



**MODEL AR-20R
Rifleman™ Amplifier
20 WATTS PEP
UHF and L-band**

The Model AR-20R is a portable, RF booster amplifier, Tactical Radio equipment employing legacy, proprietary and emerging waveforms. The amplifiers cover the frequency band of 225-450 MHz, 1250-1390 MHz, and 1750-1850 MHz with high speed auto switching T/R detection circuits and low pass output filters to assure good harmonic suppression. The unit is designed for use with modern networking formats like ANW2, WNW and SRW. The amplifiers is designed for operating at 12 to 35 VDC, RF sensing, T/R switching, Automatic Level Control (ALC), protection against antenna mismatch and over-temperature. Protection against accidental polarity reversal is provided. The AR-20R also has an internal LNA that can be switched on or off by the front panel switch. The amplifiers are comprised of rugged 2-piece aluminum case. Optional interface coaxial cables and DC battery cables are available.

GENERAL SPECIFICATIONS

FREQUENCY RANGE	225-450 MHz, 1250-1390 MHz, and 1750-1850 MHz
POWER OUTPUT PEP	20 Watts PEP
INPUT POWER RANGE PEP	2-3 W PEP
RF KEYING SENSITIVITY	<1 Watt PEP typical
T/R SWITCHOVER TIME	<10 μS
LNA NOISE FIGURE	<4 dB nominal
LNA GAIN	6 dB nominal
MODULATION	Modern complex tactical communications waveforms like ANW2, WNW, and SRW
DUTY CYCLE	Tactical operations 100% for networking modulations
INPUT/OUTPUT IMPEDANCE	50 Ohm nominal
INPUT VSWR	1.5:1 nominal
HARMONICS	Better than -60 dBc typical
SPURIOUS OUTPUTS	Better than -70 dBc
POWER REQUIREMENT	12 to 35 VDC/dual 5390 batteries/single 2590 battery
CURRENT	4A Amps @ 28V typical

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)	1.5 x 4 x 6 inches
WEIGHT	2 lb 9 oz
COOLING	Natural convection required
RF CONNECTORS	RF Input(Radio) – TNC or N-type female* RF Output(antenna) – TNC or N-type female* <i>*RF connectors may be ordered in any configuration of TNC or N-type per customer's request</i>
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integral heatsink

modular rf



DOC # 7-98-964-001 Rev B
14 May 2015