



**TRICOM**  
RESEARCH, INC.

**TCR-HHR-02/02B**

## Tactical Repeater/Communications System - 148/152

The Tricom Research Tactical Radio Repeater and Communications System is a fly away repeater and communications kit for use with the Harris AN/PRC-152A (and Thales AN/PRC-148 when factory is notified at time of order) family of Multi-Band Handheld Radios. It allows an operator to rapidly set up a LOS, SATCOM, or Wideband communications link in various scenarios including military and commercial vehicles or "TOC in a Box" applications in the field or shelters. The two radios can be operated independently or set up as a repeater by connecting them with a retransmission cable (user supplied). In a repeater application the TX side radio is amplified by a TCR-MBA-50 WB Wideband/Multi-Band RF amplifier using a custom heatsink for forced air cooling. The system consists of a TCR-MBA-50 amplifier, connections for two BB-2590 style batteries (user supplied) with integrated battery chargers, and a 115/230 VAC power supply. The enclosure includes an egress panel for easy access to antenna, handset, PA remote and input power connections and forced air cooling of the amplifier and radios allows the system to be operated with the case closed for environmental protection.

**Part # 11000-00848** (for wheeled case version, 02B)

**Part # 11000-00770** (for non-wheeled case version, 02)



**Radios and batteries NOT included**

### FEATURES

- **Up to 50 Watts transmit power output (User selectable)**
- **Auto frequency selection**
- **Highly portable**
- **Multi-Band 30-512Mhz**
- **Wide Band Operation 225-450Mhz**
- **Automatic switching, UPS capability when external DC or AC power is lost**
- **Automatic battery bypass with external DC or AC power applied**
- **Backup battery status indicator with integrated battery charging**
- **Microprocessor controlled DC power and cooling system.**
- **Custom PA heat sink for more efficient fan cooling operation in a splash proof case (when lid is closed)**
- **Automatic PA DC mode of operation based on DC voltage source (battery, commercial vehicle 12-14 VDC or military vehicle 24-28 VDC)**
- **USB interface for PA remote**
- **Supports TCR-SPK-02 Dual Net Amplified Speaker**

## TRANSMIT SPECIFICATIONS

### SATCOM MODE

Frequency Range  
Switching Speed  
Modulation  
RF Power Input  
RF Power Output

### SATCOM PERFORMANCE

292-318 MHz  
JITC DAMA and IW compatible  
FM or Phase Modulation  
2-10 Watts (20W without damage)  
BA-5590 (12.7 VDC 4.5 A max): 10, 15, 20 Watts  
BB-2590 (15 VDC 4.5 A max): Commercial 10, 15, 25 Watts  
Vehicle (13.5 VDC 5.5 A max): Military 10, 15, 20 Watts  
Vehicle (28 VDC 6.5 A max): 10, 15, 25, 35, 50 Watts

### LOS/WB MODE

Frequency range  
Modulation  
RF Power Input  
RF Power Output

### LOS/WB PERFORMANCE

30-512 MHz with Automatic Frequency Detection/ WB 225-450 MHz  
AM, FM or Phase Modulation, AM/FM Frequency Hopping and ANW2/SRW  
2-10 Watts (20W without damage)  
BA-5590 (12.7 VDC 4.5 A max): 20 Watts  
BB-2590 (15 VDC 4.5 A max): Commercial 20 Watts  
Vehicle (13.5 VDC 5.5 A max): Military 25 Watts  
Vehicle (28 VDC 6.5 A max): 25 Watts, 50 Watts (LOS only)

## RECEIVE SPECIFICATIONS

### SATCOM MODE

Frequency range  
Noise Figure  
Receive Gain

### SATCOM PERFORMANCE

242-268 MHz  
3.75 dB Typical  
10 dB or LNA Bypass

### LOS MODE

Frequency Range  
Insertion Loss  
VSWR

### LOS PERFORMANCE

30-512 MHz  
< 1 dB  
2.5:1 Max

### WB PERFORMANCE

225-450 MHz  
< 2.5 dB  
2.5:1 Max

## GENERAL SPECIFICATIONS

LOS Antenna Connector	Type N Female
SAT Antenna Connector	Type N Female
Wide Band Connector	Type N Female
Receive Radio Connector	Type N Female
AC Connector	IEC C14
DC Connector	Amphenol 97-3102A-14-5P
USB Connectors	USB Mini Type B
High Temperature	PA High Temperature Indication/Fold back
AC Input	115/230 VAC
DC Input	12-32 VDC
DC Off	Routes Radio Connector to LOS Antenna Connector
Operating Temperature	-30 C to +60
Cooling	Air flow cooling for PA and inside the case
Indicators	DC ON/ Ext DC Applied/XX90 Battery status/Battery Charge Status
Dimensions	7" H x 16" W x 13" D / 7"H x 20.5"W x 11.5"D (wheeled version)
Weight	21 Lbs (without radios and without batteries)