq$ 2:1 * Graceful Degradation $\leq$ 3:1 * Protected Cut Off Above 3:1
Input VSWR	2:1 Maximum
Input Voltage	115 / 230 VAC $\pm$ 15%, Single Phase 50 – 60 Hz
Input Power	* LPA-9600: 4500 VA Typical (Including Exciter) * LPA-9500: 2000 VA Typical (Including Exciter)
Indicators	Power On, Fault, Metering, and LCD
Metering	Forward Power, Reflected Power, and PA Voltages and Currents
BITE	Microprocessor-Controlled With English Language Readout
MTBF	6900 Hours
MTTR	30 Minutes
Dimensions	* 15.75 H x 17.88 W x 19.0 L (in) * 40.0 H x 45.4 W x 48.3 L (cm)
Weight	* LPA-9600: 90 lbs (40.9 kg) * LPA-9500: 70 lbs (31.8 kg)
Construction	Modular Plug-In Assemblies, Field Serviceable
Origin	Designed and Manufactured in the U.S.A.

- **Redundant Internal AC Power Supplies**
- **Soft Fail Design**
- **Full Power into Load VSWR up to 2:1**
- **Comprehensive BITE to LRU**

PRODUCT SPECIFICATIONS

INTERNAL OPTIONS

Power Level Setting	Third Level of 250 W
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PERIPHERAL EQUIPMENT OPTIONS

Mounting	* Ears and Rack Slides For EIA Standard 19 Inch Rack * Desktop * Shockmount Kit
Spares Kits	Running Spares, Field Modules
Radios	RT-9000D / R-9000D / T-9000D
1 kW Antenna Couplers	CU-9150

ENVIRONMENTAL

Temperature	* Operating: -30°C to +65°C (-22°F to 149°F) * Storage: -40°C to +85°C (-40°F to 185°F)
Humidity	95% at 65°C (149°F), Non-Condensing
Shock	MIL-STD 810F, Method 516.5, Procedure 1
Vibration	MIL-STD 810F, Method 514.5 & MIL-STD-167-1
Altitude	* Operating: Up to 10,000 Feet * Storage: Up to 40,000 Feet

CERTIFICATIONS

European CE Standard, (Optional)	* EN 300 373-2 v1.2.1 * EN 301 843-5 v1.1.1 * EN 60950 * Notified Body 1177
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