**TSE-AMP-MB50**  
Multi-band 50 Watt Amplifier

- 18-50 Watts Transmit Power
- DAMA, HaveQuick & SINCGARS compatible
- SATCOM & LOS antenna connections
- Automatic Frequency Selection in SATCOM and LOS modes
- Rugged, Small & Lightweight

The TSE-AMP-MB50 (MB50) provides transmit and receive amplification across the entire 30 to 512 megahertz band. It is compatible with all military radios including the PSC-5, SINCGARS Radio, PRC-148, PRC-152, URC-200, PRC-117F and PRC-117G, or any multi-band radio capable of 30-512 MHz.

The MB50 is a rugged, lightweight, small form factor amplifier suitable for manpack, vehicle, airborne or fixed station applications, and can be operated on 12-28 Vdc, or a single BA-5590 battery.

The MB50 has automatic frequency selection in SATCOM and LOS modes, with dual antenna connections. It is compatible with DAMA, HaveQuick & SINCGARS waveforms and has advanced filtering to minimise SATCOM co-site interference.

**Included Accessories**

- BA5590 power cable
- Flying lead cable
- Cigarette cable
- Antenna Cable
### Specifications

#### Transmit LOS Mode
- **Frequency Range**: 30-512 MHz with automatic frequency detection
- **Modulation Format**: AM / FM / MPSK 5 or 25 KHz bandwidth, SINCGARS FH
- **RF Power Input**: 2-5 watts
- **Max RF Power Input**: 10 watts
- **RF Power Output**: 5590 - 18 watts* / car cord - 24 watts* / 24-30 Vdc - 50 watts*
- **Harmonics**: -60 dBc
- **Transmit Duty Cycle**: 4:1 RCV to Tx

#### Transmit SATCOM Mode
- **Frequency Range**: 292-318 MHz
- **Modulation Format**: FM / Multi-phase 5 or 25 KHz bandwidth
- **Co-site suppression**: 30 dB
- **Switching Speed**: DAMA compliant
- **RF Power Input**: 2-5 watts
- **Max RF Power Input**: 10 watts
- **RF Power Output**: 5590 - 18 watts* / car cord - 24 watts* / 24-30 Vdc - 50 watts*
- **Harmonics**: -60 dBc
- **Transmit Duty Cycle**: 4:1 RCV to Tx

*Note: RF output figures are average across the 30-512 MHz frequency spectrum. Power output may exceed 50 watts or drop below 18 watts, depending on the frequency and DC input power.*

#### Receive LOS Mode
- **Frequency Range**: 30-512 MHz
- **Insertion Loss**: 1.5 dB

#### Receive SATCOM Mode
- **Frequency Range**: 242-268 MHz
- **Noise Figure**: 3.5 dB
- **Receive Gain**: 10 dB

#### General
- **Operator Controls**: SATCOM / LOS mode switch / Hopping, L/M/H power
- **Power Source**: 12-28 Vdc
- **Power Consumption Tx**: 4.3 A max - BA5590 / 5.1 A max - cigarette cable / 5.7 A max - 28Vdc Cable
- **Power Consumption RCV**: SAT 175 mA, LOS 100 mA
- **Radio Connector**: Nested BNC female (same configuration as found on PRC-112, PRC117F, and PSC-5 series)
- **SATCOM Antenna Connector**: Type N Female
- **LOS Connector**: BNC Female
- **Input / Output VSWR**: 2:1
- **VSWR Mismatch**: No damage
- **High Temperature**: Power fold-back protection
- **DC Off Bypass**: Routes RF input to LOS
- **Operating Temperature**: -20 to +60°C
- **Cooling**: Natural convection
- **Dimensions**: 63.5 mm H x 127 mm W x 203.2 D (2½" x 5" x 8")
- **Weight**: 1.82 kg (4 lbs)