

AN/PRC-163

Multi-channel Handheld Radio

The L3Harris AN/PRC-163 (formerly known as RF-335M-STC) Multi-channel Handheld Radio is a versatile, secure solution that provides simultaneous up-and-down echelon connectivity, crossbanding capability, and critical interoperability and redundancy in a small form factor. Overlapping UHF and SATCOM band availability in both channels offers flexibility for any combination of SATCOM, VHF/UHF Line-Of-Sight or Mobile Ad-Hoc Networking (MANET) applications, including Signals-Based Threat Warning/Situational Awareness (SBTW/SA) and ISR video receiving.



The next-generation AN/PRC-163 has improved SWaP compared to existing single-channel radios. Built off of L3Harris' Multi-channel Denali® security architecture, it features TSM-X™ MANET for high-speed networking and seamless

updates to future waveforms. It provides secure network connections to computing devices, including Android™ smartphones. Plus, its expansion module interface secures L3Harris and third-party solutions that expand capabilities.

Using an ISR Video Module, the AN/PRC-163 delivers integrated tactical radio and video receiving capability with superior thermal performance, and easy-to-use crossbanding. The radio provides SBTW/SA features using advanced multi-node Time Difference of Arrival or single-node Angle of Arrival methods. It incorporates fully integrated MUOS-capable hardware, for true dismounted SATCOM on the move with only a single whip antenna.

The AN/PRC-163 incorporates a familiar yet enhanced user interface, providing critical status information at a glance, and allowing access to basic functions without removing the radio from its holster.

CONVERGING ISR VIDEO,
VOICE, CROSSBANDING,
SA/PLI, AND MORE

KEY BENEFITS

- > Distributed Common Operational Picture including ISR video
- > Close Air and Fires support
- > Beyond-Line-Of-Sight reachback
- > Tactical edge waveform

GENERAL	
Frequency Range	R/T 1 VHF low: 30-88 MHz VHF high: 118-174 MHz UHF: 225-512 MHz MUOS(A) SATCOM: 300-320 MHz UL / 360-380 MHz DL UHF SATCOM: 291-318.3 MHz UL / 243-270 MHz DL SBTW / SA: 30-2600 MHz R/T 2 UHF: 225-450 MHz L/S-band: 1300-2600 MHz
Channel Spacing/Bandwidth	R/T 1: 5 kHz-10 MHz R/T 2: 5 kHz-40 MHz
Net Presets	99 (standard); unlimited with multiple mission files
GPS	Built-in module—SAASM L1/L2 or Commercial L1
Management Tool	Windows®-based Communications Planning Application (CPA); JENM compatible
Frequency Tuning	10 Hz
Software Environment	SCA 2.2.2
Frequency Stability	0.5 ppm

TRANSMITTER	
Power Output	250 mW to 5 W, 10 W SATCOM modes, 3.2 W L/S-band
Spurious Suppression	Per TIA-603D

RECEIVER	
Sensitivity	-116 dBm, 12 dB SINAD
Adjacent Channel Rejection	Per TIA-603D

POWER	
Power Input	9.6 to 34.3 VDC
Battery Types	Rechargeable lithium-ion battery (included) Non-rechargeable A123 battery cell holder Approved tethered battery solutions

SECURITY	
Encryption	Denali®-based Type 1 Suite A/B

AVAILABLE MODES AND WAVEFORMS	
Narrowband Waveforms	FM/FSK, AM/ASK, SINCGARS, HAVEQUICK I/II; P25
Wideband Waveforms	ANW2®C; SRW, TSM-X™
UHF SATCOM Waveforms	HPW, IW; future capability software upgrade: MUOS
Voice and Data Modes	Voice Narrowband analog/PCM AM/FM CVSD ASK/FSK cipher text Wideband 2400 bps MELPe LPC/2400-MELP – SATCOM (IW) Data Narrowband analog/PCM AM/FM CVSD ASK/FSK cipher text Wideband up to 16 Mbps

PHYSICAL	
Dimensions	6 H x 3 W x 2 D in (15.24 x 7.62 x 5.08 cm)
Volume (with battery)	40 in³ (655.48 cm³)
Weight (with battery)	2.75 lbs (1.13 kg)
Color/Finish	CARC Green

ENVIRONMENTAL	
Temperature	Operating: -22°F to 140°F (-30°C to +55°C) Storage: -40°F to 185°F (-40°C to +85°C)
Immersion	20 meters

INTERFACES	
Data	USB 2.0, IP over USB, Ethernet
Audio	19-pin ADF, 2-channel audio + KDU, USB 2.0, fill
Antenna Ports	50-ohm TNC
Programming	USB 2.0
Key Fill	DS-101
Function Knob	Preset switch: 16 Presets Mode/volume switch: Volume control + Off, Load, Z with mechanical interlock
External Mission Module	Power, data, control/status

STANDARD KIT INCLUDES	
AN/PRC-163	Multi-channel Handheld Radio Transceiver
12500-2500	7.0 Ah Li-Ion battery
12102-2700-01	13 in. miniblade 30-870 MHz
12193-2740-01	Dual-band 225-450 & 1300-2600 MHz

OPTIONAL ACCESSORIES	
12011-2730-01	45 in blade 30-512 MHz
12193-2710-01	Dismount Tether Antenna Mount
12236-1000-01	Power Adapter Interface (PAI)
RF-5853-CH	Battery Charger
12193-0340-A001	Cable, Key Fill/Audio Adapter
12193-0460-A006	Cable, USB High Speed Data
12193-1000-01	2-Port USB Side Adapter
12246-2000-01	Ethernet Adapter
12193-1590-01	Holster
12193-1595-01	Carrying Bag
12243-1000-01	ISR Mission Module
12193-2791-01	Signals-Based Threat Warning LVPA Kit

AN/PRC-163 Multi-channel Handheld Radio

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1025 W. NASA Boulevard
Melbourne, FL 32919

L3HARRIS FALCON® IV AN/PRC-158

Multi-channel Manpack (MCMP)

The L3Harris Falcon IV AN/PRC-158 delivers dual-channel connectivity across the full 30-2500 MHz frequency range. Compact and lightweight, the MCMP provides forward-deployed warfighters with an unrivaled level of tactical communications flexibility.



Equipped with a Software Communications Architecture (SCA) and a broad portfolio of narrowband, wideband and fast-hop resilient waveforms, the AN/PRC-158 ensures continuous communications, advanced interoperability and fast in-field updates for new capabilities. The manpack's two channels and superior routing and crossbanding technologies support communications redundancy and sharing critical voice and data ISR with a variety of nets and sub nets.

The MCMP includes MUOS-ready hardware for SATCOM connectivity while on the move. NSA-certified for voice and data up to U.S. TOP SECRET with L3Harris Sierra™ II encryption, the manpack is fully JTRS COMSEC and TRANSEC compliant. The AN/PRC-158 supports numerous legacy encryption and key fill modes as well as Type 3 AES keys.

The familiar Falcon user interface reduces training time and speeds tactical operations. An embedded SAASM GPS receiver enhances Situational Awareness through automatic position location reporting.

The AN/PRC-158 is the first Falcon IV product that supports ARROW, L3Harris' new resilient waveform. ARROW is a 30Mhz-512Mhz fast-hopping Line-Of-Sight waveform that is designed to operate in congested and highly contested environments.



TYPE 1 SECURITY IN A VERSATILE TWO-CHANNEL MANPACK

KEY BENEFITS

- > **Dual-channel simultaneous send and receive capabilities**
- > **Software-defined architecture supports fast, in-field updates**
- > **MUOS capable for SATCOM on the move**
- > **NSA-certified for voice and data up to U.S. TOP SECRET**

GENERAL	
RT Nomenclature	RT 2034A P C U (SAASM GPS) RT 2034 P C U (commercial GPS)
Frequency Range	30 MHz-2.5 GHz Narrowband: VHF: 30-225 MHz UHF: 225-520 MHz, 762-874 MHz SATCOM: RX: 243-270 MHz TX: 292-318 MHz MUOS: RX: 360-380 MHz TX: 300-320 MHz Wideband: UHF: 225-520 MHz L-BAND: 762 MHz-2.5 GHz
Channel Spacing/Bandwidth	Narrowband: 8.33 kHz, 12.5 kHz, 25 kHz Wideband: 1.2 MHz, 2.5 MHz, 5 MHz and 10 MHz FM Deviation: 5 kHz, 6.5 kHz, 8 kHz
Net Presets	99 system presets per channel
Internal GPS	SAASM receiver (commercial GPS optional)
Management Tool	Communications Planning Application (CPA); JENM compatible, ATOM
Frequency Tuning	10 Hz from 30-520 MHz 100 Hz from 762 MHz-2.5 GHz
Software Environment	SCA v2.2.2

TRANSMITTER	
Power Output	Narrowband: 10 W SATCOM: 20 W Wideband: 20 W peak/10 W average (max)
Antenna Outputs	Single 30-2500 MHz N-type connector per channel
Harmonic Suppression	> 53 dBc
Frequency Stability	0.5 ppm
Spurious Suppression	> 53 dBc

RECEIVER	
Sensitivity (for 10db SINAD)	LOS FM 30-512 MHz: -116 dBm LOS AM 90-512: -103.5 dBm with 30% modulation
Adjacent Channel Rejection	> -40 dB
Squelch	Digital (CDCSS or CTCSS), tone, noise or none

POWER	
Power Input	19-34 VDC
Power Consumption	120 W max
Battery Types	BA-5590/U, BA-5390/U, BB-2590/U

SECURITY	
Encryption	Sierra™ II-based, Type 1 (Suite A/B) NSA Certified TOP SECRET and below
Encryption Modes	KY-57 (VINSON), KYV-5 (ANDVT), KG-84C, FASCINATOR, HAIPE (PPK, FFV), AES (Type 1 & 3), TSVICIS
Key Fill Device Compatibility	AN/CYZ-10 DTD, KOI-18, KYK-13, KYX-15, MX-18290, AN/PYQ-10, KIK-11, KIK-20
Key Storage	Up to 300 per channel
Modes	DS101, DS102, mode 2/3, USB

MODES AND WAVEFORMS	
Narrowband Waveforms	AM/FM, ARROW, HAVEQUICK I/II, HPW, SATURN, SINGGARS, VHF/UHF LOS
Wideband Waveforms	SRW, ANW2®, ANW2®D, WREN-TSM™*
UHF SATCOM Waveforms	MIL-STD-188-181B dedicated channels MIL-STD-188-182A, 183A DAMA MIL-STD-188-181C, 183B, IW Phase 2 HPW, MUOS
Voice and Data Modes	Simplex or half duplex MIL-STD-188-113 CVSD STANAG 4198 LPC-10e STANAG 4591 MELPe Full duplex capable
Transmission Modes	AM, ASK, FM, FSK, PSK, CPM, GMSK

PHYSICAL	
Dimensions (no handles)	3.50 H x 7.36 W x 9.51 D in (without battery) 3.50 H x 7.36 W x 14.25 D in (with battery)
Volume	181 in3 (without battery) 264 in3 (with battery)
Weight	8.9 lbs (without battery) 12.7 lbs (with battery)
Color	CARC green 383

ENVIRONMENTAL	
Shock/Vibration	MIL-STD-810G for tracked and wheeled vehicles, ADTP-2404D ballistic shock
Immersion	2 meter salt water (MIL-STD-810G)
Temperature	Operating: -40°F to 131°F (-40°C to +55°C) Storage: -40°F to 160°F (-40°C to +71°C)
EMI/RFI	MIL-STD-461F
Sand/Dust/Salt/Fog/Rain	MIL-STD-810G

INTERFACES	
External Data	USB, USB RNDIS host and device, Ethernet, RS-232
Audio	Standard 6 pin per channel
Antenna Port	Single N-type connector per channel
Programming	Communications Planning Application (CPA); JENM compatible, ATOM
Function Knob	OFF, ON, LD, Z
Remote Control	USB, RS-232, Remote Keypad Display Unit (RKDU), Software Keypad Display Unit, SNMP

L3Harris Falcon® IV AN/PRC-158 Multi-channel Manpack (MCMP)

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FAST. FORWARD.

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Melbourne, FL 32919

FALCON III® AN/PRC-160(V)

Wideband HF/VHF Tactical Radio System

The L3Harris Falcon III AN/PRC-160(V) is the smallest, lightest, fastest wideband HF manpack available. Engineered for advanced security and performance, the Wideband HF/VHF Tactical Radio System features industry-leading encryption, breakthrough data performance and interoperability with fielded Falcon II® HF radios, including the L3Harris AN/PRC-150(C).



This SWaP-optimized manpack delivers continuous coverage from 1.5 to 60 MHz with a single battery while providing 20 watts HF and 10 watts VHF power. With its high-speed wideband waveform, the AN/PRC-160(V) transmits data in bandwidths from 3 kHz to 24 kHz. Data rates of up to 120 kbps are supported through technology that optimizes channel selection and adapts the selected channel to real-time conditions.

The NSA-certified RT-2060(C)/U and RT-2061(C)/U, components of the AN/PRC-160(V)1 and AN/PRC-160(V)2, will protect the confidentiality of legacy and modern voice and data up to the U.S. TOP SECRET level with L3Harris Sierra™ II software programmable encryption.

This wideband manpack supports secure interoperability with Coalition and Partnership for Peace forces through modern algorithms, including the L3Harris proprietary Citadel® and AES encryption.

In addition to MIL-STD-188-141B ALE, a third-generation automatic link establishment per STANAG 4538, provides improved ease of use and high-performance reliability. The embedded SAASM or commercial GPS receiver ensures accurate Position Location Information for enhanced Situational Awareness.



Advanced Security and Power in a Lightweight Manpack

KEY BENEFITS

- > World's first and only Type 1 HF manpack meeting new NSA crypto-modernization requirements
- > Data rates up to 10 times greater than existing HF radios
- > Secure interoperability among U.S., Coalition and Partnership for Peace forces
- > Supports immediate radio replacement using existing L3Harris vehicular and base station equipment
- > Smallest, lightest, fastest HF manpack available today

GENERAL	
RT Nomenclature	RT-2060(C)/U part of AN/PRC-160(V)1 (SAASM GPS version) RT-2061(C)/U part of AN/PRC-160(V)2 (Commercial GPS version)
Frequency Range	1.5-59.999 MHz
Net Presets	75, fully programmable
RF Input/Output Impedance	50 ohm nominal, unbalanced
Frequency Hopping	Serial tone ECCM Falcon II interoperable
Automatic Link Establishment (ALE)	STANAG 4538 FLSU, MIL-STD-188-141B Appendix A, Appendix B (Linking Protection, AL-1)
Frequency Stability	$\pm 1 \times 10^{-6}$
Power Input	26 VDC (21.5-35 VDC)

TRANSMITTER	
Power Output	HF: 1, 5, 20 watts PEP, -1/+1 dB VHF: 1, 5, 10 watts FM
Audio Input	1.5 mV at 150 ohm or 0 dBm at 600 ohm for full rated output
Carrier Suppression	> 60 dB below PEP output (J3E mode)
Undesired Sideband Suppression	> 60 dB below PEP output
Antenna Tuning Capability	OE-505 10-foot (3 m) whip (1.6-60 MHz), RF-1940-AT001/RF-1941 dipole RF-1936, RF-1912, random wires, long wires
Vocoder	HF: LPC-10-52E (600/2400), MELP (600/1200/2400) VHF: CVSD

RECEIVER	
Sensitivity	SSB: -113 dBm (0.5 μ V) for 10 dB SINAD
Audio Output	12 mW at 1000 ohm to external handset
Squelch	Front panel adjustable, active squelch selectable
IF Rejection	> 80 dB
Image Rejection	> 80 dB (1st IF image)
AGC	Mode dependent, automatically selected
Intermodulation Distortion	-80 dB or better for two -30 dBm signals separated 30 kHz or more
Overload Protection	Receiver protected to 32 VRMS

SECURITY	
Encryption Modes	Supports legacy and modern algorithms
Encrypted Data	HF: MIL-STD-188-110C App. D, App. C, and main body serial-tone waveforms, STANAG 4415, STANAG 4539 VHF: WBFsk (16 kbps)

MODES AND WAVEFORMS	
Emission Modes	J3E (single sideband, upper or lower, suppressed carrier telephony) H3E (compatible AM single sideband plus full carrier) A1A, J2A (compatible CW), selectable; F3E (FM) and HF ECCM
Wideband HF Data	MIL-STD-188-110C Appendix D and Wideband HF Internet Protocol Data

PHYSICAL	
Dimensions	3.3 H x 7.9 W x 9.2 D in (8.3 H x 20 W x 23.4 D cm)
Weight	9.1 lbs (4.1 kg) without batteries
Color/Finish	CARC green

ENVIRONMENTAL	
Shock and Vibration	MIL-STD-810G for ground tactical
Immersion	1 meter of water (3 ft)
Temperature	-40°F to +159°F (-40°C to +71°C)
Sand/Dust/Salt/Fog/Rain	MIL-STD-810G

INTERFACES	
Data Interfaces	USB and Ethernet with adapter, synchronous or asynchronous (RS-232C)
Networking	Narrowband and wideband HF IP, SNMP, Automatic Position Reporting (PLI)

INCLUDED ACCESSORIES	
10515-0512-4200	Operator's manual
10512-0512-4000	Operator's card
10515-6648	Instruction sheet, dismount dipole adapter
10515-0512-4100	Field reference guide
RF-3070-AT242	GPS antenna for AN/PRC-160(V)1
12006-0017-02	GPS antenna for AN/PRC-160(V)2
10372-0240-02	OE-505 manpack antenna kit
10372-1260-01	Antenna assembly adapter
10372-1270-01	Dismount dipole adapter
10075-1399	H-250/U lightweight handset (modified)
12043-4800-01	Battery box
10303-1008-01	Ground stake kit
12043-2850-A006	Cable assembly program/data (USB)
RF-6705	Tactical Chat IP

OPTIONAL ACCESSORIES	
12200-8501-01	LPI/LPD Option
RF-5910-PS005	Falcon III Battery Eliminator
10553-0100-02	KDU Remote Control Kit
12083-0707-A003	USB/Ethernet® Adapter Cable

Falcon III® AN/PRC-160(V) Wideband HF Tactical Radio System

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