



# SCALE DIMENSION

OFFICIAL NEWSLETTER OF THE SCALE SQUADRON OF SOUTHERN CALIFORNIA



**PROUD SUPPORTERS & FOUNDERS OF  
THE U.S. SCALE MASTERS CHAMPIONSHIPS**



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## 2021 BOARD OF DIRECTORS

### COMMANDER

Sam Wright

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Pano Coromelas

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### NEWSLETTER EDITOR

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EMAIL: [Commander@ScaleSquadron.com](mailto:Commander@ScaleSquadron.com)



# COMMANDER'S VIEW



**Sam Wright**

Commander

*Make Model Aviation Great Again*

Hello Squadron Members and Guests,

My goodness, it is May and time is really zooming by. As an example, I leave for Top Gun Tuesday April 27 and back home May 2<sup>nd</sup>. This will be my 33<sup>rd</sup> time to announce Top Gun and sadly without my good friend Frank Tiano. Frank passed away just a short time ago and I surely will miss him. We had plans to go to number 35 for Top Gun. This year, Frank's wife Carol with help of good friends has managed to pull Top Gun 2021 together and it should be fine as I have been on the inside track of preparation. I think we will have a great event; however, Frank will be missed by everyone.

I asked Pano to insert an updated flyer for the NASA Raffle. We added a Morane Saulnier biplane in the bones to the mix from Legends Hobby. Look and grab some tickets as this raffle is chock full of goodies.

I did want to comment on our fantastic newsletter editor, Pano Coromelas. He has decided with his wife who recently retired to move out of California. Pano is moving to Idaho and now will really have a building season in the warm comfort of the shop in their new home. Pano has done a fantastic job of giving the humble squadron newsletter a much higher image that many looked forward to receiving. I hope we can have a regular meeting so we can send Pano off in person and I think we may be able to have our meeting room for that. Possibly some Buffalo Wings at Silky's too after the meeting. I don't know if Idaho has any buffalo!

Naturally as your Commander I am wits end trying to find a replacement editor. My work has really put constraints on my time, and I am already the editor for the NASA Newsletter the Replica plus with 18 years under my belt doing the newsletter with help from others like Joni Whitsett, Tim Johnson, Mike Greenshield's son and Jan Savage, it has always been worth doing and the Squadron is well known because of all that effort.

It goes without saying that we are looking for someone to step up and carry on the tradition of the "Scale Dimension newsletter. Pano agreed to publish the May newsletter and we may be fortunate to get a June edition out of him, but after that, we are on our own.

Could this be the end of the Scale Squadron with reduced membership due to age, lack of interest or embodied with other interest?

I for one certainly hope not as we as the Scale Squadron have a long legacy of events and promotion of scale aircraft and competition. I want us as a club to continue and that would mean for the newsletter as well.

Please do not hesitate to let me know your thoughts and ideas. I am hopeful for a good outcome to the editor position.

In the meantime, remain healthy, and get some wind under those wings....

**Sam Wright, Commander**

sam-w@cox.net

# EDITORS NOTE:

Hey Gang!

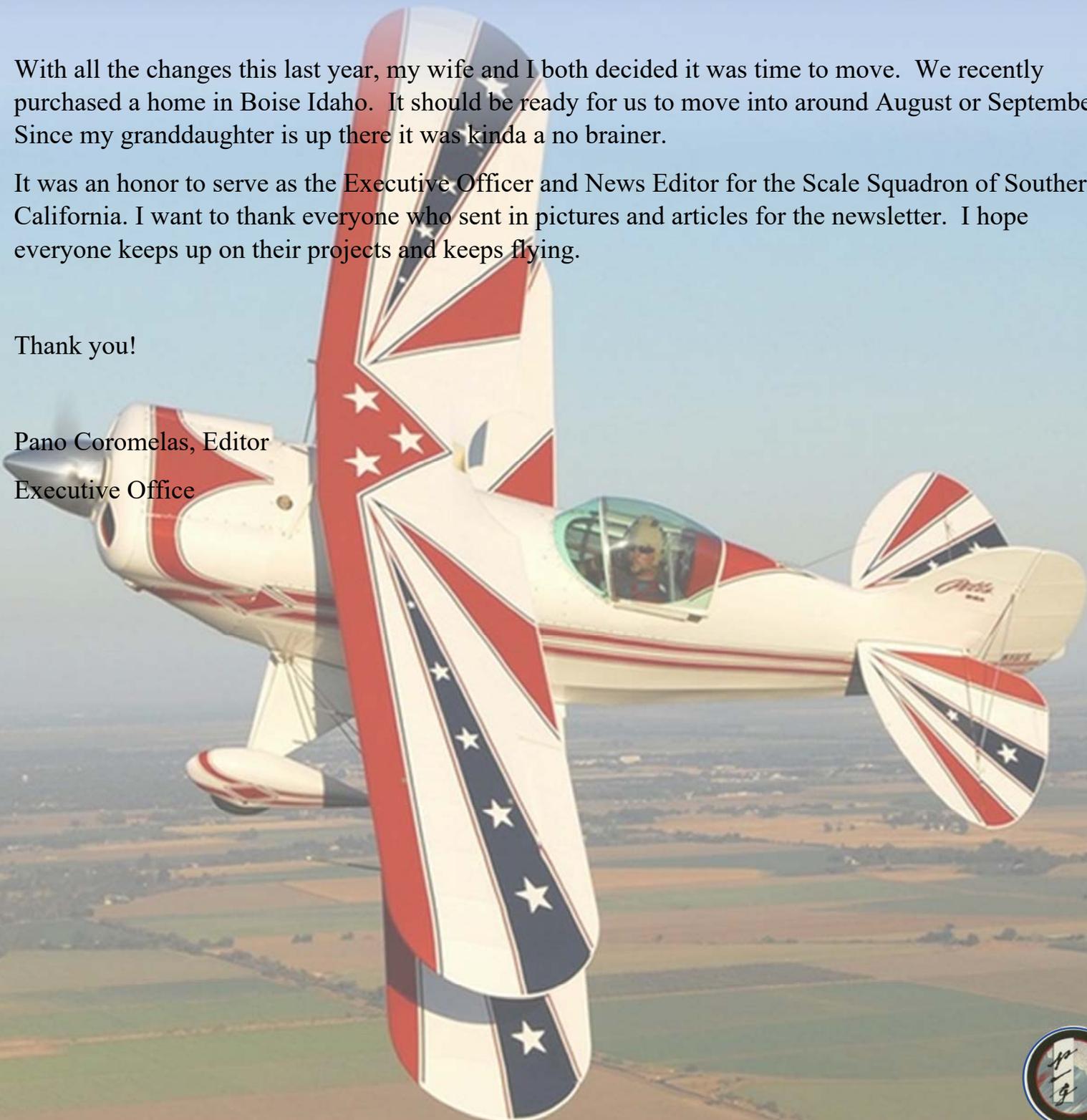
I write this Editors note with a heavy heart. As of May 1<sup>st</sup>, 2021, I have officially resigned as the Executive Officer and Newsletter Editor so this will be my last newsletter for the Scale Squadron.

With all the changes this last year, my wife and I both decided it was time to move. We recently purchased a home in Boise Idaho. It should be ready for us to move into around August or September. Since my granddaughter is up there it was kinda a no brainer.

It was an honor to serve as the Executive Officer and News Editor for the Scale Squadron of Southern California. I want to thank everyone who sent in pictures and articles for the newsletter. I hope everyone keeps up on their projects and keeps flying.

Thank you!

Pano Coromelas, Editor  
Executive Office



## CUSTOM GAS ENGINE THROTTLE ARM



Many times the control arms as delivered on gas engines are not up to the job. That is, they are too small or wrong shape for the job at hand in getting a pushrod attached to open or close the butterfly valve. This is pretty easy to remedy without getting on the computer and searching thru the RC vendor sites to find something that will work – you can easily make one yourself out of scraps from your grab-bag of parts (I never throw away anything). In this case, I found a G-10 part from something or other that went unused and gave it new life.

G-10 is very solid material and makes a great replacement arm for the choke/throttle control. G-10 is basically just layers of glass cloth laminated with epoxy resin. It can also be made with carbon fiber layers for even more strength. In cases where you cannot find any scrap G-10, it is a good idea to order it by the sheet in various thickness to have on hand for ad-hoc use. Several vendors sell it in fairly small sheets to keep the cost down and make it easy to ship.

The G-10 can be hard on band saw blades, you can sometimes see sparks flying when cutting. To save wear on your expensive band saw blades, make as few cuts on the band saw as possible and use your belt or disc sander to do the shaping. A Dremel tool with drum sander works well too. When sanding G-10 made from carbon fiber, be sure to not inhale the dust – it's pretty nasty stuff.

As a note of clarification and definition, G-10 is what I generally call this material. It actually goes by several names such as FR4, G9, G-10, Glass Epoxy Sheet, Melamine, Phenolic, and possibly more. The differences are from the material used in building and if it is fire rated (i.e., FR4). Phenolic is usually made from paper products vs glass cloth, but is very strong. Whichever material you use, it needs to be of a thickness that won't twist or flex under use – usually at least 0.032" thick; 0.060" is very suitable. Sheets can be bought in affordable prices and sizes such as 12 inches by 6 inches or larger. One small sheet will last for many projects down the line.

Another note of interest is that G-10 can be used to make custom control horns for ailerons, elevators, and flaps. I've even made custom hinges out of G-10! But, be sure to NOT attempt to use standard aircraft plywood to make control horns or throttle arms – it will eventually come apart and you will be very sad when it does fail. I witnessed a very nice giant scale Spitfire fail to recover from a loop and went straight into the Earth! The plywood elevator control horn finally failed and the warbird hit so hard it cracked

# TIPS FROM THE SHOP

the 55cc engine cylinder in two! Plane was in pieces. Nothing rebuildable or salvaged. So, take heed on this warning.



Problem – throttle arm was to the top of carb and I needed it to be at the bottom to get a pushrod on there. Simply flipping the steel arm over would not have given the correct geometry. So, I decided the new part should have an extension to the bottom and a dog-leg offset. I mocked up the desired shape on the scrap G-10 part for the new throttle arm. A couple more scrap parts positioned to form a possible solution.



G-10 is rough-cut along the marked lines.



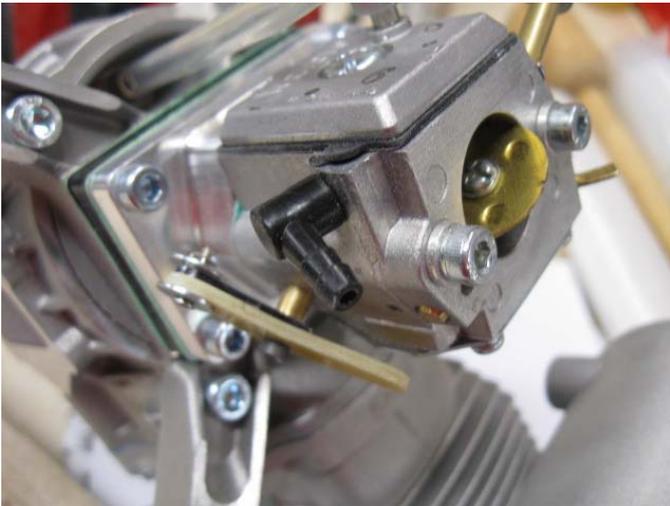
With some sanding and a couple of holes drilled, the new part is tested on the carb. The new, longer, center capscrew is the pivot point and the upper screw secures the G-10 to the factory control arm. New hole for pushrod clevis is yet to be drilled.

# TIPS FROM THE SHOP

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Reverse view of the assembly. The steel factory arm is left in place to anchor the new G-10 part. Note the thickness of the G-10 – very stout.



One more view of the carb assembly with new G-10 arm. Whole job took less than an hour and was basically at no cost.

TEXT & PHOTOS BY LANE CRABTREE

Updated: May 8, 2018 — 8:06 AM

# WHAT OUR MEMBERS ARE BUILDING

## Joe Trama - TBM Avenger

*The Avenger entered U.S. service in 1942, and first saw action during the Battle of Midway. Despite the loss of five of the six Avengers on its combat debut, it survived in service to become the most effective and widely-used torpedo bomber of World War II, sharing credit for sinking the super-battleships Yamato and Musashi (the only ships of that type sunk exclusively by American aircraft while under way) and being credited for sinking 30 submarines. Greatly modified after the war, it remained in use until the 1960s.*



Joe has completed the 50 caliber machine gun turret, and is held by magnetically on the bottom of the turret.



He designed the turret from actual photos off the internet.

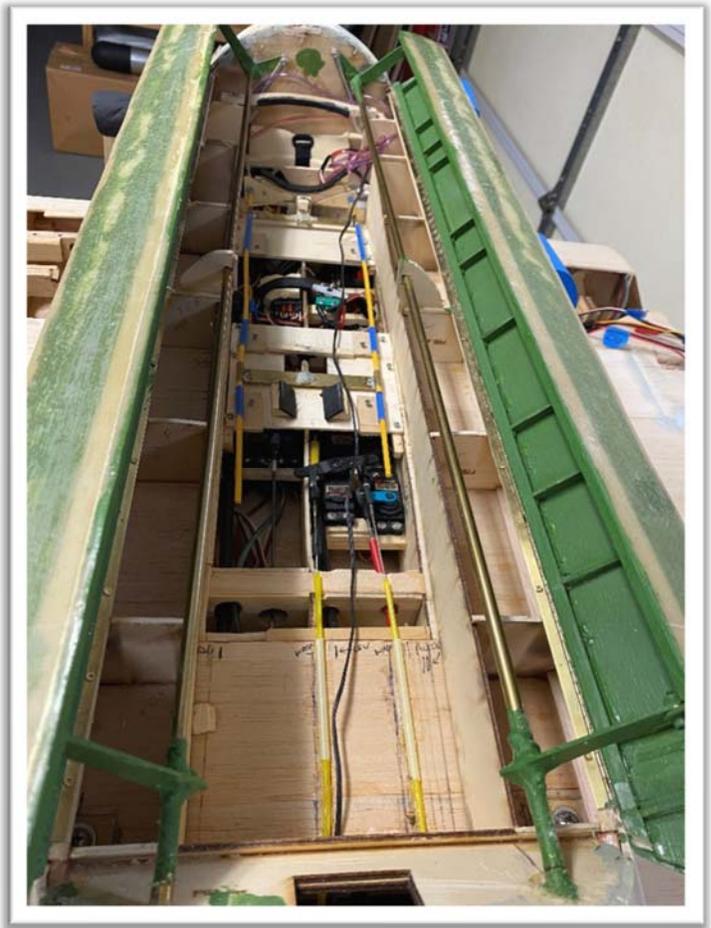


It was made out of styrene, ply, 12 gauge coated electrical wire and some round 5/32 solid styrene, and the painted with Testors chromite green.

# WHAT OUR MEMBERS ARE BUILDING

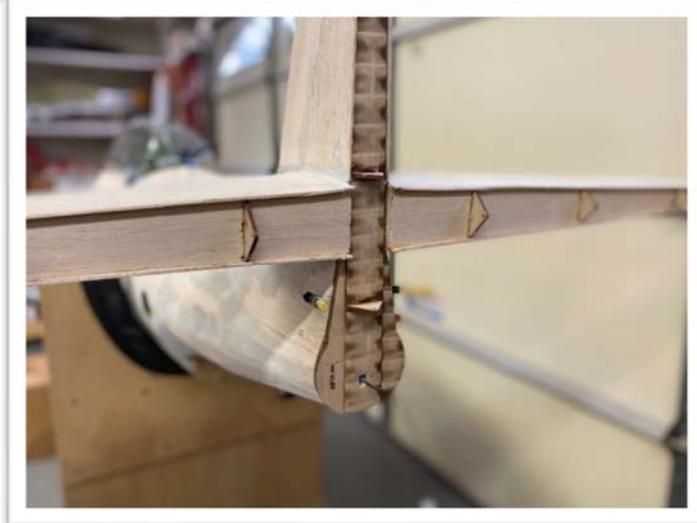


The torpedo is 26" long the two halves were glue together puddied balance and painted didn't want it come down like a rocket when released.



# WHAT OUR MEMBERS ARE BUILDING

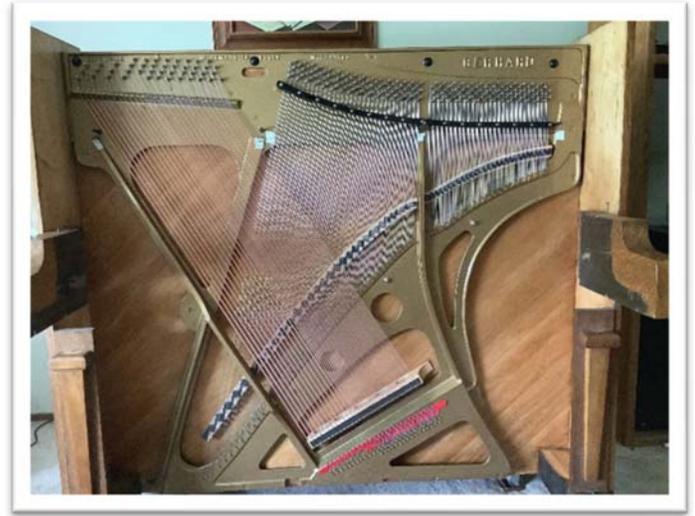
The fuse is almost ready to be glassed and coated with epoxy resin. The plane will have 13 servos, 9 inside the bomb bay doors the other 4 on the wings. This plane has been a real challenge, lot of detail and intricate designing.



# WHAT OUR MEMBERS ARE BUILDING

## Rob Hahn - Dremel scroll saw

The only airplane work I have done recently is to make use of a little leftover Klass Kote grey primer from my piano project, (almost done), and primed one of the hatches on the Skyknight.



do however have a scroll saw story that may be interesting. Recently I had been perusing Craigslist when I came across this nice looking Dremel scroll saw and the asking price was only \$50! Mmmmm! I bought my current scroll saw from someone out at the flying field years ago. It is an older Dremel that still works well but when compared to this newer model is relatively rudimentary. This saw has many features that mine is lacking.

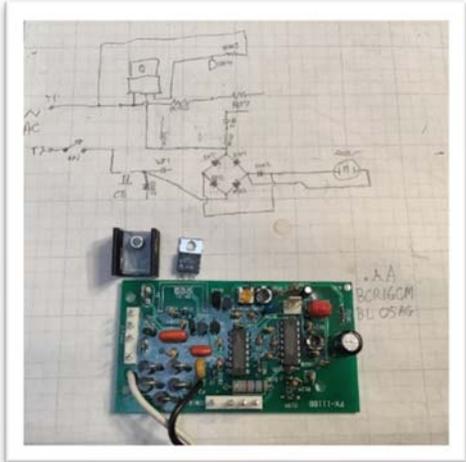
This item was listed as “salvage, for parts or repair”, well that figures. The seller stated that “the light works but the motor doesn’t and it may be something simple but he didn’t have time to deal with it.” Mmmm. Well okay then.

So I googled the model number (1680) and discovered that this model has a history of what would seem to be motor failure. One reviewer said “after 30 hours of use the motor burned out.” Another said “on a dry day, after getting a normal static shock when touching the saw, it stopped working.” “ They sent me a new saw and it wasn’t that long until it also stopped working.”

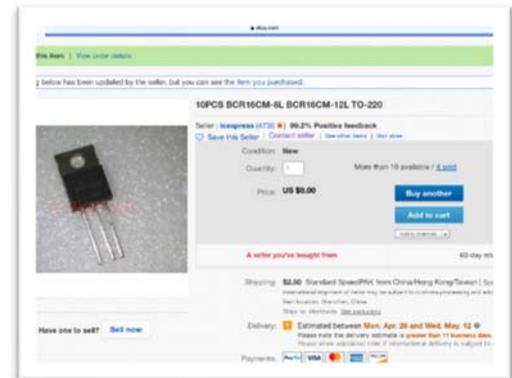
Okay by now you’d think I had heard enough and would just move on, but noooo... instead I became more interested. I contacted the seller, Arnel, who said he had only removed the front panel to check for continuity in the wiring and hadn’t disassembled it any further, so I brought it home. He said they had only used it on a couple of projects. The low mileage was evident in how it looked.

# WHAT OUR MEMBERS ARE BUILDING

That evening I discovered the power transistor on the speed control board was bad, with no sign of it overheating. I also noticed while poking around on this circuit board that this power transistor and heavier heat sink it was attached to were not mechanically secured to the board. You could rock them back and forth. They were held in place only by the transistor's pins soldered into the board which is hard mounted to the chassis.



Now most everyone knows that a scroll saw's only purpose in life is to cut stuff, make dust and vibrate. With that, I can only guess there is likely intolerable mechanical stress on this transistor that is causing it to fail. I have ordered a pack of ten transistors from China. Assuming this will make the saw functional, I will then figure out how to prevent this component from moving or vibrating on the circuit board.



Got the pack of ten transistors in the mail and went to work. Was able to make bottom of heatsink rest flush on board. Here preparing to drill holes in board and heatsink to secure. Was careful not to drill through any conductors or fingers. New part installed with fresh thermal goo, heatsink lashed and CA'd to board.



Back side of board showing heavy thread laced through holes and CA'd.



Well the new part did the trick and I am very happy with my new toy, ...er, umm ...I mean tool! It is powerful, quiet and smooth. Hopefully my 'theory of transistor vibratility' is sound and the new component will last.

So, if any of you fellow minimalists out there come across a Dremel 1680 scroll saw, not working and therefore cheap, with a \$1 transistor we can likely whip it into shape!

# LARRY WOLFE'S BIRTHDAY

March 20<sup>th</sup> 2021

Hey...Did you hear...

## It's A Hangar Party!

For None Other Than The One and Only...  
**Mr. Jet Hangar!**

You are cordially invited to help Larry Wolfe celebrate his 80th birthday!  
Join us for Tacos and Beverages, Music and Fun!  
Saturday, March 20th at the Chino Airport at "The Hangar"  
Bar Opens at 2 p.m., Food at 3 p.m., and Cake Cutting at 5 p.m.  
Please RSVP by March 15th to Cyndy Wolfe at:  
Phone: 858.649.3293  
Email: [copsmom98@aol.com](mailto:copsmom98@aol.com)

*The only gift requested is the gift of your attendance!*  
Don't miss the flight!



# LARRY WOLFE'S BIRTHDAY

March 20<sup>th</sup> 2021



# MONTHLY MEETING NIGHT

Monday

May 10, 2021

7:00pm

# MAY

# MEETING

# CANCELLED

As we continue to monitor the rapidly evolving situation around the coronavirus (COVID-19), our first thought is for the safety and well-being of our members impacted by these difficult circumstances. In these unprecedented times, it is important that we come together to support all those impacted.

## **MARK YOUR CALENDARS**

**MORE EVENTS TO VISIT OR PARTICIPATE IN  
COMING UP!**

### **HOBBY CLUB USA PARKING LOT SALE**

**APRIL 30TH – MAY 1ST, 2021**

<https://inlandempire.craigslist.org/tag/d/ontario-rc-airplanes-for-sale/7310059598.html>

### **GIANT SCALE FLY-IN**

(Formally the Castle AFB EVENT)

**JULY 28TH - AUGUST 1ST, 2021**

[Tri Valley RC Modelers](#)

### **NATS**

**SEPTEMBER 16-19, 2021**

[NASAScale - National Association of Scale Aeromodelers](#)





Join us for the  
9th Annual



# Central Coast Giant Scale Fly-In

## July 28th - August 1st 2021

Hosted by the Tri-Valley RC Modelers of Santa Maria, Ca.  
AMA Gold Leader Club #170

### The facts:

- ◆ Landing Fee: Only \$25.  
Includes: Parking, lunch on Saturday, and a raffle ticket;
- ◆ Dry camping for \$10/night;
- ◆ Only Giant Scale planes until 5pm;  
(Mono 80", Biplanes 60");
- ◆ Proof of current AMA required;
- ◆ Epic Pilot's Raffle on Saturday.

### The fun stuff:

- ◆ World Famous Santa Maria Style BBQ dinner on Saturday night;
- ◆ Beautiful Santa Maria weather;
- ◆ Food & drinks available daily;
- ◆ 500' asphalt runway and expanded shade cover,
- ◆ Open flying after 5pm;
- ◆ Only 3 miles from the Radisson.

**Pre-registration requested: Call Chuck Barnes @ (805)886-7921  
or email [CDBarnes10@comcast.net](mailto:CDBarnes10@comcast.net)**



**JR PROPO**  
PROFESSIONAL RADIO CONTROL SYSTEM



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# FIRST PRIZE

**TOP RC CORSAIR**

**JR PROPO RADIO SYSTEM  
DA 70**

**A123 BATTERIES & SWITCHES  
WARBIRD PILOTS**

# SECOND PRIZE

## PT-17 SHORT KIT

**87" NICK ZIROLI PLANS  
NATIONAL Balsa - SHORT KIT  
PHOTOPACK DOCUMENTATION**



## THIRD PRIZE

**DA 85**



## FOURTH PRIZE



**LEGEND HOBBY MORAINE SAULNIER**

  
NATIONAL Balsa

  
NICK ZIROLI  
PLANS

  
ElectroDynamics  
ELECTRONICS FOR THE DISCERNING MODELER

  
robart

**TICKETS:**

**1-\$5 3-\$10 7-\$20 20-\$50**

  
AIRCRAFT  
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SERVICES  
110-11-0100 10/16/10

**DRAWING TO BE HELD AT THE NASA SCALE CLASSIC ON SEPT 18, 2021**

# SCALE SQUADRON OF SOUTHERN CALIFORNIA

## *Advancing and 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 the Scale Squadron.

Our members have diversified interests in all facets of aviation history, from the first aircraft to fly at Kitty Hawk to the modern-day jet. Advancements in technology have provided us with ready-to fly kits, on-board cameras, in-flight telemetry, multi-cylinder engines as well as high powered miniature jet turbines that burn real jet fuel. 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 outperform that of its 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 every member makes a scale masterpiece. That's OK too! Whatever pleases you is what counts. Whether you are kit-bashing, volunteering at charity aviation events, or making molds from scratch for Scale Masters or AMA National Championship 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 2nd Monday of each month at the Green Valley Adult Clubhouse, 17215 Los Jardines West (just north of Slater) in Fountain Valley, CA. The meetings start at 7PM and last about 2 hours.

Our meetings throughout the year include the usual club business as well as Member Show & Tell, Modeling How-To's, 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. Like-minded visitors are always welcome. All members and visitors alike are encouraged to bring their latest scale models and projects!

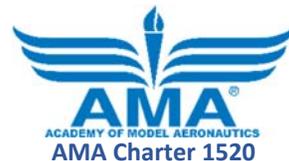


# SCALE SQUADRON OF SOUTHERN CALIFORNIA

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

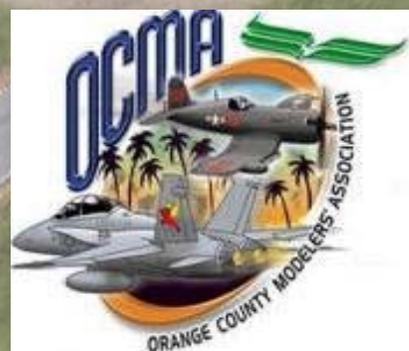
Comments \_\_\_\_\_

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.

# GO FLY!



at



**Tuesdays seem to be the unofficial Scale Squadron day at the field with 3-6 of us meeting up with our airplanes and box lunches.**

**Tim Cardin is at the field a number of times a week and weekends. He does see a handful of Scale Squadron Members, so I know some of us are active**

# ABOUT THE SCALE SQUADRON

## SCALE SQUADRON OF SOUTHERN CALIFORNIA

Officially AMA  
Chartered on  
April 7th, 1977

# 1977

## WHERE IT ALL BEGAN

Scale Modeling is the accurate recreation of aircraft in aviation, from the early biplanes to the latest jets of the 21st century. Whether it's built from scratch, a kit or an ARF, scale modeling strives to recreate the airplane as historically accurate as possible. Paint schemes, rivets, windshield glass, and even pilots are faithfully painted and built to exacting specifications. The end result is a flying recreation of the original full-size airplane.

Our members all have one common goal - to share their knowledge of aviation, aviation history, and scale modeling.

Our monthly meetings are open to everyone, and often feature "how to" seminars on building and flying model aircraft.

Each year the Scale Squadron hosts and participates in numerous events, with the overall goal of bringing together modeling

enthusiasts from all over the world. Events our members historically and perpetually attend are:

- Top Gun
- U.S. Scale Masters
- Warbirds Over the Rockies
- Arizona Electric Festival
- Best in The West Jet Rally
- One Eighth Air Force Fly-in
- Battle of the Builders

The Scale Squadron also hosts their own annual event known as The Scale Squadron Warbirds and Classics. This year will be the 9th year running of the Squadron event.

The Scale Squadron dates back to the early 70's. Harris Lee, Bert Baker and Bob Olson were the original founders of the Scale Squadron and members of the Orange Coast RIC Club. Their interest in scale modeling brought them together regularly at Lee's home. The word soon got out, and their numbers quickly grew. Scale modeling became the hottest new interest within the R/C community.

The first official scale modeling club was formed in 1973 with events held at Mile Square Park.

Scale modeling was in its infancy yet immensely popular as attested to by the large participation at each of their events. Harris Lee devised a plan for sanctioning a series of local qualifiers around the country and then having a fly-off to determine the national champion. Out of this idea the U.S. Scale Masters was started and is the premier scale competition in the country today. Pat Potaga, of Scale R/C. Modeler Magazine, helped to put this program on the map. His articles and front-page color photos helped fuel the fire of scale modeling. The modeling world owes these visionaries a debt of gratitude. Thank you Bert Baker, Bob Olson, Jerry Ortega with special thanks to Harris Lee.