The AN/PRC-150(C) is a member of the Falcon® II family of multiband tactical radio systems. It is an advanced HF-SSB/VHF-FM manpack radio that provides reliable tactical communications through enhanced secure voice and data performance, networking, and extended battery life. In addition to the HF capability, the transceiver’s extended frequency range (to 60 MHz) provides secure FSK 16 kbps CVSD voice and data in the VHF band. The NSA-certified AN/PRC-150(C) provides U.S. Type 1 voice and data encryption compatible with ANDVT/KY-99, ANDVT/KY-100, VINSON/KY-57, and KG-84C cryptographic devices, eliminating the need for external encryption. An integral Citadel® encryption mode offers secure communication interoperability with coalition and Partnership for Peace forces.

High speed data rates, up to 9600 bps (HF), and selectable ARQ modes reduce on-the-air transmission time and enhance secure data transmission for improved communications reliability and throughput. The combined robust digital voice (MELP, LPC-10) and serial tone data modem operate over poor communication channels. The AN/PRC-150(C) includes a last ditch voice mode that transmits digital voice using ultra robust 3G waveforms for operation in channels where no other waveforms will work.

A serial-tone ECCM waveform with DSP-based excision filtering and a 600 bps MELP vocoder are combined to provide reliable, secure HF communications in the presence of jamming. Secure digital voice, 75 to 2400 bps data, and ARQ are supported in the ECCM mode.

In addition to MIL-STD-188-141B ALE, the AN/PRC-150(C) includes STANAG 4538 third generation HF Link Automation. It provides high performance ALE and data link protocols, providing superior linking and error-free data transfer. The radio also provides Scope Command telephony calling capability.

The AN/PRC-150(C) can connect to a standard PLGR GPS device. The accurate GPS timing data can be used for ECCM and advanced ALE synchronization.

Integrated telephony capability allows the radio operator to place and receive telephone calls using the radio keypad when used with the RF-6010 Tactical Network Access Hub.

The data capability and network management features of the radio utilize industry standard IP-based protocols to provide fast, simple, and direct communications.
### Specifications for the AN/PRC-150(C) Series

#### General
- **Frequency Range**: 1.6 to 59.999 MHz
- **Net Presets**: 75, fully programmable
- **Frequency Stability**: ±0.5 x 10⁻⁶
- **Emission Modes**: J3E (single sideband, upper or lower, suppressed carrier telephony), H3E (compatible AM single sideband plus full carrier), A1A, J2A (compatible CW), selectable; F3E (FM)
- **RF Input/Output Impedance**: 50 ohm nominal, unbalanced
- **Power Input**: 26 VDC (21.5 to 32 VDC)
- **Data Interface**: Synchronous or asynchronous (RS-232C; MIL-STD-188-114A)
- **Dimensions (with battery case)**: 10.5W x 3.5H x 13.2D inches (26.7W x 8.1H x 34.3D cm)
- **Radio Weight**: 10 lb (4.7 kg) without batteries

#### Receiver
- **Sensitivity**: 
  - SSB: –113 dBm (0.5 µV) minimum for 10 dB SINAD
- **Audio Output**: 15 mW at 1000 ohm to external handset
- **IF Rejection**: Greater than 80 dB
- **Image Rejection**: Greater than 80 dB (First IF image)
- **Intermodulation Distortion**: –80 dB or better for two –30 dBm signals separated 30 kHz or more
- **Overload Protection**: Receiver protected to 32 VRMS

#### Transmitter
- **Power Output**: 1, 5, 20 watts PEP/Average -1/+2 dB (1, 5, 10 watts FM)
- **Audio Input**: 1.5 mV at 150 ohm or 0 dBm at 600 ohm for full rated output
- **Carrier Suppression**: Greater than 60 dB below PEP output (J3E mode)
- **Undesired Sideband Suppression**: Greater than 60 dB below PEP output
- **Spurious Outputs**: –50 dB relative to rated output, except harmonics which are –40 dB
- **Antenna Tuning Capability**: OE-505 10-foot (3 m) whip (1.6 to 60 MHz)
- **Environmental**
  - **Test Method**: Per MIL-STD-810E
  - **Vibration**: Ground Tactical
  - **Immersion**: 3 ft. (9.1 m) of water
  - **Operating Temperature**: –40˚C to +70˚C

#### HF Features
- **Encrypted Data**: 
  - MIL-STD-188-110B Application C (9600 bps and 12,800 bps uncoded), STANAG 4225 (2400 bps), STANAG 4415 (75 bps), STANAG 4539 (9600 bps), FSK (600 bps)
  - VHF: FSK (16 kbps)
- **Automatic Link Establishment (ALE)**: STANAG 4538 FLUJ, MIL-STD-188-141B Appendix A with Appendix B AL-1 LP (including the Scope Command telephony call type), Serial Tone ECCM
- **Frequency Hopping Vocoder**: HF: LPC-10-52E (600/2400) MELP (600/2400), VHF: CVSD
- **Data Link Layer Protocol (ARQ)**: STANAG 4538 (3G), pFED-STD-1052

#### VHF Features
- **Data**: Wideband FSK (16 kbps)
- **Voice Digitization**: CVSD (16 kbps)

#### AN/PRC-150(C)
- **COMSEC Interoperability**: ANDVITY-99, ANDVITY-100, KG-84C, KY-57 VINSON (VHF), CITADEL (coalition)

#### Accessories & Options
- **RF-5800H-V001**: 150 Watt Vehicular Adapter
- **RF-5800H-B003**: 400 Watt Base Station Adapter
- **RF-5800H-V006**: 20 Watt Vehicular Adapter
- **BB-390B/U**: Nickel Metal Hydride Battery (Rechargeable)
- **BB-2590/U**: Lithium Ion Battery (Rechargeable)
- **10512-0465-01**: Backpack Carrying Bag
- **RF-5850-P5001**: Battery Eliminator
- **10535-8010-002**: LPI/D option

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