The TCR-MBA-50 WB (EXT) is a State of the Art software defined RF Amplifier designed to extend the range of modern Handheld and Manpack Transceivers. The Amplifier supports emerging Wideband Networking Waveforms including SRW and ANW2, as well as legacy Narrowband Waveforms such as IW, DAMA, SINCGARS and HAVEQUICK. Additionally, the Amplifier integrates seamlessly into systems using new Special Communications Modes in both LOS and SATCOM.

The TCR-MBA-50 WB (EXT) allows for flexible Communications installations and can be powered from a single BA-5590 battery as well as 12 and 24 Volt vehicle power.

A simple three button user interface controls the mode, antenna selection, and output power with a dimmable front panel display showing operating mode and Amplifier status.

FEATURES

- 3 Dedicated Antenna Ports – Wideband Networking, SATCOM, and Line-of-Sight
- Wideband Networking and Narrowband Operation
- ANW2, SRW, DAMA, IW, HAVEQUICK, SINCGARS and Special Communications Modes
- Compatible with AN/PRC-152A, AN/PRC-117G, AN/PRC-117F, AN/PSC-5, AN/PRC-148 or any Transceiver operating in the 30-512 MHz frequency band
- Rugged, Compact and Efficient - 2.5” H x 3.5” W x 8.15” D including connectors!
- Dedicated Single BA-5590 Mode
- Natural Convection Cooling. Extended Heat Sink for high duty cycle applications
- Full Function RS-232 or USB Remote Control
- Flexible mounting configurations to include drop in replacement for the TCR-MBA-25
## WB PERFORMANCE

**Frequency range**
- 225-450 MHz

**RF power input**
- 5 Watts (1-10 Watts typical)

**RF power output**
- BA-5590 (12.7 VDC 4.75 A max): 20 Watts Peak
- BB-2590 (15 VDC 4.75 A max): 20 Watts Peak
- Commercial Vehicle (13.5 VDC 5.5 A max): 20 Watts Peak

## SATCOM PERFORMANCE

**Frequency range**
- 292-318 MHz

**Switching speed**
- JITC DAMA, IW, aSCM compatible

**RF power input**
- 5 Watts (1-10 Watts typical)

**RF power output**
- BA-5590 (12.7 VDC 4.75 A max): 10, 15, 20 Watts
- BB-2590 (15 VDC 4.75 A max): 10, 15, 25 Watts
- Commercial Vehicle (13.5 VDC 5.5 A max): 10, 15, 25 Watts
- Military Vehicle (28 VDC 6.8 A max): 10, 15, 25, 35, 50 Watts

## LOS PERFORMANCE

**Frequency range**
- 30-512 MHz with Automatic Frequency Detection

**Modulation**
- AM, FM or PSK, AM/FM Frequency Hopping, i/aSCM compatible

**RF power input**
- 5 Watts Avg/Peak (1-10 Watts typical)

**RF power output**
- BA-5590 (12.7 VDC 4.75 A max): 20 Watts
- BB-2590 (15 VDC 4.75 A max): 25 Watts
- Commercial Vehicle (13.5 VDC 5.5 A max): 25 Watts
- Military Vehicle (28 VDC 6.8 A max): 25, 50 Watts

## GENERAL SPECIFICATIONS

- **Radio Connector**: BNC female
- **LOS Antenna Connector**: BNC female
- **SAT Antenna Connector**: BNC female
- **WB Antenna Connector**: BNC female
- **DC Connector**: MS3112E10-6P
- **Auxiliary Connector**: Optional RS-232 Cable (PN 77500-00390)
  - Optional USB Cable (PN 77500-00391)
- **High Temperature**: High temperature indication & fold back
- **DC Off**: Routes radio connector to LOS antenna connector
- **Operating Temperature**: -30 C to +60
- **Cooling**: Natural convection
- **External Finish**: Black anodize, optional desert tan or olive drab CARC
- **Dimensions**: 2.5” H x 3.5” W x 8.15” D (including connectors)
- **Weight**: 4.2 Lbs

---

**TRANSMIT SPECIFICATIONS**

**WB Mode**
- **Frequency range**: 225-450 MHz with co-site filtering
- **Insertion loss**: <3.5 dB

**SATCOM Mode**
- **Frequency range**: 242-268 MHz with co-site filtering
- **Noise figure**: 3.75 dB Typical
- **Receive Gain**: 10 dB Typical, or LNA bypass mode

**LOS Mode**
- **Frequency range**: 30-512 MHz
- **Insertion loss**: < 3.5 dB
- **VSWR**: 2.5:1 Max