Prop Talk

THE NEWSLETTER OF THE RIVERSIDE RADIO CONTROL CLUB

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AUGUST 2016

FAA Acknowledges AMA as a CBO

We are a "Community Based Organization" (CBO)

Our hobby has faced many challenges this year as we address an increase in government intervention and proposed regulations. AMA has been aggressively advocating for our hobby, and during the past few weeks, we've been happy to report successful progress.

Today, our members have yet another AMA government advocacy victory to celebrate.

There has been confusion among our members as to whether operations above 400 feet are permitted by the FAA. AMA has remained steadfast that the Special Rule for Model Aircraft (Section 336 of the 2012 FAA Modernization and Reform Act) permits operations above 400 feet if conducted within our safety program requiring the pilot to be an AMA member, to avoid and not interfere with manned aircraft, and to keep the model in visual line of sight of the pilot/observer. It should be noted that the AMA Safety Code requires model aircraft to remain below 400 feet above the ground when within 3 miles of an airport unless there is an agreement with the airport that allows models to safely go higher.

In January of this year, the AMA requested that the FAA clarify the 400-foot issue in writing. We are happy to share that in a recent letter to the AMA, the FAA recognized AMA's role as a community-based organization and acknowledged our safety program, including allowing flight above 400 feet under appropriate circumstance.

In this letter, dated July 7, 2016, the FAA states:

> *"…model aircraft may be flow consistently with Section 336 and agency guidelines at altitudes above 400 feet when following a community-based organization's safety guidelines."*
>
> *"Community-based organizations, such as the Academy of Model Aeronautics, may establish altitude limitations in their safety guidelines that exceed the FAA's 400 AGL altitude recommendation."*

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RRCC CLUB OFFICERS

President: *Jeff Szueber*

Vice-President: *Jon DeFries*

2nd Vice-President: *Bob Baker*

Secretary: *Rob Evans*

Treasurer: *Larry Roberts*

Newsletter Editor: *Jim Bronowski*

Safety Officer: ***Vacant***

Field Director: *Dale Yaney*

Webmaster: *Oscar Weingart*

ALL OFFICERS MAY BE CONTACTED AT: RRCCCONTACT @YAHOO.COM

NEXT MEETING SATURDAY AUG 20TH 10:00 A.M. CROWLEY FIELD

Minutes of the July 2016 Meeting

Call to Order:

- President Jeff Szueber called the regular monthly meeting of the Riverside Radio Control Club to order at **10:25 AM July 16th, 2016** at Crowley Field.

Minutes of the previous meeting:

- The minutes of the June 2016 meeting were approved as written and published in the March Prop Talk newsletter by the members present.

Old Business:

- The Quickie 500 pylon races scheduled for Saturday and Sunday, October 29th and 30th was discussed. Right now the event is a go but will required help from our club members to make it a success. The pylons will be positioned east of the runway so as not to fly on the pit side of the runway. The free-flight area will be shut down for the races.

- Other events tentatively scheduled are an IMAC Free Style event on November 4th and 5th and a sailplane F-3J event on November 12th and 13th. All three events will shut down our field for general flying on those weekends. Although it is an inconvenience to many of our members, it is a major source of finances for our club as we lost both our normal contests this year.

New business:

- Jim Bronowski described the physical symptoms of his recent heart attack. He described the pain in his left arm and shoulder in the middle of the night that sent him to the hospital. He wanted to let everyone know that if anything similar happens to them to get to the closest emergency room as soon as possible. It could save your life or prevent significant heart damage.

- Jim Bronowski also covered the latest AMA/FAA soap opera that continues to change. A final determination of our status as modelers and the FAA will be available soon (or so they say).

Program and Show and Tell: None

Raffle:

Pluma Foam ARF Electric Model, One Gallon 15% Fuel, 5 Servos of Various Sizes, 2 LiPo batteries, Foam-Safe CA Glue, Regular CA Glue, 1 Battery Voltage/Capacity Checker and a Partridge in a Pear Tree.

Meeting Adjourned at 11:35 AM by Jeff Szueber
Minutes submitted by: Jim Bronowski

We regret to announce that we have lost one of our most highly regarded members: **Bill Kline**.
Bill was a regular with the "retired group" and also a regular participator at our monthly meetings. He was a true gentleman and an outstanding modeler. For Bill it was "Glow or No-Go" and he could make a glow engine sing. Cancer took him from us much too soon. Rest in Peace dear friend and we will be thinking of you.

I don't have much to report, hobby-wise, this month, as I was busy getting ready for our Summer RV trip, and it was too hot to fly, anyway. One sad note is that club member Bill Kline passed away. I feel guilty that I put off visiting Bill until it was too late. Bill was a good-natured guy, a member of our Tuesday-Thursday retired group. He was an interesting conversationalist and lunch companion, and a meticulous model builder. Bill was a Navy veteran of the Korean War, and took part in the landings at Inchon. Good news is that our fine newsletter editor, Jim "Ski" Bronowski is recovering nicely from his recent heart attack.

I would like to review the detailed results of the AUVSI competition held last June in Maryland. As we stated last month, there were 43 International applicants, but 19 dropped out during the initial phase of the event, where thy had to submit a written technical journal about their project and a "proof of flight" video. These dropouts never took part in the remaining phases and never came to Maryland. The remaining 24 teams were invited to the Patuxent Naval Air Station, where the oral presentations and flight demonstrations were held. The flight demonstrations involved a number of challenging tasks, including autonomous take-off, flight and landing, recognition of ground targets, telemetry of results to a ground station, bomb drop, and so on.

In the accompanying table, I have listed the top 20 ranked teams, all of whom flew, except Cal Poly Pomona, who got no flight or presentation points, but ranked 24th, probably for a super Journal.

Looking at this table, one sees that our local UCR team ranked 8th overall and 4th of the American teams who flew. Only American teams Cornell, North Carolina State and Mississippi State scored higher than UCR. UCR scored highest of all California entrants, which included UC San Diego, Cal Poly Pomona, and CSU Fullerton. Of these four, only UCR and UCSD flew, with a respectable rankings of 8th and 11th. (Note that both UCR and UCSD used our flying field for test flying.) The seven teams that ranked higher than UCR included Canada (the overall winner), tiny Israel (4th), vast India (5th) and Germany (7th).

There are some startling surprises in this listing. There are no Eastern European teams! I guess that the Russians couldn't find a way to cheat. Where is France? Where is Great Britain? India, whom we tend to think of as technologically backward, has five teams in the first 25! The USA had 12 teams, exactly half of the 24 who flew, but this was no surprise, especially since the competition was held in the USA. Canada had four teams in the top 25, including the first and 10th place rankings.

Another surprise is in rankings 21 and 22, both High School level private Prep Schools! Again, this should not be too startling, because there are some fine High Schools out there. Your writer attended Brooklyn Technical High School, which turns out better practical engineers than many colleges and universities.

But where are the Far-Eastern countries like Japan and China, where much of the equipment used by the contestants was probably manufactured? Why were Central and South America not represented? How about Africa and the Mid-East? Only Israel and Turkey participated.

Fourth ranked Israel is a special case. It is a tiny place, only 8,000 square miles and 8.5 million population, but it turns out more high-tech patents and technical papers, from more high-tech companies, than any other country except the USA. The Technion, which fielded their team, is a world class Technical University, comparable to MIT and Cal Tech. With reference to the AUVSI competition, we should recall that Israel was a pioneer of drone development, and our own military early on bought many Israeli drones.

I hope that all our members have a great remaining Summer. Maybe the heat wave will end soon. Until then, all the best and happy landings.

Oscar

Results of 2016 AUVSI Competition - Top 20 Team Ranking

Overall Rank	University & Team	Mission / Journal / Presentation	Country/ State or City
1	Universite de Sherbrooke VAMUdeS	1 / 5 / 4	Canada/Quebec
2	Cornell University CUAir	2 / 12 / 2	U.S.A/New York
3	North Carolina State University Aerial Robotics Club at NC State	4 / 7 / 9	U.S.A/N. Carolina
4	Technion - Israel Insitute of Technology TAS - Technion Aerial Systems	5 / 1 / 1	Israel/Haifa
5	M.S. Ramaiah Institute of Technology Team Edhitha	3 / 2 / 14	India/Bangalore
6	Mississippi State University Xipiter Student UAS Team	5 / 8 / 3	U.S.A./Mississippi
7	Munich University of Applied Sciences Student Aviation Munich	5 / 9 / 5	Germany/Munich
8	University of California, Riverside UCR UAS	5 / 6 / 7	U.S.A./Riverside
9	Embry Riddle Aeronautical University Androne	5 / 11 / 6	U.S.A/Florida
10	University of Toronto UTAT	5 / 10 / 8	Canada/Toronto
11	University of California, San Diego UCSD AUVSI	5 / 3 / 15	U.S.A./San Diego
12	Istanbul Technical University ITUNOM Unmanned Air Vehicles	5 / 4 / 16	Turkey/Istanbul
13	Christopher Newport University CNU/IMPRINT	5 / 21 / 10	U.S.A./Virginia
14	Michigan State University MSU Unmanned Systems	5 / 20 / 11	U.S.A./Michigan
15	University of Texas at Austin Unmanned Aerial Vehicle Team	5 / 16 / 12	U.S.A./Texas
16	University of Alberta UAARG	5 / 14 / 19	Canada/Alberta
17	University of Hawaii VIP University of Hawaii Drone Technologies	5 / 19 / 17	U.S.A./Hawaii
18	RV College of Engineering Project Jatayu	5 / 13 / 20	India/Bangalore
19	Mukesh Patel School of TM&E, NMIMS University UAS NMIMS	5 / 24 / 13	India/Mumbai
20	Indraprastha Institute of Information Technology Delhi Aurora IIITD	5 / 15 / 21	India/New Delhi

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Essentially, this letter confirms that sailplanes, large model aircraft, turbines, and other disciplines can responsibly operate above 400 feet if the AMA member is operating within our safety programming. Equally important, the FAA again acknowledges AMA as a community-based organization.

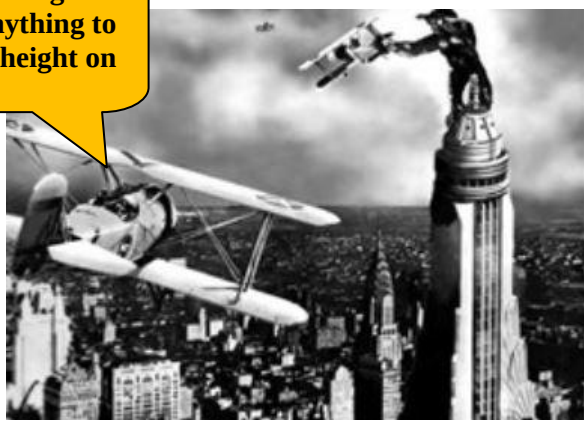
This victory falls on the heels of other successful AMA efforts, including an AMA member exemption from the FAA's Final sUAS Rule (Part 107), the removal of problematic text in the 2016 FAA Reauthorization Bill, and preserving the Special Rule for Model Aircraft through 2017.

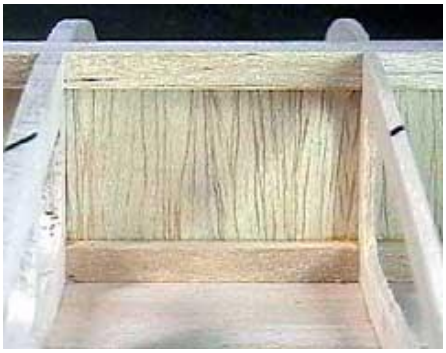
These successes do not transpire easily and our advocacy efforts are not over. We will continue to work with the FAA toward reducing the burden of registration requirements on AMA members. Throughout the next 14 months, we will continue to work with Congress toward a long-term reauthorization bill that will further strengthen the Special Rule for Model Aircraft.

Your basic Amps vs. wire size chart.

AWG	Amps	AWG	Amps
4	347	16	21.5
5	276	17	17
6	219	18	13.5
7	173	19	11
8	137	20	8.5
9	108	21	7
10	87	22	5.0
11	69	23	4
12	54	24	3
13	43	25	2.5
14	34	26	2.0
15	27	30	0.8

Those free-flighters will do anything to get more height on a launch.





Using Shear Webs in Model Airplane Wings and Other Flight Surfaces

Imagine a stick of wood laying on your workbench. If you hold each end and bend the stick some interesting things happen. On the outside of the bend the wood is under **tension**. That simply means it is being pulled apart. On the inside of the bend it is under **compression** - it is being pushed together. A pair of spars behave in the same way. If the wing is bent up, then the lower spar is under tension and the upper spar is under compression.

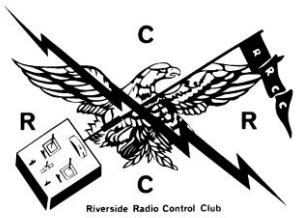
It is normally the compressed spar that fails when a wing folds

Just because a wing fails does not necessarily mean the design is faulty. It could mean that the wing was stressed beyond it is intended limit or that the wing was poorly constructed. Shear webs essentially turn a pair of spars into an **I-beam**. There is a reason why this shape is used for construction of buildings. It is light and strong. The webs add tremendous strength to the wing construction and help prevent a spar from compressing to the point of failure.

At our July meeting the members present approved the following events at our fields on the dates listed. These events require that our field be closed on those dates and our president, Jeff Szueber, is requesting comments and questions at the email address given below. These events all provide a source of income for our club.

Upcoming events:
Pylon Race- October 28,29,30 2016 Fri, Sat, Sun
3E/Freestyle Fun Fly- November 4,5,6 2016 Fri, Sat, Sun
F3J Glider- November 12,13 2016 Sat, Sun

Questions? Contact email: rrcccontact@yahoo.com



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