

**AN/PRC-117F(C)-HQ
GROUND-TO-AIR
HAVEQUICK I/II
RADIO**



reliable ground-to-air

features your missions

demand.

Enhanced functionality

AN/PRC-113 replacement

radio.

The AN/PRC-117F(C)-HQ covers the entire 30 to 512 MHz frequency range while offering embedded COMSEC, and Havequick I/II ECCM capabilities. This advanced software reprogrammable digital radio provides 20W FM and 10W AM transmit power along with Have Quick I/II capability in the UHF band.

It is fully compatible with the TSEC/KY-57 in voice and data modes, including full transmit and receive SARK operations mode. The radio supports both DS-101 and DS-102 fill interfaces and all common fill devices for Havequick Word-of-Day (WOD) and encryption key information. The AN/PRC-117F(C)-HQ also supports a KY-57/VINSON compatible voice/data interface to ease backwards interoperability with fielded equipment.

The radio is interoperable with Have Quick I/II ECCM operation in voice and data modes. When coupled with the standard external Precise Lightweight GPS Receiver (PLGR), Havequick TOD can be obtained directly. NMEA compatible GPS units can also be used.

Advanced key management techniques help manage the diverse embedded COMSEC and TRANSEC capabilities of the transceiver. Over 75 keys can be stored and transferred by securely encrypting them using benign key and fill techniques. Removal of the CIK [contained in the Keypad/Display Unit (KDU)] declassifies the keyed radio. Reattachment of the KDU restores the previous operating condition.

A flexible data interface is compatible with the RS-232E, MIL-STD-188-114A, or RS-422 data standards. The interface supports software or hardware flow control at standard terminal and tactical data rates in synchronous or asynchronous modes.

Radio operating parameters and status can be accessed through the remote control capability of the radio. The asynchronous remote control data interface is either RS-232E or RS-422. A built-in-test feature checks system performance down to the module level.



Specifications for the AN/PRC-117F(C)-HQ

General

- **Frequency Range:**
 - VHF LOW: 30.000 to 89.999 MHz
 - VHF HIGH: 90.000 to 224.999 MHz
 - UHF: 225.000 to 512.000 MHz
- **Channel Bandwidth**
 - VHF LOW: 25 kHz
 - VHF HIGH: 8.33 kHz, 12.5 kHz, 25 kHz
 - UHF: 5 kHz, 8.33 kHz, 12.5 kHz, 25 kHz
- **Preset Channels**
 - 100 Fixed/Hopping presets
- **Modulation**
 - VHF LOW: FM (5, 6.5 or 8 kHz), FSK
 - VHF HIGH: FM (5, 6.5 or 8 kHz); AM (90%), FSK, ASK
 - UHF: FM (5, 6.5 or 8 kHz); AM (90%), FSK, ASK
- **Power Supply**
 - 26 VDC Nominal, accepts two BA-5590, BA-390A/U, or BB-590 batteries
- **Environmental:** Tested to MIL-STD-810E
 - Shock/Vibration: Ground mobile environment
 - Immersion: 1m of water
 - Operating Temperature: -40°C to +70°C
 - Altitude: Operate to 40,000 ft.
- **Size (maximum envelope)**
 - 3.2H x 10.5W x 9.6D in. (w/o battery case)
 - 3.2H x 10.5W x 13.5D in. (w/battery case)
- **Displacement Volume**
 - 235 in³ (w/o battery case); 375 in³ (w/battery case)
- **Weight**
 - 15.9 lb (w/2 BA-5590 batteries and battery case)
 - 9.8 lb (w/o batteries or battery case)
- **Voice Modes**
 - Simplex or Half-duplex
 - Wideband Cipher Text Digital Voice (16 kbps; CVSD; KY-57)
 - Havequick I/II ECCM (UHF band only)
- **Data Modes**
 - Simplex or Half-duplex
 - Asynchronous data (75, 150, 300, 600, 1200, 2400, 4800, 9600, 19.2k, 38.4k, 57.6k, 115.2k)
 - Synchronous data (16k bps)
 - Wideband Cipher Text Digital Data (16 kbps; KY-57)
 - Havequick I/II ECCM (UHF band only)
- **COMSEC Interoperability**
 - KY-57 VINSON; KG-84C (modes 1, 2, 3, 4); Fascinator
- **COMSEC Features**
 - One Red KEK, One Cryptographic Ignition Key, Over-the-Air Rekey (OTAR), including full SARK capability, storage for over 75 black keys of type TrTEK, TEK, or KEK
- **COMSEC Fill Devices**
 - KYK-13, KOI-18, KYX-15, AN/CYZ-10 DTD (supports DS-101 and DS-102 fill formats)
- **TRANSEC Interoperability**
 - Havequick I/II
- **TRANSEC Fill Device**
 - AN/CYZ-10 DTD, KYK-13, KOI-18
- **GPS Capability**
 - External dedicated interface, PLGR and NMEA protocol compatible
- **External Data Interfaces**
 - RS-232E, MIL-STD-188-114A, RS-422 balanced
- **Remote Control Capability**
 - Full remote control — RS-232E or RS-422 balanced interface
 - Removable Keypad/Display Unit (up to 250 feet)
- **Interoperable Radios**
 - AN/PRC-117D(V)2; AN/VRC-94D(V)2; AN/PRC-119A CNR, AN/PRC-113; AN/PRC-77, PSC-5A/C/D

Transmitter Specifications

- **Output Power**
 - 30-90 MHz FM: 1-10 Watts
 - 90-420 MHz FM: 1-20 Watts
 - 90-420 MHz AM: 1-10 Watts Avg.
 - 420-512 MHz FM: 1-10 Watts
 - 420-512 MHz AM: 1-4 Watts Avg.
- **Output Power Selection:** Variable in 1 dB steps
- **Harmonic Suppression:** Greater than 40 dBc
- **Frequency Stability:** 1×10^{-6}

Receiver Specifications

- **Sensitivity**
 - FM: -116 dBm for 10 dB SINAD
 - AM: -110 dBm for 10 dB SINAD, 70% modulation
- **Image Rejection**
 - Greater than 60 dB

Optional Accessories

- VRC-83 replacement when configured as a VRC-103 (50 Watt PEP output power)

Specifications are subject to change without notice.



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