MICAD

Multipurpose Integrated Chemical Agent Alarm System

..... from Lockheed Martin Librascope

The M27 MICAD, a key component in "digitizing the NBC battlefield", is an automated integrated Nuclear, Biological, and Chemical (NBC) warning and reporting system for use by troops in a variety of vehicles, vans and shelters. It is a light weight, highly reliable, set-and-forget system that requires minimal operator interface. The small size and flexible architecture permits MICAD to be mounted in any available space (e.g., under seats, under floorboards). MICAD consists of a Display Control (DC), a two-channel Communications Interface Unit (CIU), and Universal Interface Units (UIU). Each UIU permits the connection of two peripheral devices, e.g., detectors, GPS, alarms). Using standard sensors, MICAD automatically issues a local alarm, activates collective protection systems, senses its position, and finally formats and digitally transmits NBC messages via tactical radios.

Fox NBCRS/MICAD

Key Features

- Operates with current sensors/expandable to accommodate future sensors
- Provides individual alerts via soldier-worn Personnel Alarm devices (pagers)
- Designed for NBC survivability and ease of decontamination
- Provides remote detection and area warning via telemetry link radios
- Readily adapted to other systems including new and emerging detector systems and command and control systems
- Automates the local NBC warning and CPE activation process

Armored Vehicles

NBC Reconnaissance

Potential Applications

- NBC Reconnaissance Vehicles
- Tanks and light armored vehicles (Abrams and Bradley)
- HMMWV/788 Shelters
- Commercial (non-military) detection and monitoring systems

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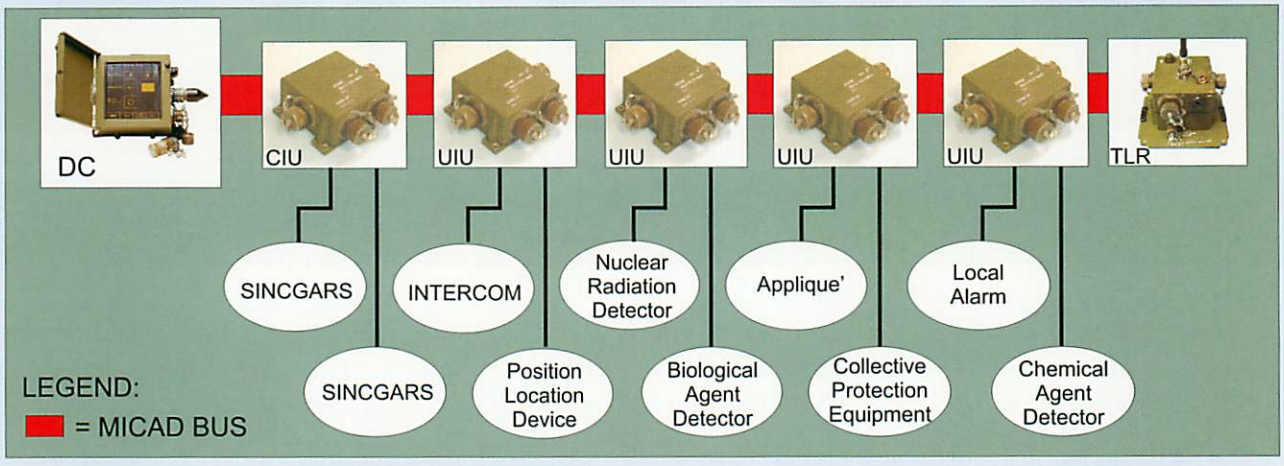
MICAD System Configuration
The MICAD System is capable of operating with up to 15 peripheral devices providing tailoring to meet any system needs.



MICAD System Components

Display Control (DC)
The DC enables the operator to configure, monitor and control the MICAD system. Since the operator interface is via a touch panel/display there are no external knobs or switches on the front. The DC provides 8MB RAM and 2MB of flash memory. The DC is 6.0"H x 6.0"W x 4.0"D and weighs 8 pounds.

Universal Interface Unit (UIU)
The UIU provides interface to all non-communications devices such as NBC Detectors, Position Location Devices, Collective Protection Equipment, Meteorologist Stations, alarms, and voice intercom systems. The UIU is compatible with RS-232/422 interfaces, provides 2 MB RAM and IBM flash memory. The unit is 2.0"H x 4.0"W x 4.0"D and weighs 1.1 pounds.

Communication Interface Units (CIU)
The CIU contains two modem/processors linking tactical radios or voice terminals to the Display Control unit via the MICAD bus. The unit is compatible with MIL-STD-1553B and RS-485 bus interface. The CIU contains three 68332 microprocessors and is packaged in a 2.0"H x 4.0"W x 4.0"D housing weighing 1.44 pounds.

Telemetry Link Radio (TLR)
The TRL is a receiver/transmitter. TLR's are used in pairs to relay data from remote detectors (remote TLR) to the Display Control unit via cabled TLR. It also functions as the activating transmitter for personal alarm devices (beepers).

Personnel Alarm (PA)
The PA is a commercial paging unit (beeper) used by dismounted troops to provide audible or vibratory warnings upon receipt of an NBC alarm.

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