In This Issue

When is Enough, Enough? A Modeler's Delima

A good friend of mine, also a modeler, is about 120 hours into his current project. He tells me that he still needs to paint and finish his build, but he is satisfied that he is past the assembly stage. He has the final paint colors almost set, so I suspect he will spend another 15-20 hours on the project before he considers it finished and ready to show. My friend is an excellent modeler, and wins when he enters contests, even nationally. But he cannot say he arrives, and excels, at this level easily. There is no doubt that he is walking the modeling walk.

I think about my friend's historical arc with modeling. In the five or six years that I have known him I have seen his skillset zoom past mine with nary a glance sideways – it has been humbling! He has moved from modifying outdated Italeri kits to accurizing some of the most challenging kits on the market, from the likes of AFV Club and Bronco up to 3D and god-awful block-resin kits. Each build grows larger and more complex than the last, continually raising the bar. He accomplishes, with considerable effort, what many aspire to achieve in our hobby.

But not all of us.

Each of us approaches this hobby from our own perspective as we work toward our individual goals. One person's sense of achievement may depart radically from another's, so much so that one person's modeling niche might seem unrecognizable to someone else. But I think we all start and (hopefully!) ***end*** each build so that we may eventually start another project.

In my own modeling world, the driving force that propels me though a project is the anticipation of the next project. I cannot say for sure that I become bored with my current builds – I don't think that is the case. I just want (and need) to walk over that next hill, to open that new restaurant menu, so to speak. There is something there that I haven't experienced before. That next model calls to me. Modifying a model, assuming it is of decent quality, never even registers on my radar – Geez – who has that kind of time! Mama - there's this OTHER kit that is waiting for me. And not so patiently!

Looking down the road, my only limitation is physical space – where am I to store everything that I build? But even that won't hold up my desire to move on to my next model.

My friend, I surmise, is heading towards an existential crisis: how high a bar will he set so that even he cannot surpass it? I say this with a wink and a nod – we should all have such problems.

In the end I can say we are both getting older - but we aren't dead yet. I will enjoy my relationship with my friend, both with modeling and otherwise, and I look forward to seeing where this will all go. Perhaps we will change our approach to modeling… especially when my friend takes a sober inventory of all the models in his stash still to build!

See you Saturday, and Model On!

Eric

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Our newsletter is prepared with the goal of providing information that educates, informs, and helps expand the skills of our membership about our hobby: plastic scale modeling (including resin, vacu-form, and 3-D printed scale models). All content related to the hobby are welcome. For more detail, please see the complete Editorial Policy here.

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The Mitsubishi Texan

By Morgan Girling

(*Editor's Note: In the spirit of presenting original content, we present an all-new, meticulously researched finding by our esteemed member Morgan Girling. Your club dues at work!)*

In 2023, Watanabe and Mika Tekkosho discovered a lacquered box under the floor of a farmhouse they were restoring on the island of Shikoku. Inside they found what appeared to be an old movie script, and a single reel of film, both in poor condition. They donated these to National Film Archive of Japan (NFAJ), who after almost two years of restoration and research, announced they had restored parts of a heretofore-unknown WWII drama by director Kōzaburō Yoshimura. The movie *Hayabusa!* (Falcon) reprised Ken Uehara and Michiko Kuwano from the 1940 *Nishizumi senshachō den* (The Story of Tank Commander Nishizumi) to star in a drama of an alienated Japanese-American aviator who leaves the USAAC to volunteer to fly for Japan in the Sino-Japanese war.

The film necessarily takes some artistic liberties with the facts. Footage from the surviving reel shows that the Japanese Navy modified a pair of Mitsubishi A6M3 Model 32 Zeros to stand in as T-6's for filming of the pilot's USAAC training in Texas. Lacking the open, dry, flat expanses of Texas, the script

relocated the flight training to the Sacramento Army Air Field so that available Japanese mountains and rice fields would fit the story.

"Hayabusa!" was adapted from the true-life story of Torimoto (Tori) Morishige. While studying at the City College of San Francisco, Tori felt excluded by the other students due to his Asian background. A chance encounter in a diner led to a friendship with Yoshio Muto. Mr. Moto happened to be a Kempeitai (Japanese military intelligence) agent in San Francisco and was quick to exploit Tori's alienation, guiding him to complete his studies and then join the Army Air Corps as a pilot trainee.

Tory completed basic and advanced flight training at Randolph Field outside San Antonio, Texas.There, his sense of alienation deepened, being the only Japanese-American in his class. Returning to San Francisco on his short graduation leave, he was met by Mr. Moto who convinced Tori to take his American fighter training to Japan and help train Japanese aviators. Tori's trail ends with a final FGI note of someone matching his description seen boarding the Tokai Maru before it departed for Yokohama on November 24th, 1941.

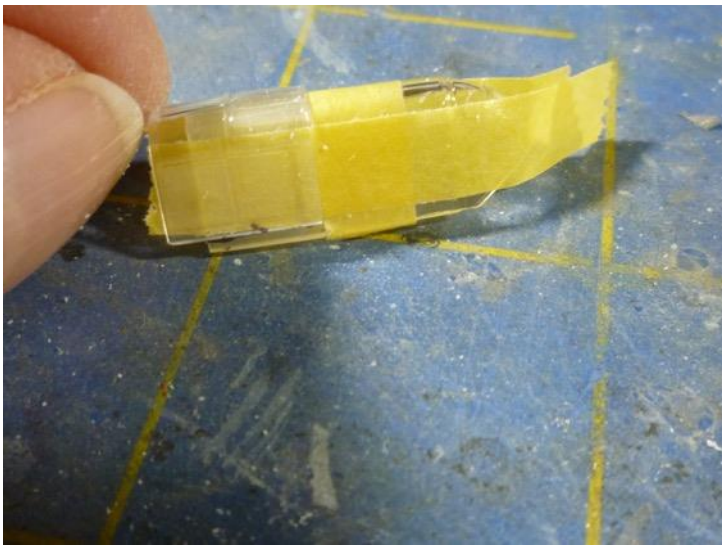
Many Japanese records, particularly those of the Kempeitai, didn't survive the war, but historians at the NFAJ were able to determine that 3 weeks later, the Tokai Maru docked in Yokohama, and a Japanese-American passed through customs. Other records show that a Japanese-American was subsequently noted at Tateyama Air Base over a period of several months. One suspects that his efforts at training American fighter tactics were unsuccessful, possibly because the other pilots viewed him as too American to be Japanese.

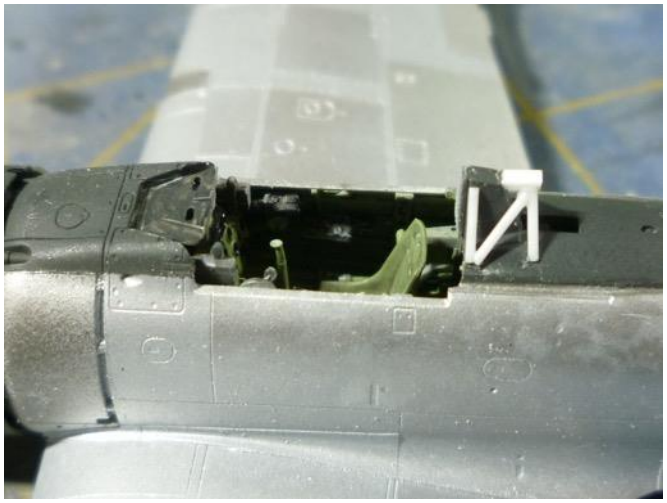
The Build

I scoured the shelves of Skyway Model Shop to find an A6M3 Zero as a base kit, and not finding one, asked Emil if I'd overlooked one hiding in plain sight. I had, for after a little digging we were rewarded with a Tamiya A6M3 Model 32 (Allied name "Hamp"). Being the clipped wing variant was convenient as it meant I could skip clipping the wingtips at the fold line.

Many of you know my tastes tend towards the esoteric subjects, resulting in a too many limited-run, old, or vacuform kits. Most of you would shudder at the Mach 2, AModel and Anigrand in my stash. A build usually takes months and is best described as a "best 2 falls out of 3" smackdown contest with the kit in one corner and myself in the other. This was to be different because of a single word: Tamiya!

Need I say more? I pre-painted the interior bits, engine and misc. greeblies and took it with me to build at the February model exhibition at the Museum of Flight. Before the first day was out, I'd clipped, trimmed and glued together most of a Zero from this gem of a kit. I'd actually run out of model to build and was forced to start on another kit! All the parts fit perfectly, there was no flash, no sink holes, no "how am I going to rescue this?" moments. The instructions were clear and precise, with no arrows pointing vaguely at a turret. Seam cleanup was a quick, barely needed pass with a flexi-file on the fuselage, and I never once had to reach for putty! I'd forgotten that building a kit could actually be easy. It was a giddy moment, dear reader.





The next weekend saw all the painting completed, the gear and engine mounted. To make an AT-6 stand-in, I stole the aft canopy from an Academy T-6 and filed the fixed part down flush with the aft "sliding" part. This gave enough clearance for the A6M3 canopy to slide back over it. I dipped all the transparencies in Future and let them dry for a couple of days before adding decal strip canopy framing (aluminum sprayed over NATO black on clear decal film, then cut into narrow strips). Figuring that the IJN would consent to only minimal modifications to a service

aircraft, I limited modifications to replacing the aft canopy and adding a dummy air scoop on the port fuselage. The scoop was another donor part from the Academy kit which needed a wee bit o'surgery on it to clear the cowl flaps. While "wrong" it looks entirely plausible, and a wartime public wouldn't have been any wiser.

Everything else was paint. Aluminum paint would be readily available at any air base and could be tinted with differing amounts of black to give some panel variation for the camera. I painted the cowl in IJN green as an O.D. standin, with a black antiglare stripe running back to the windscreen. If I were to do it again, I'd paint the cowl with a 50-50 mix of IJN green and interior green-grey to give better contrast to the antiglare stripe. (In my defense, I'll claim it would look film lighter due to the yellow filter used with B+W film.

The Academy kit's final donation was the tail number and spurious training squadron ID, while the star-in-circle national markings were donated by a P-51A destined to be an Me.109F from another movie. As for the Academy T-6's fate, I have an aft canopy from a Zero handy...

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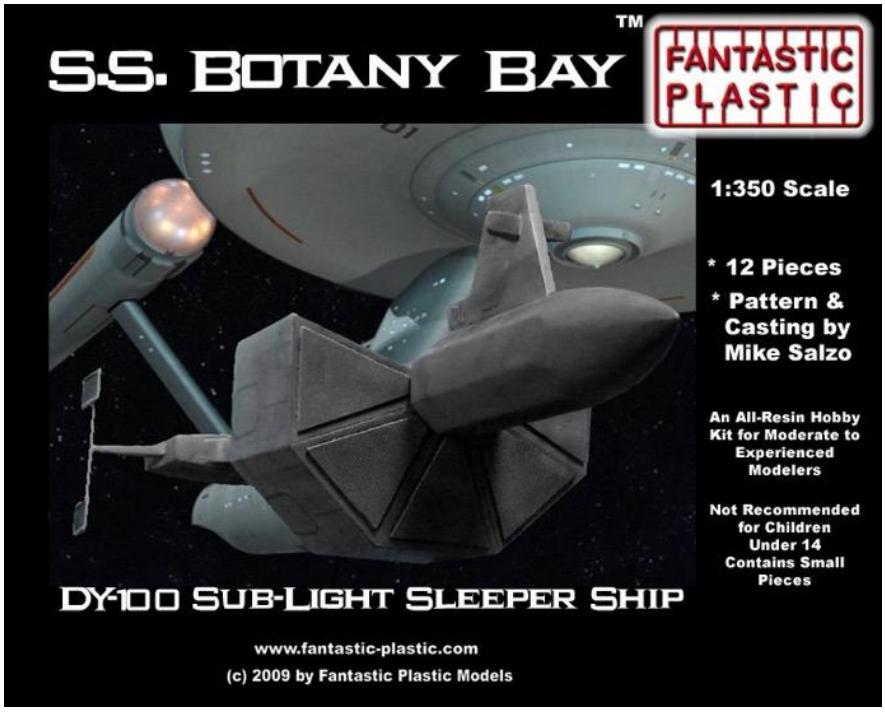
Strange New Worlds: The Fantastic Plastic *S.S. Botany Bay*



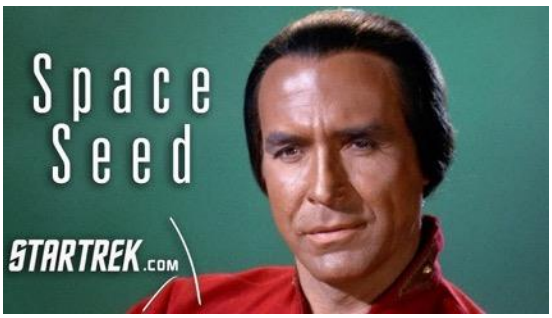
By Tim Nelson

INTRODUCTION

I've considered myself a "Trekkie" of a sort since childhood. I was raised on The Original Series (TOS), enjoyed most of the later movies, and also became a fan of The Next Generation in the 1990s. My enthusiasm never reached the level of cosplay at a Comicon, but I'm still a fan.

One of the intriguing stories from TOS was "Space Seed" (S1/E22), in which the USS *Enterprise* encounters a derelict vessel which turns out to be a transport for exiled malcontents from 1990s Earth. These n'er-do-wells had been in suspended animation for over 200+ years, and turn out to be ambitious, "genetically optimized" humans cast out following the terrible "Eugenics Wars" of the late 20th Century. The *Enterprise* crew re-animates the survivors and mayhem predictably ensues. The leader of the bunch is Khan Noonien Singh, played by a young (and ripped) Ricardo Montalban. This is one of Khan's best quotes, to Capt. Kirk:

"Captain, although your abilities intrigue me, you are quite honestly inferior. Mentally, physically. In fact, I am surprised how little improvement there has been in human evolution. Oh, there has been technical advancement, but, how little man himself has changed…Yes, it appears we will do well in your century, Captain."



After the dust settles, the miscreants are once again exiled, this time to their own planet (Ceti Alpha V). What

could go wrong? Lots, as it turned out - trouble would brew again years later in *Star Trek II: The Wrath of Khan.*

The derelict ship was the S.S. *Botany Bay*, a DY-100 Class "sleeper ship" named in honor of Australian penal colony parallels from days of yore. It was an interesting looking ship, evoking a cool submarine vibe for no apparent reason. Since its outcast crew would be traveling VERY far away in a vessel incapable of warp speeds, they were required to be placed in suspended animation, hence the "sleeper ship" label. As an automated spacecraft with no conscious passengers or crew, there would have been a conspicuous absence of entertainment, cuisine, beverages, or casinos on board…

In addition to my longtime fascination with this ship, I viewed this project as a canvas to do more weathering than most of my usual subjects call for. The original 1967 depiction of the ship, which used a real model in production, was relatively clean – as a ship in the frigid cold and absolute darkness of interstellar space likely would be. When Paramount remastered all TOS episodes in 2009 with updated special effects, the new CGI version of the *Botany Bay* was much more "beat up," and it was this more interesting version that I chose to emulate.

Photo 1: 1967 Version

Photo 2: 2009 Version

THE KIT

Fantastic Plastic, a limited run purveyor of resin space and science fiction kits owned by Allen Ury, introduced a kit of the *Botany Bay* in 2009. It consists of 6 significant solid resin parts, plus some shapes intended to represent the odd "fly swatter" structures, presumably thermal radiators, seen on the stern. When this kit went on a flash sale in mid-2024, I pounced on it like Khan seizing power.

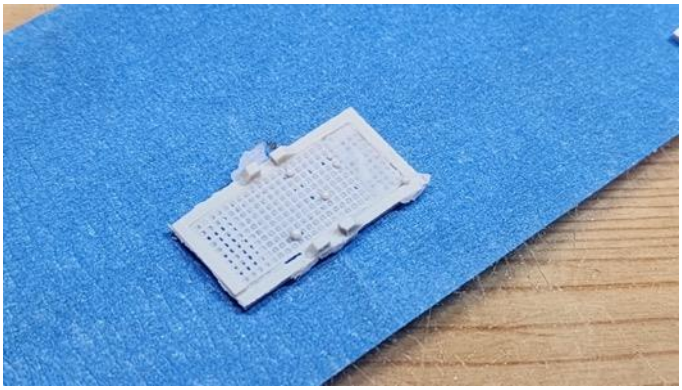
THE BUILD

I really wanted this to be a "quick side project," not a long slog through a thick quagmire, so my aim was to clean up the most obvious issues and not get buried in detailing, accurizing, and other potential minutiae.

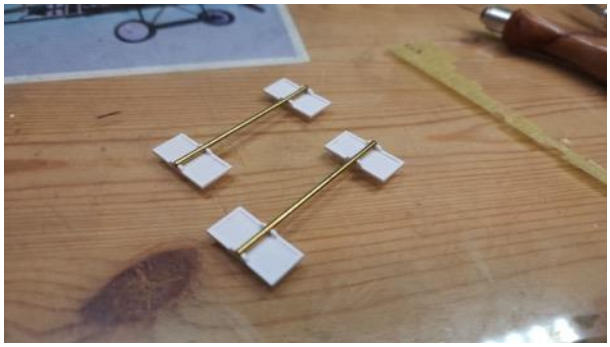
The kit is classic limited run resin fare: cool subject matter, decent detail, many pour stubs to remove, and a multitude of surface imperfections, bubble holes, and pits. This kind of cleanup is never particularly fun, but nothing that can't be done with some motivation and grit. I always start a resin project with a thorough cleaning in a warm bath of Dawn, followed by a scrub down with denatured alcohol. (I repeat the alcohol scrub just prior to priming as well.)

Major assembly consisted of joining fore and aft hull sections, affixing the "sleeper" section in the midship area, attaching the

“conning tower,” and then setting the struts for the radiator structures to come later. As a resin subject impervious to “hot” fillers, I broke out my old tube – still a lifetime supply – of 3M Acryl Blue automotive putty. The fit of the “sleeper” section to the hull was not great – the hexagonal cross section in that area did not align for mating, so I did some creative filling with epoxy and putty. Close enough was good enough for this build.



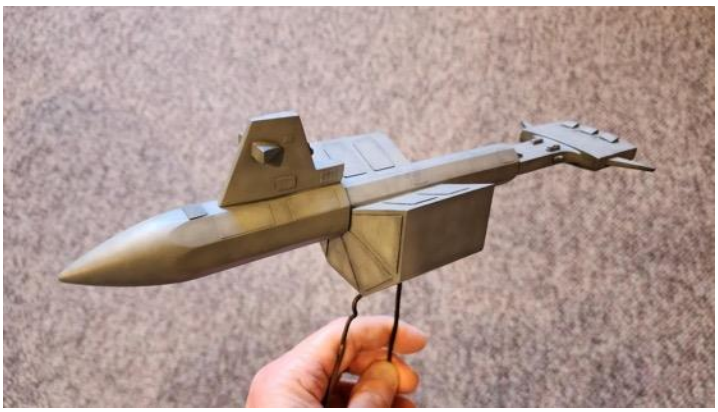
The kit radiators were unusable so I decided to scratchbuild some replacements from strip and sheet styrene, and 1/16” brass rod. There was never a good, clear closeup of these assemblies in either the 1967 or 2009 versions of the “Space Seed” episode, so I was freed to use a little imagination to come up with something convincingly “radiator-ish.” More on that below…



PAINT & FINISH

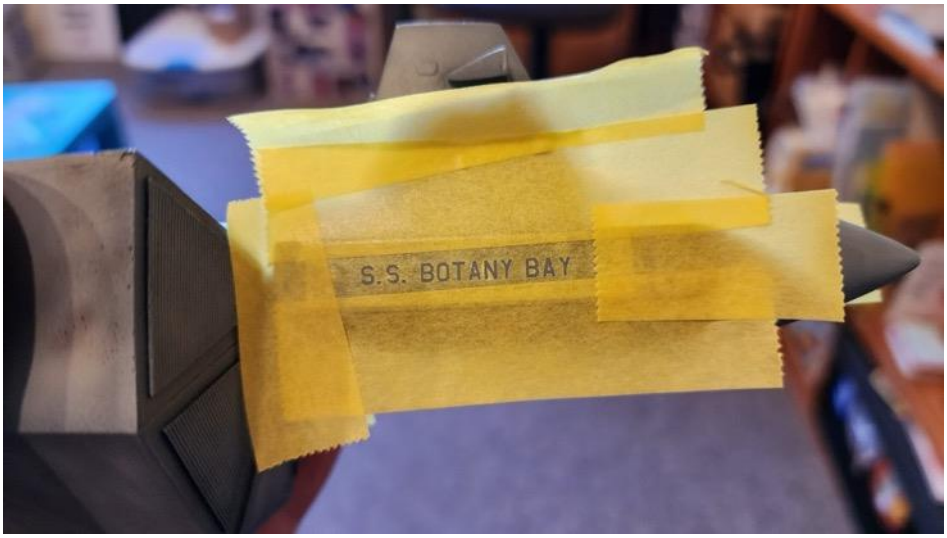
After cleanup and basic assembly, I primed the model with rattle can Krylon ColorMaxx Paint + Primer in Satin Black. Another round of putty and sanding was needed, then I spot treated the affected areas with Mission Models MMS-001 Black Primer, thinned about 50% with Createx 4011 Reducer plus a few drops of Tamiya Acrylic Retarder (this excellent acrylic primer was guaranteed not to interact with the previous Krylon surface.)

I began the weathering by applying a pre-shade of mottling all over the model with Tamiya XF-55 Deck Tan, significantly thinned (about 4 to 1) with Vallejo Thinner, again with a few drops of Tamiya Acrylic Retarder. I used a Harder & Steenbeck Infinity airbrush with a 0.15 mm tip installed for this phase, set up for low volume but using a pressure of about 12 psi. This was followed by a base coat of AK Real Colors RC289 RAF Medium Sea Grey (chosen by "Kentucky Windage" comparison of screen shots with my vast collection of many grays/greys). The key when applying a base coat over preshading is THIN paint, applied in many layers. In this case, the AK grey was thinned about 4 to 1 with AK High Compatibility Thinner, once more with a few drops of retarder. My usual technique here is to apply a layer, look the model over, and decide whether another layer is needed. When I think *just 1 more* layer is appropriate, that's my usual sign to stop.

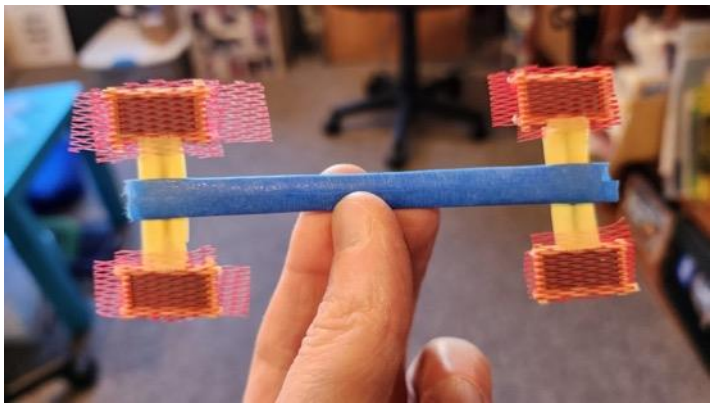


Depending on the look you're after, some postshading with some lighter shades of the base coat can be effective. In this case, seeking to break up the monochromatic grey, I postshaded with some more of the Tamiya Deck Tan, even more thinned than before. Again, the watchwords are THIN and LAYERS – postshading is easily overdone.

To apply the ship's name to the sides, I created custom masks using my Silhouette Cameo. This was not apparent in the 1967 version but can be made out in the 2009 CGI rendering and I liked the look of it. I painted it in mottled fashion with Mission Models MMP-105 Worn Grey, thinned about 50/50 with a 70/30 mix of Createx thinner and Mission Clear Primer, plus the usual retarder.



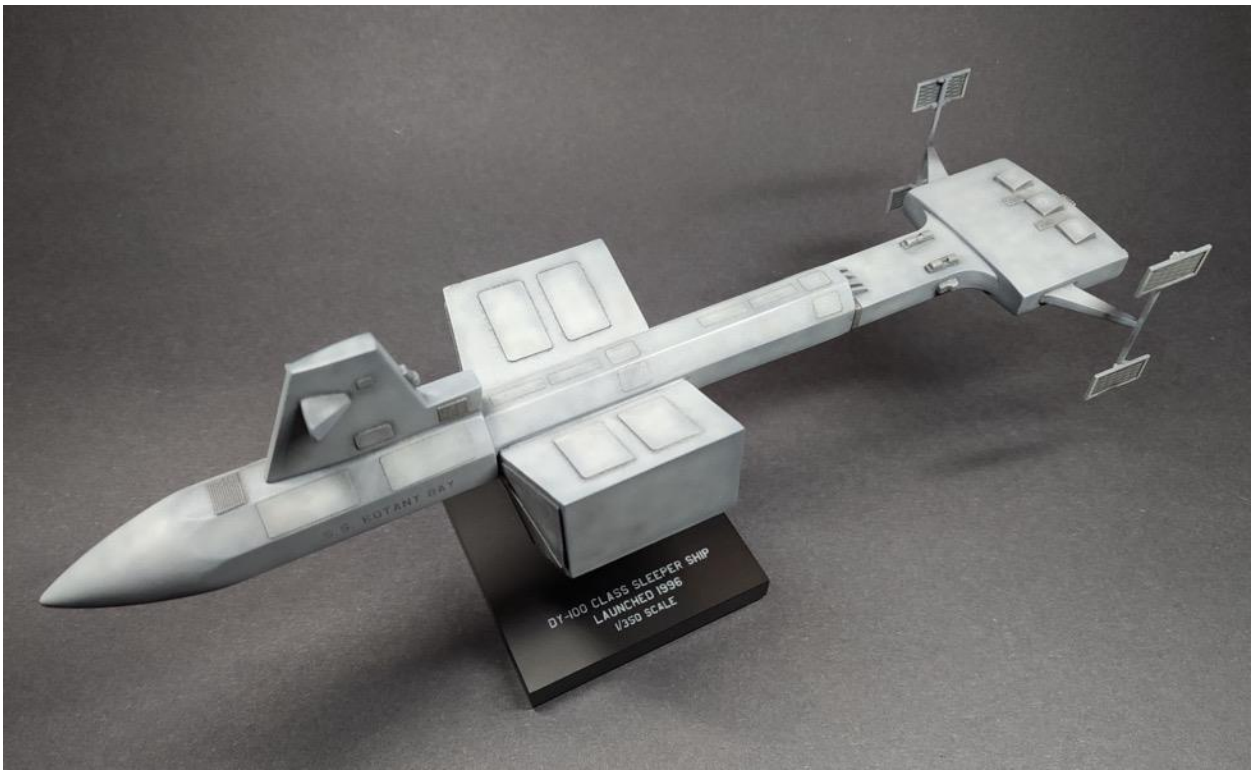
Returning to the radiators, I opted to depict some kind of a grid surface using the same overall grey as the rest of the ship, then spraying Mission Worn Gray over a carefully applied mesh repurposed from a small cherry tomato bag I saved years ago. I was pretty pleased with the results, and it was far easier than any sort of textured surface that I might have fabricated. Attaching these assemblies at the end was a challenge, due to very small mating surfaces and 3-dimensional alignment challenges. I started with 5 min epoxy and was happy, until knocking both off – at that point I resorted to CA glue and hope that future avoidance of contact will preclude ever having to reattach again.



Very late during all of this activity, I discovered numerous pits on the starboard side of the sleeper section, which I'd somehow missed earlier. In the spirit of this project, rather than try to make them all disappear, I enhanced them with airbrushed discoloration, to perhaps suggest a transit through some interstellar nebula or meteor shower. Let's go with that.

Having achieved most of the basic look I wanted, I clear coated the model with Alclad Aqua Gloss. After allowing for curing, I treated all the nooks and crannies to a wash of (in this case highly appropriate) Abteilung "Starship Filth" oil paint thinned about 10 to 1 with Mona Lisa odorless thinner.

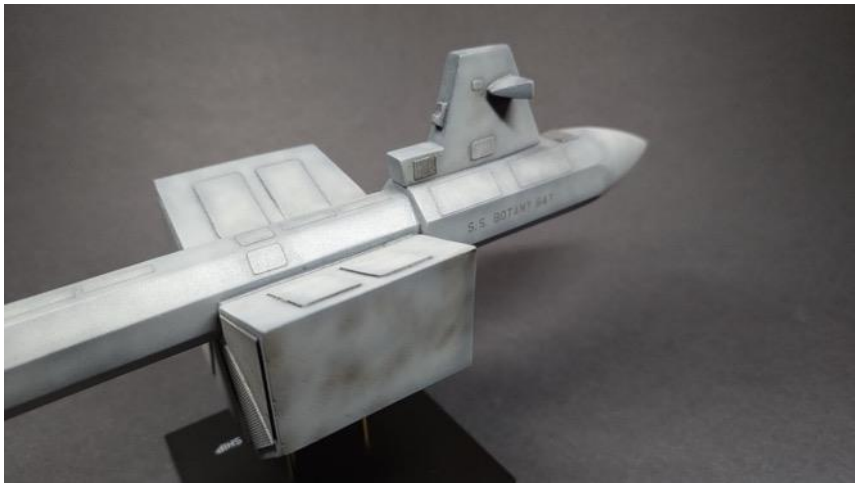
Needing a base, I reached into my collection of miscellaneous small acrylic blocks to select one of the right size and physical stability. I primed it with Mr. Finishing Surfacer 1500 rattle can primer (this is EXCELLENT stuff, by the way). I used the Silhouette to create a label, which I painted a medium gray to avoid stark contrast with the black background. After drilling holes for two 3/32" brass rods, using a drill guide to ensure perpendicularity, Khan's ship was mounted and the "quick side project" completed.

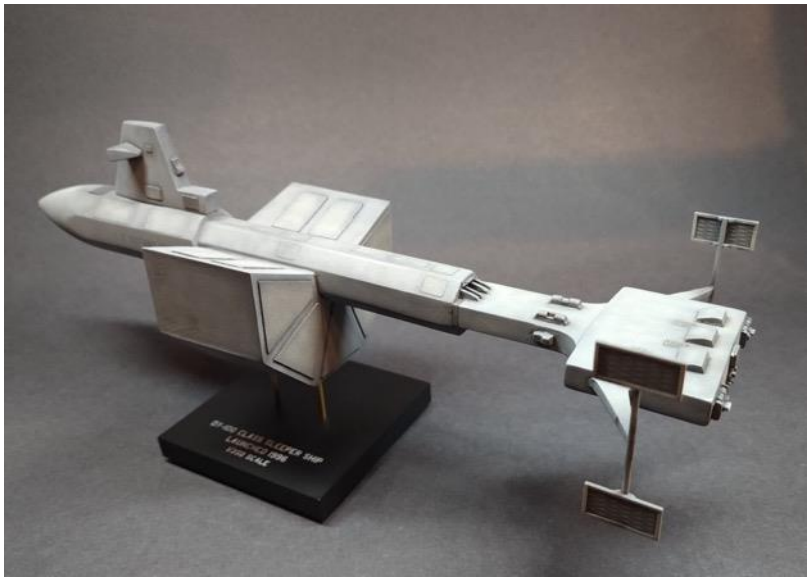


SUMMARY

I ended up spending 23 hours on the *Botany Bay,* very much on the low end of the spectrum for my projects, even if more than I'd planned. It was a fun diversion, and I learned a few things – which is a goal of every project.

Now Mr. Sulu, let's get the hell away from Ceti Alpha V…





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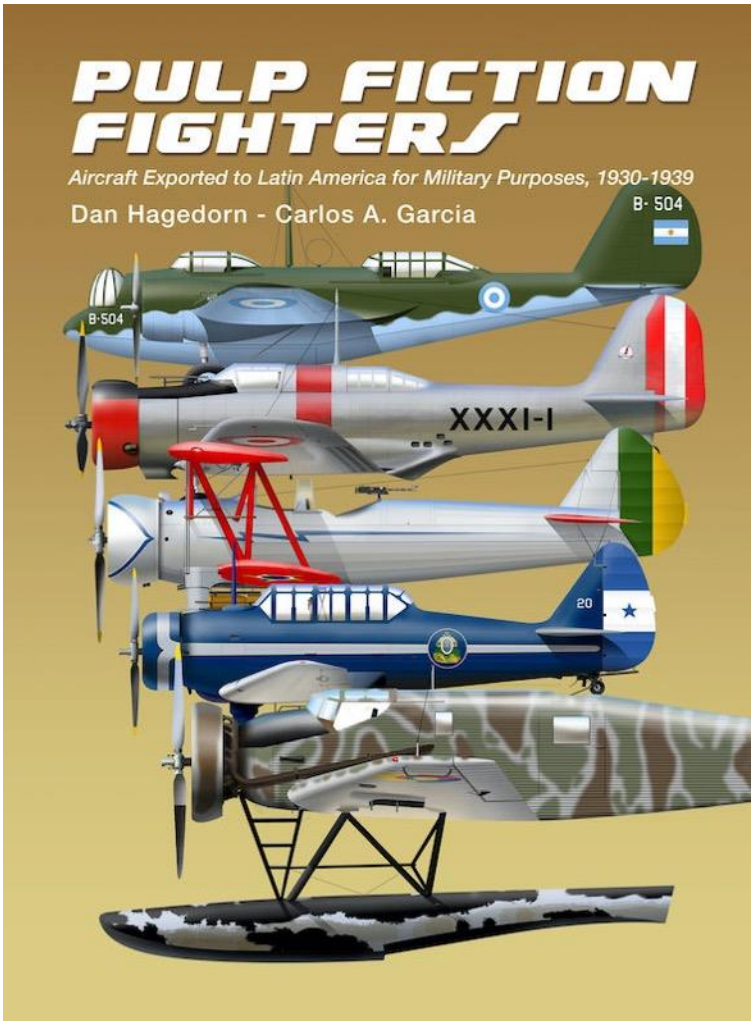
Pulp Fiction Fighters – Aircraft Exported to Latin America for Military Purposes, 1930-1939

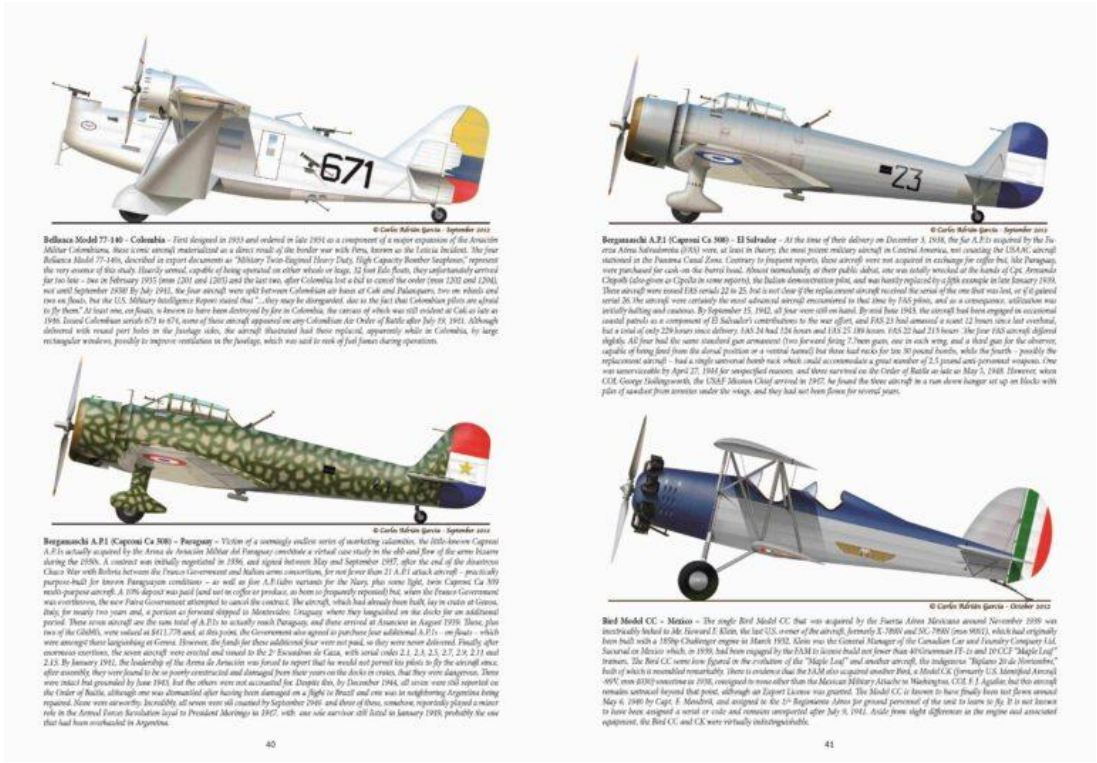
by Dan Hagedorn & Carlos Garcia; Published 2024 by European Airlines



Book Review by William Perry

This title's author, Dan Hagedorn, will be remembered by local aviation enthusiasts as the distinguished former Senior Curator of the Museum of Flight. Those with an interest in Latin American aviation will recognize Dan as the expert author of numerous books on that subject. His latest work builds on that legacy with a volume focusing on Latin American military aviation in the tumultuous decade preceding World War II. The book begins with a short introduction to the tricky business of selling aircraft in Latin America, followed by a country-by-country overview of military aviation developments. Then a very long listing of the diverse aircraft covered by this work.

The rest of the book is the exciting and beautiful part – 376 color plates by talented artist Carlos Garcia. Here are a few teaser pages from the publisher's website-



You'll notice that the author's captions are quite long - Dan uses them to summarize each aircraft's acquisition and history in the service of the country illustrated. These short histories sometimes describe shady business dealings, with an

occasional head-scratching mystery. As an example, here's the caption for the pretty dark blue Honduran trainer on the front cover-

"North American NA-16-2H (NA-20) - Honduras - Although Honduras acquired a pair of NA-16-2As (NA-42s, msn 42-691 and 692) in early March 1938, these were followed by a beefed-up, well-traveled demonstrator, the solitary NA-20 (an NA-16-2H) on November 18, 1938 (msn NA-16-2). Oddly, even though it arrived after the two NA-42s, which became Honduran serial 21 and 22, the NA-20 got serial 20. This aircraft mounted two synchronized .30 caliber guns over the nose, and had three A-3 bombe racks under the center line. Unlike the NA-42s, however, for some reason the NA-20 was not equipped with a rear, flexible gun mount. Both of the NA-42s had both radio transmitters (Avt. 12-b's) as well as RCA Avt.7-B receivers, while the NA-20 had only an RCA Avt.7-B receiver. All three mounted 520hp Pratt & Whitney Wasp engines, making them amongst the most powerful of all NA-16 variants. By July 29, 1940, the service had checked out not less than nine pilots on the aircraft, and FAH-20 had amassed 52:05 total time that year, while FAH-21 had 46:20 and FAH-22 30:40. The NA-20 and the two NA-42s were the pride of the service, and amongst the most potent aircraft in Central America outside of the Panama Canal Zone. All three, incredibly, survived in line service at least as late as June 30, 1957, and FAH-20 survived to this day on display in front of the FAH Headquarters at Toncontin Field, Tegucigalpa - the oldest surviving North American aircraft."

Those detailed captions represent an immense amount of aviation research, and we're lucky that Dan has shared them with us in this concise format. Pairing that information with colorful profiles is icing on the cake. The format allows for end-to-end reading, or a random "open & enjoy" approach.

This book contains many subjects to attract a modeler's eye, though good luck finding kits for many of the planes depicted! Another frustration might be the lack of colors and markings on top of the plane – only a port-side profile here. Luckily, many of these subjects have been covered in greater detail - Helion's Latin America @ War series springs to mind – as well as websites from Latin American enthusiasts.

Physically, the book is nice – a hardcover printed on good quality paper with good color printing of the plates. It's priced at $50 and is available from the publisher - https://www.europeanairlines.no

Or the US distributor - https://www.autobooks-aerobooks.com (cheaper shipping). If this aviation genre is remotely interesting to you, then *Pulp Fiction Fighters* is highly recommended!

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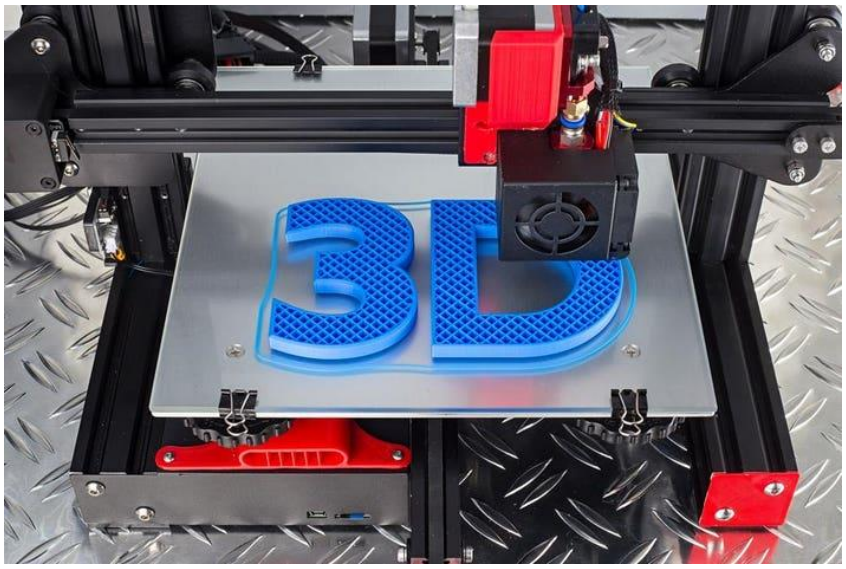
Introduction to Home 3D Printing



By Gil Vincent

Home 3D printing has transformed the way we think about making things, empowering hobbyists, creators, and innovators to bring their ideas to life from the comfort of their homes. For scale modelers, this opens a whole new door to enhancements and conversions where commercial solutions might not exist. But how did this incredible technology come to be, and what should you know as you consider diving into the world of 3D printing?

A Brief History of 3D Printing

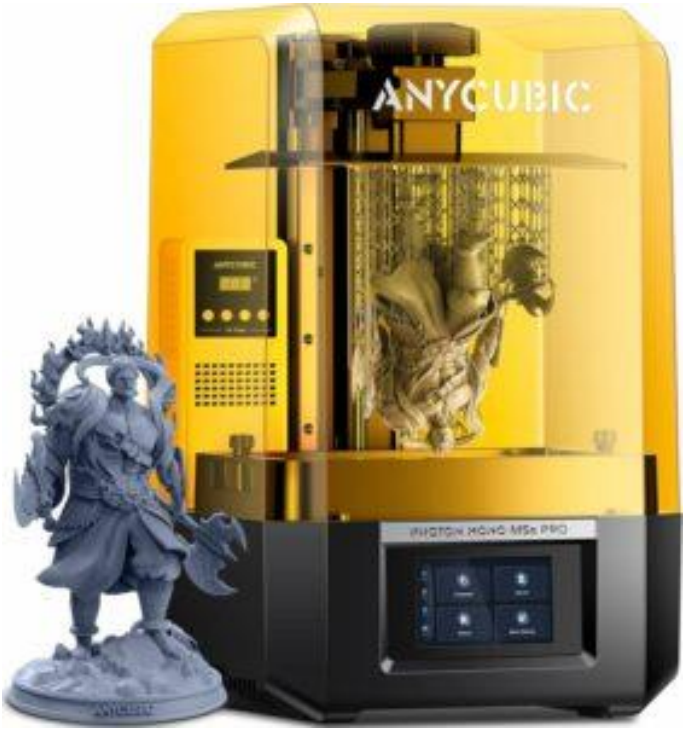
The origins of 3D printing trace back to the 1980s when the first patent for stereolithography (SLA) was filed by Charles Hull. Since then, 3D printing pretty much belonged to the field of *additive manufacturing*, where items are built up as opposed to removing material as in CnC/milling processes. In the last 10 years, the technology has evolved dramatically. What began as an industrial manufacturing technique is now widely accessible thanks to the advent of affordable desktop printers geared toward the hobbyist. From prototyping to creating intricate models, this technology has gained popularity among us model builders and professionals alike.

FDM vs. SLA: Two Popular Home Printing Technologies

For home 3D printing, two main technologies dominate the scene: Fused Deposition Modeling (FDM) and Stereolithography (SLA).

- **FDM**: This is the most common type of 3D printer for beginners. It works by extruding melted plastic filament layer by layer to create an object. Typically, the printer precisely moves a nozzle around, laying down a layer, building the object up from the baseplate. Newer FDM printers support a growing range of filament materials, many of which provide good strength. FDM printers are cost-effective, user-friendly, and capable of producing durable models and other large objects. On the other hand, some sanding and finishing may be necessary to remove evidence of “layer lines”.

- **SLA**: SLA printers, on the other hand, use a liquid resin cured by a laser or UV light to create highly detailed prints. Typically, the printer repeatedly lowers the baseplate to the resin reservoir and an entire layer is exposed to the curing light at once at the bottom of the reservoir. SLA printers usually offer better layer size and are just as fast printing many objects at once as they do for a single item, since a layer is set all at once. While SLA offers superior precision and surface finish, it typically requires more post-processing and careful handling of the resin material. At a minimum, after removing the piece from the baseplate, you must wash the part (either IPA or water, depending on resin type) and then give it a final cure with UV light to harden it. Note that the IPA or water is now contaminated and cannot be discarded down the drain!



- **Which type is best?** For modelers, we are typically interested in printing small, highly detailed objects - cockpit equipment, replacement tank exhausts, tracks, ordnance, and figures. SLA printers provide the best resolution with the least amount of finishing work required. However, post-processing and handling of resin makes it more difficult overall than FDM. SLA resins are also a poor choice for making larger objects, tools, and jigs. For example, FDM would be a better choice for printing mobile paint racks or custom airbrush stands. In general, FDM printers have a larger print area and can use stronger materials.

Each technology has its strengths, and your choice depends on what you want to achieve with your 3D printing projects. In a future article I will discuss actual 3D printing operations in more detail.

Software for 3D Printing 3D printing software is a crucial part of the workflow, enabling users to design models, prepare them for printing, and control the printing. Here are some key categories and popular tools:

- **Design Software**: Tools like *Tinkercad*, *Fusion 360*, and *Blender* are great for creating 3D models. Tinkercad is beginner-friendly, while Fusion 360 and Blender offer more advanced features for professional 3D designs. Shape-based tools like Tinkercad are easier to grasp and a surprising

number of projects can be accomplished. I've seen one person design entire ground vehicles in Tinkercad. On the other hand, true 3D engineering CAD tools like Fusion and SolidWorks require fully dimensioned 3D models and involve a steeper learning curve. However, future modifications of your model are better supported in a fully dimensioned model.

- **Slicing Software**: Once a model is designed, slicing software converts it into a format that the printer can understand. Programs like *Cura*, *PrusaSlicer*, and *Lychee Slicer* (for SLA) allow users to adjust settings like print speed, layer height, and supports. Basically, the slicer takes horizontal slices of the 3D model and converts them into the locational coordinates for a layer. These layers are then turned into machine instructions for your particular printer.

Choosing the right software depends on your experience level and project requirements, but many tools are available for free or at an affordable cost.

STL Files: The Foundation of 3D Printing STL (Standard Tessellation Language or STereoLithography) files are the most common format used in 3D printing. These files define the geometry of a 3D model using a mesh of triangles, making them compatible with most 3D printers and slicing software. This means that STL is the usual file format for exchanging 3D models. Note: Object (OBJ) file format is often used for exchanging 3D models between software packages, but is only supported by newer 3D printing systems. STL is more universal in the world of 3D printing.

Where can you find STL files?

- **Online Marketplaces**: Websites like *Thingiverse*, *MyMiniFactory*, and *Cults* offer extensive libraries of STL files, ranging from free designs to premium models.
- **3D Design Software**: If you prefer to create your own designs, software like *Fusion 360*, *Tinkercad*, or *Blender* allows you to create and export your creations as STL files.
- **Community Forums**: Enthusiasts often share STL files on 3D printing forums or social media groups, providing access to unique designs created by the community. Many modelers with a presence on YouTube, Instagram, etc. have Patreon accounts where if you support their work, they give you access to their STLs.

Whether you're downloading ready-made designs or crafting your own, STL files are the gateway to endless creative possibilities in 3D printing.

Safety First: Important Considerations 3D printing at home can be an exciting and rewarding hobby, but it's crucial to prioritize safety. Here are some key considerations:

- **Ventilation**: Both FDM and SLA printers can emit fumes or particles during printing. Ensure your workspace is well-ventilated. FDM is typically less smelly and, more importantly, less of a health issue than SLA resin fumes. Consider getting an enclosed printer or external enclosure (often used for home growing) with external venting.
- **Handling Materials**: Resin used in SLA printers can be toxic if not handled properly. **Always** wear gloves and wipe up spills. Note: liquid resin does NOT dry out/evaporate. You must wipe it up and expose it to UV to cure it into a solid for disposal.

- **Risk of Spills**: Spilling liquid resin can lead to skin irritation and damage to surfaces. Direct contact can be harmful, causing skin irritation, allergic reactions, and potential respiratory issues. You may find afterwards that you can't even continue using your printer because of your new sensitivity to the resin. Work on a protected surface, and clean up spills immediately using appropriate cleaning materials (absorbent paper towels and such). I recommend placing your printer on a large tray to contain any spills.
- **Safe Disposal**: Dispose of cured resin waste responsibly. Unused liquid resin should NEVER be poured down the drain; instead, cure it under sunlight or UV light before discarding it as solid waste according to local regulations. I fear the day that some hobbyist pours uncured resin down a drain and causes a water source crisis, resulting in UV resin becoming a regulated item. Besides, you don't want to be "that guy" that caused young Suzy to suffer painful medical issues for the rest of her life because you were lazy and irresponsible.
- **Fire Hazards**: 3D printers often involve high temperatures. Never leave your printer unattended during operation.

Environmental temperature is the last topic I'll cover in this introduction. FDM and SLA printers have their own preferred operating temperature ranges. Extreme temperatures at either end of the spectrum are not good. FDM printer nozzles need to generate a specific narrow range of heat to produce reliable melting of the filament. A cold shed or garage in winter may not produce acceptable results. Likewise, SLA resin works best at temperatures in the mid-70s. Because I don't want any minor disasters to turn a room inside the house into a "toxic cleanup site", I keep mine in the garage. You can buy heating elements to keep your printer in the ideal temperature range.

By staying mindful of these safety considerations, you can make the most of your 3D printing adventures while maintaining a safe and responsible workspace.

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North American F-100 A thru C Super Sabre

Original Art and Drawings By Norm Filer

Introduction

North American Aviation sought to enhance the F-86 through their "Sabre 45" program but faced difficulties obtaining Air Force funding. The Korea conflict and the Mig 15 highlighted the urgency of developing the next-generation fighter.

In September 1949, North American modified an F-86D by equipping it with a 45-degree swept wing. Wind tunnel tests indicated that achieving Mach One might be feasible with this new wing design and an improved engine. Two months into the war, the Air Force determined that the existing F-80s and F-84s were insufficient.

The arrival of the MiG-15 in Korea in November 1950, with its advantages over the F-86, made the Air Force reconsider their reliance on the F-86. On 14 May, 1951, North American submitted a formal proposal to the Air Force requesting funding and authorization for two prototypes of their “Sabre 45”.

Six months later, the Air Force contracted for two prototypes, tooling, design materials, and funded long lead materials and equipment for up to 94 aircraft. All this from nothing more than a paper airplane!

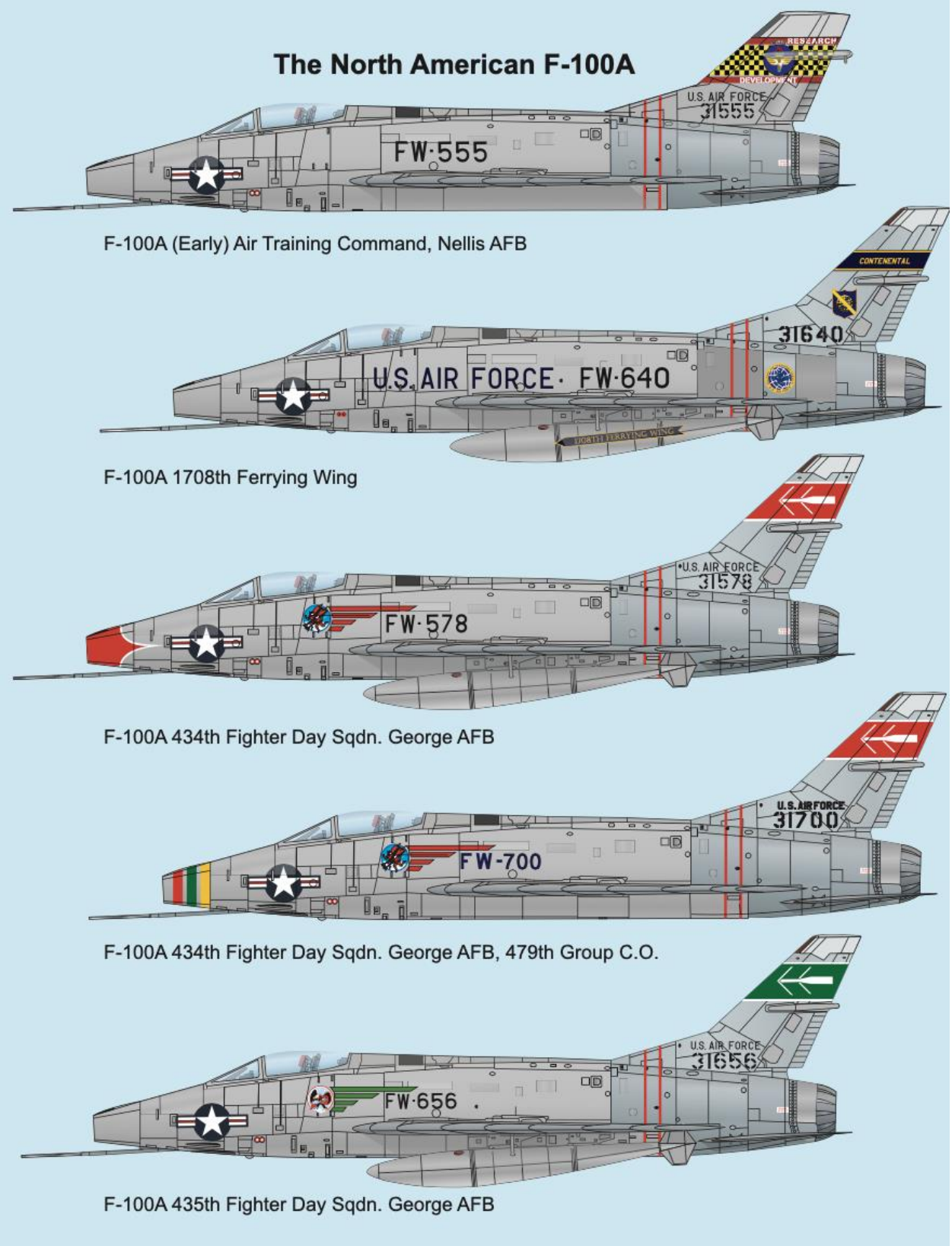
Eight days after the contract award, North American had a mockup ready for inspection, which was approved. On December 7, 1951, the program received the designation "F-100".

The initial prototype, designated YF-100A, was completed on April 24, 1953 and was transported to Edwards Air Force Base and began flight testing.

The flight test program was long and difficult. Directional stability was a major problem. The prototype YF-100A models featured a tall vertical tail, but the production F-100A tail was shortened by a foot. The reasons for this occurrence remain unclear, however, the outcomes were catastrophic. Directional stability was never really eliminated, but the short tail quickly resulted in accidents and obvious problems. A flight test pilot stated, "The only time the ball in the turn and bank instrument was in the center was when it was moving from one end to the other."

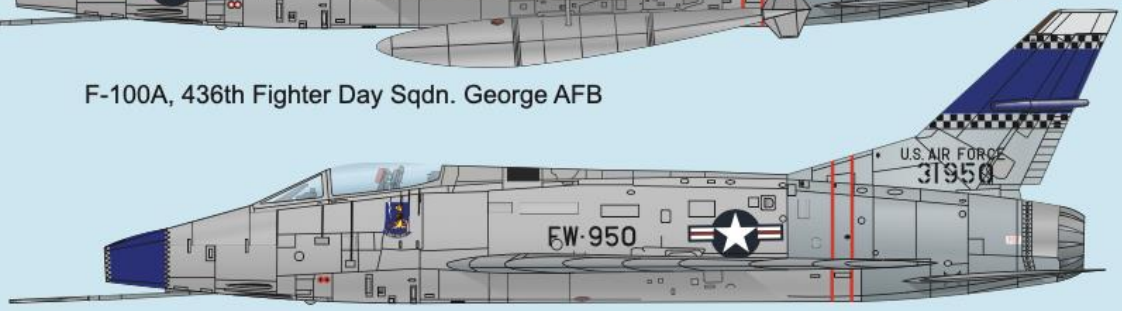
On October 1, 1954, less than a year after the inaugural flight of the F-100A, the first A models were delivered to the 479th Fighter Day Wing stationed at George Air Force Base in California. A month later, the entire fleet was grounded due to multiple issues and one fatality. The resulting investigation determined that the short vertical tail was the cause of the crashes and ordered that all existing F-100s be either modified or produced with a larger tail.

Okay, this completes the F-100 early family history. Let us proceed to the profiles.


The North American F-100A
RESEARCH
DEVELOPMENT
U.S. AIR FORCE
31555
FW·555
F-100A (Early) Air Training Command, Nellis AFB
CONTINENTAL
31640
U.S. AIR FORCE· FW·640
1708TH FERRYING WING
F-100A 1708th Ferrying Wing
U.S. AIR FORCE
31578
FW·578
F-100A 434th Fighter Day Sqdn. George AFB
U.S. AIR FORCE
31700
FW-700
F-100A 434th Fighter Day Sqdn. George AFB, 479th Group C.O.
U.S. AIR FORCE
31656
FW·656
F-100A 435th Fighter Day Sqdn. George AFB

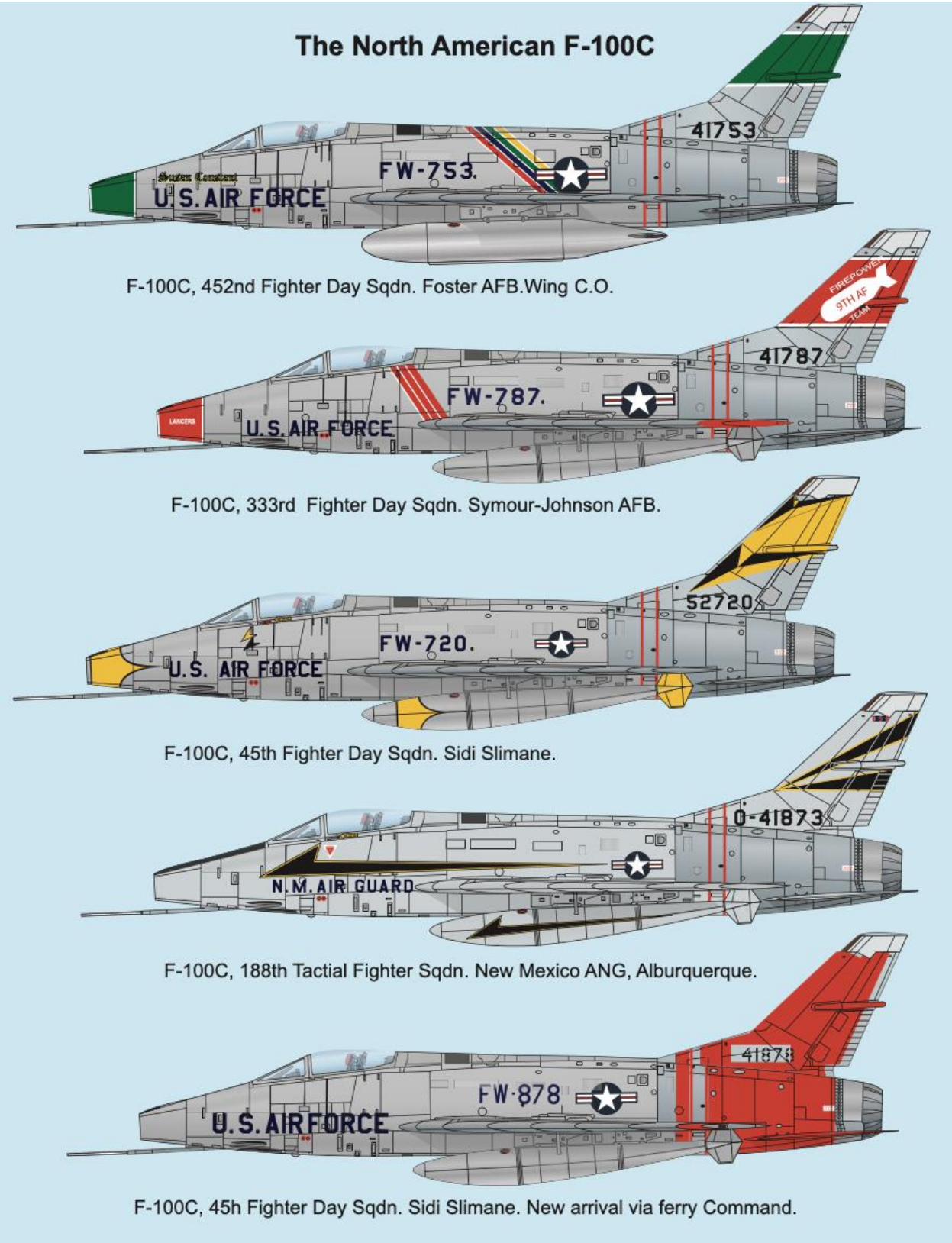
The North American F-100A

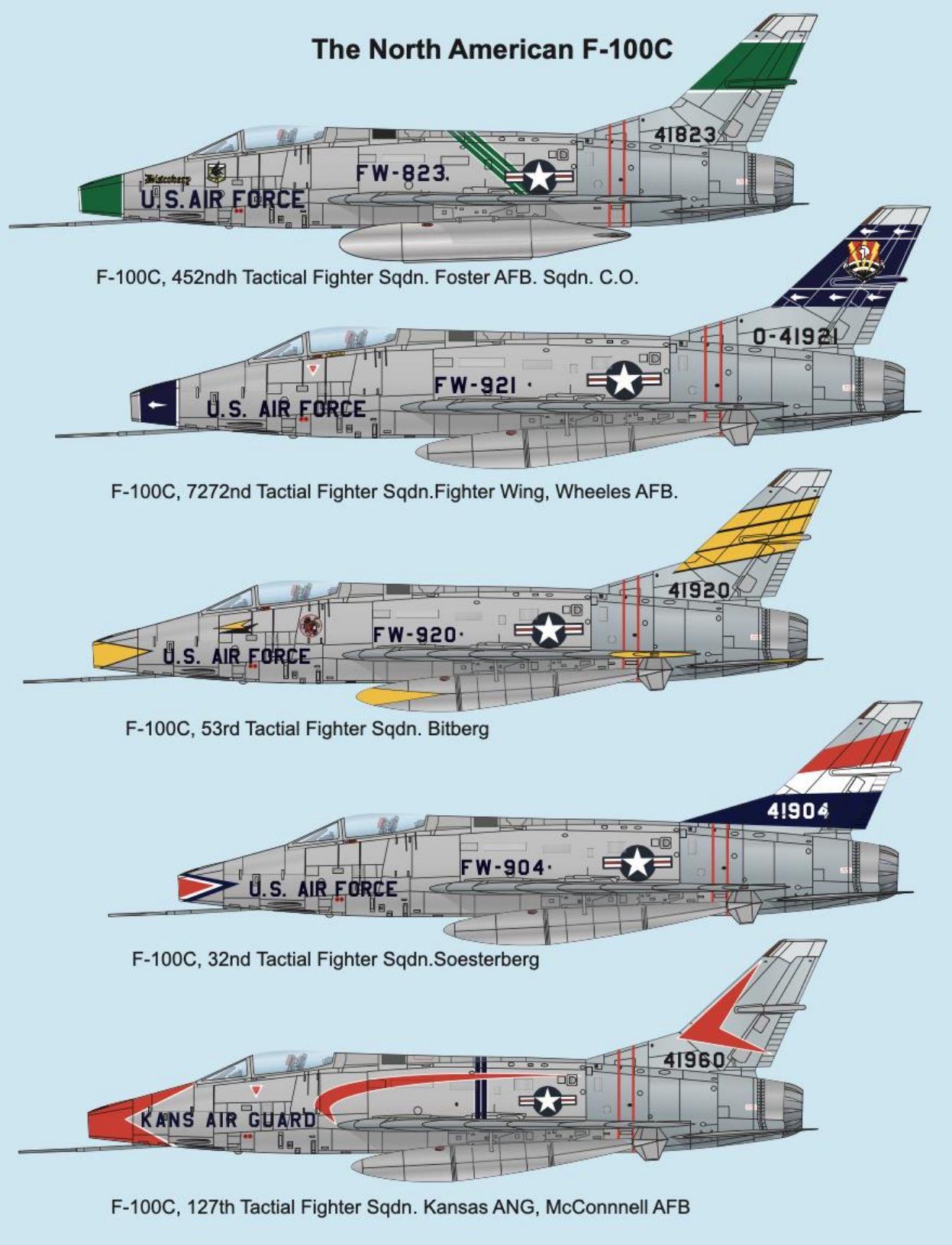
F-100A, 436th Fighter Day Sqdn. George AFB



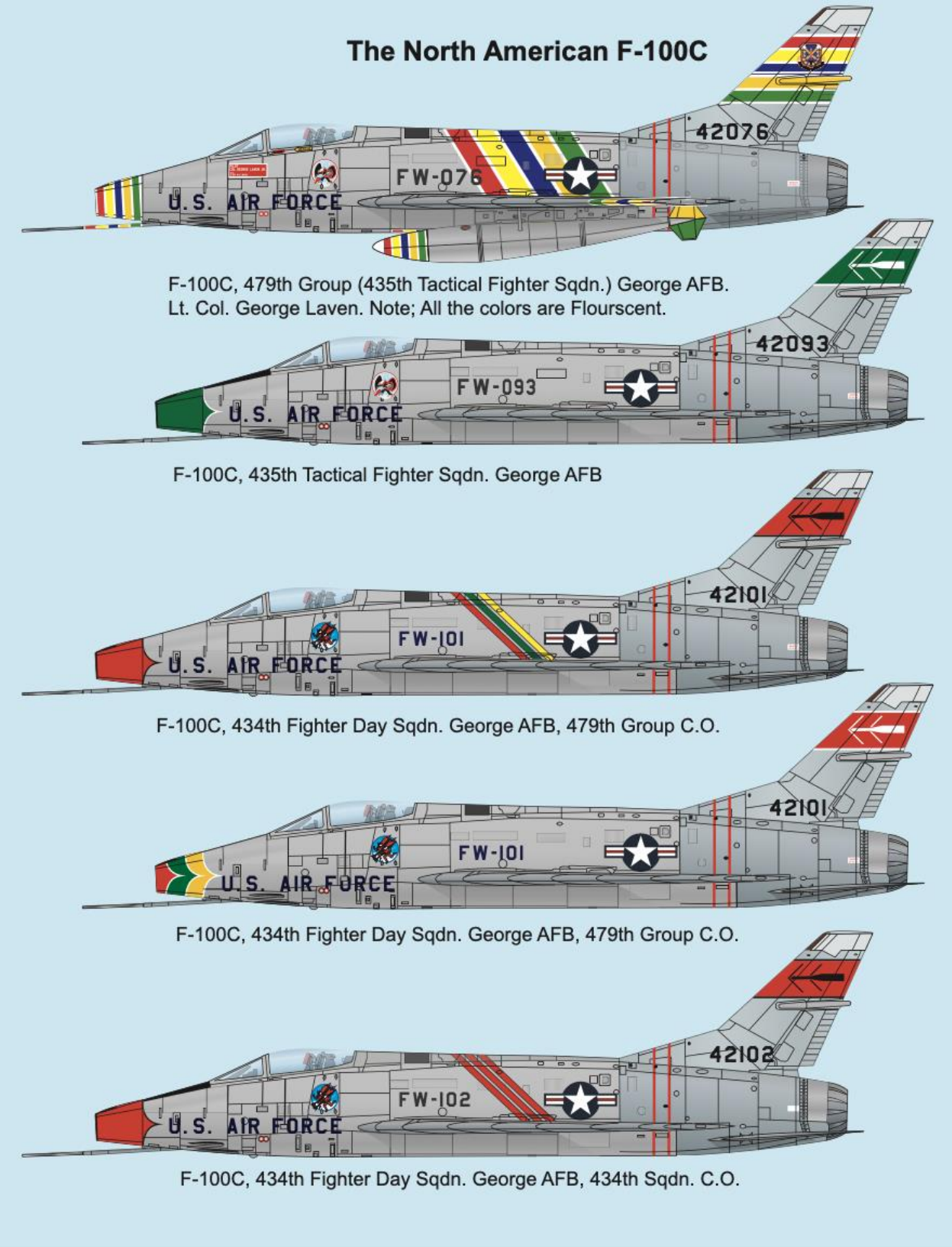
F-100A, 454th Fighter Day Sqdn., Bunker Hill AFB

F-100A Emblems


The North American F-100C
41753
FW-753.
U.S. AIR FORCE
F-100C, 452nd Fighter Day Sqdn. Foster AFB.Wing C.O.
FIREPOWER
9TH AF
TEAM
41787
FW-787.
U.S. AIR FORCE
LANCERS
F-100C, 333rd Fighter Day Sqdn. Symour-Johnson AFB.
52720
FW-720.
U.S. AIR FORCE
F-100C, 45th Fighter Day Sqdn. Sidi Slimane.
0-41873
N.M. AIR GUARD
F-100C, 188th Tactial Fighter Sqdn. New Mexico ANG, Alburquerque.
41878
FW-878
U.S. AIR FORCE
F-100C, 45h Fighter Day Sqdn. Sidi Slimane. New arrival via ferry Command.


The North American F-100C
41823
FW-823
U.S. AIR FORCE
F-100C, 452ndh Tactical Fighter Sqdn. Foster AFB. Sqdn. C.O.
0-41921
FW-921
U.S. AIR FORCE
F-100C, 7272nd Tactial Fighter Sqdn.Fighter Wing, Wheeles AFB.
41920
FW-920
U.S. AIR FORCE
F-100C, 53rd Tactial Fighter Sqdn. Bitberg
41904
FW-904
U.S. AIR FORCE
F-100C, 32nd Tactial Fighter Sqdn.Soesterberg
41960
KANS AIR GUARD
F-100C, 127th Tactial Fighter Sqdn. Kansas ANG, McConnnell AFB


The North American F-100C
41984
IOWA AIR GUARD
F-100C, 174th Tactial Fighter Sqdn. Iowa ANG, Sioux Falls, South Dakota.
U.S. AIR FORCE
42009
F-100C, Skyblazers, attached to 35th Fighter Wing, Bitburg.
42013
FW-013
U.S. AIR FORCE
F-100C, 461st Tactial Fighter Sqdn. Hahn. Wing C.O.
42053
FW-053
U.S. AIR FORCE
F-100C, 434th Tactical Fighter Sqdn. George AFB
42070
FW-070
U.S. AIR FORCE
F-100C, New 476th Tactical Fighter Sqdn. George AFB.
Operations Officer.


The North American F-100C
42076
FW-076
U.S. AIR FORCE
F-100C, 479th Group (435th Tactical Fighter Sqdn.) George AFB.
Lt. Col. George Laven. Note; All the colors are Flourscent.
42093
FW-093
U.S. AIR FORCE
F-100C, 435th Tactical Fighter Sqdn. George AFB
42101
FW-101
U.S. AIR FORCE
F-100C, 434th Fighter Day Sqdn. George AFB, 479th Group C.O.
42101
FW-101
U.S. AIR FORCE
F-100C, 434th Fighter Day Sqdn. George AFB, 479th Group C.O.
42102
FW-102
U.S. AIR FORCE
F-100C, 434th Fighter Day Sqdn. George AFB, 434th Sqdn. C.O.


The North American F-100C
42101
FW-101
U.S. AIR FORCE
F-100C, 434th Fighter Day Sqdn. George AFB, 479th Group C.O
.After acquisition of 476th TFS.
42110
FW-110
U.S. AIR FORCE
F-100C, New 476th Tactical Fighter Sqdn. George AFB.
52720
FW-720.
U.S. AIR FORCE
F-100C, 7235th Support Sqdn, Wheelus AFB.
31774
FW-774.
F-100C, 451st Fighter Day Sqdn., Foster AFB
Susan Constant
Discovery
322
GP
INIMICOS DESTRUO

This is part one of two parts. It will cover the A (late) and C models. I arrived at George in November, 1956. The 479th was just recovering from the extended groundings and reworked A model deliveries. All three squadrons were finally up to normal allotment and were already anticipating the arrival of the first C models.

The reworked tall tail-A and the C models are difficult to tall apart. Reference to the serial number is really the only way.

Internally the differences were significant.

The A model was developed as a day fighter aircraft. Performance was paramount. Fuel was stored in the fuselage, with no underwing pylons for weapons. It had 275-gallon external tanks. It was notable, and few aircraft in the Southern California skies engaged with it again. The time between takeoff and the urgency to land was very brief.

The C model appeared identical externally but had significant internal differences. The internal fuselage fuel configuration was maintained, and a significant portion of the wing was sealed to accommodate additional fuel storage. An external air-to-air refueling capability was incorporated. Two pylons were added under each wing to ground attack ability as well. The Air Force is transitioning from high performance fighters to efficient fighter bombers. The downside was a bit of a reduction in performance. All the changes added weight with no significant increase in thrust. This trend continued into the D models and resulted in a mostly bomber, not so much fighter. By the time the D showed up it weighed about 2100 lbs. more that the C and had only a bit more thrust to haul that ton of extra weight.

The profiles emphasize aircraft of the 479th Group, which I observed and photographed from 1956 until the transition to the F-104C in October 1958.

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Northwest Scale Modelers (NWSM)

The Northwest Scale Modelers meet monthly at the Museum of Flight in Renton. Modelers of all genres are welcome to attend. Please see their website for more information: [NorthWest Scale Modelers (nwsm.club)]

Seattle Armor Modeling and Preservation Society (AMPS)

The Seattle Chapter of AMPS holds monthly meetings and occasional build sessions that modelers of all genres are welcome to attend. Please see their Facebook page for more information.

Galaxy Exiles Sci-Fi Modelers

The local Sci-Fi modeling community is served by this club located in the North End. Modelers of all genres are welcome to attend. For more information, please contact John Morel at johncmorel@gmail.com or see their Facebook page for more information.

Performance Model Club

The Performance Model Club meets every third-Saturday of the month at the Mt Vernon Roundtable Pizza from Noon to 2:00pm. All modelers are welcome to bring their recently completed models (or ones in work) to 'show and tell.' We have several that drive all the way from West Seattle and Renton as well as from Bellingham. We purely talk models, techniques, etc. With an average attendance of 6-10 at each meeting, we are not prepared to sponsor another PMC Model Show yet, but who knows what might be possible if this club grows!

Questions? Feel free to contact David Kaneshiro – kaneshiro.david@gmail.com or call/text 206-601-1351.

Upcoming Events

April

26 — IPMS Seattle Spring Show - Renton Community Center - Renton, WA
IPMS Seattle - Annual Show and Swap Meet - IPMS Region 7 Regional Contest

May

17 — Oregon Modelers Society - Event TDB

24 — Best of the West Model Contest - Orleans Hotel Casino - Las Vegas, NV
IPMS Las Vegas - Annual Contest

June

July

12 — Sprue-Man Group Model Swap Meet - Vancouver, WA

August

6-9 — IPMS Nationals - Hampton Roads, VA

16 — Kit Auction - Oregon Modelers Society - Portland, OR

September

20 — Oregon Modeler's Jamboree - Linn County Expo Center - Albany, OR
Oregon Model Show and Contest - hosted by Oregon Mid-Valley Modelers

October

4 — Fall Show - IPMS Palouse Area Modelers - Moscow, ID

11 — Scale Model Fest - Bonsor Recreation Complex - Burnaby, BC, Canada
IPMS Vancouver Annual Fall Show

TBD - Fall Show - IPMS Boise - Boise, ID

During (and since) the Pandemic, modelers from all over have been meeting online via Zoom sessions. Between our two local clubs, (IPMS and NWSM), the TNI group, the Galaxy Exiles, plus IPMS clubs in Oregon, there are Zoom meetings just about every night. These sessions are joined by other modelers from across the country, as well as overseas – I think St. Petersburg is the farthest way? These are less meetings than simply build sessions where we share ideas, techniques, etc. – like a bunch of little old modeling ladies. We discuss our current projects, how to solve modeling problems, new techniques, tools, paints, and kits. We try to keep politics and religion out of the conversations, and that really makes the sessions fun and relaxing. These Zoom sessions are open to everyone. The Monday/Wednesday/Thursday sessions normally have between 8 and 15 attendees at any given time, and the big (Thursday) build sessions last 7 hours (2pm through 9:00pm). Modelers come and go, break for dinner, or to walk the dog, etc. The build sessions continue in the background, allowing modelers to join at their convenience.

A lot of modelers with a wealth of experience who can help solve just about any model-related issue. And a great group of people!

Joining a Zoom session takes a single click of a mouse, once you are all set up. First, it is recommended that you download a free copy of Zoom and install it on your device first. Having a local copy is not required but makes everything a little easier to use. Once that is done, all you need is a very basic setup that includes camera, microphone, and speakers (normally all built-in, especially with newer devices). Then just click on one of the links below!

Mondays: Seattle. WA IPMS 2pm – 5pm LINK

Tuesdays: Salem, OR IPMS 6pm – 10pm LINK

Wednesdays: Seattle. WA IPMS 2pm – 5pm LINK

Thursdays: Seattle. WA IPMS 2pm – 9pm LINK

Albany, OR IPMS: Odd-numbered Thursdays (i.e., 1st, 3rd, and 5th) from 6pm - 10pm. LINK

Saturdays: Salem, OR IPMS 6pm – 10pm. LINK

Sundays: 4:00pm CDT-5:00pm CDT. LINK

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The IPMS Seattle 2025 meeting schedule is as follows. All meetings are on Saturdays at North Bellevue Community Center from 10:30 AM to 1:30 PM, except as indicated. To avoid conflicts with other groups using our meeting facility, we must NOT be in the building before our scheduled start times, and MUST be finished and have the room restored to its proper layout by our scheduled finish time.

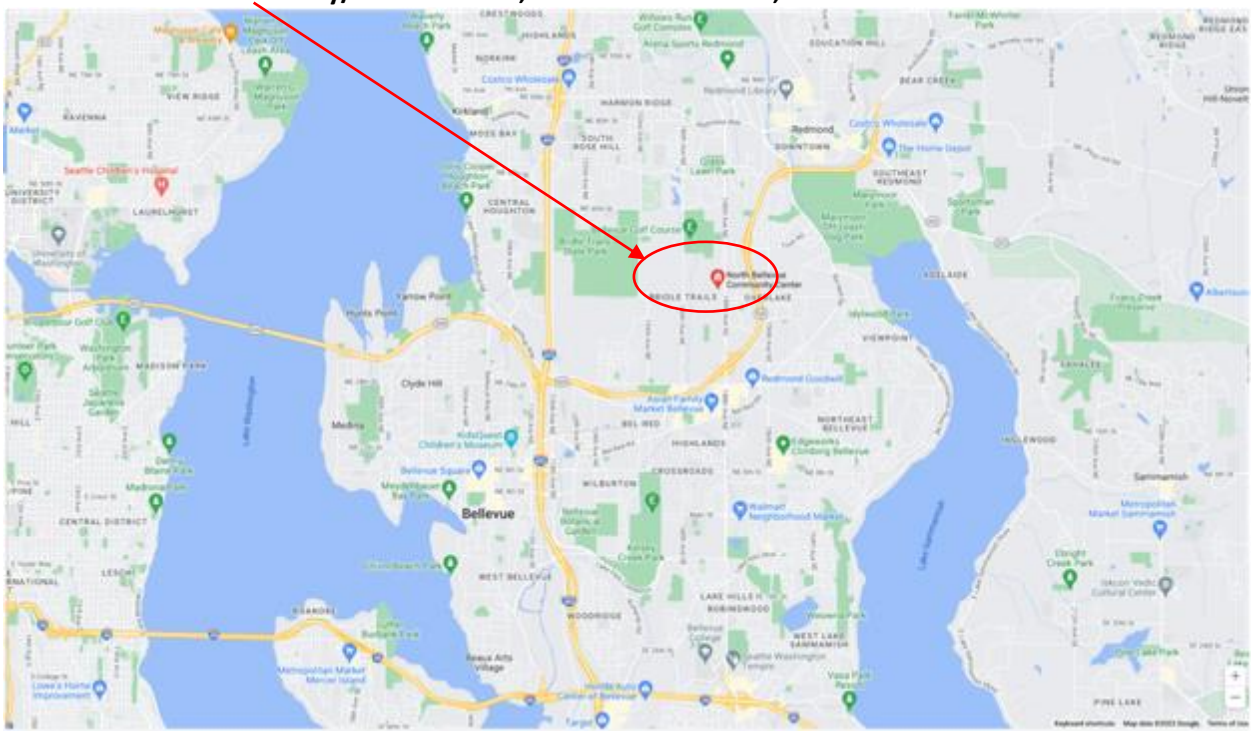
April 12, 2025 **May 10, 2025** **June 14, 2025** **July 12, 2025**

Next Meeting: April 12– 10:30 AM to 1:00 PM

North Bellevue Community/Senior Center, 4063 -148th Ave NE, Bellevue.

Map Link Site Link

North Bellevue Community/Senior Center, 4063 -148th Ave NE, Bellevue



Directions to NBCSC: From Seattle or from I-405, take 520 East to the 148th Ave NE exit. Take the 148th Ave North exit (the second of the two 148th Ave. exits) and continue north on 148th until you reach the Senior Center. The Senior Center will be on your left. The Center itself is not easily visible from the road, but there is a signpost in the median.

Join IPMS/USA

Why Join IPMS/USA?

IPMS/USA is the United States Branch of the International Plastic Modelers' Society, whose roots can be traced to the startup of the first IPMS National Branch during the 1960's in Great Britain. In 1964 a US-based modeler applied for a charter to start the US Branch. In the ensuing five decades, IPMS/USA has become a 4,600-member, all-volunteer organization dedicated to promoting the modeling hobby while providing a venue for modelers to share their skills in a social setting, along with friendly but spirited competition in the form of local, regional, and national contests and conventions. As this is written, there are over 220 active US chapters (including groups in Canada and the Philippines as well as one "cyber-chapter" existing entirely on the internet). These chapters are organized into 13 geographically-determined Regions, overseen by Regional Coordinators. The IPMS/USA Executive Board, made up of elected and appointed members, serves as the overall governing body for IPMS/USA.

Join Online (https://myipmsusa.org/join-us)

MODEL PAINT SOLUTIONS

Model Paint Solutions specializes in tools for handling, storing, mixing, spraying, and finishing model paints. We carry quality scribing tools, abrasives, Mission Models Paint, the full line of AK Real Colors, and German-manufactured Harder & Steenbeck airbrushes and parts. All Seattle IPMS members can take advantage of 5% off and Free-Shipping on any orders delivered during the monthly IPMS meetings. Details provided at the meetings.

Model Paint Solutions (https://modelpaintsol.com/)

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