



MODEL: AR-75

75 Watts

30 MHz - 512 MHz, Multi-Band

Automatic Band-Switching/LNA with Co-Site Filter

The AR-75 is the second generation 75W portable, fully automatic band-switching RF booster amplifier for multi-band VHF/UHF Tactical Radio equipment employing legacy, proprietary and emerging waveforms. The redesigned unit incorporates a slimmer, lighter, and lower-profile design than the predecessor. The amplifier covers the frequency band of 30-512 MHz using six high speed auto switching filters to assure harmonic suppression and is SINGGARS, HAVEQUICK, HPW, DAMA, IW, WNW, SRW and ANW2 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.

- Radio Vendor independent design, single and multi-band radio compatible with just an RF connection
- 75W CW across the entire 30 – 512MHz band; no filter gap
- Full band high-speed filter switching for SINGGARS and HAVEQUICK fast hopping modes to assure interference free operation
- DAMA capable
- Separate LOS and SATCOM antenna ports
- Multi-level RF output power switch
- LOS/SATCOM LNA ON/OFF SELECTION
- Internal LNA with Co-site filtering
- Three year Warranty from a company with 40+ years in the business



GENERAL SPECIFICATIONS

FREQUENCY RANGE	30 MHz – 512 MHz
POWER OUTPUT	75 Watts CW nominal; 75 W PEP with 70% AM modulation; <10% distortion typical
INPUT POWER RANGE CW : 1-20W	5-8 Watts CW typical for nominal 75 Watts Output; Input Protection for up to 20W CW
INPUT POWER RANGE AM :	2 Watt average (5-7 W PEP) for 70W PEP output at 70% modulation
RF KEYING SENSITIVITY	1 Watt typical
T/R & FILTER SWITCHOVER TIME	SINGGARS, HAVEQUICK, HPW, DAMA, IW, WNW, SRW, and ANW2 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 SINGGARS and HAVEQUICK – No filter gaps
SPURIOUS OUTPUTS	Better than -70 dBc typical
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 45 dB typical
POWER REQUIREMENT	18 - 35.5 VDC filtered and transient protected for 24 volt vehicle systems batteries MIL-STD 1275 and 461 compliant DC-DC internal power supply
CURRENT	< 9.5 Amps @ 24V typical



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ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	-30 to +60 °C Ambient
ALTITUDE (operating)	15,000 ft
IMMERSION (water)	IP67
VIBRATION / SHOCK / HUMIDITY / ENVIRO	Designed to meet applicable sections of Mil Std 810F/Designed for ground/base vehicle use

MECHANICAL SPECIFICATIONS

SIZE (HxWxD)	3.00" x 6.00" x 11.17"
WEIGHT	10.5 lbs
COOLING	Natural convection required
RF CONNECTORS	RF Input(Radio) – BNC female* RF Output(LOS) – TNC Female* RF Output(SATCOM) – N-Type* <i>*RF connectors may be ordered in any configuration of BNC, TNC or N-type per customer's request</i>
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integral heatsink



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DOC-00000267 REV A - 2020-05-04

Previously 7-98-950-003

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