



# MODEL AR-20H w/ Remote Keyline 20 WATTS CW/PEP 30-512 MHz

The Model AR-20H 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 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 4dB Noise figure and approximately 6dB 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 aluminum case.

### GENERAL SPECIFICATIONS

FREQUENCY RANGE	30-512 MHz
POWER OUTPUT PEP	20W, +2dB/-1dB typical. CW or PEP AM Modulation; 1 kHz DOM 90%, <14% distortion (<10% distortion typical)
INPUT POWER RANGE	1.5-3W CW or PEP for full power output. Up to 8W without damage
RF KEYING SENSITIVITY	<0.2W typical
T/R SWITCHOVER TIME	<25 μS 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 Ohm 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	<3.75A Amps @ 24V typical
REMOTE KEYLINE	Open Drain for RX, 6-Pin Keyline Connector

### ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	-40 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)	1.86 x 3.75 x 8.78 inches (including connectors)
WEIGHT	2.6 lbs
COOLING	Natural convection required
RF CONNECTORS	RF Input(Radio) – TNC RF Output(Antenna) – N-Type
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integrated heatsink

### OPTIONAL EQUIPMENT – ACCESSORIES

ARM Model Name	Description
MP-AR-20H-01	Mounting plate – length mount
MP-AR-20H-02	Mounting plate – width mount

Speak with your AR Modular RF Sales Representative for additional accessories including power pig tails and other items.