

Electronic Combat Range



The Electronic Combat Range (ECR) is physically located in California at China Lake's South Range and provides a realistic electronic combat environment. ECR provides threat systems; operations and range control; instrumentation; Time, Space, Position Information (TSPI), telemetry, optical and communications; data processing and display systems; and signal monitoring, calibration systems and assessment and repair facilities for test and evaluation and training customers. ECR is the Navy's principle open-air range for test and evaluation of airborne electronic combat systems.

THREAT SIMULATIONS

The ECR offers a wide variety of threat simulations, surrogates and actual systems, providing a threat-rich environment. The 1,200 square miles of restricted airspace overlying 900 square miles of Navy land offer ample room for either single- or multi-platform events.

Open-air hardware-in-the-loop testing at the ECR helps bridge the gap between laboratory and open-air testing. Long before a system is ready for flight testing, the hardware can be tested against an assortment of threat systems and advanced technology simulators.

Multiple threat systems are available: actual, surrogate and simulated. A broad range of EW technologies are offered: pulse, continuous wave, Doppler, multispectral, and Blue and Gray systems. Test emitter spectrums include radio frequency, electro-optical and millimeter wave. All systems use audio and video instrumentation to collect extensive digital flight test data.



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FOR MORE INFORMATION

Electronic Threat Systems
(760) 939-5303
7000 Randwash Road
China Lake, CA 93555
www.navair.navy.mil/ranges

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TEST SUPPORT

At ECR, aircrew have the opportunity in a single mission to combat both an air-to-air threat and a surface-to-air threat as well as complete an air-to-ground strike mission.

Top secret and special-access level security is available with minimum electromagnetic interference. ECR supports a combination of land and naval systems (littoral threat). The ECR provides engineering support, developmental and operational test and evaluation, analysis, and training resources for users of systems that counter or penetrate air defenses.

TYPES OF EVENTS

- Electronic Countermeasures (ECM) effectiveness testing
- Radar Warning Receiver (RWR) testing
- Unmanned Aerial Systems (UAS)
- Expendables – chaff and flare effectiveness
- Towed- and air-launch decoy testing
- Anti-radiation missile (ARM) flight testing to evaluate seekers and avionics
- Tactics development
- Training

DATA OUTPUTS

- Scope video
- Boresight video
- Display video
- Radio recordings
- Crew hot mic recordings
- Digital data
- Raw unprocessed data
- Sorted corrected data (wild point flags and sorted by time)

TECHNOLOGIES

- Pulse systems
- Continuous wave systems
- Pulse Doppler systems

SYSTEMS PROVIDED

- Advanced threat simulations
- Surrogates
- Red, Blue and Gray threat assets