

THE MONTHLY NEWSLETTER OF IPMS, NEW ZEALAND.



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NEXT MEETING

7.30 pm Tuesday 18/10/2022Royal Oak Bowls146 Selwyn St, Onehunga

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From the Editor

This month saw the resumption of the IPMS nationals, this year hosted by the Dunedin branch. It was so nice to get some sort of normality back in our annual calendars following the unprecedented (in our time) disruption to life as we knew it due to COVID. A number of us made the journey south and had a great weekend that was both enjoyable and rewarding. It was good to catch up with some old modelling friends and acquaintances and to meet some new ones. The weather was kind to us being nice and fine, if a little more chilly than we were used to. We were able to get about and take advantage some of the fine hospitality available in the centre of Dunedin.

The number of models on the tables and overall standards were pretty good, no doubt the result of pent up production during the COVID years. It would be great if we could attract a similar turnout in Auckland in 2023. They do things differently to us in the south and the judging used a standards based, or 'open' system. Gold, silver and bronze honors were awarded based on whether a model attained the minimum standard requirements for each level. In this system multiple awards at any level could be made or conversely none if no models meet the standard. There were special prizes awarded for the best model in major categories along with overall best in show and runner up best in show. There was a special award for best New Zealand Subject. Images of the major class winning entries are included later in this newsletter

Don't forget that we have out Ukraine theme build coming to a conclusion at the November meeting. Just remember-Ukrainian kits or subjects, no Russian kits or subjects unless in Ukrainian colours.



BULLETIN BOARD

NEW MEMBERS AND SUBS ****** 2022/23 NOW DUE ******

Subs for 2022/23 now due -see below for club account details or see the club secretary

Membership Type	Description	Cost
Full	Living in the Auckland Metropolitan Area	NZ\$45
Out Of Town	Living 75km or more from central Auckland	NZ\$30
Junior	Same rights as full mem- bership for those under 16	NZ\$25

IPMS BANK ACCOUNT
NUMBER

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Please add your name and details so we know who has paid!

EVENTS

CLUB NIGHT EVENTS

IPMS Auckland Meet on the third Tuesday of each month at 7.30pm

Venue: The Sports Lounge

Royal Oak Bowls

146 Selwyn St, Onehunga

October 3D Printing Workshop

November Ukraine Theme build

December Christmas and end of year

wind up



BULLETIN BOARD

CLUB SUPPORT

The following retailers have kindly agreed to offer IPMS Auckland club members a discount on their purchases upon presentation of their current IPMS Auckland Membership card.

The discount only applies on selected product lines and remains at the discretion of the retailer.



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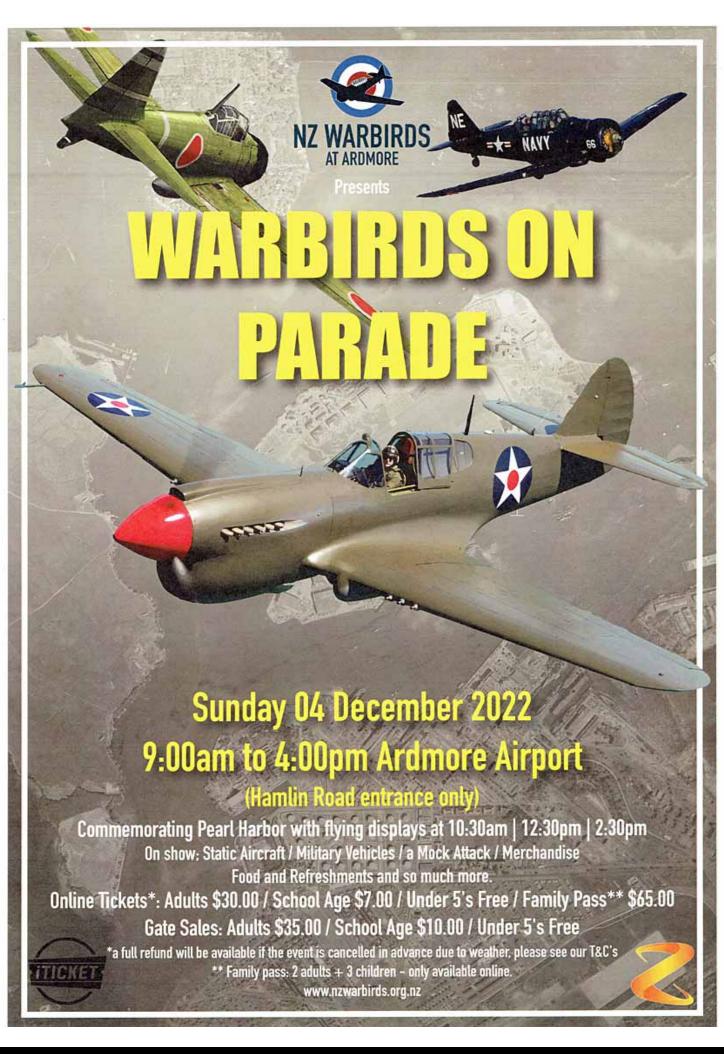
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IPMS NZ nationals 2022 Class Winners

Best Junior - Aspen Purdom: Princess Nausicaa



Best Ship - Herb, Southland: Type VII Sub



Best Aircraft - Craig Sargent : 1/48 F15 Eagle



Best Military Vehicle - Lance Whitford: 1/35 Sherman IB



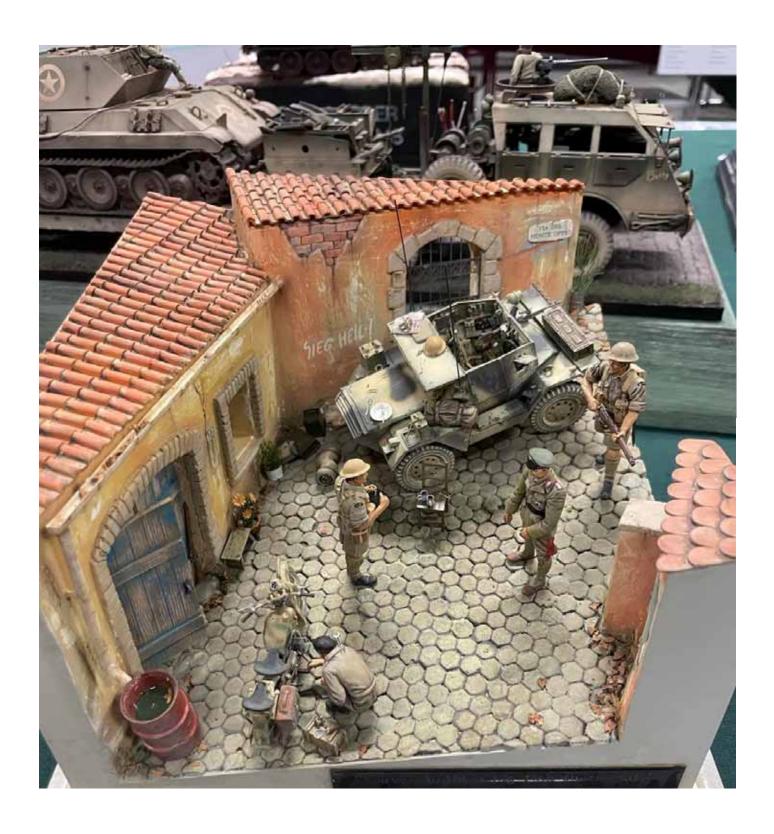
Best Civilian Vehicle - Troy Gutry : VW Beetle



Best Sci Fi & Misc - Greg Blick = 1/9 Moose



Best NZ Subject - Gordon Arthur: Dingo Diorama



Runner Up Best in Show & Best Figure - Zane Purdom: 5th New York Volunteer Infantry



Best in Show & Best Diorama : Zane Purdom: Charge of the Light Brigade



3D RESIN PRINTER (& Accessories) REVIEW. By Brett Peacock



I have been looking at 3D printers for a couple of years now, ever since I saw a demo of one at a Modelex back in 2018. That one was a Filament deposition type, which left fairly large layer marks, so was only marginally useful for modellers unless extensive filling and sanding is to your taste! Then a couple of years ago I saw some resin prints which had only marginally visible layers. So I started seriously investigating getting such a printer. HOWEVER, The liquid resins these use are somehat Malodorous and you can develop an allergy if you get this resin on your skin. Therefore it is **MOST IMPORTANT** that the USER has **Nitrile gloves, a good Breathing Mask and Eye Protection** when printing or washing or curing the resin, and when cleaning up afterwards. (And that IS MESSY!). These are all consumables, and a fresh set of gloves for each print session is advisable. You will also need a **lot of disposable Kitchen Paper towels.** I make this point because we all know about safety precautions in out current hobby, but there is a significant percentage of us (Including myself!) who will skip one or other precautions if time presses.

Once the 3D print has been cleaned and cured it is then safe to handle.

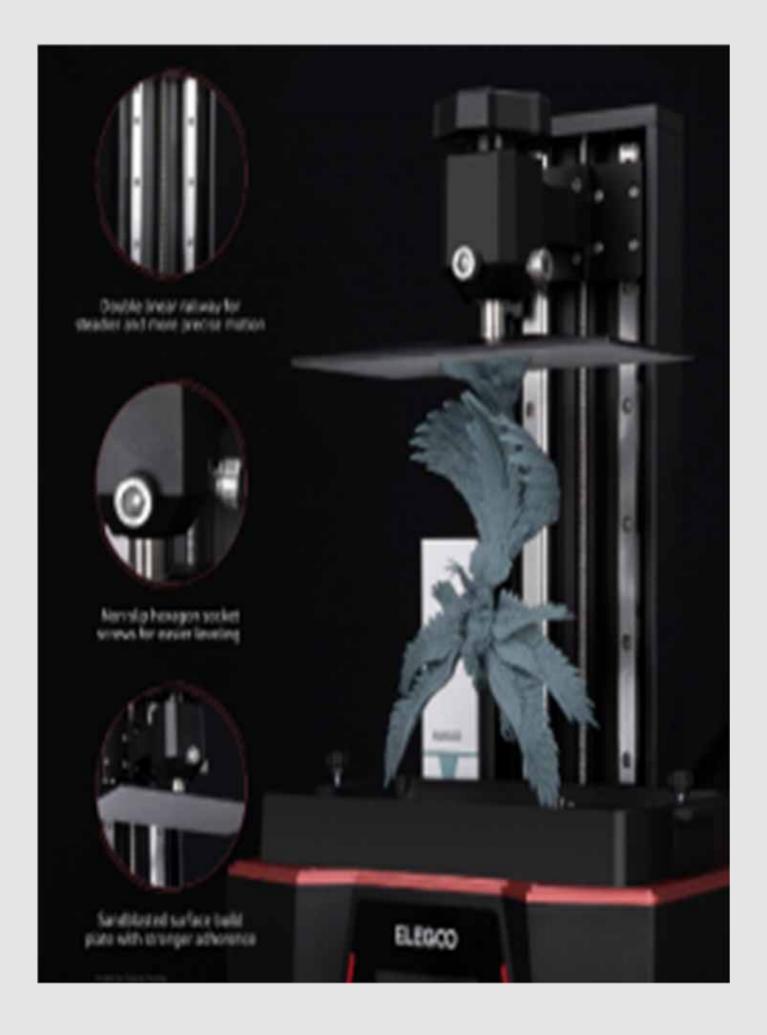
On to the Printer itself: The Elegoo Saturn 2 is a recent addition to their range (Which has a Planetary theme – the earlier Mars Resin Printers were 4K and their build plates less than half the size of the Saturn 2. The first Saturn has a very similar build plate size (Slightly sammler in LxWxH. but was still 4K and had a smaller build volume.

(Saturn (original) Build Vol: 192mm (L) * 120mm(W) * 200mm (H)) VS; Saturn 2: Build Volume: 219 x 123 x 250 mm) The resin Vat used is also larger, with a new type of base sheet



Visually the original Saturn was a simple box with a red or Yellow cover. The Saturn 2 is a bit more stylish with a large control LCD on the front and a USB port on the right rear of the side. There is no other connection, but you can add Wifi with a unit available in the US (I haven't enquired of the NZ Agent if they can get it here as yet.)

The resin printer works by lowering the build plate into the vat containing a pool of resin. An LCD screen below the Vat then displays a Black and White (clear) mask of the layer(s) to be printed, and a UV light then cures the resin visible thru the mask. The side attached to the build plate is then retracted with the plate and the flexible FEP (EFAP) sheet on the bottom of the vat between the LCD and the Vat with bend and release the resin cured to it (It is less "grabby" so the resin springs off... theoretically! And sticks to the build plate. This process is then repeated with a new mask for each layer until the build is done. Hopefully without failing at some point – there are rules and do's and Don't to preparing the model for slicing in software and there is quite a learning curve to every stage of the process.)

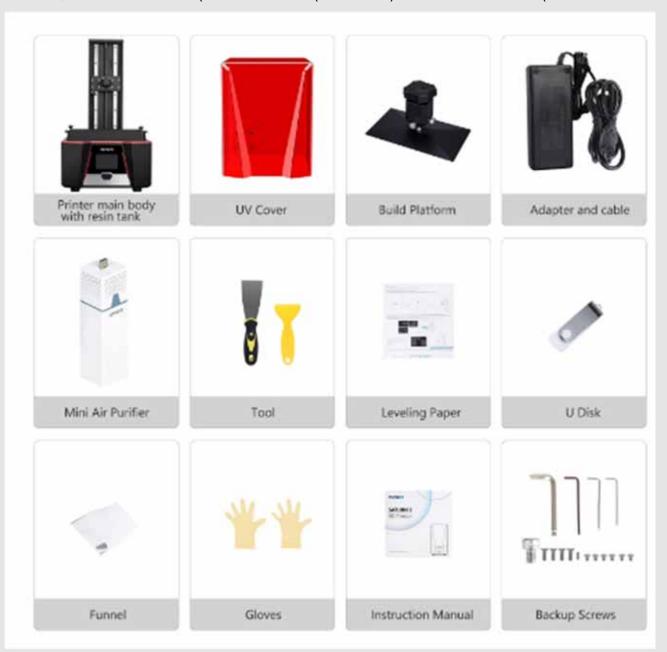


Fortunately there are many "How-To" videos on You Tube to teach you the ins and outs, do's and Don't's and hints and tips. Mr Google is your friend here. Be sure to watch them at least once as you work until you get the information you need. (I recommend anything "Uncle Jessy" or VOG (Veg Oil Guy for some good starting info. But do not be afraid to check out 3D Printing related links, either.)

I have left out several important steps to set up the printer, but they are all covered in Basic "Starting 3D Printing videos. Pay CLOSE attention to these instructions.or you can end up damaging a very expensive 3D Printer. (And, yes, resin printing works upside down as opposed to filament printing!)

Now for the BAD NEWS: Resin printing is EXPENSIVE: The printer alone will set you back about \$1100.00 NZ and each 1 litre bottle of resin (Depending of type) is between \$70.00 to \$120.00 NZ. ON top of that Isopropyl Alcohol for cleaning is about 18-20 per litre and the other consumables should be comparable to that. Curing the cleaned resin is easy and free (If it is a sunny day) Put the Print in sunlight for up the 10 minutes and turn around and over it several time to expose all surfaces to the UV in Sunlight.

As I live in Auckland, (aka Cloud and Rain City)I bought a bundle with my printer which includes a Wash'n'Cure set called an Elegoo Mercury XS – currently the largest such they make. AnyCubic (Another brand of 3D Printmakers) do a larger one but the package deal was better (Elegoo \$350.00 vs Anycubic's \$550.00) in keeping final costs down. Also the Elegoo package were tools, 4 bottles of Resin (2x8K Standard (IPA Wash) and 2x8K Standard (Water washa-



And, at last we get to the results so far. After a couple of failures I finally produced my first successful print: The test file provided by Elegoo of a Rook (Chesspiece) The exterior is a spiral, with spiral columns and stairs inside it. (Pic next Page) This I printed at about 2x size and it took about 3 hours (Because of the height (Z axis)



After that I tried a simpler, but bigger 3d file,the Dragon Symbol from TES V: Skyrim. This time I put 2 examples onto the print area. As it was larger and there were 2 example but flatter, it took much less time (43 Minutes) to print. This is where resin printing wins out: you can place aany number of models on the area, but if they are all identical, then the time to print, say 20 of them, is EXACTLY the same time it would take to print 1. Pics on next page:





The thing to note here is that each layer is 0.05mm tall and is virtually invisible to the human eye, although it does show when magnified about 4 times. This means that it will be useful and useable for modelling. And That is why I bought the printer.

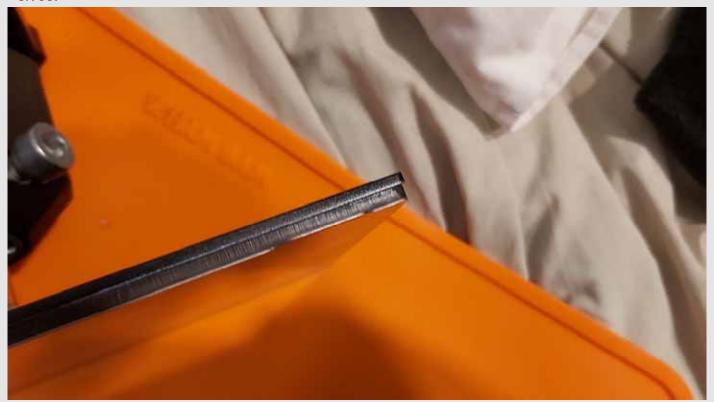
Most of you will know that I have been a computer user and geek for the last 40 odd years so this will be simpler for me to get the hang of that for some others. Is the 3D printing good value? It is expensive, but so is Resin casting and mold making, The time involved will similar too. But the results are, in my opinion, superior, especially on an 8K printer such as this. (I will bring some examples to the next IPMS Meeting, but the printer is, sadly, not very portable at all.)

One coat of your preferred primer and it is ready to paint... just like a cast one!



Quite early on in my research into Resin Printers I found that there was a flaw, so to speak, with the Build plates being used. That is, the flat build surface was generally a cast Aluminum (Aluminium to us English speakers) piece and the Tool used to scrape off the Print and any other resin cured to the build plate was tool steel. Not unnaturally this generally resulted scratches and gouges in the build plate, as cast Aluminium is very much softer that tool steel.

The solution is to "Replace "that solid Aluminium flat build plate surface with flexible steel. But How?. In filament printing they can imply clamp a steel plate over the build plate or use a thin magnetc sheet and some adhesive... but in Resin printing that was not an option – the space tolerances are too precise for clamps and Resin and the IPA cleanup will attack most adhesives.



Which is where Wham Bam systems rides to the rescue! After extensive consultation with 3M they have found a type of adhesive which will, once thoroughly cured, resist the IPA and the Resin. But this must be applied in a specific fashion and allowed to cure for AT LEAST 72 hours. The thin pad this is applied to has a strongly magnetic reverse side and the flexible steel plate attaches to that side.



he scuffed Steel Flex Plate – and yes, clean it up also after sanding!!

The order of Application is:

1/ Use the provided 200 and 400 grit sandpaper to scour the Aluminium Build plate surface to provide a "Tooth" on that flat surface over and above any casting texture.

2/ Use IPA and Paper towels to clean any reside and oxidation off said surface. Do this several times until the paper towels have no residue on them at all.

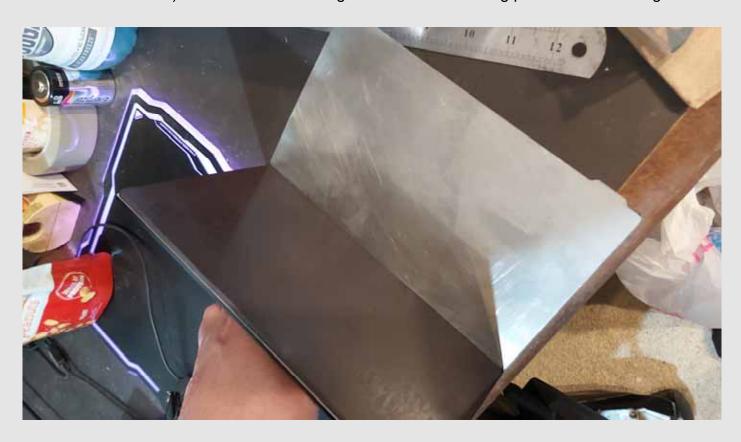
3/ FOLLOW the instructions (Also a Video on Wham Bam's site) to apply the pad to the Build Plate, ensuring perfect alignment. Ensure the Steel plate has been removed from the pad FIRST. (Each Flex sysyem os made for a specific Resin Printer Model and brand – Mine is for the Saturn 2)

4/ Once 3 is done and you are satisfied it is aligned, place the Build Plate on a FLAT surfacem pad side down and leave it alone for 3 days (72Hours.) Do NOT touch it.

5/ While you wait you can sand and clean ONE SIDE of the STEEL flex plate. This will be your main build surface, with the other side as a reserve.

6/ Once the Adhesive has cured you should take the build Plate assembly and hold it so that the flat surface is VERTICAL to the surface you are placing it on. With the other hand you bring the Steel Flexplate in along the Flat surace at nearly 90 degrees to the buildplate and align it with the pad. Now begin to raise it in an arc, keeping the bottom edge on the pad. BE CARE-FUL because when the magnetism "grabs" it is STRONG. Check alignment of the Flex plate with the whole Build Plate and you are done.

7/ To remove, most Flex Plates have a small tab on one or two edges for removal from the pad via leverage. You can now print and to remove the print from the plate, lever the steel plate off the pad and then flex it gently in both directions and the resin print should literally pop off, not needing the scraper to be used 95% of the time. (And if you do need it, it will do any damage to the cast Aluminium.) Do this over something soft to catch the falling prints without damage.



Caveat: Resin Printers usually has as sensor to detect the "Zero Point of the Z-axis travel, and this is precisely matched to the standard Build plate. The flex sysem adds a thin layer to that, which "invalidates the Zero Point. There are ways around this, using a spacer on the tang which acts to trip the sensor so it triggers a liitle early, the precise distance of the thickness of the plate, pad and steel early so that becomes the new standared Zero point. These spacers are often found on Wham Bam's site or even the manufacturers' sites and also on Thingiverse, an online, free source of 3D files.

I had 4 of them printed for My Saturn 2, so have sparer should I need them. (The Saturn 2 needs the 3.6mm type and you will need the small He wrench to install it, along with a 3mmx 100 scre (I found these in stock at Bunnings... it took some doing, but I bought 2 bags for about \$4.00 each. Again, spares, should I need them.



Above is my Mega Slap Mat ready for use by my Wash'n'Cure set.

The "Pen" is a Small UV torch powered by the Cure Machine via cable and switch

As I stated in my Saturn 2 Review, Resin printing is Messy and cleanup is worse, and Resin can attack furniture Varnish/paint if left too long. Which brings me to The Wham Bam Slap Mats. The Slap comes in 2 sizes, Regular (Standard and Mega (Large) and I bought one of each. Sizes available:

- Original Slap Mat 240 mm x 500 mm (9.5 in x 19.7 in)
- Mega Slap Mat 345 mm x 700 mm (13.6 in x 25.5 in)

This is the Standard Slap Mat... With a can of Fly Spray for scale



They are made from Silicon, which is immune to the resin. As far as I can tell, the only colour they come in is VERY BRIGHT Orange and they are somewhat weighty for the rather thin base material. Each had a raised edge so resin has a more difficult job to overflow it.

If you have resin allover your slap mat simply take it outside into the sunlight and wait – or you can expose it to UV light inside manually. Flexing the mat will detach that junk resin (now solid) and you can dispose of it in the Rubbish, wrapped in paper hopefully.

Both of these accessories are worth getting, even after you account for the cost in US \$ and Post – (They do come direct from China but are ordered in Wham Bam's LA offices.)

Disclaimer: I was given a discount on the purchases on condition that I publish a written review here in NZ in our IPMS Newsletter. Thankfully I do not have anything bad to say – the flex plates are "Fiddly" and require exact installation, but that is very true of many, many things modelling-related, so.... That is hardly a major negative, is it? The Sap Mats are a no-brainer – you NEED these if you are resin printing. They take a lot of the cleanup and make it simpler and quicker. Not only that they can also be used when soldering!!

German Night Fighter Discovery News

Lynn Ritger may have some news about a discovery in documentation about standard German Nightfighter Camouflages....

Basically, some/many Luftwaffe Nightfighters were not RLM76, but actually White over RLM75 uppers.

One example was Werner Streib's famous He 219 protoype which crashed on landing after downing 5 Lancasters in one mission.

Follow the link to Hyper scale for the documentation and more images....

https://www.tapatalk.com/groups/hyperscale/a-possibly-brand-new-discovery-about-nachtjaeger-p-t533639.html?t=533639?deduce=login

Chopped & Channeled Airfix 1/72 Gloster Javelin FAW.9 F/R

By Mark Davies



Background & Approach

Back in 2015 I began my Javelin build as a quick and easy project for a 'Fast Jets Group' Build (GB) on HyperScale's "Airfix, Frog and Matchbox - Classic British Kits" forum. I realise that classing the Gloster Javelin as fast jet is a bit of an oxymoron, and that the Airfix 1/72 Javelin FAW.9 was the result of changes to Heller's Javelin T.3 moulds, but it still qualified for the GB.

I used to be fairly prolific modelling article writer, with close to 900 reviews and build articles appearing on HyperScale, IPMS Stockholm's newsletter, ARC, Modelling Madness, Military Modelcraft International, as well as some others. Many of my reviews were repeated in IPMS Auckland's newsletter until I gave up writing when my Parkinson's Disease (PD) made typing increasingly onerous.

Approach

A recent change in my PD medications has extended my "on-time" when I can use a keyboard & mouse effectively, and Lance asked me if could again contribute to the newsletter. I thought about how I could approach preparing material with a reduced need for me to type. My suggestion to Lance was that I draw on the material I have posted in hundreds of my online build logs, as these have numerous notes and captioned photos in the various message threads. I think I can copy and paste these to reduce my need to type and, with a bit of 'word-smithing', I should be able to cobble together an article or two. Of course, the way one posts quickly online is different in style to a well thought out article, so any patched-together effort may be a bit of a dog's breakfast in nature. Finally, many of the captions added to photos were

hastily written and are probably replete with typos which cannot be corrected, as I no longer have the originals. Anyway, those are my excuses for the following build article...

The Kit

The 1/72 scale Airfix Gloster Javelin FAW.9 uses Heller's 1981 Javelin T.3 tooling for the vast majority of the kit. Airfix re-boxed and issued Heller's T.3 in 1993 and in 1994 made some changes to the tool to produce the FAW.9 F/R variant. The kit is typical of Heller's heyday in the 1980s; crisply moulded, good fit, acceptable raised surface detail, basic cockpit detail, and accurate in outline – At least it was in the case of the Javelin T.3...

The last Javelin variant, the FAW.9 and FAW.9 F/R, with the 'F' denoting 44 of 118 aircraft equipped for in-flight refueling, and the 'R' for range as a result of being equipped to carry underwing fuel tanks on the FAW.9's revised wing. From memory, the changes Airfix made to the kit were: a new rear fuselage with different engine nozzles, I think different wing tips, an in-flight refueling probe, and Firestreak missiles.

The Elephant in the Room

The FAAW.9 had a wider rear fuselage and 'beefier' variable engine nozzles compared to the T.3s 'pen-nib' rear fuselage fairing and enclosed nozzles. → Regrettably, Airfix made a miserable job of this version because they could only



produce alternate and new parts, not change the mould. This meant they retained the T.3's fuselage taper resulting in an undersized rear fuselage fairing that simply replaced the T.3's pen-nib part with a FAW.9 styled piece to the



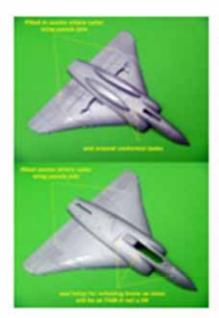
same dimension, and ergo with grossly undersized engine nozzles. This is clearly illustrated in the image of the kit tail laid over 1/72 scale plans ← contained in Warpaint Series No.17 - Gloster Javelin.

Two problems were readily apparent – I needed to make new rear fuselage, and somehow make the relatively elaborate engine nozzles that are such a feature of the FAW.9. And so, it was time for some plastic surgery to remove the rear fuselage from a line adjacent to the rear of the speed brakes, as it is from this point the FAW.9 fuselage differed from that of the T.3. The cut was made a little more challenging because I needed to leave the base of the vertical fin intact. At least that's what I'd like to say happened, but the truth is a little bit different...

Impulsiveness v Research

I initially thought all was sweet with a straightforward honest kit and had started to build it OOB - Remember how I said at the very beginning this was to be a quick and easy project!) It was only after I'd added the conformal fuel tanks and ballast that I became aware of the undersized tail fairing and engine nozzles as evidenced by these next images of routine parts preparation and initial assembly.





I also chose at this time to build it as a FAW.9 without the refuelling probe, and attended to various and mundane parts preparation. →

← When I was about to join the top and bottom haboes I became aware of how undernourished the Airfix kit's rear end was, and the fix that I needed to do, if an anywhere half-decent model was to result.

As it turned out, the fuselage change was fairly easy, although a little time consuming. I could have made life simpler had I not wanted to give some depth to the afterburners and

just fitted some nozzles to a blanked of rear fuselage.



Instead, I needed to make some hoop-shaped → supports within the new rear fuselage to support the afterburner jet pipes. This is what I ended up with after fabricating a supporting skeleton from 0.060" styrene sheet along with two turbine faces inside some short pipes (the have may come from an Esci Tu-22).





← The fabricated assembly fitted quite nicely into the cutout I had made in the rear fuselage.

I still needed to run the afterburner jet pipes between the turbine face and the two exhaust nozzles I had yet to make.



← I found a stand-off from an Esci Tu-22 would provide for these quite nicely, and the result was quite pleasing, plus the tubes provided plenty of rigidity to the rather flimsy skeleton. →

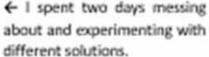


I was confident I could skin the rear fuselage skeleton without any problems, so I left that job for later in the build, as I had to confront a 'make-or-break' issue first.

The Exhaust Nozzles



The issue was: Could I fabricate acceptable exhaust nozzles, or was it a bin-job? →





I think that the real nozzles had 30 holes around their circumference, and I felt that these were the biggest challenge to create. The next images show my initial concept, and just of my experiments and materials I used.

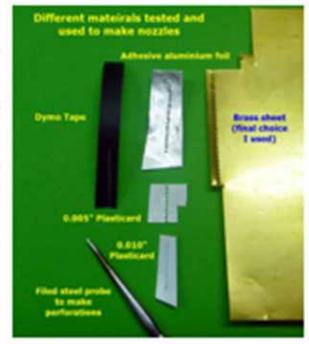


As can be seen, I experimented with a variety of materials trying to make the holes.

Among the compromises I made was to use of a sewing pounce wheel to mark each nozzle which resulted in 32 circumferential holes rather than the correct 30. I settled on brass sheet which I punched holes in using a metal probe I filed to a suitable cross-section. This was cut into a strip and curved to from a ring.

These were the components I ended up using to make the engine nozzles. ↓





- ← Creating the stepped recess for the brass ring was a very time-consuming process of careful filing and scraping to get an even recess around the tube's circumference.
- ← Likewise, fabricating the plastic ring was a tedious exercise as it had to be cut and filed from 0.040" styrene sheet. And if it worked, I would need to make a second set!

Here are the nozzle components assembled before painting. →

More representation than replica, due to a lack of skill, I had to console myself that the solution I had settled on would be no worse than the terribly undersized kit items.

At this point I was dreading how rough they would when look painted, but they looked OK-ish, so I had to move on rather than chuck in the towel.





← These images show the skinning of the skeleton with 0.020"

sheet and adding the exhaust nozzles. As can be seen I ended up cutting the base of the fin off for a better fit to the new rear fuselage. I felt that the result was good enough to box on. 7



Drop Tanks Interlude

By this stage I had decided I would complete my Javelin as an FAW.9 F/R, so I would need a pair of drop tanks, which was something the kit did not provide. The best solution I could come up with was to radically modify some old Hasegawa F-14 Tomcat tanks.



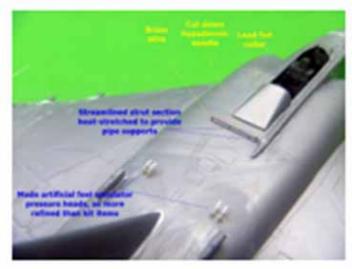
After a fair amount of effort, I abandoned these drop-tanks as I had a much better offer from a Scottish modeller who kindly mailed me a pair of Revell Hunter drop-tanks.



Airframe Bits & Pieces

Whilst waiting for Hunter drop-tanks I carried on and did a bit more general airframe work. 4





← I discovered some refueling probe details I needed to scratch-build, fitted a pair Master pitots I had been sent to review, and attended to various other refinements and small enhancements.

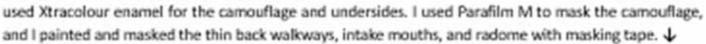
The kit's wheels were lacking any tread on their tyres, so I → made some from thin red packaging tape normally used to seal the twisted necks of polythene bags. Once painted, I felt that the tyres looked much better. ↓



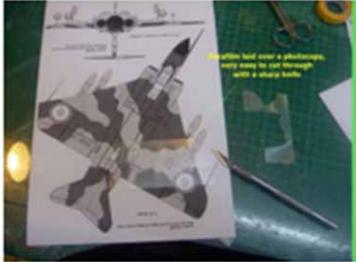
I also came up with a simplified ->
representation of the canopy rails that
were missing from the kit item.

Paint & Decals

Finally, it was time for primer and paint. I







The model finally stated to look the part when the camouflage was on. 4



I added Payla resin ejection seats and the cockpit instruments and side console details were provided by the kit's decal sheet. I also seem to recall making a radar scope visor from scrap plastic. The result was quite adequate for what was only intended as a cabinet display model.

The Hunter drop-tanks were fitted, and I can't recall if the Firestreak missiles I fitted were kit or aftermarket items, or they could possibly have come from a new-tool Airfix Lightning F.2A.

The kit provided the stencil decals whilst the national insignia and unit markings were by Model Alliance Group. The model was finished with an acrylic satin clear coat. The model was topped off with a PE windscreen wiper.

Having re-read my build log notes I see that, despite acknowledging the error, I never got around to painting the refueling probe entirely grey after having mistakenly painted some if green to conform with the camouflage pattern as this is what the colours and markings guide, I used, showed.

Seven years on and I am still waiting for Airfix to announce a new 1/72 Gloster Javelin down-scaled from their rather nice 1/48 scale kit. Here is a selection of images of my finished model.













Check out our Website gallery for photos taken of models at our monthly meetings

http://ipmsauckland.hobbyvista.com



And as usual -check out the IPMS Auckland website as we're trying to keep the content a bit more dynamic. We won't be regurgitating content found on other websites but will provide links to sites we think are of interest to members.

