

Title: "SIMULATION SHADOWLAND"

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Fittingly enough, the Air Force has built its biggest electronic combat "playground" in a stretch of wasteland not far from the gaming capital of the world, Las Vegas. Sprawling over 5 million acres of the Nevada desert and coopting an additional 12,000 mi² of airspace overhead, the Nellis AFB Fighter Weapons Center (FWC) range complex can rightly lay claim to its title as the largest contiguous air and ground space available for instrumented military training operations in the world. Developed to provide realistic arenas for aircrew training, operational testing of equipment and tactics development, the live-fire Nellis ranges form an advanced airborne boot camp for Air Force (and frequently other service) Ectraining.

Responsibility for keeping the base's vast facilities up to par falls to a special caretaker unit, the 554th Range Group. With range development logistics and operations divisions, the 554th manages the acquisition and operations and maintenance support of threat simulators, instrumentation, communications systems and Air Combat Maneuvering Instrumentation (ACMI)/Red Flag Mission Debriefing System (RFMDS) modifications. It is also the focal point for scheduling, managing and controlling Red- and Blue-force operations at the complex.

Summertime at Nellis heralds the crowning point of the EC season, as hundreds of aircrew and support personnel arrive with their units to participate in Green Flag, the most elaborate, EC intensive exercise conducted in the US military (see "Green Flag Revisited" by Lt Col J.J. Jordan, "JED", July 1992, p. 63). In order to provide individual and collective training to EC assets on such a large scale, Nellis can mix and match an impressive assortment of threat simulation equipment, mimicking red threat early-warning, ground-control intercept, target-acquisition, surface-to-air (SAM) and anti-aircraft artillery (AAA) defense and guidance radars, as well as equipment that captures and evaluates aircrew response.

Not all of the equipment finds its way to the EC-dedicated North ranges, however, since Nellis also boasts an 8 million-acre (3 million acres restricted, for the use of live munitions) Bombing and Gunnery Range. Here, targets representing everything from tank battle- ' fronts to SAM sites to industrial complexes are protected by a variety of threat simulators and actual radar and communications jamming equipment, according to a Nellis press release.

Although Nellis must report to the Air Combat Command (ACC) like the other ranges, it has its own two-star general and is fairly autonomous—a "strange duck," as described by one Air Force official in its procurement decisions. A list provided by the Sacramento Air Logistic Center's (SMALC's) Range Threat Systems Division (McClellan AFB, CA), the focal point for acquisition, development and maintenance of threat simulators for the Air Force, reveals Nellis's inventory to include just about every piece of range equipment ever developed, as outlined in Table 1. Nellis is also a beneficiary of two of the three principal new procurements at the SMALC: Harris's MST-T1(V) Mini MUTES, composed of a master control station and up to five remote emitter units (called pedestals), currently in the midst of a follow-on development to give it a blue/grey capability, and Sierra Technology's TPT-T1(V) Unmanned Threat Emitter (TJMTE), also master-slave configured, which is collocated with targets to simulate densely deployed SAM and AAA terminal threats. (Nellis's PWC recently took delivery of three of the UMTEs.) AEL's MLQ-T4(V)1 Ground Jammer, an I/J-band terrain following/avoidance- and bomb/navigation-radar jammer will go elsewhere--see Table 1.

For future procurements, Nellis and the ACC have expressed an interest in purchasing the actual Russian equipment off the international market, where SAM systems have sold at bargain basement prices. According to Lt. Col Michael Smolin, systems program director at SM-ALC, Nellis has asked his center to investigate logistics/supportability issues that could affect such an acquisition.

[Article continues, discussing other EW bases.]

Table 1: Simulation Equipment at Air Force Ranges

Nellis: 6 MTEs, 2 MSQ-T7Bs, 2 MSQ-T8Aa, 23 MPS-T1s, 5 MPQ-T3s, 2 MSQ-T13s, 1 MPS-T9, 3 UMTEs, 15 TPT-4s, 7 SPS-66As, 15 TRTGs, 5 MSQ-77s, 8 FXQ-4As (TOSS), 2 DA3Hs, 5 M-33s, 2 MPS-T10s, 2 MSQ-T32s, 1 MSQ-T6, 1 MSP-14, 1 MSQ-T12, 1 MSY-T1