



T-10000A

10 KILOWATT HIGH POWER TRANSMITTER SYSTEM

The Sunair T-10000A is the hallmark solution for mission-critical communications applications requiring hemispheric coverage. The transmitter system combines solid-state RF power amplification and control technology to produce a failsafe high power solution, and operates in a frequency range of 1.5 MHz to 30 MHz. Maximum power output is 10 kW to facilitate long-range hemispheric communications when coupled with the appropriate antenna. Power is reducible in 1 dB steps down to the 1 kW level. Standard operating voltage is 338 – 458 VAC, 50 or 60 Hz with a modest power requirement of ≤ 35 kVA.

The Sunair T-10000A is supplied as an integrated system consisting of the Sunair T-9000D Software-Defined HF SSB/ISB Transmitter, F-9800 Post-Selector, and the LPA-10000A 10 Kilowatt Power Amplifier. The amplifier architecture consists of eight IPA intermediate power amplifier subsystems that are combined to produce final power output and managed by the Sunair HPAC High Power Amplifier Controller. The HPAC actively monitors system balance and performance, and provides power control and safety shutdown in the event of internal module or antenna failure.

Advanced built-in-test (BITE) capability reports the status of the unit down to the subsystem level on the HPAC, the T-9000D, and then to a remote site when configured. The system's intuitive modular design allows for ease of maintenance and upgrade throughout the equipment life cycle at minimal expense. These high-performing niche products are in daily service as integral components of critical strategic communications solutions for leading defense, peacekeeping, and aviation agencies around the world.



- High Efficiency Solid State Design
- Full Power into Load VSWR up to 2:1
- BITE to LRU
- Remote Control

PRODUCT SPECIFICATIONS

GENERAL	
Frequency Range	1.5 – 30 MHz
Frequency Stability	±1 x 10 ⁻⁸ Per Day
Power Output and VSWR Performance	* 10 kW PEP and Average ±1 dB for VSWR ≤ 2:1; Selectable in 1 dB Steps Down To 1 kW * Reduced Power for VSWR ≤ 3:1; Self-Protected from Open / Short Circuits * Custom: ±0.5 dB
Duty Cycle	Continuous
Tuning Steps	1 Hz Minimum
Transmit Activation Time	7 ms Maximum for 90% Output Power With Band Change Per MIL-STD-188-203-1A
Modes of Operation	AME, NB-FM, USB, LSB, ISB, CW; Data Modes Such As STANAGs 4285, 4259, 4481, 4539, and 4203, RATT, Link 11 / 22 and MIL-STD-188-110 A / B With External Modems
Key	Local or Remote
Remote Control	Remotely Controllable Through T-9000D; Designed For Unattended Continuous Operation
Post-Selector Operation	Automatic With F-9800; F-9800 Bypasses at 1.5 – 1.6 MHz
Output Impedance	50 Ω Nominal, Unbalanced
Output Connector	7/8 Inches EIA Flange (1 5/8 Inches With Adaptor)
Tuning Control	Initiated By T-9000D and Digitally Controlled; No Operator Intervention Required
Input Power	338 – 458 VAC 3 Phase, 50 / 60 Hz
Power Consumption	≤ 35 kVA
Metering	TFT Display on HPAC and T-9000D; Analog Metering On IPA-1500
BITE	Power Up, Surveillance, and Operator-Initiated; Fault Isolation to the IPA Level; Reporting and Resetting Through T-9000D and Remote Control
MTBF	10000 Hours (Estimated)
MTRR	60 Minutes
Dimensions	* 100.5 H x 42.0 W x 31.5 L (in) * 255.3 H x 106.7 W x 80.0 L (cm)
Weight	2367 lbs (1075.9 kg) Estimated, Unpacked
Construction	Modular Plug-In Assemblies, Field Serviceable
Origin	Designed and Manufactured in the U.S.A.

TRANSMITTER	
Harmonic Suppression	At Least 60 dB Below Carrier
Intermodulation Distortion	At Least 36 dB Below PEP
Carrier Suppression	Better Than 70 dB Below PEP
Undesired Sideband	Better Than 70 dB Below PEP
In Band Noise	Better Than 50 dB Below PEP
Audio Input Impedance	600 Ω Balanced
Audio Response	±1 dB from 300 – 3050 Hz
Audio	0 dB Nominal; Adjustable to ±20 dB

PERIPHERAL EQUIPMENT OPTIONS	
Spares Kits	Running Spares, Field Modules, Final Tested Sub-Units
AC Power Control	Remote ON/OFF

ENVIRONMENTAL	
Temperature	* Operating: -20°C to +45°C (-4°F to 113°F) * 45°C to 55°C (113°F to 131°F) @ Reduced Duty Cycle
Humidity	95% @ +55°C, Non-Condensing
Altitude	* Operating: Up to 10,000 Feet * Storage: Up to 40,000 Feet
Cooling	Forced Air; Fan-Cooled
Air Source and Volume	Clean Filtered Air
Exhaust Air	External Exhaust Recommended



3131 SW 42ND Street
Fort Lauderdale, FL 33312
Tel: 954-623-3131 / 400-5100
Fax: 954-583-7337
sunairelectronics.com

 **sunair**
www.sunairelectronics.com