

AN/PRC-155 Networking Manpack Radios

2-channel networking radio with embedded encryption and GPS



First NSA certified software-defined
2-channel manpack

Runs narrowband and wideband Software
Communications Architecture (SCA)
compliant waveform

Reconfigurable and interoperable with current-force
and future radio platforms via a software upgrade

Creates self-forming ad hoc networks
in any battlefield scenario

Extends the classified network
beyond the path of vehicles

Fielded Today in Mounted, Dismounted
and TOC Configurations

Overview

The AN/PRC-155 Manpack radio is the first fielded two-channel, software defined radio capable of network-centric connectivity and legacy interoperability, supporting advanced (SRW, MUOS) and current-force waveforms (including SINGARS and SATCOM). In addition, the AIM II embedded programmable security allows the dismounted warfighter to seamlessly join any combat net with confidence. Added functionality, like internal voice and data bridging between networks, makes this the most powerful piece of tactical equipment in the soldier's communications arsenal – joining local networks to beyond line of sight networks.

Common Core Radio Approach

Team General Dynamics uses a common core radio architecture, software and hardware design approach for the Manpack radio. Continued emphasis on SWAP-C (Size, Weight and Power- Cost) lightens the soldier's load and maximizes battery life through efficient design and aggressive and intelligent power management. Our common architecture and use of common core radio modules reduces both development time and cost, enables easy technology upgrades, and supports rapid platform development as well as reducing the logistics tail.

AN/PRC-155 Networking Manpack Radios

Technical Specifications – AN/PRC-155 MANPACK

- Frequency range
 - 30 to 2200 MHz (banded)
- Guard
 - 121.5 VHF and 243.0 UHF
- Size (No handles)
 - 209 in³ (344 in³ with battery)
 - 3.0" x 10.0" x 8.5" (without battery bucket)
 - 3.0" x 10.0" x 13.5" (with battery bucket)
- Weight (lbs.)
 - 10.3 lbs (14.6 lbs w/battery)
- Number of channels
 - 2
- Waveform support
 - SRW, MUOS, SINCGARS, SATCOM
- Presets
 - 50 per channel
- Max. power output
 - 20 Watts
 - External 50 watt PAs available
- JTRS compliance: Yes
- Army-certified waveforms: Yes
- Fully programmable COMSEC and TRANSEC (Type 1 & Type 2): Yes
- JTRS APIs: Yes
- Multiple Independent Levels of Security (MILS): Yes
- Remote control capability: Yes
- Cryptographic Ignition Key (CIK) function, removable: Yes
- Over the Air Rekeying (OTAR): Yes
- Retransmission, voice and data
 - Integral (2 channels)



Dismounted Manpack on Mission in Afghanistan

Qualified Suppliers

- General Dynamics Mission Systems

Features and Benefits

- MUOS Manpack is the DoD Radio Terminal for MUOS Program
 - MUOS offers enhanced Beyond Line-Of-Sight (BLOS) alternative to legacy SATCOM
 - Over 5000 MUOS capable AN/PRC-155s and 2000 MUOS HPAs delivered to date- MUOS deployable now
 - MUOS capable AN/PRC-155 supporting MUOS MOT&E successfully integrated Video, Voice and Data bridging SRW radio over MUOS and SINCGARS Radio
- Modular design for ease of technology insertion
- Scalable from 2 to 4 channels by connecting two units through Ethernet ports
- Detachable Human Machine Interface (HMI) for ease of operations utilizing extensible ReadyUp Android application.
- Remote control software application available for both existing dismounted and vehicle displays
- Modular, detachable power amplifiers for ease of field maintenance and reduced repair time
- Separation of RF channels provides superior isolation
- Dual battery configuration to meet mission power requirements
- Hot swappable batteries for extended missions without recycling power
- Sealed and vented battery bucket provides protection from environmental elements with added user safety
- Ruggedized chassis that is EMI/EMC compliant
- Embedded Selective Availability Anti-Spoofing Module (SAASM) GPS receiver supports display and transmission position location information (PLI)
- Operationally tested for interoperability with windows-based applications including Command Post of the Future (CPOF)
- Works with legacy key fill devices
- Compatible with JTSR Enterprise Network Manager (JENM)
- Adapts to existing vehicular mounting plates and vehicle adaptor amplifier (VAA) trays
- Single and Dual Vehicle mount, power supply / chargers, 20-ft tether for HMI in mounted applications

GENERAL DYNAMICS
Mission Systems

Phone: 1-877-449-0600 • Fax: 480-441-0006 • HMSinfo@gd-ms.com • gdmissionsystems.com/hms