

November 2008

Military

Booster Amplifiers, Modules & Amplifier Systems

The Leading Supplier of
Booster Amplifiers for
Tactical Military Radios

30 – 512 MHz
20 – 200 Watts

JITC Certified

Booster Amplifiers for Tactical Military Radios: Battle-Tested with the U.S. Army, Navy, Marines, Coast Guard, and FEMA.

AR Modular RF is the leading supplier of military amplifiers, amplifier systems and accessories. For a lot of good reasons.

Our amplifiers and embedded modules do the job. They cover the broadest frequency (30 - 512 MHz and HF, VHF, and UHF bands) and wave forms. We build them to withstand the toughest conditions. Extreme heat and cold. Shocks and vibration. They keep working through it all. They're waterproof, compact, lightweight and, easy to operate. Man-pack and vehicle-mount systems are available.

Auto-frequency sensing and switching are standard with some models; they work with virtually every tactical radio device worldwide.

We build these booster amps as if lives depend on them - because they do.

Our amplifiers exceed MIL STD 810F

Our families of booster amplifiers have passed the toughest tests and the most extreme battle conditions, because we build them to exceptionally high standards. Each amplifier incorporates RF sensing circuits to switch from Receive to Transmit. They all include Automatic Level Control, low pass harmonic or band pass filters, and protection against antenna mismatch (VSWR) and overheating.

Modules and Amplifier Systems for Electronic Warfare, ECM/ECCM - 12 to 3,000 Watts.

We have modules and systems with all the features you need to gain the upper hand in EW, ECM, and ECCM. They're suited for CW, pulse, over-the-horizon, foliage penetration, IFF, Doppler, and Phased Array radar applications.

RF jammer amplifiers are also available (10 - 2,700 MHz) for both portable and vehicle-mounted systems. And we have the power you need -- from a few watts to a few hundred watts!

Don't See Exactly What You Need?

We'll Customize to Your Specs.

AR Modular RF is uniquely capable of creating customized variations of our products to meet your specifications. We'll work with you to create a solution that's right for your needs.

We Back them Better Because We Build them Better.

Only AR delivers innovative technology, advanced design, quality build & workmanship, mismatch capability, durability, less cost watt for watt, and a worldwide support network that is here for you today and tomorrow. Everything we sell is backed by the best comprehensive warranty in the industry.

GSA Contract Available.

AR Modular RF has an approved GSA contract (#GS-07F-0371U), making it easier for government entities to purchase our products.



AR Modular RF Booster Amplifiers



Features	KMW1030M6	KMW1031	KMW1040	KMW1040HP	KMW2030	KMW2030 ABS	KMW2050
Frequency Range	30 - 512 MHz	30 - 512 MHz	30 - 512 MHz	30 - 512 MHz	30 - 512 MHz	30 - 512 MHz	225-400 MHz
Power Output	20 Watts	20 Watts	50 Watts	75 Watts	125 Watts	125 Watts	200 Watts
Input Power	2 Watts typical, 10 Watts max	<2 Watts typical, 10 Watts max	2- 20 Watts max	2- 20 Watts max	2- 20 Watts	2- 20 Watts	1.5-25 Watts
RF Key Sensitivity	1 Watt CW typical	<1 Watt CW typical	<1 Watt typical	<1 Watt typical	<1 Watt for Receive-Transmit switchover	<1 Watt for Receive-Transmit switchover	<1.5 Watts switches from Receive to Transmit
T/R Switchover Time	<250 ms <50ms typical @ 5W input	SINGGARS, HAVEQUICK and DAMA Compatible	SINGGARS, HAVEQUICK and DAMA Compatible	SINGGARS, HAVEQUICK and DAMA Compatible	DAMA Compatible	DAMA Compatible	SATCOM DAMA
SATCOM LNA					Yes	Yes	Yes
Insertion Loss	1.0 dB max	<1.5 dB	1.5 dB typical	1.5 dB typical	<2 dB	<2 dB	≤0.7 dB; Bypass mode
Modulation	AM, FM or PM	AM/FM/PM, HAVEQUICK, SINGGARS and other JTRS waveforms	AM/FM/PM, HAVEQUICK, SINGGARS and other JTRS waveforms	AM/FM/PM, HAVEQUICK, SINGGARS and other JTRS waveforms	AM, FM or PM	AM, FM or PM	AM, FM or PM
Duty Cycle	Tactical operations	Tactical operations	Tactical operations	Tactical operations	Tactical operations	Tactical operations	Tactical operations
Input/Output Impedance	50 Ohm nominal	50 Ohm nominal	50 Ohm nominal	50 Ohm nominal	50 Ohm nominal	50 Ohm nominal	50 Ohm nominal
Input VSWR	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Harmonics	-60 dBc typical	-60 dBc typical	-60 dBc typical	-60 dBc typical	-65 dBc typical	-65 dBc typical	225-290 MHz -42dBc 290-400 MHz -53dBc
Spurious Outputs	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc	-70 dBc
Power Requirements	24 VDC @ 6A - transmit, zero current on standby 24V Vehicle Power Compatible	12-32 VDC from battery or 12 and 24v DC vehicle systems, filtered and transient protected. Single battery capability	11-36 VDC @ 26-6 Amps max	11-36 VDC @ 26-6 Amps max	826 Watts @ 24 VDC	826 Watts @ 24 VDC	28 VDC @ 25 A nominal
Input Voltage Range	19 - 32 VDC	11-32 VDC	11-36 VDC	11-36 VDC	19-32 VDC	19-32 VDC	28 VDC
Operating Temperature	- 30 to +60 °C	- 30 to +60 °C	- 30 to +80 °C (case temp)	- 30 to +80 °C (case temp)	-20 to + 50 °C	-20 to + 50 °C	-20 to + 50 °C
Altitude (Operating)	10,000 m	10,000 m	10,000 m	10,000 m	Methods 500.4 15,000 ft	Methods 500.4 15,000 ft	200 Watt to 6000 ft 150 Watt to 10,000 feet
Immersion (water)	66 ft for 20 minutes	66 ft for 20 minutes	Waterproof	Waterproof	Weatherproof	Weatherproof	Weatherproof
Vibration/Shock/Humidity	Per MIL STD 810E	Per MIL STD 810E	Per MIL STD 810E	Per MIL STD 810E	Per MIL STD 810E	Per MIL STD 810E	Per MIL STD 810E
Size (WxHxD)	3" x 2.45" x 7.7"	3" x 2.3" x 7.7"	11.7"x 6.5"x 4"	11.7"x 6.5"x 4"	5"x 7"x 13.5"	5"x 7"x 13.5"	4.5"x 8.25"x 15.5"
Weight	2 lb 5 oz	2 lb	11 lb 5 oz	11 lb 5 oz	17 lb	17 lb	12 lb
Cooling	Natural convection required	Natural convection required	Natural convection required	Natural convection required	Built-in fan	Built-in fan	Built-in fan
RF Connectors	TNC Female	TNC Female	TNC Female	TNC Female	N Female	N Female	N Female
Construction	Aluminum housing with integral heatsink	Aluminum housing with integral heatsink	Aluminum housing with integral heatsink	Aluminum housing with integral heatsink	Aluminum housing with integral heatsink	Aluminum housing with integral heatsink	Aluminum housing with internal heatsink
JTC Certified					Yes		Yes

Cable assemblies, power cables, shock-mount kits and other accessories are available for booster amplifiers.

AR Competitive Edge.

At AR, there's no substitute for quality. It's the foundation of our business and the AR value that's recognized around the globe. It's one of the key reasons AR has become the worldwide leader in EMC, Wireless and beyond.

AR products do more, last longer, work harder and make your job easier. And that gives you a fierce competitive edge. Only AR delivers innovative technology, advanced design, quality build & workmanship, mismatch capability, durability & longevity, less cost watt for watt, and a worldwide support network that's here for you today and tomorrow.

With the combined resources of all the AR companies, we simply have more of the best people making the best products to overcome your toughest challenges.

AR Modular RF

- RF Amplifiers and Modules
- Broadband and Sub-band Solid State RF Amplifiers
- Booster Amplifiers for Tactical Military Radios

AR RF/Microwave Instrumentation

- RF Amplifiers 1 to 10,000 Watts, dc to 1 GHz
- Microwave Amplifiers 1 to 16,000 Watts, 0.8 to 45 GHz
- Antennas 1 to 15,000 Watts, 10 kHz to 50 GHz
- Transient Generators
- Pre-Compliance Test Systems
- Accessories and Software

AR Receiver Systems

- EMI Receivers
- Impulse Generators and Measurement Systems
- Leak Detectors

AR Receiver Systems products can be purchased through AR RF/Microwave Instrumentation

AR Europe

- Offering a complete line of RF Products and testing solutions for the European Market

Want to know more about AR? Need help with any RF solutions or testing procedures?

Here's how to reach AR and get all the help you need:

www.ar-worldwide.com

For RF Amplifier modules, contact:

AR Modular RF

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Tel 425-485-9000 • Fax 425-486-9657

AR RF/Microwave Instrumentation

160 School House Road,
Souderton, PA 18964-9990 USA
Tel 215-723-8181

For receiver systems, contact:

AR Receiver Systems

Tel 800-933-8181

AR Global Promise

AR Modular RF warrants each product to be free from defects in material and workmanship for a period of thirty-six (36) months from invoice date. AR Modular RF will repair the product at no charge for parts and labor should failure prove to have been caused by a factory defect as disclosed by our examination. Please see your equipment manual for the full statement of warranty conditions and limitations of liability.

