

RF-5800M-VAU

FALCON® II

VEHICLE RADIO

COMMUNICATIONS

SYSTEM

reliable ground-to-ground

and ground-to-air

communications;

software reprogrammable



The RF-5800M-VAU is a member of the Falcon® II family of multiband tactical radio systems. This advanced software reprogrammable digital radio supports continuous operation across the 30 MHz to 512 MHz band with 50 Watt transmit power. The RF-5800M-VAU meets the need for both military and civilian ground-to-ground and ground-to-air communications while providing interoperability with Land Mobile Radio (LMR) systems.

Voice communications are provided in 8.33, 12.5, and 25 kHz channels to support the evolving air traffic control standards. Digital voice is supported at 16 kbps using CVSD. Digital data is supported at rates of 16 kbps standard (up to 64 kbps).

Standard features of the RF-5800M-VAU include 100 programmable radio presets, full RS-232 remote control support, multiband scan, wireless radio-to-radio preset cloning, a swept frequency distress beacon (available on any channel), and CTCSS tone support for LMR repeaters.

Quicklook 1A and HAVEQUICK II ECCM are available as software options. When coupled with the optional internal GPS receiver, HAVEQUICK TOD can be obtained directly without costly external devices.

Collocation filter options are available for low band VHF (30 MHz to 90 MHz) and UHF (225 MHz to 400 MHz).

The optional Harris CITADEL® based encryption provides high speed digital encryption for either voice or data traffic and can be customized as required.

The RF-5800M-VAU is interoperable with the URC-200, AN/PRC-113, and AN/PRC-117 radios.



Specifications for the RF-5800M-VAU

General

Frequency Range	30 to 512 MHz
Net Presets	100, fully programmable
Frequency Stability	$\pm 1.0 \times 10^{-6}$
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 option
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
Radio 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
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 Output	VHF LOW FM: 50 W VHF HIGH FM: 50 W VHF HIGH AM: 50 W PEP UHF FM: 50 W UHF AM: 50 W 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)

Environmental

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

RF-5800M-VAU Features*

Full 50 W FM output power
Full 50 W AM PEP output power
Swept frequency beacon
8.33 kHz channel support
CTCSS tone support for LMR repeater interoperability
Radio-to-radio preset cloning

RF-5800M-VAU Options

High Speed Data	48/64 kbps data - Option
ECCM	Quicklook 1A; HAVEQUICK II
Digital Voice/ Data Encryption	Citadel-Based Digital Encryption Option
GPS	Internal 12-Channel GPS Receiver Option
Collocation Filtering*	VHF Low Band (30 - 90 MHz) (Optional) UHF Band (225 - 400 MHz) (Optional)

*Factory Installed Option

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