



modular rf

MODEL AR-50RC 25/50 WATTS CW 30 - 512 MHz, Multi-Band Automatic Band-Switching/LNA with Co-Site Filter

The Model AR-50RC is a portable, lightweight, fully automatic band-switching RF booster amplifier for multi-band VHF/UHF Tactical Radio equipment employing legacy, proprietary and emerging waveforms. The amplifier covers the frequency band of 30-512 MHz using six high speed auto switching filters to assure harmonic suppression and is SINCGARS, HAVEQUICK, and ECCM compatible. The amplifier includes power supply Voltage Spike Suppression, a DC/DC converter for wide DC input range, RF sensing, T/R switching, Automatic Level Control (ALC), six automatically switched harmonic filter bands (DAMA capable), and protection against antenna mismatch and over-temperature. Protection against accidental polarity reversal is provided. The amplifier comprises a rugged 2-piece aluminum case. Optional interface coaxial cables and shock mounting plate are available.

- Radio Vendor independent design, single and multi-band radio compatible with just an RF connection
- 25W CW across the entire 30 – 512 MHz band; no filter gap and 50W at SATCOM band.
- Full band high-speed filter switching for SINCGARS, HAVEQUICK and ECCM modes to assure interference free operation
- Remote Control Connector
- Separate LOS and SATCOM antenna ports
- Internal LNA with Co-site filtering
- **Same internal AR-50 JITC Certified amplifier board (AN/PSC-5D & AN/PRC-117G)**
- Three year Warranty from a company with 40+ years in the business



GENERAL SPECIFICATIONS

FREQUENCY RANGE	30 – 512 MHz
POWER OUTPUT	LOS: 25 Watts CW nominal; 25W PEP with 70% AM modulation; <10% distortion typical SATCOM (290 to 320 MHz): 50 Watts
INPUT POWER RANGE CW :	<5 Watts CW typical for 25W LOS and 50W SATCOM Output; Input Protection for up to 20W CW
INPUT POWER RANGE AM :	LOS: 1.5 Watts average (3 - 5W PEP) for 25W PEP output at 70% modulation SATCOM: 1.5 Watts average (3 - 5W PEP) for 50W PEP output at 70% modulation
RF KEYING SENSITIVITY	<1 Watt typical
T/R & FILTER SWITCHOVER TIME	SINCGARS, HAVEQUICK, HPW, IW, ANW2 and DAMA capable
INSERTION LOSS BYPASS MODE	1.0 dB typical
INSERTION LOSS ACTIVE RX	1.5 dB nominal
MODULATION	AM, FM, or PM, and Tactical communications waveforms
DUTY CYCLE	Tactical operations
INPUT/OUTPUT IMPEDANCE	50 Ohm nominal
INPUT VSWR	1.5:1 nominal
HARMONICS	Better than -60 dBc typical. FULL high speed filter switching avoids interference in SINCGARS, HAVEQUICK, and ECCM Modes – No filter gaps
SPURIOUS OUTPUTS	Better than -70 dBc
Rx LNA GAIN	12 dB typical
Rx LNA NOISE FIGURE	2 dB typical
Rx CO-SITE FILTER	Band pass frequency 239 – 273 MHz, Out of band rejection 35 dB typical
POWER REQUIREMENT	12 - 35.5 VDC filtered and transient protected for 12 or 24 volt vehicle systems or dual XX90 batteries
CURRENT@50W OUTPUT	<7.5 Amps @ 24V typical

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