



MODEL KMW1031
20 WATTS CW
20 WATTS PEP
30 MHz - 512 MHz, Multi-Band
Automatic Band-Switching
NSN 5996015813519

The improved Model KMW1031 is a portable, lightweight, waterproof, 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 SINCGARS, HAVE QUICK, 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. The unit may be powered from a single XX90 or similar batteries; or 12 and 24 VDC vehicle power. Protection against accidental polarity reversal is also provided. Low current on standby due to "sleep mode" greatly extends battery life in field use. The amplifier comprises a rugged submersible 2-piece aluminum case. Optional Broadband Antenna, cables and tactical vest pouch are available.

- Radio Vendor independent design. Single and multi-band radio compatible with just an RF connection
- 20 W CW across the entire 30–512 MHz band
- Low RF input power for full 20 W CW output
- Super low "sleep mode" standby RX power drain
- **Single battery operation:** A single 5590 battery will provide approximately 17 hrs of operation with a 15% duty cycle and approximately 25 hrs of operation for the newer 5390 battery
- High speed filter switching in SINCGARS, HAVE QUICK, and ECCM modes to assure interference free operation
- DAMA capable
- Battery and Vehicle power compatible, 12 and 24 volt systems. Filtered and DC transient protected
- Waterproof (Submersible)
- 3 year Warranty from a company with 35+ years in the business



GENERAL SPECIFICATIONS

FREQUENCY RANGE	30 MHz – 512 MHz
POWER OUTPUT	20 Watts CW P1dB nominal, 20W PEP with 80% AM modulation, less than 10% distortion
INPUT POWER RANGE CW :1-5 WATTS	<2 Watts typical for 20 Watts CW Output; Input protection provided for up to 10 Watts max
INPUT POWER RANGE AM :1-3 WATTS PEP	1W PEP typical for 20W PEP Output; Input protection provided for up to 10 Watts max
RF KEYING SENSITIVITY	<1 Watt CW typical
T/R & FILTER SWITCHOVER TIME	SINCGARS, HAVE QUICK, HPW, and DAMA compatible
INSERTION LOSS BYPASS MODE	1.0 dB or better
INSERTION LOSS ACTIVE RX MODE	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	-60 dBc typical FULL high speed filter switching avoids interference in SINCGARS, HAVE QUICK, and ECCM hopping Modes
SPURIOUS OUTPUTS	Better than -70 dBc
POWER REQUIREMENT	12 - 33 VDC, from Battery or 12 and 24 VDC vehicle systems, filtered and transient protected
CURRENT	3.15 Amps nominal

modular rf

ENVIRONMENTAL SPECIFICATIONS

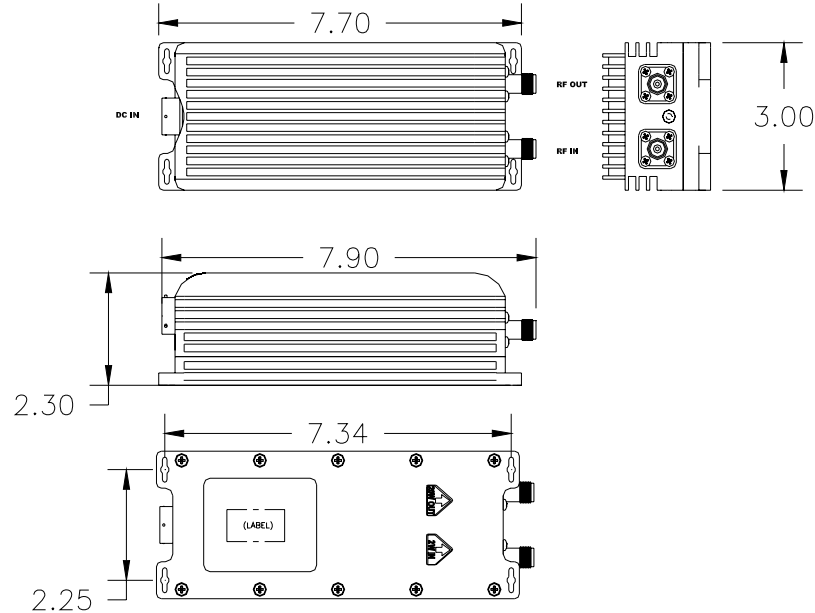
OPERATING TEMPERATURE	-30 to +60 °C
ALTITUDE (operating)	15,000 ft
IMMERSION (water)	66 ft for 20 min
VIBRATION / SHOCK / HUMIDITY/ENVIRO	Designed to meet applicable sections of Mil Std 810F/Hand portable

MECHANICAL SPECIFICATIONS

SIZE (HxWxD)	2.30" x 3.00" x 7.70"
WEIGHT	2 lb
COOLING	Natural convection required
RF CONNECTORS	TNC female
DC CONNECTOR	Multi-pin connector (Mating Connector Supplied)
CONSTRUCTION	Aluminum housing with integral heatsink

OPTIONAL EQUIPMENT

BC1031	Battery Cable (22" cable connecting KMW1031 to one XX90 or similar batteries)
BC1030	Battery Cable (22" cable connecting KMW1031 Series to two XX90 or similar batteries)
VC1030	Vehicle Power Cable (120" cable with NATO slave plug for vehicle use)
RC1031	Radio Cable (36" TNC Male to TNC Male)
AC1031	Antenna Cable (36" TNC Male to TNC Female)
TVP1031	Tactical Vest Pouch (Attaches to any MOLLIE/PALS style gear for holding the KMW1031)
ANT1031	Blade Antenna 30-512MHz (TNC Male)
KT1031	Tactical Booster Amplifier Kit includes: BC1031, TVP1031, ANT1031, RC1031, and AC1031



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