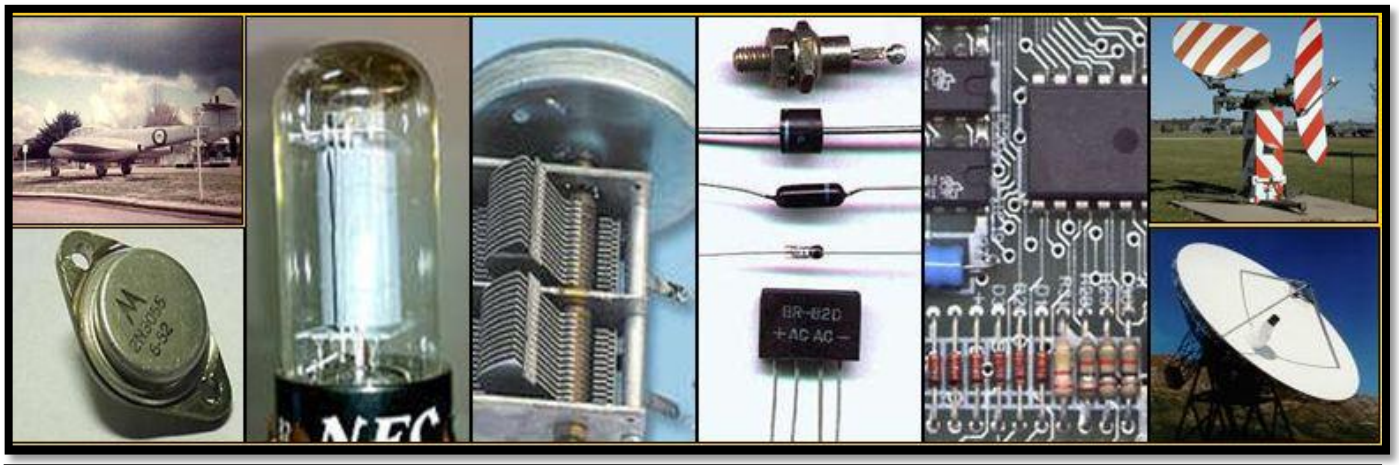


RAAF Radschool Association Magazine

Avalon Air Show Special

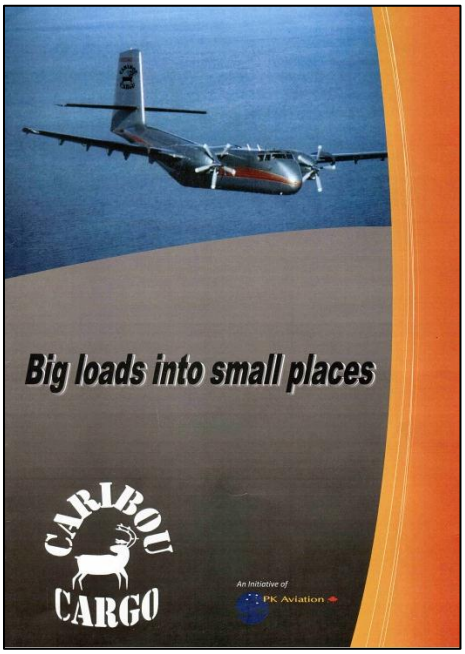
Mar 2011

ABN 18 477 110 847

RAAF Radschool Association Magazine
Avalon Air Show Special Edition

The fabulous Avalon Air Show was on from the 1st to the 6th March, 2011. Laurie Lindsay and I went along and Laurie took along his trusty little Kodak instamatic, a pocket full of cartridges and half a dozen flash cubes and we got some good snaps!!

This is how we saw it.



The Show was an excellent opportunity for Exhibitors to show their wares to prospective buyers.

See Page 1

It was the 90th anniversary of the RAAF and they were there in force.

See page 2

RAAF Radschool Association Magazine
Avalon Air Show Special Edition

Civilian Aircraft were there in abundance, some luxurious, some economy class, some old, some new.

See page 3

There were many military aircraft at the event, but the B1 bomber from the USAF stole the show.

See page 4

And what would a show be without Volunteers, but volunteering for what, that is the question.

See page 5

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The 2011 Avalon Air Show.

This year's event, which was held over the days 1-6 March, was a very special one as it celebrated the 90th anniversary of the Royal Australian Air Force.

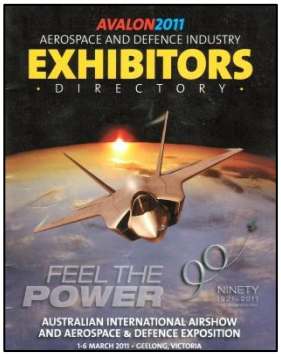
As normal, it was held at the Avalon Airport which is about 55 Klms south west of Melbourne, and about 20 klms from Geelong – on the Geelong Highway and as normal, it attracted an enormous amount of international and local interest and participation.

The show is really two shows in one, the first few days are for trade exhibitors to show their wares to potential customers, then from Friday afternoon to Sunday night, the show is open to the public for them to look over, get inside and touch the huge array of aircraft on static display and to watch most of them take to the sky and demonstrate their amazing capabilities.

The show is held every two years, and this year was its tenth anniversary. It is well established as a regular feature on the world aviation, aerospace and defence calendar and is Australia's largest and most comprehensive aviation, aerospace and defence exposition. It covers the full range of military and civil aviation and aerospace, as well as air and land defence.

Avalon is big business.

Exhibitors.



In all, there were more than 400 separate exhibitors at the show, some set up large displays out in the open, others took advantage of and set up in the huge 3 inter-connected Expo Halls purpose built for the occasion. These halls form the largest temporary structure in the Southern Hemisphere.

The Show started back in 1992 and since then the Australian International Airshow and Aerospace and Defence Exposition, to give it its full name, has established itself as one of the Asia Pacific's leading aviation, aerospace and defence events – and each year they just get bigger and better.

For the public day Sunday, Melbourne turned on excellent weather which brought thousands of people to the show. The air conditioned exhibition halls can be seen at the far left in the top photo.

Click each pic for a clearer view.

Inside the Halls.

On trade days, the Exhibitors were able to cope with the orderly flow of inquisitive lookers, most of whom were in suits, but on the public days things were completely different. Thousands flocked to the halls to see the exhibitions, to ask, in some cases, silly questions, and to grab all the freebies they could.

The F136 Engine.

The G.E./Rolls Royce F136 engine is a 40,000 lbf class, two-shaft engine specifically designed to be "interchangeable' across the three variants of the Lockheed Martin F-35 Joint Strike Fighter;

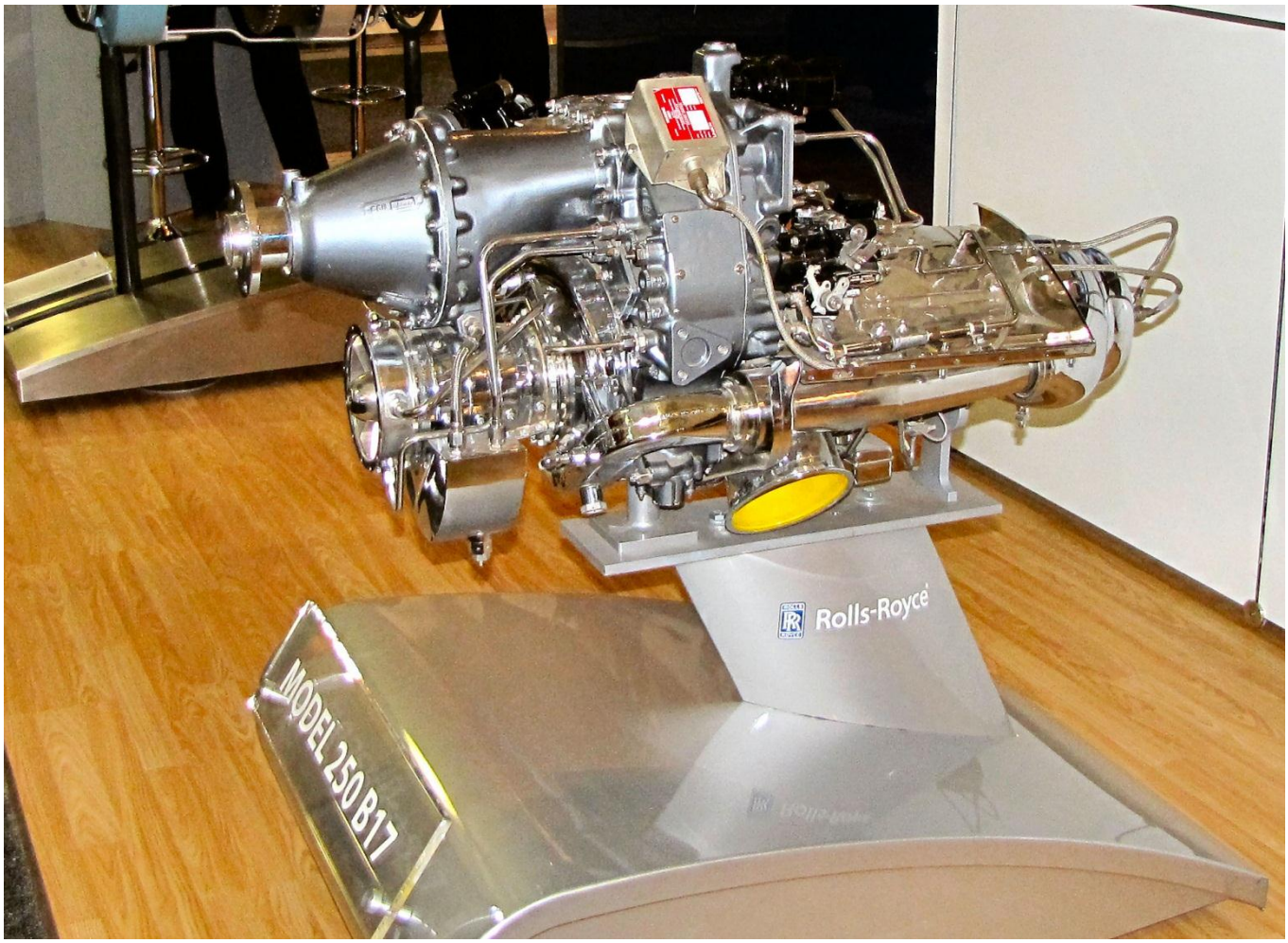
- F-35A - Conventional Take Off and Landing (CTOL)
- F-35B - Short Take Off and Vertical Landing (STOVL)
- F-35C - Carrier Variant (CV)

With a potential market in excess of 4,000 aircraft, the F-35 aircraft will be operated by customers such as the US Air Force, US Marine Corps, US Navy, Royal Air Force, Royal Navy, RAAF and a host of international customers.

Rolls-Royce has a 40 per cent share in the project and is responsible for the three-stage fan, combustion system, LP turbine and accessory gearbox.

M250 engine

This engine, originally developed by the Allison Engine Company in the 1960's, but since RR acquired Allison in 1995, and now known as the Rolls Royce M250, is one of the most successful 300-450shp turboshaft engines ever developed.



The M250 turboprop has found popularity due to its small size and high power-to-weight ratio, which make it ideal for turbine conversions of existing piston-engined designs.

Caribou Cargo

Paul Strike, who is an ex RAAF avionics bloke, is the Managing Director of a Queensland company called Caribou Cargo. Caribou Cargo plans to operate an air transport business, pitched at customers in Australia, PNG and Asia, with a re-engined turbo Caribou STOL aircraft. The turbo Caribou can carry loads of up to 4500kg into small or unprepared airstrips.

Paul Strike was in the RAAF from 1982 to 1998 and had postings to 1AD, 482 Mntce Squadron, 38 Sqn, 23 Sqn then back to 38 Sqn.

The aircraft has been retrofitted by US based Caribou specialist Pen Turbo which removed the old radial engines and replaced them with PT6A turboprops and associated propellers

Blake and Paul Strike.

The airframes are low time and are sourced and converted by Pen Turbo – a company that operates from an airport in Rio Grande, New Jersey, in the USA.

The take off and landing specs for a fully loaded turbo aircraft in STOL configuration are as follows:

Take off (25 deg flaps)	
Ground run	800 ft
Distance to clear 50 ft obstacle	1,300 ft
Landing (40 deg flaps)	
Ground run	425 ft
Distance to clear 50 ft obstacle	945 ft

The takeoff and landing specs for a fully loaded turbo aircraft in Airline configuration are as follows:

Take off (7 deg flaps)	
Ground run	1,630 ft
Distance to clear 35 ft obstacle	2,550 ft
Landing (30 deg flaps)	
Ground run	1,100 ft
Distance to clear 35 ft obstacle	2,250 ft

As the new engines are made of plastic, they are quite a bit lighter than the original real engines, so to maintain C of G and not have the aeroplane fly with the pilots looking at the sky, Pen Turbo had to move the new ones quite a bit forward. The props are now level with the back of the pilots seats. One wonders why the RAAF didn't look at these aircraft instead of the Beech 350's.

Paul, through his company, has tendered for one of the ex-RAAF Caribous, one of the ones with real engines, and he hopes to hear shortly whether his tender was accepted. If he is successful, he would love to hear from any ex 35/38 blokes who worked on or flew the old girls and who would or could lend a hand as he's sure he will need to do an E on her.

The Spice 1000.

If you've got a spare bomb or two hanging around in the back shed, this could be just what you are looking for. The Rafael SPICE (Smart Precise Impact and Cost Effective) guidance kit is a modular upgrade for 'dumb' bombs which gives the bomb greatly enhanced terminal accuracy and significant stand-off range. SPICE combines GPS/INS guidance and an electro-optical seeker which ensures the bomb will land exactly where you want it.

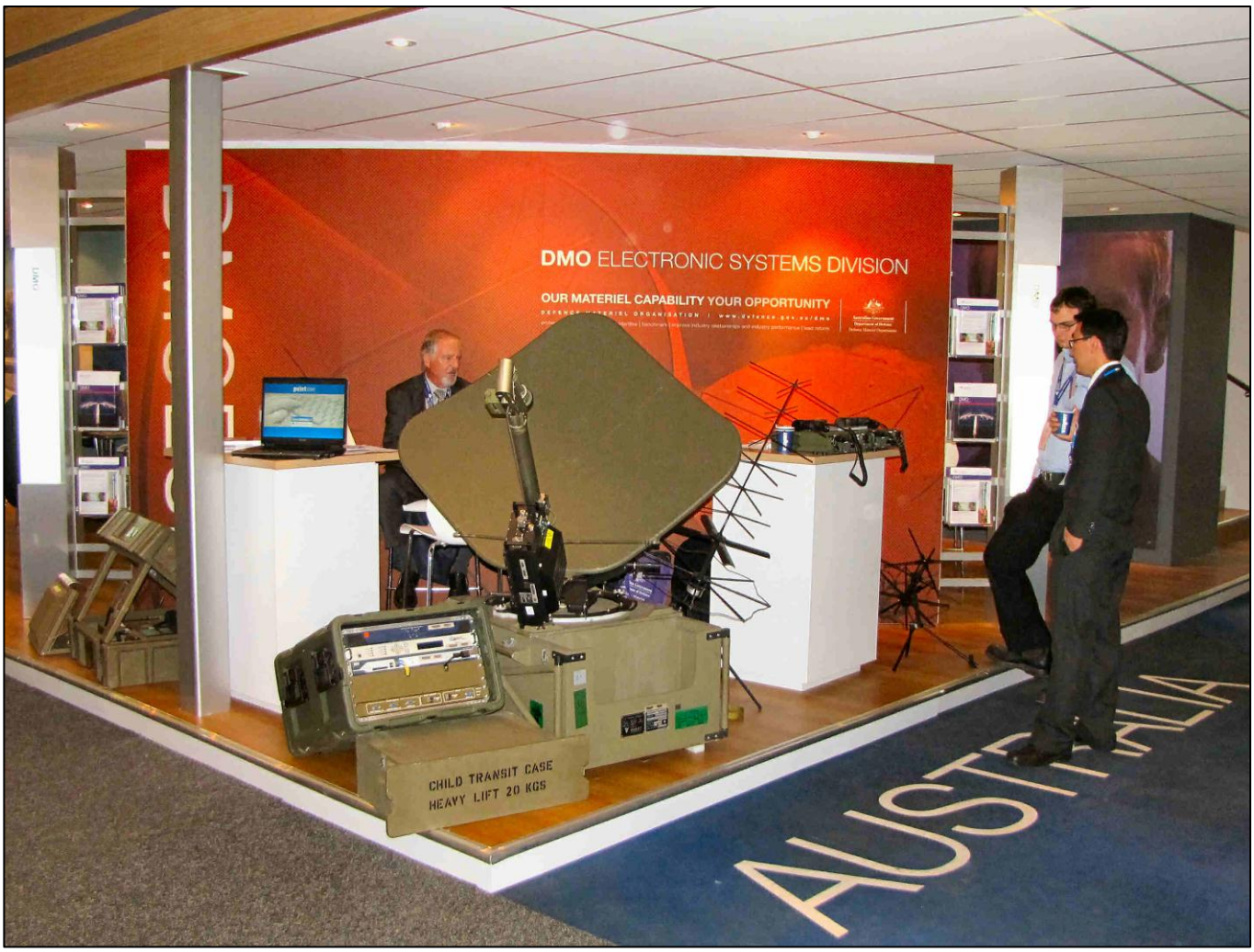
This upgrade has an automatic target recognition mode that has been

successfully demonstrated against targets on land and at sea. After the Yom Kippur conflict of 1973, the Israeli Air Force was one of the first air forces to recognise the need to move combat operations away from direct attack methods, and adopt a precision stand-off capability instead.

And there seemed to be a lot of people interested in the technology too…..

DMO

The Defence Materiel Organisation ('DMO') is the Australian Government agency responsible for the acquisition, support and disposal of equipment for the Australian Defence Force. The DMO is part of the Australian Department of Defence, and manages the acquisition and support of a diverse range of equipment, including aircraft, ships, vehicles, electronic systems, uniforms and rations.



The DMO has a budget of A$11.8 billion (2009), with over $6.3 billion spent on purchasing new equipment and $5.5 billion on sustainment and through-life support (maintenance, upgrades, fuels, explosive ordnance and spares). In 2009, the DMO managed some 210 major projects, each with a budget over $20m and more than 150 minor projects. It employs more than 7,500 military, civilian and contracted staff in more than 70 locations around Australia and internationally.

Spotted.

Spotted during trade days are ex brats, Bob Bartram and Ron Gretton. Both were ex-RAAF instrument fitters, Bob was on 3 intake (the Sunbeams) back in 1951 and Ron was on the 12th intake (the Wombats) in 1960.

Ron graduated from Number 7 Engineering Diploma Course in 1964 and is now associated with the RAAF Museum at Pt Cook.

Also spotted was John Clarkson (below) who was an RAAF engineering officer who had joined 12-13 Engineering Diploma Course in 1967. In 2001, as a Group Captain, he was the senior RAAF Officer on the Board of Inquiry into the health problems associated with the F-111 fuel tank seal/deseal program and in 2002, was looking into the long-term future of the F-111 aircraft following an unexpected wing failure during ground fatigue testing.

John retired from the permanent RAAF in 2004 and is now on the reserve, He is also on the Executive Management Team that organises the Air Shows.

Sight Unseen.

Paul Mathieson at the Sight Unseen stand. Paul joined the RAAF as a Diploma Cadet on 13 Course in 1967.

He was at 2AD in the early 70's but has now retired from the RAAF and is currently Business Development Director for L-3 Communications in this part of the world.

Jelly Belly.

Kent Pietsch in his 1942 Interstate Cadet is a master at performing extreme maneuvers in his Jelly Belly sponsored aircraft. The Interstate Cadet is a tiny 360 Kg aircraft with an 11 metre wingspan. It has a 4 cylinder horizontally opposed engine that can generate 90 horsepower and a the airframe can handle a G force of -3 to +5 and one of Kent's favourite routines is landing on the rooftop of a moving vehicle.

He performed this amazing trick as part of his unbelievable stunt show every day, no matter what the weather or wind. What is amazing about this trick is that Kent cannot actually see the top of the vehicle when actually setting the Aircraft on to the roof but relies on being talked down by the truck driver.

This bloke has amazing skill.

John Stewart-Jones (left) used to run a drafting and design service called HSJ Aviation and quite often he joined with the world famous Avionics Design Electronics company and produced some excellent material.

He's now retired, but being a very good artist and he now draws aircraft and sells the sketches.

Army.

The Australian Army were at the show in strength and apart from their aircraft and their search and destroy demonstrations, they also had many of their land vehicles on show, a feature that was appreciated very much by a huge bunch of kids who would still be there playing wars if they were allowed.

The Army's famed Bushranger is an Australian-built wheeled armoured vehicle which is designed to carry troops safely in combat conditions. As it is only lightly armoured, the term Infantry Mobility Vehicle is used to describe and distinguish it from a heavier wheeled or tracked armoured personnel carrier. It was originally designed by Irish company Timoney Technology but designs and licences were sold to Thales Australia who now build it at their Bendigo factory. In 1998, the Bushmaster was selected by the Australian Army and over 800 have been built.

It is optimised for operations in northern Australia, and is capable of carrying up to 9 soldiers and their equipment, fuel and supplies for 3 days. It is and was once planned to have a cool water drinking system but this was initially omitted due to cost constraints. After many complaints from the troops, the cool water drinking system is being reconsidered for installation.

It is powered by a 320 HP Caterpillar 3126E diesel engine and is currently being used by the Australian Army, the RAAF, the Royal Netherlands Army and the British Army and talks are underway to have it sold to the US Army.

The Australian Light Armoured Vehicle (ASLAV), is an Australian version of the Light Armoured Vehicle designed and manufactured by General Dynamics Land Systems Canada for the U.S. Marines. vehicle was re-designed to meet North American requirements and US Military Standards.

It is a highly mobile, eight wheeled amphibious armoured vehicle used for reconnaissance and surveillance operations – and the kids loved it.

The Army also had their Blackhawk helicopters in the air doing mock search and destroy missions with the troops, all of which was closely watched by the huge crowds.

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Civilian Aircraft.

Many manufacturers had numerous aircraft on display, some super luxurious, some general admission, some old, some new, some ex-military and some about which you"d have to think twice about before venturing into the wide blue yonder in them – but they all attracted attention from the huge crowds on the 2½ open days, here are just a few.

Bombardier Global 5000.

On most people"s wish list, the Canadian built Bombardier Global 5000 corporate jet stood out from the crowd and just oozed style, luxury, comfort and performance.

The Bombardier is an ultra long-range corporate and VIP high speed jet aircraft and is powered by two BMW Rolls Royce BR-710 turbofans. It can fly up to 19 passengers, in sumptuous comfort, intercontinental ranges without refueling as its typical range is 6,325 nm (11,400 klm) at a cruise of 488 kt (900Klm/h) with a service ceiling of 51,000 ft.

It first flew in 1996 and to date there are 400 in service and if you want one, you"ll need $45M in the bin.

Phenom 300.

If your pockets aren"t deep enough to afford the Bombardier, perhaps the Phenom 300 is more your style.

The Phenom is a small jet developed by the Brazilian aircraft manufacturer Embraer, the company that built the unpressurised Bandeirante that was tried in PNG back in the 1970‟s, but in a country where Flight Level starts at 20,000ft and where hills go up to 14,500ft, it wasn‟t the smartest choice.

The Phenom can carry 8 or 9 occupants with a flying range of 1,971 nautical miles and you can have a new one for only $8M. It‟s a pressurized aircraft and at 45,000 feet, it has a cabin altitude of 6,000 feet.

The first aircraft was delivered in 2009.

Cessna’s Grand Caravan.

This aircraft is a bit like an FC Holden Ute – it will go anywhere, carry anything and do it all with absolute ease. As a passenger carrier, it can carry 12 pax in air conditioned comfort, or remove the seats and you can jam in 1,300 kg and carry it for 100nm. You could say it is a 206 on steroids. Certified for single pilot IFR operations, it will cruise at 340Klm/hour at a maximum altitude of 25,000ft, although being unpressurised, you wouldn‟t want to do that for too long. It needs 2,500ft of runway to get air born but only 1,800ft on which to put it down and at sea level it will climb out at just under 1,000ft/min. It entered service back in 1984 and to date, 2000 have been built.

Undercarriage is fixed and very strong and looks like it could handle a 100ft drop from a crane. Power is provided by a Pratt & Whitney PT6A-114A engine, driving a 3 bladed Hartzell variable pitch propeller giving a range of 2,000 km with max fuel and reserves. Cessna call it the 208.

Pilatus PC-12.

The Pilatus PC-12 is also a single-engine passenger and cargo aircraft (much like the Caravan) manufactured by Pilatus Aircraft of Switzerland. Pilatus announced the development of the PC-12 in 1989 and the first flight took place in 1991 with certification being completed in 1994. Since then Pilatus have built and sold in excess of 1,000 aircraft. It is also powered by a single Pratt & Whitney PT6 turboprop engine (what isn‟t??), though a four bladed variable pitch prop and is certified for single-pilot IFR operations, though many operators choose to utilize a second flight crew member. At the moment it is offered only as a nine-seat airliner but a pure freight model is under consideration.

Unlike the Cessna, the Pilatus is pressurised and cleans up in flight. Cruise speed is 500Klm/hour at 20,000ft, giving a range of 2,800 klms fully loaded and following recent

regulatory changes, single engined turboprop aircraft have been approved to operate as regional passenger transports opening up a new market for the PC-12 and the C208.

Beechcraft

Beechcraft, which was part of the gigantic Raytheon group, but which was recently sold to a Canadian "private equity fund" and which is now called Hawker Beechcraft, had several of their aircraft on display. Their little T-6 is a development of the Pilatus PC-9, which was modified significantly by Beechcraft in order to enter the Joint Primary Aircraft Training System (JPATS) competition in the 1990s. Beech was awarded the production contract in December 2001 and it is now the primary basic trainer for the USAF and the US Navy.

The Beech King Air 350 is from the “Super” King Air family of twin-turboprop aircraft of which there are B200‟s, B250‟s, B300‟s and now B350‟s. The Super in the name, which was to distinguish the aircraft from the old Piston engine King Air, 90 and 100 series aircraft that entered service in 1964, was dropped in 1996.

The “Super” King Air family has been in continuous production since 1974, the longest production run of any civilian turboprop aircraft in its class and has outlasted all of its previous competitors.

The RAAF‟s 32 Sqn, which supports the RAAF‟s school of navigation and which is based at East Sale (Vic), and the Townsville based 38 Sqn which had the Caribous, operate a number of these aircraft.

The Premier 1 aircraft was officially launched in September 1995 and construction of the first prototype commenced late in 1996. The first aircraft "rolled out" and first flew in 1998 and after several modifications, the upgraded Premier IA was certified in 2005.

The Premier, which is powered by 2 Williams FJ44-2A turbofans, is a 6

passenger deluxe aircraft which cruises at 460 kts (850 Klm/h), it has a range of 1,430 nm (2,650 klms) and a service ceiling of 41,000 ft.

Piaggio.

Another manufacturer, that has been around for a long time, is Piaggio, and their Avanti 11, which is powered by 2 Pratt & Whitney PT6A-66B engines, set up in pusher configuration, carries 6 passengers in comfort and 8 at a pinch in a pressurized cabin over 1,750 nm (3,240 klm) at a service ceiling of 41,000 ft.

The Italian company, Piaggio, is one of the world's oldest airplane manufacturers, and its planes have been well known from the early days of aviation. Back in the late 1950"s, Piaggio released their "famous" P166 model, which was a 12 seat piston engine pusher aircraft and when landing „appeared" to come over the fence flat out.

The Avanti 11 first flew in 1986 and certification was obtained in 1990. The 100th aircraft was delivered in 2005 and the 150th 2008. The Avanti's turboprop engines are placed on a mid-fuselage, high aspect ratio wing, located behind the cabin. The design utilizes both a T-tail and a pair of small, fixed anhedral forward wings that lack control surfaces. All 3 surfaces provide lift.

Agusta Grand Helicopter.

In the late 1960s, the Italian company Agusta designed the A109 as a single-engined commercial helicopter. It was soon realised that a twin-engined design was needed and it was re-designed in 1969 with two Allison 250-C14 turboshaft engines and was developed into the eight-seat version the **A109C**. The first of three prototypes made its maiden flight in 1971.

A protracted development then followed and the first production aircraft was not completed until April 1975 and delivery of production machines started in early 1976. The aircraft soon became a success and as well as being a smart light transport utility helicopter it performed perfectly well as an air ambulance and search-and-rescue aircraft.

In 1975 Agusta returned again to the possibility of a military version and trials were carried out between 1976 and 1977 with five A109As fitted with missiles. Two military versions were then developed, one for light attack or close support and another for naval operations.

The sale of the Agusta A109 to the Belgian armed forces in 1988 gave rise to a bribery scandal that led to the resignation and conviction of NATO Secretary General Willy Claes.

In August 2008, a factory-standard AgustaWestland Grand chopper broke the round-the-world speed record with a time of 11 days, 7 hours and 2 minutes.

Eurocopter

The Eurocopter AS332 Super Puma is a four-bladed, twin-engine, medium-size utility helicopter marketed for both civil and military use. It was originally designed and built by Aérospatiale as the Puma, but was enlarged and re-engined and as the Super Puma it first flew in 1978.

It is powered by two of the new and more powerful French made Turbomeca Makila turboshaft engines powering a four-bladed composite main rotor, and was designed to withstand a fair bit of damage with its more robust fuselage structure, a new crashworthy undercarriage and the ability to withstand battle damage to the rotor blades and other key mechanical systems.

It is fitted with a ventral fin under the tail and a more streamlined nose and comes in two fuselage lengths, the short version giving better performance in "hot and high" conditions and a stretched version allowing more passengers to be carried when weight is less critical.

It has proven immensely successful, being chosen by 37 military forces around the world, and some 1,000 civil operators. In civilian configuration it can seat approximately 18 passengers with two crew. A wide variety of specialised military variants are in use, including dedicated Search and rescue (SAR) and Anti-submarine warfare (ASW) versions.

The military version, pictured above, has a top speed of 167 kts and a range of 580 nm (1,075klms). It will carry armed 24 troops.

HARS.

HARS, the Historical Aircraft Restoration Society, which is based at Wollongong (NSW) had several of their aircraft on display, all of which were in excellent condition, were fully serviceable and which flew demonstration flights on public days.

HARS is a not-for-profit organisation and was formed in 1979 by a group of aviation enthusiasts interested in the preservation of Australian aviation history. In 1991 the Australian Taxation Office granted their request for donations to the organisation be allowable as a tax deduction – so, if you"ve got a spare bob or two……

HARS recruited specialist people from within the aviation industry who were interested in the preservation of historical aircraft and now has within its membership over 70 licensed aircraft engineers covering virtually all of the skills recognised within the industry.

Their achievements to date are very impressive, considering everything has been achieved solely by volunteers with funding coming partly from corporate sponsorship and from the general public.

In 1997 the International Guild of Air Pilots and Air Navigators awarded the Grand Master"s Australian Award to HARS in recognition of the outstanding restoration of the wonderful old Lockheed Super Constellation. This was presented in London to Robert De La Hunty OAM, the President of HARS in December 1998 on behalf of HRH Prince Phillip, Duke of Edinburgh.

The Connie.

The Connie belongs to another era – an era when ladies really frocked up and men put on the coat and tie, Brylcreamed the hair and got stuck into the shoes with some nugget before boarding an aeroplane – flying back then was slow, expensive, for the privileged few but also very elegant!! It was a grand adventure.

Back then the hosties were all young, single and good looking and aeroplanes looked and played their part too, grand machines that belched smoke and flames when started and roared and squealed when taxying but which sounded great when the taps were opened. You can"t beat the sound from a round engine at full boar…..

And the Connie?? – possibly the best looking aeroplane ever built – and HARS has one and regularly flies it and it is now the only flying Super Constellation in the world, a credit to the many dedicated HARS members who contribute to her maintenance and upkeep.

Inside, you can see why flying was so expensive, this huge 4 engined aeroplane wouldn‟t carry as many people as one of Qantaslink‟s Bombardiers (which carries 74 pax) - but, instead of sitting on a board and being crammed in like a sardine, in the Connie you sat in one of granny‟s arm chairs and had tons of room.

The Neppy.

This old bird was one of 12 bought by the RAAF to replace the Avro Lincoln and was operated by 10 Sqn at Townsville from 1962 until 1977 when it was replaced by the Orion - after completing 5,476 flying hours. It was bought by a private owner who started to restore it, but who ran out of puff and it lay dormant for some years. It was eventually bought by HARS who completed the restoration and in 1998 it was declared airworthy and flown again.

Since then, it has thrilled air show audiences and some old grey haired blokes who, many years ago, worked on or flew in them. We think, however, that it might not be the original colour of a 10 Sqn Neppy - to us it looks a lot like one of the old 11 Sqn aircraft (see HERE).

In November 1999, it was flown back to its old Squadron, which had since moved to Edinburgh, near Adelaide, to celebrate the 60th Anniversary of the formation of 10 Squadron in 1939.

A89-273 (VH-IOY as it is now known) is the only former RAAF Lockheed Neptune flying in Australia and is maintained, operated and crewed by members of HARS who maintain a high degree of maintenance and safety and continually strive to maintain the aircraft in immaculate condition. With large amounts of spare parts and engines available, it is anticipated that Neptune A89-273 will continue to fly for many years.

When flown by the RAAF, the aircraft normally carried two pilots, a SGT/FSGT flight engineer, 2 or 3 navigators and 5 AEOs. We asked Col Price, who was an AEO with 10 Sqn for 5 years and who flew many hours in this particular aircraft, what is was like and he says it was a noisy, non-airconditioned and very cramped aircraft, but it was a great crew aircraft - had to be, we were all jammed in so close!

It could carry 8,000 lb (3,270 kg) of bombs or torpedoes or mines or depth charges and also 4 rockets under each wing (when they fitted the carriers). It had a max speed of 316 kt (with the jets running) 265 with the radials only and would normally cruise at 160 kts. It had a ceiling of 22,400 ft and a range of 1,920 nm (3,540 klm). It was great to see it flying again.

They were a Radtech's nightmare, being crammed full of radio stuff with only a few transistors in all those black boxes, it was mainly all valve stuff which meant the equipment tended to last until the aircraft lined up, then went US. We got talking to one of the HARS pilots who flew the old girl down to Avalon and when we mentioned we'd worked on the type at the old 2AD Pentad hanger, he kindly offered us a look inside. We seem to remember being able to get around inside a lot easier in those earlier days.

If you were ex 10 Sqn and/or a Depot Doggie, click HERE and get all nostalgic. They are hi-definition photos so will take a little while to load.

The Goonie.

The old DC3/C47 belonging to HARS needs no introduction as everybody in the whole wide world would know instantly what it was. Not so long ago they were everywhere, but these days they are a bit scarce and you usually only see them at an air show, or stuck on a pole outside an RSL. Douglas must have made at least a hundred million of them.

This particular aircraft began its RAAF life in 1945, and we do believe that at some time in its career it was attached to 38 Sqn, then 36 Sqn then it went to 34 Sqn to ferry VIP"s around. In 1954, it was used to carry support equip during the Queen"s visit.

In 1967 it was considered a bit too long in the tooth to be a VIP aircraft, so it was retired from those duties and stayed on in Canberra so pilots could get some hours. In 1982 it was sent south to ARDU at Laverton where they probably did strange things to it like strap a 44 gallon drum of water to one wing tip to see if it would fly.

In 2000, after having flown 14,600 hours, the RAAF had had enough of it and it was sold. HARS bought it and flew it to Bankstown where it was completely restored and brought onto the civvy register as VH-EAF. Today, at 66 years of age, it is a familiar visitor at most events involving great old and reliable aircraft and will most likely be around for many years to come.

If anyone can provide some info on the old girl, please get in touch.

The Cat.

HARS have a fully restored PBY-6A Catalina which we believe is painted to represent one of the wartime “Black Cats”. (See our earlier story on Catalinas HERE).

It is uncertain whether this is actually A24-362 restored or whether it is another aircraft painted to look that way – either way, they have done a fantastic job on the restoration and it was a huge crowd pleaser.

There is huge world wide interest in Catalinas and the Catalina Society, which was formed in the UK has one aim and that is to keep examples of this beautiful old flying boat airworthy for many years to come. With organisations like HARS, we're sure they will.

Temora

Back in the dim darks, Temora was the home to the RAAF's No. 10 Elementary Flying Training School (10 EFTS) which was the largest and longest lived of the flying schools established under the Empire Air Training Scheme during World War Two.

Back then, 10,000 personnel were based at the airfield and more than 2,400 pilots were trained. At its peak the unit contained a total of 97 de Havilland Tiger Moth aircraft and four satellite airfields were set up in the Temora district to cope with the demand to train RAAF pilots.

10 EFTS ceased operation on 12 March 1946 making it the last WWII flying school to close. Since then, Temora has continued its aviation heritage becoming the preferred airfield for a growing number of sport aviation activities including gliding, parachuting and ultra-light aircraft operations.

When Sydney businessman David Lowy expressed interest in establishing an aviation museum dedicated to aircraft and pilots who had defended Australia, Temora Aerodrome had all the attributes - rich in aviation history, hospitable people, an encouraging and co-operative local council, good weather, flat terrain and uncontrolled air space below 20,000 feet. The museum was incorporated in late 1999 and construction of the facilities commenced.

The hangar facility was completed in February 2000 and David Lowy donated the initial aircraft for the collection and the museum opened for public viewing in June 2000. In late 2000 construction commenced on the exhibition buildings, containing display space, theatrette, admission entrance, gift shop, a children's playground and picnic area. These were completed and opened to the public August 2001.

Today Temora has one of the most impressive line ups of vintage military aircraft, four of which were flown to and at the Air Show.

The Sabre.

Back in 2005, the chief of the RAAF, Air Marshal Geoff Shepherd, signed an agreement with the Museum whereby the RAAF would lend the museum one of its mothballed Sabres.

In all, it was a pretty good deal for the RAAF as the Museum was to restore it to flying condition, at no cost to the RAAF and once restored, would fly it at their scheduled flying

weekends which are open to the public. This ensures that important pieces of the RAAF's heritage are not only preserved but are made available to the Australian public.

Sabre A94-983 was eventually restored and flown at Temora (see our earlier story HERE.)

A94-983 was built by the Commonwealth Aircraft Corporation (CAC) in 1957 and was delivered to 1 AD at Laverton to undergo test flights at Aircraft Research and Development Unit (ARDU). It was then allotted to 78 Wing at Williamtown and in 1958 was sent to 3 Sqn at Butterworth. In 1959 it made a wheels-up landing at Butterworth, with extensive damage to the underside of the airframe, and was transported back to CAC at Avalon for survey and costing of repair work. (Pity the poor old framie who signed the pre-flight…)

In 1961, after it was repaired, it was allotted to 76 Sqn and was operated until July 1963, when it was dismantled and put into storage at Williamtown. In 1966, it was dragged out of storage, spruced up and put back into service with No 2 Operational Conversion Unit. In 1971 the RAAF had no further use for it and it was ferried to Base Squadron Butterworth for transfer to the Royal Malaysian Air Force.

The RMAF retired the aircraft in 1976 and it was handed back to 75 Sqn (RAAF) where an E service was gradually carried out and in 1978 it was fit to fly again. It was then ferried back to 2AD at Richmond and put on display at a museum that was located at Richmond at the time. From there it went to the RAAF museum at Pt Cook and in 2006 was trucked to Temora where a comprehensive return to service program commenced and it flew again in July 2009.

It now lives at Temora and is displayed regularly at Temora‟s Flying Days and select Australian Defence Force airshows. The sabre has a top speed of 608 knots (1,125 klm/h) and would cruise at 475 kts (885klm/h).

The Meteor.

The Meteor was the first British jet fighter and the Allies' first operational jet in WWII.

It first flew (as an F.1) in 1943 and commenced operations in July 1944 with 616 Squadron of the Royal Air Force (RAF). Initially it was used to counter the V-1 flying bomb threat and in July 1944, three aircraft were active over Kent.

The RAF were not allowed to use them on combat missions over German-held territory for fear of an aircraft being shot down and then salvaged by the Germans.

Improvements were gradually carried out on the model, and in 1948 the F.8 emerged as the definitive aircraft. It was not an aerodynamically advanced aircraft but the Gloster design team succeeded in producing an effective jet fighter that served the RAF and other air forces for decades. Meteors saw action with the RAAF in Korea and remained in service with numerous air forces until the 1970s. The F.8 model was the most built of all Meteors with 1,522 being produced.

The Meteor in the Temora Museum collection is very special as it is the only F.8 Gloster Meteor flying anywhere in the world.

The Museum‟s Meteor initially carried RAF serial number VZ467, serving until 1982 and when it was retired from the RAF it was bought by a private owner and flown privately in the UK. In 2001, the Museum managed to buy it, and transported it, disassembled, to Bankstown where it reassembled, serviced and then flown to its new home at Temora.

It has been painted with the markings of a Korean War era Meteor (A77-851) operated by 77 Sqn and flown by Sgt. George Hale.

The Meteor had a max speed of 500 kts (940 klm/h) and a cruise speed of 340 kts (630 klm/h). They sound magnificent in flight. In flight they have a distinctive sound – marvelous.

The Hudson.

The Hudson served the Allies faithfully during the war on most fronts and with little fanfare. The air forces of Britain, Canada, the United States, New Zealand, the Netherlands, China, Brazil and Australia all operated Hudson‟s. Based on the Lockheed Model 14 Super Electra 12 passenger transport, the Hudson first flew in December 1938 and by the time production ended in mid 1943, a total of 2,941 had been built, most of which served the Royal Air Force and Commonwealth countries.

The RAAF received 247 Hudson‟s between January 1940 and May 1942. As the war progressed a growing number of roles were found for the Hudson including transport (14 troops could be carried if the turret and other items of equipment were removed), meteorological reconnaissance, VIP transport and air-sea rescue, for which role an under fuselage airborne lifeboat could be carried. The versatility of the Hudson ensured it remained in service throughout the war and for a time afterwards.

The Museum‟s Hudson was delivered to the RAAF in 1941 and in 1942 it was used by 14 Sqn for anti submarine patrol off the coast of Western Australia. It was eventually transferred to 6 Sqn which operated out of Milne Bay in PNG where it was used on bombing, armed reconnaissance and patrol work for a period of twelve months. It was returned to Australia for an overhaul after which it was allocated to the RAAF Survey Flight and flew with them for the next two years.

After the war, it was sold to East-West Airlines and became their flagship, VH-EWA, for the next six years after which it was purchased by Adastra Aerial Surveys as a photographic aircraft. It was bought from Adastra by the Long family in 1976 and gradually restored to its original military configuration. This was completed in 1993.

Temora Aviation Museum acquired the aircraft in May 2004 and operates it as a tribute to Hudson crews of World War II. The paint scheme is representative of a Hudson III A16-211 bomber that served with No.6 Squadron RAAF during the decisive Battle for Milne Bay and later with No.2 Squadron in the North Western Area.

The real A16-211 ground looped in 1943 and was severely damaged. It was Christmas treed for spares and remains at Millingimbi (NT) to this day.

The Hudson had a max speed of 220 kts (410 klm/h) and would cruise at 170 kts (315 klm/h)

And then….

If none of the previous takes your fancy, perhaps you would prefer one of these, some look like a lot of fun while others, to our non-qualified eye, look a little bit „insecure" and we think we would need to be offered a considerable sum to coach us above tree height in one.

Q

and this one, which we are led to believe, actually flies with real live human people in it!!!

Military Aircraft.

A lot of the world‟s best military aircraft were on parade at the air show, and going by public appeal, the star was undoubtedly the USAF‟s B1 bomber. This magnificent machine looks like it could do you a damage by just sitting there.

Built by Rockwell, (now part of Boeing) the B-1 Lancer (called by the troops who work on it “The BONE” – from B-one) is a four-engined, variable swept-wing strategic bomber and was first envisioned way back in the 1960‟s as a supersonic bomber to replace the aging B-52. Its development was delayed many times as the theory of strategic balance changed from flexible response to mutually assured destruction and back again. The initial B-1A version was developed in the early 1970s, but its production was cancelled and only four prototypes were built. In 1980, the B-1 resurfaced as the B-1B version with the focus on low-level penetration bombing. The B-1B entered service with the United States Air Force (USAF) in 1986.

It started out as a nuclear bomber but in the 1990s, it was converted to conventional bombing use. It was first used in combat during Operation Desert Fox in 1998 and during the NATO action in Kosovo the following year and is still used in Afghanistan and Iraq.

We found an old codger loitering nearby (left) and after some gentle persuasion, he agreed to stand beside the B-1 to give us an indication of its actual size.

Originally, it was planned that 240 B-1 bombers were to be built and the swept wing design was agreed to as it provides high lift during take-off and landing and low drag during a high-speed dash. The wings can sweep from 15 degrees to 67.5 degrees (full forward to full sweep) and with the wings set to their widest position the aircraft has considerably better lift and power than the B-52, allowing it to operate from a much wider variety of bases. In 1970, the estimated unit cost was $40 million, and by 1975 this figure had climbed to $70 million.

When Carter took office in 1977 he ordered a review of the entire program as the unit cost had risen to over $100 million per aircraft and in June 1977 he cancelled the project in favour of cruise missiles. It was said that for the price of one bomber, the US could deploy 200 cruise missiles.

However, when Reagan took over the reins, he decided that the B-1 was needed and he approved the acquisition of 100 upgraded B-1B aircraft, at a unit cost of $280M. The upgraded aircraft had a reduced maximum speed which, through airframe changes, resulted in a reduced radar signature and it‟s MTOW was increased to 216,000 Kg from the original design‟s 179,000 Kg with a minimal increase in empty weight. Its maximum speed was also reduced to Mach 1.25. The little canard wings near the nose automatically control a flexing problem that was caused by air turbulence at low altitude.

Over the years, the aircraft has undergone many modifications to make it a significant deterrent, but due to its age, for every flight hour it needs 48.4 hours of repair. The fuel, repairs and other needs for a 12-hour mission cost about $720,000.

When the two display aircraft left Avalon, one was unable to retract its nose-wheel and had to return. One can just imagine the hassles that resulted from that.

A total of 100 B-1Bs were produced and it is believed that about 70 are still flying. The USAF intends to operate the aircraft for about another twenty years.

The B-52.

Also on display, but a decent walk down the airfield, was the aging but still impressive B-52, of which, 744 were built. Designed back in 1946 and first flown in 1952, it has undergone many modifications over the years and has been used in every war since the War of the Roses. It‟s a bit like the fireman‟s axe, three heads and two handles – but still a great machine. At 48.5 m in length, its payload is 31,500 Kg, compared to 56,700 Kg carried by the 44.5 m long B-1.

While the Air Force works on its Next-Generation Bomber, it intends to keep the B-52H in service until at least 2040, 78 years after production ended and 85 years after it entered service. This will be an unprecedented length of service for a military aircraft as the last aircraft, an H model, left the Boeing factory in October, 1962 – the same year Holden were making the EK Holden.

The USAF continues to rely on the B-52 because it remains an effective and economical heavy bomber having the capacity to "loiter" for extended periods over the battlefield and deliver precision standoff and direct fire munitions.

The E-3D Sentry.

The RAF operates seven E-3D Sentry aircraft in the airborne surveillance, command and control role. The E-3D Sentry, known to the RAF as the AEW1, is based on the Boeing 707-320B aircraft which has been extensively modified and updated to accommodate modern mission systems. Mission endurance is approximately 11 hours (over 5,000nm), although this can be extended by air to air refuelling. The E-3D is the only aircraft in the RAF‟s inventory

capable of air-to-air refuelling by both the American „flying-boom" system and the RAF"s „probe-and-drogue" method.

The aircraft normally carries a crew of 18.

It can cruise at 400 kts at 30,000ft and can scan at distances over 300nm, it can detect low-flying targets or maritime surface contacts within 215nm and it can detect medium-level airborne targets at ranges in excess of 280nm.

The Tankers.

The USAF had two of their tankers on display, the KC-10 and the KC-135.

The McDonnell Douglas KC-10 Extender is a three-engined wide-body air to air tanker aircraft which is derived from the Douglas DC-10 airliner. Around the time of the Vietnam War doubts began to be raised about the ability of the 700 plus KC-135 fleet to meet the needs of the United States' global commitments. A large portion of the aerial refueling fleet was needed in Southeast Asia to support the tactical aircraft and the strategic bombers. There was also a need to support the US-based nuclear bomber fleet and this stretched things a bit too tight, so the USAF sought an air-to-air tanker with a greater capability than the KC-135. In 1972 two DC-10s were flown in trials at Edwards Air Force Base, simulating air refuelings and checking for possible wake issues. Boeing performed similar tests with a 747.

The 1973 Yom Kippur War clearly demonstrated the necessity of adequate air-refueling capabilities. Denied landing rights in Europe, USAF C-5 Galaxies were forced to carry a fraction of their maximum payload on direct flights from the continental United States to Israel. As a result C-5 crews were soon trained in aerial refueling and the U.S. Department of Defence concluded that a more advanced tanker was needed.

In 1975, under the *Advance Tanker Cargo Aircraft* program, four aircraft were evaluated: the C-5 itself, the Boeing 747, the McDonnell Douglas DC-10, and the Lockheed L-1011 and the DC-10 was selected in December 1977.

The design for the KC-10 involved only minor modifications from the original DC-10-30CF design. The major changes were the addition of a boom control station in the rear of the fuselage and extra fuel tanks below the main deck. The KC-10 has both a centreline refueling boom and a drogue/hose system on the right side of the rear fuselage. Other changes from the DC-10-30CF include the removal of most cargo doors and windows.

The boom operator is located in the rear of the airplane with wide window for monitoring refuelling. The operator controls refuelling operations through a digital, fly-by wire system.

KC-135 Stratotanker

In September 2006 the USAF‟s KC-135 Stratotanker fleet celebrated 50 years of service. The aging tanker has received several upgrades over the years to the point it is almost a completely different aircraft than when it first flew in the 1950s. Today‟s aircraft have the new CFM-56 engines and can offload 50 percent more fuel, is 25 percent cheaper to operate and is 96 percent quieter than the original KC-135A.

The Boeing Company's "proof of concept" demonstrator model 367-80, which was commonly called the "Dash-80" was the basic design for the commercial 707 passenger plane as well as the KC-135A Stratotanker. Contrary to popular belief, the KC-135 is not a converted Boeing 707, but was a different design from the beginning and was called the Boeing 717. It has a narrower fuselage and is shorter than the 707. It can carry either 83,000 pounds of cargo, airlift up to 80 passengers or carry 202,800 pounds of JP-4 jet fuel, most of which is transferable for global refueling missions.

In 1954 the USAF gave an order for the first 29 of its future fleet of 732 aircraft and the first aircraft was delivered to the USAF in August 1957. The last KC-135A was delivered in 1965. About 550 of the tankers remain in service today.

During the Vietnam era, the KC-135‟s made the air war different from all previous aerial conflicts. Mid-air refueling brought far-flung bombing targets within reach. Combat aircraft, no longer limited by fuel supplies, were able to spend more time in target areas. During air refueling, the large flyable boom attached to the airplane's belly can offload fuel at the rate of 6,500 pounds per minute. This is enough fuel in one minute to operate an average family car for one year.

The fuel cells in the tanker are made of nylon fabric less than 1.6 mm thick. A fuel cell weighing 36 Kg will hold 6,000 Kg of fuel. The cells are contained in the belly region of the aircraft, under the floor, where baggage would be carried in the commercial B707, not in the upper region of the fuselage which is used to carry Passengers or up to 37,650kg of cargo.

The primary air fuel transfer method is through the tanker's flying boom, controlled by an operator stationed at the rear of the fuselage. USAF aircraft have primarily used this boom and receptacle refuelling technique as will Australia when the RAAF‟s Airbus A330 Tankers are in service. The KC-135 can trail a shuttlecock drogue behind the boom to refuel aircraft equipped with refuelling probes.

About 45 KC-135R tankers are fitted with wingtip hose and drogue air refuelling pods, which are capable of refuelling Navy and Nato aircraft. The receiving aircraft approaches the tanker and its probe makes contact with a hose reeled out and trailing from the tanker.

Alenia C-27J.

Lockheed Martin Alenia, which is a JV between Lockheed Martin and Italy‟s Alenia Aeronautica, had its smart little Alenia C-27J Spartan on display which, some say, is the possible replacement for the RAAF‟s old Caribou. The Spartan, launched in 1997, is a medium-sized military transport aircraft with the (Rolls-Royce Defence North America - formerly Allison) turbo prop engines, propellers and systems from the C-130J Hercules. The flight deck is also very similar to that of the C-130J.

Like the Caribou, the Alenia has a crew of 3, pilot, co-pilot and loadmaster, but unlike the Caribou, it can carry 60 troops (using centre seating) or 46 paratroops or 36 litters with 6 medical personnel.

The aircraft design is based on the proven G-222 airframe from Alenia and final assembly takes place in Italy but Lockheed Martin is responsible for product support and worldwide marketing.

The Spartan is constructed with a floor strength equal to that of a C-130 and the large cargo cabin cross-section is able to accommodate Hercules pallets.

Unlike the old Caribou, the aircraft is pressurised and air conditioned and the cargo compartment is equipped with a dedicated aero-medical oxygen supply and 12 power centres for medical or auxiliary equipment. For the paratroop role, it is equipped with door-jump platforms and static lines and paratroop jumps can be carried out from the paratroop doors on both sides of the cargo compartment or from the cargo ramp and rear door.

It can land on and take off from a wide range of airfields, including short, unprepared strips in hot-and-high altitude conditions while transporting heavy loads. The Spartan can perform 3g tactical airlift operations under severe conditions and the navigation and night piloting systems allow the aircraft to fly just above tree height even at night. The aircraft has already been selected as the Joint Cargo Aircraft (JCA) for the United States military.

Casa 235.

The CASA/IPTN CN-235 is a medium-range twin-engined transport plane that was jointly developed by CASA of Spain and IPTN of Indonesia as a regional airliner and military transport. Its primary military roles include maritime patrol, surveillance, and air transport. Its largest user is Turkey which has 61 aircraft.

Design began in January 1980 with first flight on 11 November 1983. Spanish and Indonesian certification was on 20 June 1986; the first flight of the production aircraft was on 19 August

1986 and FAA type approval was granted on 3 December 1986. The aircraft entered service on 1 March 1988.

F-22.

Known as the Raptor, the Lockheed Martin F22 is the most advanced combat aircraft in the world today. In 1981 the USAF decided it needed a new air superiority fighter to replace the F-15 Eagle so as to combat the Soviet‟s new SU-27 Flanker fighter aircraft and asked for tenders.

In April 1991, the USAF ended the design and test flight competition by announcing Lockheed's YF-22 as the winner. Although Boeing‟s YF-23 was faster and more stealthy, it lost to the agility of the YF-22. At the time it was anticipated that 650 aircraft would be ordered.

Several small design changes were made on the YF-22 for the production F-22 and the production F-22 model was unveiled on 9 April 1997 at Lockheed Georgia and first flew in September, 1997. By 2004, 51 Raptors had been delivered and in 2006, the USAF confirmed orders for 381 F-22‟s and production is scheduled to run through to 2013.

F35A.

The Lockheed Martin F-35 Lightning II is a family of single-seat, single-engine, fifth generation multirole fighters under development to perform ground attack, reconnaissance, and air defense missions with stealth capability. The F-35 has three main models; one is a conventional takeoff and landing variant, the second is a short take off and vertical-landing variant, and the third is a carrier-based variant.

The F-35 is descended from the Joint Strike Fighter (JSF) program. JSF development is being principally funded by the United States, with the United Kingdom and other partner governments providing additional funding. It is being designed and built by an aerospace industry team led by Lockheed Martin. The F-35 took its first flight on 15 December 2006.

The United States intends to buy a total of 2,443 aircraft for an estimated US$323 billion, making it the most expensive defense program ever.The United States Air Force (USAF) budget data in 2010, along with other sources, projects the F-35 to have a flyaway cost from US$89 million to US$200 million over the planned production of F-35s. Cost estimates have risen to $382 billion for 2,443 aircraft, at an average of $156 million each. In January 2011, the F-35B variant was placed on "probation" for two years because of development issues.

The F-35 is primarily a ground attack aircraft with a secondary air defense capability. The F-35 takes advantage of many of the advanced technologies developed for the F-22, but has a shorter range, simpler avionics, and is less maneuverable.

RQ-4C.

The Northrop Grumman RQ-4 Global Hawk is an unmanned aerial vehicle (UAV) used by the USAF and the US Navy as a surveillance aircraft. In role and operational design, the Global Hawk is similar to the Lockheed U-2, the 1950s spy plane and the first thing that impresses you when you see it is it‟s size – it is huge.

It has a wingspan of 40 metres, the same as a C130, a length of 14.5 M, weighs in at 14,500kg, nearly 3 times as heavy as the RAAF‟s Beech 320 and it has an endurance of 28 hours.

It is able to provide high resolution radar that can penetrate cloud-cover and sandstorms and Electro-Optical/Infrared imagery at long range with long loiter times over target areas. It can survey as much as 40,000 square miles (100,000 square klms) of terrain a day. They cost about $35 million each.

Volunteers.

Like a lot of organisations, the Avalon Air Show has and relies on a large number of Volunteers to ensure the show goes ahead and runs efficiently. Both sides benefit from this situation, the organisers obtain a large and dedicated work force for minimum cost and the volunteers benefit by being part of an event about which they hold a keen interest. The available volunteering jobs are numerous and varied and there is virtually a job for everyone, they range from.

Aircraft services	
Aircraft and Aircrew reception	Co-ordination centre
Aircraft Ground Operations	Flight Planning
Air Movements, flow control	Operations and weather
Airfield Preparation	
Event Services	
Exhibition Operations	Site operations
Customer Services	Car parking
Finance, Admin & Commercial Services	
Admissions	Event Transport
Car Park Fee Collection	Public Services
Programs, Production & Promotion	
Entertainment Displays	Protocol and Delegations
Event Personnel	Pyrotechnics and fireworks
Ground Displays	Site Decoration
Media and Publicity	
Safety, Security & Emergency Services	
Security & Emergency Services	Public and Staff Welfare

In all, there were about 520 volunteers at the Show, all of whom were co-ordinated by the delightful and very efficient Karen Scott (right) and her little side-kick, Kelly McDonnell, who had the knack of being here, there and everywhere, all at the same time.

Being part of the Volunteer Group is like being in a small privileged community, people come from all parts of Australia, from all walks of life, with vastly different backgrounds and experiences but all with the one interest at heart, that of being around and involved with aeroplanes. Everyone bands together into one large happy group of people for the one purpose – to ensure the Air Show runs smoothly.

A lot of the volunteers have been to many previous shows and the ones we spoke with do not intend this one to be their last. Friendships are made and carried over to the next show – in a way, it is similar to holidaying at a large caravan park.

If you like being around aeroplanes and you get the opportunity to be part of the Volunteer Group at a future Air Show – our suggestion, grab it!!! You will meet and work with some very nice people, you will be part of an exciting event and generally you will have a lot of fun.

As as volunteer, you will be asked to arrive at the show a day or two before it starts, you will be ushered to the Event Personnel Accreditation Office where each person receives their photo ID cards, name tag, car parking instructions, meal tickets, free entrance tickets for family and/or friends and also a safety handbook and Air Show handbook.

Two of the lovely ladies who run the accreditation office, Pat Leviston (left) and Elizabeth Lloyd, both girls have been to six shows.

Volunteers are provided with tickets which allow them 3 meals per day. Breakfast and dinner at night are provided in Lara, a small township not far from the airport and where Volunteers have the option of choosing to eat at either the Lara Sporting Club or the local hotel. Lunch was provided at the airport.

Volunteers wishing to camp while working at the Event are also provided (FOC) with non-powered camp sites at the Sporting Club however portable showers and toilet facilities are available.

Hundreds of people set up their tents on the football ground with caravans and vehicles parked around the perimeter.

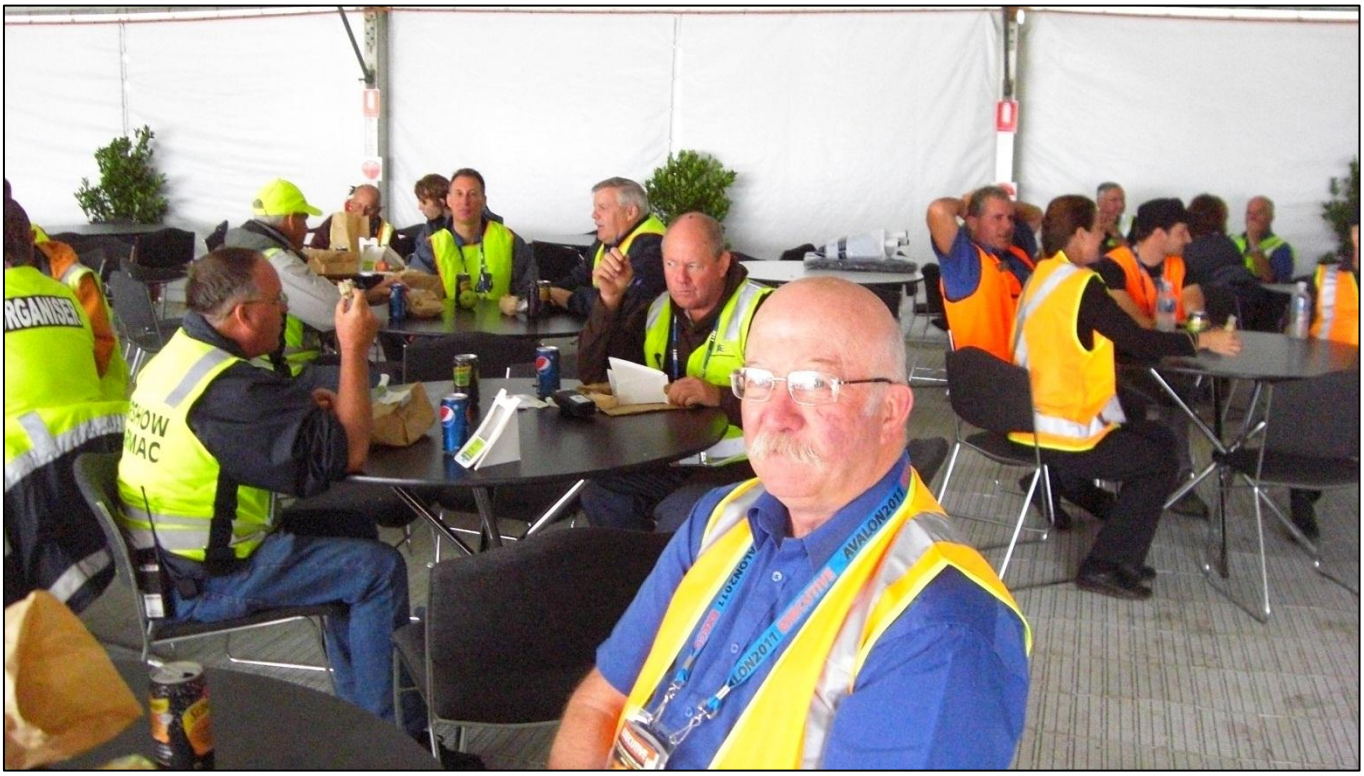
Part of the huge volunteer force at Breakfast one morning, all tucking into their bacon and eggs on toast.

WOD of the breakfast nook was Marion Gooding, popularly known to all and sundry as Madam Lash.

Marion had the knack of being able to put many many people through breakfast with a minimum of fuss and in record time. Madam Lash, who turned 71 during the show, is on her 8th event and every morning would meet you with a big smile and the same old question, “continental or cooked, apple or orange, what table”.

How Madam Lash and her small team were able to provide hot and freshly cooked eggs and bacon on toast to all those people, with a wait time of only 2 or 3 minutes, when the same thing served at a restaurant or servo would take at least 20 mins, was beyond us.

Congratulations to them and a big thank you from all of us.



Bob Scouten, shown above in the ASDU Club and whose title was Event Personnel Induction Officer, held regular briefing conferences for new arrivals to ensure all volunteers are made aware of their responsibilities during the show, had a thorough knowledge of all emergency procedures and were current in their Workplace Health and Safety requirements. Bob explained the relevant sections of the material handed out at the induction centre.

Bob is still with the RAAF, currently serving in the Reserve as a Sqn Ldr with 21 Sqn in Melbourne. He joined the Permanent RAAF in 1975 and served as an Equipment Officer (now called Logistics Officer) at Point Cook (for 2½ years), Williamtown (2 years), 2SD (2½ years), Canberra (5½ years) then he conned a posting to St Kilda Rd where the RAAF left him for a further 16 years by which time he decided it was time to smell the roses and he retired from the Permanent RAAF only to find he missed the “action” and the camaraderie so he joined the Reserve. He‟s been with 21 Sqn for 5 years and he thinks it might be getting close to time……

After inducting all Volunteers, Bob, who is on staff with the Show Organisation, switched roles and became the Night Duty Manager – a duty he reckons was awfully like the old days when he was on Orderly Officer duty. He‟s done 3 shows and reckons he‟ll definitely back up for more.

After the volunteers left Bob, they were sent to the Uniform section (L Group??) where each volunteer was kitted out with his/her uniform which consisted of 2 shirts, tie/scarf, hat and weather proof jacket which everyone thought was for service at the South Pole but when Melbourne‟s weather turned to muck, as it usually does – proved to be very handy indeed.

L-R: Helen Weiler and Joy Jennings in her weatherproof jacket. Helen and Joy are two of the ladies who work in the uniform shop.

2011 is Helen‟s 8th show and Jenny has done 6, both enjoy it immensely and both insist, all being well, they will be here again in 2 year‟s time.

During the day, lunch was provided at the ASDU Club (Airshows Downunder – but called the Dubbo Club). The organisers had established the ASDU club for the use of all volunteers as well as Air Show Staff and participants.

These four lovely ladies worked every day in the ARDU Club where they served a good healthy lunch to the hundreds of volunteers, always with a howdy and a big happy smile.

They are **L-R:**

Clare Gray, who is on her first Air Show, ***Antonia Megens***, who is on her 5th, ***Fay Argento*** who is on her 3rd and ***Pat Bulger*** who is also on her 3rd.

These ladies, like a lot of other Volunteers, must take part of their annual leave to be able to attend the show and all declare they will definitely be back for more.

Security.

With the huge number of people expected on the 3 public days, the organisers treated security and safety very seriously. The flying displays were scheduled non-stop and as a consequence, large numbers of aircraft and their ground support equipment vehicles were constantly on the move.

The Organisers had recruited many experienced personnel who were briefed with the task of keeping aircraft movement areas and roadways clear and safe.

One such volunteer was Alek Miller. Alek is an ex RAAF Brat, passing out of Wagga as a Framie. He joined up in 1964 and was posted to 9 Sqn Vung Tau from 1968 to 1969. He finally decided he"s had enough of the RAAF and took his D in 1988.

This is his 5th show.

Aircrew Reception.

These people are part of the team that look after visiting aircrew and handle all sorts of requests, some of which Robbie says are „quite different". Normally they meet visiting aircraft, transport the crew to and from briefing, arrange meals, accommodation, transport and generally act as concierge for crews.

They are L-R: ***Laura Dillon***, on staff with the air show organisation, ***Mark Dean***, on his 8th show, ***Robbie Pearce***, ex Army artillery, on his 9th show, and ***Wayne Cook***, also ex Army and also on his 9th show.

As there were many thousands of people at the show, it was necessary to have staff entrances manned in order to permit orderly flow of staff inwards and outwards. One such entrance, which was for participants and event personnel only, was looked after by Heather Batson (below left) and Shona McLean.

Both girls are on their 7th show, and like all volunteers we met, love every minute of it and will definitely back up for more. One wonders whether the abundance of men in uniform has anything to do with it!!!!! Mmmm.

The Briefing Office, Flight Planning staff.

Being an Air Show, the Pilot Briefing Office had an important role to play and was responsible for:

- Providing direction and assistance to pilots and crews as required.
- Providing appropriate briefing material to pilots and aircrew as required.
- Lodging VFR flight plans.
- Maintaining the self-help briefing services.
- Maintain a constant weather watch and provide current and forecast conditions to pilots.

The Holden Team.

Back Row: L-R
Trev Benneworth,1st Airshow. Ex RAAF Radtech then Flight Service with DCA. Plan snatcher.
Glyn Butchard is on his 2nd Airshow and is responsible for slotting all aircraft into arrival and/or departure times. (Air Movements) When he"s not doing that important job, he has the menial task of flying one of Cathay Pacific"s Airbus A330/340"s.
Mike Walden. Mike is in charge of the Pilot Briefing office and this is his 6th airshow, and when he"s not cracking the whip he"s an IFR pilot instructor.
Andrew Sheils is on his 5th Air Show. He"s one of the team leaders and when he"s not leading the tream, is a commercial pilot.
Shane Smith is on his second airshow and holds a Private Pilot"s licence. Shane is currently in the hospitability trade and is trying to get into ATC.

Middle Row: L-R
Rod Trower, This is Rod"s first airshow. He joined the RAAF in 1971 as a pilot and spent most of his career at East Sale at Nav School flying the HS748"s
Erin Muscat is on her 6th Airshow and is on staff with the Air Show organisation. Erin drives the computer and keeps track of all aircraft movements once Glyn has managed to find them a slot.

Front Row: L-R
Stuart Robinson-Fox. Stewart is doing his second airshow and is an ex Singapore Airlines B747 pilot. He had the responsibility for weather briefing at the Air Show (a bit in-experienced, but we carried him).
Luke Hodgson**.** 1st Airshow. Luke is a glider pilot in real life and was also a plan snatcher in the Briefing Office.

The Ford Team.

The "Ford" team, also part of the Flight Planning/Pilot Briefing section, were in later in the day, rostered on the afternoon shift.

L-R:

Davide Vaiano, is a Commercial Pilot and flies out of Moorabbin with MFS,
John Gleeson, a team leader, who learnt to fly along side Orville Wright, is an experienced powered and glider pilot and at previous shows, flew the glider tug when the gliders were an act. John is also heavily involved with Angel Flight and readily gives up his time to transport unfortunate but needy people in his own aircraft.
Dennis Chen, who is based in Hong Kong, flies with Cathay Pacific as a first Officer, flying the Airbus A340.

Emanuel Cutini-Calisti who is a commercial pilot and regularly flies a Cessna 206 for parachute enthusiastis as well as taking his life in his hands and flying a glider.

We were told that there is no truth in the rumour that the organisers took pity on John and gave him the benefit of a sleep-in most mornings and made sure there were some young blokes rostered on with him just in case he ran out of puff.

Air Ground Operations (AGO).

Gordon Lind, who was with the Permanent RAAF as a sumpie from 1964 to 1995, then stayed on with the weekend warriors until 2005, worked in the Air Ground Operations (AGO) section of the air show.

The AGO was responsible for the following:

- Co-ordination of aircraft movements between Avalon Tower and individual tarmacs.
- Provide escort or follow me duties for aircraft under tow airside.
- Maintain safety and security for airside areas with particular attention to eliminating FOD.
- Provide adequate fencing and barricading to ensure the safety of the public.
- Provide support to aircraft as required, including service and refuelling.

- Loading and unloading of aircraft cargoes.
- Making a video record of the event.
- Provide and run an adequate stores depot with equipment to be used during the event.

Conclusion.

The Avalon Air Show is a bi-annual event, with most of the „work" being done by Volunteers. As a volunteer, you meet and work with people from all over the country, people with different backgrounds, different outlooks and different expectations, but all with a love of aeroplanes and a willingness to work.

The next show will take place in 2013, mark it in your diary and if you're interested, be sure to volunteer. There's jobs for everyone, the work is not demanding, there are plenty of facilities, you are well looked after – and as Pete DeJonge would say, "if a damn Radtech can do it, anyone can".

It will be one of the best "holidays" you've ever had.