



Servo Chatter



MAY 2023 ISSUE

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President's Message

By Steve Smith



Hello Tomcats,

I hope everyone has been enjoying our flying facility over the last couple of weekends. The winter-like weather is finally behind us. The late sunsets and warmer temperatures are bringing many members to the field to enjoy their passion, flying R/C models and visiting with fellow modelers. I am pleased to see so many people of all ages involved in the hobby. Of recent we have had several new solo pilots thanks to Dave Neves, Mike Leggett, Mike West and others for spending their time training future R/C pilots.

As reflected in prior emails, the gravel entrance road survived rainy season. There are a couple of areas with potholes to contend with until they are repaired.

I would like to remind everyone to drive cautiously and do not exceed the 15MPH speed limit on the gravel entrance road. This will extend the life of the road plus keeps the dust down. Another reminder, please lock the gate after entering and leaving and put our lock through the yellow links. Recently one of the agencies bypassed our lock, preventing access. If this does occur, please contact the Ranger and they will send someone to correct the situation.

Thanks to the many volunteers over the past months for your help to maintain the runways, the facility and mowing the lawn areas.

This has been a challenging year so far as the ground is still wet with the grass continuing to grow requiring mowing on a weekly basis. Our mower is 40+ years old and is still running thanks to Tim Jones. I would also like to thank Tom Ciccone and John Bagnatori for their efforts marinating the runway area during the weekdays and of course repairing the infamous Tomcat windmill. Thanks guys!

We are always looking for volunteers to drive the mower. If you are interested helping with mowing, contact use at fieldmaintenance@sccmas.org. We'll go over the mower use procedures and get you mowing. The County will be disking east of the runway next month. As usual the goats will be next in line to finish off the mowing.

If you haven't noticed, we have new high definition cameras installed and visible from our website. One camera points towards the flight line and the other camera captures the pit and parking areas. We felt it was time to upgrade our 25+ year old system. All of this was spearheaded by Mike and Chris Luvara. Big thanks to the both of you!

Continued on following page.

President's Message, Con't.

For those of you following the FAA requirements over the past year, September 2023 is approaching. This is a special month where a Remote ID broadcast transmitter in your R/C aircraft (UAS) will be required. This does apply to recreational UAS flyers. The AMA in cooperation with the FAA provides a process for flying sites under a Community Based Organization (CBO) (the AMA) to acquire classification as a FAA Recognized Identification Area (FRIA). Having this classification will exempt the CBO flying site from requiring a Remote ID broadcast transmitter on R/C aircraft (UAS). I have submitted the FRIA application for the SCCMAS. As many other flying sites around the area and the state have also submitted the FRIA application. I have been in contact with the AMA. Now we have to wait for the FRIA classification to be issued. I will be providing updates as they become available from the AMA.

In the near future we will be hosting the annual field cleanup day on a Saturday in June (Date TBD). We will start at 8:00am and finish around 1:00pm. During this time our facility will closed to all flying! As in the past, this is a time when SCCMAS volunteers come together to spruce up the place.

We will be painting the tables and posts, re-roping the perimeter posts, mowing, runway cleanup, edging, trimming, and other tasks. Bring your safety glasses, gloves, ladders, rakes, shovels and weed trimmers. Donuts and Coffee in the morning, followed by lunch around 1:00pm.

Mark your calendars, Sharam Shirazi is in the process of working out the details for a Warbird Fly-In at our facility on Saturday July 22nd. This will be open to all Military era aircraft WWI, WWII, to modern. Aircraft can be Electric, Glow, Gas, or Turbine Jets. All aircraft must have military schemes and markings. Pilots meeting in the morning, followed by lunch at noon. Additional information will be available soon.

We are always looking for additional 'Servo Chatter' content. If you have photos from the field, an article to share, new product experience, project or building tip, send them to Liam at servochatter@sccmas.org.

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

Enjoy your time flying and see you at the field,

Steve

Tomcats Reminder:

—All Tomcats Members must lock the main entrance gate behind them each time they enter and leave the SCCMAS Flying Field.

From the Editor's Desk

Newsletter Editor - Liam O'Connor

Greetings Tomcats -

Welcome to the May 2023 issue of Servo Chatter!

This year's unusually wet, cold, and windy weather is now behind us. I am very pleased that our new vehicle access road survived some record breaking winter storms with virtually no issues. While all of the rain was very much needed in California, it was starting to get "a bit old," and we are all looking forward to warmer days and excellent flying conditions over the coming months.

I hope all of you will enjoy this issue, which includes key information from SCCMAS leadership and volunteers, a summary of upcoming events, plenty of photos of our recent activities at the flying field, a construction article by SCCMAS member Andy Keates (Building Tips for Hinges and Holes); and a construction article by Dave Neves (Li-ion Alternative to Li-Po Flight Batteries).

I would also like to remind our members that if you have anything you would like to share in our newsletter, please send it to me at the email address below. We are always on the lookout for stories, articles, building tips, photos, etc. that we can include in Servo Chatter.

Finally, with the warmer weather at the field, we have begun to see some of our little rattlesnake friends hiding in plain sight. Please be on the lookout for them!



If you do encounter a snake, do not disturb, attempt to move, and/or touch it. Instead, back away and let the snake continue on its journey.



Until our next issue, I wish all of you a fantastic spring full of flying, fun, and happy landings.

See you at the field!

Liam

servochatter@sccmas.org

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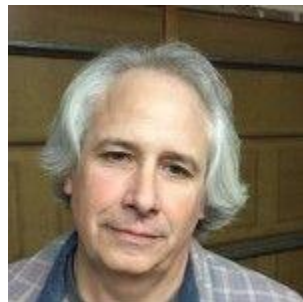
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Fixed Wing, Drones, and Helicopter Flight Instruction

Coordinator

Dave Neves

Congratulations New Pilots!

Congratulations to Baden Erickson on completing his flight training and soloing on Saturday, 4-8-2023. Baden was soloed by Dave Neves.



For anyone who is interested in flying a model airplane, but does not have a plane yet, please contact me and I would be happy to take you up on a buddy box flight on my club trainer (pictured below). Just give me a call or email at: (510) 673-4467 or rcheliguy7@gmail.com

We now have a number of additional instructors who are available to help with flight instruction. If you are a new member who needs help, please check with them for their availability. You can find their names and contact information on our website in the training section.

Thanks,
Dave Neves



SCCMAS Field Upgrades - New Webcams!

04/25/2023 03:36:19 PM
PitCamIID



04/25/23 at 3:36p | Temp: 77.1°F | Wind: 3.0 mph W

SCCMAS is in the process of upgrading to all new HD webcams at our field. The new Runway Cam was installed several months ago, and the new Pit Cam went live in late April 2023 (see above). Other HD cameras will be installed in the near future!! Visit our website (www.sccmas.org) to see for yourself! A big thanks to our Club Officers for making this happen, especially Chris and Mike Luvara.



Construction Article

By SCCMAS Member, Andy Keates

Building Tips – Hinges and Holes

Here are a few things I've been using for building and covering. Maybe new, maybe not.

It's not easy to slide film hinges into a slot. The SIG easy-hinges have a layer of fabric over a plastic core and the fabric tends to ride up over the core if the fit is too tight. The answer to this is to cut a piece of sandpaper and push it into the slot, then move it around to remove a thin layer of balsa. This makes the slot as thick as the hinge. If you didn't cut the slot quite straight, this can flatten it out. If you didn't cut it directly on the centerline of the hinge, you can sand the slot so that it's more centralized. This all makes it much easier to attach the aileron to the wing etc. and you get a second chance at having them line up really well. It makes the process of attaching the two surfaces much more predictable when the hinges fit snugly. You can't wiggle the hinges into place if they are attached to another surface.

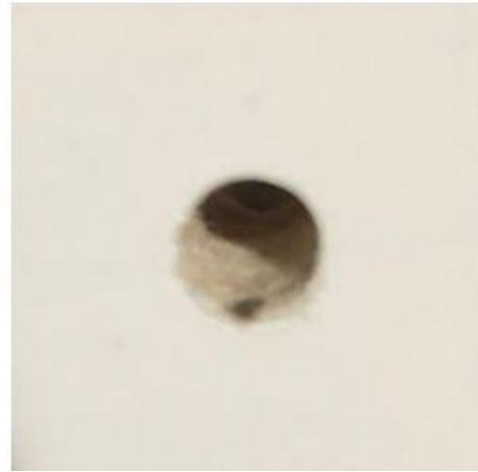


blade and prevent glue from getting into the joint. It's a pretty nasty slot. The solution to this is to get a soldering iron with a small tip and to run it along the slot. This seals the covering material into the edges of the slot, and the covering material shrinks away from the slot itself, leaving a good clean slot to insert the hinges.

The next step is slot preparation after applying covering film. You should cut the slots before covering, so that any sanding doesn't leave sawdust under the edge of the film you just applied. After you cover it, you can put a knife through the film into the slot, but film around the slot might act like a wiper

Continued on following page

Construction Article, Con't.



Similarly, if you have a hole to reveal (a wing hold—down bolt hole in this picture), just push the soldering iron through the hole, and it'll bond the film to the edges of the hole.

Getting the iron to the right temperature is just practise. Start with a low temperature and work upwards.

Happy building!

Did You Know?

—The speed limit on the SCCMAS Vehicle Access Road is 15 MPH.





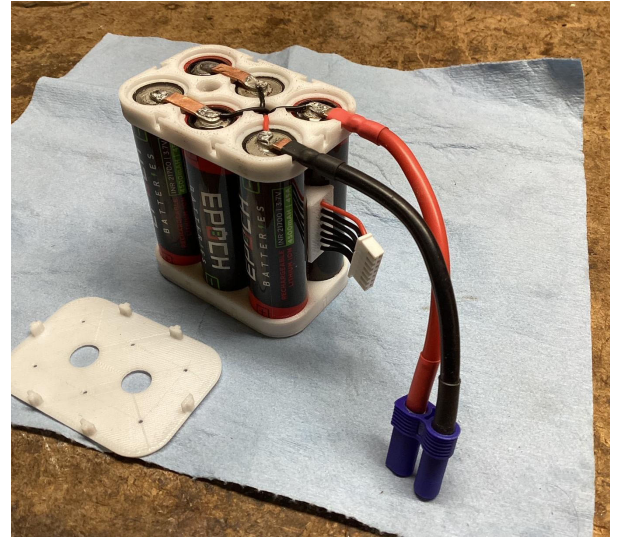
Construction Article

By SCCMAS Member, Dave Neves

Li-ion Alternative to Li-Po Flight Batteries

Recently, a number of Tomcats modelers (including me and Shahram Shirazi) have started experimenting with Li-ion batteries in place of the Li-Po flight batteries which we are commonly using. The individual batteries are 3.7v and have a capacity of 4500mAh. I decided to design and print end caps with covers to support both ends of the batteries in 6 cell pack.

I created pre shaped solder lugs from 18awg solid copper. One of the advantages of this battery pack is size and weight. The Li-ion pack weighs about 30% less than a 6s-4500mAh Li-Po pack. If two Li-ion packs are wired together in parallel, you will have a 6s-9000mAh pack that weighs only 3 oz more than a single 6s-6000mAh Li-Po pack. The Li-ion batteries can also be safely discharged to 3.0v per cell.



Due to their cylindrical metal case design, the batteries are claimed to last a significantly greater number of charge cycles than an equivalent Li-Po pack. The only drawback with the Li-ion batteries is that they do not have the same high instantaneous current draw of the Li-Po batteries.

Continued on following page

Construction Article, Con't.

Tomcats member Shahram Shirazi was a leader of the Li-Ion experiment, and the inspiration came from a YouTube video by a modeler in Europe. Shahram reported the following:

"Yesterday I flew the Viper 90 for about 12 minutes with a 6S2P and had about 15% capacity left at the end of the flight.

The viper with li-ions feels like flying with older lipos. The viper with a 7000 Lipo out performs the Li-ions for performance and instantaneous thrust. The li-ions are the king of the hill for duration.

I am now sure that a 6S3P with 13,500 mah capacity will be the king of the hill for thrust and duration. Stay tuned."

"I flew the eflight p-51, 1.5m plane with two sets of these batteries for 15 minutes! Darn good flight time." **

The data sheet for the Li-Ion Batteries described in this column is included on the following page.



Above: Dave Neves using his radio's telemetry function to monitor the discharge rate on his Li-Ion battery setup



LITHIUM-ION RECHARGEABLE BATTERY

PRODUCT DATA SHEET MODEL **INR-21700-P45B**

■ CELL CHARACTERISTICS

Capacity	Typical	4500 mAh 16.2 Wh
	Minimum	4300 mAh 15.5 Wh
Cell Voltage	Nominal	3.6 V
	Charge	4.2 V
	Discharge	2.5 V
Charge Current	Standard	4.5 A
	Maximum	13.5 A (70°C cut-off)
Charge Time	Standard	1.5 hr
Discharge Current	Continuous	45 A (80°C cut-off)
Temperature	Charge	0°C to 60°C
	Discharge	-40°C to 60°C
Energy Density	Volumetric	643 Wh/l
	Gravimetric	242 Wh/kg
Typical Impedance	AC (30%SOC)	7 mΩ
	DC (50%SOC)	15 mΩ

■ PHYSICAL CHARACTERISTICS

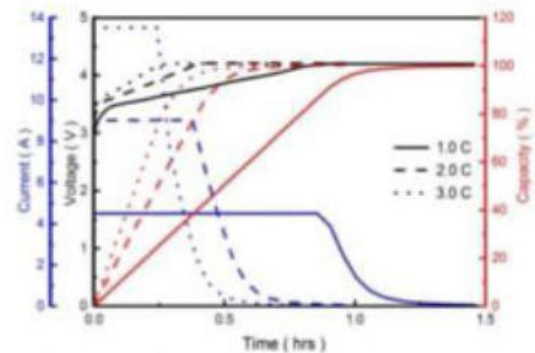


Shape	Cylindrical
Can	Steel
Diameter	21.55 mm (Max)
Height	70.15 mm (Max)
Weight	70 g (Max)

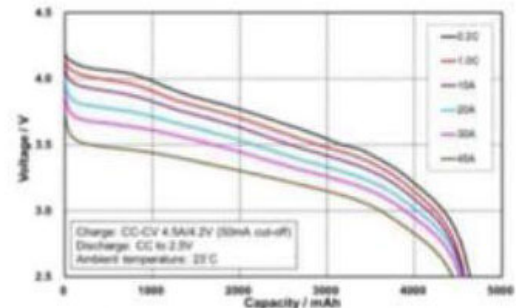
The information contained herein is for reference only and does not imply a performance guarantee or a product warranty. Specifications and characteristics are subject to change without prior notice.

For application specific information, please contact E-One Moli Energy Sales and Applications or the nearest MOLICEL® recognized agent.

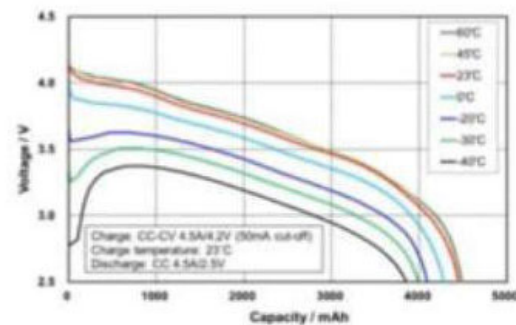
■ Charge Characteristics



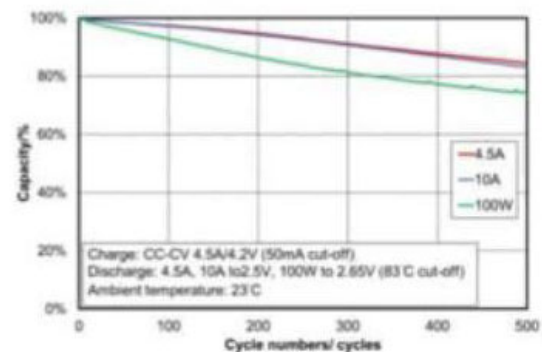
■ Discharge Rate Characteristics



■ Discharge Temperature Characteristics



■ Cycle Characteristics



AMA Sanctioned Events Approved for Higher Altitudes

Airspace FAA March 8, 2023 / Holly Silvers /

AMA is happy to share that we have finalized a process with the FAA to provide higher altitudes for AMA sanctioned events in uncontrolled airspace. Effective immediately, the AMA sanctioning process will now include an assessment for operations to be approved up to 700 or 1,200 feet above ground level.

This is just one of many steps in AMA's strategy to continue securing higher altitudes for our safe operations. AMA has already secured higher altitudes for many of our club flying sites in controlled airspace, in some cases up to 2,000 feet. Our work is not done, AMA will continue to advocate for higher altitudes elsewhere.

To learn more about becoming a Contest Director or Event Manager to sanction an event, please visit www.modelaircraft.org/events/become-an-organizer. You can also contact our Competitions department at (765) 287-1256, ext. 252 or competitions@modelaircraft.org.

We also encourage you to read our [Frequently Asked Questions](#) to learn more about this exciting news!

Read more about AMA's efforts here: [AMA Sanctioned Events Approved for Higher Altitudes - AMA IN ACTION Advocating for Members \(modelaircraft.org\)](#)

Please note that some of this may be new to you...

In addition to your SCCMAS Membership, you need:

- A current AMA membership
- An FAA Small UAS Certificate of Registration
- Place FAA registration number on your aircraft
- Complete the AMA TRUST test

The Recreational UAS safety Test (TRUST)

<https://trust.modelaircraft.org/>

FAA Drone Zone Website for Small UAS registration

<https://faadronezone.faa.gov/#/>

<https://amablog.modelaircraft.org/amagov/2021/05/11/update-to-faa-drone-zone-registration-and-renewal-process/>

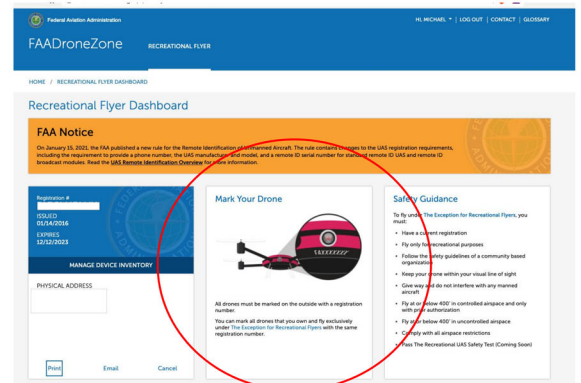
FAA Recreational Rules: https://www.faa.gov/uas/recreational_fliers/

[Advisory Circular AC 91-57B](#)

[AMA Safety Code](#)

AMA Know Before You Fly <https://www.modelaircraft.org/know-you-fly>

FAA Drone Zone Website



Mark Your Drone



All drones must be marked on the outside with a registration number.

You can mark all drones that you own and fly exclusively under [The Exception for Recreational Flyers](#) with the same registration number.

Example FAA Small UAS Certificate of Registration



Federal Aviation
Administration

Small UAS Certificate of Registration

REGISTERED OWNER: YOUR NAME HERE
REGISTRATION NUMBER: XXXXXXXX
ISSUED: 01/14/2016 EXPIRES: 12/12/2023

This Small UAS Certificate of Registration is **not an authorization to conduct flight operations** with an unmanned aircraft. Operators of unmanned aircraft must ensure they comply with the appropriate safety authority from the FAA. To operate as a recreational flyer, a person must meet all of the statutory conditions of the exception for limited recreational operations of unmanned aircraft (49 U.S.C. 44809). Persons who do not meet all of the statutory conditions may not operate under the statutory exception for limited recreational operations of unmanned aircraft.

To fly under the exception for recreational flyers you must:

- Have a current registration
- Fly only for recreational purposes
- Follow the safety guidelines of a community based organization
- Keep your drone within your visual line of sight
- Give Way and do not interfere with any manned aircraft
- Fly at or below 400' in controlled airspace and only with prior authorization
- Fly at or below 400' in uncontrolled airspace
- Comply with all airspace restrictions
- Pass The Recreational UAS Safety Test (Coming Soon)

This Small UAS Certificate of Registration **is not an authorization to conduct flight operations** with an unmanned aircraft. Operators of unmanned aircraft must ensure they comply with the appropriate safety authority from the FAA. To operate as a recreational flyer, a person must meet all of the statutory conditions of the exception for limited recreational operations of unmanned aircraft (49 U.S.C. 44809). Persons who do not meet all of the statutory conditions may not operate under the statutory exception for limited recreational operations of unmanned aircraft.

For U.S. citizens, permanent residents, and certain non-citizen U.S. corporations, this document constitutes a Certificate of Registration. For all others, this document represents a recognition of ownership.

To fly under the exception for recreational flyers you must:

- Have a current registration
- Fly only for recreational purposes
- Follow the safety guidelines of a community based organization
- Keep your drone within your visual line of sight
- Give Way and do not interfere with any manned aircraft
- Fly at or below 400' in controlled airspace and only with prior authorization
- Fly at or below 400' in uncontrolled airspace
- Comply with all airspace restrictions
- Pass The Recreational UAS Safety Test (Coming Soon)

SEE
DETAILS ON
2ND FLYER

DAWN PATROL

WOODLAND DAVIS CA

SEPTEMBER 1ST-4TH 2023

EVENT FEE \$25-

WE NEED YOU TO JOIN THE FUN!

WWI AND GOLDEN AGE ON SATURDAY/SUNDAY.
OPEN FLYING ON FRIDAY AND MONDAY.
FIELD LUNCH ON SATURDAY/SUNDAY FOR \$6 PER DAY
EVENT FEE INCLUDES ONE LUNCH TICKET.

PILOTS AND
MECHANICS
NEEDED!

BRING
YOUR ALMOST
FINISHED WWI BIRD
AND TALK SHOP AND
WIN AN AWARD

WELCOME ALL

ALL WWI AND GOLDEN AGE
STATIC AND PARTIALLY BUILT WILL BE
JUDGED AT NOON TIME ON RUNWAY

AMA REQUIRED

TOP SECRET LOCATION...
DRY CAMPING AND RV
WELCOME - NO HOOK UP'S

N38 35 06.4
W121 42 01.4

43295 Country Road 29
Davis CA

AWARDS

BEST FLYING AXIS WWI
BEST FLYING ALLIES WWI
OUTSTANDING FLIGHT WWI
OUTSTANDING CRAFTSMAN WWI
BEST STATIC AXIS WWI
BEST STATIC ALLIES WWI
BEST ARF AXIS WWI
BEST ARF ALLIES WWI
BEST GOLDEN AGE

RAFFLE PRIZES

VK 1/6 SCALE FOKKER DR.1
VK 1/6 SCALE SOPWITH CAMEL
WORK BENCH PLANE STAND
AND MUCH MUCH MORE . . .

BRING YOUR RC
STUFF TO SHARE,
TRADE AND SALE!

QUESTIONS ASK MICHAEL
RADU@MAC.COM
OR (408) 504-6826

FLYER
2 OF 2

DAWN PATROL

WOODLAND DAVIS CA

SEPTEMBER 1ST-4TH 2023

AWARDS

BEST FLYING AXIS WWI
BEST FLYING ALLIES WWI
OUTSTANDING FLIGHT WWI
OUTSTANDING CRAFTSMAN WWI
BEST STATIC AXIS WWI
BEST STATIC ALLIES WWI
BEST ARF AXIS WWI
BEST ARF ALLIES WWI
BEST GOLDEN AGE

FLYING RULES

WORLD WAR ONE PLANES:
PLANES MUST HAVE BEEN USED
DURING OR BEFORE 1918

GOLDEN AGE PLANES:
PLANES MUST HAVE BEEN
FLOWN BEFORE 1939

EVENT FEE \$25-

DON'T
HAVE TO FLY
TO WIN JUST
HAVE ENTRY
FEE

WHAT YOUR \$25- GETS YOU!

- 1) ENTRY FOR THE AWARDS
- 2) ENTRY TICKET INTO RAFFLE DRAWING
- 3) FREE GIFT FROM CONTEST DIRECTOR
- 4) ONE LUNCH TICKET
- 5) THE ENTIRE 4 DAYS TO FLY!

SCHEDULE ON SATURDAY

DAWN BREAK	- 12PM	OPEN FLYING
12PM	- 1PM	STATIC PLANES ON RUNWAY
1PM	- 2PM	LUNCH - OPEN FLYING
2PM	- 5PM	OPEN FLYING

SCHEDULE ON SUNDAY

DAWN BREAK	- 12PM	OPEN FLYING
12PM	- 1PM	STATIC PLANES ON RUNWAY
1PM	- 2PM	LUNCH - OPEN FLYING
2PM	- 3PM	OPEN FLYING
3:30PM	- 4PM	AWARDS AND RAFFLE
4PM	--	OPEN FLYING

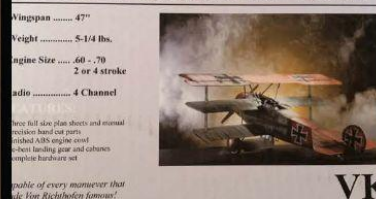
RAFFLE PRIZES

VK 1/6 SCALE FOKKER DR.1
VK 1/6 SCALE SOPWITH CAMEL
RC PLANE TABLE STAND
AND MUCH MUCH MORE . . .

BRING YOUR
ALMOST FINISHED
WWI BIRD AND TALK
SHOP AND WIN AN
AWARD



1918 FOKKER Dr.1



NOTE: IT COULD BE HOT SO PLEASE BRING LOTS OF WATER.

DRY CAMPING ONLY SO ARRIVING EARLY IS WELCOME. I'LL BE THERE FRIDAY MORNING!

BRING ALL YOU WISH TO
TRADE AND OR SALE.
WELCOME TO ALL

QUESTIONS ASK MICHAEL AT RADU@MAC.COM OR CALL OR TEXT TO (408) 504-6826

SCCMAS: Scenes from the Field



SCCMAS: Scenes from the Field (con't)



SCCMAS: Scenes from the Field (con't)



SCCMAS: Scenes from the Field (con't)



SCCMAS: Scenes from the Field (con't)



SCCMAS: Scenes from the Field (con't)



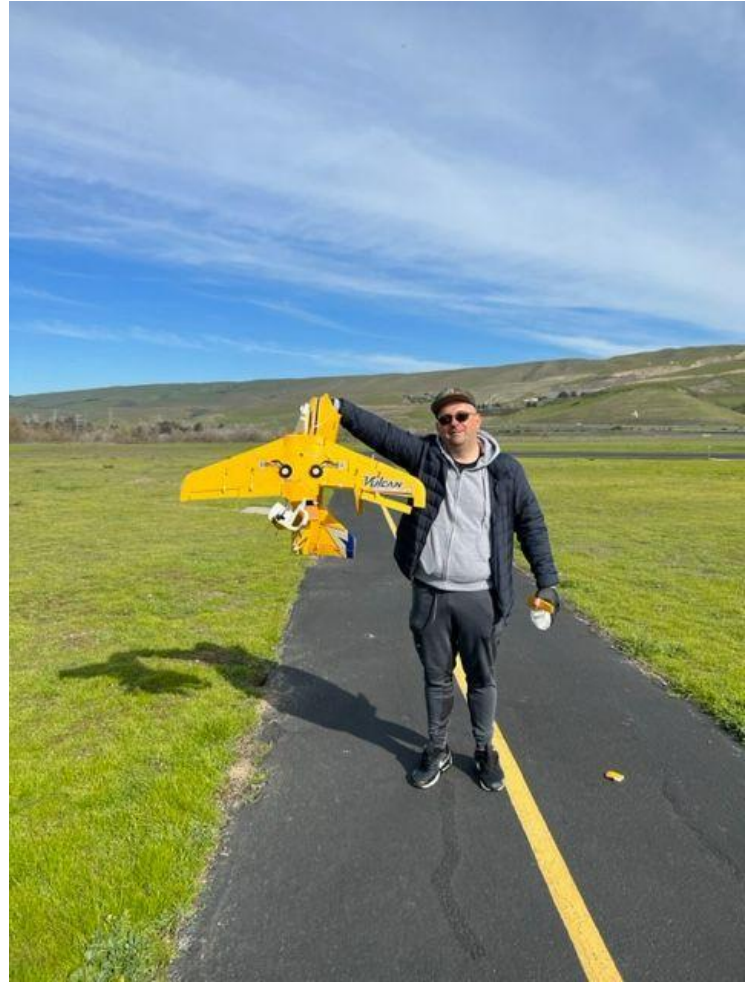
SCCMAS: Scenes from the Field (con't)



SCCMAS: Scenes from the Field (SJSU Engineering Students Annual Test Flight)



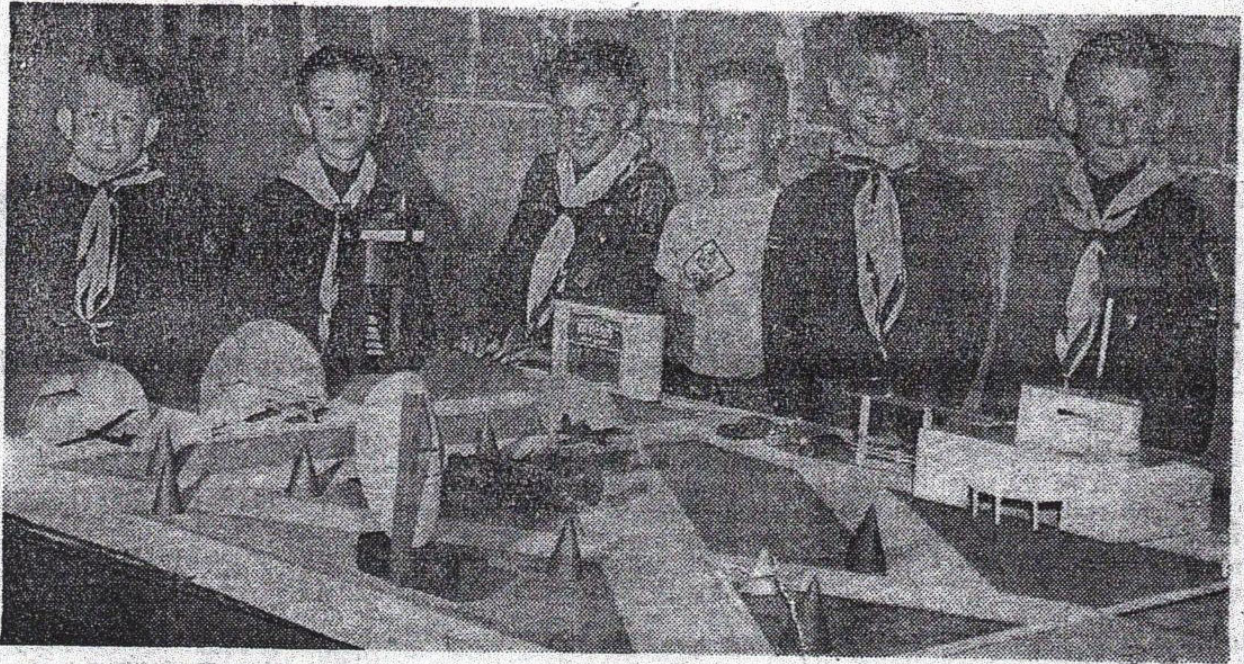
SCCMAS: Scenes from the Field (Accidents Happen to All of Us!)



SCCMAS Member's Early Modeling Achievements

SCCMAS Member, Roger Pellor, provided a copy of the newspaper article below, which was printed in 1952. Roger can be seen in the center of the photo, wearing a white T-Shirt. Roger has been a skilled modeler from the very beginning!

Cub Scouts Exhibit Airport Project



CUB SCOUTS of Pack 20 exhibited a model airport they designed at Hopkins St. School Thursday evening. Scouts pictured are, from left, Larry Carpenter, Robert Thorpe, William Cook, Robert McElroy, Charles Smith and Richard Peterson.

David Dent was awarded a prize for the best plane in the exhibition and Roger Pellor received a special award for his craft which was carved from wood.

The program included a picnic supper and a pack inspection by Paul Pierce.

The Pack committee will meet June 1 at 8 p. m. at the home of Mrs. Raymond Peterson, 760 Hazel St., to plan an ice cream social June 3.



Servo Chatter is published several times annually by the SCCMAS "Tomcats" radio control club located in Morgan Hill, CA. Views expressed in Servo Chatter are those of the writers. They do not necessarily represent the views of the club, its members, or officers. Mention of any product, material, or service shall not, nor is it intended to, imply approval, disapproval, or fitness for any particular use. The SCCMAS is a non-profit organization. Permission is granted to reproduce anything printed in Servo Chatter as long as the source and author are credited.



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