

Joint Biological Point Detection System

Robust Bio Detection Instrument Suite

Chemring

Sensors & Electronic Systems



Joint Biological Point Detection System (JBPDS) is a robust bio detection instrument suite that is fully functional in any operational environment the user may encounter.

JBPDS provides automatic detection and identification of airborne biological agents at very low levels, triggers local and remote warning systems, and communicates threat information over standard communication systems.

The legacy system uses laser-induced fluorescence, the trigger/detector continuously evaluates the atmospheric background for traces of potential biological agents. When the system detects something of a suspicious nature, the collector/concentrator is initiated to sample hundreds of liters of air per minute, providing a small amount of liquid containing the collected aerosol sample.

The JBPDS Upgrade Kit adds “a more discriminative detector, the Rapid Agent Aerosol Detector (RAAD) developed by MIT. The RAAD uses orthogonal technologies to substantially reduce the number of false detections of the JBPDS.”

This sample is then evaluated for specific biological agents using immunoassays with an automated reader assembly. If the assay shows signs of biological agents, an alarm is sounded and a portion of the collected sample is provided for gold-standard laboratory analysis.

Application Areas

- HMMWV-mounted shelters (M31E2 BIDS)
- Light Armored Vehicles (LAV, Stryker NBCRV, JSLNBCRS)
- Shipboard, shore and port facilities

Specifications

Basic Bio Suite Unit (BBSU)	30" H x 36" W x 20" D (762mm x 914mm x 508mm) 275 pounds (124.7 kg)
Ship/Shelter Power Packs	9" H x 21" W x 18" D (229mm x 533mm x 457mm) 65 pounds (28.4 kg)
MP/TR/fixed Power Packs	10" H x 36" W x 25" D (254mm x 914mm x 635mm) 200 pounds (90.7kg)
ECU (MP/TR/fixed only)	30" H x 20" W x 13" D (762mm x 508mm x 330mm) 100 pounds (45.3kg)

Power

Ship/Shelter	1,500 W max
MP/TR/fixed	2,400 W max

Other

Operating Temp.	-18°F to 122°F (-28°C to 50°C)
Storage Temp.	40°F to 158°F (-40°C to 70°C)
Vibration	MIL-STD-810E Method 514.4 Proc. 7 - common carrier / Proc. 3 loose cargo
Electromagnetic Interference (EMI)	MIL-STD-461/462
Drop test	MIL-STD-810

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