

# Servo Chatter

AMA Club Charter #110

August 2017



[www.sccmas.org](http://www.sccmas.org)

Official Newsletter of the SCCMAS "Tomcats"

Field Location: 10250 Monterey Road, Morgan Hill, CA 95037

## President's Corner



Hello, All SCCMAS Members

Despite limited access, as a result of last winter's severe storm damage, activity at the flying field remains brisk. The Board appreciates the memberships continued patience as it works with the County Parks Department to find a solution for the access road repairs. However, for the foreseeable future, access to the SCCMAS

field will be limited to the bike path.

With preliminary cost estimates for road repairs at \$700,000, Parks has stated that this cost is one of the largest in the Parks' system resulting from this past winter's storm devastation. Since the Parks Department priority is public safety and health, repairs of the access road will remain a lower priority. We continue to work with the Parks Department investigating other temporary vehicle access solutions to our field. Recent alternate access options have been a challenge in the past months due to the involvement of several other agencies having jurisdiction, including the Water District, Fish & Games, and the Roads and Airports Department. Frequent communication continues with the Parks Department and I will update the membership as new information becomes available.

When using the bike path to access the field, please remember to share the path with other Parks' systems users. Do not block the bike path with your trailers, wagons, equipment and airplanes. Pull over to the side and allow others to pass. The question of electric powered bikes has come up. While Parks does allow the use of electric pedal-assist bikes (with trailers) on the bike path, operators must obey the 15MPH speed limit. The rangers have stepped up speed enforcement along the section of the bike path from Anderson Dam to our field. Remember to carry out what you carry in!

Free use of the Livermore Flying Electrons R/C (LFERC) for 2017 SCCMAS members has unfortunately been terminated. Failure to observe the protocol at their club field resulted in this decision. As minor as it may have seemed at the time, trying circumvent their field use rules was noticed, and caused the loss of a benefit for all SCCMAS members, including myself. I went to great efforts to secure the free use of the LFERC field and the Southern Alameda County Radio Controllers (SARCS) during our current field access situation. Free use of the SARCS field in Union City/Newark is available for 2017 SCCMAS members. It is required that all SCCMAS members that fly at this field have their 2017 SCCMAS card visible at all times. If you do not have your 2017 SCCMAS card when you are at the SARCS field please do not even attempt to fly! Please respect their flying site rules and regulations as we are guests. If you need a replacement 2017 SCCMAS membership card, email [renewals@sccmas.org](mailto:renewals@sccmas.org). We will do our best to mail a replacement card in a timely manner.

**The next SCCMAS club meeting will be on Saturday, August 5th at the Wings of History Museum, 12777 Murphy Ave, San Martin. This meeting will start at 5:00 p.m. The air museum will be open prior to the meeting.**

## From the Editor



This is a mini issue simply due to timeliness and busy schedules. As you can imagine, flying has been scattered and it is harder to maintain contact with everyone. So I hope that the newsletter gives us all a focal point for the club membership. A lot of us have tried a variety of the local fields and a fair number have defaulted to Bayside. The Bayside team has been very active in upgrading and improving the field and every time you go over you will see new features added. They are also a very nice group of people who have been very gracious in allowing us to join and continue to enjoy the hobby.

Although many of us have made the trek to the field, the recent heat wave has not been encouraging and certainly has stopped me from wanting to do so. That said, I still really miss our field and all the facilities we enjoyed without really realizing how great a space we have. Hopefully it will get sorted out in the near future and we can be back to our home. Until then,

Happy Landings,

**Bahman**

Looking forward, the 2018 membership renewal packages will be mailed out in October. Because of the current access road situation, the 2018 renewal fee for all current 2017 SCCMAS members will be no cost. The zero dollar cost will be reflected on the 2018 renewal form. Renewing 2017 members are still required to sign and initial the forms; include a copy of your 2018 AMA card covering the period from January 1 2018 through December 31 2018. SCCMAS members that did not renew for the 2017 year will be charged the standard annual renewal fee.

As many have noticed we had no choice but to cancel all of our annual events at the SCCMAS field with the exception of the spring and summer swap meets. The BaySide R/C Club in Fremont allowed the SCCMAS to host the spring swap meet at their new site. The summer swap meet scheduled for Saturday September 9th will be located at the Wings Of History Museum, 12777 Murphy Ave, San Martin, CA 95046. Sellers' area will be located in the gravel area between the hangers. Gates open at 8:00a.m. and will conclude around 1:00p.m. Sellers, 10x10 area is \$10. Bring your table(s) and chair! On-site donuts, coffee will be served. More information is available at [www.sccmas.org](http://www.sccmas.org) or email Eric Sander at [contests@sccmas.org](mailto:contests@sccmas.org).

In closing, I would like to thank the membership for your support during this time.

**Steve Smith**

## Governing Board Members and other Volunteers of the S.C.C.M.A.S.

President*	Steve Smith	408-292-1212	steve@sccmas.org
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AMA Intro Pilot**	Mike Leggett	408-839-1757	secretary@sccmas.org
AMA Intro Pilot**	Peter Vogel		
Field Weather (automated)		408-776-0101	
SCCMAS Business Office		408-292-1212	
SCCMAS WWW address		www.sccmas.org	
Club Meeting Dates - 05/06/17 08/05/17 11/11/17			

\* Governing board members

\*\* AMA Intro Pilots. These pilots can fly non AMA members once, certain restrictions apply

\*\*\* Email is preferred to voice mail



April 8

Spring Swap Meet

May 19 - 21

Heli Jamboree

Cancelled

May 20

South Coast Airport Open House

Cancelled

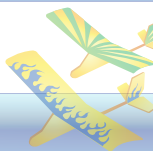
June 10



SCCMAS Work Party

Cancelled

June 24



Jet Fly-In

Cancelled



July 15-16

Annual Airshow

Cancelled

August 19

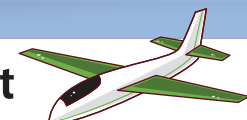


Pattern Day

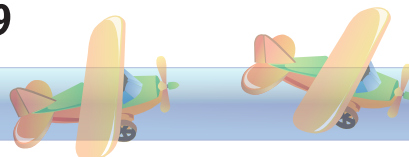
Cancelled

September 9

Summer Swap Meet



October 7



T-34 / Unlimited Warbird Race Finals

Cancelled

October 13

Coyote Club Bike Ride

Cancelled

December 3



Toys-For-Tots

Cancelled



## Treasurer's Report



Jim Patrick

### SCCMAS Profit & Loss April through June 2017

#### Ordinary Income/Expense

##### Income

Membership dues	580.00
Vending machine	179.00
Total Income	759.00

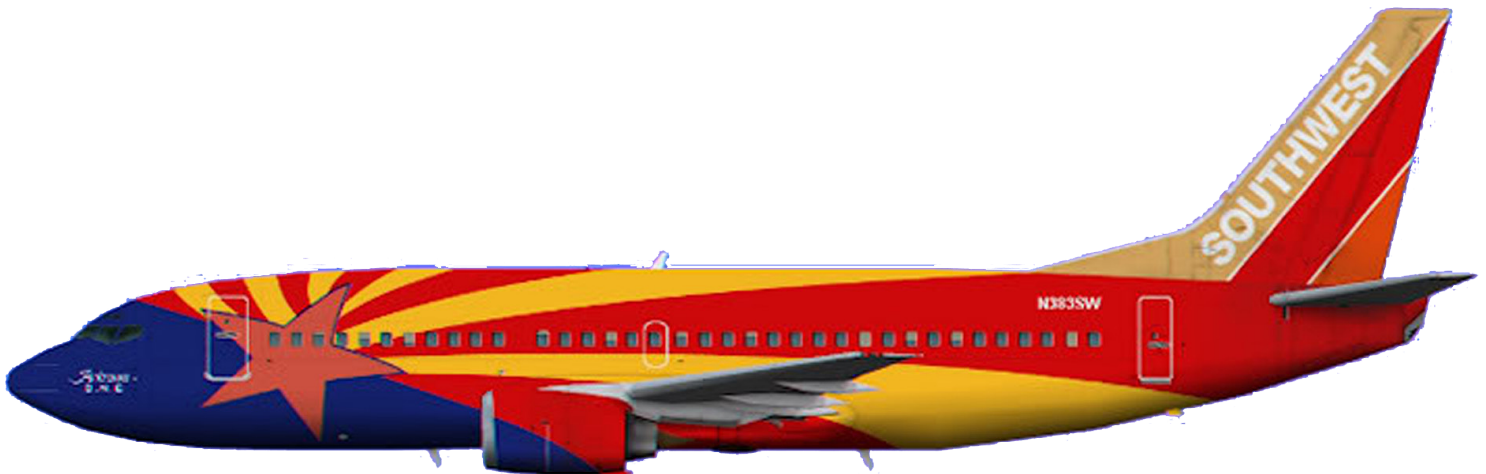
##### Expense

Bank Service Charges	2.00
Bay Alarm	135.00
Dues and Subscriptions	-178.93
Equipment Rental	81.57
Food	207.44
Garbage service	39.86
Insurance	
Fire Insurance	992.75
Insurance - Other	50.00
Total Insurance	1,042.75

Licenses and Permits	25.00
Postage and Delivery	14.09
Rents paid	100.00
Sanitation service	172.10
Supplies	112.93
Taxes	10.00
Telephone	169.26
Utilities	
Gas and Electric	267.02
Total Utilities	267.02

Total Expense 2,200.09

Net Ordinary Income -1,441.09







Well greetings fellow fliers. I'm sure you are also missing the easy access to our field and the community of friends that helps to create. I hope your still able to enjoy flying and friendships through another field or the hike into ours.

Last month I was able to attend the Warbird flight event at Woodland Davis. I spent two weeks redoing my Hangar 9 1/4 scale cub in an Army Liaison paint job (See pict). For this ARF builder, I was quite proud of the final look and with 138 flights on this aircraft, I went to the warbird event quite confident in having some

good flights. I shared a ride with Mike Leggett and his beautiful B-26 (which ended the day signed off and certified for flight).

I think I surprised Michael Radu and Randy Warkentin with the new paint job, certainly not their scale master level work, but not terrible for a "rookie". Lynsel Miller was not surprised, as he knew I was changing my old boring cub with the new "camo" paint so I could fly it at warbird events.

So what does this have to do with safety? Well successfully flew my "new" looking cub on its 139th flight and after about 12 minutes in the heat decided it was time to land. I shot an approach, too high, and then landed hard and popped the bungees on the mains. No big deal, done this many times and a simple swap out and ready for flight number two...or so I thought. ON the second flight during takeoff something was very different...bad ground loop at speed and subsequent crash. What did I do? Well I didn't check the control surfaces, was in a rush to get airborne and should have checked my transmitter for any changes. In short flight number 140 was not to be!

Lesson Learned- Over confidence on a plane that's easy to fly with so many flights and I set aside my usual careful checklist routine- didn't take the time to check the basics- flight controls direction of travel-transmitter settings ( High, low rates, etc). The rebuild is WIP and not turning out to be that bad, but lesson learned and a good reminder for this Sunday pilot.

Happy landings-

Tim



Please help support these companies and organizations as they help to support us

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## Aircraft Design – Structures and Materials

Lou Rodriguez

The airframe, (fuselage, wing, and tail), must be strong enough to withstand a variety of loads. Positive and negative Gs, bending and twisting loads, shock loads, and vibration must all be considered when designing an airplane structure. The goal is to achieve an adequate structure at minimum weight. Why? A light airplane flies better. Proper structural design and materials will provide a reliable airframe that can withstand the “normal” stresses we put on our models.

The primary structure carries flight loads, power loads from an engine or motor, and landing loads. Secondary structures improve aerodynamics but do not carry significant loads. Wing filets, fairings, and wheel pants reduce drag and improve the aesthetics of an airplane design. They need only to be strong enough to withstand normal use and handling.

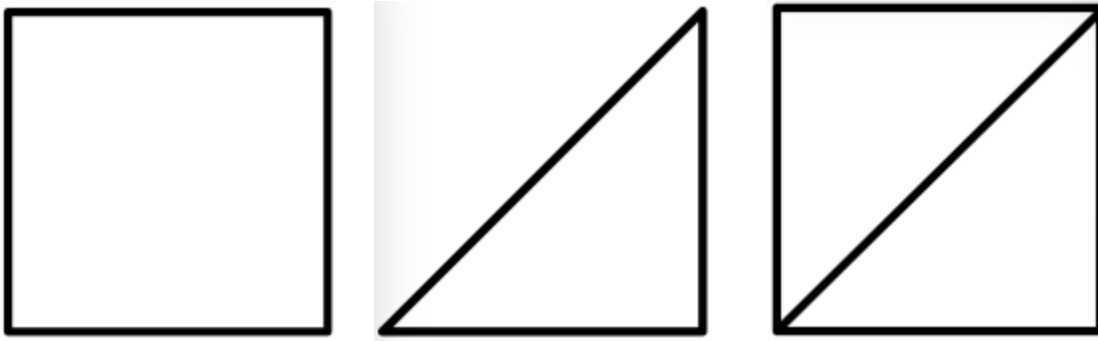
The first picture of a full-scale Stearman fuselage shows the primary fuselage structure. It is a welded steel truss structure. This carries the loads imparted to the fuselage from the wings, tail, and engine. The second picture shows the secondary structure consisting of formers and stringers that give the fuselage its rounded shape when covered with fabric.



I'm not suggesting that an RC model fuselage be built of steel tubing. There are features of this fuselage design, however, that are noteworthy. The primary truss structure includes diagonal tubing that gives the fuselage extra strength and **rigidity**. This fuselage would fail under load without those diagonal pieces. Triangular structures are rigid when tension or compression loads are applied.

Also, note how the engine mount in the second photo is attached to the firewall at the fuselage longerons. This distributes the thrust and torque loads directly to the primary fuselage structure. The firewall is sheet metal and would not support the weight of the engine nor the imposed loads.

You can test some simple structures. Make a square frame with four pieces of wood. Balsa sticks or Popsicle sticks will work. Also make a triangular frame using three sticks. They can be glued together, screwed together, or just pinned. Push against the corners of each structure to displace its shape. The square structure will fail when low to moderate force is applied. The triangular frame will withstand a greater force (load) before failing. A diagonal piece added to the square frame makes two triangles (truss structure) and gives it additional strength and rigidity. The diagonal brace will experience tension or compression depending on which direction force is applied.



Square, triangle, and truss structures.

This style of truss structure for an RC model would likely be built from balsa or spruce, depending on the size of the airplane. Basswood can substitute for spruce but is slightly heavier. Birch plywood is typically used to make the firewall for our model airplanes. It must be thick enough to support the engine mount and associated loads.

Gusset plates, made of thin plywood, can be glued to the joints for additional strength. Stress loads are then distributed across a larger area, improving reliability of the structure. Close fitting joints and proper adhesives are essential to the integrity of the structure. Avoid thin CA glues for these joints.

Fuselage sides could be made of sheet balsa instead of the open truss structure, or a combination of both. Square or rectangular longerons glued along the top and bottom length of the fuselage sides will help carry flight loads from the firewall to the tail. Vertical braces between the longerons will help stiffen the structure. This semi-monocoque construction uses the sheeted side as a shear panel and shares the loads with the attached framework.

So what size and type of materials can be used for the fuselage? The following sizes of medium weight balsa are appropriate based on the size of the model:

For a typical wingspan around 36", use 1/16" balsa sheet or 1/8" square open truss structure. Wingspan around 48", use 3/32" sheet or 3/16" square. For 60" to 72" wingspan, use 1/8" sheet or 1/4" square stock.

The forward fuselage area may need thin plywood glued to the sides to stiffen the area and distribute the engine loads. The plywood should extend far enough aft to support the landing gear and wing loads as well. Carbon fiber is usually **not** necessary in most models. Appropriate use of fiberglass or carbon fiber can strengthen high stress areas. Use it only if you think it is truly required.

Analyze the structural components of your design. Each piece should address compression, tension, or torque (twisting) loads. Distribute loads across a broad area to reduce stress concentration points. Build your fuselage to withstand the normal "punishment" that your model will experience in flight and landings.

The next article will continue the discussion on structures and materials. Wing design for various performance applications will be explored.

Build it strong. Build it light. Just build it!  
Send comments to: [Lou@sccmas.org](mailto:Lou@sccmas.org)





*Visiting Jomcats and other fields*







Although this does not look like much, it is the top of a sinkhole at the outergate of the field



SCCMAS (Tomcats) field is located in the county park and can be reached via Monterey highway



Photo Credit in this issue: John Mattson, Kris Pettersen, Mike Richion, Bahman Dara, Cyndi Cougoule, Jim Xumsteg, Steve Smith

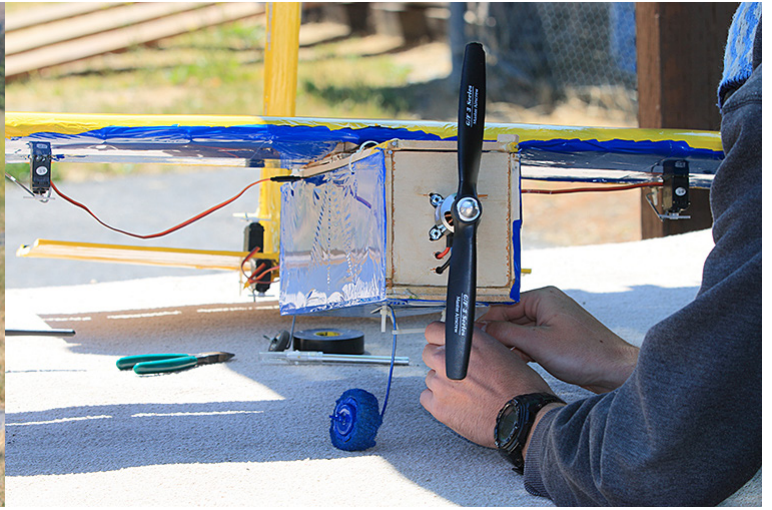




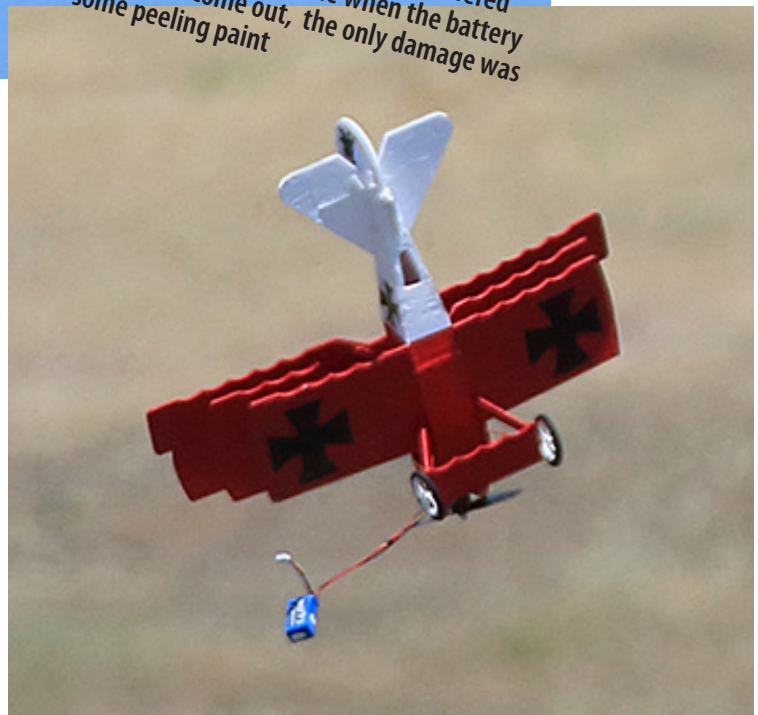




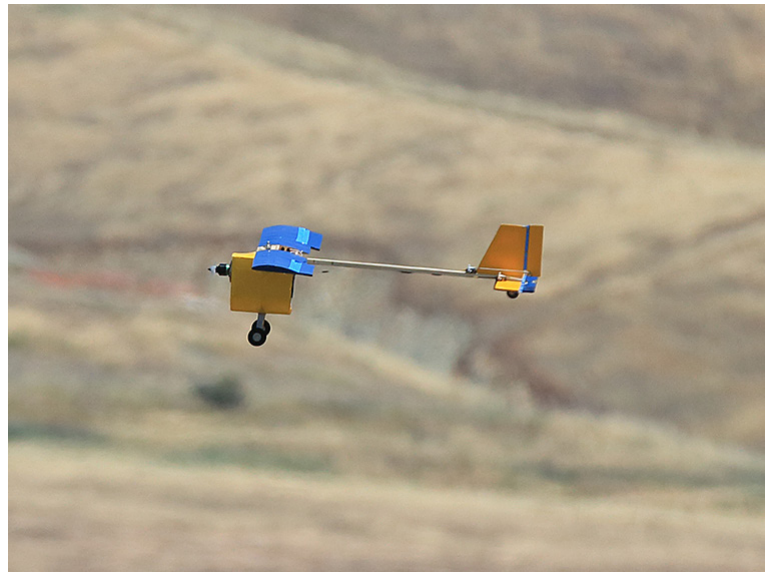




Despite the massive CG change I suffered on this Flite Test triplane when the battery decided to come out, the only damage was some peeling paint















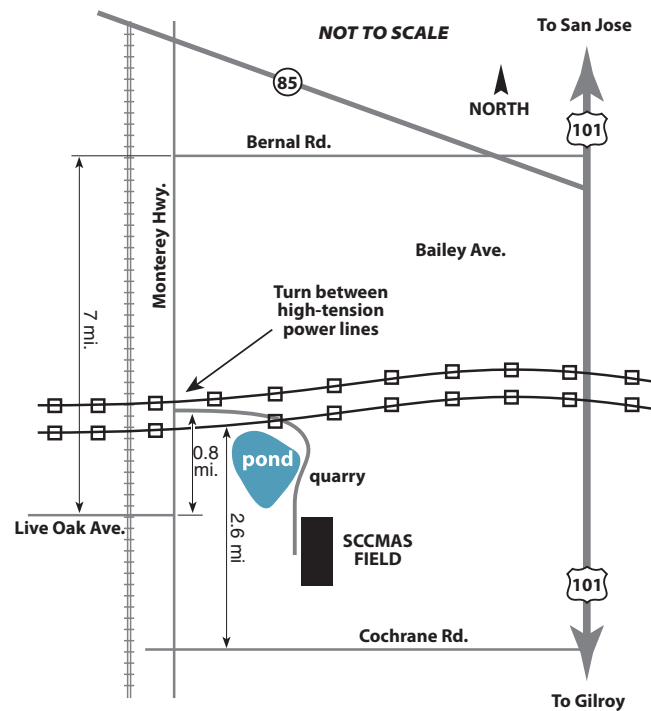


# Wanted

Made the mistake of selling off my pattern planes several years ago. Now looking for a 1970's to 1990's fiberglass fuselage pattern plane or kit. Preferably EU1 or EU1A by RC City, Elan by Dick Hanson, Conquest VI or VII by RC City, possibly Phoenix 7 or 8, but will entertain others if available. Looking to convert to electric. Prefer tail dragger; plug in wing would be nice; 60/90 size. Also trying to locate Frank Navarro from SCCMAS... he bought my Conquest, framed up by Bud Garric, and I'd like to see if it might be available to get it back.

Mack Patterson NSRCA 231 AMA 2205 grumpyoldmack@yahoo.com 650-704-2945

Mack Patterson







Shahram with CARF Skygate Viper  
Jetsmunt 200 Turbine, Electron  
electric Gear, 100" Wingspan, 37  
lbs dry weight - Crow's Nest



Servo Chatter c/o SCCMAS  
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Los Gatos, CA 95032-4610

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