

L3HARRIS FALCON III® **RF-7800V-V50X**

VHF Power Amplifier

The L3Harris RF-7800V-V50X Power Amplifier provides high-performance VHF power amplification for the L3Harris Falcon III RF-7800V-HH VHF Handheld Radio in vehicular and base station radio systems. This flexible solution enhances radio and link reliability with advanced features for uninterrupted communications.



This VHF power amplifier covers the 30 to 108 MHz frequency, supplying up to a full 50 watts of forward power under demanding Voltage Standing Wave Ratio conditions. It also delivers excellent collocation performance in both fixed frequency and frequency hopping modes.

An integrated handheld battery charger supports simultaneous radio operation and battery charging. The RF-7800V-V50X's "hot jerk-and-run" feature allows users to remove the radio from the amplifier without turning it off, ensuring uninterrupted communication. Heat sinking also provides an extended-use duty cycle.

The VHF power amplifier includes a VIC-3 interface for legacy intercom support and is fully interoperable with the L3Harris RF-7800I Tactical Networking Intercom System. Equipped with multiple ports, the RF-7800V-V50X can simultaneously run multiple industry-standard interfaces. This solution supports a software-only process for product upgrades.

The RF-7800V-V50X extends the network-centric capability and user-optimized features of the RF-7800V-HH, delivering a powerful tactical information tool for today's warfighter.



ADVANCED NARROWBAND WAVEFORM POWER AMPLIFICATION

KEY BENEFITS

- > Extended range and link reliability for advanced narrowband waveforms
- > Capable of running multiple interfaces simultaneously, with direct connection to peripheral devices
- > Built-in, high-performing collocation features
- > Future-proof architecture via software upgrades

GENERAL	
RT Nomenclature	RF-7800V-V50X
Frequency Range	30-108 MHz
Input Power	20-30 VDC MIL-STD-1275 compliant
RF Input/Output Impedence	50 Ohms, unbalanced
Collocation	15% frequency 1.5 M antenna separation
External Connections	Speaker power DC input power DC output power Intercom VHF RF port UHF RF port Data remote Remote Keypad Display Unit
Future Proof	Software-defined amplifier

TRANSMITTER	
Power Output	5 W, 20 W, 50 W (user selectable)
Harmonic Suppression	> 60 dBc typical
Spurious Suppression	> 50 dBc typical
Tx Power Consumption	Max 450 W

RECEIVER	
FM Sensitivity	-112 dBm @ 12 dB SINAD
IF Rejection	> 60 dB
Rx Power Consumption	Max 65 W

PHYSICAL	
Dimensions	10.7 H x 19.3 W x 14.0 D in (27.2 H x 7.6 W x 35.6 D cm) VAA only without shock tray
Weight	26 lbs (~11.8 kg) without shock tray 40 lbs (~18.1 kg) with shock tray
Color/Finish	Green (RF-7800V-V501) Black (RF-7800V-V502) Tan (RF-7800V-V503)

ENVIRONMENTAL	
Operating Temperature	-22°F to +140°F (-30°C to +60°C)
MIL-STD-810	Shock/vibration Humidity Sand/dust Altitude Solar radiation Thermal shock Salt fog Blowing dust/sand/rain Icing/freezing rain Immersion Fungus Explosive atmosphere

STANDARD KIT INCLUDES	
12050-3000-XX	Shock Mount/Interface Assembly
12107-0105-XX	Ancillary Kit
10515-0376-4200	System Install/Maintenance Manual

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