

RF-5800M-MP
FALCON II®
ADVANCED TACTICAL
RADIO SYSTEM



Ask about secure ground/air interoperation
with Rockwell Collins airborne radios

*reliable tactical
communications through
enhanced, secure,
voice-and-data performance,
and reduced size/weight*

The RF-5800M-MP is a member of the FALCON II® family of multiband tactical radio systems. This advanced multimode, multimission manpack radio supports continuous operation across the 30 MHz to 512 MHz frequency range. This allows the RF-5800M-MP to meet mission needs for ground-to-ground, ground-to-air, and ship-to-shore communications in a rugged, compact package.

Voice communications are provided in a variety of formats and channel spacing to ensure interoperability with existing ground, air, air traffic control, and Land Mobile Radio (LMR) systems.

Built-In Multimedia Data Communications are fast and flexible. The standard high speed modem uses FSK or ASK modulation and is compatible with many older data communication systems, which supports rates up to 64 Kbps for added throughput and reduced on-air time.

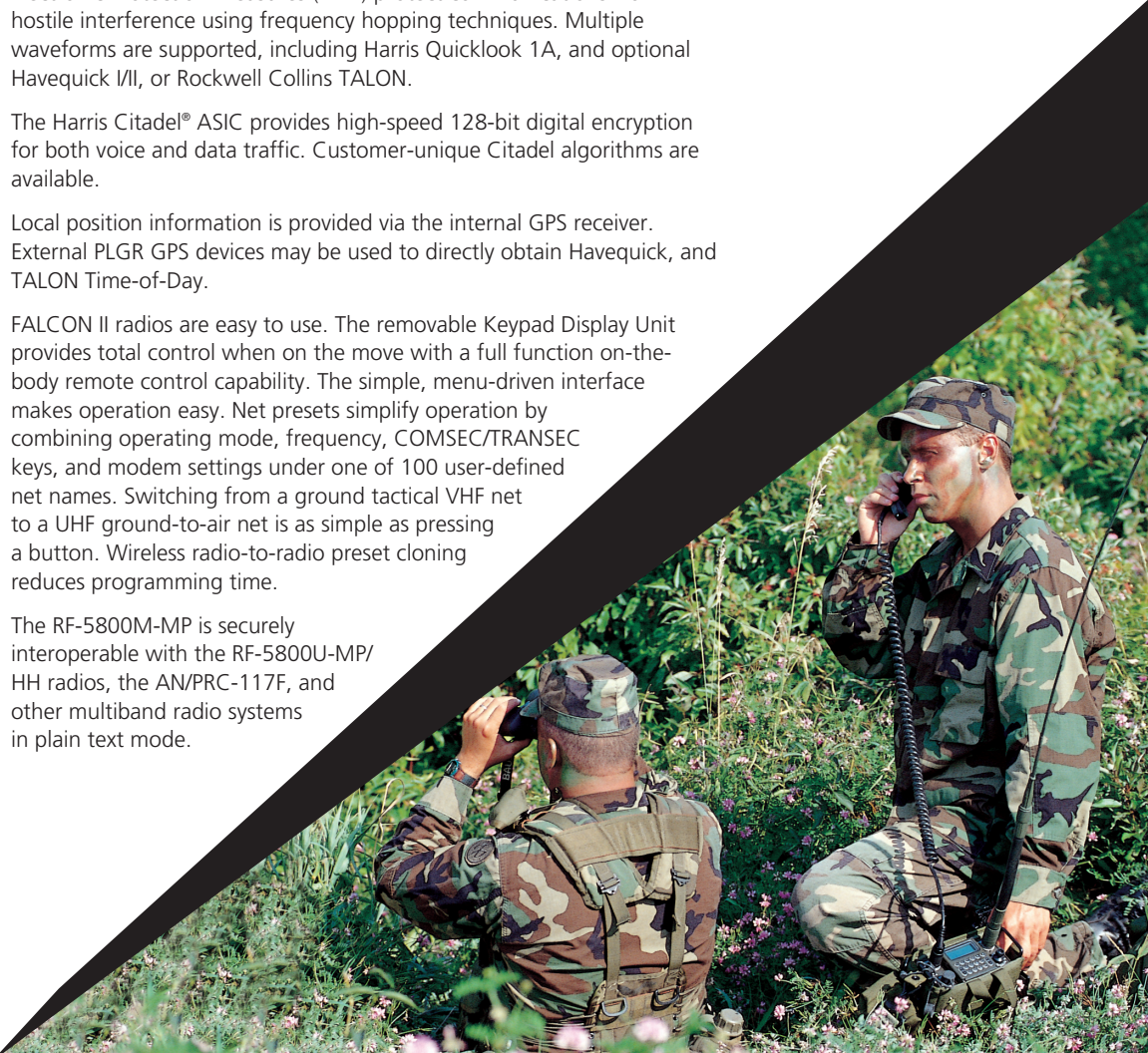
Electronic Protection Measures (EPM) protect communications from hostile interference using frequency hopping techniques. Multiple waveforms are supported, including Harris Quicklook 1A, and optional Havequick I/II, or Rockwell Collins TALON.

The Harris Citadel® ASIC provides high-speed 128-bit digital encryption for both voice and data traffic. Customer-unique Citadel algorithms are available.

Local position information is provided via the internal GPS receiver. External PLGR GPS devices may be used to directly obtain Havequick, and TALON Time-of-Day.

FALCON II radios are easy to use. The removable Keypad Display Unit provides total control when on the move with a full function on-the-body remote control capability. The simple, menu-driven interface makes operation easy. Net presets simplify operation by combining operating mode, frequency, COMSEC/TRANSEC keys, and modem settings under one of 100 user-defined net names. Switching from a ground tactical VHF net to a UHF ground-to-air net is as simple as pressing a button. Wireless radio-to-radio preset cloning reduces programming time.

The RF-5800M-MP is securely interoperable with the RF-5800U-MP/HH radios, the AN/PRC-117F, and other multiband radio systems in plain text mode.



Specifications for the RF-5800M-MP

General

Frequency Range	30 to 512 MHz
Net Presets	100, fully programmable
Frequency Stability	$\pm 1.0 \times 10^{-6}$
Channel Spacing	8.33, 12.5, 25 (kHz)
FM Deviation	5.0, 6.5, 8.0 (kHz)
Emission Modes	FM Analog Voice, AM Voice ASK/FSK 16 Kbps CVSD Voice ASK/FSK 16 Kbps Data Trellis Coded Modulation (TCM) 48 & 64 Kbps Data
RF Input/Output	
Impedance	50 ohm nominal, unbalanced
Power Input	26 VDC (20.5 to 32 VDC)
Data Interface	Synchronous or asynchronous 75 bps–115 Kbps (MIL-STD-188-114A; RS-232C and RS-422)
Dimensions	10.5W x 3.2H x 13.5D in, with batteries (26.7W x 8.1H x 34.3D cm)
Radio Weight	10 lbs. (4.7kg) without batteries

Receiver

Sensitivity: FM	–116 dBm minimum for 10 dB SINAD
AM	–110 dBm for 70% modulation, 10 dB SINAD
Audio Output	12 mW at 1000 ohm to external handset
Squelch	Front panel adjustable, quieting or tone squelch selectable
Image Rejection	Greater than 60 dB
IF Rejection	Greater than 75 dB
AGC	Mode dependent, automatically selected

Transmitter

Power Output	30-90 MHz FM: 1-10 Watts PEP 90-400 MHz FM: 1-20 Watts PEP 400-512 MHz FM: 1-10 Watts 90-512 MHz AM: 1-10 Watts PEP
Audio Input	2.6 mV at 150 ohm or 0 dBm at 600 ohm for full rated output
Harmonic Suppression	Greater than 40 dBc
Local Oscillator	
Radiation	Less than –70 dBm
Spurious Outputs	–50 dBc typical (greater than 200 kHz from Fc)

Antenna Tuning

Capability	50 ohm output 44-inch Blade Antenna (30-108 MHz) 10-foot Whip Antenna (30-108 MHz) 13-inch Flexible VHF/UHF Antenna (90-512 MHz)
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Environmental

Test Method	Per MIL-STD-810E
Vibration	Ground Tactical
Immersion	3 feet (1 meter)
Operating Temperature	–40°C to +70°C

Additional Features

QUICKLOOK 1A frequency hopping
Swept Tone Beacon Preset
HAVEQUICK guard receiver
CTCSS/CDCSS Rx/Tx tone support
for LMR repeater interoperability
Wireless radio-to-radio preset cloning
10 channel LOS net scanning
Detachable Keypad Display Unit
48/64 Kbps Data
Citadel® -Based Digital Encryption
Internal 12-Channel GPS Receiver
Situational awareness

Options

ECCM Modes*	HAVEQUICK I/II TALON™
Remote Control	RF-5800R-RC501 or 511 Remote Control System
RPA	RF-6550V radio programming application Programming cable 10513-0740-A006
Retransmission	Cable 10511-0717-01

*Contact Harris for custom waveforms

Specifications subject to change without notice.



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