



Military Aircraft.

There were a number of overseas military aircraft at the Airshow, but undoubtedly, the US of A stole the show with its amazing Lockheed Martin/Boeing F-22 Raptor.

The F22 is a single-seat, twin-engine fifth-generation super-maneuvrable fighter aircraft that uses stealth technology. (Someone said, you might not be able to see it, but you can certainly hear it). It was designed primarily as an air superiority fighter, but has additional capabilities that include ground attack, electronic warfare, and signals intelligence roles. It is made by a consortium of companies of which Lockheed Martin Aeronautics is the prime contractor and is responsible for the majority of the airframe, weapon systems and final assembly. Boeing Defense, Space and Security provides the wings, aft fuselage, avionics integration, and training systems.

Pic by Erin Muscat



The aircraft entered service with the USAF in December 2005 which now considers the F-22 a critical component of U.S. tactical air power and claims that the aircraft is unmatched by any known or projected fighter.

The USAF originally planned to order 750 aircraft at a cost of \$26.2 billion (\$35M each), but in 1990 Dick Cheney altered the plan to 648. The goal changed again in 1994, when it became 438 aircraft and then in 1997 it was further reduced to 339. In 2003, the USAF said that the



existing congressional cost cap limited the purchase to 277. Then in December 2004, the Department of Defence reduced the number further to only 183 aircraft. By 2006 the cost had blown out to \$361M per aircraft. The final F-22 rolled off the assembly line on 13 December 2011

Currently US Federal Law prohibits export of the aircraft which has limited its production and as a consequence, increased its per item cost. Several nations (Japan and Israel for two) have indicated they would buy the aircraft now if allowed, but in 2006 the US Congress confirmed the ban. Instead the US is exporting the Boeing F/A-18E/F Super Hornet and nations are waiting for the (supposed) cheaper and more flexible F35 Lightning. The F35 will not be as agile as the F-22 or fly as high or as fast, but its radar and avionics will be more advanced.



A while back, some Australian politicians and defence commentators proposed that Australia should have purchased the F-22s instead of the F-35 as the F-22 was a proven, highly capable aircraft, while the F-35 was (and is) still under development. The Rudd Government ordered a review of Defence procurement plans and in February 2008, the U.S. Defence Secretary Robert Gates said he had no objection to supplying the F-22 to Australia and Australia would not be barred from buying the F22 should it wish to so do. However the RAAF found that the F-22 could not perform the strike or close air support roles planned for the JSF so that plan was canned and it was decided to go with the F35. Let's hope they were right!

The PBRD was not game!!

The USAF also brought in their trusty old B52, an aircraft that has flown with the USAF since 1955. Like the woodman's axe which has had two handles and three heads, but is still a damn good axe, the B52 has, over its 58 year history, undergone many many changes too, but it's still a B52. Beginning with the successful contract bid in June 1946, the B-52 design evolved from a straight-wing aircraft powered by six turboprop engines to the eight turbojet engined, swept



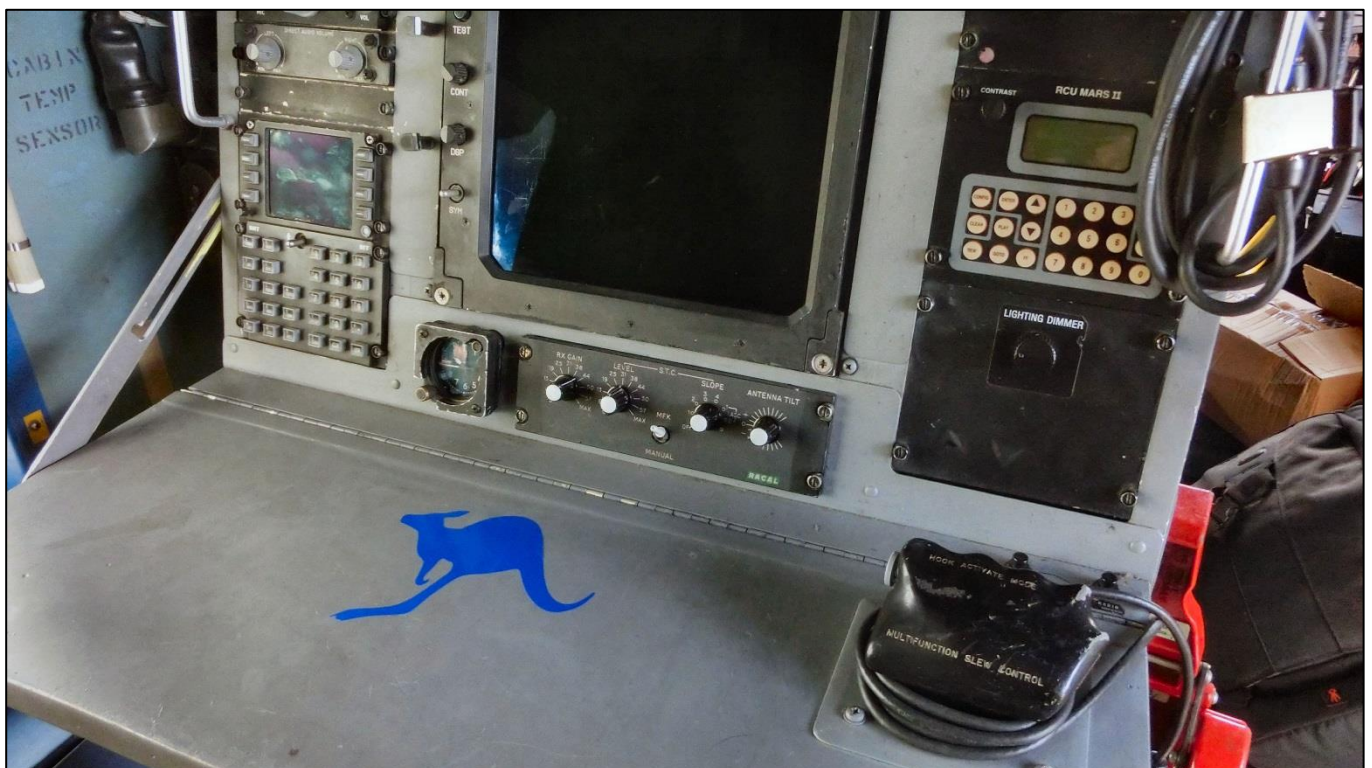
wing airframe it is today. It took its maiden flight back in April 1952 and was built to carry nuclear weapons for Cold War-era deterrence missions.

A veteran of several wars, the B52 is fondly referred to as the *BUFF* (Big Ugly Fat/Flying Fu**er/Fellow). Of the 744 that were built, 85 remain in active service with the new Air Force Global Strike Command (AFGSC) with a further 9 in reserve.

Superior performance at high subsonic speeds and relatively low operating costs have kept the B-52 in service despite the advent of later more advanced aircraft. The B-52 marked its 50th anniversary of continuous service with its original operator in 2005 and after being upgraded between 2013 and 2015 it will serve into the 2040s.



Somehow the PBRD snuk on board the B52 and left a memento of the BUFF's trip to Avalon.





Another USAF aircraft that has been around for a long long time is the Boeing KC-135 Stratotanker. Built on the Boeing 717 airframe, not, as is often thought, from the different 707 airframe, the KC-135 first flew in 1956 and entered service with the USAF in June 1957. Despite increased maintenance costs, it is thought many of the original 803 aircraft could be flown until 2040. The aircraft will eventually be replaced by the Boeing KC-46 which is based on the Boeing 767. The early aircraft were equipped with Pratt & Whitney J-57-P-59W turbojet engines which produced approximately 58 kN of thrust wet. Wet thrust is achieved through the use of water injection on take-off. 2,500 Litres of water are injected into the engines over the course of two and a half minutes. The water turns to steam and is ejected out the rear of the engine, increasing the exhaust mass and increasing thrust. It results in the engine running somewhat hotter, with more engine noise.



The aircraft have undergone two engine upgrades since 1957 and future mods are planned for the refuelling system.

And because it was there, the PBRD branded the tanker too.



RAAF Radschool Association Magazine.

Avalon Air Show 2013 Special Edition



The Kiwis also came to the party with one of their two Boeing 757-200 people movers. Operated by 40 Squadron RNZAF, the fleet, which started work in the Shaky Isles in 2003, undertakes operations to many points around the globe and flies a varied mission profile. They are also fitted with an upper deck cargo door that can handle 11 cargo pallets.



The interior of the people mover, no red webbing seats here....



The PBRD welcomed the Kiwis to Avalon too.



The RAN's 816 Squadron operates 16 Sikorsky S-70B-2 Seahawk helicopters whose primary role is to provide anti-submarine warfare and anti-surface surveillance from the Navy's Frigates. With its electronic equipment and integrated weapons systems, the Seahawk can find and destroy surface or submarine targets either independently or in conjunction with other forces. A typical Seahawk mission involves up to four hours of low-level operations over the sea, by day or night, in all weather and returning and landing on a ship that can pitch and roll dramatically in heavy seas.



The Seahawk's main weapon is the MK 46 torpedo and it can also be fitted with a 7.62 mm door mounted general purpose machine gun. It is also used in search and rescue, troop lift and tactical insertion, utility operations (winching and external load lift) and fire bombing.

816 Sqn used to operate the Grumman Trackers which were all destroyed in a fire in Dec 1976. As a result of this, in 1982, the Sqn was disbanded then re-activated again in 1984 to operate the Wessex Helicopter. Then in 1988, the RAN began to introduce the Seahawks and they were officially introduced to 816 Sqn in 1992, the delay being caused by the first Gulf War.



The 816 Squadron Crest depicts the head of a Bengal tiger on a black field and its motto is 'Imitate the Action of the Tiger'. You can read more on 816 Sqn [HERE](#).

The Republic of Singapore Air Force had two of their Super Puma helicopters on deck. This particular aircraft, flown by RSAF's 125 Sqn, has proved immensely successful, chosen by 37 military forces around the world, and some 1,000 civil operators. The first prototype of the full Super Puma made its maiden flight in September 1978, followed quickly by five further prototypes, each of which contained many improvements, until the current aircraft was accepted and went into production. A wide variety of specialised military variants are in use,



including dedicated Search and rescue (SAR) and Anti-submarine warfare (ASW) versions. Since 1990, military Super Pumas have been marketed as the AS532 Cougar.



Formed in February 1985, 125 Squadron is the RSAF's third helicopter squadron, after 120 Sqn (with the AH-64D Apache Longbow) and 123 Sqn (Sikorsky S-70B Seahawk).

The first Super Puma made its way to Singapore in July 1985 and the Squadron was officially inaugurated on 4 October 1985. Three of the Squadron's Super Pumas are permanently painted in red and white paint scheme for conducting Search and rescue (SAR) work, taking over the duty of SAR-configured Bell 212 Twin Huey helicopters from 120 Sqn, which were retired the same year, the motto of the SAR detachment is *"That others may live"*.



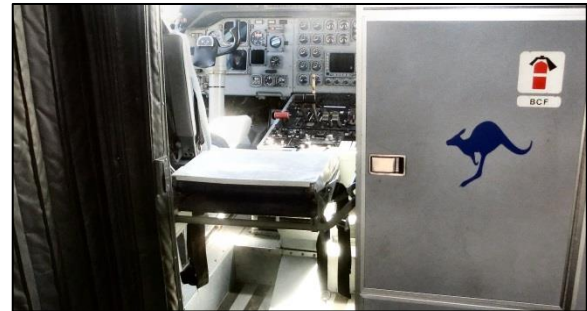
The French Air Force had one of their versatile CASA C-295 aircraft at the Airshow. This is the aircraft that EADS, a section of Airbus Industries were pitching to the RAAF as a replacement for the Caribou but which eventually lost out to the C27. The C-295 is manufactured and assembled in the Airbus Military facilities in Seville, Spain.





It is a development of the commercially successful Spanish - Indonesian transport aircraft CASA/IPTN CN-235, but with a stretched fuselage, 50% more payload capability and new PW127G turboprop engines. The C-295 made its maiden flight in 1998.

In 2012, EADS announced several enhancements to the design, including winglets, and an ability to carry the Marte anti-ship missile. An airborne early warning and control version is also planned.



The C-295 is in service with the Armed Forces of 15 countries. By January 2013, a total of 121 C295s have been contracted and 93 are in service, two were lost in accidents.

Words with two meanings - ENTERTAINMENT (en-ter-tayn-ment) n.

- Female: A good movie, concert, play or book.
Male: Anything that can be done while drinking beer.