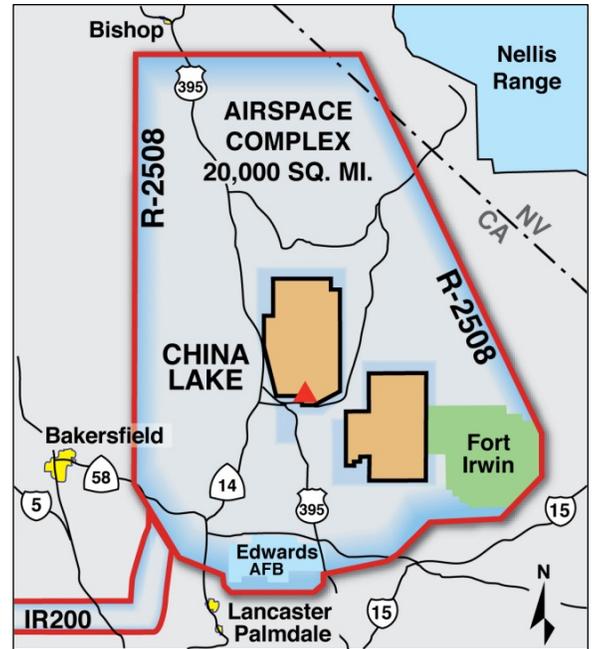


With over 1,722 square miles (1.1 million acres) of land space and 20,000 square miles of controlled airspace within the R-2508 complex, the China Lake Land Ranges provide a large, secure, fully instrumented air and ground test environment. These assets along with the extensive range infrastructure, facilities, and capabilities described below allow a large number of diverse customer test and evaluation (T&E) and training requirements to be supported.

- Weapon launches (air-to-air, air-to-ground, ground-to-air, and ground-to-ground)
- Aircraft mission systems (avionics, infrared [IR] systems, sensor fusion)
- Rapid response T&E supporting counter-improvised explosive device (C-IED) detect, defeat, and compatibility testing
- Electronic warfare (EW) (aircraft system integration, radio frequency [RF] countermeasures, threat and missile warning systems, anti-radiation missiles)
- Ordnance subsystems (warhead, propulsion, fuzes, sensors)
- Unmanned systems (full spectrum engineering support and battlefield integration)
- Experimentation (hypersonic research, scramjet propulsion, fleet battle experiments)
- Fleet training (air combat tactics, surface target engagement, pre-deployed exercises)



Infrastructure

Airfields. The China Lake Ranges are supported by a fully equipped airfield with three major runways, one that is 10,000 feet long. A smaller 2,000-foot runway is dedicated to unmanned aircraft systems (UASs) with a nearby support structure. In remote parts of the ranges, there are two 1,250-foot intersecting unimproved runways with an adjacent building to support UAS and other test customers. This remote location includes a 5,088-foot unimproved runway that supports C-130s and C-17s with an adjacent 1,850-foot test strip. (See separate Airfield Facilities Quick Facts.)

Connectivity. Intra-range instrumentation at test sites is provided by 401 miles of fiber optic cable to 91 communication sites. Instrumentation deployed to test sites outside of the fiber optic infrastructure is connected by mobile microwave receivers. Inter-range connectivity is provided by the Exodus Transport Network (ETN), a fully accredited, DoD owned and managed multi-level security infrastructure with 20 nodes providing connectivity to over 1,000 users at contractor and government facilities throughout the country. This connectivity includes the surrounding DoD ranges at Edwards and Nellis Air Force Bases, the Army's National Training Center (NTC) at Fort Irwin, and the Navy's facilities at Point Mugu, California, and Fallon, Nevada. The Defense Research and Engineering Network (DREN) and Secret Defense Research and Engineering Network (SDREN) also support customer data transfer requirements.

Range Instrumentation

Fixed and mobile instrumentation provide decision quality data to customers during tests and post-test. Instrumentation includes fixed and mobile telemetry receiving capabilities; mobile video optics; laser instrumentation; real-time Global Positioning System (GPS); time, space, and position information (TSPI); single and multiple target radar tracking systems; digital fixed and video camera systems; ultra-high / very-high frequency communications; and meteorological support. Customer supplied instrumentation can also be supported with appropriate lead time.



Targets



A large target inventory is available to support customer tests ranging from simple fixed bulls-eye targets, mannequins, structural sea vans, and military targets (vehicles, tanks, radars) to more complex high fidelity structures and anti-radiation missile targets. Mobile targets such as remotely controlled or programmable trucks, cars, and dune buggies are also available. With appropriate lead time, special target construction (buildings, ponds, etc.) can be accomplished to support customer test requirements.



Facilities and Capabilities

China Lake Range Control Center.

Concurrent operations can be displayed

among five test bays that are Joint Air Force, Army, and Navy security accredited. Concurrent operations can be supported at the secret level and, with advance notice, higher levels of security.



Joint Counter-IED (C-IED) Facility (JCIF).

JCIF is located in a remote valley surrounded by mountains. This location provides an ideal environment for test support of full-spectrum rapid response open-air C-IED system testing of ultra-high fidelity near-field antenna patterning, directed energy, and GPS jamming. JCIF responds within hours to combatant commander's requests for "actionable decision quality data." (See *separate JCIF Quick Facts.*)

EW Systems. The Land Range is the Navy's principal open-air range for T&E of airborne electronic combat systems. It provides a realistic electronic combat environment offering a wide variety of threat simulations, surrogates, and actual systems across all phases of the EW spectrum of electronic attack, support, and protection.



Supersonic Naval Ordnance Research Tracks (SNORT).

SNORT consists of two test tracks. The main track is a 21,600-foot-long (~4 miles) dual rail track and is the Navy's longest and fastest track supporting live weapons and captive flight testing. The G4 track is a 3,000-foot-long dual rail supersonic track with 30-inch center-to-center rail spacing. Inventories of test sleds are routinely modified by track personnel to support customer testing. (See *separate SNORT Quick Facts.*)

Unmanned Systems. The dedicated UAS runway at the airfield supports thousands of training and tactics flight hours annually. The China Lake Ranges have supported a number of "firsts" in flight testing: Northrop-Grumman's RQ-8 (Fire Scout) and X-47A (Pegasus) and the Navy's ScanEagle. First launches include AGM-114P against a moving target from the Army Sky Warrior, single AGM-114 (Hellfire) off the MQ-1 (Predator A), ripple fire (4) AGM-114 from MQ-9 (formerly Predator B), and air-to-air Stinger from the MQ-1. First releases include GBU-39 Joint Direct Attack Munition (JDAM) from MQ-9 (Reaper), GBU-12 (Paveway II) from MQ-1 and MQ-9 (Reaper), and GPS-guided small smart bomb (SSB) from the Boeing X-45A. (See *separate UxS Quick Facts.*)

Training and Tactics. The range's unique topography (mountainous terrain, combat wilderness areas, remote valleys contained within mountain ranges, and smooth hard dry lake beds) and stationary and moving targets (bridges, tunnels, mines, radars, tanks, convoys, surface-to-air missile (SAM) sites, airfields, buggies, trucks) can support training and tactics testing exercises involving explosive and inert items.

