



PRELIMINARY MODEL AR-50
"KMJ1035"
50 WATTS
30 MHz - 512 MHz, Multi-Band
Automatic Band-Switching

The Model AR-50 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 SINGARS, HAVEQUICK, and ECCM compatible. The amplifier includes Voltage Spike Suppression, 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 splash-proof aluminum case. Optional interface coaxial cables are available.

- Radio Vendor independent design, single and multi-band radio compatible with just an RF connection
- 50W across the entire 30 – 512MHz band
- Super low "sleep mode" standby RX power drain
- Fast Pin Diode T/R Switching
- High speed filter switching in SINGARS, HAVEQUICK and ECCM modes to assure compatible interference free operation
- DAMA capable
- Separate LOS and SATCOM ports
- 3 position LOS/SATCOM switch
- 4 position power switch
- Internal LNA, Co-site filtering
- Three year Warranty from a company with 30+ years in the business



GENERAL SPECIFICATIONS

FREQUENCY RANGE	30 MHz – 512 MHz
POWER OUTPUT	50 Watts nominal
INPUT POWER	< 5 Watts typical for 50 Watts Output; 20 Watts max
RF KEYING SENSITIVITY	<2 Watt CW typical
T/R & FILTER SWITCHOVER TIME	SINGARS, HAVEQUICK Compatible, HPW and DAMA capable
INSERTION LOSS BYPASS MODE	1.5 dB or better
MODULATION	AM, FM, or PM
DUTY CYCLE	Tactical operations
INPUT/OUTPUT IMPEDANCE	50 Ohm nominal
INPUT VSWR	1.5:1 maximum
HARMONICS	Better than -60 dBc typical. FULL filter switching avoids interference in SINGARS, HAVEQUICK, and ECCM Modes
SPURIOUS OUTPUTS	Better than – 70 dBc
POWER REQUIREMENT	18 -32 VDC filtered and transient protected
CURRENT	7.5 Amps @ 24V typical



modular rf

ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	-30 to +60 °C
ALTITUDE (operating)	10,000 ft
IMMERSION (water)	Splash proof
VIBRATION / SHOCK / HUMIDITY	Per Mil Std 810E

MECHANICAL SPECIFICATIONS

SIZE (HxWxD)	~2.20" x 5.20" x 7.75"
WEIGHT	~4.0 lb
COOLING	Natural convection required
RF CONNECTORS	N type, TNC, and BNC
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integral heatsink



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