



High-power radio-frequency directed energy weapons

High-power radio-frequency (HPRF) directed energy weapons (DEW) intentionally aims to couple electromagnetic energy into the circuitry of targeted electronic hardware at sufficient levels to cause operational disruption or damage.

In an era dominated by electronic warfare and smart weapon systems facilitated by advances in electronics and information technologies, HPRF DEWs could become a game-changing capability to:

- Defeat smart weapons
- Disable command and control systems
- Neutralise improvised explosive devices
- Counter uninhabited aerial systems
- Remotely stop vehicles or boats.

Research

DST is conducting research into the development of HPRF systems and enabling technologies, assessing the effects of HPRF DEWs on targets of interest, and the development of hardening measures for protection of assets against such weapons.

Testing and validation

DST has facilities to test, evaluate, and validate computational electromagnetic modelling and analysis of HPRF systems and environments.

Partnering opportunities

DST is seeking to partner with organisations in the following areas:

- HPRF source technologies
- High voltage and pulsed power systems
- Miniaturisation of system size, weight, and power
- Numerical simulation of HPRF effects
- Electromagnetic protection measures.



For more information contact:
PartnerWithDST@dst.defence.gov.au

