

New Australian DEW can be mastered in just 5 minutes

03 October 2024 Adam Jeffs, Editor, SAE Media Group

The Australian Defence Force has demonstrated new Fractl Portable High Energy Laser's ease-of-use, with just five minutes training required to down a drone at 500 metres.



Credit: CPL Jacob Joseph/Australian Army

Australia has joined the ranks of those nations boasting directed energy weapons (DEW) for UAS defence with a successful 'hard kill' demonstration of its new Fractl Portable High Energy Laser. In a [June 17 press release](#), the Australian Ministry of Defence showcased the capability of its new DEW, demonstrating the successful elimination of a drone at 500 metres with a deployable prototype of the weapon at the Puckapunyal range in Victoria.

Amid the rising threat of drones in modern warfare, many nations are seeking cost-effective solutions for countering drones at scale. DEWs are

fast becoming a necessary component in the arsenal of any nation for counter UAS due to the key advantages that they offer over traditional 'hard kill' methods, such as missiles. The most significant advantage is the cost, as firing missiles costing as much as £1 million at drones costing as little as a few thousand in some cases is simply not sustainable in the long term, while the Fractl can take down drones with less power than it takes to boil a kettle.

The Fractl weapon offers further advantages however, which stem from its portability and ease-of-use. The DEW is said to be extremely simple to operate, with Corporal Patrick Flanagan of the Australian Defence Force (ADF) stating that he was trained on the system for roughly five minutes before successfully downing a drone.

“You push a button to track the drone and the computer takes over, then you push another button to ‘pull the trigger’ just like a video game,” Corporal Flanagan said. “With your index finger you can quickly change your aim between the drone’s video camera, centre mass or one of the propellers. It only takes seconds to knock out the camera and two or three seconds to disable the rotor.”

The system, designed and manufactured for the ADF by the Melbourne-based contractor, AIM Defence, is roughly the size of a suitcase meaning it can be deployed quickly to defend troops from incoming drone strikes.

DEW confidence remains a challenge

The system would need to be deployed as part of a layered defence strategy, particularly against swarms of drones which could overwhelm the weapon’s capacity to switch targets. However, the successful demonstration should help to improve confidence in the effectiveness of DEWs, which is the biggest challenge they face.

The lack of confidence among military experts comes from the relatively short range of DEWs, most of which can operate at ranges of less than 10km. This means that troops would need to wait until the drone is uncomfortably close in order to use a DEW, rather than firing a missile which can be effective at ranges up to 400km in some cases.

Colonel Adam Miller, PM for Directed Energy, C-sUAS at RCCTO will speak at the [Counter UAS Technology USA](#) conference in December on the US Army's mission to develop and field directed energy weapons to address the UAS threat.