

Sensor Assurance. Anywhere.
Highly mobile and configurable EW testing.

Blue Jay Mobile

As electromagnetic (EM) threats evolve, effective systems to validate mission-critical electromagnetic warfare (EW) assets are essential. Current through-air testing systems are not only prohibitively expensive, they often lack specialised functionalities required for thorough operational testing.



INTRODUCING BLUE JAY MOBILE – POWERFULLY PORTABLE

Blue Jay Mobile, developed by Mellori professionals with hands-on experience in EW performance trials, addresses the need for critical independent sensor validation by providing a cost-effective, purpose-built solution that enhances confidence in modern military EW systems.

The highly mobile system offers a compact solution which can be configured to meet diverse operational requirements.

Blue Jay Mobile can cover flexible frequency ranges, with assured baseline testing capability across the full 500 MHz to 40 GHz spectrum, for thorough operational testing.



BLUE JAY MOBILE CAPABILITIES AT A GLANCE

BLUE JAY MOBILE DELIVERS	
Cost	Low-cost, yet highly effective solution for Electronic Support (ES) assurance.
Transportation & Setup	A modular system split into three subsystems that can easily be transported, even on commercial flights. 15-minute setup time.
Operation	A choice of tablet or laptop. Simple to operate, and an intuitive interface with remote operation via Ethernet or encrypted Wi-Fi.
Signal Generation	SDR-based solution capable of mimicking real-world radar signals and replaying IQ data.
IQ Transmission	Externally recorded IQ data can be replayed or generated within the software with customisable RF parameters and signals to be tested within the supported bandwidth of the system.
Automated Logging	Auto-logging and timestamping, emitter transmissions, power level adjustments and operator observations.
Flexible Frequency Range	Assured baseline testing across the full 500 MHz to 40 GHz range as standard.
Channels	Dual channels allow transmission across two frequency bands simultaneously (extendable to three channels).
Range	3 to 1 km @ -63 dBm 0.5-6 GHz receiver sensitivity. >1 km @ -60 dBm 6-18 GHz receiver sensitivity. >1 km @ -70 dBm 18-40 GHz receiver sensitivity.
Emitter Type	CW & pulsed, A/F/PMOP, FMCW, PRI & PW timing staggers, Antenna Scan Pattern simulation.
Situational Awareness	High resolution daylight camera with x32 optical zoom. Accurate GPS location reporting.
Asymmetric Testing	Network Blue Jay systems for asymmetric threat representation.
Power Sources	Flexible power sources (110-240 V AC outlets and generators as well as 12-48 V DC battery).
Bandwidth	50 MHz.
Weather Resistance	IP65-rated payload enclosures and antennas. Able to operate in moderate wind and rain conditions.

TEST SMARTER. PREPARE WITH PURPOSE. PERFORM WITH PRECISION.

Contact our team at info@mellori.com.au for more information.

ABOUT MELLORI SOLUTIONS

Mellori Solutions is a trusted provider of specialised electromagnetic warfare (EW) services to the Australian Defence Force and its allies. With a strong focus on innovation and collaboration, Mellori offers tailored training, testing, and engineering solutions to enhance the effectiveness of installed EW assets. Using cutting-edge technology and expertise in EW sensor assurance, Mellori ensures quick and efficient delivery of sensor performance testing and validation. Our team of skilled professionals combines military operational experience with engineering proficiency to provide capabilities that enhance the confidence of defence personnel using EW equipment in the field. An Alkath Group company.