

Tactical Radio Products

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.

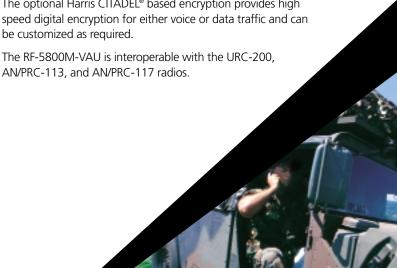
Voice communications are provided in 8.33, 12.5, and 25 kHz channels to support the evolving air traffic control standards. Digital voice is supported at 16 kbps using CVSD. Digital data is supported at rates of 16 kbps standard (up to 64 kbps).

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



Specifications for the RF-5800M-VAU

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

es 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 VHF LOW FM: 50 W

Output 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 $+70^{\circ}\text{C}$

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

