

Land Ranges

With over 1,722 square miles of land space and 17,000 square miles of controlled airspace, the China Lake Land Ranges provide a large, secure, highly instrumented air- and ground-range complex for testing live and inert missiles, rockets, guns, lasers, Unmanned Aerial Systems (UAS), Unmanned Combat Air Vehicles (UCAV) and other weapons systems. A broad selection of targets are available, including “shootable” radio frequency targets. Capable of day and night operations, the Land Ranges provide an ideal environment for testing conventional weapons and aircraft systems.

RANGE CONTROL CENTER

The Range Control Center is the centralized range-control facility. Here, customers are provided test operations control and coordination, as well as real-time data collection for one to three test operations simultaneously. Processing and display of telemetry data, airspace surveillance, range communications and Range Safety are all handled at the Range Control Center.

TELEMETRY RECEIVING CENTER

The Telemetry Receiving Center receives and records data in real time and data can be presented either as computer video displays or strip chart oscillographs. Computer video display systems interface in real time with major Time, Space, Position Information (TSPI) sources. TSPI data may originate from differential GPS systems, tracking RF radar, optical/video tracking mounts or fixed optical/video cameras. Metric quality imaging infrared cameras are also available.



Pacific Ranges



Weapons testing

FOR MORE INFORMATION

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REAL-TIME DATA SOURCES

All real-time data sources entering the Range Control Center can be recorded for post-mission use. Scoring data is available within 30 seconds after impact and is provided by the Metric Video Center. Quick-look data products are generated from recorded real-time data and are available within two hours after the test. Data is deliverable in a wide range of media. Conventional plots and tabular listings are accessible. Computer-readable media include 8-mm DAT tape cartridge, DVD, VHS, Super VHS, Umatic and Hi-8 mm.

Multi-station/multi-instrument TSPI solutions are generated and ground-based TSPI data can be merged with telemetry data. Standard data reduction includes approximately 160 predefined TSPI related functions. Custom data reduction includes interpolation and extrapolation, filtering and smoothing, various geodetic transformations and data format conversions.

RANGE COMMUNICATIONS

Range communications include both secure and non-secure transmission facilities for all video, voice and data requirements. Communications are designed around standard telecommunications hardware, allowing for easy compatibility, and all systems incorporate communications security. Fiber-optic distribution facilities, microwave systems, Ultra-High Frequency (UHF) ground-to-air and VHF ground-to-ground radio systems, digital multiplexing and digital switching are all provided for customer use.

Tests include:

- Air-to-air and air-to-surface weapons systems
- Surface-to-air guided missiles
- Small tactical air-defense systems
- Surface-to-surface systems, including guns and tactical air-defense systems
- Preflight tests of experimental airborne guided missiles and rockets
- Large-scale explosives detonations
- Tests of weapon-delivery techniques
- UAS/UCAV

THE LAND RANGE OFFERS TEST AND EVALUATION AND FLEET CUSTOMERS:

- Realistic air/land operational environment
- 1,722 square miles of land space
- 17,000 square miles of controlled airspace
- Operations and range control
- Instrumentation
 - TSPI, telemetry, optical, communications, geophysics
- Data processing and display systems
- Air, land and armed targets
- Ordnance storage, handling and assembly facilities
- Range safety, security and environmental support
- Aircraft support
- Fleet training



Supersonic Naval Ordnance Research Track (SNORT)



JDAM testing