

20-Watt 30-512 MHz Amplifier

MBA-21R+



Application

This unit provides an ideal solution for the soldier on the move. The unit is radio agnostic, and compatible with virtually any 30-512 MHz radio currently in use by domestic and international militaries and government agencies. MBA-21R+ is DAMA ready, and was designed for the demands of today and the future.

One Source, Many Solutions

Ultralife Communications Systems comprises three brands: AMTI, McDowell Research and RedBlack Communications. By harnessing the collective design and engineering expertise of these operating units, we can provide a single source to support the warfighter and homeland security.

From the individual soldier to command and control, from manpack kits to system and vehicle integration, Ultralife has the solution.

Features

- **Combat proven**
- **Supports DAMA and JTRS waveforms**
- **Full-rated power across the 30-512 MHz range**
- **Radio manufacturer independent**
- **Supports HAVEQUICK and SINCGARS**
- **Sealed and weather-resistant**
- **Remote power ON capability**
- **Developed for the United Kingdom MOD**

Overview

This amplifier features AMTI A-320 technology inside the chassis. Specifically, it provides all the advantages of the A-320 along with built-in Low Noise Amplification (LNA) for UHF SATCOM operation. The MBA-21R+ accepts DC input voltages from 9-36 VDC and can be powered from a vehicle cigarette lighter.

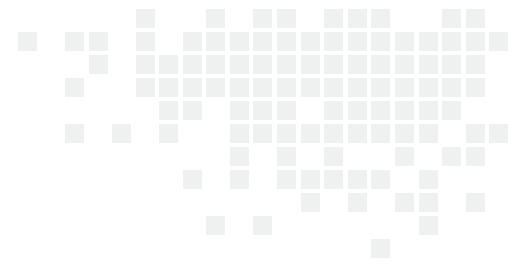
Like the A-320, the MBA-21R+ is very power efficient. Unlike other amps that require two batteries to achieve 20-watt power, the MBA-21R+ operates from a single 5590 battery with a supply voltage of 22-36 VDC. When powered by a 5390 battery, operational life can be extended to 24 hours (based on a 15% transmit duty cycle).



TNC RF connectors

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MBA-21R+ Technical Specifications

| | |
|----------------------------------|---|
| Size (H x W x D - inches) | 2.5 x 8.1 x 3.3 |
| Weight | 2.5 lbs. |
| Frequency Range | 30-512 MHz full-spectrum |
| Input/Output Impedance | 50 ohm |
| RF Input | 5 watts (nominal) |
| RF Output (FM) | 20 watts |
| RF Output (AM) | 20 watts PEP/110-512 MHz |
| RX Path Insertion Loss | < 1.5 dB |
| RX Path VSWR | < 2:1 |
| Bypass Path Insertion Loss | < 1 dB |
| Power | 9-36 VDC (22-36 single battery operation) |
| Power @ Transmit | ~65 watts |
| Power @ Receive | < 3.0 watts |
| SINGGARS/HAVEQUICK | compatible |
| RF Conector RAD/ANT | TNC/TNC female |
| Operating Temperature | -40° to +60° C |
| Weather Resistant | MIL-STD 810F submersible 1M for 30 mins. |
| EMI | MIL-STD 461E |
| Finish | Black, anodized |
| Low Noise Amplifier (LNA) | |
| Frequency | 240-270 MHz |
| Gain | 10 dB |
| Noise Figure | <3 dB |
| 1 dB Compression | 22 dBm |
| Out of Band Rejection | 50 dB - 30-220 MHz & 290-512 MHz |