

AR-20H

20 Watts PEP, 30-512 MHz, Tx/Rx Booster Amplifier with Remote Keyline
RF Amplifiers



The Model AR-20H is a portable, lightweight, fully automatic band-switching RF booster amplifier for multiband VHF/UHF Tactical Radio equipment employing legacy, proprietary and emerging waveforms. The AR-20H produces 20 Watts from a nominal 2 Watts CW/PEP radio input and covers the frequency band of 30-512 MHz. The unit has a DC voltage range of 18 to 36 VDC vehicle power. The unit is designed for use with the latest modern networking formats including ANW2C and SRW. The AR-20H also includes voltage spike suppression, over temperature protection, RF sensing T/R switching, harmonic filters, lightning protection, and protection against antenna mismatch. The AR-20H has a typical 4 dB Noise figure and approximately 6 dB gain Low Noise Amplifier in the receive path. The AR-20H was tested to meet specific portions of MIL-STD-461F, MIL-STD-464C, MIL-STD-704F MIL-STD-810G and RTCA/DO-160G. The amplifier is comprised of rugged 4-piece aluminium case.

Specifications

Frequency Range	30-512 MHz
Power Output PEP	20 W, + 2 dB/- 1 dB typical. CW or PEP AM Modulation; 1 kHz DOM 90%, < 14% distortion (< 10% distortion typical)
Input Power Range	1.5-3 W CW or PEP for full power output. Up to 8 W without damage
RF Keying Sensitivity	< 0.2 W typical
T/R Switchover Time	< 25 μ S typical
Noise Figure	4 dB typical
LNA Gain	6 dB typical
Modulation	Amplifies all legacy and modern complex tactical communications waveforms
Input/Output Impedance	50 Ω nominal
Input VSWR	1.5:1 nominal
Harmonics	Better than - 60 dBc typical
Spurious Outputs	Better than - 70 dBc typical
Power Requirement	18 to 36 VDC
Current	< 3.75 A Amps @ 24 V typical
Remote Keyline	Open Drain for RX, 6-Pin Keyline Connector

Environmental Specifications

Operating Temperature	- 40°C to + 55°C Ambient
Altitude (Operating)	20,000 ft
Certifications	MIL-STD-461F: CE101, CE102, RE102; MIL-STD-464C; MIL-STD-704F; MIL-STD-810G; and RTCA/DO-160G

Mechanical Specifications

Size (HxWxD)	4.72 x 9.52 x 22.30 cm (including connectors)
Weight	1.18 kg
Cooling	Natural convection required
RF Connectors	RF Input (Radio) – TNC RF Output (Antenna) – N-Type
DC Connector	Multi-pin connector (Mating Connector Supplied)
Construction	Aluminium housing with integral heatsink
Optional Equipment	
MPK20H	Mounting Plate Kit
801-007-16NF6-6SA	Keyline Mating Connector

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All specifications are subject to change without notice
The information contained herein is for reference only and does not constitute a warranty of performance

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