

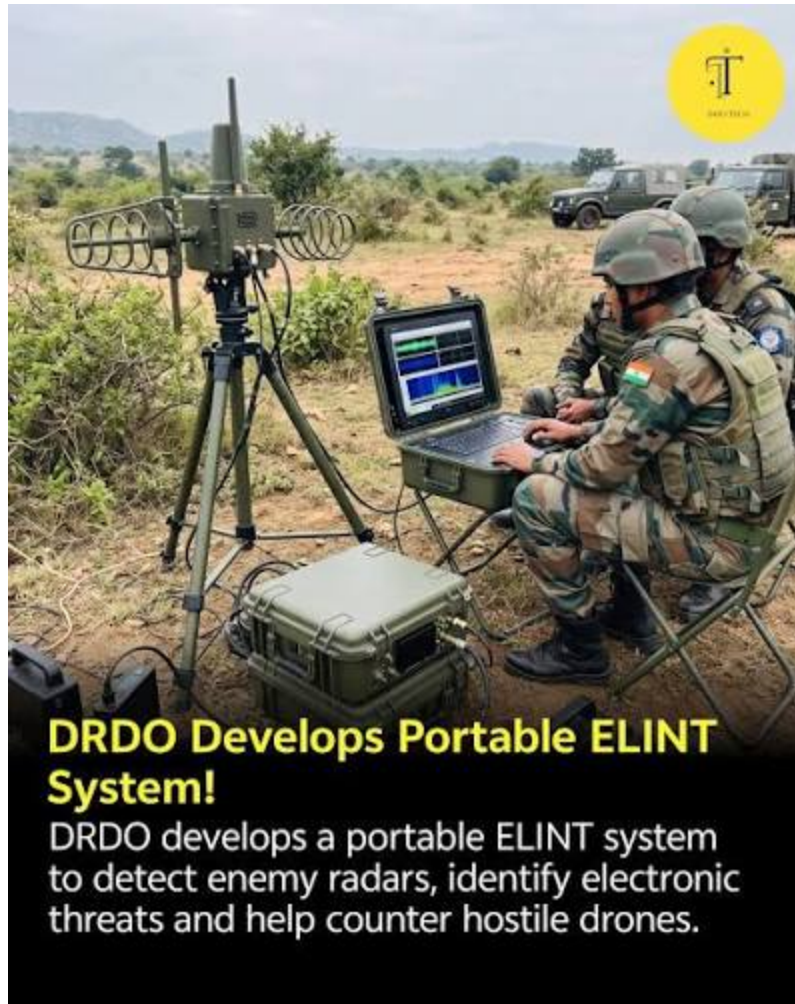
Portable Electronic Intelligence (ELINT) systems

Prelims: Current events of national and international importance | Defence

Why in news?

The DRDO is advancing a new generation of man-portable Electronic Intelligence (ELINT) systems meant to pick up and analyse the signals emitted by enemy radars and others.

- **Portable Electronic Intelligence (ELINT) systems** - These are compact, man-portable or lightweight sensor suites designed to passively intercept, record, analyse, and locate non-communication electromagnetic emissions—primarily from hostile radars, antennas, and rogue drones.
- **Development** - DRDO's Hyderabad-based Defence Electronics Research Laboratory (DLRL).
- **Working** - It captures signals from radars and other electronic equipment and studies them to work out what kind of system is operating and its technical characteristics.
- A radar or a drone operator could be emitting signals, which could inform about the frequency range of the device sending out signals, pulse width, signal strength, and direction of arrival.
- This could help jam the system more effectively, focusing on those particular frequencies and thereby reducing the effectiveness of the system.
- It classifies different types of radars, including search, tracking, and fire-control radars and helps troops locate signal sources using techniques such as triangulation.
- **3 phases of project** - Development, integration and qualification.
 - Development will cover the equipment and its modules,
 - Integration brings the parts together into one working system, and
 - Qualification tests it against technical and environmental standards, including temperature, humidity, vibration, shock and electromagnetic interference.
- **Significance of Portability** - It is designed to be lightweight and easily deployable, especially in mountainous and remote terrain, where deploying large vehicles or fixed surveillance equipment could be difficult.
- It allows frontline units to monitor electronic activity independently without relying on larger assets.
- **Counter-Drone Capability** - By detecting electronic emissions, the system can
 - Identify the location of hostile drone operators.
 - Provide early warning of incoming drones.
 - Give troops additional time to activate counter-drone measures and defensive responses.



Reference

[TOI | DRDO develops portable system to sniff out enemy radars, track drone threats](#)