

A photograph of a Pennsylvania Air National Guard EC-130J Commando Solo aircraft on a runway. The aircraft is a four-engine turboprop plane with a large spherical sensor pod under the left wing and a star-shaped sensor pod under the right wing. The propellers are blurred, indicating the aircraft is moving. The runway is dark asphalt with yellow and white markings. The sky is a clear, pale blue.

Dominating and using the electromagnetic spectrum falls to a select group of aircraft.

Warriors for t

A Pennsylvania Air National Guard EC-130J Commando Solo readies for takeoff at a base in Southwest Asia. These flying TV and radio stations conduct information warfare operations, getting out the coalition message to local populations. The J models are among the newest in the electronic warfare inventory.



he Spectrum

Photography by Jim Haseltine

Electronic warfare is a broad discipline ranging from eavesdropping on communications to blinding an enemy's sensors. It is performed by a wide array of distinctive aircraft and dedicated specialists.

[1] EC-130H Compass Call aircraft, such as this one from Davis-Monthan AFB, Ariz., conduct jamming missions against enemy surface-to-air missiles and early warning radars. **[2]** Capt. C. J. Zaworski and SSgt. Jeremy Martin perform preflight checks in their RC-135W Rivet Joint. **[3]** An RC-135S Cobra Ball aircraft. Note the black wing, meant to reduce sun glare when the aircraft observes ballistic missile launches from afar. Note, too, the large round camera ports above the starboard cheek blister.

Photo by Ted Carlison



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[4] An OC-135 aircraft, which makes overflights of countries signatory to the Open Skies treaty. **[5]** The RC-135W Rivet Joint is a signals intelligence platform distinguished by its long nose and bulbous "cheeks."



USAF photo by SSgt. Tia Schroeder

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[1] An EC-130J Commando Solo prepares to land after another mission in Southwest Asia. [2] SSgt. Jeremiah Curtain, an engine technician, reviews paperwork on an RC-135W Rivet Joint (in background). The "RJ" fleet is one of the most frequently updated and modified aircraft in USAF. [3] The E-4B National Airborne Operations Center in flight. The E-4B provides a flying command post for the President, Secretary of Defense, and Joint Chiefs of Staff in a national emergency, and carries a sophisticated suite of secure communications. [4] A crew chief at Offutt AFB, Neb., marshals a TC-135S, the trainer for the Cobra Ball.

[1] An E-3 Sentry of the 552nd Air Control Wing at Tinker AFB, Okla., takes off for a Red Flag mission at Nellis AFB, Nev. **[2]** An E-3 on final approach at Nellis after a Joint Expeditionary Force Experiment in April. Originally distinguished by its “flying saucer” radome, the E-3 now also sports cheek and chin radomes and bristles with additional antennas. It can track targets hundreds of miles away. **[3]** An RC-135U Combat Sent aircraft, with its unique chin radome. Beyond signals and communications intelligence, its mission is mysterious. **[4]** The RC-135V flown by the commander of the 55th Wing at Offutt, headquarters of the Rivet Joint fleet. **[5]** Lt. Col. Rody Janzen, Lt. Col. John Kratt, and Capt. Joey Laws (l-r), discuss an RC-135W preflight.

Photo by Richard VanderMeulen



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Photo by Richard VanderMeulen



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Photo by Richard VanderMeulen

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[1] The E-8C Joint STARS of the 116th Air Control Wing at Robins AFB, Ga., returns to Nellis after a JEFX exercise in early 2008. The E-8 carries a radar “canoe” under its forward half. It scans battlefields, providing moving target indications and other useful intelligence to commanders. **[2]** Capt. Keith Eveland preflights an RC-135 at Offutt. **[3]** L-r: pilot and copilot Capt. Jason Corbett and 1st Lt. Daniel Therrien and navigators Maj. Alex Bruz-zano and Capt. Mike Forte on an RC-135. **[4]** A Cobra Ball is tracked by a Litening Advanced Targeting pod aboard an F-16, and displayed on the fighter’s multifunction display. **[5]** One of only two Combat Sent aircraft, with its unique wingtips, tail, and nose fairings, banks away on another cloak-and-dagger mission. ■