

## AN/VRC-110

**DUAL 50-WATT SINCGARS  
COMPATIBLE MULTIBAND  
VEHICULAR SYSTEM**



*Versatile  
multimission vehicular  
system for long-range  
communications reliability  
and quick-dismount  
applications*

The AN/VRC-110 is a fully integrated, high-performance multiband vehicular radio system with an advanced architecture that ensures performance comparable to existing SINCGARS systems. With 50 watts output power in the key 30 to 90 MHz band, the radio system also includes multiple power output options for the 90 to 512 MHz band.

Separate VHF and UHF antenna ports and automatic port switching on each amplifier provide the AN/VRC-110 with true multimission capability. The user can switch between ground, ground-to-air, or SATCOM communications by simply selecting the required net on the radio. The VHF antenna port provides a 50-watt output from 30 to 90 MHz, and the UHF antenna port optionally provides up to 20 watts UHF(90-512 MHz) and up to 50 watts SATCOM output.

The system includes the AN/PRC-152(C) Software Communications Architecture-based handheld radio, providing SINCGARS, Havequick II, VHF/UHF AM and FM, DAMA, and MIL-STD-188-181B with Advanced Narrowband Digital Voice Terminal (ANDVT) and up to 56 Kbps data. The AN/PRC-152(C) uses the Harris Sierra™ II software programmable encryption module, ensuring support of future waveforms and encryption modes.

To maintain communications in dismount operations, the system's "jerk-and-run" capability allows the AN/PRC-152(C) handheld radio to be quickly removed while remaining powered on. An integrated handheld battery charger provides simultaneous operation and charging of the handheld radio battery.

The AN/VRC-110 also provides VIC-1/3 interface and heat-sinking for an extended-use duty cycle. For vehicular applications, a standard MT-6352 SINCGARS install kit may be used. The multimode, multimission capabilities of the AN/VRC-110 maintain interoperability with legacy radio-equipped forces through the transition to JTRS.



## Specifications for the AN/VRC-110

### General

<b>Frequency Range</b>	30-512 MHz
<b>Transmission Modes</b>	FM, AM (90-512 MHz), PSK, CPM, FSK, ASK
<b>Presets</b>	99 (standard); unlimited using multiple mission plan files.
<b>Power Input</b>	20-32 VDC MIL-STD-1275B compliant
<b>Power Consumption</b>	25 Amps single, 50 Amps Dual at 20 VDS
<b>Tuning Resolution</b>	10 Hz

### Interfaces

<b>DATA</b>	RS-232
<b>Remote Control</b>	RS-232
<b>VHF Antenna Port</b>	50 Ohm BNC
<b>UHF Antenna Port</b>	50 Ohm BNC
<b>Audio</b>	VIC-1, VIC-3, LS-671 compatible
<b>Battery Charger</b>	Six-hour charge time

### Transmitter

<b>Output Power</b>	30-90 MHz: 5, 20 or 50 watts PEP 90-512 MHz: 20 watts PEP with 50 watts PEP in SATCOM bands
<b>Harmonic Suppression</b>	Greater than 60 dBc (50 watts) Greater than 56 dBc (20 watts) Greater than 50 dBc (5 watts)
<b>Spurious Suppression</b>	VHF: Greater than 80 dBc typical UHF: Greater than 60 dBc (50 watts) Greater than 56 dBc (20 watts) Greater than 50 dBc (5 watts)

### Radio Interoperability

<b>Crypto Fill Devices</b>	AN/CYZ-10 DTD (supports DS-101, DS-102 and MODE 2/3), KYX-15, KYK-13, DTD-2000
<b>Crypto Modes</b>	KY-57, ANDVT/KYV-5, KG-84C, AES, FED-STD-1023, Fascinator
<b>Radios</b>	AN/PRC-117G, AN/PRC-117F, AN/PRC-113, AN/PRC-119A/B, AN/PRC-148, AN/PRC-77, PSC-5, AN/PRC-139, XTS-5000, ARC-210, ARC-164, ARC-231
<b>GPS</b>	PLGR, DAGR

### Receiver

<b>Sensitivity</b>	-113 dBm @ 12 dB SINAD (FM)
<b>Image Rejection</b>	Greater than 80 dB
<b>IF Rejection</b>	Greater than 70 dB

### Physical Specifications

<b>Height</b>	10.2 in.
<b>Depth</b>	13.4 in.
<b>Width</b>	7.5 in. (single channel)
<b>Width</b>	15.2 in. (dual channel)
<b>Weight</b>	23 lbs. (single channel)

### Environmental

<b>Temperature</b>	-30°C to +60°C
<b>Shock/Vibration</b>	MIL-STD-810F
<b>Sand/Dust</b>	MIL-STD-810F

### Key Radio Waveforms

SINCGARS
VHF/UHF AM/FM
HAVEQUICK I/II
MIL-STD-188-181B
DAMA (Option)
HPW (Option)
APCO P25 (Option)

### Key Radio Features

SCA v2.2 Compliant (no waivers)
Sierra™II programmable Type-1 crypto
Built-in speaker/microphone
Full numeric display
NVG compatible display
MELP
Wireless cloning



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