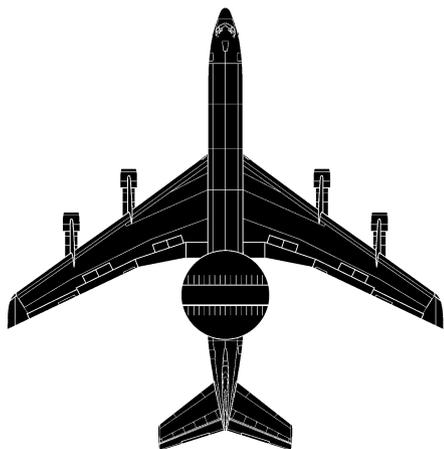


E-3 Sentry



USAF's E-3 Airborne Warning and Control System, the greatest force multiplier in military history, is the nervous system of US airpower. With its distinctive, pancake-shaped radar dome, the Boeing-built aircraft projects power without provocation, as it is unarmed. It manages the air battle, providing broad air surveillance to track airborne friend and foe and communications systems to direct air defense and precision air attack. Because of its success, the E-3 is often imitated but never equaled.

The Sentry is based on a Boeing 707-320B airframe. The 30-foot-wide, six-foot-thick radar dome houses a Doppler radar system for surveillance of air, sea, and land. It can reach out 335 miles to track moving airborne objects and 200 miles to detect objects on land or sea. The radar offers air commanders a potent "look down" capability, with the power to identify and track enemy and friendly low-flying aircraft by eliminating ground "clutter" that confuses other radar systems. The

AN/APY radar sorts aircraft and provides vector, while onboard personnel use advanced computer, navigation, and communication systems for tasks that range from guiding support aircraft to monitoring inbound hostile aircraft.

USAF built 34 E-3s (32 now in service), but the AWACS has been acquired by others around the world. NATO, as an alliance, bought 18 (17 now in service). As for individual nations, Britain has seven, France four, and Saudi Arabia five. The E-3 has served in a near-continuous role in every US air operation since it was deployed in 1991 in Desert Shield. It proved invaluable in the Gulf War, Allied Force, Enduring Freedom, and Iraqi Freedom, as well as Operations Northern Watch and Southern Watch and the NATO operation in Libya. The E-3 has also supported many humanitarian operations.

—Walter J. Boyne

This aircraft: E-3B Sentry Airborne Warning and Control System—#71-1407—as it looked in March 2005 when assigned to the 960th Airborne Air Control Squadron, Tinker AFB, Okla.



In Brief

Designed, built by Boeing and Westinghouse ★ first flight Oct. 31, 1975 ★ crew of four and 13-19 mission specialists ★ number built 68 [US, NATO, allies] ★ radar AN/APY-1 or AN/APY-2 ★ no armament ★ **Specific to E-3A:** four Pratt & Whitney TF33-PW-100 turbofan engines ★ max speed 530 mph ★ cruise speed 360 mph ★ range (unrefueled) 4,600 mi ★ weight (loaded) 347,000 lb ★ span 145 ft 9 in ★ length 152 ft 11 in ★ height 41 ft 4 in (radome mounted 11 ft above fuselage).

Famous Fliers

Notable: Many, including Andy Deckard, Mike Hostage, James Jones, Pete Karjanis, James Kowalski, Ben Robinson, Lori Robinson, Joe Rossacci, Jonathan Williams.

Interesting Facts

Nicknamed "frisbee" by airmen ★ able to carry out—unrefueled—eight-hour mission profile ★ recorded, via computers, the entire Gulf War air campaign, a historic first ★ designed with two bail-out chutes (one forward, one aft) but one deleted as cost-cutting measure ★ replaced EC-121 Warning Star aircraft ★ can increase range and on-station time with air refueling and use of onboard crew rest area ★ uses Boeing 767 airframe for Japanese variant ★ assisted in 38 of the 41 coalition air-to-air kills in the Gulf War ★ suffered a catastrophic crash in 1995, killing 24 crew members, after engines ingested Canada Geese on takeoff.



One of two Sentry EC-137D prototypes rolls out of the Boeing factory in 1972. This airplane received all improvements and upgrades and became a full-fledged E-3 AWACS. In fact, it is represented in the illustration on this page.

USAF photo