

**HARRIS CORPORATION  
EXPERIMENTAL SPECIAL TEMPORARY  
AUTHORITY APPLICATION  
FILE NO. 0438-EX-ST-2015  
APRIL 2015**

**EXHIBIT I - REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

Harris Corporation ("Harris") hereby requests FCC experimental Special Temporary Authority ("STA") to conduct testing utilizing its family of wideband tactical radios at locations centered around Columbia, Maryland and Ellicott City, Maryland. STA is requested for a six month period.

The testing will utilize the following equipment:

Harris Corp AN/PRC-158, 10 units  
Harris Corp. AN/PRC-117G, 10 units  
Harris Corp. AN/PRC-152A, 10 units  
Harris Corp. RF-330E, 10 units

The requested frequencies will be used to perform testing on new waveforms and waveform enhancements. ANW2 is a networking waveform that allows user to do secure voice and data over tactical military radios. Harris will be testing basic ANW2 and SRW waveform functionality such as net formation, voice and IP data. Harris will also be testing basic narrowband LOS waveform functionality such as voice and data in VULOS, SINCGARS, HPW, DAMA, IW and P25. Operations would include multiple radios (both vehicular and handheld) attempting to simulate typical military communications needs in rural, suburban, and urban environments.

Harris has requested 5 MHz of contiguous bandwidth. Given the frequency usage restrictions for spectrum below 450 MHz range Harris hereby requests that if the requested bandwidth cannot be authorized under STA, it be allowed to modify the bandwidth to 1.2 MHz for the lower band spectrum.

Harris acknowledges that all transmissions will be on a non-interference basis and will adhere to any conditions placed on the Special Temporary Authorization.

Because the equipment is technically incapable of providing station identification, Harris respectfully requests a waiver of the station identification provisions of Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115.

All network traffic will be simulated traffic only, solely for evaluation purposes and not for the purpose of providing network data communications services to user stations.

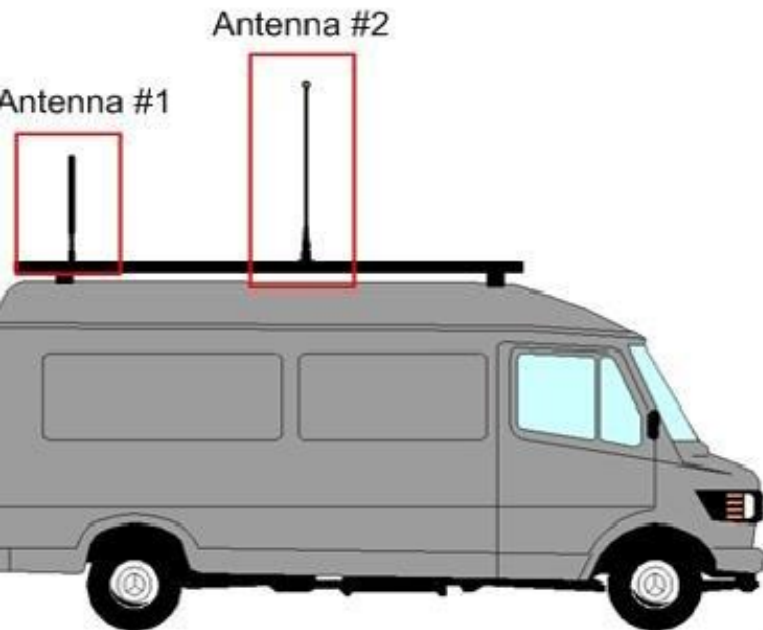
Harris submits that a grant of this application is necessary and in the public interest because it will advance national security efforts in the further development of equipment utilized by US Armed Forces around the world.

The **stop buzzer contact** for this demonstration is Matthew Hausknecht at Harris, tel: 443-259-3199, mobile: 585-738-7731, e-mail mhauskne@harris.com.

# Antenna Sketch for L-Band License Request

## Fixed and Mobile Stations

For the purpose of this experiment, a fixed station is defined as a stationary test van and a mobile station is defined as either a test van or a person on foot that is moving. Depending upon asset availability and testing parameters, stations will consist of a mix of vehicles persons on foot. Total quantity of stations will not exceed 10.



## Antennas to be used during testing

Antenna #1:  
RF-3165-AT122



Antenna #2:  
RF-3187



Antenna #3:  
RF-3150-AT152



Antenna #4:  
RF-3152-AT152



Antennas  
#1, 3, & 4



≤ 50 km



TYPE-1 WIDEBAND  
MULTIBAND MULTIMISSION  
RADIO WITH INTERNAL  
SAASM GPS

**AN/PRC-117G(V)1(C)**

**FEATURES**

- > A revolutionary CNR-sized radio with US/NATO standardized waveforms and wideband data capabilities



The Falcon III® AN/PRC-117G(V)1(C) manpack is a software defined tactical radio that provides breakthrough wideband data performance and interoperability with fielded waveforms. This single channel radio covers 30 MHz to 2 GHz and is 30% smaller and 35% lighter than currently fielded multiband manpack radios. The radio operates off a single standard battery, further reducing the weight of a dismounted radio yet maintaining peak transmit power of 10 watts VHF and 20 watts UHF.

The AN/PRC-117G features a JTEL-certified Software Communications Architecture (SCA) operating environment, providing the optimal transition to software-defined radio technology. The AN/PRC-117G provides SINCGARS, Havequick II, VHF/UHF AM and FM, DAMA, 181B Dedicated Channel TACSAT, High Performance Waveform (HPW), Integrated Waveform (IW), as well as Soldier Radio Waveform (SRW), and the Harris Adaptive Networking Wideband Waveform (ANW2). The ROVER L-Band receive and APCO P25 are also available as optional waveforms. Future planned software upgrades include MUOS and SATURN waveforms (subject to NSA approval).

AN/PRC-117G networking capabilities can be enhanced using the RF-7800B series of Broadband Area Global Network (BGAN) terminals. The RF-7800B BGAN terminals provide satellite-based wideband beyond-line-of-sight (BLOS) communications. When combined with the AN/PRC-117G, the system provides automatic and secure range extension, connection to out-of-range networks, and entry into the Internet or remote private networks.

Secured by the Harris Sierra™ II software programmable encryption module, the AN/PRC-117G is certified to carry up to US Top Secret voice and data traffic. The Sierra II, designed to maximize battery life in battery-powered radios, supports all JTRS COMSEC and TRANSEC requirements. The radio supports HAIPE® in-line encryption for secure network connectivity. Numerous legacy encryption modes are also supported, including KY-57/VINSON, ANDVT/KYV-5, KG-84C, and keyfill modes of DS-101 and DS-102. The radio also supports Type-3 AES keys in VHF/UHF AM and FM mode.

The AN/PRC-117G stores multiple mission fill files, extending the time between reconfigurations. It also includes an embedded SAASM GPS receiver to display local position and provide automatic position reporting for situational awareness on the battlefield. A commercial GPS option is also available. Three separate antenna connections allow efficient and flexible use of antennas. The AN/PRC-117G(V)1(C) includes the R/T, manuals, H-250 handset, radio programming application, and programming cable.

# SPECIFICATIONS FOR: AN/PRC-117G(V)1(C)

## GENERAL

<b>RT Nomenclature</b>	RT-1949(P)(C)
<b>Frequency Range</b>	30 MHz-2 GHz Narrowband (NB): VHF Low: 30-90 MHz VHF High: 90-225 MHz UHF Low: 225-512 MHz SATCOM UHF Low: 243-270 MHz and 292-318 MHz Wideband (WB): UHF/L-Band: 225 MHz-2 GHz
<b>Channel Spacing</b>	NB: 8.33 kHz, 12.5 kHz, 25 kHz SATCOM: 5 kHz, 25 kHz WB: 500 kHz, 1.2 MHz, 2.5 MHz, 5 MHz FM Deviation: 5 kHz, 6.5 kHz, 8 kHz
<b>Net Presets</b>	100
<b>Data Interfaces</b>	Ethernet, RS-232/RS-422, USB
<b>Control Interfaces</b>	SNMP: Ethernet, RNDIS USB ASCII: RS-232, RS-422, USB
<b>Management Tool</b>	Windows-based Communications Planning Application (CPA)
<b>Software Environment</b>	JTEL Certified SCA 2.2
<b>Integrated GPS</b>	SAASM (Commercial GPS optional)
<b>Frequency Stability</b>	0.5 ppm
<b>Frequency Tuning</b>	10 Hz from 30 MHz-512 MHz 100 Hz from 513 MHz-2 GHz

## SPECIFICATIONS

<b>Dimensions (no handles)</b>	7.4 W x 3.7 H x 8.8 D in. (without battery) 7.4 W x 3.7 H x 13.5 D in. (with battery)
<b>Weight</b>	8.2 lbs (without battery) 12 lbs (with battery)
<b>Color</b>	CARC Green 383

## MODES AND WAVEFORMS

<b>Narrowband Waveforms</b>	AM/FM, VHF/UHF LOS, SINGGARS, Havequick I and II, APCO P25 (optional), P25 OTAR (optional)
<b>Wideband Waveforms</b>	ANW2, ROVER III L-Band Receive (optional)
<b>UHF SATCOM Waveforms</b>	MIL-STD-188-181B Dedicated Channel MIL-STD-188-182A, 183A DAMA MIL-STD-188-181C, 183B IW Phase 1 HPW
<b>Voice and Data Modes</b>	Simplex or Half-duplex, MIL-STD-188-113 CVSD STANAG 4198 LPC-10e, STANAG 4591 MELPe
<b>Data Modes</b>	Synchronous Data (300, 600, 1200, 2400, 12k, 16k bps) SINGGARS ECCM (VHF Low band/1200, 2400, 4800, 9600) Wideband FSK Cipher Text Digital Data (16 kbps; KY-57) Narrowband Cipher Text Digital Data (2.4 kbps; ANDVT/ KYV-5) KG-84C Havequick VIII ECCM (16 kbps; KY-57 UHF band only)



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## SECURITY

<b>Encryption</b>	Sierra™ II Based Type-1
<b>Encryption Modes</b>	KY-57, KYV-5, KG-84, HAIPE®, AES
<b>Key Fill Device Compatibility</b>	AN/CYZ-10 DTD, KOI-18, KYK-13, KYX-15, MX-18290, AN/PYQ-10, KIK-11, KIK-20
<b>Key Storage</b>	Up to 300
<b>Mission Fill Device Compatibility</b>	Windows-based Communications Planning Application

## POWER

<b>Power Input</b>	19-34 VDC
<b>Power Consumption</b>	55W max
<b>Battery Types</b>	BA-5590/U, BA-5390/U, BB-590/U, BB-390/U, BB-2590/U

## ENVIRONMENTAL

<b>Shock/Vibration</b>	MIL-STD-810G for tracked vehicles, wheeled vehicles, shipboard
<b>Immersion</b>	1 meter

## TRANSMITTER

<b>Power Output</b>	NB: 10W, SATCOM: 20W WB: 20W peak/5W average
<b>Antenna Outputs</b>	NB: 30 MHz-512 MHz, SATCOM: 243 MHz-318 MHz WB: 225 MHz-2 GHz
<b>Harmonic Suppression</b>	Greater than 50 dBc

## RECEIVER

<b>Narrowband Sensitivity (for 10 dB SINAD)</b>	LOS FM 30-512 MHz: -118 dBm LOS AM 90-512 MHz: -110 dBm with 70% Modulation TACSAT FM 243-270 MHz: -120 dBm
<b>Adjacent Channel Rejection</b>	60 dB referenced to 10 dB SINAD (50 kHz channel) VHF: 60 dB (50 kHz off channel) UHF: 50 dB (50 kHz off channel)

## ACCESSORIES

<b>10075-1399</b>	H-250 Handset
<b>RF-6650M</b>	Communications Planning Application (CPA)
<b>12043-0750-A006</b>	USB Programming Cable
<b>Manuals</b>	Operation Manual, Reference Guide, SINGGARS Pocket Guide, ANW2 Pocket Guide
<b>OPTIONAL</b>	
<b>RF-300M-DK001</b>	Dismount Antenna Kit
<b>RF-300M-VK001</b>	Vehicular Antenna Kit
<b>RF-3166-AT120</b>	L-Band ROVER Antenna Kit
<b>RF-7800M-V150</b>	50W Vehicular Amplifier Adapter
<b>RF-7800M-V120</b>	20W Vehicular Amplifier Adapter
<b>RF-3590-RT</b>	Harris Ruggedized Tablet
<b>RF-3073-AT242</b>	Push-on GPS Antenna Kit (L1/L2 Band)
<b>12043-2710-A006</b>	PPP Data Cable
<b>12043-2730-A006</b>	Data and Remote Control Cable
<b>12043-2740</b>	Digital Retransmission Cable
<b>12043-260-A006</b>	Black Ethernet to RJ45 Ethernet Cable
<b>12043-2760-A006</b>	Ethernet Cable
<b>RF-5910-PS005</b>	Battery Eliminator
<b>RF-7800B-DU024</b>	BGAN Land Portable Antenna System
<b>RF-7800B-VU104</b>	BGAN Land Mobile Antenna System

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## WIDEBAND NETWORKING HANDHELD

# AN/PRC-152A

### FEATURES

- > Sierra II based Type-1 encryption
- > SCA v2.2.2 compliant (no waivers)
- > Wideband networking waveforms
- > Narrowband and SATCOM support
- > PLGR DAGR interface
- > Internal GPS (option)
- > Built-in speaker/microphone
- > Full numeric keypad
- > NVG compatible display
- > Supports multiple mission plans



**HARRIS**<sup>®</sup>  
assuredcommunications<sup>®</sup>

The FALCON III<sup>®</sup> AN/PRC-152A Wideband Networking Handheld provides simultaneous voice and high-speed networked data using the Harris Adaptive Networking Wideband Waveform (ANW2) and the Soldier Radio Waveform (SRW). ANW2 uses innovative intelligent protocols that do not require the presence of a designated network control station each radio automatically discovers and joins an authorized network. Ad-hoc networking allows automatic and transparent relay through an available station. It also heals the network if a station leaves, ensuring network reliability. Combined with the NSA certification for TOP SECRET and Below communication, the AN/PRC-152A is the handheld capable of interoperating on either SECRET or Sensitive but Unclassified (Type-2) SRW networks.

The ANW2 and SRW waveforms provide situational awareness and data on demand, seamlessly linking dismounted and upper-echelon networks. The radio quickly and efficiently transmits mission-critical voice, data, imagery, and video in the most challenging communications environments. With the AN/PRC-152A, dismounted radio operators have access to more real-time intelligence, creating increased situational awareness and faster decision making in the field.

The AN/PRC-152A is built with the same form factor as the widely fielded AN/PRC-152 Multiband Handheld, without compromise to size, shape, or weight. With a common form factor, user and data interfaces, the AN/PRC-152A continues support for fielded customer accessories. The handheld covers the multiband (30 to 512MHz) frequency range and outputs 5W transmit power for line-of-sight (LOS) waveforms, 10W for SATCOM. On top of supporting next generation wideband (1.2MHz bandwidth) networking waveforms, the AN/PRC-152A continues legacy interoperability with the traditional narrowband waveforms such as SINCGARS, HAVEQUICK III, and VHF/UHF AM and FM. The handheld is delivered with a standard high band enhancement that increases the radios frequency coverage to 520 MHz and adds the 762-870MHz band for select waveforms.

The AN/PRC-152A features the Software Communications Architecture (SCA) operating environment, providing the optimal transition to software defined radio technology. JTEL certified without waivers (v2.2.2), the SCA architecture enables the upgrade to future waveforms supporting the evolution of communications from legacy narrowband to network centric wideband operations. Secured with the Harris Sierra<sup>TM</sup> II encryption module, the AN/PRC-152A provides voice and data security supporting legacy and modern encryption, up to the TOP SECRET level.

The AN/PRC-152A is the wideband radio that can deliver secure, IP-based mobile ad-hoc networking to operators at the tactical edge.

# SPECIFICATIONS FOR: AN/PRC-152A

## GENERAL

<b>Frequency Range</b>	Narrowband: 30-512MHz Extended Narrowband: 512-520MHz, 762-870MHz (P25 and AM/FM) Wideband: 225-450MHz
<b>Channel Spacing</b>	Narrowband: 12.5kHz, 25kHz Wideband: 1.2MHz
<b>Tuning Resolution</b>	10Hz
<b>Presets</b>	99 (standard); Unlimited with multiple mission plan files
<b>Software Environment</b>	SCA 2.2.2 (JTEL Certified)

## SPECIFICATIONS

<b>Dimensions</b>	2.9 W x 9.6 H x 1.9 D in. (with battery)
<b>Dimensions (With GPS)</b>	2.9 W x 9.6 H x 2.5 D in. (with battery)
<b>Weight</b>	2.5 lbs max (with battery and antenna)
<b>Weight (With GPS)</b>	2.7 lbs max (with battery and antenna)
<b>Volume</b>	40 in <sup>3</sup> (with battery)
<b>Volume (With GPS)</b>	42 in <sup>3</sup> (with battery)
<b>Finish</b>	CARC Green

## MODES AND WAVEFORMS

<b>Narrowband Waveforms</b>	AM/FM Line-of-Sight SINCGARS HAVEQUICK I/II HPW & HPW IP (Optional) APCO P25 (Optional)
<b>Wideband Waveforms</b>	SRW, ANW2 Compatibility, ANW2 30-Node
<b>UHF SATCOM Waveforms</b>	DAMA modes (Optional): MIL-STD-188-181B, MIL-STD-188-182A, MIL-STD-188-183A IW Phase 1 (Optional): MIL-STD-188-181C, MIL-STD-188-183B HPW (Optional)
<b>Voice and Data Mode</b>	Simplex or Half-Duplex
<b>Transmission Modes</b>	AM, ASK, FM, FSK, PSK, CPM

## KEY RADIO FEATURES

- Wideband networking and legacy waveform support
- PLGR/DAGR interface
- Built-in speaker and microphone
- Full alpha-numeric keypad
- Night Vision Goggle compatible display
- Sierra based Type-1 encryption, certified TOP SECRET and below
- Internal GPS (option)
- Highband frequency coverage for Public Safety
- 10W SATCOM, beyond-line-of-sight mode



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## SECURITY

<b>Encryption</b>	Sierra II Programmable Crypto
<b>Encryption Modes</b>	VINSON KY-57, ANDVT, TSVCSIS, KYV-5/KG-84C, T1 AES, T3 AES, T3 DES, HAIPE
<b>Key Fill Device Compatibility</b>	AN/CYZ-10 DTD (Supports DS-101, DS-102 & Mode 2/3), KOI-18, KYK-13, KYX-15, MX-18290, AN/PYQ-10, KIK-20

## TRANSMITTER

<b>Power Output</b>	250mW to 5W 10W SATCOM mode
<b>Frequency Stability</b>	+/- 0.5 ppm

## RECEIVER

<b>FM Sensitivity</b>	-116 dBm, 12 dB SINAD
<b>FM Deviation</b>	5, 6.5, 8kHz
<b>Adjacent Channel Rejection</b>	Greater than -40 dB
<b>Squelch</b>	Selectable (Tone, noise, CDCSS, CTCSS)

## INTERFACES

<b>External Data</b>	USB, USB RNDIS Host and Device, Ethernet, RS-232
<b>Audio</b>	Standard 6-pin
<b>Antenna</b>	50-ohm TNC
<b>Programming</b>	USB
<b>Remote Control</b>	USB, RS-232; Remote Keypad Display Unit (KDU)

## ENVIRONMENTAL

<b>Shock/Vibration</b>	MIL-STD-810G
<b>Temperature</b>	-30C to +60C
<b>Immersion</b>	2 meter (20 meter radio option available)

## ACCESSORIES

<b>Antenna</b>	VHF/UHF Multiband Antenna UHF Antenna
<b>Battery</b>	Rechargeable Lithium Ion Battery Field Replaceable Hold-Up Battery (HUB)

## NEW DATA ACCESSORIES

<b>12041-7227-02 and -04</b>	USB Networking and Remote KDU Adapter
<b>12041-7227-01</b>	USB Programming Cable
<b>10553-0100-02</b>	Falcon III KDU Remote Control Kit (Requires 12041-7227-02 or -04)
<b>12043-2853-A006</b>	RS-232 DB9 Cable (Requires 12041-7227-02 or -04)
<b>12043-2854-A006</b>	GPS PLGR/DAGR Adapter Cable (Requires 12041-7227-02 or -04)
<b>12083-0707-A003</b>	USB to Ethernet Cable (Requires 12041-7227-02 or -04)

## LEGACY DATA ACCESSORIES

<b>12041-7110-A1</b>	Asynchronous and Synchronous Data 9pin and 25pin Y-Cable
<b>12041-7290-A006</b>	Asynchronous or Synchronous Data 25pin Cable
<b>12041-7130-A1</b>	Retransmission Cable
<b>12041-7170-A006</b>	GPS Interface Cable for PLGR/DAGR
<b>12041-7180-A006</b>	PPP Data Cable
<b>12041-5490-A006</b>	Falcon III KDU Cable

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## TYPE 1 MULTI-CHANNEL MANPACK

# AN/PRC-158

### FEATURES

- > Covers 30 to 2500 MHz frequency range
- > Provides 2 channels in 1 radio
- > Is 30% smaller than other 2-channel manpacks
- > Runs narrowband and wideband waveforms
- > Integrated MUOS\* without a separate Power Amplifier
- > Embedded routing and cross-banding
- > Optional 3rd slot for advanced mission capabilities

\*MUOS, ANW2, and WNW will be software upgrade



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The AN/PRC-158 is a modular two-channel manpack radio designed to exceed the HMS Manpack program requirements, and covers the full 30-2500 MHz frequency range in a form factor 30% smaller than similar products.

Each channel is capable of running a wide variety of Software Communications Architecture (SCA) narrowband and wideband waveforms – including the same waveform on both channels. Each channel can be used to transmit and receive simultaneously, using different frequency bands and/or waveforms. Embedded routing and cross-banding provide the ability to connect different nets and sub-nets for both voice and data.

A defining feature of the AN/PRC-158 is that no Power Amplifier (PA) change-outs or additions are required to switch between waveforms or to run Mobile User Objective System (MUOS)\*. Fully integrated MUOS-capable PAs eliminate logistical complexity, cost, and further reduce size and weight.

Secured by Harris Sierra™ II software programmable encryption, the AN/PRC-158 is certified to carry up through US Top Secret voice and data traffic on either channel. The Sierra II, designed to maximize battery life in battery-powered radios, supports all JTRS COMSEC and TRANSEC requirements. Numerous legacy encryption modes are also supported, including KY-57/VINSON, ANDVT/KYV-5, KG-84C, and keyfill modes of DS-101 and DS-102. The radio also supports Type-3 AES keys in VHF/UHF AM and FM mode.

Additionally, a third slot accommodates an optional module that adds a variety of advanced capabilities. These embedded capabilities include Intelligence Surveillance and Reconnaissance (ISR) receiver, additional Mobile Ad-hoc Network (MANET) capabilities and Signals Intelligence (SIGINT). An interface based on industry standards is defined to provide vendors with the ability to create future enhancements on their own.

The AN/PRC-158 is able to store multiple mission fill files, providing maximum mission flexibility. Situational awareness is enhanced through an embedded SAASM GPS receiver that displays local position and provides automatic position reporting. Use of a single, standard lithium ion battery further reduces the weight of the radio while maintaining peak transmission power of up to 20 watts.

The AN/PRC-158 is based on the AN/PRC-117G certified Software Communications Architecture and is compatible with JTRS Enterprise Network Manager (JENM) software. It is also compatible with the Harris AN/RC-114 and RF-7800M-V series of Vehicular Amplifier Adapters utilized with the AN/PRC-117G.

# SPECIFICATIONS FOR: AN/PRC-158

## GENERAL

<b>Number of Channels</b>	2, +1 option module
<b>Frequency Range</b>	30 MHz-2.5 GHz Narrowband (NB): VHF low: 30-90 MHz VHF high: 90-225 MHz UHF low: 225-520 MHz, 762-874 MHz Wideband (WB): UHF 225-520 MHz, 762 MHz-2.5 GHz
<b>Channel Spacing</b>	Narrowband: 8.33 kHz, 12.5 kHz, 25 kHz Wideband: 1.2 MHz, 5 MHz, 10 MHz
<b>FM Deviation</b>	5 kHz, 6.5 kHz, 8 kHz
<b>Net Presets</b>	99
<b>Management Tool</b>	Communications Planning Application (CPA) ; JENM Compatible
<b>Software Environment</b>	SCA v2.2.2
<b>Internal GPS</b>	SAASM receiver (commercial GPS optional)
<b>Frequency Stability</b>	0.5 ppm
<b>Frequency Tuning</b>	10 Hz from 30-520 MHz 100 Hz from 762 MHz-2.5 GHz

## SPECIFICATIONS

<b>Dimensions (no handles)</b>	7.4 W x 3.5 H x 9 D inches 7.4 W x 3.5 H x 14 D in. (with battery)
<b>Volume</b>	181 in <sup>3</sup> (without battery) 264 in <sup>3</sup> (with battery)
<b>Weight</b>	8.8 lbs (without battery) 12.6 lbs (with battery)
<b>Color</b>	CARC Green 383

## MODES AND WAVEFORMS

<b>Narrowband Waveforms</b>	AM/FM, VHF/UHF LOS, SINGGARS, HAVEQUICK (SATURN, APCO P25 capable)
<b>Wideband Waveforms</b>	SRW (WNW, ANW2 capable)
<b>UHF SATCOM Waveforms</b>	MIL-STD-188-182A, 183A DAMA MIL-STD-188-181C, 183B IW Phase 1 (IW Phase II, MUOS, HPW capable)
<b>Voice and Data Modes</b>	Simplex or Half Duplex Full Duplex Capable MIL-STD-188-113 CVSD STANAG 4198 LPC-10e STANAG 4591 MELPe
<b>Transmission Modes</b>	AM, ASK, FM, FSK, PSK, CPM



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## SECURITY

<b>Encryption</b>	Sierra™ II Based Type 1
<b>Encryption Modes</b>	KY-57, KYV-5, KG-84, AES, Fascinator, Type 3-DES
<b>Key Fill Device Compatibility</b>	AN/CYZ-10 DTD, KOI-18, KYK-13, KYX-15, MX-18290, AN/PYQ-10, KIK-11, KIK-20
<b>Key Storage</b>	Up to 700 per channel
<b>Mission Fill Device Compatibility</b>	Windows-based Communications Planning Application

## POWER

<b>Power Input</b>	18-38 VDC
<b>Power Consumption</b>	120W Max
<b>Battery Types</b>	BA-5590/U, BA-5390/U, BB-2590/U

## ENVIRONMENTAL

<b>Shock/Vibration</b>	MIL-STD-810G for tracked and wheeled vehicles, ADTP-2404D Ballistic Shock
<b>Immersion</b>	2 meter salt water (MIL-STD-810G)
<b>Temperature</b>	-40C to +55C
<b>EMI/RFI</b>	MIL-STD-461F

## TRANSMITTER

<b>Power Output</b>	Narrowband: 10W, SATCOM: 20W, Wideband: 10W
<b>Antenna Outputs</b>	Single 30-2500MHz N-connector per channel
<b>Harmonic Suppression</b>	Greater than 53 dBc

## RECEIVER

<b>Narrowband Sensitivity (for 10 dB SINAD)</b>	LOS FM 30-512 MHz: -116 dBm LOS AM 90-512: -103.5 dBm with 30% modulation
<b>Adjacent Channel Rejection</b>	40 dB referenced to 10 dB SINAD (25 kHz channel)

## INTERFACES

<b>External Data</b>	USB, USB RNDIS Host and Device, Ethernet, RS-232
<b>Audio Programming Remote Control</b>	Standard 6 Pin USB, RS-232, Remote Keypad Display Unit (KDU)

## OPTIONAL ACCESSORIES

<b>12043-4800-01</b>	Battery Box
<b>RF-3150-AT122</b>	VHF, 30-108 MHz NB Antenna
<b>RF-3162U-AT001</b>	UHF, 225-450 MHz Antenna
<b>RF-3166L-AT001</b>	L band 1250-1850MHz Antenna
<b>RF-5934-XX</b>	Multi-channel Manpack Backpack
<b>12083-0707-A003</b>	USB to Ethernet cable
<b>12006-9005-01</b>	Portable SATCOM Antenna
<b>10075-1399</b>	H-250 Handset
<b>12043-2750-A006</b>	USB Programming Cable
<b>RF-30XX</b>	Push on GPS Antenna
<b>10553-0100-02</b>	Fill Remote KDU
<b>10535-0707-A020</b>	Cable Assy, Speaker Audio
<b>10535-2713-A020</b>	Cable Assy, Speaker Power, VAU, Right Angle
<b>10535-0706-A250</b>	Cable Assy, Speaker Power
<b>11080-3980-01</b>	DC Switch Assy
<b>RF-3071-AT234</b>	L1/L2 Vehicular GPS Antenna
<b>A30-1059-002</b>	Handset, Mod H-250, Dual Audio
<b>RF-3143-AT320</b>	Tri-Band Antenna
<b>12172-4200</b>	MCMP Single Mount
<b>12172-4600</b>	MCMP Dual Mount
<b>12172-0300</b>	Tethered V/U PA

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## WIDEBAND NETWORKING TEAM RADIO

### RF-330E-TR001

#### FEATURES

- Suite B, Secret and Below, non-CCI security architecture
- Meets and exceeds Rifleman Radio and Nett Warrior operational requirements
- Market-leading 24-hour mission weight (< 3 lbs)
- Market-leading battery life supports missions over 24 hours with one spare battery
- Market-leading point-to-point range
- OLED display provides visual confirmation of vital radio status without external device
- Harris' single Tri-band antenna addresses full SRW spectrum requirements
- Uses currently fielded batteries and charging systems
- Provides user Situational Awareness (SA); with Position Location Information (PLI)
- Software programmable security architecture

The RF-330E-TR Wideband Team Radio is a small, tactical team radio, NSA certified for Type 1 Suite B, Secret and Below encryption in a non-CCI package. Designed to exceed Rifleman Radio and Nett Warrior operational requirements for range, battery life and mission weight, the RF-330E-TR provides simultaneous voice, high-speed data and up-to-date position location information, enhancing situational awareness and ensuring the individual war fighter is always connected and never alone.

As a member of the Harris Falcon III® family of tactical handheld radios, the RF-330E-TR utilizes the same menu structure and widely- fielded battery and charging systems as the Falcon III HH family of radios. Compatibility with a fielded battery form factor and well known menu structure greatly eases the logistical burden of fielding and training for a new radio system. Additionally, the innovative design of the RF-330E-TR optimizes power consumption, offering unparalleled battery life capable of supporting missions well in excess of 24 hours with only a single spare battery, minimizing the total weight carried into the field.

The RF-330E-TR hosts the SRW networking waveform and features a Software Communications Architecture (SCA v2.2.2) operating environment, enabling software upgradeability as well as hosting additional software defined waveforms.

The compact size and advanced capabilities of the RF-330E-TR provide a means to allow seamless voice and data capabilities for every team member, enabling today's war fighter to take on tomorrow's missions.

**HARRIS**<sup>®</sup>  
assuredcommunications<sup>®</sup>

# SPECIFICATIONS FOR: RF-330E-TR001

## GENERAL

<b>Frequency Range</b>	Tri-band antenna optimized for: 225-450 MHz, 1250-1390 MHz and 1755-1850 MHz
<b>Power Out</b>	Selectable up to 3.2W
<b>Bandwidth</b>	Supports SRW 1.2 MHz channel spacing
<b>Displaced Volume</b>	33.5 cubic inches with battery and antennas
<b>Weight</b>	2 lbs with battery and antenna
<b>Waveforms</b>	SRW software upgradeable to support additional / future waveforms
<b>Type-1 Secret and Below (non-CCI)</b>	SW programmable Security architecture Suite B
<b>Power Input</b>	Nominal 10.8 VDC (Falcon III HH radio family interface)
<b>Battery</b>	Interfaces with currently fielded inventories of Falcon III HH batteries and chargers (Falcon III HH radio family)
<b>Battery Life</b>	Unparalleled battery life capable of supporting missions well in excess of 24 hours with only a single spare battery
<b>Net Presets</b>	Storage for up to 99 programmable presets
<b>GPS</b>	Internal GPS standard External SAASM interface (DAGR/PLGR)
<b>SW Environment</b>	SCA v2.2.2

## ENVIRONMENTAL

<b>Environmental</b>	MIL-STD-810G
<b>Operating Temperature</b>	-30C to +55C
<b>Storage Temperature</b>	-51.1C to +71C
<b>Immersion</b>	2 Meters
<b>EMI / RFI</b>	MIL-STD-461F (including CE106 Compliance)

## INTERFACE

<b>RF Antenna</b>	Single TNC connector
<b>Audio</b>	Supports interoperability with standard 6-pin ADF interface
<b>Key Fill</b>	DS-101
<b>Mode/Presets switch</b>	(Off/Zeroize/Load) Access to 11 programmable presets
<b>OLED Display (HMI)</b>	Immediate visual confirmation of RT status: Battery gauge Net connection status Preset number and label Indication of loaded key material
<b>Utility Access (HMI)</b>	User friendly access to menu driven radio utilities without requiring an external device



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