



E-7A Wedgetail Airborne Early Warning and Control

In the late 1980s, the Australian Government commenced investigations into the acquisition of an Airborne Early Warning and Control (AEW&C) capability to improve the nation's air defence effectiveness. By 1996, a Request for Proposal was issued, and Boeing was awarded the contract for an initial four E-7A aircraft under 'Project Wedgetail' in December 2000. In 2004, an additional two aircraft were ordered.

Boeing's E-7A Wedgetail solution was derived from the Next Generation 737-700. Incorporating the Northrop Grumman Multi-role Electronically Scanned Array (MESA) radar, the capability was designed to gather information from multiple sources to provide complete situational awareness of airborne and maritime targets. This information allows on-board operators to control the tactical battlespace and direct fighter aircraft, land and surface combatants.

The first two modified Wedgetail aircraft rolled out of the Boeing Field facility in Seattle, Washington in March 2004 and August 2005 and underwent flight tests in the U.S.

Boeing Defence Australia modified the remaining four from green, or unpainted, 737-700 into the Wedgetail configuration at the Boeing Aerospace Support Centre at RAAF Base Amberley, including the installation of an advanced MESA antenna, ventral fins and mission system equipment.

Boeing Australia heritage company Hawker de Havilland Aerospace locally designed and manufactured various components for the Wedgetail, including the ventral fin, dorsal fin, wingtip assemblies,

counter measures dispensing system, and internal systems cabinets for all six aircraft.

As pioneering technology, the development of the Wedgetail platform was high-risk and multi-faceted. At the time of contract award, Boeing described Project Wedgetail as the largest and most complex commercial-to-military aircraft modification ever undertaken in Australia. That statement proved prophetic when, in 2006, the Minister for Defence announced delays in the proposed delivery timeframe. The first two aircraft were delivered in November 2009.

The RAAF accepted the final of its six aircraft into service in May 2012, at which time Boeing's focus shifted from platform development to ongoing enhancement and in-service sustainment. Under the Wedgetail In-Service Support contract, Boeing Defence Australia delivers all sustainment activities for the fleet, including engineering, maintenance, training and supply support. The company is also the prime contractor of the AIR5077 Phase 5A program, the first major upgrade program for the E-7A.

Despite a troubled start, after more than a decade of service the E-7A Wedgetail is still considered a world-leading AEW&C capability. Its powerful combination of airborne surveillance, communications and battle management capability has been proven in Operations Spate, Atlas, APEC assist and most recently Operation OKRA during which it commanded and controlled up to 80 allied aircraft in any single mission, earning the Wedgetail a reputation as a force multiplier for allied nations.

The fleet is operated by No 42 Wing out of RAAF Base Williamtown.

TECHNICAL DATA: E-7A Wedgetail

Wing Span	34.3m (112 ft 7 in)
Length	33.6m (110 ft 4 in)
Height	12.6m (41ft 3in)
Max. takeoff weight	77,565 kg (171,000 lbs)
Top speed	995 km/h (618 mi/h)
Cruising speed	760 km/h (472 mi/h)
Range	3,801 nmi (7,040 km)
Ceiling	12,496 m (41,000 feet)
Power	Two CFM International CFM56-7 turbofans (27,300 lb thrust each)

