

# JAPANESE STARFIGHTERS



LOCKHEEDS SAMURAI SWORD

WARBIRDS AMG

# AERO-TORQUE

Issue 005, Jan - Mar 2012

# MODEL EXPO 2012

THE AUSTRALIAN OPEN PLASTIC & SCALE MODEL CHAMPIONSHIPS



## COMPETITION ENTRIES

Friday, 8 June 5pm – 9pm

Saturday, 9 June 9am – 12pm

Adults – \$5.00 first model, then \$2.00 each for next 5 models, additional models FREE

Junior/Intermediate – \$2.00 per model up to 5 models, additional models FREE

## PUBLIC VIEWING TIMES

Saturday, 9 June 11am – 5pm

Sunday, 10 June 10am – 5pm

Monday, 11 June 10am – 5pm

## ADMISSION

Adults – \$10.00

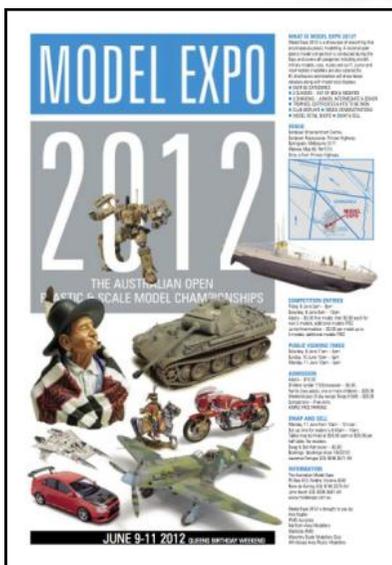
Children (under 17)/Concession – \$5.00

Family (two adults, one or more children) – \$20.00

Weekend pass (3 day except Swap & Sell) – \$20.00

Competitors – Free entry

AMPLE FREE PARKING



Click the Expo brochure to get to the website:

[www.modelexpo.com.au](http://www.modelexpo.com.au)



## SWAP AND SELL

Monday, 11 June from 10am – 12 noon.

Set up time for traders is 8.45am – 10am.

Tables may be hired at \$30.00 each or \$20.00 per half table. No retailers.

Swap & Sell Admission – \$5.00

Bookings: (bookings close 1/6/2012)

Laurence Farrugia (03) 9546 9571 AH

## INFORMATION

The Australian Model Expo

PO Box 812, Niddre, Victoria 3042

Rene de Koning (03) 9748 2270 AH

John Booth (03) 9338 3881 AH

[www.modelexpo.com.au](http://www.modelexpo.com.au)

Model Expo 2012 is brought to you by:

Axis Eagles

IPMS Australia

Northern Area Modellers

Warbirds AMG

Waverley Scale Modellers Club

Whittlesea Area Plastic Modellers

## WHAT IS MODEL EXPO 2012?

Model Expo 2012 is a showcase of everything that encompasses plastic modelling. A national open plastic model competition is conducted during the Expo and covers all categories including aircraft, military models, cars, trucks and sci-fi. Junior and intermediate modellers are also catered for. Kit distributors and retailers will show latest releases along with model club displays.

- OVER 60 CATEGORIES
- 2 CLASSES – OUT-OF-BOX & MODIFIED
- 3 DIVISIONS – JUNIOR, INTERMEDIATE & SENIOR
- TROPHIES, CERTIFICATES & KITS TO BE WON
- CLUB DISPLAYS ■ MODEL DEMONSTRATIONS
- MODEL RETAIL SHOPS ■ SWAP & SELL

## VENUE

Sandown Entertainment Centre,  
Sandown Racecourse, Princes Highway,  
Springvale, Melbourne 3171  
Melway Map 80, Ref C10.

Entry is from Princes Highway.



# AERO-TORQUE Issue 005 - Jan / Mar 2012

## Contact

**Web:** www.warbirdsamg.com

**Email:** warbirdsamg@iinet.com.au

## Committee

**President:** Laurence Farrugia

**Vice President:** Laurence Farrugia

**Display Co-ordinator:** Chris Dowsett

**Web Co-ordinator:** Michael Tabone

**Editor:** Martin Reid

## Meeting Details 2012

### When?

Meetings are held on the first Tuesday of each month, February to November.

Meetings start at 7:30pm,

Admission \$5

### Where?

Ashburton Library - Copeland Room

154 High Street

Ashburton VIC 3147

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**Cover:** The Lockheed F-104 Starfighter possesses is one of the classic shapes of the Cold War era. This issue is a super special profile edition with no less than a dozen outstanding Lieuwe De Vries profiles of the Starfighter in Japanese service.

## Editorial - One At A Time?

This editions Modeller's Profile features our President Laurence Farrugia. Aside from his modelling skills which have earned him an array of awards over the years, Laurence is one of those few that actually models on the "one at a time" basis. I've known Laurence for over 20 years and can attest to his commitment to this, only seeing a few occasions where more than one has been on the bench. It's certainly a great discipline to have and it must be immensely satisfying to see so many kits going the course from the box to the display cabinet.

I have to say I have no such discipline, on a number of occasions through my modelling tenure, even going to the extreme of salvaging spare parts from an array of unbuilt kits and clearing the bench. No doubt there's a deep seated psychological, sub-coconscious basis for this behaviour but I'll just stick to assigning it to simple over enthusiasm.. At this stage I have around ten kits in this state and while I'm not quite ready for another purge, this may occur before the end of the year. Perhaps the frustration of too much self-delusion will again get the better of me and I'll once again kid myself I'll model my modelling on Laurence... That's not going to happen is it? The purge most likely will but the change of modelling habits may last for a kit or two or three but then a new release half way through a build will probably take care of that noble intent.

Another way of looking at it I suppose is tell myself I'm helping the industry by my "consumption" but that could be tempered by being honest with myself about what a complete waste of good styrene it is.



Martin Reid's 1/48 Revell He111. This is big enough, now he's planning to build Revell's 1/32 behemoth.



Laurence Farrugia's rescribed 1/48 Monogram Ju87G Stuka.



This time, it's Laurence's 1/48 Hasegawa Ju87B under construction. This Stuka's destined for Italian service!!!

# SNAPSHOTS

Photos by Ian Keizers

## Meeting Models



A selection of models and products on the table including a box of 1/48 Blackbirds being built by John Swenson for the upcoming Warbirds 50's & 60's Jets at Model Expo in June.

# APRIL MEETING SPECIAL EVENT

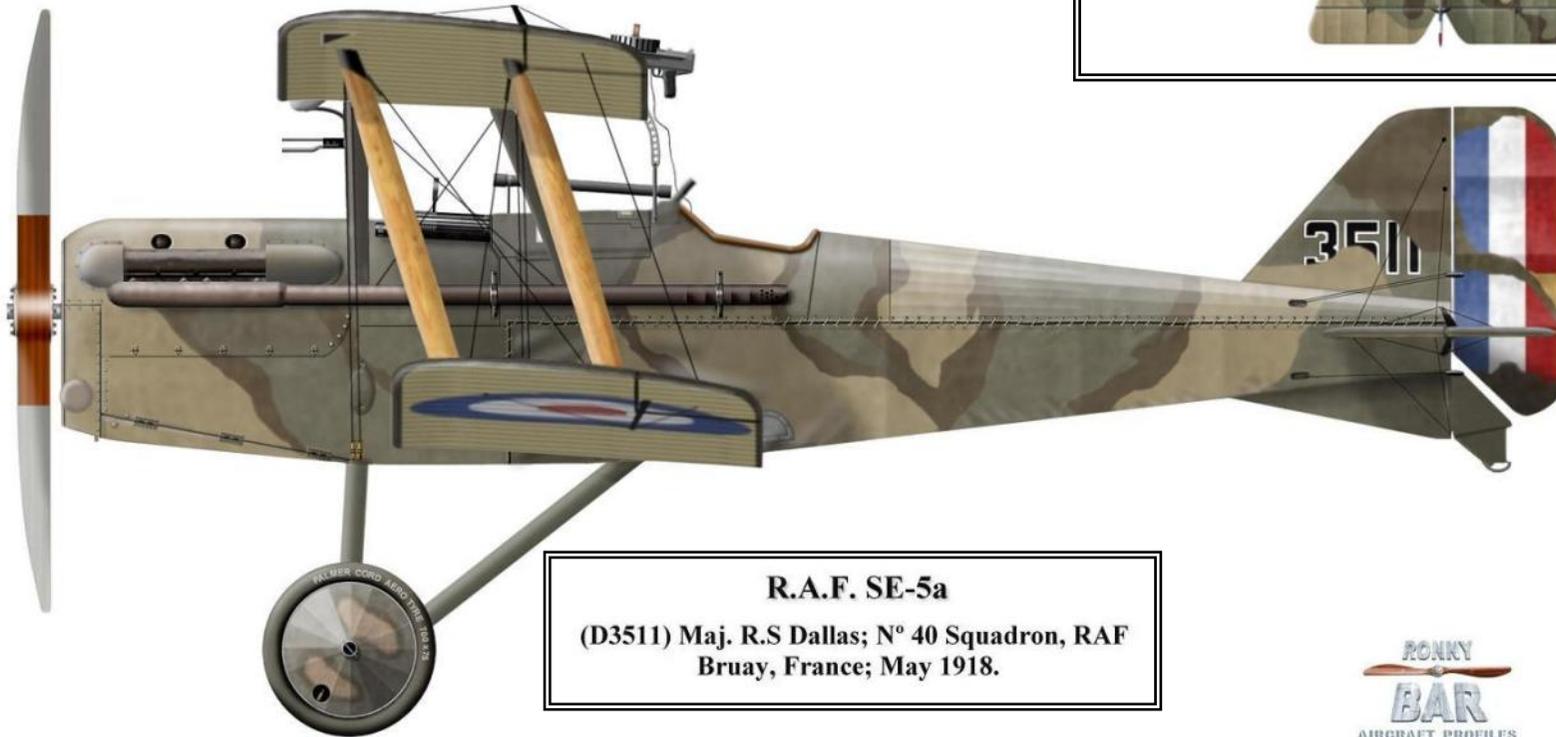
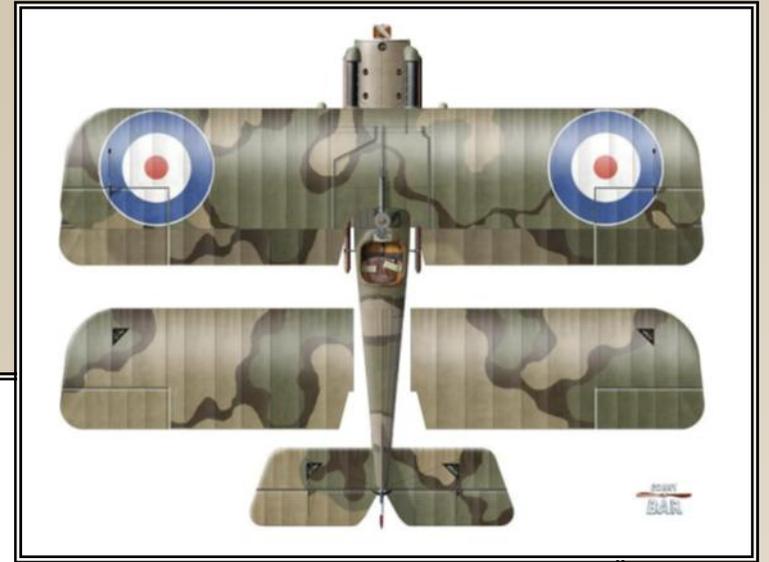


In recent times, Laurence Farrugia has been fortunate enough to make his way overseas to visits a number of aviation museums. Along with the well known, major museums, Laurence has visited museums such as Heritage Flying collection owned by Paul Allan in Seattle USA and of the Pacific Aviation Museum and ANG collection Hawaii USA. At the April Meeting, Laurence will present a display of his best shots up on the big screen and talk us through them. If you're in the Melbourne area...

**Come along, everyone's welcome!**  
**April 10th - Ashburton Library**



# Ronny Bar's Great War Graphics



**R.A.F. SE-5a**  
(D3511) Maj. R.S Dallas; N° 40 Squadron, RAF  
Bruay, France; May 1918.



A personal selection of a great World War I aircraft for your viewing pleasure from Ronny Bar.

# LOCKHEEDS SAMURAI SWORD

Profiles: Lieuwe De Vries

Article: Laurence Farrugia

The Lockheed F104 Starfighter arguably represents the Cold War Century Series Fighter program more dramatically than other aircraft developments in the period. While not a particularly successful military weapon, the Starfighter forged it's place in history and served in air forces around the world from it's USAF debut in 1958 through to it's final operational retirement from the Italian Air Force in 2004.

Lieuwe De Vries treats us to a picture essay of the F104 in Japanese Service, presented in serial number order. Background and historical information, researched and documented by Laurence Farrugia.

**T**he F104 is born in 1954. The Starfighter was created by Lockheed's Kelly Johnson after hearing feedback from Korean War pilots that they required aircraft that were smaller more nimble and possessed an ability of great speed and altitude. What Kelly Johnson and his team created was an aircraft such that the world had not seen or had envisaged. The Starfighter design was to incorporate a long slender fuselage with unbelievably small trapezoid wings. So small were the wings that many thought that the aircraft would not be able to fly and if it could that it would be incapable of lifting any significant weapons payload.

## Development

The Starfighter's small wing was to have a minimum thickness of just 2 inches (50mm) and a maximum thickness of only 4 inches (100mm). So radical was this wing design that extensive testing was done by attaching scaled down version of the wing and wingtip designs to 5 inch army rockets. Cameras mounted to these rockets enabled the designers to view the effects of high speed on the wing design. The unique tail design options were also tested in the same manner and resulted on the T tail design.



**Serial: 26-5007**  
**Unit: 203 Hikotai**  
**Base: Komatsu**  
**Date: Unknown**



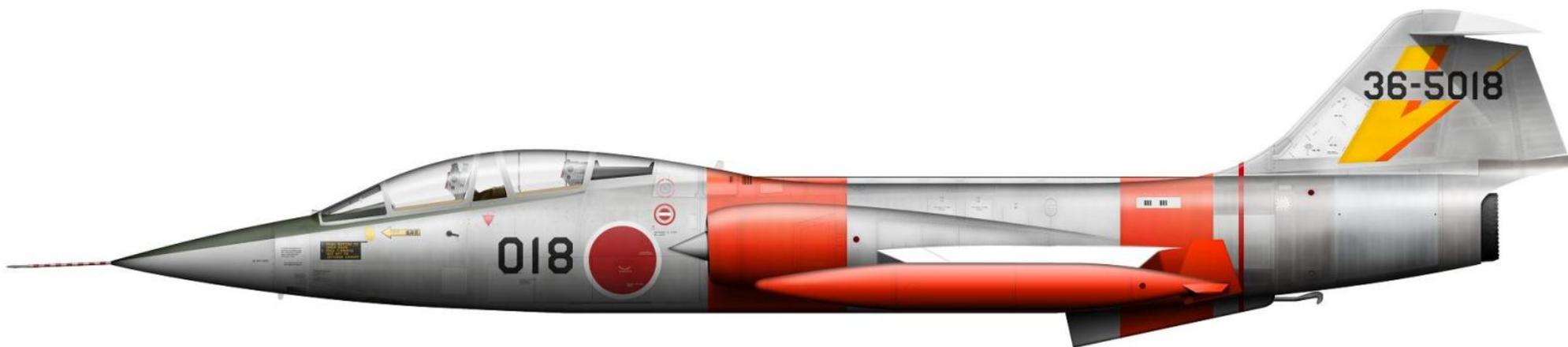
**Serial: 36-5016**

**Unit: 202 Hikotai / 5 Kokudan**

**Base: Nyutabaru**

**Date: 1980**

## LOCKHEEDS SAMURAI SWORD Profiles by: Lieuwe De Vries



**Serial: 36-5018**

**Unit: 202 Hikotai / 5 Kokudan**

**Base: Nyutabaru**

**Date: Autumn 1980**



**Serial:** 46-5020  
**Unit:** 205 Hikotai  
**Base:** Komatsu  
**Date:** 1981

## LOCKHEEDS SAMURAI SWORD Profiles by: Lieuwe De Vries



**Serial:** 46-8591  
**Unit:** 205 Hikotai  
**Base:** Komatsu  
**Date:** Unknown



**Serial: 46-8621**

**Unit: 203 Hikotai / 2 Kokudan**

**Base: Komatsu**

**Date: Autumn 1980**

The designs of the wing lead to many issues that resulted in equally unique solutions. One such problem was the hydraulic forces that were required to move the wing control surfaces at high speed. No existing hydraulic cylinders were powerful enough that could fit within the 1 inch cavity in the wing. Lockheed's solution was to fit a bank of small hydraulic cylinders along the entire edge of the control surfaces. The resulting combined force was more than sufficient.

Small high loaded wings required high landing speeds. The solution to this problem was to be the BLCS or Boundary Layer Control System or Blown flaps as it became more commonly known. Bleed engine air was directed over the trailing edge flaps and this energised the airflow over the flaps increasing lift and reducing landing speeds.

### Structure

The design of the F104 with its extremely thin wing meant that all of the avionics, fuel and undercarriage assemblies had to be housed within the fuselage. The result was the long and slender missile shape that is unmistakably an F 104 as we know it. The wing unit did not pass through the fuselage as many conventional designs had in the past. In the case of the F104 the wings were bolted to the fuselage sides. The F104 main undercarriage assembly retracted forward with the main wheels rotating through 90 degrees to fit into the small bays. The nose gear retracts forward and is of a conventional design. With the exception of the gun all weapons were to be carried externally and the wings had provision to mount air to air missiles or wingtip fuel tanks that could be jettisoned if required.

An unusual design feature of the Starfighter as a result of the T-tail, was for early model F104s to have a downward firing ejection seat. There was a concern that the capabilities of the current ejection seats not being able to successfully clear the tail at high speeds. This was to have obvious profile limitations and advancements in ejection seat design would see later models of the F104 fitted with upward firing Zero-Zero seats.

The F104 was originally criticised of a short range and the team at Lockheed soon had the solution. The F104 was fitted with an air to air refuelling probe. Multiple tests were conducted with both dry and wet fuel hook ups.

### Powerplant

The original power plant installed into the F104 was the J55 which was to prove underpowered and did not have the capability to achieve the maximum benefit that the F104s design could deliver. Early on in the development stage the J55 was replaced by a newer generation engine being the J79 which gave a remarkable improvement in thrust and fuel efficiency. The pairing of the J79 and the F104 airframe was the pivotal moment in the development of the Starfighter.

### Weapons

The F104 was designed with great flexibility in mind. Sidewinder AAM could be carried on the wingtip positions but the mounting of wingtip tanks normally resulted in the mounting of a twin rail rack under the forward fuselage. Sidewinder launches were met with success against various drones. The F104 was also tested and proved far

more than capable of launching the Genie Nuclear tipped air to air missile designed to attack formations of Soviet Bombers. Successful tests of Genie missile launches were achieved at high altitude and at supersonic speeds and utilised a trapeze launch rack that placed the Genie into a clear airstream to ensure the genie would clear the F104 and not be affected by turbulence coming off the fuselage.

**“With the exception of the gun all weapons were to be carried externally ”**

The weapon that was to cause grief in the test stages for the F104 was the then new M61 Vulcan cannon. The second prototype (Buzz number 787) during a firing test run in flight was to lose all engine power after a loud bang was heard by the pilot. A dead stick landing was performed by the pilot after he had calculated that he had enough altitude and speed to reach the airfield runway. Investigation discovered that the gun was at fault with the backing plate having been blown off the gun and had ripped back through the fuselage.

Both the gun and aircraft were repaired and testing continued. Unfortunately a similar in flight test failure with the M61 resulted in control loss of 787 and the pilot had no other option but to eject from the aircraft. The second prototype crashed into the desert floor and was a total write off. The pilot however luckily escaped without injury.



**Serial:** 46-8646  
**Unit:** 205 Hikotai  
**Base:** Komaki  
**Date:** Autumn 1979

## LOCKHEEDS SAMURAI SWORD Profiles by: Lieuwe De Vries



**Serial:** 46-8650  
**Unit:** 203 Hikotai / 2 Kokudan  
**Base:** Chitose, Misawa  
**Date:** Autumn 1979

Despite such a set back the development of the M61 continued as its overall performance far outreached that of multiple cannon or machine gun installations

### USAF service

With all of the test and development issues being corrected and the F104 proving itself to be an extremely capable aircraft it was however not enough to persuade greater interest from the USAF. The designs of the time were for larger heavier aircraft that were designed with a primary role of interception.

The USAF at the time could not come to terms with the design philosophy of the F104 which would later be termed as a light weight air superiority fighter. Thus its small size was not to find favour with the USAF. Some references have termed the F104 as the right aircraft but at the wrong time. Nevertheless the USAF did place an initial order of 15 F104-A.

The fly off competitions would see the F104 proving itself as being a very capable aircraft. The F104 set many flight records in its early flight days. These were later challenged and beaten by newer generation designs such of the F4 Phantom. The F104 promptly exceeded the records set by the F4 and in many cases set up such results that the F4 had no chance of ever competing with these records.

Despite all this a lack of interest by the USAF for a lightweight fighter and various political decisions would lead to the F104 only being ordered in small numbers. A short tour of duty in Vietnam where a high

number of the F104s deployed being lost to various causes did nothing further to endear it to the USAF hierarchy. Lockheed could clearly see that the future for the F104 lay outside the USA.

**“The F104 promptly exceeded the records set by the F4 and in many cases set up such results that the F4 had no chance of ever competing with these records.”**

### Foreign interest

With USAF interest not being what was required Lockheed then started to look for export customers and Europe was such a location that the lightweight fighter concept could easily be accepted. The prime export customer that was being courted was the West German Luftwaffe.

The specifications imposed on the F104 lead to further development and testing, all of which the F104 easily achieved. The already developed air to air refuelling capability was one such demand as was the ability for the F104 to be able to perform barrier arrested landings on shortened or damaged airfields.

Another unique test to suit the European environment was the testing of zero launch capability for the F104. Tests were conducted with a large booster rocket attached to the rear underside of an F 104. With this arrangement, the F104 could be launched from a trailer without

the need for a runway. Several successful tests were conducted with the F104 in this very spectacular launch method.

The European climate also produced demands on the F104 to become an All-Weather Multirole Fighter. In all of the requirements the F104 was to not only meet the requirements but would easily exceed them.

The F104 was to find its home not so much in the country of its origin but as an export product predominately throughout various NATO countries as well as some other nations. Some of the countries that purchased or produced the F 104 were Canada, the Netherlands, Japan, Taiwan, Spain, Norway, Greece, Turkey, Italy, Jordan, Belgium and Germany.

### The two seat Starfighter - TF104

With the lessons learnt by the USAF experience with a demanding aircraft upon its pilots Lockheed decided that a two seat F104 would greatly assist the acceptance of an aircraft that had a reputation as a ‘hot ship’ or a “Widow Maker’. While the demands of the F104 were evident for pilots who were not familiar with the aircraft or its flight envelope, Lockheed knew and understood that well trained pilots and aircrew could easily cope with the aircraft in the air and on the ground.

To assist with the training regimen the TF 104 was created. Lockheed retained one of these aircraft and painted in Lockheed colours this TF 104 was taken on a World Tour and demonstrated to various air forces. The production of the TF104 was to be a major step towards various air forces in gaining an acceptance and realisation of the F104 and its capabilities.

*This machine is currently preserved at the Air Museum, Hamamatsu in 204 Hikotai / 5th Wing markings.*



**Serial: 76-8693**  
**Unit: 207 Hikotai**  
**Base: Naha, Okinawa**  
**Date: Unknown**



**Serial:** 76-8700  
**Unit:** 207 Hikotai  
**Base:** Naha, Okinawa  
**Date:** Autumn 1980

## LOCKHEEDS SAMURAI SWORD Profiles by: Lieuwe De Vries



**Serial:** 76-8708  
**Unit:** 207 Hikotai  
**Base:** Naha, Okinawa  
**Date:** Autumn 1980

## The F 104 J Japan's Samurai Sword.

The Japanese Air Self-Defence Force (JASDF) flew its first Starfighter in 1961. Designated as a F104J the airframe was externally the same airframe as the F104G. The main differences with Japan's Starfighters were in the equipment it carried or in this case did not carry to maintain Japan's Self Defence approach. This meant that all 'offensive' systems were totally removed from the aircraft. Thus the F104J was a pure interceptor with many of its electronic components and systems replaced with those of Japanese design and manufacture to optimise this role. Even the radar unit was modified so it could only operate in the air to air mode. Apart from the M61 Vulcan cannon, the F104J could carry a pair of sidewinder missiles mounted onto a centre-line dual rack launching rails plus an additional pair of sidewinders. Construction.

Japan's total fleet of F104Js was to be 230 aircraft in all. 210 of these were single seaters designated F104J and 20 were 2 seaters designated F104DJ. The fleet of F104J were built by Mitsubishi Heavy Industries. The first three F104Js were supplied as pattern airframes and components. The next group of 29 airframes were supplied as components by Lockheed and were assembled by Mitsubishi Heavy Industries. The remaining 178 aircraft were totally manufactured by Mitsubishi Heavy Industries utilising components manufactured in Japan including a licence produced version of the tried and tested J79 engine which was manufactured by Ishikawajima-Harima Heavy Industries. The two seater F104DJ were supplied as components from Lockheed and assembled in Japan by Mitsubishi Heavy Industries

## Colour schemes in Japanese service

Japanese Starfighters entered service with an unpainted, natural metal finished fuselage. The small wings were usually painted white which gave a high contrast background for displaying the bright red Hinomaru. Later service would see most of the bare metal aircraft being painted in an overall light gray scheme. This provided tactical camouflage and also assisted with corrosion control. Some aircraft that would be used for dissimilar combat training aggressors would see a range of colour schemes that was fitting for this role. Additionally some aircraft were finished in special anniversary markings.

**"Japan's total fleet of F104Js was to be 230 aircraft in all. 210 of these were single seaters designated F104J and 20 were 2 seaters designated F104DJ."**

## Japanese F104 Milestones

The F104J first flew in 1961 and production would cease in 1967. The Starfighter was to remain the service of Japan until 1986. It was progressively replaced by the Mitsubishi built F15J Eagle commencing in 1981. While some were retained for special roles and 22 F104Js and 5 F104DJs were passed on to Taiwan for service with that neighbour's small air force. In the 1990s a small number of F104Js were converted into Target Drones and were designated QF104J. In service Japanese

Starfighter losses were 15% over a 20 year span of heavy service. This compared much better than some of the European experiences. In all Japan lost 34 F104Js and 2 F104DJs. by way of comparison Germany had lost approx 30% of its Starfighter fleet to accidents and Canada had lost approx 50% of its Starfighter fleet. Spain had no issues maintaining and operating its fleets without a single loss of a Starfighter.

For more of Lieuwe's fine profile work, visit his website at:



[www.lieuwedevries.com](http://www.lieuwedevries.com)

Prints are available, Commission work accepted.

*This machine is currently preserved at the Naka Nippon Aviation College, Seke City in 203 Hikotai / 2nd Wing markings.*



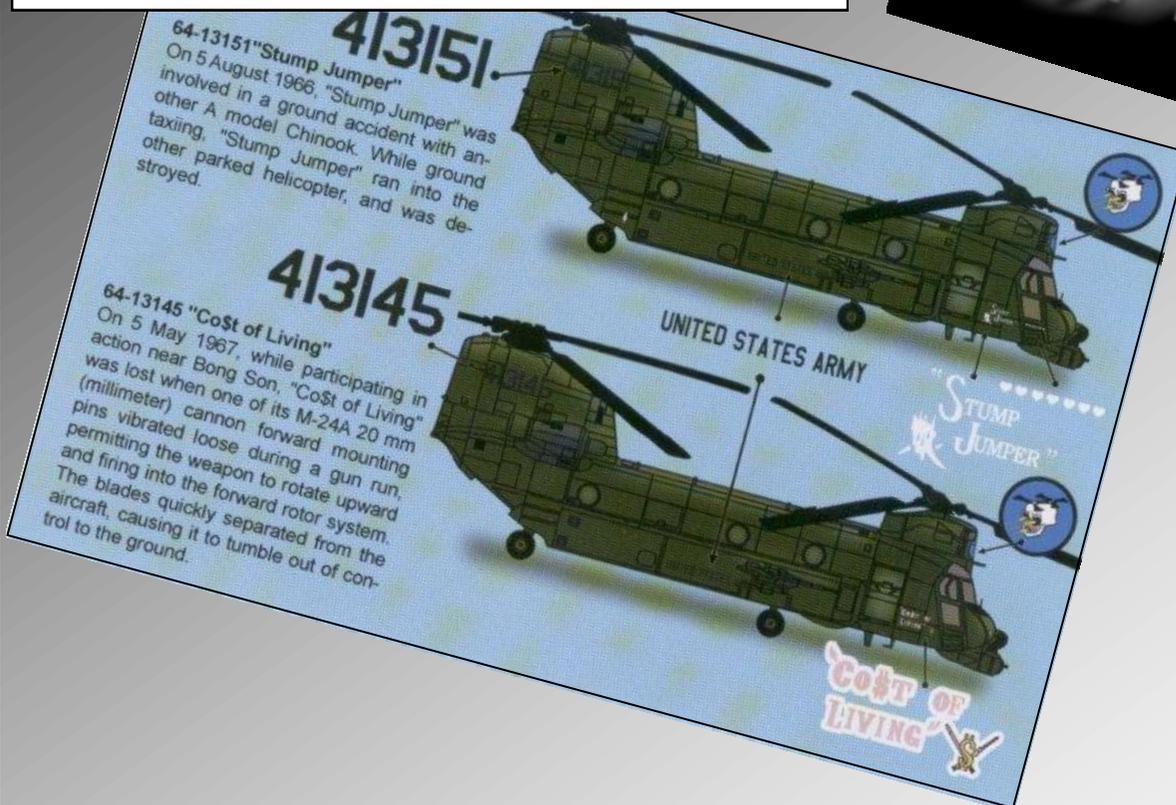
**Serial: 76-8710**  
**Unit: 202 Hikotai**  
**Base: Nyutabru**  
**Date: Autumn 1980**



*Decal Art by ZOTZ*

Decals are both a blessing and a curse for modellers. They can be either the crown jewel or the undoing of a project.

Without them modellers would be left to hand-painting skills alone and for some of the more artistic aircraft adornments, most modellers rely on decals as their AERO ART.



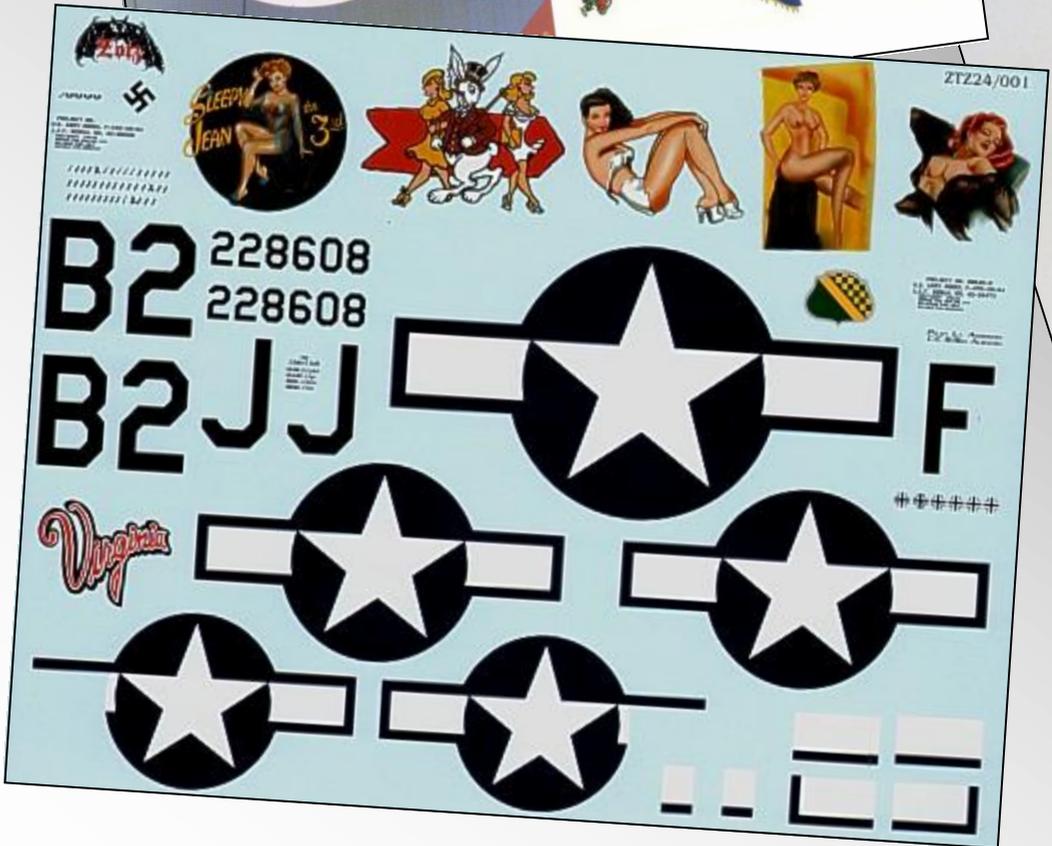
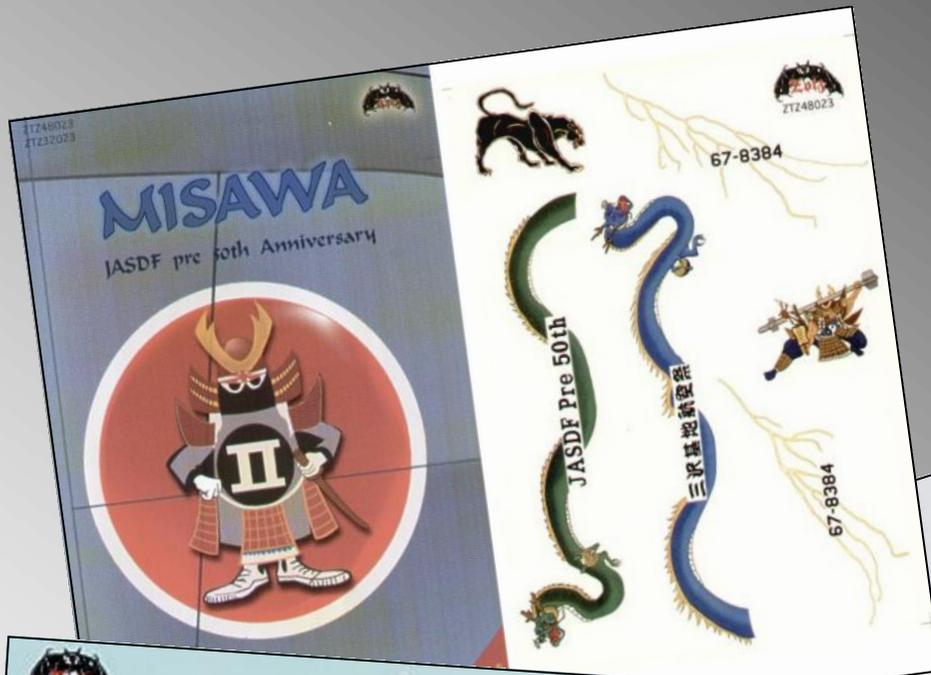
### [ZOTZ Website](#)

Zotz decals is a Mexican company run by Eli Raphael that produces a range of spectacular markings. They are of the highest quality and are produced in all major scales for all aircraft types from World War II onwards. The only real limitation is they don't do boring schemes!!!

Available direct or from major online and shopfront dealers including our own AEROWORKS, Zotz can fill that gap for something spectacular for your next project.

Eli has an online forum presence on the Large Scale Planes Forum (Refer this issues Web Watch) where he has his own sub-forum. He's happy to answer any questions you may have. Of course, Zotz are one of many quality decal companies out there, look out for other offerings in future issues of AERO-TORQUE.

[ZOTZ forum on Large Scale Planes](#)



As you can from the images over this and the previous page, Zotz put a big effort into their product not content with simply producing quality decals, the packing and overall presentation really is something special.

These samples show packing, decals and end results for:

**Previous page:** Chinooks, Lancasters, Tomcats & Phantoms

**This page:** Phantoms, Thunderbolts & Mustangs.

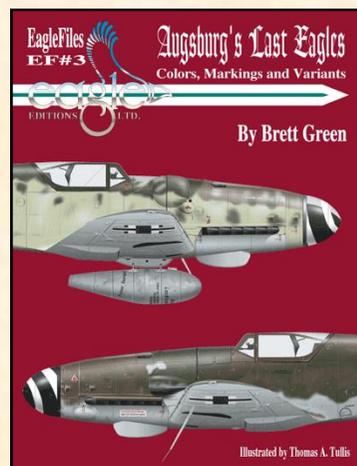
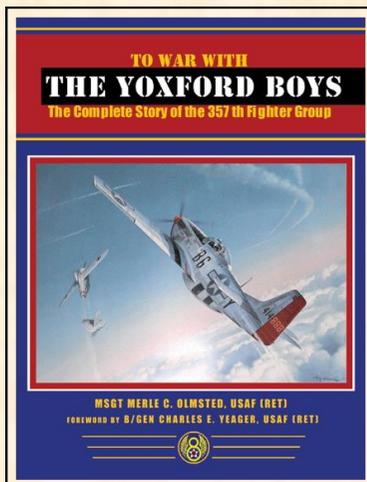
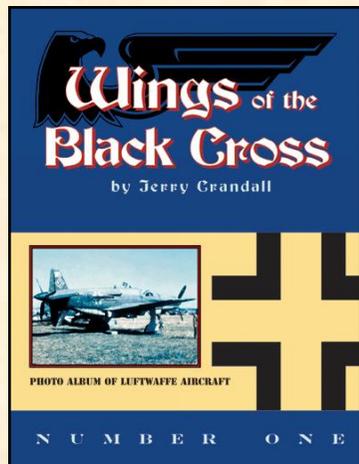
Many more are on offer, check them all out on their website.

# Bookmarks Recommendations for your library

This issues Bookmarks looks at a publisher rather than specific books. Eagle Editions have been a staple part of the modelling community for near on 40 years providing us with a range of reference books, decals and resin parts.



Jerry and Judy Crandall have a boundless dedication to historical accuracy of military aircraft, particularly World War II, and providing the means to turn those dreams into reality. Here's a selection from their expansive range with books available from inexpensive soft-cover editions through to expansive hard cover books with signed limited editions:



Anything from their collection is well worth a place on your library shelf. They are available from good book and hobby stores and online at:

[www.eagle-editions.com](http://www.eagle-editions.com)



## AeroWorks

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**Saturday 9.00am – 1.00pm**

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**For a free price list contact –**  
**Phone/Fax: (08) 8357 4756**  
**Email: [aeroworks@iprimus.com.au](mailto:aeroworks@iprimus.com.au)**



# Real Wooden Propellers



## Introduction

Two colour wood propellers were made by several layers of laminated wood arranged in a sequence of light colour and dark colour woods. The nice thing about these propeller is that when this wood sandwich is carved to form the aerodynamic shape of the propeller a beautiful "wave" pattern would show up.

If you want to make your own two colour wood propeller you either paint these wave patterns or you can make your own the similar way they were really done. This step-by-step was done with merging techniques researched with fellow modellers on the internet adding or changing a thing or two.

Recent instalments of Benchmarks have looked at the finer points of World War I modelling and this instalment from Marco Jennings looks at an old fashioned, back to basics technique of carving your own real wood propeller.

Marco decided he would adorn his 1/32 Roden Fokker Dr1 with a real wooden propeller.  
Here's how he did it...

For more of Marcos fine work:

[www.mtj-kits.blogspot.com](http://www.mtj-kits.blogspot.com)



# Benchmarks



**Pic 1**

First you must find a source of very thinly laminated wood in two colours. I've chosen wood veneers. This is real wood: walnut (dark) and birch (light). These are usually used to cover furniture made of less noble wood. They are sold by meter and can be rolled up like paper (mine came in tube by airmail).

**Pic 2**

You can cut the veneers with a normal scalpel and a ruler to guide it.

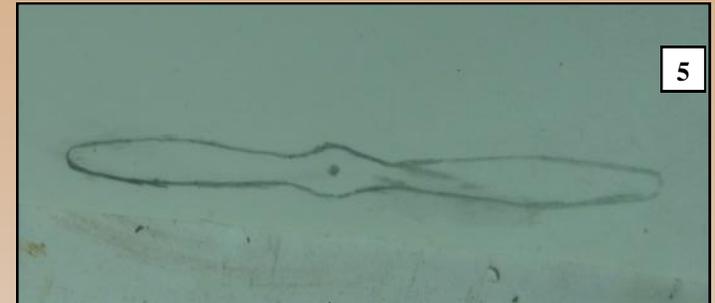


**Pic 3**

Stack them up. I used four dark slices and three light ones. Glue them together with normal white glue or the yellow wood glue. They must dry under pressure. I use two metal rulers on each side and small clamps to press the slices together. Applying pressures expels bubbles of air from in between the slices and doesn't allow the wood to warp during drying.

**Pic 4**

While the glue dries (I leave overnight), prepare the template. Photocopy your plastic propeller.



**Pic 5**

Draw the edges of the photocopied propeller with a 2B pencil. Turn over the paper over a thin plastic sheet and "trace" the outline (just rub on the other side of the paper and pencil outline will transfer to the plastic).

**Pic 6**

Cut out the template. Now you have a plastic template you can use many times.





**Pic 7**  
Trace the outline onto the wood. Note that the outline is a little larger than the template. Just remember to carve the wood to the inside of the outline.

**Pic 8**  
Just carve wood. Use your template to guide you. The smaller you make your original block of wood, the less you'll have to carve. Note where the lines are drawn in pencil - these will guide you in the following two steps.



**Pic 9 & 10**  
File down the tips this way. More or less half way along each blade, slim them down to a sharp tip. You can see there is a line drawn on the wood on picture 8 where you should start slimming the blade.



**Pic 11**  
This is the trickiest part. Using also the lines on picture 8 - the curved ones near the centre - carve the curved shape of the propeller. I use a Dremel 801 Carbide Shaping Wheel to do most of the carving and finish off with sanding paper.



**Pic 12**  
It's a bit hard at first, but the result is very satisfying. The curves show up as soon as you start carving and even help to guide you to keep both blades symmetrical.



**Pic 13**  
Apply varnish. You can choose from many colours of varnish.



**Pic 14**  
Now make your propeller boss. Just cut it off the plastic propeller. Try to remove a lot of plastic so that you only end up with a very small disc.

# Real Wooden Propellers

# Benchmarks

What could or should be on your modelling bench to help you?

## Real Wooden Propellers



15

**Pic 15**  
After painted the boss should look like this.



16

**Pic 16**  
Glue on the boss and the propeller is ready!



The finished product, now with decals, sitting proudly on the Roden 1/32 Fokker Dr1.



# MEMBERS MODELS

BY  
CHRIS DOWSETT

**This issue we have something a little different. Rather than a sample of models from one of our members, this time we focus on a specific model built by Chris Dowsett for the Shrine of Remembrance in Melbourne, Australia to mark the Japanese raids on Australian soil during the Second World War.**

**Rather than assisting her allies in their time of need, Australia was truly at war for the first time in her short history.**

TYPE 21 ZERO

A REAL

MUSEUM  
PIECE

There are many reasons why we enjoy our hobby so much. For me, I enjoy the building and painting process just as much as learning about the history of my kits. Another bonus is sharing both the art of model building and the history with others. This is a story about a real museum piece.

A few years ago, when working for a printing firm called Image Box in South Melbourne, I had the thrill of working with all of the major exhibition centres and museums in the city of Melbourne. Within this time, I also had the pleasure of supplying print and working with the staff at the Shrine of Remembrance. I found the staff a real pleasure to work with, especially the Shrine's Exhibitions Curator and spokesperson, Neil Sharkey (BA Hons).

On Remembrance Day 2011 I was able to catch-up with Neil. He asked if I had any aircraft in my collection that represented aircraft used in the first year of the war between Australia and Japan, as they would be appropriate for an upcoming exhibition. The particular exhibition, named "Japan's entry into the Second World War (1939-1945)" is currently showing at the Shrine until 3 June 2012. It consists of photos, rare personal items and other artefacts to educate and inform the general viewing public of Australia's first year fighting a desperate battle against the Japanese empire. Neil understands that scale models work well in exhibitions, such as the type the Shrine of Remembrance have on show for the general public all year round. Two exhibitions, directly relating to the history of



Often mistaken for varying shades of gray to white, Chris describes the use of the “caramel” colour used by the Japanese.

Australians in conflict, are scheduled at any given time. As I didn't have anything in my built collection, I chose a kit in my large un-built collection that could be built relatively quickly, to ensure it was completed on time.

## The Kit

I started with the fine little Hasegawa Mitsubishi A6M2b Zero Type 21 'Pearl Harbour' special edition, kit No 09481. Hasegawa do a good job of the Zero in 1:48 scale, like most of their 1:48 scale aircraft range, especially when it's of a Japanese subject. The original boxing of this fine example of the Imperial Japanese WWII Navy fighter was released around 1996 and includes sixty seven grey styrene parts, seven clear parts and offers enough decals to do any of the Zero Type 21 aircraft that participated in the Pearl Harbour attack back in December 1941. All this is within the typical standard Hasegawa boxing with great artwork.

However, it is quite unusual and also quite annoying, as the later 'Pearl Harbour' special edition kit includes much fewer decal options than the standard earlier 1996 release of the Zero (kit number JT43). The 'Pearl Harbour' special edition offers just four options. Go figure... On the positive side, the decals supplied in the later special edition kit are of a better quality than the original release, but I really needed the decals that were supplied from the original 1996 release. Luckily, Robert Madden from Dandenong Modellers Club, generously offered to help out and send me the decals I needed to model my chosen aircraft. More on this later... The kit is quite straight forward to build, and as with most aircraft kits, you start with the cockpit which has thirteen parts to be placed within the main fuselage (with just three main parts). The cockpit is

detailed enough so once the kit is complete, looks busy enough to please most that peer inside. The only additional items that I added to my kit were Edward pre-painted seatbelts.

Be careful with any Japanese WWII aircraft subjects that you do your research on the colours, especially when it comes to the cockpits, airframes and wheel wells. Most Zeros were actually built by Nakajima Heavy industries, and as such were painted in Nakajima colours. Mitsubishi-built aircraft were different colours than Nakajima-built aircraft, so when starting on a Zero, first find out which company originally built the aircraft you are about to model, and then start researching the correct factory colours that would have been applied to it. Finding out the correct company that built your aircraft is the easy part - most of the time. Once this is done the real fun starts, as there is just mountains of information and debate about what the correct colours for each factory painting process actually were.

Basically, all the Zero Type 21s that participated in the famous Pearl Harbour attack were of Mitsubishi build, and later, once the aircraft were painted in dark green upper surface colour, the following applies: Mitsubishi-built Zero aircraft had a straight line from the main wing to the rear of the aircraft, and the Nakajima-built Zero's had a slightly curved line from the main wing to the rear wing. Other points of interest are the colour of early Mitsubishi-built Zeros and the wheel wells. Most sources believe these aircraft were painted in a creamy caramel colour, and the wheel wells were painted the same colour as the airframe and not Aotake as some would assume. However, trying to research the correct early Zero 'creamy' caramel colour, is quite time consuming and raises more questions than one would like to not experience. There are other items, like the aileron weights, that are believed to be painted red and not the standard exterior caramel colour like the rest of the airframe. I'm just glad at least the kit was a joy to build. When building this



Chris chose to keep weathering to a bare minimum on this Zero



**BII-124 looking worse for wear after coming down on Melville Island**  
**Photo: Australian War Memorial Ref P00022.002 (Public Domain)**

kit, two things to keep an eye out for are: the panel lines that need to be removed (refer to the instructions for these areas), and the oil cooler intake piece that is attached to the under wing area, as the fit isn't the best and the join line goes straight through the wheel well and is hard to clean-up. I believe Hasegawa could have improved this issue when designing the kit. However, Hasegawa has improved this on later variants of the kit, as per the Type 63 (A6M7) that was released a few years after the Type 21 A6M2b.

### The Markings and History of BII-124

I decided to choose one of the most famous Zeros within Australia's history, coded BII-124. On February 1942, during one of the largest raids on Darwin Harbour, an Imperial Japanese Navy A6M2 Zero, serial No 5349, coded BII-124, was hit in the oil tank by a single .303" rifle bullet when flying over Darwin Harbour.

This one-in-a-million shot seized the engine when the oil ran out. Unable to fly back to his carrier Hiryu, Flight Sergeant Hajimi Toyoshima was forced to crash land his aircraft on Melville Island, north-west of Darwin.

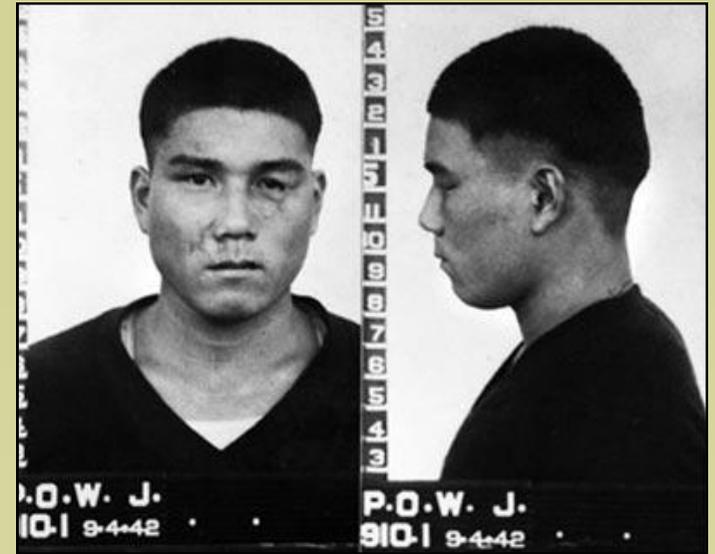
A local Tiwi (Aboriginal), Matthias Ulungura of Snake Bay settlement, witnessed the crash with other local people. Matthias and some other Tiwis captured Toyoshima and took him to nearby Bathurst Island. They used Toyoshima's own service pistol to escort him to captivity.

Toyoshima was originally handed over to Sergeant Leslie J Powell, of the 23rd Field Company Royal Australian Engineers. The unarmed Sgt Powell was on Bathurst Island to maintain demolition installations on the island. Upon his capture, Toyoshima tried to keep his identity

and his downed aircraft a secret, and originally gave his identity as Tadao Minami. He claimed to be a Sergeant pilot flying from Ambon (Dutch East Indies - now Indonesia) to Darwin, and it was under this name he was given the designation of PWJ 910.1, the first Japanese Prisoner of War in the Pacific War.

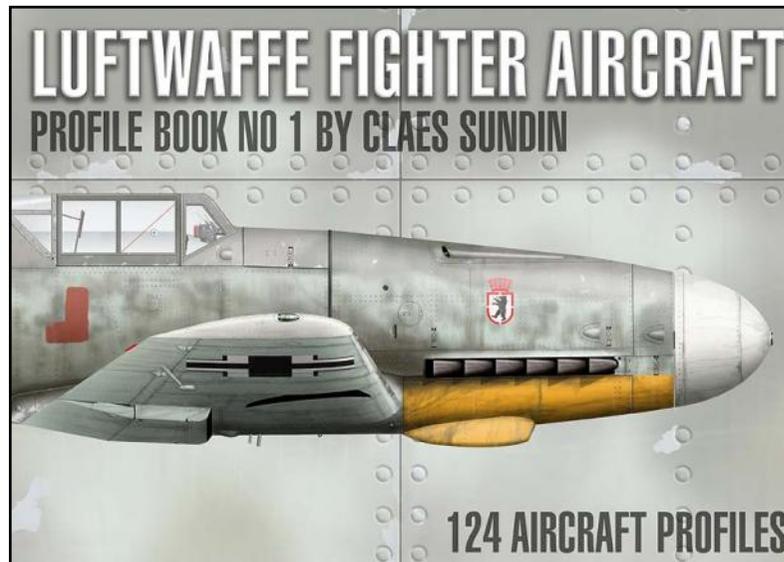
The severely damaged aircraft was eventually found and was one of the first intact Zeros captured. The Allies could now view up-close the much feared Zero, which at that stage of the War was sweeping all Allied aircraft before it with its superb handling characteristics and lethal punch, with four guns, including two 20mm Cannon in the wings. Toyoshima's identity was eventually revealed, after further interrogation, and his real rank, name and reason for crashlanding was fully understood. As a prisoner, he was moved a number of times before being interned to the Prison in the town of Cowra in NSW.

Toyoshima was one of the instigators of the now infamous 'Cowra Breakout'. He signalled for the inmates to commence the breakout by sounding a bugle, and took his own life not long after the breakout. What is left of the aircraft that Flight Sergeant Hajimi Toyoshima crashed on Melville Island is now displayed in the Australian Aviation Heritage Centre near Darwin.



**Toyoshima, his face swollen from wounds inflicted during his crash landing. Photo: Australian War Memorial Ref 068530 (Public Domain)**

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# MEMBERS MODELS

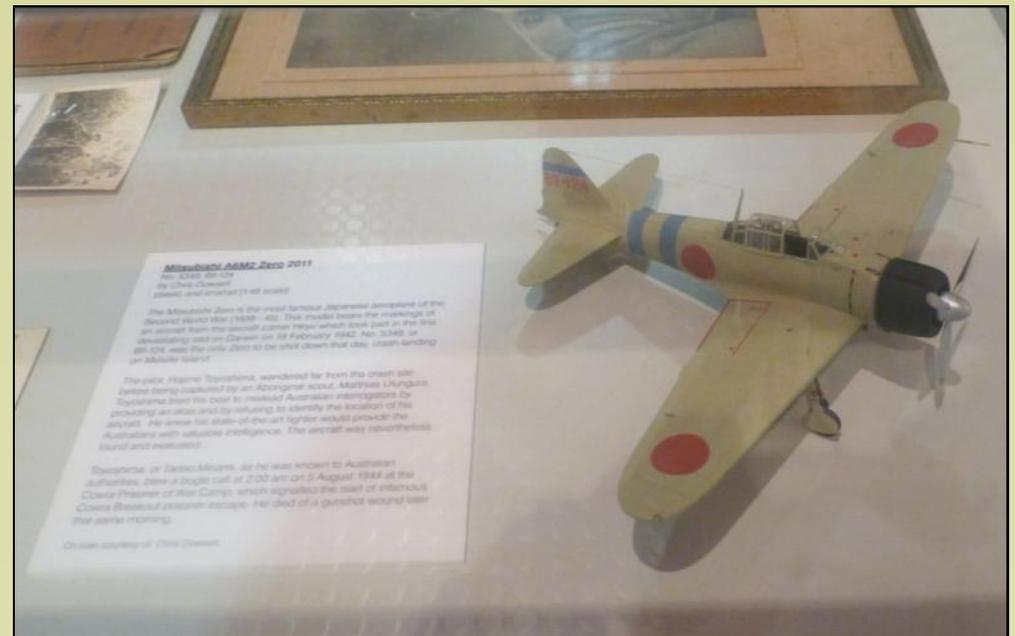
TYPE 21 ZERO

A REAL

MUSEUM  
PIECE



Young William Dowsett admires his fathers work at The Shrine.



The completed Zero on display, photographed as best as possible behind glass

# 5 Or More! - An Aces Profile

Saburo Sakai  
Never Again!!!



**Inset:** Saburo Sakai's autograph and personal motto which translates to "Never Give Up".

石橋不屈  
坂井三郎

© CLAES SUNDIN

## CPO Saburo Saikai, Tainan Kokutai Lae, July 1942. Mitsubishi A6M2 21, S/N 3647

When thinking of air aces, one naturally thinks of their brave, heroic and often foolhardy efforts to best their opponents in the name of their country and their people. Saburo Sakai most certainly fits into that category, however he was not to retain his ferocious tenacity for battle. Saburo Sakai, with 64 victories totalling, as best as can be validated, came out of the war and after much soul searching with the aid of his Buddhist faith, he vowed to "never again kill any living thing, not even a mosquito."

Nonetheless, Sakai's prowess in the air was deservedly legendary. On one notable occasion, on June 24 1944, Sakai misidentified a group of 15 aircraft. Thinking they were compatriot Zero's, he soon learnt he had indeed engaged a group of 15 U.S. Navy Grumman F6F Hellcat fighters. Too late to disengage and escape, rather than falter, he managed to elude the Hellcats. Not one of the Hellcats were able to disable either pilot or plane. Saburo Sakai spent approximately 20 minutes eluding his foes managing to return to base untouched. On another occasion, his human side was seen when he disobeyed orders to shoot all aircraft down. He spotted a Douglas DC-4 and upon seeing it was civilian and contained women and children, he simply waved with both his hands and wings for them to fly to safety.



**L** Laurence Farrugia has been a stalwart of the Melbourne Modelling scene for more years than he'd like to remember. As a serving committee member for a number of local modelling groups, he was the Director of the Model Expo committee during the tumultuous period where the show had to make it's move from it's traditional home at the Melbourne Showgrounds to it's current successful tenure at the Sandown Racecourse.

Laurence is one of those strange modellers that actually operates on a basis of building one at a time! That takes amazing discipline and will-power. The proof in the practice is shown in the selection of models shown in this profile and the plethora of awards Laurence has won over the years. Don't worry, he's not completely alien to the rest of us, I've seen his huge stash of kits...



Surely the most attractive of Mirage schemes is the Israeli desert camouflage?  
1/48 Mirage III C by Hobby Boss.



1/48 Albatros DVa by Eduard, a great little kit.  
Not without its flaws, but a great build nonetheless.

**How did you first get into the hobby?**

I first got into the hobby as a junior, I have always had an obsession about planes and that interest lead me towards model building.

I think my first kits were a Mazda sedan and an Austin Healey (both had wind up spring motors that drove the wheels). There was also an F5A in this initial batch of models and that quickly got me launched into aircraft modelling. This was closely followed by a FROG Vickers Vimy that lived as a mono plane due to my inability to construct the upper wing onto the struts

**Why do you still model?**

I find it a relaxing past time where all the daily concerns of life can disappear for a while. I also enjoy the research side of building a certain subject or aircraft. I also have met many of my closest friends through modelling and that social aspect also is a major part of why I still model. Besides that, I have a few kits in the stash and yes I intend (and hope to) to build them all.

**What's your favourite model you've built and why?**

I don't really have a favourite model. I would have to say that each one as it is completed becomes my favourite until the next one is completed. However there is one particular model that I am particularly fond of. It is a 1/20 Falke from the MaK series. This is because of the work I went to fitting the model with magnets to achieve a levitated hovering state. The model hovers about 20 mm above its base in a suspended state.

**What's your biggest modelling disaster, what happened?**

I had returned from a local hobby shop where I had a few completed models on display. I had brought about 5 home after replacing them with freshly completed models. I removed the box from the car and then swung the car door shut. The corner of the car door frame just caught the edge of the box, spinning out of my hand to crash onto the concrete drive way. I guess you could call me an 'ace in a day' as all five model aircraft were totally destroyed on impact.

# Modeller Profile - Laurence Farrugia



Top Left: 1/48 F4E Phantom by Hasegawa, resplendent in Australian Markings. These were in service while awaiting delivery of F111's.

Left: Laurence's superbly detailed 1/72 SM 79 by Airfix. The interior has to be seen to be believed.

Above: The provocatively names diorama, "Camel Tow" with 1/48 MC 202 by Hasegawa and scratch-built camel.

**"I don't really have a favourite model. I would have to say that each one as it is completed becomes my favourite until the next one is completed"**

# Not just aircraft



Top Left: 1/72 U-boat by Special Navy.

Left: 120mm Luftwaffe Instructor by Reheat complete with detail painted Fw190 and Spitfire.

Above: 1/20 Falke by Hasegawa from the Maschinen Krieger Series. Yes it actually floats due to clever use of magnets.

# Modeller Profile - Laurence Farrugia

## What are you working on now and what's your modelling schedule like generally?

I am currently working on a 48 scale JU 87R Stuka by Italeri. Basically out of the box but will be finished in Italian markings from the Battle of Malta, which is where both my parents originated from. I always have a kit on the go and generally finish approx 8 models a year.

My build philosophy is build only one at a time. Only when it is completed and placed into the display case do I then look at the next project. That way I do not end up with 20 on the go and none completed. I also like to do a couple of non-aircraft models each year just for a bit of diversity.

## Are you a kit hoarder/ collector or do you genuinely intend to build everything you have and how big is the current collection?

I have approx 1200 kits in the stash. The intent is for them all to be built and that is even for some of the kits that are considered to be collectables.

The only kit that may be considered as a collectable from the entire stash is the Frog BP boxing of the Vickers Vimy. I have strong memories of the walk up the street to the BP service station with my father to purchase the original kit.

## What is your modelling collection made up of?

Military Aircraft in 48 scale are the bulk of the collection though there are aircraft ranging from 1/200 to 24 scale in my collection. These represent about 70% of the collection.

The remaining 30 percent is spread over all other modelling subjects. The only subject in which there are only one or two are cars as I have little motivation for model cars. My interest in cars is more into the real thing.

## What kit/s would you like to see released?

I would love to see a really nicely detailed kit of the MiG 23 and 27 in 48 scale. I am hoping that a model manufacturer will do this one day instead of another Spitfire, Mustang or ME 109.



1/48 F84F by Kinetic as used by the Italian and in an Olympic celebratory scheme. This is the first completed model for our 50's & 60's Jets display at this years Model Expo.



1/48 Hughes 500 in Argentinean camouflage scheme by Academy already put together from last years Warbirds Kit Kringle.

## Do you build anything other than aircraft, if so, what?

I currently have apart from aircraft completed models of motorcycles, Armour, ships, aero engines, figures, submarines, Sci Fi, Anime figures, rockets and Dioramas etc. If there is a model of any type of subject then I am interested

## Is there a modelling technique you still feel you haven't developed to your satisfaction yet and if so, what is it?

Figure painting is a technique or discipline that I have yet to master. Basically I need to do a lot more of them to get practice at it. I have a few figures of all scales and really want to do them justice. This will hopefully get me prepared to take on the 1/4 scale figures by Soriyama that I have obtained.

## What are your top ten aircraft of all time

In no particular order:

1. F4 Phantom,
2. MiG 23,
3. Mirage III,
4. TU 95 Bear,
5. A4 Skyhawk,
6. F/A 18 Super Hornet
7. FW 190A8,
8. F4U Corsair,
9. Macchi 202,
10. Albatros DVa,

## If you could change anything about the hobby, what would it be?

I would like to see the main stream manufacturer's doing kits of some of the more unusual subjects but are subjects that would still sell well. This is an unashamed plug to try to get Hasegawa, Special Hobby, Revell, Tamiya, Trumpeter, Hobby Boss or anyone to do a 48 MiG 23.

## Where do you see the hobby headed in the future?

The hobby is definitely heading into the direction of larger scale aircraft and more detailed kits straight from the box. I see that manufacturers are all responding to meet the demands of modeller's for easier to build, more detailed



Above: 1/48 FW 190 V1 by Legato. This kit battled Laurence to the end, but he won!

Left: 1/48 Spitfire by Hasegawa from the Maltese campaign.

Right: 1/48 Rufe by Hasegawa.



models. However I believe while kits just keep getting better and better it will plateau out in the next 10 years. I also see that people will build fewer models per year but they will be of a much higher standard. It is already getting tough for competition judges out there and I see it getting tougher as each year goes by.

**What advice would you give to someone considering getting into the hobby?**

My advice would be to join a club or two as you will make many friends and learn many things along the way. Your modelling skills will improve in the right clubs. Be prepared to also put back into your club or the hobby by attending shows and helping out where ever you can. Modelling is much more fun as a participant modeller than a modeller watching from the sidelines.

**Finally, what do you do for a living and how do you fund your hobby**

I am a Risk Manager for a Global Share Registry organization. I basically identify and then eliminate risks in the operation of the business. I also look after our complaints and claims area and function as our Quality manager to ensure we maintain our ISO certification.

I do not particularly budget for my hobby. If there is a kit I want I will generally purchase it. The only limitation I have is that my modelling competes with my many other interest which include collecting and restoring classic muscle cars, motorbike riding, collecting and playing guitar, as well as painting and sketching artwork.

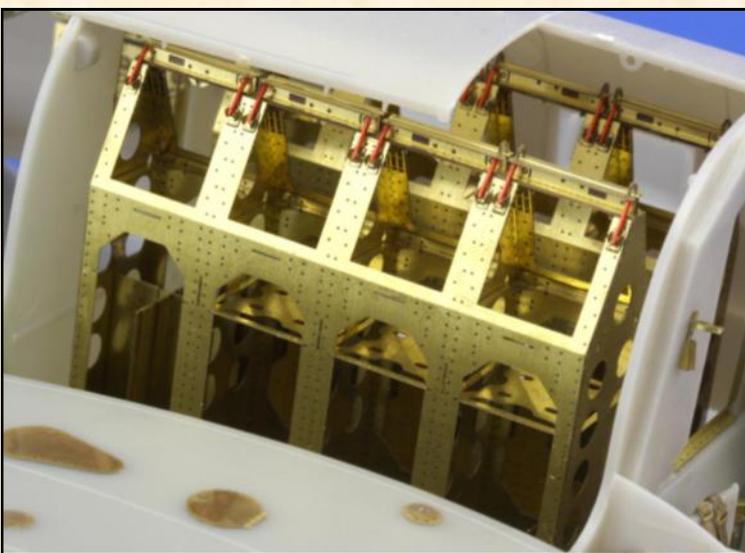
# Modeller Profile - Laurence Farrugia

# TAIL SPIN CONFESSIONS OF A TIME POOR EDITOR

**W**ow!!! I finally picked up a 1/32 Revell Heinkel He111P over the Christmas / New Year period. What a plane, what a kit, what a lot of space it will take up when it's built. I still remember my first He-111, the Matchbox 1/72. I built it with great patience and dedication but with the non-standard application of all over metallic green camouflaged. I'm sure old Hermann would have frowned on the beloved Heinkel in such a scheme but hey this was the 70's!!!

It got me wondering how close I can get to just building it without too much extra in the way of time and money consuming extras? It truly is a wonderful kit and of course there are areas it could do with a helping hand. This is definitely one of those kits though that once you get started on the detailing you could very easily commit yourself to never completing it.

So that raises the eternally vexing modelling question. How far to go on an inspirational kit (or on any kit for that matter) with aftermarket parts and / or some good old fashioned scratch-building? Over the years I've had many great modelling ideas put



on permanent hold by over thinking and over planning and getting to a point where it becomes overwhelming.

The 1/32 Revell He-111 is one of those kits that has incredible scope for enhancement. The base kit is wonderful with (as far as I understand) no major issues or flaws for most of us modelling mere-mortals to worry about. Out of the box, there are only two real issues I see. A lack of swastikas and seatbelts. Both easy and relatively cheaply fixed and I know that's all I SHOULD do but as can be seen by the pictures of a few of the Eduard photo-etch offerings, the detail on offer for this behemoth is quite spectacular and with

all of that wide open viewing space on and in the airframe, surely it needs as much love and enhancing as one can supply? It would be easy to spend twice, if not three times the original purchase price of the kit. That would make for a mighty expensive project and if one could be disciplined, then there would be no need for the modelling stash for at least a year.



It will actually be interesting to see how many of these kits make it to completion and display benches in the near future. I remember when the 1/48 kit was released, locally it was at least 2 to 3 years before the first one made it to a competition table. It actually inspired a small group build of them in a modelling group I was with at the time. If I recall correctly, we got three completed.

Back to the original question... While making no promises, I have to restrict myself to a set of aftermarket decals and a basic cockpit set to provide seatbelts and better instrument panels. Then I suppose being 1/32 scale, it would benefit from brass barrels as they really are visible. It would be expensive but then what value do you place on completing a kit of this magnitude and regretting not adding that *little bit* extra?

Oh well, I can see another modelling project that will suffer paralysis by analysis...

*Martin*

Early Sharkmouth Aircraft

Shark Attack !!!

WARBIRDS AMG

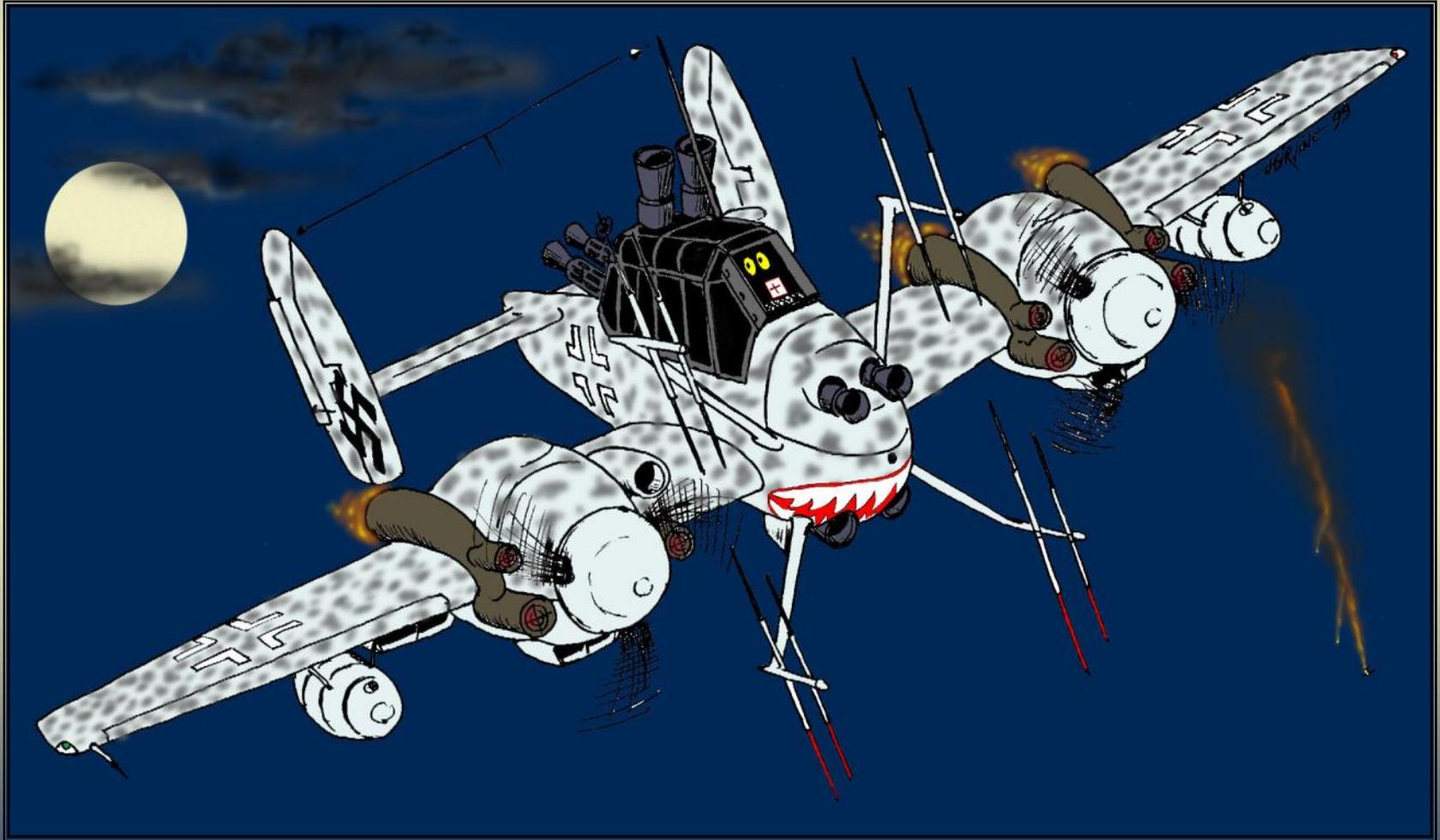
# AERO-TORQUE

Issue 006, Apr - Jun 2012

Next Issue

# CarAIRcatures by Glenn Irvine Nacht Haifisch!

## Moonerschmitt



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