

Integrated Air Defence Weapon System

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Integrated Air Defence Weapon System Latest News

Recently, the Defence Research and Development Organisation (DRDO) has successfully conducted the first flight-tests of an Integrated Air Defence Weapon System (IADWS).

About Integrated Air Defence Weapon System

- It is a **multi-layered air defence system**, which includes three components — **Quick Reaction Surface to Air Missiles (QRSAM)**, the **advanced Very Short Range Air Defence System (VSHORADS)** missiles, and a **high-power laser-based Directed Energy Weapon (DEW)**.
- QRSAM has been designed and developed by the DRDO, VSHORADS and DEW have been developed by **Research Centre Imarat (RCI)** and **Centre for High Energy Systems and Sciences (CHESS)** respectively, both Hyderabad-based facilities of the DRDO.
- The integrated operation of all these weapon system components is controlled by a **Centralised Command and Control Centre**, developed by the **Defence Research and Development Laboratory, Hyderabad**.

The Three Components of the IADWS

- **QRSAM:** It is a **short-range Surface to Air Missile (SAM)** system, primarily designed to provide a **protective shield** to moving armoured columns of the Army from enemy aerial attacks.
- The entire weapon system is configured on highly mobile platforms. It has search and track capability and can fire on short halts. The system has an operation range of three to 30 kilometers.
- The QRSAM weapon ensemble consists of a fully automated command and control system, two radars — **Active Array Battery Surveillance Radar** and **Active Array Battery Multifunction Radar** — and one launcher. Both the radars have a **360-degree coverage with 'search on move' and 'track on move' capabilities**.
- **VSHORADS:** It is a **fourth-generation**, technically advanced **miniaturised Man Portable Air Defence System (MANPAD)**. This missile system has the capability to meet the needs of all the three **branches of the Armed Forces — Army, Navy and Air Force**.
- **Directed Energy Weapon (DEW):** Earlier this April, the CHESS facility conducted a successful field demonstration of the **land version of the Vehicle mounted Laser DEW MK-II(A)**.
- It defeated **fixed wing UAV and swarm drones**, causing structural damage and disabling their surveillance sensors. With this, India has joined the exclusive club of global powers who possess such a system. DEW is said to have a range of less than three kilometers.

Source: **IE**

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