AEW&C Aircraft Altitude Record

Flight testing of the next generation Boeing 737-700 aircraft is continuing, with the aircraft recently setting an altitude record for 737's by flying to 12,500 metres. Earlier 737 models fly no higher than 11,270 metres.

It is the ability to reach such altitudes that makes the 737-700 an ideal Airborne Early Warning and Control (AEW&C) platform. Work has now begun to integrate the Multi-role Electronically Scanned Array (MESA) onto the aircraft.

The MESA system, and the aircraft itself, are currently on offer to the Royal Australian Air Force as an AEW&C system, code named Wedgetail in honor of Australia's native eagle.

Managing Director of Boeing Australia Limited, Mr David Gray, said altitude is important in an airborne radar platform, as "it gives you a longer horizon enabling the radar to be used to its maximum potential. The greater range keeps the aircraft out of harm's way yet still allows you to see into critical areas."

Mr Gray went on: "Speed is also a factor and during recent flight tests, the 737-700 flew at speeds of up to .81 Mach (464 knots or 860 kph). Speed enables the AEW&C platform to reduce the time it takes to respond to a particular area and ensures it can keep up with the fighter aircraft it is controlling.

"Speed is also important from a defensive standpoint - you need to be able to turn and move quickly away from a threat, thus offering greater survivability," he said.

When in an operational mode, the aircraft can spend from six to eight hours on station, and comfort will play a big role. The Boeing 737-700 Wedgetail is equipped with rest facilities and also a galley on board.

Northrop Grumman Electronic Sensors and Systems Division and British Aerospace Australia have joined Boeing and Boeing Australia Limited on the Wedgetail team.

Northrop Grumman will design and build the radar and British Aerospace will also help design and develop the radar as well as other sensors. Boeing Australia and British Aerospace, the premier defence contractors in Australia, will assume the primary through life support roles for the Australian Defence Force well into the 21st century.

The MESA radar provides significant operational capability by allowing the system to be dynamically tailored to match the mission requirements. It is able to track air and sea targets simultaneously and can assist the operator in maintaining control of high performance aircraft while continuously scanning the operational area.

Boeing and Northrop Grumman have been the leaders in the AEW field for 25 years with their E-3 and 767 AWACS aircraft. The Boeing 737-700 Wedgetail platform will be ready to go into service with the Royal Australian Air Force in 2002.

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