

L3HARRIS FALCON III®

RF-7800M-MP

Wideband Networking Manpack Radio

The L3Harris RF-7800M-MP employs next-generation ANW2[®]C and/or the M-TNW wideband waveform to seamlessly link dismounted soldiers with upper echelons through a self-forming, self-healing mobile ad-hoc network.

Leveraging wideband and narrowband interoperability, the radio covers the 30 MHz to 2 GHz range with 20 watts of transmit power, and is capable of fixed-site, vehicular and man-portable battery operation.



The L3Harris Wideband Networking Manpack Radio is software defined, ensuring rapid upgrades to future waveforms and capabilities. Quicklook ECCM ensures communications in high-noise environments.

TALON CUID and HAVEQUICK waveforms are also available for reliable ground-to-air communications and interoperability with fielded airborne platforms.

This battle-proven manpack stores and operates on multiple mission fill files so soldiers can switch waveforms or networks on the move. An embedded 12-channel GPS receiver enhances Situational Awareness with automatic friendly-force Position Location Information and provides hopping waveform Time-of-Day synchronization.



PORTABLE AD-HOC NETWORKING

KEY BENEFITS

- > Mobile ad-hoc networking powered by ANW2C and/or M-TNW waveform
- > Wideband and narrowband capable
- > Interoperable with fielded airborne platforms
- > Software defined with SCA v2.2.2 platform
- > Communications secured through Acropolis™ II Type 3 encryption

GENERAL	
Frequency Range	30-2000 MHz Narrowband: VHF 30-225 MHz UHF: 225-512 MHz SATCOM: RX 243-270 MHz and TX 292-318 MHz Wideband: UHF/L-band: 225-2000 GHz
Channel Spacing/ Bandwidth	Narrowband: 8.33 kHz, 12.5 kHz, 25 kHz SATCOM: 25 kHz Wideband: 500 kHz, 1.2 MHz, 2.5 MHz, 5 MHz FM deviation: 5 kHz, 6.5 kHz, 8 kHz
Net Presets	99 system presets
GPS	Internal Commercial Jupiter JF2 GPS
Management Tool	Windows®-based Communications Planning Application (CPA)
Frequency Tuning	Front panel: 100 Hz ASCII remote: 1 Hz Highband: 5 kHz ANW2C: 5 kHz
Software Environment	SCA v2.2.2 (compatible)

TRANSMITTER	
Power Output	Narrowband: 10 W SATCOM: 20 W Wideband: 20 W peak/5 W average (max)
Antenna Outputs	Narrowband: 30-512 MHz (J5) SATCOM: 243-318 MHz (J7) Wideband: 225- 2000 GHz (J8)
Harmonic Suppression	> 50 dBc
Frequency Stability	0.5 ppm

RECEIVER	
Sensitivity (for 10db SINAD)	LOS FM: 30-152 MHz; -118 dBm LOS AM: 90-512 MHz; -110 dBm with 70% modulation TACSAT FM: 243-270 MHz; -120 dBm
Adjacent Channel Rejection	> -40 dB
Squelch	Noise, tone, digital (CDCSS, CTCSS), none

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

SECURITY	
Encryption	Acropolis™ II
Encryption Modes	Type 3 AES, Type 3 DES, Citadel® I/II
Key Fill Device Compatibility	Windows-based Communications Planning Application (CPA)
Key Storage	Up to 180
Modes	USB

MODES AND WAVEFORMS	
Narrowband Waveforms	AM/FM, VHF/UHF LOS, HAVEQUICK I/II (optional), Quicklook I/II, TALON (optional)
Wideband Waveforms	ANW2®C, ROVER III L-band receive (optional)
UHF SATCOM Waveforms	Satellite Time-Division Multiple Access Capability (STC) (optional)
Voice and Data Modes	Simplex or half duplex, CVSD, MELP, full duplex capable
Transmission Modes	AM, ASK, FM, FSK, PSK, GMSK

PHYSICAL	
Dimensions (no handles)	7.4 W x 3.4 H x 8.8 D in (without battery) (18.8 W x 8.5 H x 22.4 D cm) 7.4 W x 3.4 H x 13.5 D in (with battery) (18.8 W x 8.5 H x 34.2 D cm)
Volume	155 in³ (without battery) 235 in³ (with battery)
Weight	7.9 lbs (3.58 kg) (without battery)
Color	34094 (green) per FED-STD-595B

ENVIRONMENTAL	
Shock and Vibration	MIL-STD-810G for tracked vehicles, wheeled vehicles, shipboard
Immersion	3.3 feet (1 meter) of water
Temperature	Operating: -40°F to +158°F (-40°C to +70°C) Storage: -40°F to +185°F (-40°C to +85°C)
EMI/RFI	MIL-STD-461F
Sand/Dust/Salt/Fog/Rain	MIL-STD-810F

INTERFACES	
External Data	USB, RNDIS, Ethernet, RS-232, RS-422
Audio	Standard 6-pin
Antenna Port	J5 LB: 50-ohm (TNC) J7 SAT: 50-ohm (BNC) J8 HB: 50-ohm (N-type)
Programming	USB
Function Knob	OFF, CT, PT, LD, Z
Remote Control	USB, RS-232, Remote Keypad Display Unit (RKDU), Software Keypad Display Unit (SKDU)

See L3Harris Product Catalog for accessories.

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