

THE RAAF F-111 STORY, aka the 'PIG'



Acquisition and initial delivery

- On 24 Oct 63, the Australian Prime Minister, Sir Robert Menzies (concerned with instability in SE Asia), confirmed that Australia would buy 24 of the world's most modern strategic warplanes for \$100 million
- One month later, on 19 Nov 63, the then President of the United States, John F. Kennedy, the

Australian Minister of Defence, Athol Townley, and the U.S. Defense Secretary, Robert McNamara, shook hands in McNamara's Pentagon office over the Australian decision to buy the F-111A 'off the drawing board'

- The first pre-production F-111A was to fly on 21 Dec 64. The design included many revolutionary features; such as variable swing-wing geometry (D6AC steel in the wing carry-through box), automatic Terrain Following Radar (TFR), after-burning turbofan engines, expanding spike and translating cowl to regulate engine inlet air flow, ejection module, an integral electronic warfare (EW) suite and radiation-absorbent material (RAM) for low observerability
- The RAAF accepted its first F-111C in 1973 with the first of four delivery flights arriving at Amberley on 1 Jun 73. The last of the delivery flights arrived later that year on 4 Dec 73

Political interest

- The day before he was assassinated (22 Nov 63) President John F. Kennedy was in Fort Worth, Texas, commending the F-111 and singing Australia's praises for buying it.
- After the first flight, Secretary of the US Air Force Zuckert, spoke of his confidence in the project: *"The effectiveness of our air power in the late 1960s and in the decade of the 70s, as well as those of our allies such as Australia, will be vitally enhanced by the success of the F-111 program. The versatility of this aircraft promises to meet the demands for mobility, supersonic performance and great striking power."*

Models

- **F-111C:** Australian version of the F-111 fighter bomber aircraft
- **RF-111C:** RAAF version only, modified for photo-reconnaissance missions
- **F-111G:** Ex-USAF F-111G's, modified from the FB-111A strategic bomber, which helped Australia maintain its strike capability until the F-111 was retired

F-111C

- Although Australia originally ordered the F-111A, longer wings for extended range and strengthened undercarriage/improved brakes for the greater all up weight of the planned USAF Strategic Air Command FB-111A were added to the Australian requirement and the aircraft designated the F-111C

- The F-111C was also equipped with the removable right control stick of the F-111K and MK-1 avionics of the F-111A
- Inside the weapons bay, the 20mm M61A1 Vulcan gatling gun was installed at the expense of the GAR-8/AIM-9 Sidewinder Trapeze system
- The Australian Government formally accepted the F-111 on 4 Sep 68
- The first flight by a RAAF crew (Ron Green & Harry Walton) of an RAAF F-111 occurred on 5 Sep 68 (aircraft A8-126 - from Fort Worth to Edwards AFB)
- On 22 Dec 69, an F-111A crashed and was destroyed. The mission had been the operational testing of rockets on the Nellis ranges. During a rocket delivery recovery, a wing of the F-111A completely detached in flight. The highly experienced crew was killed after an unsuccessful out-of-module-limits ejection from the rapidly rolling, out of control aircraft
- As this aircraft already had a modified wing carry-through box, the loss caused the grounding of all F-111s for an extended period, (five years) and nearly the cancellation of the Australian order for 24 F-111C
- The RAAF crews at Nellis were brought home and 24 F-4E Phantom II were leased and based at Amberley in the interim.



Delivery

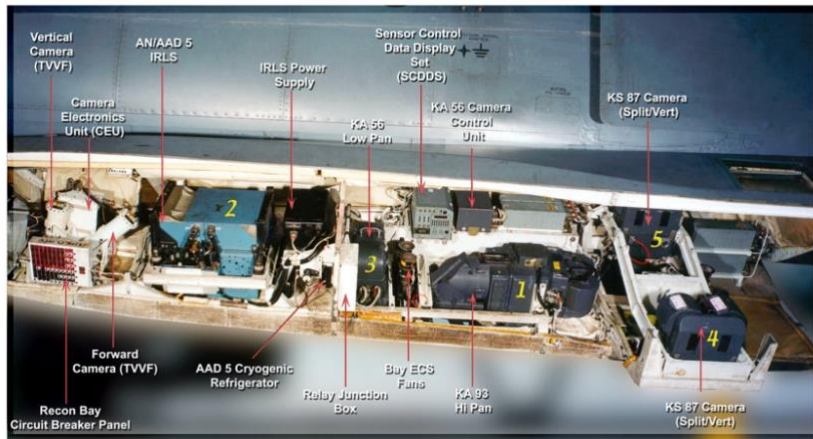
- On 16 Dec 71, the Australian Government announced the decision to accept the aircraft
- By Jan 73, Australian aircrew and maintenance personnel were once again training at Nellis AFB
- The first six-ship ferry arrived at Amberley on Friday 1 Jun 73
- Three more six-ships ferries arrived at Amberley on 27 Jul, 28 Sep and 4 Dec 73
- With no official name, the RAAF F-111s were fondly known as the 'Pig' by RAAF aircrews and maintainers
- The fighter-bomber's primary mission in the early analogue years was: single ship, night TFR ingress & egress, with dumb bombs against land targets (alone, unarmed and unafraid), and multi-ship attacks for maritime strike

Attrition Aircraft

- In early Jan 77, the subject of attrition replacement aircraft was raised and six USAF F-111A were offered to the Australian Government for a cost of \$42 million
- Four F-111A were eventually purchased (109, 112, 113 and 114) and delivered in 1982. Over the next few years, the aircraft were modified by No. 482 Squadron (maintenance) and No 3 Aircraft Depot to F-111C standard

RF 111C Reconnaissance Bay

RF-111C



- From the outset, Australia was interested in making reconnaissance modifications to some of the F-111C
- The RF-111A, and the following RF-111D programs were both cancelled by the USAF, leaving Australia to

'go it alone' with General Dynamics, Fort Worth to develop a reconnaissance capability

- On 22 Aug 79, the first RF-111C (A8-126) arrived from McClelland AFB. The remaining three aircraft (134, 143 & 146) were modified by 3AD at Amberley. The total RF modification cost \$27 million
- Later Upgrades included:
 - Integration of the AGM-142 Popeye electro-optically guided stand-off missile
 - enhanced Electronic Warfare protection including the EL 8222 EW jamming pod
 - Night Vision goggles

F-111G

- On 15 Oct 92, the Australian Government announced the surprise decision to purchase 15 ex-USAF F-111G aircraft
- Over the following 18 months, all 15 F-111Gs were ferried from McClellan AFB to Australia without tanker support or enroute maintenance personnel, and without incident
- The acquisition of the F-111G enabled F-111 fleet hours to be extended beyond 2000 and preserved F-111C strike aircraft
- On 3 Sep 07, the last F-111G sortie was flown by the Chief of Air Force, AM Geoff Shepherd and SQNLDR Steve Clarke in A8-512

Roles and capability

- No. 1 Squadron operated the F-111C between 1973 and 2008 in the low-level strike role, simulating attacks on land and maritime targets
- In Jul 96, four RF-111C reconnaissance aircraft were transferred to No. 1 Squadron. This expanded the squadron's role to include tactical and strategic reconnaissance
- On 5 Aug 08, all F-111 maintenance began to merge into 6 Squadron and by Nov 08 the process was completed when all F-111 aircraft and aircrew workforces amalgamated into 6 SQN
- No. 6 Squadron continued to operate and maintain both the F-111C and RF-111C aircraft as a formidable part of Australia's air combat capability until the RAAF F-111 retirement in Dec 10
- The F-111 was a significant component of Australia's air combat capability in concert with the F/A-18 Hornets
- The F-111 was a twin-engine, swing-wing fighter-bomber aircraft. It could take off and land at relatively low speeds with the wings swept forward, then fly at more than twice the speed of sound with its wings swept back. It could fly automatically close to the ground at supersonic speeds, day or night, following the terrain to avoid radar detection



Upgrades and modifications

- The F-111 underwent numerous airframe, engine, weapons and avionics upgrades since it was introduced to the RAAF in Jun 73
- In 1981, four US Air Force F-111A's were purchased as attrition replacements. Delivered in 1982, these aircraft became A8-109 to A8-114. They were subsequently modified to full F-111C standard
- Four F-111Cs were modified to RF-111C reconnaissance aircraft



- To enhance its attack capability, the RAAF modified the F-111C to carry the Pave Tack forward-looking infra-red acquisition and laser target designation pod in 1985. The Pave Tack system passively enhances target identification in poor weather and at night, and the laser designator enabled precision homing of laser-guided bombs.
- The Harpoon anti-ship missile was first fitted to the F-111C in the mid-80s to enhance maritime strike capabilities and the last major weapons fitment was the AGM-142 Popeye air-to-surface missile in the early 2000s
- The F-111 was one the world's leading long-range strike aircraft. To improve both its capability and maintainability, the RAAF embarked on the Avionics Update Program (AUP) with advanced systems to keep the F-111 in the front line through to the year 2010. AUP aircraft entered service in 1994 and the upgrade was completed in 1997

Operational service

- Australian F-111s participated in deployments and exercises throughout Australia, New Zealand, Malaysia, Singapore, the Philippines the United Kingdom and the United States.
- In Jun 99, civil unrest broke out in East Timor. Militia gangs threatened United Nations staff and Australian nationals as well as the East Timorese, Australian peacekeeping troops were inserted under Operation SPITFIRE. With tensions building, six aircraft (F-111Cs and RF-111Cs) from Nos 1 and 6 Squadrons deployed to RAAF Tindal, ready if called upon. When INTERFET forces arrived in Dili on 20 Sep 99, the situation on the ground was volatile. Requests for RF-111 overflights of East Timor were initially refused by the Indonesian Air Commander, but after Indonesian forces withdrew in late October, overflights were permitted. RF-111C missions began on 5 Nov 99 and continued for four days. These aerial reconnaissance flights over East Timor were the only operational employment of the RAAF F/RF-111C fleet.
- F-111C fighter-bomber aircraft from 1 Squadron were seriously considered for operational service by Air Commander Australia (AVM John Kindler) as part of Operation FALCONER in 2003. Australia was asked to join a US led coalition war in Iraq and given direction by Government to send a bomber force to the Middle East for an 'up to one-year operational deployment'. Unfortunately, the availability of serviceable F-111s was greatly diminished due to serious personnel health concerns following the fuel tank reseal/deseal Board of Inquiry. ACAUST could therefore not commit the F-111C force, and instead deployed 75SQN F/A-18 Hornet fighter/attack aircraft. However, select 6SQN armament fitters (gunnies) and OPSFLT aircrew were deployed to support 75SQN's involvement in Operation FALCONER and served with distinction.
- The Australian War Memorial announced on 30 May 19 that an RF-111C would be added to its aircraft collection. Aircraft A8-134 is the only remaining RF-111C that participated in missions over East Timor (Timor-Leste) in 1999. It has the greatest operational provenance of the preserved Australian F-111 fleet.



Aircraft Losses

Date	Tail	SQN	Location	Cause
28Apr77	136	6SQN	Armidale (12:17pm) 30.19.2S 151.43.5E	Engine Oil Hot, a/c caught fire, crew <u>ejected</u> safely at 9000' AMSL
29Sep77	133	6SQN	EVD Range (10:37am) 29.19.53S 153.20.22E	Catastrophic birdstrike, crew <u>ejected</u> out of envelope; fatal
25Oct78	141	6SQN	Waiheke Is, NZ (12:44pm) 36.43.08S 175.10.91E	Wheel well hot, a/c caught fire, crew <u>ejected</u> safely over water
24Aug79	137	1SQN	RNZAF Ohakea (11:20am)	Engines stalled on takeoff due water ingestion, aquaplaned, crew <u>ejected</u> safely at end of runway
28Jan86	139	1SQN	Off Moruya, NSW (08:24pm) 35.56S 151.08E	CFIT during low-level night tactics; maritime strike simulating Harpoon; fatal
2Apr87	128	6SQN	Tenterfield (07:33pm) 29.01.55S 152.01.50E	CFIT during low-level night tactics; post auto-toss attack; fatal
13Sep93	127	1SQN	Guyra (07:16pm) 30.10.39S 151.39E	CFIT during low-level night tactics; post auto-toss attack; fatal
18Apr99	291	6SQN	Pulau Aur Island (08:21pm) 02.26.6N 104.31.4E	CFIT during low-level night tactics; maritime strike simulating Harpoon, hit island, fatal

Aircraft Specifications

- **Technical Data:** General Dynamics F-111C
- **Description:** Two-seat long-range strike reconnaissance aircraft.
- **Power Plant:** Two 8165 kg (18,000 lb) thrust Pratt & Whitney TF30-P-109 turbofans.
- **Dimensions:** Wing span (extended to 16 degrees) 21.33 m (70 ft); (swept to 72 degrees) 10.34 m (33 ft 11 in); length 22.4 m (73 ft 6 in); height 5.3 m (17 ft 5 in).
- **Weights:** Basic (Pave Tack) 23 300kg (51 300lb); Max take-off 51 955kg (114 300lb).
- **Performance:** Max speed Mach 1.2 at sea level, Mach 2.5 above 50,000ft; High Level Cruise speed 780 km/h (420 kt); Low Level Cruise speed 900 km/h (510 kt); Ferry range 5560km (3000nm); Ceiling 50,000 ft (15 200 m).
- **Weapons:** Harpoon anti-ship missiles; combinations of Mk 82 and Mk 84 bombs or Paveway II laser-guided bombs with AIM-9 Sidewinder air-to-air missiles, Paveway III Low Level LGBs and AGM-142E standoff missiles



Story Bridge ‘Dump & Burn’ Photo by Mal Lancaster - July 1990

“It was the 50th anniversary of the opening of the Story Bridge and as always, with River Fire whilst the F-111s were operating, they were the main entertainment for the night when they do their traditional “dump and burn”. They do their dump and burn, and so they’d fly in, start dumping fuel and then hit the after-burner and all that fuel exploded into flame.

We had an exchange pilot, chap by the name of Anderson from England, an English exchange pilot and I think he was supposed to fly over at 800 feet was somehow the heights got mixed up and he flew over, they ascertained at 169 feet and he flew out and did the dump and burn.

I think Andy’s time in Australia was sort of limited after that, went back to England and he went on to become, I think a Three

Star General in the Air Force. He just got knighted. He ended up being in charge of the RAF Safety, Flight Safety, just recently got knighted for his work.

He told a funny story when the F-111s were, sort of phased out, they had a big send-off at Amberley and Andy was there. He said – Mal I don’t want to see you. Every time I go somewhere I see that photograph. He said – as Chief of the Air Forces Flying Safety, it’s not a good thing.

So, it was quite funny but it was good. It was quite exciting. There was a fire station at the eastern end of the Story Bridge and they had a big fire ladder there. And I got up the top of that, once again working with the air crew, to get in the right position. I set a time-exposure on the Hasselblad camera when they came through so it was about an eight second time exposure. And so I had this great big stream of flame coming through the photograph which shows the Story Bridge, the city and everything else illuminated. The photograph probably goes on a wall.

The Chief of the Air Force called me and said – Mal under no circumstances is that to be released. Somehow the negative got out and it ended up in the Officers’ Mess at Point Cook. And once that happens, it goes everywhere. I know it was in Hawaii at the General in Charge of Pacific Fleet, I think, in his office. So it went around the world. But it was, a unique photograph, there’s no doubt about that.”

Mal Lancaster was interviewed in October 2016

<https://mulliganoralhistory.info/mal-lancaster/>