TRICOM

RESEARCH, INC.

TCR-HHR-02 (KDU)

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-152/152A (and Thales AN/PRC-148 ((V1-V6)) if requested to factory at time of purchase) 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 heat sink 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 # 11000-00822

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**
- **uP 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**

TRANSMIT SPECIFICATIONS

SATCOM MODE	**SATCOM PERFORMANCE**	
Frequency Range	292-318 MHz	
Switching Speed	JITC DAMA and IW compatible	
Modulation	FM or Phase Modulation	
RF Power Input	5 Watts (2-10 Watts typical)	
RF Power Output	BA-5590 (12.7 VDC 4.5 A max):	10, 15, 20 Watts
	BB-2590 (15 VDC 4.5 A max):	10, 15, 25 Watts
	Commercial Vehicle (13.5 VDC 5.5 A max):	10, 15, 25 Watts
	Military Vehicle (28 VDC 6.5 A max):	10, 15, 25, 35, 50 Watts

LOS/WB MODE	**LOS/WB PERFORMANCE**	
Frequency range	30-512 MHz with Automatic Frequency Detection/**WB 225-450 MHz**	
Modulation	AM, FM or Phase Modulation, AM/FM Frequency Hopping and **ANW2/SRW**	
RF Power Input	5 Watts CW/PEP (2-10 Watts typical)	
RF Power Output	BA-5590 (12.7 VDC 4.5 A max):	20 Watts CW/PEP/**20W Peak WB**
	BB-2590 (15 VDC 4.5 A max):	25 Watts CW/PEP/**20W Peak WB**
	Commercial Vehicle (13.5 VDC 5.5 A max):	25 W CW/PEP/**20W Peak WB**
	Military Vehicle (28 VDC 6.5 A max):	25, 50 W CW/PEP/**25W Avg WB**

RECEIVE SPECIFICATIONS

SATCOM MODE	**SATCOM PERFORMANCE**
Frequency range	242-268 MHz
Noise Figure	3.5 dB Typical
Receive Gain	10 dB Typical

LOS MODE	**LOS PERFORMANCE**	**WB PEFORMANCE**
Frequency Range	30-512 MHz	**225-450 MHz**
Insertion Loss	< 3.5 dB	**<3.5dB**
VSWR	2.5:1 Max	**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
Weight	20 Lbs (without radios and without batteries)

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