HARRIS®

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RF-5800M-V

FALCON II® LONG-RANGE VEHICLE AND FIXED SITE COMMUNICATIONS SYSTEM

reliable multiband, secure, air and ground communications, and 50 Watt transmit power

The RF-5800M-V is an advanced radio amplifier that provides up to 50 watts FM transmit power and 20 watts AM transmit power, with full circuit protection and DC filtering. The amplifier is used with the RF-5800M family of transceivers. It supports continual frequency coverage and all modes of operation across the 30 MHz to 512 MHz frequency range.

The system has antenna port programming and includes options for mobile and base station operations, with all required mounting, antennas systems, and associated power supplies and cables. An optional pull and go version allows for quick conversion to manpack configuration, including all manpack radio accessories and antennas. Other versions are available, which provide either a VHF/LOW (FM) filter, UHF-AM filter, or both.

When used in conjunction with the RF-5800M multi-band transceiver, the system provides voice communications in a variety of formats and channel spacing, ensuring interoperability with existing ground, air, ATC, and Land Mobile Radio systems.

Built-In data modems include a high-speed modem using FSK or ASK modulation for compatibility with many older data communication systems, which supports data rates up to 64 kbps throughput, reducing on-air time.

Electronic Counter Counter Measures (ECCM) use frequency hopping to protect communications from hostile interference. Optional systems include, Harris QUICKLOOK 1A, HAVEQUICK I/II, and Rockwell-Collins TALON™.

The Harris Citadel® ASIC chip provides high-speed 128-bit digital encryption for both voice and data traffic, with customer-unique algorithms available. Global Positioning capability displays real time position information and Time of Day synchronization via the built in GPS receiver, or use of an external device. All Falcon II radios have a full function remote control capability via the removable Keypad Display Unit. The menu-driven interface allows programming and control of 100 nets. Radio-to-radio cloning and the radio programming application assure accurate and quick radio net programming.

The RF-5800M-V and multiband transceiver are interoperable with most VHF/FM/AM and UHF/AM radios systems in use today.

Specifications for the RF-5800M-V

***Specifications are for the RF-5800M-V when used with the RF-5800M-MP transceiver.**

General

Frequency Range	30 to 512 MHz
Net Presets	100, fully programmable
Frequency Stability	±1.0 x 10^{-6}
Channel Spacing	5, 6.25, 8.33, 12.5, 25 (kHz)
Emission Modes	FM Analog Voice, AM Voice ASK/FSK 16 kbps CVSD Voice ASK/FSK 16 kbps Data TCM 48/64 kbps Data
RF Input/Output Impedance	50 ohm nominal, unbalanced
Power Input	26 VDC (22 to 32 VDC)
Data Interface	Synchronous or asynchronous 75 bps – 115 kbps (RS-232C; MIL-188-114A; RS-422)
Dimensions	15W x 9.90H x 13.98D inch
System Weight	60 lb

Receiver

Sensitivity: FM	–116 dBm minimum for 10 dB SINAD (LNA on) –110 dBm minimum for 10 dB SINAD (LNA off)
AM	–110 dB for 70% modulation, 10 dB SINAD (LNA on) –104 dBm for 70% modulation, 10 dB SINAD (LNA off)
Audio Output	12 mW at 1000 ohm to external handset or optional speaker
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

Maximum Power	VHF LOW and VHF/HIGH (FM): 50 Watts UHF (AM): 20 Watts
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)

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-RC501or 511 Remote Control System
RPA	RF-6550V radio programming application
Retransmission	Programming cable 10513-0740-A006 Cable 10511-0717-01

*Contact Harris for custom waveforms

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