



Tactical Radio Products

RF-5800V-MP **FALCON® II ADVANCED** **VHF TACTICAL** **RADIO SYSTEM**



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

The RF-5800V-MP, a member of the FALCON II family, is designed with a common digital platform, man-machine interface, and accessories. The transceiver provides continuous coverage in the **30 MHz to 108 MHz** frequency band with 10W output power (50W amplifier optional).

Voice Communications are provided through the standard 6-pin handset/headset connector, or the fixed-level audio interface for intercom systems. Selectable FM deviation, squelch settings, and CVSD digital voice ensure compatibility with fielded systems.

Built-In **Multimedia Data Communications** are fast and flexible. The standard 16-kilobit per second modem uses FSK modulation and is compatible with many older data communication systems. The optional high-speed modem 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. The easy to use Harris Quicklook waveform is standard and provides hop rates exceeding 100 or 300 hops per second.

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

An optional **internal GPS receiver provides** local position information. The radio displays GPS information in a selectable format (latitude/longitude, grid, etc) and map datum. **Automatic Position Reporting** transmits the radio position securely to other radio net users, where it is displayed on the radio front panel or digital map using the RF-6910 Situational Awareness application.

The **removable Keypad/Display Unit** provides total control when on the move with a full function on-the-body remote control capability. The menu-driven interface makes operation easy. Net presets simplify operation by combining operating mode, frequency, COMSEC/TRANSEC keys, and modem settings under one of 25 user-defined net names. Switching nets is as simple as pressing a button. Radio-to-radio Wireless Cloning makes deployment quick and mistake-free.

The RF-5800V-MP **Advanced Tactical Networking** Capability is unsurpassed. The industry standard PPP serial interface allows Internet-style services to be extended to the battlespace without additional equipment. When used with the RF-6010 Tactical Network Access Hub, the mobile user can place and receive telephone calls directly from the radio keypad.

The RF-5800V-MP is **interoperable** with VHF band radio systems, including AN/PRC-77, AN/PRC-117, AN/VRC-12, other FALCON II systems, and many other standard radios.



Specifications for the RF-5800V-MP

General

Frequency Range	30 to 108 MHz
Net Presets	25, fully programmable
Frequency Stability	$\pm 2.0 \times 10^{-6}$
Emission Modes	FM Analog Voice FSK 16 kbps CVSD Voice FSK 16 kbps Data Trellis Coded Modulation (TCM) 48 & 64 kbps Data (option)
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 (RS-232C; MIL-188-114A; RS-422)
Dimensions	7.2W x 3.2H x 13.5D inches, with batteries (18.3W x 8.1H x 34.3D cm)
Radio Weight	7.5 lbs (3.4 kg), without batteries
Finish	CARC Green 383

Receiver

Sensitivity: FM	-118 dBm (0.28 μ V) minimum for 10 dB SINAD
Audio Output	12 mW at 1000 ohm to external handset
Squelch	Front panel selectable: Off/Noise/Tone
Image Rejection	Greater than 90 dB
IF Rejection	Greater than 80 dB
AGC	Mode dependent, automatically selected
Intermodulation	
Distortion	Input intercept point: 0 dbm > 300 kHz; 15 dBm > 20%
Overload Protection	Receiver protected to 32 VRMS

Transmitter

Power Output	1,4,10 watts (User Selectable)
Audio Input	1.5 mV at 150 ohm or 0 dBm at 600 ohm for full rated output
Harmonic Suppression	Greater than 50 dBc
Local Oscillator	
Radiation	Less than -70 dBm
Spurious Outputs	-60 dBc typical (Greater than 200 kHz from Fc)
Antenna Tuning	
Capability	50 ohm output 48-inch Blade Antenna 104-inch Whip Antenna (30-108 MHz)

Environmental

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

RF-5800V-MP Features

High Speed Data	48/64 kbps Data – Optional
ECCM*	Quicklook 1A, Quicklook 2
Digital Voice/ Data Encryption*	Citadel™-Based Digital Encryption Optional
GPS	Internal 12-Channel GPS Receiver Optional

*Contact Product Management for custom waveforms

RF-5800V-MP Optional Accessories

RF-5800V-V201	50 Watt Vehicular Adapter (less transceiver)
RF-5800V-V203	50/50 Watt Dual VHF Vehicular Adapter (less transceivers)
BB-590/U	Ni-Cd Battery
BB-390A/U	Nickel Metal Hydride Battery
BA-5590/U	Lithium Battery
10512-0201-01	48-inch Blade Antenna Set. Includes flexible base
10512-0240-01	104-inch Whip Antenna Set. Includes flexible base and carrying bag
RF-5800V-SK	Site Spares Kits – various
10512-0465-01	FALCON II backpack carrying bag
RF-3020	Lightweight Headset
RF-6010	Tactical Network Access Hub

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Specifications subject to change without notice.



RF-5800V-MP with RF-5800V-V201 Vehicular Adapter Kit

