

General Dynamics F-111C

The General Dynamics F-111 – nicknamed the ‘pig’ in Australia – was selected to replace the Canberra bomber in 1963 and provided the RAAF’s long-range strike capability for almost 40 years. Its revolutionary features included a swing-wing design and terrain following radar, which enabled it to hug the ground at low level to mask it from adversary radar.

In total, the RAAF received 43 F-111s – 4 F-111As, 24 F-111Cs and 15 F-111Gs – which were operated by 1 and 6 Squadrons within 82 Wing. Four of the C model aircraft were converted to reconnaissance aircraft and rebadged RF-111Cs operated by 6 Squadron.

The F-111 had a troubled introduction into RAAF service following a range of development challenges in the 1960s. Australia announced in October 1963 that it was acquiring the F-111, with first delivery slated for 1967. But the ongoing design issues, particularly with the swing-wing feature, delayed delivery of the first tranche of six aircraft until 1 June 1973. But once in service, the acquisition delays were forgotten as it proved its value over four decades.

Despite not being a Boeing aircraft, the company was considered the F-111’s Original Equipment Manufacturer after the RAAF became the sole global operator in 1998, and because of the extensive Boeing-designed upgrades and modifications incorporated on the fleet.

Boeing’s history with the F-111 commenced in January 1996 when Rockwell Australia, which was acquired by Boeing that same year,

RAAF F-111C: First Flight

RAAF Designation	A8
Classification	Strike
Wing Span (extended)	121.33m (70ft 0in)
Length	22.40m (73ft 6in)
Max. takoff weight	49,896kg (110,000lbs)
Top speed	1377kt (Mach 2.4/2550km/h)
Cruising speed	420kt
Range	3215nm (5950km)
Ceiling	50,000 (feet)
Power	Initially – two Pratt & Whitney TF-30-P-3 two shaft axial flow turbofan engines each rated at 18,500lb thrust Later – two 20,840lb thrust with afterburner TF30-P-109 turbofans
Accommodation	1 pilot, 1 navigator

commenced work on the F-111 Avionics Update Program (AUP). Under that contract Boeing led an upgrade of the fleet’s avionics system from analogue to digital to improve reliability, supportability and maintainability of the weapons system.

Five years later, in August 2000, the Commonwealth announced Boeing Australia Limited, as the company was then named, as the preferred contractor for the 10-year F-111 Weapon System Business Unit (WSBU) contract.

In 2001, when the contract was signed, the WSBU was the largest and most far-reaching contract ever awarded by the Commonwealth of Australia. Over the ensuing decade, Boeing partnered with the RAAF and local industry to transform the F-111 into one of the world’s most formidable front-line strike aircraft that competed on an equal footing with its adversaries, despite its age.

The WSBU contract covered all major upgrades to the fleet’s airframe, avionics and weapons system including all structural maintenance from R1 (basic level) through to R5 (deeper level); system analysis, design, modification and testing; designing and integrating software and hardware to support the AGM-142 missile; and radar warning modifications.

Boeing was also contracted to deliver additional programs and facilities throughout that period including a fuel tank repair program; operating the only F-111 cold proof load test facility in the world, which was used to identify airframe defects and fatigue cracks at temperatures around -42°C; and a wing recovery program.

