

THE SCALE SQUADRON
OF
SOUTHERN CALIFORNIA



SCALE DIMENSION

Official Newsletter of the Scale Squadron of Southern California

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Evergreen Air
Museum
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1. A happy ending to a slightly nerve wracking but successful first flight of Jerry Smith's Rutan Model 61 Long-EZ.
2. Yuliy Lieb's Fairchild Republic A-10 Thunderbolt II about to touch down.
3. A Mikoyan Guryevich MiG-21 Fishbed, this one belonging to Jack Cannon, flying by for a gear check.



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COMMANDER'S VIEW



Mike Greenshields
Commander

Squadron!

It's fall, no longer baking hot in my garage, and the excuses are running thin!

Sadly, my **Fly Baby** kit is still buried in the back of my storage unit somewhere, so I figured I'd better build something!

While looking for that kit, I found this one. Forgot I even had it. This is a real gem. A blast from the modeling past. Designed by **Bob Boucher** at **Astro Flight**, this is a rarely modeled **Partenavia P-68 Victor**. 48" of small airplane fun. With modern technology, it's going to be like a whole different airplane. Clean and light, with generous tail surfaces, this one is going to be an easy build and a blast to fly. Inside the kit along with a pile of wood and some plans, was a reprint of the original RCM article.

To put it in perspective, the Astro Flight P-68 model was conceived back when electrics were new and not exactly mainstream...

Quote from Bob Bouchet from the RCM article:

"This exciting new scale electric mini twin was born one Saturday morning while Bill Warner and I were organizing the first all-electric contest sponsored by the North American Flight Masters Club of Los Angeles. We had

decided to have two Stand-Off Scale events at the contest, one for free flight and one for radio control."

Bob was always ahead... It's going to be a joy to give this model some scale detail, put modern gear in it, and make it really sing (well hopefully anyway).

So, keep the Fly Baby on my Builder's Wing commitment, but now we're adding, just for fun, this little (itty bitty by today's standards) Partenavia twin EP. Let's hope by Monday night it's more than just some sticks in a box :)

If I've glued nothing together by then, the first round's on me...



See ya' Monday.

Mike Greenshields, Commander
Commander@ScaleSquadron.com

EDITOR'S NOTES

October!! Holy cow, the year is “flying” by! (Get it, *flying* by?) September and October have been busy months for me and the family. In addition to being hotter than heck, my wife and I took a three-week road trip to visit family in Washington state (where it wasn’t nearly so hot). My brother lives an interesting life in WA and I got to drive a 25 ton crane, a Bobcat backhoe, and make 2x4’s and 4x4’s from monster logs on a 36” sawmill—all without leaving his property. Not the kind of stuff everyone in Lake Forest, CA gets to do on a regular basis. That all slowed my modeling down a bit this month but it gave me the opportunity to do a couple things I didn’t think I’d ever get to.

Beginning on **Page 8** you’ll find an article on our visit to the **Evergreen Aviation & Space Museum** in McMinnville, OR. I’d heard about this place ever since they acquired the Spruce Goose from the Disney Corporation in 1992 and moved it to the museum. I was blown away by the museum’s collection and only wish we could have spent about three days there. Check out the article and see what you think.

W&C Builders’ Wing

The **2023 Warbirds & Classics Builders’ Wing** is getting some traction. At the August meeting, **Commander Mike Greenshields** challenged everyone to select a building project for the 2023 event. He held the Board of Directors’ feet to the fire and made them commit to a specific model for the Wing. Three members brought their projects to the September Squadron meeting and provided updates on their progress. Check out the Squadron meeting update on **Page 15** to see who those folks were and how they’re coming along.

Field Trips

If you’ve been reading through these newsletters over the past year and a half or so, you’ll notice that I enjoy field trips to museums, airfields, other modeling clubs, aviation-themed events, and pretty much anything related in some way to modeling, aviation, and making stuff. I also love to write about those excursions and share the experience. Southern California was the heart and soul of aviation and aerospace in America for decades so it’s no wonder that there is so much aviation-oriented activity pretty much right here in our own back yard.

Mike and I have been talking off and on for a



Eric Puchalski
Newsletter Editor

while about ways to get members more engaged in Squadron activities and maybe even expand the member base a bit. One of the things we’ve discussed is setting up a series of field trips and including anyone who would like to tag along. Right now, these trips include my fellow aviation enthusiast and diamond lane dummy, **Jack Guiso** and me. It’s always a treat going somewhere with Jack but I’m a big believer in “the more, the merrier.”

At the October meeting, I’ll bring along a list of places Jack and I have visited recently and some places we’d still like to see. I’ll be asking for suggestions for other destinations that we may not have thought of. Then we’ll see if we can’t hammer out a plan to get a bunch of people together and go see some of these incredible sights.

Member Projects

With the W&C Builders’ Wing going strong, I expect to have lots more to report on member projects. This month, we have two updates: **Rob Hahn** has some information on how he’s going to extend the flight time of his **F-11 Tiger** and **Tim Cardin** has a ton of information and tips relating to the **P-47 Thunderbolt** project he’s completing for Ed Woodson. I highly recommend that you look at both of those as they’re filled with interesting approaches to common modeling problems.

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ROB HAHN'S F-11 TIGER BUILD

by Eric Puchalski

This is the third chapter in a series of articles following Rob Hahn's progress on his build of a **Grumman F-11F-1 Tiger** from an old (1959) Berkeley kit. (See the August and September 2022 newsletters for Parts 1 and 2.)

At this stage, Rob has pretty much completed the model and is working on some final tweaks before attempting a first flight. One of those tweaks is to improve flight time. The power unit for this model is a Cox .020 Tee Dee with a stock, rear-mounted fuel tank driving a 50MM fan. Rob says the stock tank provides about three minutes of run time and he'd like to improve on that.

There's also a slight problem with balance of the model. It came out a little nose heavy and there's very little room inside the fuselage to move things around.

To address both issues, Rob decided to fabricate a custom fuel tank to extend air time and a little weight to the tail.

Rob has provided a number of photos and comments, so I'll step aside and let him show you how that's going.

01: An indication of the problem. Note the small red arrows indicating the balance range and the position of the balance pads of the CG checker.

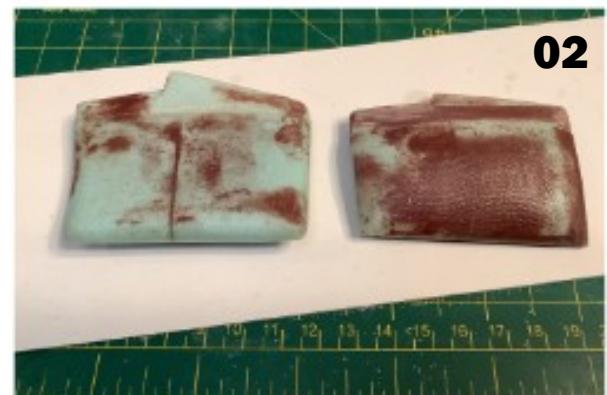
02: Trying to fabricate fiberglass tanks to surround the fuel bags to apply crankcase pressure. Nothing new here, just one more version of a bubble less pressurized fuel tank. These are 1-off blue foam molds that get destroyed after layup.

03: Test fitting the blue foam molds in the fuselage.

04: Top half of tanks laid up. 3k cf tow wraps six times around 1/8" white PE plastic molds. This is where the fuel and pressure lines will enter. Crossing my fingers.

05: Was able to remove the molds from inside the fiberglass parts with only minor damage to the parts. The Molds are history. Need to make a new set of fuel bags to fit these tanks. The plan is, once the bag and fittings are secured in the top, it will be lowered into and sealed to the bottom.

06: Iron (fiberglass) lungs of sorts. Those are the PE molds used to make the entries. Smooth PE (polyethylene) never needs mold-release because nothing sticks to it. That's a razor blade dispenser they are leaned against.



ED WOODSON'S P-47 "LITTLE CHIEF" BUILD

[ed note: This is the third in a multipart series where Tim provides updates on his progress on finishing Ed Woodson's P-47 Thunderbolt. Parts 1 and 2 appeared in the August and September 2022 newsletters. If you want to contact Tim directly to see what's up, your best bets are email or you can catch him most days at OCMA Field.]

by Tim Cardin

The project moves forward, then back two steps, then forward again. I painted the canopy with the test paint. Loved it so much I considered it ready to move forward and mounted the windows in place. Then I painted the fuse starting with the test paint and needed to open the big can (same exact paint and numbers) to put the final coat on. Looked great until I set the canopy on it and discovered it was a shade or two lighter than the fuse (**Photo 1a**). Can this be? I thought that was why we had things like federal standard colors with color numbers!? Solution was to mask the windows and reshoot (**Photo 1b**). Of course that would completely hide the rivet detail in the canopy frame. *Grrrrrrr.*

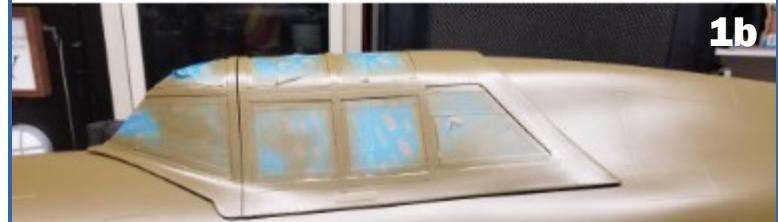
Chad Veich rivets to the rescue! I love these detail items and have used them many times. (Contact Chad via email at cvnkv@aol.com.) The rivets are properly spaced on the sheet and lifted off with scotch tape. Place in position, lightly burnish, and lift the tape (**Photo 2**). I use a hard roller and go over them again. The primer and paint hold them in place. The effect is fabulous (**Photo 3**) and, if for some reason one falls off, the look is still great. Paint chips off rivets and Dzus fasteners all the time, right? A repaint and all looks good now.

Cockpit Detailing

On to the cockpit. Researching I find a couple things. P47's built on the Republic lines painted the cockpits with a dull dark green paint. P47's built on the Curtiss lines painted the cockpits in green zinc chromate. I opted for the dull dark green, using **Warbird Colors** paint green and dark grey mixed something close to the photos in the books. I also learned that the early P47's had a corrugated floor opposed to the smooth floor in later models. I opted for the corrugated floor. The



1a



1b

Photo 1a & 1b: 1a (upper) shows the slight mismatch in paint colors between canopy frame and main fuselage, despite being the same product and spec number. Photo 1b (lower) shows a much nicer match after repainting from the same can of paint as the fuselage.



Photo 2: Placing the Chad Veich vinyl rivets.



Photo 3: Canopy rivets in place and ready for final paint (again).



Photo 4: Simulating the corrugated floor using .020" G10 and some balsa strips.



Ed Woodson's P-47 "Little Chief" Build

instrument panel and cockpit items were purchased from iflytailies.com as were a couple of versions of side panels, flat with rivets and curved with structure. The main consideration for the cockpit was installing and removing the sliding canopy. Room dictated that the cockpit be removable to accomplish this. Using the flat side panels seemed the best solution as the controls and switch panels are easier to place. Setting the depth of the cockpit was a chore, fortunately there was enough flat panel material to make a couple versions of cockpit sides. The floor is left up to the modeler, I had plywood, ABS sheet and G10 .020" to choose from and went with the G10. Using balsa strips I simulated the corrugation and fashioned foot supports from ABS (**Photo 4**). Pedal supports were also fashioned from G10 (**Photos 5a & 5b**).

With the cockpit complete (**Photos 7 & 8**) it was time start some weathering and putting the graphics on while maneuvering the fuse was still rather easy. With the major graphics in place it is final assembly time for the fuse (**Photo 9**). I will put the nomenclature in place last, once all the big pieces are assembled. Once I have it assembled there will be room for working on the wings. The wings will need to be disassembled for painting.

That's it for now. I'll keep you posted.

Tim Cardin

Tim.Cardin@CardinWest.com



Photo 5a & 5b: Rudder pedal supports made from G10 will be glued to the corrugated floor.

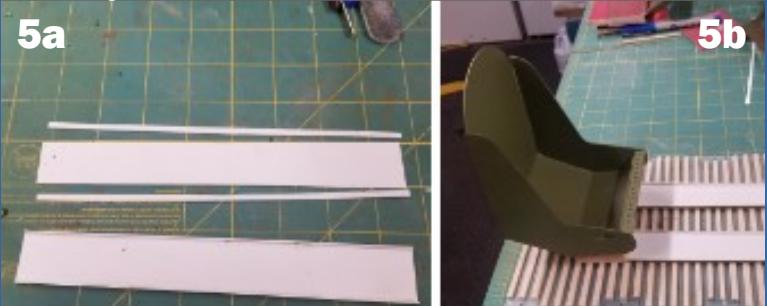


Photo 6: Basic cockpit painted and ready for assembly.

Photo 7: Cockpit components ready for final assembly.



Photo 8: Assembled cockpit and pilot ready for action.



Photo 9: Time to place major graphics and make sure all main components fit..



FIELD TRIP: EVERGREEN AVIATION & SPACE MUSEUM

By Eric Puchalski

When my wife suggested that it was time to really wring out the RV trailer we bought in March, I thought it was a great idea. We'd already been to San Onofre and Julian a couple times so I knew how to set everything up and flush the gray and black water tanks. I thought maybe a little bit of a stretch would be something like Joshua Tree National Monument for a few days or maybe Phoenix, AZ. After hashing it out, we finally agreed on a trip to Washington state to spend a couple days with two of my brothers who live up there, plus whatever we could see in between. That worked out to be a *three week* tour of California, Oregon, and Washington. We hit a ton of places that we'd visited in the past and some that we'd never seen.

There were lots of high points during the trip and one of the big ones occurred when we were in Oregon and in the vicinity of the **Evergreen Aviation & Space Museum** in McMinnville, OR. My wife might rather spend the day visiting wineries (which we also did) but she's a terrific sport about stuff like this and understands my weakness for all things aviation.

History

The museum was founded in 1991 by the owner of Evergreen International Aviation and initially included a small collection of vintage aircraft. In 1992, the museum acquired

01: This is actually the side view of the main aviation display building, but it's the first thing you see when you arrive on the museum property.

02: The gift shop is pretty typical for an air museum but the goods are maybe a bit higher end. (And a corresponding bit more expensive.)

03 & 04: The **Hughes H-4 Hercules** (aka, "Spruce Goose") is the centerpiece of the Evergreen collection. I had to borrow these two photos from the museum's website since I don't have a wide angle lens that can fit the whole airplane in.

the **Hughes H-4 Hercules** (aka, *Spruce Goose*) was acquired from the Disney Corporation and was moved from Long Beach to McMinnville. It took nine years of disassembly, restoration, and reassembly to restore the airplane. The main museum building was pretty much built around the Goose and was opened to the public in 2001.

During the 2010's, Evergreen International Aviation appears to have fallen on hard times and in 2020, it filed for bankruptcy. The museum was purchased by an entertainment company that plans to continue to operate it in conjunction with some other entertainment enterprises such as a water park and hotel.

Since the museum is now self-sustaining, there's a pretty good gift shop offering the usual t-shirts, hoodies, baseball caps, books, etc.



01



02



03



04

Field Trip: Evergreen Aviation & Space Museum

The Collection

The Evergreen collections contain much more than the air and space exhibits out on the main floors. There is also a huge collection of artifacts, books, documents, and other information relating to aviation and aerospace industry. Aircraft on display range from a full-scale **1903 Wright Flyer** replica to a **Lockheed SR-71 Blackbird**. Types include experimental, military, general aviation, drones, and home built aircraft. There is also a collection of space vehicles including a complete Titan II rocket that was the launch vehicle for the Gemini space capsules. (Oh, yeah, they also have a Gemini module on display.)

The part of the collection that's on display is housed in two large, well-lit buildings. Lighting is terrific for photos but, unfortunately, access is not. Displays are roped off so you won't be able to do walk-arounds of your favorites unless you can convince one of the docents to let you jump the fence.

Most of the airplanes in the collection are fully restored and highly polished examples of their types. While this is terrific for getting an idea of what an airplane looked like when it rolled off the assembly line, it's not indicative of what it looked like in action. It's not clear how many of these airplanes are currently operational. On the other hand, the museum has provided detailed histories of each aircraft and many of them served proudly on active duty. All of the airplanes on display also appear to be complete so you're not looking at a bunch of hollowed out fuselages.

I'm not a space guy and I can't speak for the space exhibits but the airplane collection contains an interesting cross-section of aircraft with a heavy focus on post-WWII military models. There are a few Vintage, WWI, and Golden Age airplanes, and lots of examples from the

Korea and Vietnam eras. There are none of the typical WWII warbirds used by the Allies (Mustangs, Thunderbolts, Spitfires, etc.), but there are a couple German examples like the **Messerschmitt Me 262**

05: The museum's collection of vintage aircraft is pretty thin. But this **1903 Wright Flyer** replica is an exact replica of the real thing.

06: This **Curtiss D-III Headless Pusher** replica was built in 1990 and was fitted with an OX-5 engine. That's not the standard engine for a Curtiss Pusher, but it looks pretty good and the original Curtiss engines are pretty scarce.

07: A **Curtis JN-4D Jenny** is a beautiful airplane when sitting on the flightline. With the covering removed, it's even more impressive. This one is a replica based on the Canadian "Canuck" version of the JN-4.

08: I couldn't find much information on this de Havilland (Airco) DH-4. This one is decked out in early U.S. Post Office Air Mail livery and is either a recent replica or an outstanding restoration.



05



06



07



08

Field Trip: Evergreen Aviation & Space Museum

Schwalbe jet fighter, Focke-Wulf Fw 190 Würger, and one or two others.

Model Airplanes

There are a few built-up model airplanes scattered around the main building. There's nothing spectacular and they mostly look like they were added in as an afterthought to fill in some open areas. The workmanship on most of them is pretty good, but probably not what most of us would consider "museum quality." I wouldn't recommend a trip to the museum to admire the model airplanes.

Docents

I've mentioned lots of times that docents are my favorite resource at museums. At the Evergreen museum, docents were *everywhere*. When we took the Spruce Goose tour, there were *six* of them waiting at the main entrance to greet us, tell us a little about the airplane and make sure we had a knowledgeable escort as we walked through the aircraft. They were all well-informed and happy to answer questions. The one time I asked to be allowed to cross the chains and take a walk around of the **de Havilland DH 112 Venom**, the chain was down before I'd finished asking. Granted, it was a weekday and visitor traffic was pretty light, but I love the commitment of these guys.

The Spruce Goose is Everywhere!

As you'll notice from the photos in this article, it's virtually impossible to take a picture of anything in the Evergreen building without including at least a part of the Spruce Goose—it's like the ultimate photo bomb. So I didn't even try. Wherever you see an odd, silver-gray shape in the background of a photo, odds are it's some part of the Goose.

It turns out, the museum building was designed specifically for displaying the Goose. In fact, the Goose was brought into the building in pieces and assembled there since there's no door big enough to allow it to be transported intact.

09: The museum's sole representative of WWI aviation is a **Sopwith Camel** replica that was built from original factory drawings 1989 and 2004. It's powered by an original Gnome rotary and mounts a pair of original Vickers machine guns. Although it's airworthy, it's never been flown.

10: The **JB-2 or KUW-1 Loon**, was an American copy of the German pulsejet-powered V-1 or "Buzz Bomb" of World War II. This is one of the few WWII representatives you will see at the museum.

11: This **Curtis Model 51 Fledgling** was actually used as an air taxi by the Curtiss Flying Service. It was fully restored in 2009 by museum staff.

12: No self-respecting airplane collection would be complete without a **Piper J-3 Cub**. This one looks like it's just flying through the hangar.



09



10



11



12

Field Trip: Evergreen Aviation & Space Museum

All in All...

Overall, I was hugely impressed with the Evergreen Museum and I highly recommend that if you're in the 'hood, you stop by. They have discounts for AAA and senior citizens so it's a pretty affordable way to spend a few hours immersed in aviation. Would I go again? In a heartbeat! If for no other reason than to explore some more. The two *giant* buildings plus all the back-office archives mean you could spend days roaming the facilities and still never see it all.

Let me know when you want to go and I'll do my best to tag along.



14



15



13



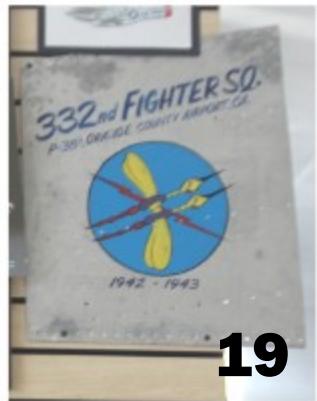
16



17



18



19

13: This **Gee Bee Model E Sportster** replica was built in 1987 using original Granville brothers' construction drawings and documentation. It spent a lot of time in the air during the 1990's and early 2000's before being acquired by the museum.

14: This **Consolidated PBY-5A Catalina** started life as a Canadian-built Vickers "Canso." It served the RCAF from 1943 to 1951. It was repurposed a number of times before being acquired by the museum and fitted out with US Navy colors.

15: Because we usually only see it operating off water, many people are not aware that the **PBY-5** was actually an amphibian that can operate from water or land. Here's what that landing gear looks like when extended for dry land operations.

16: This particular **Curtiss C-1 Robin** was built in 1929 and served for many years with a flight school in the Midwest. The original Curtiss OX-5 engine was replaced by a much larger Continental radial and flown in that configuration for a number of years before the airplane was donated to the museum.

17: Speaking of **Piper Cups**, this **L-4H Grasshopper** version was built sometime in the mid-1950's. It was restored and in 2007 was named Reserve Grand Champion Warbird at Oshkosh.

18: The **cockpit of the L-4H** looks like it's ready for the pilot to jump in and fly off on his next mission.

19: The museum holds a number of examples of **nose art** in its collection. Here is an example from an unknown Lockheed P-38 Lightning that was assigned to a squadron operating out of Orange County, CA Airport.

Field Trip: Evergreen Aviation & Space Museum



20: This **Beechcraft D-17A Staggerwing** has an interesting and unique history. It was the first D-17A ever built and is the sole survivor of the type. During WWII it was used as a personnel transport throughout the Southeast. After the war it went through several owners before being donated to the museum.

21: Not many people know that the frame design of the **Beechcraft T-34 Mentor** was based on the Model 25 Bonanza. The T-34 on display here was built in 1956 and flew for the U.S. Navy out of multiple Navy bases in Florida. It was restored and painted in its current colors by the Evergreen Restoration Team.

22: I couldn't find much information on this **Messerschmitt Me 262 Schwalbe (Swallow)** but it's a beautiful restoration of an example of the first production jet fighter to see action.

23: Looking straight down the intake of the engine pod of the Me 262, you can barely make out the vanes on the original **Junkers Jumo 004** jet engine.

24: This is definitely not your ordinary **Stearman PT-17 Kaydet**. This one was built in 1945 as a **U.S. Navy N2S-5** and after being retired by the Navy, it was fitted with a 450 HP engine and smoke system and worked in the air show circuit. .

25: Before being acquired by the museum, this **Douglas A-26C Avenger** was used by the USAAF at the end of WWII, then by the French in Indochina. It was returned to the USAF in 1954 and sold to a company in Montana that converted it to a water bomber for fire suppression. Museum staff spent 6,000+ hours restoring it to its original configuration.

Field Trip: Evergreen Aviation & Space Museum

A Final Note

So, I could go on like this for pages and pages. There are literally hundreds of airplanes, drones, helicopters, rockets, artifacts, displays, exhibits, etc. to see at the Evergreen Museum. What I'll close with are some random things that aren't necessarily airplanes, but I found them interesting. When you take your trip to the museum, we can see what we missed and swap photos. In the mean time, Let me know if there's something specific you were hoping to see and I'll go through my pics to see if I have something on it.



29a



29b



32



30



31a



31b



33a



26



27



28



33b

26: This Boeing 747 looks like the very definition of STOL.

27: I didn't get the whole story on this **Lockheed SR-71B Blackbird** but it looks complete and ready to fly. The small airplane hanging in the upper left of the photo is a **Teledyne-Ryan AQM-34N Firebee** drone. It was acquired from the USAF but all the serial numbers had been filed off so no one is quite sure of its operational history. The Firebee started life as a target drone but was modified to fly reconnaissance missions over Viet Nam.

28: This is what a **Blackbird** looks like with the "hood" open and one engine removed for servicing.

29: It's a little difficult to see but when you're standing in the middle of the **Spruce Goose's** fuselage, **29a** shows the view looking aft and **29b** shows the forward fuselage area. This is the main deck—there's also a lower deck and an upper.

30: I thought it interesting that the Restoration Department does pretty much what we do when painting this **de Havilland DH 112 Venom**: mask off the parts you don't want to get paint on and spray the rest.

31: There are those who believe the **Apollo Lunar Lander** (**31a**) only landed on a back lot at Paramount Studios. The same people will also try to convince you that the **Apollo Command Module** (**31b**) never returned astronauts to the surface of the earth. Gotta feel sorry for the flat-earthers of the world.

32: I'm not sure what this is but there was some signage next to it indicating that it's some sort of Russian interplanetary spacecraft. I just think it looks really cool.

33: There are 20+ helicopters in the collection. I don't know much of anything about helicopters so I offer **33a** and **33b** to anyone interested.

Field Trip: Evergreen Aviation & Space Museum

[ed. Note: It's not possible to provide complete coverage of a museum the size of Evergreen. The article I provided covers a teenie part of the entire collection. The following is a list of all the things I saw that I was interested enough in to take a picture. Your interests will be different and you'll be looking for different things. All I can recommend is that if you ever get up to northwest Oregon, plan at least one day at Evergreen.]

- Bede BD-58 Micro
- Beechcraft C-45 (Model 18) Expeditor
- Beechcraft D-17A Staggerwing
- Beechcraft Model 35 Bonanza
- Beechcraft T-34 Mentor
- Bell HTL-3 Helicopter
- Bell UH-1H Iroquois (Huey) Helicopter
- Boeing 747 Evergreen
- Boeing 747 STOL
- Cessna O-2A Skymaster
- Consolidated PBY-5 Catalina
- Convair F-102 Delta Dagger
- Convair F-106A Delta Dart
- Curtiss C-1 Robin
- Curtiss CW-A22 Falcon
- Curtiss D-III Headless Pusher
- Curtiss JN-4D Jenny
- Curtiss Model 51 Fledgeling
- de Havilland DH 112 Venom
- de Havilland DH-4
- Douglas A-1E Skyraider
- Douglas A-26C Invader
- Douglas A-4 Skyhawk
- Douglas C-47 Skytrain
- Douglas DC-3A
- Fairchild Republic A-10C Thunderbolt II
- Focke-Wulf Fw 190 Wurger (Shrike)
- Gee Bee Model E Sportster
- Grumman F-14D Tomcat
- Grumman JRF-235 G (G-21A Goose)
- Grumman OV-1 Mohawk
- Grumman TF-9J Cougar
- Helicopter - Bell AH-1F Cobra
- Helicopter - Bell H-13 Sioux
- Helicopter - Crop Duster
- Helicopter - Piasecki HRP-1 Rescuer
- Helicopter - Sikorsky HO3S-16
- Hispano HA-200 SAETAS
- Hughes H-4 Hercules
- Lockheed F-94C Starfire
- Lockheed SR-71B Blackbird
- Lockheed T-33A Shooting Star
- LTV A-7 Corsair II
- McDonnell Douglas VC-9C Skytrain II
- McDonnell-Douglas F-15A Eagle
- McDonnell-Douglas F-4 Phantom II
- Messerschmitt Me 262 Schwalbe (Swallow)
- Mikoyan Guryevich MiG-15
- Mikoyan Guryevich MiG-17 Fresco
- Mikoyan Guryevich MiG-21 Fishbed
- Mikoyan Guryevich MiG-23 Flogger
- Mikoyan Guryevich MiG-29 Fulcrum
- Naval Aircraft Factory N3N-3 Canary
- North American F-86H Sabre
- North American FJ-3 Fury
- North American SNJ-4 (AT-6C) Texan
- North American X-15
- Northrop F-5E Tiger II (outside)
- Northrop Grumman RQ-4A Global Hawk
- Piper J-3C-65 Cub
- Piper L-4H Grasshopper
- Pitts S-2B
- R-8 Glider
- Republic F-105G Thunderchief
- Republic F-84 Thunderstreak
- Republic RC-3 SeaBee
- Republic-Ford JB-2 (or KUW-1) Loon
- Russian Aerobatic Airplane
- Ryan NYP Spirit of St. Louis
- Scaled Composites X-38 Escape Plane
- Sopwith Camel
- Stearman PT-17 Kaydet
- Taylorcraft Auster AOP.6
- Teledyne-Ryan AQM-34N Firebee
- Unknown Russian Airplane (Maybe MiG-23?)
- Vultee BT-13 Valiant
- Wright 1903 Flyer

SEPTEMBER 2022 SQUADRON MEETING

Commander Mike Greenshields talked about the upcoming OCMA Swap Meet, W&C Builders Wing, and the upcoming annual **Squadron Christmas Party**. The swap meet is pretty simple: Show up on Saturday morning, pay your five bucks, and sell everything you have in the back of your truck. Then go buy a bunch of stuff so you don't go home empty handed. The Builders Wing is gathering steam with several members already committed to completing projects. (See below for more details.) The Christmas Party is still a bit up in the air. The event planners (Mike, Joni, and anyone else who cares to help out) are looking for menu suggestions.

All that stuff was great, and you can read about it in the meeting minutes. But once we got through all that, we moved on to what everyone was really there for... **Show & Tell!**

Rob Hahn – Grumman F-11F1 Tiger: Rob has done some pretty amazing work on his old Berkeley kit. From the outside it looks much like the kit design. Internally, however, he's built virtually everything from scratch. Most of the airframe is now complete including the hand-cut markings. He's still tweaking the Cox .020 Pee Wee to make it behave the way he wants. He finally settled on white UltraCote and matte gray Monokote for covering with hand-cut markings. Rob says first flight could be any day now.



Eric Puchalski – Stinson SR-9 Reliant: I brought along some parts for the model. When I acquired this kit some years ago, someone had started framing up the fuselage and empennage. The stab and elevators aren't too bad but the fuselage was nowhere near straight. The fuselage formers were misaligned which resulted in very wavy stringers on the top and bottom of the fuselage. So I disassembled the fuselage, cleaned up the formers, and got everything ready to be reassembled. Progress!



September 2022 Squadron Meeting

Tim Cardin - Republic P-47 Thunderbolt: Tim brought along parts from the 110" Jug that he's completing in memory of **Ed Woodson**. Tim mentioned a number of challenges he's working through. This night he mentioned the paint that he obtained from Warbird Colors which is a semi-gloss satin that he's thinning 2:1 with Windex to work with his HVLP sprayer. He also described the complexities of building a cowl that will provide enough airflow over that big Moki 250. With a 30" four-blade prop and fixed cowl flaps, he thinks that's not going to be a problem.

Tim has been an Airtronics man for decades but Ed was a Spektrum guy. Ed's radio was a DX-18 that he had already set up for many of the control functions and mixes. Tim's keeping the Spektrum, Ed's programming, and learning the rest.

Like most of us, Tim is optimistic about how much time this project will take but he thinks the model will be ready to fly (although not necessarily "finished") by mid-October.



Ed McCormick – RAF S.E.5a: Ed impresses me as one of those guys who always did extra credit homework at school—even when he already had an "A" in the class. He explained that the simulated rib stitching and finishing tapes are finally applied but not before he tried several methods and selected the one that he thought was best. He also explained why it took multiple attempts with the Stits paint to get exactly the finish he's looking for. For covering and paint, Ed has gone all-in on the Stits system and is very happy with the results. The covering has been glued and shrunk, and the first coat of dope has been sprayed on. This will be followed by Stits sandable primer and a silver undercoat for UV protection.

The airframe is pretty well complete with all the hardware and brackets ready to go. Power will come from a Zenoah G38.

When pressed for a "first flight" date, Ed suggested "fourth quarter, 2022."



September 2022 Squadron Meeting

Wayne Spani - DFS SG 38 Schulgleiter: Wayne brought along his glider project that he's building from a ValuePlanes kit. Always one to do his research, Wayne provided a detailed history of the full-size Schulgleiter and explained how it was designed to not only teach aspiring German Luftwaffe pilots the fundamentals of aircraft control, but also to provide basic airframe and power instruction.

Wayne has nothing but good things to say about the quality of the kit. He'll be covering it with Oratex from Balsa USA and expects it to come in around 16 lb. ready to fly. The full-size airplane was normally launched using bungee or tow line but could also be fitted with a small two-cylinder engine in a pod over the wing. Wayne isn't sure which method he'll use and is considering setting up for all of them.

At this point, the airframe is complete and ready for final sanding. Then will come staining, covering, varnish, and final markings and details.



John Wencel – Republic P-47 Thunderbolt: John's P-47 began life several years ago as a TopFlite .60-size ARF. John said this was his first .60-size model and he's been flying it for about five years. He has a *lot* of flights on it and it's one of his favorites but over the years it has suffered a lot of "hard landings." Fortunately, the model is of the built-up variety so those landing mishaps have provided opportunities for a lot of "structural upgrades." Last summer he stripped the covering, touched up the airframe, and re-covered it with Oratex from Balsa USA. He applied a completely different set of markings from Callie Graphics. During the overhaul he also installed a retractable tail wheel.

John powers the 63" model with a DLE-20 two-stroke gas engine that he says pulls the 12.5 lb. airplane around nicely.

In these days of "disposable" models, it's great to see someone willing to invest the extra effort in keeping an old favorite airworthy.



GADGET DEPT: ENGINE STARTING PISTOL

And now for something completely different...

[*Ed. note: I've mentioned that I love going through old model magazines and I'm often surprised at how little our hobby has changed. Sure, we have materials that weren't even dreamed of 50 years ago and our forebearers didn't have access to a couple hundred million workers in China standing by, ready to build our models. But, for the most part, we're still tinkerers who enjoy using a new gadget. For those of us who still fly small nitro-powered airplanes and would prefer not to hand-prop our engines, here's a slightly different take on a chicken stick. I found this in the 1948 Aeromodeller Annual from England. I offer it here in its original form and format.*

It's one of those things that looks like it just might work. And one wonders why we haven't seen something like it in use already. Now if only someone (Rob?) would build a prototype...]

GADGET DEPARTMENT

Engine Starting Pistol

A LOT of time has been spent thinking out a simple and portable mechanical starter for power models. The starting pistol described here, provides the answer in a simple and safe manner. It requires no special skill in construction and can be modified to suit components that may be readily available. A similar pistol was recently demonstrated to us at Eaton Bray, which worked quite well with engines of small capacity, but lacked power to turn over a larger motor where its employment would have been readily appreciated. This pistol, however, which hails from Italy, has enough punch to turn over motors up to 5 c.c. at least, and a stronger spring could easily be incorporated to turn over the largest engine in normal use.

The pistol comprises two main parts :

- (a) The hand grip and trigger with a spring holding it in the off position.
- (b) The prop engaging dog and spring winding mechanism.

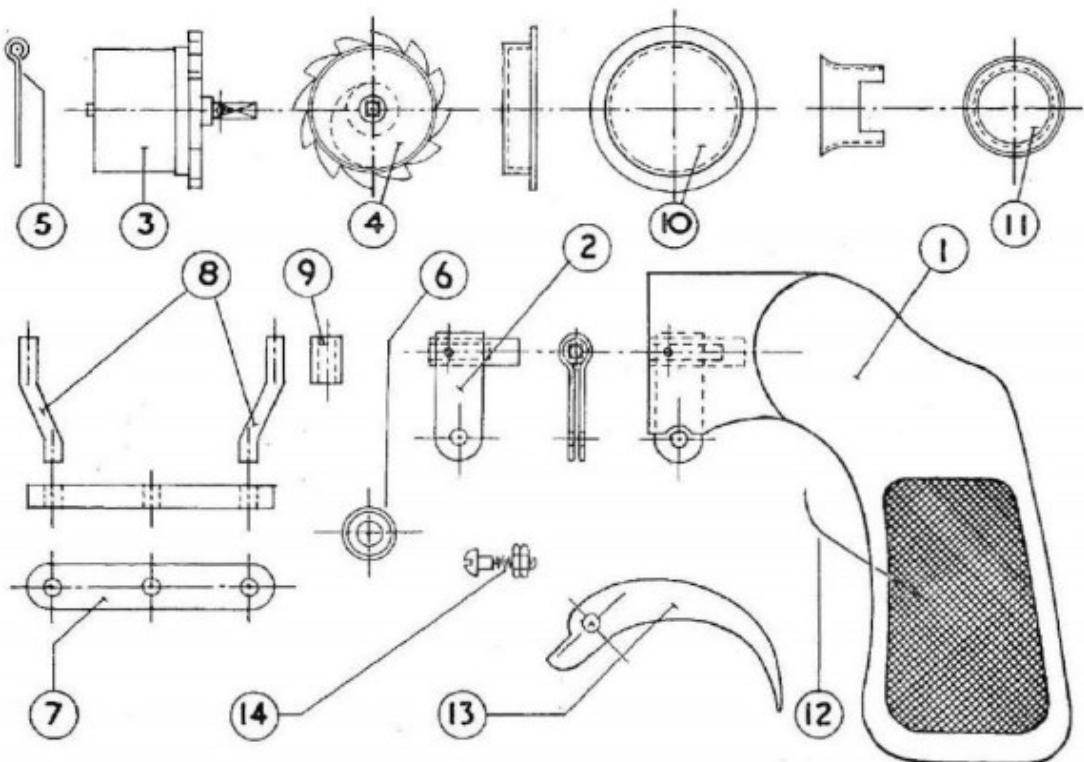
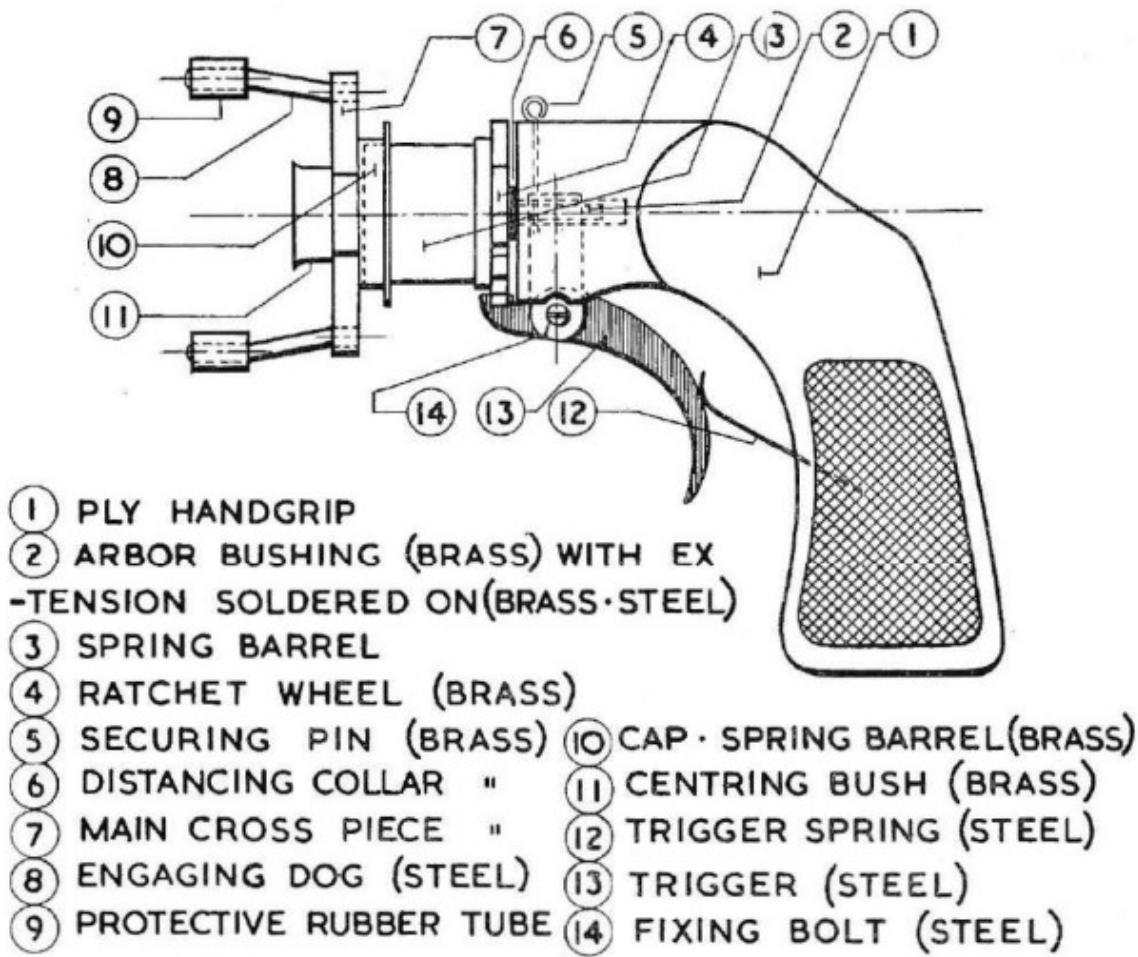
The handle is made up of thick plywood, or any other suitable material fixed to a hardwood base, which houses the arbot bushing. It can be given a knurled finish like its more lethal counterpart or left a plain wood. An extension piece is soldered to this arbot, making a firm fixing for the pivoting bolt holding trigger in place.

The operative part consisting of a spring barrel and ratchet wheel, held normally at the off position by the spring loaded trigger, and a crosspiece with two engaging dogs for the airscrew can be made up as shown, or in many cases suitable ex-government surplus parts can be found that will obviate any fabrication.

Two methods of winding up are available. The user can simply wind up by turning the dog in the opposite direction to that required for starting, when the ratchet wheel will freely click round. Alternatively, a length of cord can be wound round the spring barrel and pulled sharply thus winding up a good store of energy. This method is to be preferred for larger size engines.

A helper then holds the model firmly and the starting pistol is applied to the airscrew, the trigger released and a good healthy swing results. Should the engine backfire, then the starter's hand will be pushed back, disengaging the dogs—and no harm done. A few hours spent making the starting pistol will be repaid by possession of an entirely practical inertia starter, and a happy freedom from cut fingers and black fingernails.

Gadget Dept: Engine Starting Pistol



MONTHLY MEETING NIGHT

Monday
October 10, 2022
7:00pm

The October 2022 Meeting is On!

Bring along your **Builders' Wing** projects and anything else you have that you'd like to show off or talk about. Joni, Randy, and Mike will be looking for ideas for the **annual Christmas party** so come prepared with an opinion about that.

Remember that visitors are always welcome so don't be shy about bringing someone. And remember that anyone with *anything* for **Show & Tell** will receive a raffle ticket for special prizes to be raffled off at the Squadron's Annual Banquet in December.

Meeting location is the **Green Valley Adult Clubhouse**. The address is:

17250 Los Jardines West
Fountain Valley, CA 92708

Directions from the South:

- From I-405 North, exit at Euclid
- Turn Left onto Euclid at the offramp
- Turn Left onto Slater
- Go *past* Los Jardines East
- Turn Right at the light onto **Los Jardines West**

The Clubhouse is on the right about a half block past the school on the left.

Directions from the North:

- From I-405 South, exit at Brookhurst North
- Merge onto Brookhurst and turn Right onto Slater
- Turn Left onto **Los Jardines West**

The Clubhouse is on the right about a half block past the school on the left.

UPCOMING EVENTS

Special Note Regarding Events

A list of upcoming scale events that are easily reachable from Southern California is included here. We encourage everyone to participate in as many of these events as possible in order to show support for clubs that have gone through the same difficulties that the Scale Squadron has experienced recently. Remember that when you attend any of these events, ***you are an ambassador of the Scale Squadron.*** Be sure to mention your affiliation with the Scale Squadron and represent us well! (Also, bring back lots of photos and get them off to **Eric Puchalski** so they can be included in the next newsletter.)

Date	Host & Location	Event & Summary
Oct 19-23	Arizona Model Aviators Superstition Airpark, Mesa CA	2022 US Scale Masters Association Championships Details on this event are a little sparse right now but there should be more information as the event gets closer.
Oct 21-22	Victor Valley R/C Flyers Hesperia, CA	Warbirds Over the High Desert Scale warbirds open to all. \$50 entry fee includes lunch. 500ft. Runway with electricity for chargers.
TBD but Probably Nov 2022	Hemet Model Masters Santa Maria, CA	Scale Masters Clinic Beginners' workshop hosted by U.S. Scale Masters. Bring your own model & learn skills required to be confident & competitive. \$10 entry fee, includes lunch. Class starts at 8:00am & covers all aspects of model selection, documentation, presentation, briefing judges, flying, etc. POSTPONED



Errors & Omissions:
If you note any errors in any information in this list or the flyers on the following pages, please contact **Eric Puchalski** or any of the members of the Scale Squadron Board of Directors. If your club is hosting a scale-themed event that's not on this list, contact Eric to get the event added to the list. If you have flyers, an informational website, or online registration page we would be happy to include that in this section as well.

ARIZONA MODEL AVIATORS

PROUDLY PRESENTS

U.S. SCALE MASTERS ASSOCIATION

41st



2022



National Championships

Model Aviation's Most Prestigious Annual Event



Reigning Grand Champion

October 19 - 23

Spectators
Welcome!



LTV A-7 Corsair by Chris Wolfe

Mesa
Arizona



At Superstition Airpark Meridian rd. & Levee dr.



R/C Scale Contest

Pilot's Compete for Prizes and National Recognition

Tim Dickey - tdickey2@icloud.com | Paul Goldsmith - pt19nut@aol.com
480-540-7553 602-323-7753

www.usscalemasters.org

www.azmodelaviators.com

Warbirds over the High Desert!



\$50 Entry / Free for spectators

VICTOR VALLEY
RC

6963 Arrowhead Lake Rd,
Hesperia, CA 92345

VVRCF.ORG

FREE LUNCH WITH ENTRY

OCTOBER 21ST-22ND, 2022

8:00 AM - 6:00 PM

500FT. RUNWAY & ELECTRICITY

PREREGISTRATION CONTACT:

Brian Hueffmeier: 909.229.8943
bhueff@gmail.com

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In Front of Judges

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we will teach you additional skills to be
confident & competitive

Beginner's
Workshop

Will
focus on the
entry-level class

Landing Fee \$0

Clinic Starts at 0800 | Lunch available at 1100
(Catered by Scales include: (as time permits)

- Most Often Asked Questions & Misconceptions
- Selecting Best Model Based on Skills and Class Entered
- Preparing Documentation for Model of YOUR Choice
- Learn to Brief Flight Judges & Selection of Flight Maneuvers
- Understanding Relationship w/your Caller
- Score Sheets / Judging Your Model / Contest Flying Basics
- Q&A Session w/instructors, judges, coaches

Craftsmanship judging available
for improving your scores

Learn About the Different Classes:

EXPERT

TEAM

ADVANCED*

PRO/AM PRO*

PRO/AM SPORTSMAN*

(*ARFs allowed)

(**No 3D flying)

AMA Required to fly | Turbines: waiver required

C.D./ Contact: Curtis Kitteringham

cak11@cox.net

(760) 807-5519

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U.S. SCALE MASTERS

www.usscalemales.org

Advancing & Promoting the Hobby of Remotely Controlled Scale Miniature Aircraft

Many people from all walks of life find it fascinating to produce a miniature working replica of a full-size object, be it a doll house, sailing ship, or operating steam locomotive. In our case it is our passion for flying machines that motivates Scale Squadron members.

Today as scale modelers we pursue nearly every possible aviation subject with the confidence that not only will our project be successful, but that it may well outperform that of its full-scale counterpart.

Squadron members delight in the pursuit of authenticity for scale projects. This requires research and documentation of specific aircraft and their variants.

Many of the flying replicas thus created are of Museum Quality and our members take to the skies with these flying miniatures regularly and successfully.

On the other hand, not everyone wants to make a scale masterpiece. That's OK, too! Whatever pleases you is what counts. Whether you are kitbashing, volunteering at charity aviation events, or making molds from scratch for Scale Masters or AMA National Championship competition scale aircraft, Scale Squadron is a club that embraces all facets of scale aviation R/C modeling and the related community.

Scale Squadron Club Meetings are held on the

second Monday of each month at:

Green Valley Adult Clubhouse
17215 Los Jardines West
Fountain Valley, CA.

Meetings start at 7:00PM and last about 2 hours.

Our meetings throughout the year include the usual club business as well as Member Show & Tell, Modeling How-Tos, Aviation and Industry presentations, and good ol' time social gathering to help enlighten and encourage our membership to push the boundaries in the art of Miniature Aircraft Replication. Visitors are always welcome. All members and visitors alike are encouraged to bring their latest scale models and projects!



JOIN US!

Membership Requirements

Membership in the Scale Squadron is open to all Academy of Model Aeronautics (AMA) members who are interested in safe formal and informal flying, including the research, building, and flying of Scale R/C Miniature Aircraft.

Membership Annual Dues are \$30.00 covering January 1 through December 31. Membership begins after verification of your current AMA membership card, your FAA Small UAS Certificate of Registration, and receipt of Scale Squadron membership dues.

The Scale Squadron Board reserves the right to deny or delay new membership approval.

Membership Benefits

Membership in the Scale Squadron includes:

- ◆ A subscription to the *Scale Dimension* monthly online newsletter.
- ◆ Squadron membership card and name tag.
- ◆ Advance notice of scale aircraft events.
- ◆ Annual Holiday Banquet for members and one guest.

Membership Meetings

Meetings are the second Monday of each month at 7:00pm. The December meeting includes the Annual Holiday Banquet and raffle drawings for anyone who presented a topic at any of the monthly meetings.

See the *Who We Are* section of this issue for details on the meeting location.

How to Join

If all this sounds like something you would like to be a part of, you can join us in a couple ways:

1. See the last page of this issue for a membership application. Fill out the form and submit it along with the required supporting documents.
2. Use the [Online Form](#) on the Squadron's website to provide basic information and pay the membership dues. A copy of the online form will be sent to you via email. Print this out and submit it with the required supporting documents.

How to Submit Your Application

All membership application submissions must include:

- ◆ A hard copy of the membership application form
- ◆ If the membership dues were not paid online then include a check for \$30.00 made payable to "Scale Squadron." Dues are not prorated if you join after January 1.
- ◆ A photocopy of your AMA membership card
- ◆ A photocopy of your FAA Small UAS Certificate of Registration

Mail these to:

Scale Squadron Membership
PO Box 8074
Fountain Valley, CA 92728

You will receive your membership card and instructions for how to obtain your key to the OCMA field by return mail in about a week.

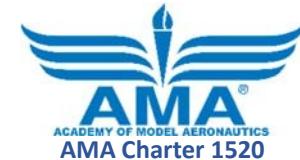


SCALE SQUADRON OF SOUTHERN CALIFORNIA

THE SCALE SQUADRON
OF
SOUTHERN CALIFORNIA



MEMBERSHIP APPLICATION



Membership in the Scale Squadron is open to all AMA members who are interested in safe, formal, and informal flying, including the research, building and flying of Scale R/C Miniature Aircraft. Membership Annual Dues are \$30.00 covering January 1 through December 31. Membership begins after verification of your current Academy of Model Aeronautics (AMA) Membership Card and receipt of Scale Squadron membership dues. Membership in the Scale Squadron includes a monthly newsletter and Squadron name tag. Meetings are the second Monday of each month at 7:00pm.

NEW RENEWAL Recommended by _____ DATE _____

Name _____ Spouse _____

Address _____ City _____

State _____ Zip Code _____ Email _____ Birthday _____

Home Phone _____ Work _____ Ext _____ Mobile _____

AMA# _____ FAA _____ USSMA _____ FCC/Ham _____ EAA _____

MODELING INFORMATION

Years in R/C _____ Modeling Level: New Intermediate Expert Need Help

Interest Area: WW1 WWII Golden Age Civilian Vintage Jets

Private or Commercial Pilots License & Type Rating _____

Are you interested in Scale Competition? Yes No Would Require Assistance

How did you hear about the Scale Squadron? _____

GENERAL INFORMATION

Meeting Preferences. Check all areas that you would like to see at the monthly meetings

How To Videos Guest Speakers Scale Techniques Scale Contest Prep

Your Ideas _____

Would you be willing to assist at Scale Squadron Events? Yes No Maybe with Help

Registration Gate Flight Line Judging Scoring Cooking

Comments _____

NOTICE: This information is only for the Scale Squadron Data Base and will not be shared or sold to any outside agencies.
Your information may be used in a Scale Squadron Membership Guide available only to paid members.