



June 1, 2011

Volume 9, Issue 6

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## Southern Alameda County Radio Controllers

President: Bob Freshwater (510) 657-2847

Secretary: Jim Newman

Vice President: Rico Dalmau

Treasurer: Jim Utley (510) 352-3150

### Minutes of the April 9th General Membership meeting by Jim Newman

#### **Minutes**

Accepted as published.

#### **New Members/Prospects**

Bill Sullivan and Casey Shimane were voted into the Club as new members.

#### **Treasury Report**

Accepted as read.

#### **Field Report**

Art Vargas Has been busy taking care of the flying field. Recently, he talked to Gary and he was happy with the field's maintenance and with members maintaining the 10mph speed limit on the road. The County will only grade the road once every four years.

What this means is that when we keep our speed down, the road will stay in good shape longer. So keep up the good work.

Bob Freshwater proposed peeling back the Astroturf in the pits and adding some gravel to try to firm up the soil underneath. After a brief discussion, the topic was tabled until later in the year when the soil underneath the pits has dried out a little more.

Bob Freshwater stated that the awnings over the pits will need to be put back up soon. No date was set for re-installing the awnings.

#### **Safety Report**

Bob Dutra reminded members to point their electric aircraft towards the fence when arming the plane on the arming table. He relayed a story of someone early in the month

Again this month....General Membership Meetings will be held

**At the Field June 11th.**

Meeting time will be 11AM followed by a free BBQ

who failed to do so and his engine went to full throttle and damaged another flyer's plane. So please be careful when arming and disarming your electric aircraft.

Herb Burns also mentioned that pilots are still taxiing their aircraft back to the starting area and pointing their plane towards the opening in the fence with the engine/motor running. This is a violation of our safety rules and is potentially dangerous to others. So please be careful and don't point you plane towards the pits when the engine/motor is running.

### **Old Business**

Art Vargas stated that Hobby Town USA in the Fremont Hub would not be moving as was speculated at an earlier meeting. The owner has worked out an agreement with the landlord and will be staying at its present location.

Bob Freshwater reminded everyone that the Club would be holding a Swap-Meet at the Hanger. The event will take place on June 4th, 2011 from 9am to 3pm. Table space will be free for members and \$10.00 for non-members.

### **New Business**

Bob Freshwater proposed having stickers on

badges to show that the member has been certified to fly solo. After a discussion, Herb Burns made a motion to require stickers on badges to show that the member has been certified to fly solo. There was no second and the motion was dropped.

Matt O'Sullivan made a motion to hold the June Club meeting at the flying field. The motion was seconded and passed by voice vote. So the June Club Meeting will be held at the flying field Jun 11, 2011. The meeting will start at 11am . A BBQ will follow the meeting.

### **Announcements**

Herb Burns reminded everyone that the Castle fly-In will be held during Memorial Day weekend.

### **Dummy of the month**

None.

### **Show and tell**

None.

## **Airline Announcement!**

United Flight Attendant announced, "People, people we're not picking out furniture here, find a seat and get in it!"

## People Behaving Badly

The first thing I would like to say is congratulations to Gary Rebiskie....He is now retired and can hang out at the field on weekdays with the good ole boys. Nice going Gary! Not to long ago, at the field, I was talking to a friend...he is not too active in flying now but has been a member for a lot of years. He asked me "where have the builders and scale flyers gone?" Well, it's a sad situation, there are not too many builders around here anymore, even the hobby shops don't support them, at least in this area. The ARF's have taken over. I am still a builder....old habits are hard to break. But, having been a builder, I have to admit there are some good ARF's on the market. If you look around, you can't build one even close to what you can buy one for.....

There is a sign at both ends of the field that are even with the flight line. Some people have been flying behind them....that is a "No-Fly-Zone". In other words, from the flight line, anything behind you is a no-fly-zone. Be Careful, I have seen a lot of people flying close to the plant that is to your right. We don't need to start anything over there.



(Bob Dutra, Safety Officer)

## Heard on a Southwest Airline Flight

"Ladies and gentlemen, if you wish to smoke, the smoking section on this plane is on the wing and if you can light 'em, you can smoke 'em".

### Upcoming Events for June 2011

- |             |  |
|-------------|--|
| 11th        | Warbird Fly-In & BBQ @ SCCMAS, Morgan Hill<br>Lynsel Miller - 408-374-9358    contests@sccmas.org          |
| 12th        | Pylonpalooza Warbird Race @ Sacramento Area Modelers<br>Casey Smith - 916-302-6061    morc9988@yahoo.com   |
| 17th—19th   | US Scale Masters Qualifier @ Fresno Radio Modelers<br>John Lockwood - 559-298-1606    imaavp@sbcglobal.net |
| 25th & 26th | Pattern @ Radio Control Flyers Unlimited, Woodward Res.<br>Dick Belden    richardbelden@volcano.net        |
| 25th & 26th | Dan Sullivan Memorial Scale Master Qualifier<br>Dan Sciacca 707-485-8628    rc_racer_x@yahoo.com           |

The complete NCRCS schedule is posted on the SACRC's website

### Servo Setup Issues

*Submitted by Jeff Whitney (originally from Don's Hobbies)*

(While this is specifically aimed at large 3D style models, much of it is applicable to smaller 3D or just plain sport or scale models using analog servos as well.)

There are modelers who have hot running or burned out digital servos, melted wires or extensions and are needlessly crashing planes because of improper setup of digital servos, linkages or radio programming. Additionally receiver reboot issues is not a new problem. 15 years it was called battery dropout and it's caused by the same things today that it was caused by 15 years ago. If your 6v system (7-8.4V nominal pre-regulated voltage) is running at 3.4V you've got a problem with the setup of your plane.

Modelers often believe the malfunctions to be the result of faulty components or the "naturally high current flow for digital servos" when it is the improper setup that has caused the high current flow and resulting damage or receivers that shut-down due to lack of power. Also, you may have heard that you shouldn't use a digital servo on throttle because you will burn it up. You will burn it up if you don't set it up correctly but that's a modeler issue not a servo issue.

To handle the higher current rates caused by improper setups modelers often believe they need and use 16-gauge wire and powerpoles or Deans connectors, power isolation systems and other gadgets. While it is not wrong to use these items, these components often mask the true nature of the problem. Often the fix is to treat the symptom rather than address and fix the problem. I believe we should fix the problem.

Here are some typical symptoms — a modeler who sets up his plane, without using a current meter to properly adjust multiple digital servo linkages, that are driving a single control surface will often experience high idling current, high battery drain, hot running or burned out servos or regulators, erratic operating servos receivers and regulators and in worse cases system shutdowns from melted wires, burned out servos, overheated regulators or receiver reboots. In short modelers are needlessly punching planes in the ground from not understanding the cause and effect of their improper setup. The root cause of "abnormally high current draw" is the servo preload or linkage binding that occurs when digital servos are not set up properly. It is virtually impossible to accurately set up travel adjustments without a meter because digital servos have 5 times the centering accuracy of analog servos. What does this centering accuracy mean in practical terms relative to your setup?

When a standard servo moves from full left to full right the servo moves 1024 incremental steps from stop to stop. A digital servo uses 5120 steps to travel the same distance from stop to stop hence 5 times the centering accuracy. If you are not in perfect alignment one servo will fight the other servo, (high current flow, hot regulators etc.)

Unlike a standard servo, when a digital servo feels resistance from any source the servos respond virtually immediately with high torque and holding power causing high current flow. Analog servos by comparison take several degrees of travel before they ramp up to their max torque and holding power. Coupled with the poor centering accuracy of an analog, relative to digital servos, modelers can get away with sloppy setups with analog servos that would crash the same plane if it were set up with digital servos.

Misaligned linkages, tail wheel binding, hinges or sub-trim not adjusted correctly, endpoint and misaligned midrange adjustments always cause high current flow, hot running regulators or servos, high battery draw and/or erratic running servos or receivers and with the latest 2.4GHZ receivers a receiver reboot is possible.

While it is certainly possible to get a new defective component that can cause these same symptoms, the common cause of these problems is due to servos fighting each other due to improper setup. In extreme cases servos can actually melt due to the setup error.

High speed stop. (burned out servo)

### Now for the midrange travel-

Move your stick 1/2 way - If your full travel is 40 degrees move the stick so your surface travels 20 degrees. Check the current reading. If it jumps in the mid travel this tells you your linkages are not properly adjusted. When using bolt linkages such as 8/32 or 10/32, with linkage fittings screwed onto the bolt, the binding at this point is caused because the fitting, that the pushrod is connected to, is not connected the same distance from the hinge line. In other words, to illustrate this issue let me exaggerate the problem - If you are 20 turns out from the hinge line on one bolt and 10 turns out from the hinges line on the second bolt the mechanical connection may scribe a 1-1/2" radius on one servo and a 2" radius on the second servo. Now you can visualize the binding that takes place if these linkages are not set up in perfect parallel symmetry.

Disconnect the linkage and turn the fitting in on the bolt a few turns. Reconnect the linkage and read the meter - If the reading is worse disconnect the linkage and go in the other direction until the preload is nulled out. Note: you can check your servo with the linkage disconnected to see if you have a defective

servo. If you are drawing more than idle current with no linkage hooked up the servo may be defective (not likely but not impossible)

Now you can see why so many modelers who don't perform these checks burn out regulators and servos, draw high current resulting in batteries that drain after just a few flights. The impression to the uninformed is that the battery, servos, switch or receiver is defective when the root cause is improper setup. The fix is not to install heavier wire, big connectors, power isolation systems and a host of other gimmicks to compensate for their problematic setup - the fix is to set the plane up correctly.

### Cooling ---by Klotz the Kat

There's an urban legend going around that says the ratio of cooling outlet area to cooling inlet area for cowled model engines should be 3:1. Is it true? Maybe.

I ask you to look at the cowls of the Nieuport 28, AT-6, B- 29, P-47, Pitts Special, FW 190, GeeBee, Cessna 152, Zero, Extra 3000, Sukoi 31, or any full-sized air-cooled airplane of your choice. You won't find this ratio or anything even close to it. In many cases, the exit is less than the inlet.

Haven't the designers of these airplanes read the chat rooms?

To be fair, under certain very specific conditions, the 3:1 rule sorta works. But those who spread this legend don't tell you all you need to know. Here's the rest of the story.

The 3:1 rule applies only to cowls ...

Without baffles or any other internal air direction, whose internal volume is much larger than the volume of the cylinder(s) and in which the incoming air travels straight to the cylinder without any change of direction.

Under these conditions, the 3:1 rule approximates the airflow of an uncowled engine. It is an attempt to get the air to flow around the engine as if the cowl weren't there!

The location and shape of the inlet and outlet must be carefully adjusted to accomplish this. For example, if the inlet hole is too big or improperly positioned, air will flow *around* the cooling fins instead of *thru* them. For this type of cowl to work, the inlet hole must squirt air directly on the engine, especially the cylinder head.

It is an inefficient and unreliable method, requiring a lot of tinkering to get it working right. It may not work at some airspeeds and some attitudes. It is incalculable. It's a kludge. That's why it is never found in full-sized aircraft. And the holes make it useless for scale models and draggy for racers.

A much better method is to follow full-size methods—use a baffle, duct or other airflow direction methods.





ANNOUNCING  
The 35th Annual  
**DAN SULLIVAN  
MEMORIAL**

&  
**BBQ**

**June 25<sup>th</sup> and 26<sup>th</sup> 2011**

Sponsored by  
**THE UKIAH PROP BUSTERS**

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*Team Scale (Non B.O.M.)-(Qualifying Class)*

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\$10.00 additional plane

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

**PRIZES - TROPHIES  
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For Information or Pre-registration Contact:

Dan Sciacca / Contest Manager

707-485-8628

PO Box 716 Redwood Valley, Ca. 95470

[rc\\_racer\\_x@yahoo.com](mailto:rc_racer_x@yahoo.com) DIRECTIONS ON THE BACK

# SACRAT

# SWAP MEET

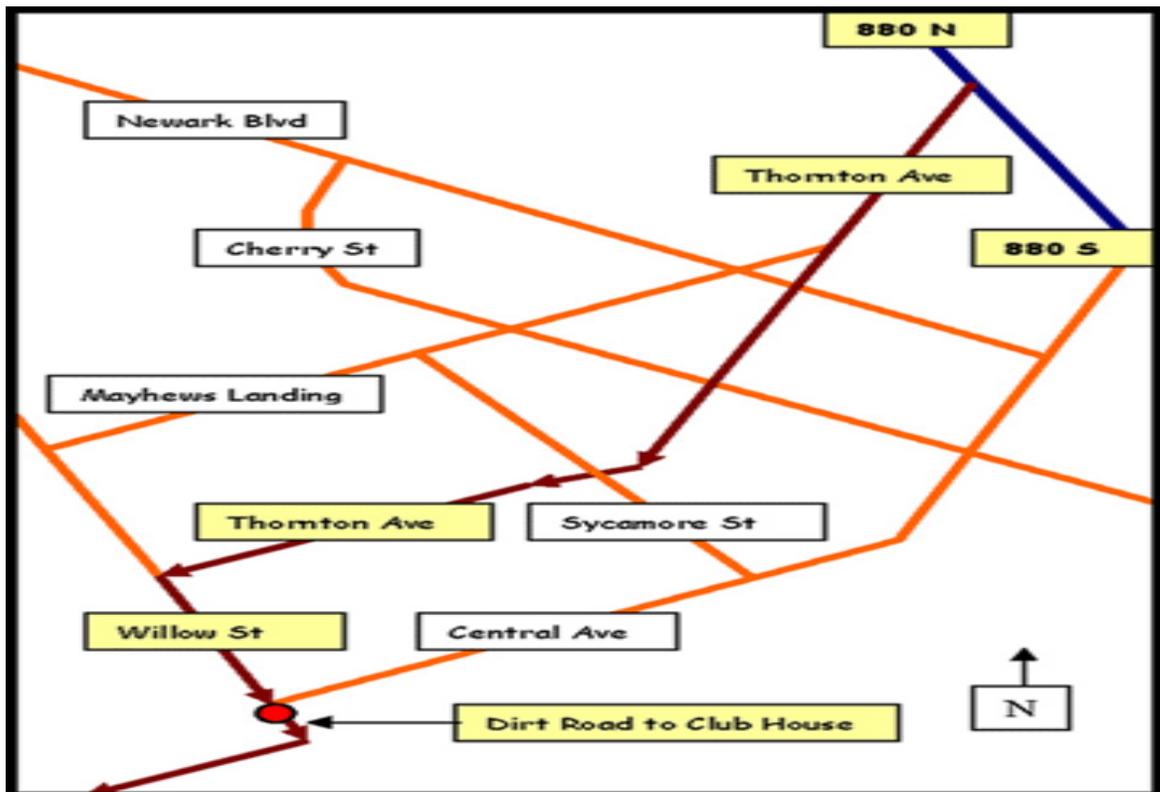
**Saturday June 4th**

**8am to 2pm**

**SACRAT—CLUBHOUSE**

**Non-Members - \$10.00    Members - FREE**

**Contact Bob Freshwater @ 510-657-2847**



# CANVAS FALCON

*Sponsored by:*

**LIBERTY FLYERS  
R C  
PETALUMA**

*2nd Annual*

## *Biplane & Vintage Models*

*Sat. Sept. 10, 2011*



**Aircraft 1903-1940.**

**Invitation**

**Rain Date Sun. Sept. 11**

Please Join us with your Scale WWI - Golden Era / Antique Aircraft (ARFS welcome)

Last years event was a great success! Please join us in making this years just as much fun.

Fun competition based on scale flying.

Class 1: "Scale" static judging & scale flying.....based on AMA rules and flying figures.

Class 2: "ARF / Fun Scale".....based on scale flying only

Class 3: "Antique / Vintage".....based on scale flying only.

### **Mission Statement:**

The goal of the "Canvas Falcon" event is to create interest in WWI and Vintage aircraft scale building and flying.

To promote the building and flying of these fabulous aircraft.

Based loosely on AMA Scale Competition regulations.

Great Prizes for top three places in all catagories !!!

Liberty Field, Stony Point Rd. No Petaluma, Gates open at 8:00 AM,

Practice from 9 AM / Competition starts at 10 AM sharp

Contact: Eric Kirby, Kirbstone48@gmail.com or 707-483-0464

2010 AMA card mandatory! \$10.00 entry fee ..... Grill - Hamburgers Hot Dogs and drinks available (extra charge)

.....bring your own tables & shade !!

Please visit our Website : [www.Libertyflyers.org](http://www.Libertyflyers.org)

**Southern Alameda County Radio Controllers**

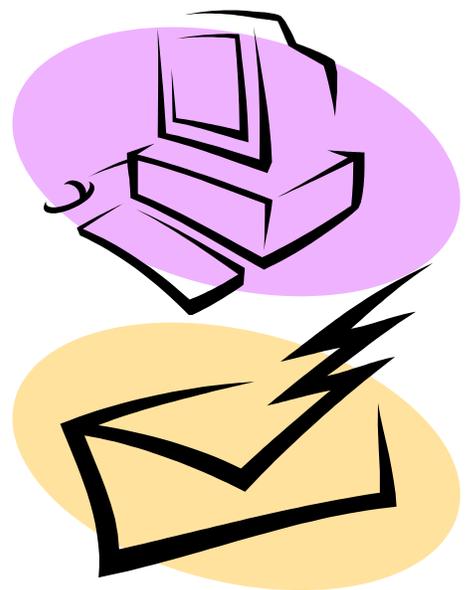
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Jim Utley, Editor