



AIR COMBAT COMMAND

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RC-135V/W RIVET JOINT

Current as of January 31, 2022



MISSION

The RC-135V/W Rivet Joint reconnaissance aircraft supports tactical, theater and national level consumers with near real time on-scene intelligence collection, analysis and dissemination capabilities.

FEATURES

The aircraft is an extensively modified C-135. The Rivet Joint's modifications are primarily related to its on-board sensor suite, which allows the mission crew to detect, identify and geolocate signals throughout the electromagnetic spectrum. The mission crew can then forward gathered information in a variety of formats to a wide range of consumers via Rivet Joint's extensive communications suite.

The interior seats more than 30 people, including the cockpit crew, electronic warfare officers, intelligence operators and in-flight maintenance technicians.

The Rivet Joint fleet was re-engined with CFM-56 engines with upgraded flight deck instrumentation and navigational systems to FAA/ICAO standards. These standards include conversion from analog readouts to a digital "glass cockpit" configuration.

All Rivet Joint airframe and mission systems modifications are overseen by L-3 Harris Technologies, under the oversight of 645 AESG (Big Safari), Air Force Materiel Command. The US/UK RC-135 Cooperative Program delivered three Rivet Joints to the Royal Air Force (RAF) with follow-on cooperative development/sustainment and co-manned operations since 2011.

BACKGROUND

The current RC-135 fleet is the latest iteration of modifications to this pool of -135 aircraft going back to 1962. Initially employed by Strategic Air Command to satisfy nationally tasked intelligence collection requirements, the RC-135 fleet has also participated in every sizable armed conflict involving U.S. assets during its tenure.

RC-135s were present supporting operations in Vietnam, the Mediterranean for Operation El Dorado Canyon, Grenada for Operation Urgent Fury, Panama for Operation Just Cause, and Southwest Asia for operations Desert Shield, Desert Storm, Enduring Freedom, Iraqi Freedom, Inherent Resolve and Freedom Sentinel.

All USAF RC-135s are assigned to Air Combat Command. The RC-135 is permanently based at Offutt Air Force Base, Nebraska, and operated by the 55th Wing, using various forward deployment locations worldwide.

Characteristics

Primary Function: Reconnaissance

Contractor: L-3 Harris Technologies

Power Plant: Four CFM International F108-CF-201 high bypass turbofan engines

Thrust: 21,600 pounds each engine

Wingspan: 133 feet

Length: 140 feet

Height: 43 feet

Maximum Takeoff Weight: 322,500 pounds

Speed: 500+ miles per hour (Mach .66)

Range: 3,900 miles

Ceiling: 50,000 feet

Crew: (flight crew) five - three pilots, two navigators; (mission flight crew) 21-27- three electronic warfare officers, 14 intelligence operators and airborne maintenance technicians

Initial operating capability: January 1964

Inventory: Approximately 17 (+3 RAF)

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