

THE SCALE SQUADRON
OF
SOUTHERN CALIFORNIA



Founders of the
US Scale Masters Championships

SCALE DIMENSION

Official Newsletter of the Scale Squadron of Southern California



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Founders & Proud Supporters of
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On the Cover

1. Phil Bland finishing another great flight with his North American T-28 Trojan.
2. Pat Schreffler flying by with his beautiful Boeing-Stearman N2S-3 Kaydet.
3. Unidentified pilot landing his Grumman F-9 Cougar.



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Mike Greenshields
Commander

Squadron Members, Friends, Family,

Last year I wrote a bit of a “state of the union” kind of article for December that included some Soap Box style comments. Eric, our prolific Newsletter Editor, has asked for something like that again: a way to wrap up the year. I agree it’s entirely appropriate.

First, I thought a year would help, but it really hasn’t so much. With the loss of another member this year (Gonzo) I am reminded still that the losses of the last couple of years run deep. I miss our friends and I’m sure you do too. I hope we continue to honor them in some small way with this great club we’ve got here and the things we do together. The Squadron really is a place to gather, and I must say I am truly thankful for you all. Take a moment, it’s OK...

Second. We have a board and it includes a change. Gordy is retiring and **Joe Trama** is stepping up! Thank you to our CD and board members of 2023. This club was well run this year and we have each of you to thank for it. Eric, Tim, Joni, Jon, Gordy, Larry, THANK YOU!

On with the show... 2023 in the hobby and in our Squadron saw some bright highlights. Warbirds & Classics was off the charts with participation. Pilot involvement was big, the models were beautiful, and the Squadron and OCMA staff worked hard to

host a great event. And... *People saw it.* Spectators galore! Almost like the good ol’ days! It was the feel-good top-moment of the year. And, if that’s all that happened this year, that would be enough. But it doesn’t end there.

This club got *active*. The Builders Wing inspired so many of you. The started projects, the completed-projects, the quality of the work, and the meeting presentations of that work all combined to propel us forward. To each of you who tried to get a model done, AWESOME. For those of you who finished, AWESOME! And now for next year, we can all finish what didn’t get done this year in time for Warbirds & Classics 2024!!!

Let’s go *flying!* I saw myself and more of you flying this year than I have in years. *Thank you* Joni and Randy for spearheading the effort to make an official OCMA flying day for our club each month. You can bet we’ll be doing that in 2024! I felt like more and more of us truly got a chance to share our modeling work and enjoy this hobby. And finishing up at the OCMA Toys for Tots and seeing all those modelers bringing toys (there was like a billion of them) was the icing on a pretty tasty cake.

New for 2024. Along with the yearly efforts you’d expect: Warbirds & Classics 2024, Monthly flying days, and an energized effort for the Builders Wing, this club is *pushing ahead!* People love NEW (me included) so here’s the NEW STUFF:

Monthly Modeling Technique Presentations. Each month expect a presentation. We will get these on the calendar, but you can expect pro insights along with more club member involvement. We all have techniques we use to get the job done. We’re looking forward to sharing those insights. More info coming.

Field Trips. Pair up with a buddy! Eric made it clear, but **we will have some outings** that we can possibly do as a group. It’s a great chance to have some laughs, see some cool stuff, maybe even to collect scale details about project aircraft! I’m hoping for 3-4 outings this year to places that should inspire our modeling efforts while offering yet another way to have some fun as a group!

Commander's View

A **Scale Competition Event** later this year. As of this writing, this event has not even been shared with the entire board yet... it's *that new*. We will have a Scale Competition-Centric event give or take the first weekend of November. It may be a club-level competition, an "un-contest," or a full blown qualifier. *You*, the members will help make that final call. With so many great airplanes being finished and so many of you flying so actively, we are in the perfect place to get back into competition.

So, if you've stuck with me so far, I'm getting to the point—bear with me a little more. With the whole FRIA/FAA/Transponder thing figured out, our hobby is no harder to participate in than it ever was. The stress of that seems over for us. The hobby industry seems to have had a good year. We're seeing tons of new models from many suppliers again like Motion RC, Legend RC, Horizon, etc. We still have the same or more good suppliers and manufacturers of radios, motors, engines, batteries, chargers, building supplies, hardware, etc. to choose from. There are even ARF

turbine aircraft that are semi-reasonably priced! So, if you look close enough you can still get everything you need to complete your favorite scale model project. AND we're blessed with a great club (with many new members—Welcome aboard!) and a great place to fly.

(Here it comes...) To paraphrase our previous Commander, Sam Wright. *No More Excuses!!!* Let's power forward, get a cool project done, have an "old reliable" going so you can fly with your Squadron buddies every month, and let's have *two* successful Scale Events full of planes, pilots and people spectating!

Have a Jack and Coke and we'll see you at the Christmas Party Monday (Thank you Joni!) and at all of the events we have planned for 2024!

Your Flying Buddy,
-Mike

Mike Greenshields, Commander

Commander@ScaleSquadron.com



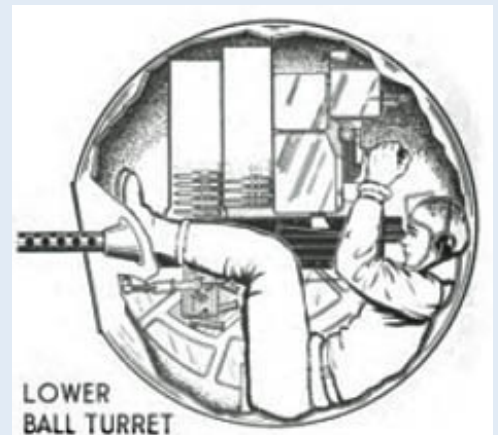
A Brief History of the B-17's Ball Turret

The Sperry Ball Turret is a defense weapon used on B-17 Flying Fortress and B-24 Liberator bombers during World War II. The turret was used to protect the vulnerable underside of the airplane. It had to be very small in order to create as little drag as possible. This made the interior of the ball extremely cramped, and indeed, the RAF considered it impossible to stay in the ball turret for an entire mission when they were first analyzing the plane. But gunners regularly spent 8-10 hours in the ball. Surprisingly, post-war analysis of crew fatality records indicate that the turret gunner was the safest job on the aircraft (the pilot's job was the most dangerous.)

The turret was built by the Sperry Corporation. It had two .50 machine guns with 250 rounds each. The ball was electrically powered, but had a hand crank to rotate the ball without power. Inside the ball was a first aid kit, a gunsight, the turret controls, interior lighting, breathing oxygen regulators, and a radio. There was also a plug to plug in an electrically heated flightsuit.

The gunner usually did not enter the ball until the plane was in flight, because of the possibility of landing gear failure. On the ground, the ball was only 15 inches from the ground. The ball was inaccessible from the inside of the airplane while on the ground. It was possible to enter from outside the plane by rotating the hatch toward the outside, but then the gunner would have to stay there during takeoff.

Two post handles worked to control the ball like joysticks, and each stick had a button to fire the guns. and the left foot controlled the gunsight, while the right foot operated a push-to-talk intercom switch to communicate with the rest of the crew.



Happy Holidays, Everyone!

Welcome to the final issue of *Scale Dimension* for 2023. Looking back over previous issues from this year, I'm impressed with everything that's gone on. I gave up on New Year's resolutions years ago but if I had to make one for 2024 it would be to make a little more time for model aircrafting. I certainly have plenty of projects in the pipeline and maybe 2024 is when they'll start showing up at the field.

Wish me luck on that.

OCMA Toys For Tots

The annual OCMA Toys for Tots event was a terrific success. I'm not sure how many pilots showed up but there were at least 25 pilots on hand and everyone brought more than one airplane. There were some really spectacular models on display and in the air. Take a look at **Page 16** to see what I mean.

Documentation: Airco DH.2

One of these days, this project will drift to the top of my build list. It's a pretty amazing airplane for its time. Before the DH.2 came along in 07/1915, Allied observation planes were being knocked out of the skies at will by Fokker E.III Eindeckers equipped with synchronized machine guns. The DH.2 bought the Allies some time to develop their own synchronized machine gun mechanism.

But the thing this airplane demonstrates more than anything else (to me at least) is the amazing courage of the men ("kids," really) who flew it at a time when airplanes were built of bamboo, spruce, a few cables, and Irish linen. Sitting in that open-air front cockpit and banging away at German fighters while being shot at yourself... I'm not sure I'd be up to it.

Dues Are Due

As always at the end of the year, it's time to renew memberships and registrations. With the advent of the FAA's new rules relating to UAS operations, things have become even more complicated. After talking with several people who were unsure about what's needed and when, it's apparent that there's a lot of confusion out there. To help with that, I've put together a checklist (**Page 18**) that new pilots and pros can use to make sure you have all your documentation in order.



Eric Puchalski
Newsletter Editor

Squadron Field Trips

I know we've been talking about it for a while now but I've finally put together a list of destinations for day trips to local(-ish) sites that we can experience as a group. I haven't pegged these to specific dates or come up itineraries yet but I'll have that done in time for the January meeting. Here's what you can start thinking about for the first few months of 2024:

- ◆ **The Miniature Engineering Craftsmanship Museum** in Carlsbad
- ◆ **Flabob Airport** in Riverside
- ◆ **Lyon Air Museum** at Orange County Airport
- ◆ **March Air Field Museum** in Riverside

These are all places I've visited and reported on in the newsletter over the past year or so. You can go back to the newsletter archives if you'd like more information about any of them. There are tons of other destinations in SoCal and over time we'll get to as many of those as possible. But this will get us started and we'll figure out what other interests we have.

I'll have details for you at the January Squadron meeting. In the mean time, if you have any ideas or thoughts, please pass them along.

I hope you have a terrific holiday season and a Happy New Year!

A handwritten signature in black ink that reads "ERIC" with a stylized underline.

roadkill1954@gmail.com



NOVEMBER 2023 SQUADRON MEETING

We had great turnout for the November Squadron meeting and also had a nice bunch of presentations for Show & Tell. Commander Mike Greenshields kicked things off and reminded everyone about the pending Christmas Banquet and a couple other things. First among the “other things” was OCMA’s **Toys for Tots** event on 12/02/2023. Mike encouraged everyone who could make it to do so. He also reminded everyone that the **2024 Warbirds & Classics** is already in the planning stages and that the **Builders’ Wing** will be a big part of that. Treasurer **Tim Cardin** was unable to make it but he relayed through Mike that we still have money in the bank and are looking good from a fiscal standpoint. **Joni Whitsitt** went over preparations for the Christmas Banquet. Then we got on to the good stuff...

Steve Penn brought along a few things that he said were “looking for a new home.” Steve is clearing out some old projects and offered some things to anyone who wanted to take them home and finish them up. This included a 32” rubber-powered **Piper PA-15 Vagabond** that had been started by Sam Wright but needed some finish work. He also had a partially-built Balsa USA **Spad X111 C1** but he didn’t recall who had done the work. The Spad went home with Mark Puchalski but the Vagabond went back to Steve’s warehouse. Contact Steve if you’re interested.



Commander Mike Greenshields showed a couple things. One of them was a **Malone Kayak Hammock Hoist System**. This is a pretty clever arrangement of pulleys and cables that was originally designed to allow storage of kayaks and other camping equipment up in the rafters of a garage. Mike uses his to hoist his larger airframes up into the wee spaces of the garage ceiling space. He’s very happy with the way it works and says it solves a lot of the storage problems for large models by getting them out of the main work area when they’re not being worked on.

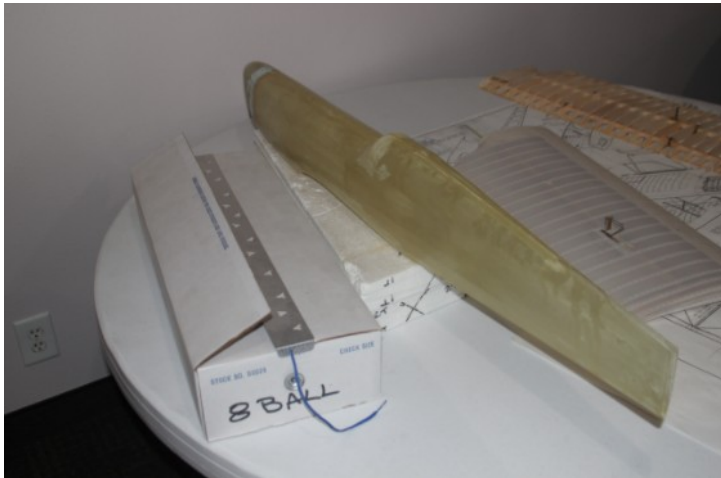


November 2023 Squadron Meeting

New member **Mark Puchalski** brought along his **Rider R-4 Firecracker** that he's building from a Bob Root kit. The Firecracker was a pretty hot ticket at the Cleveland Air Races from 1936-1939.

Mark's building his model from a kit that he acquired from AMA Hall of Famer **Bob Root** that Bob had designed for a "one design" racing event at the **Camarillo Flying Circus R/C Club** some years ago. The kit includes a fiberglass fuselage, foam cores for wings, and some bits of balsa and spruce. The original kit was designed for .35 2S power but Mark's going electric.

The good news is that the Planes of Fame museum at Chino Airport holds the original Firecracker so it will be easy to get information on the fine details. The kit wasn't designed for precision scale so Mark will have to decide what to include and what can wait for v2.0.



Mike Greenshields showed his progress on his **Partenavia P-68 Victor**. Mike explained that this is a *way* standoff scale model and the kit was designed as "easy build." That means a few liberties were taken with the kit design to make it easier to assemble. He pointed out that the fuselage on the full-sized Victor is rounded all over and blended at the joints. The kit he's working from, however, doesn't do a great job of representing most of that. So, he's added a lot of balsa to the inside of the fuselage to make it possible to round it out, and a lot of filler to the outside to fill in the gaps.

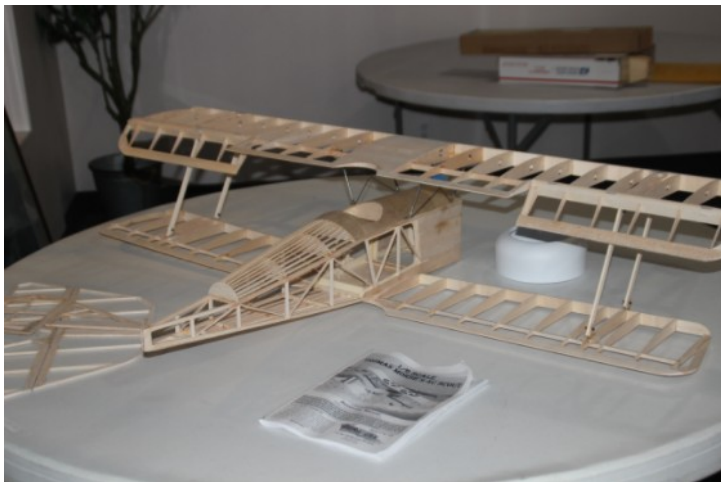
The kit has its origins in 1970s "standoff scale" thinking so if you look at the fuselage from the top or either side, the lines look pretty good. But if you compare the overall shape of the kit model with the full-size then it's obvious that some work is required.



November 2023 Squadron Meeting

New Squadron member **Pat Driscoll** started work on a Balsa USA kit of a **Thomas-Morse S-4C Scout** and brought it in to show his progress. The model is 1:6 scale and Pat chose it for a number of reasons, including the fact that at that scale the wings fit his work bench. He's done a lot of research on the S-4C and discovered that it has quite a history, which he is enjoying researching. It turns out the Scout was available in large numbers at the end of WWI as U.S. Army surplus. That led to a lot of them being flown as barnstormers and to a lot of Scout parts being available for home-built airplanes.

He intends to build it according to the plans and will not make any tweaks to make it "more" scale. He still has a number of decisions to make, such as power (it will be electric) and covering material. He's considering Oratex (Solartex) or something similar but is also open to fabric and dope. Paint is also up for consideration at this point.



Joe Trama is in love with warbirds. This month he brought in a **Vought F4U-5N Corsair** night fighter. He acquired this model partially-built and pretty much in the state you see here. It's a Jerry Bates kit and someone else did all the work up to now. Joe explained that the F4U-5N differs from the typical Corsair in that it was designated as a night fighter and mostly saw action in Korea. Its mission was to attack enemy supply lines, including truck convoys and trains, as well as interdicting night attack aircraft. There are slight differences in the cowl and air intakes on the wing, and a few other minor variations that distinguish it from the F4U's that were used in the South Pacific during WWII.

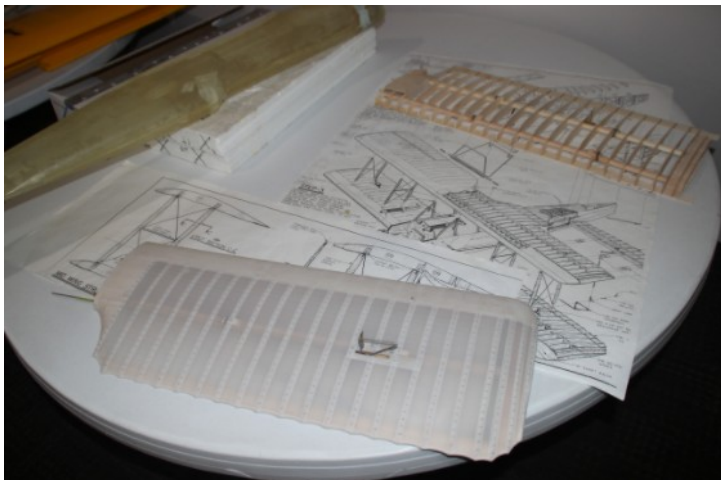
Joe is taking his time with this build so he has no idea when it will be finished. The finished model will have a wingspan of 89.5" and will weigh in around 35 lbs. He will include a full cockpit but hasn't settled on a power system or final color scheme.



November 2023 Squadron Meeting

Larry Wolfe has been working on his 1:6 scale **Spad XIII.C1** for a couple months and brought it in to show how far it's come. Larry is building this 63" wingspan model from a set of Bob Rich plans that were published in *RC Modeler* magazine in October, 1993. This is a plans build so Larry is working directly from the Bob Rich plans and cutting his own parts.

Since last month, Larry has taken the fuselage and wing panels about as far as they can go until final assembly. Everything's covered in Solartex and over the past month he's been working on rib stitching. Unlike most of us who look for clever ways to simulate stitching and taping, Larry decided he might as well stitch the ribs and then apply rib tape as all that was done in 1917. He spends a lot of time in front of the TV moving a large needle back and forth and applying actual rib stitches to all wing and empennage surfaces. The effect is *amazing* since it's the real deal!



Eric Puchalski brought in the Piper J-3 Cub he's been working on for a month or so and whined some more about the less-than-professional methods that the original builder used when constructing the kit sometime back in the 1990s.

The challenge seems to be that the two wing panels don't line up very well at the wing joint and it's a bit of a mystery how everything will hold together. The kit was designed in the 1980s and this particular model was built somewhat later than that. It's obvious that the engineering works since the model obviously has lots of flights on it but Eric is less than confident that everything will hold together in the air.

Next steps will be to build a new set of flying struts for the wing (including jury struts which were not included with the original model). The horizontal stabilizer is snapped off and will have to be rebuilt before a set of support struts for the empennage can be built.



MONTHLY MEETING NIGHT

Monday
December 11, 2023
7:00pm

The December 2023 Meeting is On!

This is the Squadron meeting you've been waiting for: **The Annual Christmas Party!** No business, no models—just food, fun, retrospection, and raffle prizes. See the flyer on the next page of this newsletter for specifics. A high point of the Christmas Party is always the **Show & Tell Raffle**. Anyone bringing something to the monthly meeting for Show & Tell receives a raffle ticket for their trouble. Here's where that all pays off! The only condition on the raffle is that winners must be present at the party. So hire a babysitter and **Let's Party!**

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.



It's Time for the 2023 Scale Squadron Annual Christmas Banquet!

- Date:** Monday, December 11, 2023 (our regular meeting night)
Location: Green Valley Adult Clubhouse (our regular meeting place)
6:00pm: Mixer
7:00pm: Dinner (catered by Stonefire Grill)
8:00pm: Awards Presentation & Raffle

So far, 2023 has been great year filled with lots of special highlights. Come join us for some Food, Fun & Frolic while we celebrate the past year & make plans for 2024.

Remember that the Christmas Party is free to all paid Squadron members and one guest. There will be a hosted bar with the traditional assortment of soft drinks and adult beverages.

We'd like to know how many to plan for so please RSVP to **Joni Whitsitt** (whitsittjo@gmail.com, 714-397-4046) or your favorite Board member.

See you there!



NOVEMBER SQUADRON FLY DAY @ OCMA

By Eric Puchalski

The November Squadron Fly Day at OCMA Field on Sunday, November 19 was the best one yet! The Scale Squadron was represented by around 10 members, all of whom brought something to fly. In addition, we had the lovely and talented **Joni Whitsitt** showing her culinary skills at lunch with her signature homemade baked beans, brats, hot dogs, and burgers.

The weather was perfect with mild temperatures, only occasional gusty winds, and a good-size crowd flying everything from BNF foamies to giant scale warbirds.

Two new Squadron members made an appearance, **Pat Driscoll** and **Mark Puchalski**. They were both favorably impressed by the pilot turnout and the number of airplanes. It's always nice to see new faces.

First flights are always stressful and everyone is happy when the outcome is good. This day, **Joe Trama** brought out his 72" **Pitts S-2B** that he's had for about a year and a half. The **DLE 60**-powered model had some initial trim issues but test pilot **Brian Young** quickly got all that under control. Everyone breathed a sigh of relief when Brian landed the model and declared it an excellent flyer.

Throughout the day there were several demonstrations of some really nice models that were flown by excellent pilots. These included **Brian Young** with his **T-6 Texan**; **Harry Middleton** flying a **P-40 Warhawk**; **Mike Greenshields** with his **TBM Avenger** and **Fly Baby**; **Tim Cardin** and his always popular **Fokker D.VII**; **Jaime Colley**



01



02



03



04

01: Friends, food, model airplanes, and beautiful weather. It just doesn't get any better than this. (Well, there's always beer, but that's for later.) If you missed the November Squadron Fly Day, you'll want to be sure to make the next one.

02: Lunch was great and **Chef Joni** made sure everyone had their fill.

03: **Joe Trama** had a lot of help with the first flight of his new **Pitts S-2B**. He's had this giant model for over a year but this was its first time out. Everyone was happy to see it perform so well.

04: Just look at that intensity! It's hard to tell who's got more at stake in that flight.

November Squadron Fly Day at OCMA Field

with a recently overhauled A-1B Husky; Ed McCormick brought his PT-19; Khoi Tran had a giant Spitfire. Squadron members Don Aitken and Jerry Thompson were also there as head cheerleaders. There were also too many sport models to list here.

As I said earlier, this was a great day to go flying in general and the best ever Squadron Fly Day. You'll want to be part of the next one.



05



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05: New Squadron member **Mark Puchalski** and his long-time brother, Eric, brought out a "technically" scale model: a 1:1 scale reproduction of a 1972 Joe Bridi designed **RCM Trainer 40**. Everything worked fine right up to the part where the throttle linkage separated from the servo and left the airplane in the air until the gas tank ran dry. No worries though, the dead stick landing was uneventful and a new servo control arm has already been fitted.

06: **Jaime Colley** flew his seldom modeled **Aviat Aircraft A-1C Husky**. Jaime's had the model for a long time but until recently it was laid up with a broken wing. Jaime decided to build a new wing (using foam and his laser cutter, of course) and he's tuning the flight characteristics.

07: One of our local **red tail hawks** made an appearance. He might have been curious about all the activity down in the pits but, more likely, he was attracted by the amazing smell of Chef Joni's cooking.

08: **Joni Whitsitt** showing the proper way to get everyone excited about lunch.

09: **Randy Wilbur** never misses an opportunity to show off the **Ugliest Stik** still in existence, and this day was no exception. Randy says the big problem is that the model just keeps on flying and the engine just keeps on chugging away. In other words, why walk away from a good thing?

10: **Mike Greenshields** brought out not one, but *two* models. While the day didn't end perfectly for his **TBM Avenger** (right) his **Fly Baby** (left) flew like a champ.

11: **Ed McCormick** brought out his old dependable **Fairchild PT-19** and did his usual excellent job of flying it in a very realistic manner.

12: **Tim Cardin's** **Fokker D.VII** never met an audience it didn't like. That's probably why he never fails to put on such an amazing airshow.

A CURE FOR THE GLUE BLUES

by Eric Puchalski

We all have our favorite way of sticking parts of our models together. The adhesives we use vary based on a number of factors: the materials being joined, expected loads on the joint, availability of certain adhesives, and, of course, personal preference.

I build a lot of wood models and I've never mastered the art of CA adhesives. About the only thing I can consistently stick together using CA is one or more of my body parts to airplane parts (**Photo 2**). Fortunately, when I was first learning the craft, CAs weren't available so I used nitrocellulose glue (**Ambroid**) and aliphatic resin (white glue). This combination has served me well through dozens of builds of all kinds and I've never seen the need to make a change (at least *voluntarily*).

Nitrocellulose cements have four really nice features:

- ◆ **Quick drying:** About 15 minutes to skin over, 30 minutes to cure enough to be handled, an hour or so and the pins can come out, and 24 hours to fully cure. That about suits my building speed.
- ◆ **Gap filling:** I try to build so I don't need to fill gaps but even a microscopic gap will cause a CA joint to fail.
- ◆ **Flexible when dry:** This is important so that joints don't crack when a model is subjected to one of my patented "controlled crash" landings.
- ◆ **Easy to sand:** This is required since, as we all know, building a model using balsa and other woods is about 25% building and 75% sanding.

Years ago I had to give up Ambroid (since they stopped making it) and switched from "white" glue to yellow carpenter's glue because it doesn't seem to get so brittle when it cures. A good replacement for Ambroid was **Sig-Ment** from **Sig Mfg.** (**Photo 1**) and I've used that for years.

Recently, just on a lark I went looking for Ambroid and of course I didn't find it. No surprise there. So then I went over to Sig to pick up some Sig-Ment—but it was sold out! Beginning to worry just a little, I went searching for other sources for either of these cements. I found 19 listings for Sig-Ment but every one of them was out of stock. So now I'm fully panicked. I'm in the middle of a project and I have to figure out what the heck I'm going to use for glue since I'm down to my last tube of Sig-Ment and my last couple tubes of Ambroid have somehow become contaminated and can't be trusted. I know the obvious answer is to just drink the Kool-Aid and go with CA, but that's mostly not

Photo 1: My last tube of Ambroid & a tube of Sig-Ment that's showing its age.



Photo 2: One of my better efforts at joining fingers to wood using CA.



Photo 3: My first bottle of fletching cement and my first batch of "pseudo-Ambroid."



going to happen here.

After some intensive research, I finally found what should be a good replacement: *fletching cement* (**Photo 3**). This is the stuff archers use to glue fletches to arrow shafts so the arrows fly straight. ("Fletches" are the feathers and other stuff at the tail end of an arrow that help guide the arrow once it's launched.)

A Cure for the Glue Blues

It turns out fletching cement is also nitrocellulose-based. So I ordered a couple two-ounce bottles and did some experiments.

The fletching cement is a little thicker than my other two favorites but that's easily resolved with a little bit of acetone. I did a test where I glued a number of balsa bits together using various glues and cements (Photo 4). This included yellow carpenter's glue and fletching cement thinned to various consistencies with acetone. After letting everything cure for a couple days, I very unscientifically broke them apart to see which ones held the best (Photo 5). This was pretty subjective and I didn't set up a rig to measure the actual force required, but it felt like they were all similar.

Given the number of choices available for glues and other adhesives, I think there's some room for a serious study of pros and cons of each. But I don't have time for that now so it'll have to wait.


Based on my ham-handed experiment, I'm comfortable that the fletching cement thinned with a little bit of acetone will meet my needs. An added plus is that I can still buy fletching cement in pint and even gallon jugs (at least until someone in Sacramento finds out and bans it). 

Photo 4: Five typical balsa-to-balsa butt joints using various blends of fletching cement and acetone.

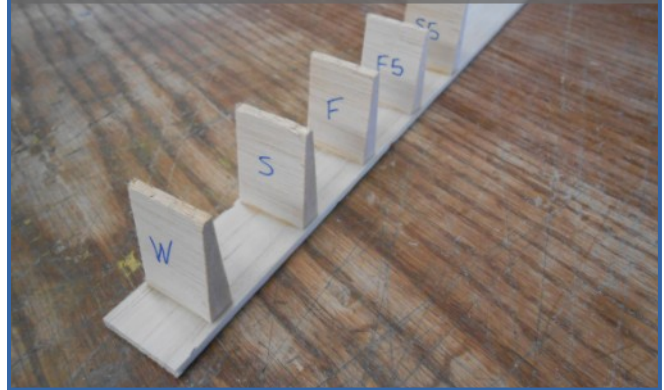


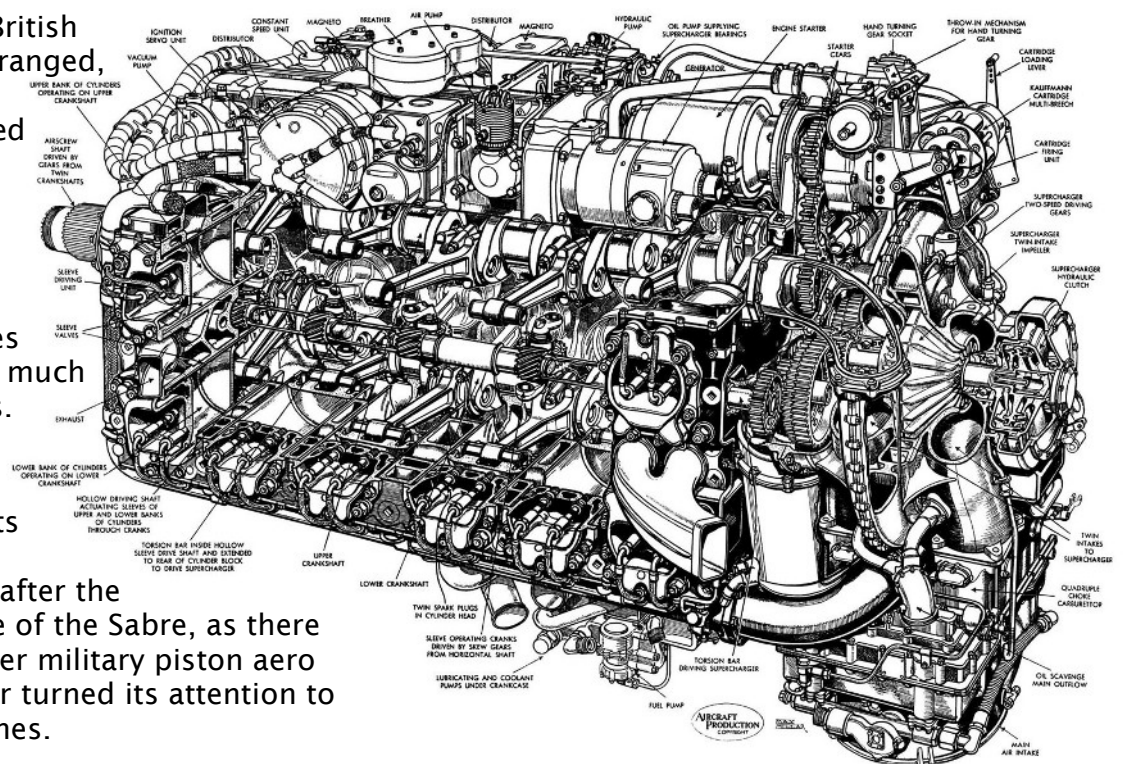
Photo 5: All joints held very well with no discernable difference in the force required to break the joints.



The Napier Sabre II Engine

The Napier Sabre II is a British 24-cylinder, horizontally arranged, liquid-cooled, sleeve valve, piston aero engine, designed by Major Frank Halford and built by D. Napier & Son during World War II. The engine evolved to become one of the most powerful inline piston aircraft engines in the world, developing as much as 3,500 hp in later models.

The Sabre powered the Hawker Typhoon and Hawker Tempest. Despite its amazing power, the rapid introduction of jet engines after the war led to the quick demise of the Sabre, as there was less need for high power military piston aero engines and because Napier turned its attention to developing turboprop engines.



2023 TOYS FOR TOTS @ OCMA FIELD

by Eric Puchalski

The 2023 OCMA Toys for Tots event is in the books and if it wasn't a record-breaker, it came pretty darn close! This annual event is hosted by OCMA and is open to anyone flying any type of model aircraft. This is a very worthwhile event and OCMA regularly collects tons of stuff for the Toys for Tots program. In 2023 alone, Toys for Tots delivered over 20,000 toys to nearly 10,000 families in Orange County alone.

This year the event was held on Saturday, December 2. The weather turned out to be beautiful for the entire event. The capricious winds we normally get in the canyon decided to go somewhere else for a change. The sun was out and temperatures were in the mid-70s.

This is not an officially sanctioned AMA event and there were no pilot registrations, typical entry fees, or a CD. Everyone was asked simply to bring a new, unwrapped toy valued at around \$10. Cash donations were also accepted.

As always, OCMA popped for lunch for all pilots and anyone else who brought a donation. Lunch included tacos, sides, and cookies for dessert.

When all was said and done, participants had donated well over 150 toys and several hundred dollars in cash. All in all, this was an excellent showing and OCMA, the event organizers, and everyone who took time to come by and participate should be immensely proud.



01



02



03



04



05

01: The day wasn't quite over when this photo was taken so the final haul was even bigger.

02: OCFA engine E15 from Silverado Station 15 made an appearance.

03: Joni Whitsitt & AMA District 10 VP Greg Stone were on hand to help OCMA members renew their membership for 2024.

04: A look up & down the flight line gives you an idea of the size of the turnout.

05: No, that's not Meriwether Lewis inspiring the Corps of Discovery to forge on over the Rockies in search of a river route to the Pacific Ocean. It's OCMA Safety Officer, Dave Kadonoff instructing a couple of new OCMA members on the boundaries of the field.

2023 Toys for Tots @ OCMA Field

OCMA's Toys for Tots event just keeps getting better and better. Every year there are more pilots, more types of flying models, more technologies, and above all, *more toys!* The following is just a small representation of what was on display but by no means represents everything there was to see.



DUES ARE DUE

by Eric Puchalski

I don't know about you but one of *my* favorite things to do every year is to renew memberships and affiliations required to get access to the field. In my case, OCMA Field is my primary flying site but I'm sure the process is pretty much the same wherever you fly.

With the implementation of Remote ID and other FAA complexities, things have become a bit more convoluted. I've been asked by a few people what's required and when. So I thought I'd put together this checklist.

Hang on and read fast because there's a lot to cover.

Step 1: FAA Small UAS Certificate of Registration

You must have one of these to fly an R/C model anywhere in U.S. airspace. Pretty much everyone will ask you to provide your FAA registration number so it's best to start here. To get yours, start with the FAA's Drone Zone website. Login or create an account. Open the cheerful greeting menu with your name on it in the upper right corner. Select "FAADroneZone Services" and click the "Launch Drone Owners and Pilots Dashboard" button to get to the "Recreational Flyer Dashboard" page. Register at least one "drone" by clicking the "Manage Device Inventory" button. The simplest option is to select "Home Built UAS" which will require only very basic information to satisfy the requirement. *You do not have to register all your models.* A registration certificate will be mailed to you or you can

print one from the dashboard.

The cost to register or renew (in 2024) is \$5.00 for three years. You'll be notified when the end of the three years is closing in.

Step 2: FAA TRUST Completion Certificate

The FAA also requires that you complete a survey showing that you understand the principles and requirements of Remote ID. It's a pretty easy survey that only takes a few minutes and only has to be completed once in a lifetime. There is no cost to complete the survey or get the certificate (as of 2024).

From the *Recreational Flyer Dashboard* of the FAA's Drone Zone website, select the "Pass the Recreational UAS Safety Test (TRUST)" option in the lower right. *[ed. note: If you'd like more details about what TRUST compliance is all about, see the July 2021 Scale Dimension newsletter.]* When you've completed the survey, print out the completion certificate and keep it in your field box even though no one will ever ask to see it.

Checklist for Obtaining OCMA Membership and a Key to the Field

Step 1: Obtain an FAA Small UAS Certificate of Registration

faadronezone-access.faa.gov



Step 2: Obtain an FAA TRUST Completion Certificate

trust.modelaircraft.org



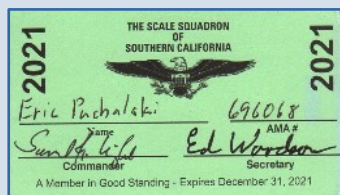
Step 3: Join the AMA

www.modelaircraft.org



Step 4: Join a Local Flying Club

www.flyocma.com



Step 5: Join the OCMA

www.flyocma.com



Step 6: Attend an OCMA Safety Briefing & Get One of These

- ◆ Sunday, 01/07/2024
- ◆ Saturday, 01/13/2024
- ◆ Saturday, 02/03/2024



Dues Are Due

Step 3: Join the AMA

Now that you're done with the FAA, it's time to tackle the AMA. Fortunately the AMA is not a government entity so the requirements are pretty easy for mere mortals to navigate. Most flying clubs (including the OCMA) require that you be an AMA member for the duration of your membership in the flying club. For example, my AMA membership expires at the end of May every year. OCMA membership runs from January through December. So if the OCMA allowed me to join in January and my AMA membership expires in May of the same year then I'll have access to the field for seven months without being an AMA member.

Start at the AMA's website. If you're already an AMA member, login from the menu option in the upper right of the form. (If you're registering for the first time, use the "*Membership*" menu to get to "*Enrollment*" and register from there.) At the end of the registration or renewal process, you'll have an opportunity to print a registration confirmation. I usually do that just in case my actual member card gets "lost in the mail" before the OCMA Safety Briefing.

AMA membership is annual and dues vary depending on the type of membership you select. You can also elect to register for multiple years at a small discount. The AMA will notify you a month or so before your current membership expires.

Step 4: Join a Local Flying Club

One last thing you have to do before joining OCMA is to join one of its affiliate flying clubs. You can get a list of these from the OCMA website. Click on "*Participating Clubs*" in the navigation panel on the left and pick one that looks good. Each club has their own new membership and renewal procedure. My own primary club affiliation is the Scale Squadron of Southern California. To join as a new member you can fill out the form on the last page of this newsletter and either mail it in or come to one of the monthly meetings. Renewing membership consists of handing a check or cash to the treasurer or secretary at any Squadron meeting or out at the field. Once signed up or renewed, you'll be issued a member card. Scale Squadron annual membership dues are \$30 and covers January 1 through December 31.

Step 5: Join the OCMA

If you don't know by now, the OCMA is actually a consortium of 10 Orange County flying clubs covering all model aircraft interests.

Unlike many organizations, the OCMA does not accept membership applications online—it's all done through the US mail. You'll find the 2024 membership application and instructions on the OCMA website. From the left navigation panel select "*How to Join*" (if you're joining for the first time) or "*Renewals*" if you've been down this road before. Be sure to follow the instructions exactly. In addition to mailing in your application, dues check, and copies of your FAA and AMA registration cards, you'll have to submit a passport-style photo via email.

OCMA membership is annual and dues are \$190 for new members and \$140 for renewals. The OCMA will notify you a month or so before your current membership expires.

Step 6: OCMA Safety Briefing

OK, now you've met all the challenges and overcome all the hurdles (*Hooray!!*) and it's time to pick up your gate key. It's a condition of OCMA membership that *everyone* attend a mandatory safety briefing before a key to the field will be given to the member. This is a *no nonsense, no exceptions* condition for membership. The briefings take about an hour and there are three scheduled so everyone should be able to meet the requirement. You might want to write down these dates and times:

- ◆ Sunday, January 7, 2024
- ◆ Saturday, January 13, 2024
- ◆ Saturday, February 3, 2024

All briefings will start at 9:00am *sharp* but you should be there a little early to sign in. Late arrivals will not be processed. Upon completion of the briefing, you will receive your 2024 badge, safety sticker, and your 2024 field key. Renewing members will be required to exchange their 2023 keys for 2024 keys. The 2023 and 2024 locks will both be on the field gate through February 3 when the 2023 lock will be removed.

That's it! I'll see you at the field!



DOCUMENTATION: AIRCO DH.2

There's some confusion about the designation of the DH.2. It was designed by Geoffrey de Havilland while he was working at the Aircraft Manufacturing Company Limited (Airco). So, the "DH" in DH.2 stands for "de Havilland." But Airco actually built the aircraft.

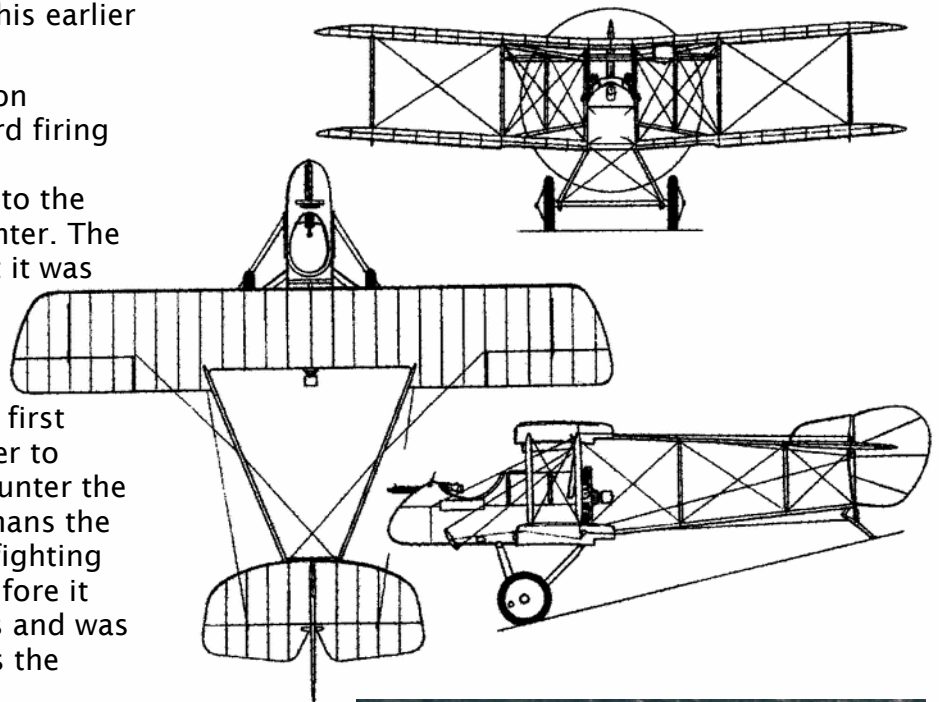
Sometimes, depending on the context or documentation, you might find references to the aircraft with either the designer's name ("de Havilland") or the manufacturing company's name ("Airco"). Be assured, they refer to the same aircraft.

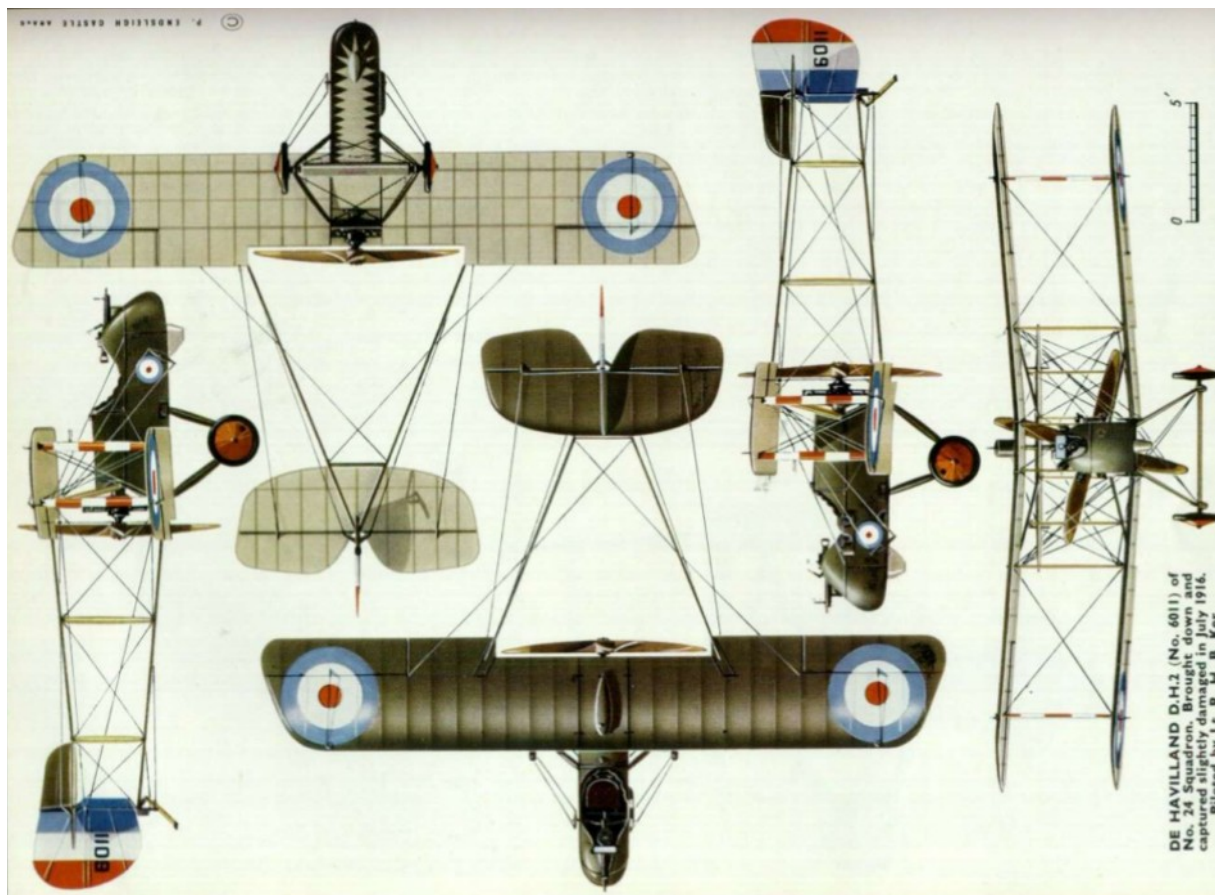
Now that *that's* out of the way, the DH.2 was a single-seat pusher biplane fighter aircraft that operated during WWI. It was the second pusher design by Geoffrey de Havilland for Airco and was based on his earlier DH.1 two-seater.

The development of pusher configuration fighters, such as the DH.2 enabled forward firing armament before the development of synchronization gears such as that fitted to the German Fokker Eindecker monoplane fighter. The DH.2 made its first flight in 07/1915, but it was lost during the following month while on service trials on the Western Front.

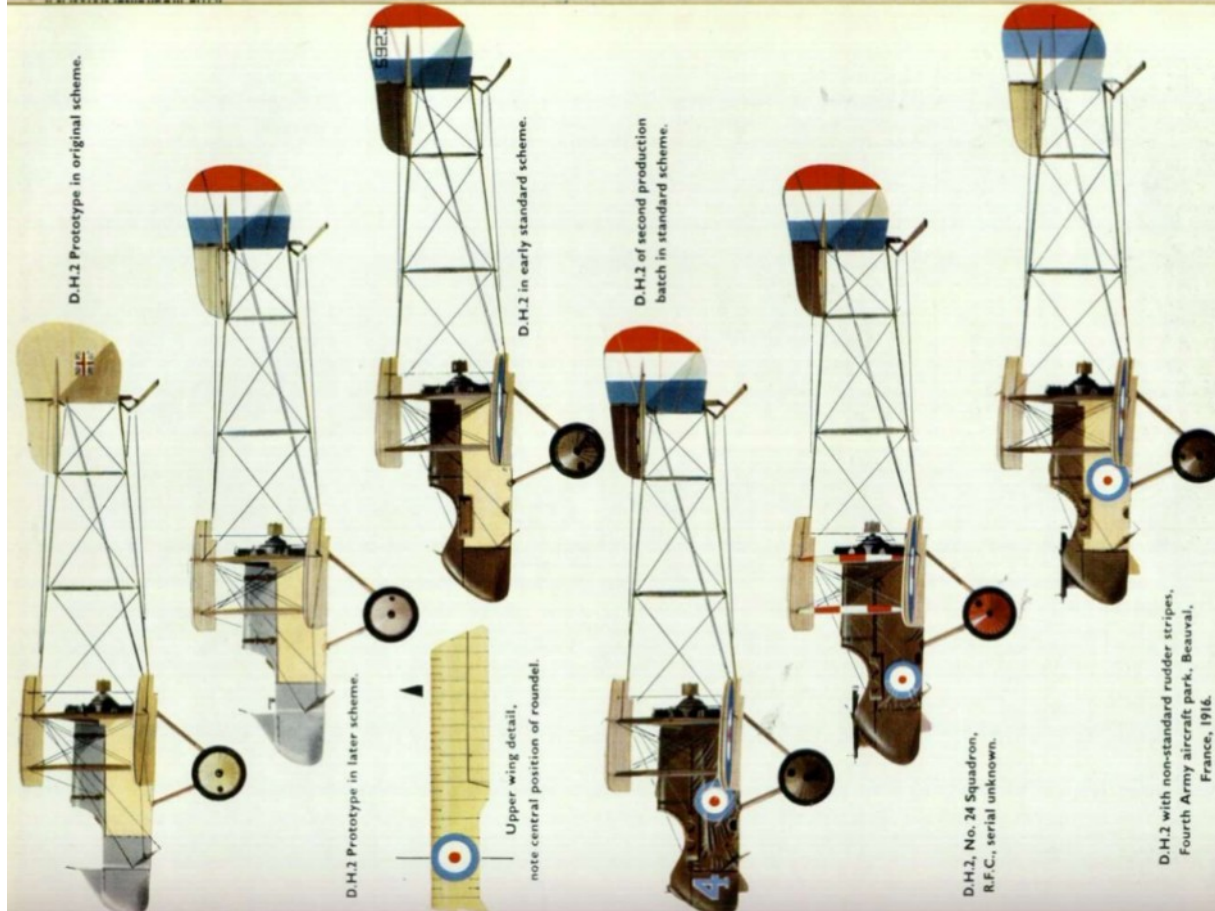
The DH.2 was introduced to front line service in February 1916 and became the first effectively armed British single-seat fighter to enable the Royal Flying Corps (RFC) to counter the "Fokker Scourge" that had given the Germans the advantage during late 1915. It served in fighting and escort duties for almost two years before it was outclassed by newer German fighters and was replaced by newer Allied fighters, such as the Nieuport 17 and Airco DH.5.

Let the Editor know if you'd like more details.





DE HAVILLAND D.H.2 (No. 6011) of No. 14 Squadron, British Overseas Force, captured slightly damaged in July 1916. Piloted by Lt. R. H. B. Ker.



D.H.2 Prototype in original scheme.

D.H.2 Prototype in later scheme.

Upper wing detail, note central position of roundel.

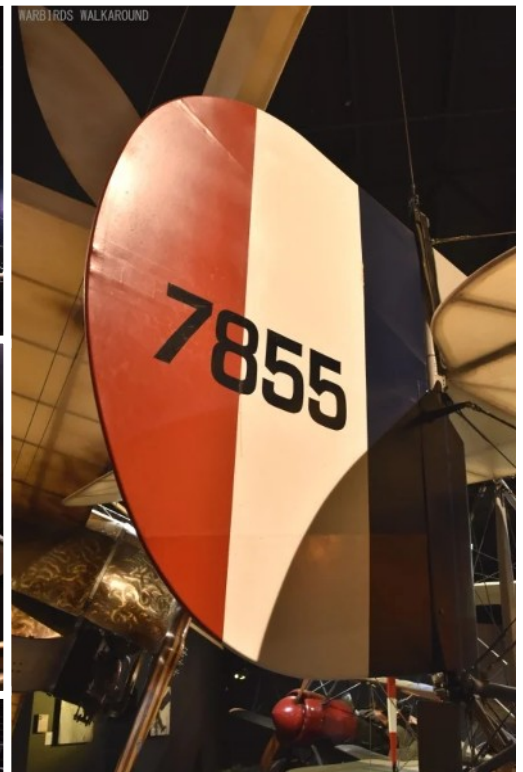
D.H.2 in early standard scheme.

D.H.2 of second production batch in standard scheme.

D.H.2, No. 24 Squadron, R.F.C., serial unknown.

D.H.2 with non-standard rudder stripes, Fourth Army aircraft park, Resoval, France, 1916.

Documentation: Airco DH.5



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
Dec 16, 2023	Model Engine Company of America Irwindale, CA	Hobby Swap Shop & MECA Collecto Held at MECOA Factory from 8:30am-12noon. This is a joint effort by MECA & MECOA. Free coffee & donuts. BIG RAFFLE. FREE parking. Sellers tables \$10 for MECA members & \$10.01 for non-MECA. Bring your own table & chair & save \$5.00. This is an outdoor event in our parking lot. Buyers admission \$5 for MECA members & \$5.01 for non-MECA.
Jan 21, 2024	Coachella Valley R/C Club Thermal, CA	12th Annual Desert Warbirds Event open to all warbirds and Golden Age aircraft, including turbine jets with waiver. \$30 pilot fee (includes both days). Awards on Saturday, open flying on Sunday. Proceeds help benefit our wounded veterans. Grab your warbirds and join us!
Jan 25-27, 2024	Sun Valley Fliers Cave Creek, AZ	Winter Warbirds 12 Warbirds of all eras in military schemes will be flown. WWI to modern jets, static & performance awards for all eras.
Feb 15-17, 2024	Coachella Valley R/C Club Thermal, CA	Coachella Jet Jam Help our Vets at the Coachella Jet Jam. Great Pilots drawing & raffle. Pilots fee \$75, includes lunch Fri & Sat until 12/01/2023, \$85 after that date. Free RV Camping, no hookups, no fires. Visit website for directions. Bring Jet raffle item for free t-shirt. Must have turbine waiver and all over weight permits. LTMA etc.



SO THE GAME IS A SIMPLE ONE. WITH THE CAT CLUTCHED IN YOUR ARMS, YOU FIRE THE GUN, AND SEE HOW LONG YOU CAN HOLD ONTO THE CAT. THE WORLD RECORD IS 1.3 SECONDS.

A very successful hobby shop owner was once asked how he made his first million dollars. He carefully explained that when he was a boy he bought some model engine parts for \$1.00 and sold them for \$2.00. He then bought a box of used engines for \$2.00 and sold them for \$10.00. He continued to work hard for a number of years until his aunt died and left him a million dollars.

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.

Hobby Swap Shop & MECA Collecto

Saturday Dec. 16, 2023 at MECOA Factory in Irwindale, CA

8:30am till 12noon

This is a Joint effort put on by MECA and MECOA

Model Engine Collectors Association and Model Engine Corp. of America

Free Coffee & Donuts - BIG RAFFLE - FREE parking.

Sellers Tables with admission \$10 for MECA members

Non MECA members \$10.01

Bring your own Table and Chair and save \$5.00

This is an outdoor event in our parking lot.

Buyers admission \$5 for MECA members

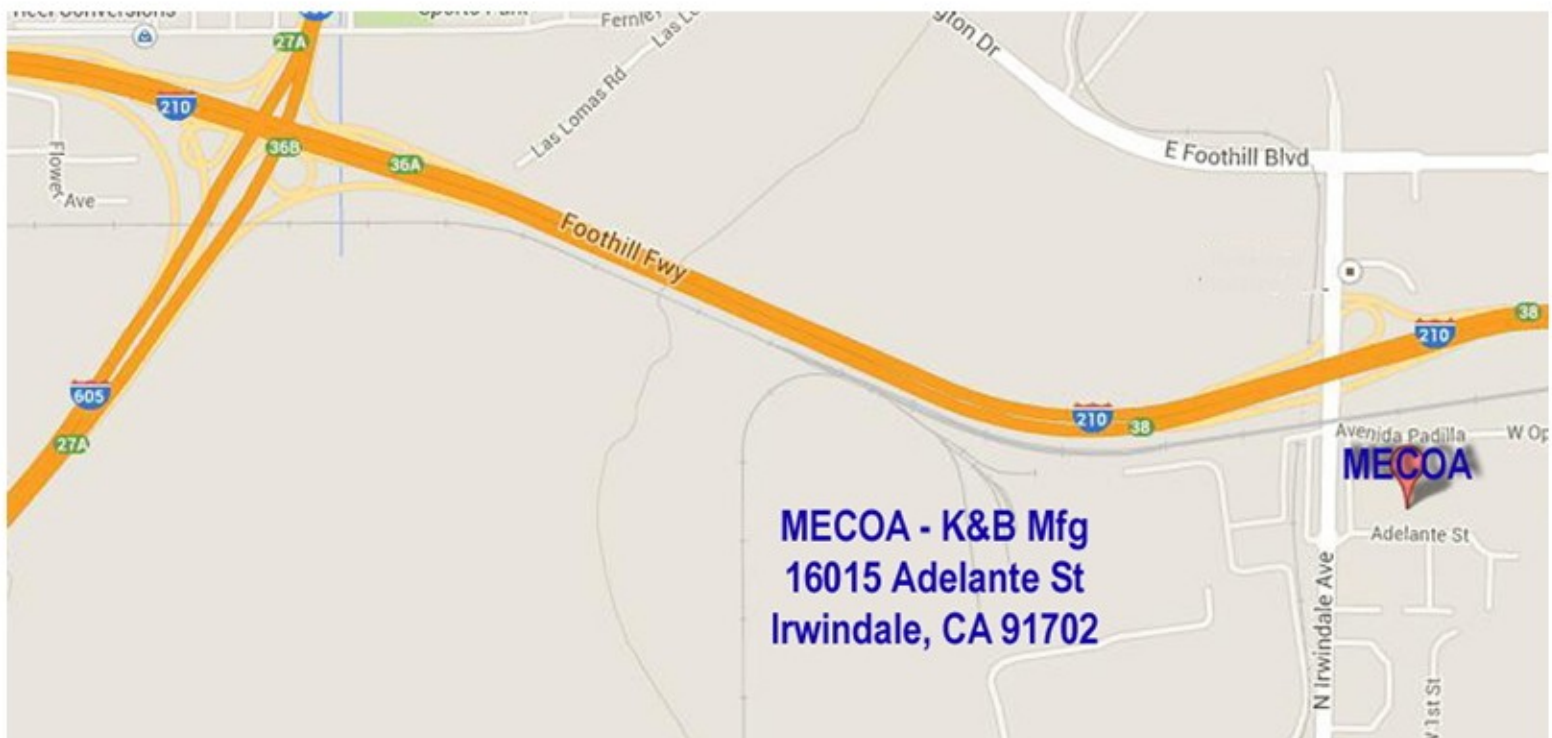
Non MECA members \$5.01

Take I-210 FWY to Irwindale Ave.

Go south 1st light, Irwindale Rd., and turn left

You will see Adelante Street as soon as you turn

MECOA is 2nd building on left. Just search MECOA in Google Maps



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.

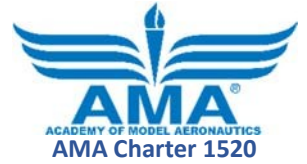


SCALE SQUADRON OF SOUTHERN CALIFORNIA

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.