

Vehicular Intercommunication Systems

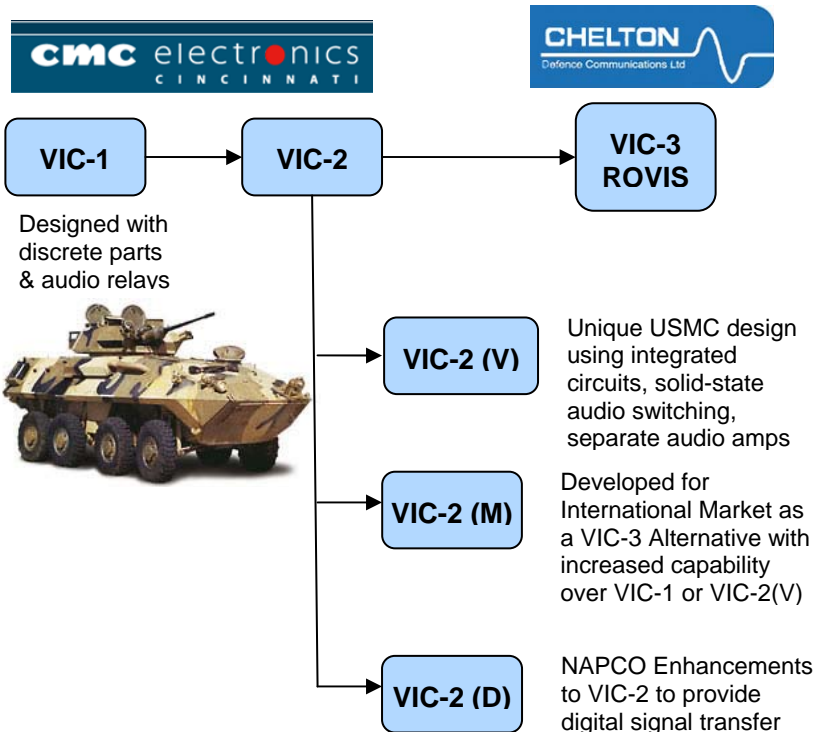
NAPCO International LLC provides a complete line of Vehicular Intercommunications Systems from a solid-state electronic and directly interchangeable upgrade of the original AN/VIC-1 through two models of an improved AN/VIC-2 with greater capabilities.

- **Improved Reliability & Sound:** State-of-the-art, solid-state electronic design provides exceptional audio performance and increased MTBF (Mean Time Between Failure).
- **Active Noise Reduction (ANR) Ready:** All models are capable of operating with the latest noise canceling technology when used with ANR headsets. NAPCO's ANR interface provides exceptional speech intelligibility by canceling ambient noise and protecting vehicle crewmembers from long-term exposure to damaging acoustic levels.
- **Fully Compatible:** All 3 Systems are fully compatible with the original AN/VIC-1 system, accessories, mounts and cables. They combine the same reliable design and construction characteristics of the original system - providing similar resistance to harsh battlefield conditions and environmental extremes - with the latest solid-state technology.
- **Vehicular Intercommunications History:**



Photo: NAPCO International Inc.

NAPCO's VIC Systems can be deployed in all vehicles where the original AN/VIC-1 is used, as well as others. The number and types of controls are dependent upon the type of vehicle and the desired operational functions.



NAPCO Received an Exclusive License from Cincinnati Electronics to market and produce VIC-2 Systems in 2001

VIC-2 (M) to VIC-1 (N) Comparison

- VIC-2 (M) shares the same cabling set as of the VIC-1 and VIC-2 (V), but with increased capability.
- You can not interchange main or crew boxes (full set exchange only)
- Comparison of Features:

	<u>VIC-2 (M)</u>	<u>VIC-1 (N)</u>
Digital control	YES	NO
Analog Voice	YES	YES
Alarm (Four vehicle inputs)	YES	NO
Radio capability (R/T)	6 R/Ts	2 R/Ts
ANR auto input signal adjust	YES	NO
Natural voice encoding	YES	NO
MCS BIT (Built In Test)	YES	NO
FFCS BIT (Built In Test)	YES	NO
MOS (Monitor Only Station)	YES	NO
RETRANS	Between R/Ts	YES
ACCENT control (Radio's / Alarms)	YES	NO
SMT (Surface Mount Technology)	YES	NO



VIC-2 (M) System Benefits (vs. VIC-1)

- **Simple Replacement for VIC-1**
 - Uses existing VIC-1 mounting holes and cables
- **Superior Voice Quality**
 - Ability to recognize who is speaking
 - Natural voice encoding
 - Background acoustic noise reduction
 - Active Noise Reduction (ANR) cancels ambient noise from vehicle operation
- **Night Vision Compatible**
 - Lighting and controls are compatible with night vision goggles
- **Radio/Intercom Interfaces**
 - No separate Radio Interface Units (RIUs) needed
 - Monitor and select up to 6 radios
 - Radios cabled directly to MCS
 - Emission control selectable to prevent inadvertent transmission
 - Commander Override capability
- **Full Duplex Operation**
 - More than 1 person can speak at the same time
- **Built in Test (BIT) Capabilities**

Defense Electronics International Offerings



ROVIS (VIC-3)



LV2 Headset



VIC-2(M) Master Control Box



TBH & TBH II



TCH



CVC Helmets, Mics and Vehicle Intercom Systems
VIC-1, VIC-2, ROVIS, LV2, LVIS, etc.



Gencom II



Microphones

Total Coverage – Full Access- Complete Spectrum Available from NAPCO and our Partners

Defense Electronics – International Broad Range of Vehicle Communications Products

Intercoms:	<u>VIC-1</u>	<u>VIC-2 (V)</u>	<u>VIC-2 (M)</u>	<u>ROVIS</u>	<u>LV2</u>	<u>LVIS</u>	<u>Others</u>
NAPCO	√	√	√				
Chelton				√	√		√
Gentex	√					√	√
Helmet Systems:	<u>CVC</u>	<u>w/ ANR</u>	<u>Light Weight</u>	<u>Shells</u>	<u>Adaptors</u>	<u>Mics</u>	<u>Others</u>
NAPCO					√		
Bose	√	√	√				√
Gentex	√	√	√	√	√	√	√
Chelton			√		√		

- NAPCO Positioning:
 - International Focus – Chelton & Bose are exclusive in US Market
 - Products adaptable to broad range of Radios
 - Adaptable to US and Former Warsaw Pact Vehicles



ITT Industries
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To have Access to Quote, Represent or Distribute the Full Spectrum of Vehicle Intercom Systems and Components

AN/VIC-1 (N)



Photo: NAPCO International Inc.

The AM-1780/VRC (N) Audio Frequency Amplifier is the main function box for the Intercommunication System. It has controls for both power and amplification. It provides connections between the amplifier and the crewmembers' audio accessories. The redesigned AM-1780/VRC (N) eliminates all mechanical relays providing increased reliability and durability.

Since 1984 NAPCO has produced and sold over 1,500 AM-1780 Audio Amplifiers (original and improved style) to US OEMs and international customers in: Austria, Cameroon, Canada, Chile, Columbia, Egypt, Finland, Greece, Germany, Indonesia, Ireland, Israel, New Zealand, Sri Lanka, Taiwan, Thailand and UAE.

AN/VIC - 2 (V)

NAPCO maintains all of the original manufacturer's production tooling, including jigs and fixturing, for assembly and test of the VIC-2(V) units both at the completed box level and subassembly levels.

Without affecting external dimensions, operating requirements or internal functions, NAPCO has improved the CCAs and selected components by a Modernization through Spares Program.

NAPCO has all necessary bench test equipment to evaluate, test and certify compliance with the original Test Specification requirements for the AN/VIC-2(V) both at the completed box level and subassembly levels.



Photo: NAPCO International Inc.

AN/VIC - 2 (M)



Photo: NAPCO International Inc.

Cincinnati Electronics developed and NAPCO improved an enhanced solid-state replacement for the VIC-2(V) that provides:

- Increased number of R/T Connections (eliminates need for JV-3179 Box)
- Built-In-Test (BIT)
- Improved CCAs and overall Voice Quality
- Compatibility with current VIC-3 ANR Headsets

Since 2001 NAPCO has produced and sold over 116 VIC-2(M) Systems and Components to international customers in:

- Botswana and Singapore
- Installed on M113s, Mowag Piranhas and ACMAT APCs



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