



S.A.M.-Antics

The Official "Fly" paper of the
SACRAMENTO AREA MODELERS
AMA Charter Club #1822

March 2016

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PRESIDENT'S REPORT

With the rain and not the best weather, there has not been a whole lot going on. For once in my life, I do not have a lot to say. Hahaha. I will make it up next month.

SAFETY----SAFETY----SAFETY, THINK SAFETY!!!

We are asking members to follow all the rules and be safe. Any member can approach other members to help keep the field safe, it is not just up to the board. It will take everyone to help others to be aware of the rules that are not being followed. But please approach people with kindness, kindness will go farther than being demanding. There are a few things that we have witness at the flying field and raised some concerns.

1. If you are flying electric aircraft, do not arm the aircraft in the pits. Please take it on the startup stands or the asphalt to arm them. Arming them on the pit tables can cause danger to you or others.
2. Please do not taxi any aircraft in the pits, please stop the aircraft before entering the pits.
3. No high speed passes above the runway, keep it out over the grass.
4. Please be aware of the deadlines. If you do not know where the deadlines are, please ask. Just remember; these rules are for everyone's safety. The rules are posted on the fence by the pilot stations. Please take a few minutes and review them as it will help you and others.

I would like to give Don Atwood special thanks for heading up the movement of the spectator's fence. We had the fence pushed back for the safety of spectators. With the fence being pushed back, it made no difference on the viewing of the flying field.

Please do not forget to renew your AMA Membership and your SAM Membership. Remember, if you have not renewed your AMA for 2016, you cannot fly.

Till next time, fly safe and have a great time at the Sacramento Area Modelers Flying Field!!!

JR Schiager

"Good Sportsmanship Equals Fun For All"

SAM Board Meeting Minutes

Date: February 11, 2016

Location: Perko's restaurant at 50 and Bradshaw

Time: 7:05 PM

Board Members

Present: President: JR Schiager, Vice President: Jerry Cunningham, Secretary: Jim Smith, Treasurer: Steve Brown, Publicity: Mark Forister, Events: Kimo Dias, Field Marshall: Don Atwood, Membership: Bob Obregon

Absent: Safety: Sergio Varo

Officer reports

President: JR started the meeting by letting the board know that Gene Strobel will be assuming the newsletter editor duties starting in March. The conversation then moved to an update with regards to racing at SAM. The site waiver for SAM has been approved by the District 10 VP. Since the race in Redding carries the SAM name and is part of the SAM series JR informed the board that the Redding club will need to have a site waiver to be part of the series (Redding is working with AMA and the District 10 VP to have a waiver in place). Changing the topic to other club business JR let the board know that Kimo had taken care of having 200 club flyers printed for advertising the site to prospective new members. This Sunday (February 14th) some board members and other pilots will be working to move the fencing that is located on the north end just past the pits for the spectator area. The move will have the spectator area pushed back from its current position to add additional protection for spectators who come out to view events at SAM. Next topic was with regards to our current AMA coverage for the site... due to paying the club fees (proactively) early this year there was a paperwork error on the part of AMA and they sent out incorrect insurance certificates to many clubs across the country. JR after speaking with AMA at length was assured that everything is in good standing with our certificate and new ones will be sent out prior to the current policy expiring. JR also mentioned that there were some new chairs gifted to SAM for use in the Augur Inn. (Secretary's addition – Please note, members must have board permission before bringing chairs, etc. to the SAM site for donation).

Other officer reports:

Vice President: Jerry Cunningham did not have anything to share currently.

Membership: Bob Obregon shared with the board the conversations that he had with local attorneys regarding club business items. Two topics covered were board of directors insurance and wording of important club documents. Bob will see if he can get an estimate for the next board meeting as to how much we would roughly be looking at to meet with one of the attorneys for an introduction Q and A meeting regarding review of our club documents. Some further discussion was also had with regards to the site rules for safety. A large topic of discussion was with regards to deadline enforcement. Bob then shared that we currently are at 118 members and are seeing last year's members renewing their memberships still. He then shared some information on what he is doing with regards to updating membership lists and processes used to renew members.

Safety Officer: Sergio Varo was not in attendance. Rumor has it that he was on a tropical beach sipping exotic drinks and listening to waves gently roll up on the sand as he contemplated whether or not he would miss his flight back to the mainland.

Publicity Officer: Mark Forister discussed that he will be distributing the SAM flyers to local hobby shops over the next couple of weeks in an effort to increase awareness of SAM and encourage new membership. Mark will also be posting a Craig's List add for the club and for upcoming events.

Treasurer: Steve Brown shared the financial numbers with the board members present. Audit was performed in January by Ron Davies, JR, and himself – looks like everything was good.

Field Marshall: Don Atwood spoke about his conversation with AMA regarding directors and officers insurance. AMA let him know that board members are not covered as part of the site or membership coverage in AMA. Don then let the board members know that he had spoken with John Reynolds and signed him as one of his two field assistants. The first scheduled site improvement was the 2/14 moving of the spectator fence. There will be work days coming in the next couple of months to keep the site looking its best. Weed control and general mowing. (Secretary's note: keep an eye on the website, newsletter, and at the field for postings of work days and come out for a little work and a lot of fun keeping the site looking good).

Events: Kimo Dias informed the board of his discussion with a local agent on the topic of directors and officers insurance. Kimo has given some requested information to the agent and he will be looking into the cost to cover the directors and officers at SAM. Kimo also shared that the Big Kahuna Memorial race will be on April 10th, with many other great events following that.

Secretary: Nothing to report.

New Business:

Mark discussed the possible need for Eye Wash Solution for the first aid kit. – Tabled currently until Safety officer is back to address.

Bob discussed the possibility of moving the dead line for flight activity. The idea was to move the deadline from the west edge of the runway to a point further from the edge of the runway say roughly 25 feet out to the west and away from the north and south ends of the runway. The board will be working with the membership to remind them of the current deadline and ask that the membership be accepting of conversations regarding deadline enforcement. Secondly there was discussion regarding pilots flying straight at the pits from the west and then pitching out at the last minute. This is not considered to be smart flying and the board asks that you please consider the safety of your fellow pilots and refrain from doing this type of action.

Steve brought up a member who asked a question regarding FAA requirements and the responsibility of SAM as a club to enforce or not enforce it. JR will be researching this further with AMA but at this point he has been instructed that SAM does not need to be involved at this at this point per AMA/FAA representative.

Old Business:

None

Motions:

None

Meeting adjourned at: 8:45 PM

Respectfully submitted,

Jim Smith

Secretary

SAM Club Meeting Sunday 02/21/16 Location: Club Field

JR Schiager Opened the meeting at: 3:30 PM

New Members Present: James Hard (returning). There were many others present as guests.

President's report: JR Schiager opened the meeting by welcoming everyone to the February general meeting. Gene Strobel will be taking over the newsletter editor duties – Thank you Gene. JR shared that there were some changes with our AMA site waiver for racing... new breakout times have been set to make our rules good with the site waiver as directed by AMA. The Redding group has also followed suit to make sure that their site waiver is approved with AMA and the same racing rules. The Board is looking to add Directors and Officers insurance. Kimo Dias is working on setting this up. The board is also looking into discussions with an attorney as brought up by a concerned club member to research our current documents.

Moving on to the topic of safety JR discussed that the board is looking at safety items as asked by many of the club members. JR discussed someone arming an electric airplane in the pits and asked that electrics be armed at the flight line. Don Atwood and other club members recently moved the fencing of the spectator area. Some other safety items were discussed such as adding height to the pit area fencing. Not sure if this is something that can be done reasonably but the board is looking into it. Our club site charter insurance was cancelled in error by the insurance company that is contracted with/by AMA. Turns out that our current policy was/is still intact and this was for the new policy (effective in March) which was being canceled in error, there will be a new policy issued prior to the expiration of the one currently in force.

Rodger Cady was given an appreciation award by JR for his years of service to SAM. A big round of applause was given. Thank you to Don Atwood for his work on the award plaque. When you see Rodger at the field thank him as well. He has dedicated many hours to the betterment of SAM.

JR took some time to let everyone know that a representative at AMA has advised that SAM as a club is not responsible for enforcing the FAA registration process or that members have their new FAA number in/on their aircraft. (Have you registered yet?)

VP report: Jerry discussed the upcoming open house and the need for support of the club members for this year. Jim Lichtenberg has again submitted everything to AMA to see if we can receive a grant again this year. The open house is scheduled to take place on April 24th.

Safety: Sergio discussed that his wishes for everyone to be safe out here (at the SAM site). He again thanked Don Atwood for the moving the safety fence in the pit area. The first aid box in the Auger Inn has been updated. If you notice items running low please contact Sergio for restocking.

Membership: Not present.

Publicity: Mark thanked Kimo and JR for the new SAM pamphlets and also let everyone know that he is putting listings on Craig's List to drum up interest for the club.

Treasurer: Steve spoke on the club finances and said that we are on track for the year.

Field Marshall: Don thanked everyone that helped in moving back the safety fence for the spectator area and stated that the board is still looking at additional safety items to enhance the field.

Events: Kimo spoke on upcoming events. See website for most up-to-date events listing. Kimo also informed the membership regarding the Directors and officers insurance search that was on going.

Secretary: Jim thanked Dale Kral and Tom Richardi for their work on securing the pylons. The OUTLAWs donated the materials to do the repairs so the club did not incur any expense.

Show and Tell:

Steve Nickerson showed off this KI 61 scratch built. Truly a beautiful airplane: This is the 3rd version of what Tim "Bushman" Sorenson has nicknamed "Uncle Samurai".

Jim Smith showed off his new Spitfire for OUTLAW racing. More than likely the plane that will finally win him the coveted OUTLAW best looking airplane award for 2016.

Raffle items:

Lipo Bag: John Bigwood – Donated to Big Kahuna

Servo Driver: JR – Donated to Big Kahuna

Screw Driver Set: Steve Brown

Receiver: Steve Brown

Hobby tools: Jeff Montrose

Proto X: Amy Kral

Lipo Bag: Joe Sousa

Magnetizer: Jim Smith – Donated to Big Kahuna

Hobby Tools: Sergio Varo – Donated to Big Kahuna

Electric Motor: Jeff Montrose – Donated to Big Kahuna

Next Club Meeting will be May 15th, 2016

Meeting Adjourned at 4:05 PM by JR.

Respectfully Submitted:

Jim Smith – Secretary

Those Pesky Lipos... Part 2

Last month we discussed the background of Lipos, battery types, some Lipo acronyms and general discussion about safety, what causes Lipo fires and how Lipo cells age. This month we will go into some charging guidelines and how to manage discharge to minimize Lipo damage.

Charging ...

Basically, the simple/safe approach to charging is to charge your Lipos at a 1C rate with balancer leads attached. This approach is about as simple and effective as it will get. Charging at a lower rate doesn't accomplish anything and also doesn't appear to extend battery life to any appreciable amount. A 1C rate is basically the rate which a discharged lipo (3.7V per cell) can be charged in approximately one hour. This time will vary depending on the age of the cells, how well the cells are matched (Internal Resistance), but generally it will take about an hour. At a 1C rate, the cells do not get hot and will actually cool down if you are charging right after a flight where the packs are hot. The 1C rate for a 3000mah pack is 3 amps, a 5000mah pack would be 5 amps, etc.

All cells on the market now can usually be charged at a higher rate than 1C without damage, the max charge rate is usually stated on the Lipo label. I usually charge at 1 to 1.5C although the packs I have can handle 5C charge rates according to the labels. Because of the way I fly and the number of packs I take to the field, I really don't have a need to charge faster. I typically take 2 or 3 packs to the field with me, usually 2 or 3 of them are charged. I fly one pack and put it on charge then by the time I have flown another flight or two, that first pack is usually charged and ready to go. Luckily SAM has electricity at the field so this process works very well for me at SAM. If I go to a field without electricity, I will take more charged packs or take my small generator with me to charge at that location. A thousand watt generator (small) will typically handle two of my chargers that are charging 5000mah 10S packs.

There are some things that can effect charging time at higher rates which results in the charging time being non-linear to a 1C charge rate. For example, you would expect charging at 2C rather than 1C would cut the charge time in half. Actually, it will probably be more like 60% of the 1C time due to the balancing cycle at the end of charge that will probably take the same amount of time as the 1C rate which extends the total 2C charging time a little at the end of the charge cycle. Another thing that can extend the higher C rate charging times is cells that have become mismatched in capacity or Internal Resistance can charge faster or slower than the other cells in the pack. This will result in longer times to balance at the end of the charge cycle. Most chargers have a much lower balancing discharge rate than the charging rate. The reason for this is to discharge a cell during balancing creates heat in the charger and most chargers cannot dissipate that heat very rapidly so the manufactures limit the discharge rates to keep the heat under control. Packs that have very well matched cells can be charged very rapidly but over time, the charge times will begin to get longer due to cells aging differently.

Occasionally you will run into a pack where the cells appear to be very well matched as far as Internal Resistance but charging times will still be extended with one or more cells taking longer to balance. Usually it is because some of the cells have lost capacity (meaning they will actually charge faster than other cells). But sometimes all the cells appear to be matched in both Internal Resistance and capacity and they still take longer to balance. What the heck is going on with that? Could be one of those mysteries never gets solved or it could be a different type problem.... worn balance lead contacts.

Over time, balance leads get plugged in many times with the charger balance lead contacts having the most use since they get used for each charge cycle. They wear, become corroded or loose and this increases the resistance which makes it harder for the charger to get the cells into a balanced state. Chargers that have balance taps that you plug the balance leads directly into the charger itself have the most wear. An easy way around this wear problem is to install a balance lead extension between the charger and the balance lead from the Lipo. That way, when the contacts become worn, loose, etc., just replace the balance extension lead and you are good to go again and the charger balance lead contacts have seen very little wear.

Charging Stages ...

Typically when charging Lipos, there are 2 stages to that cycle. The stages are CC and CV (constant current and constant voltage). When you first start a charge, you will notice the charge rate ramps up to the selected rate, for example 3A for a 1C charge of a 3000mah Lipo. This first stage (CC or constant current) is used to do the bulk of the charging of the Lipo pack. Then at some point in the charge cycle, near the end, you will notice the charge current begins to drop off gradually until it reaches a very low current. When the current begins to drop off, the charger has switched to the second stage (CV or constant voltage). In this stage, the charge voltage is held constant, usually just above 4.2V per cell and is held there while the charger works at balancing all the cells. The goal of these two stages is to gradually approach the fully charged state with reduced current and a constant voltage while balancing and have the charge terminate near 4.2V with all the cells within some small difference in voltage from each other. This difference is in the .05V or smaller range, it depends on the specific charger how close it tries to match the voltage of the cells as the charge terminates.

Some chargers have multiple charge choices. Balanced charge, Fast charge, Charge (usually without balancing) or Storage. The Balanced charge is what I explained in the previous paragraph. Fast charge usually extends the time the charger stays in CC (constant current) mode and reduces the amount of time the charger has to balance the cells during the CV (constant voltage) stage. This approach works well for packs that have very well matched cells but not so well for packs that have cells mismatched in capacity or internal resistance. Charge mode is usually has no balancing activity but the charger still monitors the cells to make sure no cells ever get over charged, however, not all chargers employ this cell monitoring function. Like we discussed last month, I really don't think it is ever a good idea to charge packs without some active balancing function at work protecting the pack during the charge process. There is just too much risk involved with that charging approach and it really doesn't save much time for packs that are in good condition. If your pack is not in good condition and charging times are getting extended, that is all the more reason to have balancing active anyway.

Storage charge is basically used to charge (or discharge) your packs so all the cells are near 3.85V per cell. The industry uses this charge state as the preferred voltage to leave your packs at for 'storage'. The actual voltage for storage is not critical, 3.85V is about half charged. Anything from 3.8V to 3.9V per cell seems to work well, the charger manufacturers have all mostly used 3.85V per cell for some time now as the default voltage for storage. I usually charge my discharged packs to 'storage' levels at the field when I finish a day flying, it doesn't take long and then I don't have to remember to do it at home.

Parallel Charging ...

One handy charging approach I use a lot is parallel charging. Basically what this means is multiple packs are attached to a charger in parallel and simultaneously charged as a 'single' pack. For example, I usually attach 2 5S 5000mah packs in parallel and charge/balance them as a single 5S 10,000mah pack. The charger doesn't know the difference and treats it as a single large pack. There are various manufacturers that make/sell parallel charging boards. These boards let you plug multiple power leads as well as balance leads into them and then that board is plugged into the charger. A couple things you need to make sure of when using this technique is to have all the packs you are parallel charging at the same or very similar voltages when you plug them together, and that the packs are all the same cell count. Yes, you can parallel charge packs that are not the same capacity but they must be the same cell count. In my case, the 2 5S packs I am charging are flown as a single 10S pack so when I plug them into parallel charge I already know they are the same voltage. But if you they were used as single packs during use them I would make sure they were the same voltage (or very close, within .1 volts) before I plugged them together thru the parallel charging board.

Charging Safety ...

In our first article about Lipos we discussed safety and what can cause fires. You have all heard the advice of never charging Lipos unattended, etc. However, there is another part of this that is seldom discussed. Where do you charge your Lipos? I charge in my shop but where I charge in my shop is intentional. I have a workspace that has a concrete shower 'backer board' as the top surface. You can buy this 1/4" thick backer board at any store like Home Depot or Lowes, it is not expensive and is easy to cut to size. In the event there is a problem during charging that causes a fire (luckily I have not had one that wasn't intentional) the concrete 'backer board' will prevent that fire from spreading beyond that area. That area that I charge in is also near an exit door to the back yard to if I had to I could pitch the battery and 'backer board' into the back yard without

having to touch the battery. Some guys use ceramic flower pots, some use Lipo charging bags, cinder blocks, etc. Basically, they are all a 'fire break' to keep the fire from spreading to adjacent flammable items. Common sense.... If I need to charge a pack and cannot watch it, I move the charging outside, pretty hard to set fire to a side walk or a BBQ grill.... ;-) Like I said I have never had an unintentional fire with Lipos but there is always that one time that could happen. Yes, I have intentionally caused Lipo fires just so I had experience with what they were actually like. There are plenty of videos on YouTube about this, being punctured, over charged, etc. Lots of smoke and successive spurts of flame as cell after cell ruptures and catches fire. Impressive when it happens, just don't want it inside my shop if it does!!

Discharging

Just like charging, discharging has its limits. We charge at low 'C' rates and discharge at much higher 'C' rates. Lipos are typically rated from 20C to 60C discharge rates. So, if you have a 2A (2000mah) lipo rated at 25C continuous rate, that means the max amps you should draw from the Lipo is 50A continuous. But, keep in mind, most Lipos have very generous marketing C rates and are typically rated at higher C rates than they can actually deliver without damage. If you use an 80% general rule, you will probably be much closer to the real C rating of the battery. So, a 25C rated Lipo is probably more like a 20C Lipo in reality and capable of delivering more like 40A without damage rather than the 50A advertised.

If you have adequate cooling for your Lipos during flight and are landing with the lipos hot (over 120F) then you are probably exceeding the continuous discharge limits of that pack. Three things can damage a lipo very quickly. Running them at too high a discharge rate, over discharging them during use and physical damage from crashes or dropping them. Running at too high a discharge rate creates excess heat and that heat alters the chemical makeup of the electrolyte in the cells, usually resulting in puffing and reduced capacity. Over discharging basically can do the same thing. As the battery approaches full discharge, the battery has to work harder (creating heat) to deliver the current needed by the ESC/motor and this heat causes the same damage as running at too high a discharge rate. Obviously, physical damage to a pack or cell is going to affect the way current is generated thru the electrolyte and plates in the cell and never in a positive way... ;-)

I try to limit my flight times so the voltage is never below 3.7V per cell after a flight. Let your pack rest a few minutes then take voltage readings after your flight. If the voltage is below 3.7V per cell, you are flying too long. Reduce your flight times to keep the voltage above that 3.7V limit. Now, be honest, have you ever flown a plane/heli long enough that it will no longer stay in the air because the battery is getting low? Well, if you have then you just damaged your battery. Luckily the price of Lipos has come down dramatically in the past few years so damaging a pack isn't as painful as it used to be.

Teaser Alert

One question that gets asked a lot is 'how do I dispose of old Lipos'? I am not going to go into detail on that this month but will give you a couple things and then next month goes into detail about various ways of doing this. First, the 'salt water bath' approach where you drop the Lipo pack into a bucket of salt water is NOT a good reliable way of discharging Lipos. Just take my word for it for now, will explain in detail next month why it may not work. Second, a fully discharged (zero volts or very near it) Lipo is pretty much inert and can be disposed of in the garbage. No toxic materials left in the Lipo when fully discharged. Basically, you can use your charger or any constant load like a tail light bulb to discharge your Lipos. I let them sit for a couple days with the bulb attached, then strip the leads back a couple inches, twist the leads together and throw them in the trash. Easy, works like a charm and is environmentally safe.

Will go into more detail next month about various ways of discharging and simple tools you can use for this. So until next month....

Happy Landings
Don
atwooddon@aol.com

Building Tips from Shawn Berkheimer

Now that you have an airplane with the CG set in what I refer to as the "sweet spot" and you have a good bench set up let's get into some of the finer details of trimming. Although most of these tips would seem to apply to aerobatic models they will be of use for just about any airplane.

The next thing we want to take a look at is control surface throw. You may have noticed that while we were adjusting CG that your elevator got more sensitive. As most people are taught to run a more forward CG we also used more elevator throw to compensate. Now with the CG closer to a neutral point we are able to reduce throw to achieve the same thing. This is going to be somewhat personal preference however if you have an airplane that is difficult to fly smoothly and the CG is not too far aft you may be running too much throw. One way I like to test elevator throw is to do a half throttle loop with full elevator travel. If the airplane wants to snap or roll out of the loop then you may have too much throw. Ailerons are a different matter, I tend to use a fair amount of throw on ailerons. This really helps with tight snap rolls that stay on line. For my race airplanes I use just enough to get through the course and have to switch to a higher rate for landing. Again personal preference. The same with Expo settings. Most times when I let someone fly one of my aerobatic airplanes they make the comment that it feels soft and uncomfortable. My expo settings on that airplane are in the 30% to 40% range. For a sport airplane you will want to try around 20% to start off. If you have not used expo in the past this is going to feel awkward and at first you may not like the result. As with any other changes to your airplane I urge you to not make a call on whether it works for you or not for at least 6 flights.

Thrust angles are another overlooked adjustment. For an aerobatic airplane the thrust angle is usually adjusted to fine tune vertical flight. The expectation is that after initially inputting slight right rudder when going from horizontal flight to vertical flight you should be able to ease off the rudder and the airplane should continue to stay on a straight track until speed bleeds off or the momentum bleeds off and the airplane is climbing from engine thrust alone then it will start to drift left. To simplify, if the airplane pitches to the canopy add down thrust, if it pitches to the gear, add up thrust. If it fades to the left add right thrust. Now this will be different with a trainer type airplane as down thrust is required with a flat bottom airfoil to avoid climbing at full throttle.

Next installment I will break away from trimming and start talking about some building tips. The first topic will be iron on coverings and then I think we will get into some composite techniques. I welcome any and all topic suggestions and of course questions on material I have written about. You can always send comments/questions to flyfamily@yahoo.com.

Until next time
Shawn "Speed" Berkheimer

Shawn & Virginia Berkheimer
[\(408\) 509-4459](tel:(408)509-4459)



Kimo Dias, Sergio Varo & Jerry Cunningham Presents:

5th Annual

Big Kahuna Memorial



Silento #84, Reno 1987

WARBIRD RACE

April 10th, 2016

In Memory of Jerry Votaw "V-MAN"



TREI on #8 387 on photo

Itinerary for Sunday

Registration Starts at 7:00 a.m. and
Closes at 8:15 a.m. Sharp!(No Exceptions)
Worker's meeting – 8:30 a.m.
Pilot's Meeting – 8:45 a.m.
Racing Starts – 9:00 a.m.

There will be 3 heats and mains for each

Send Payment to:

Kimo Dias
117 Talgarth Ct
Roseville, CA 95661
(916) 870-0468

Please make checks
payable to SAM

**CASH PRIZES IN ALL
BRACKETS!**

**NO FREQUENCY
CONFLICTS!**

HARD HATS REQUIRED!

*Version 2016 SAM Warbird
Rules Apply*

3 ways to Pre-Register

1. Send in Entry Form and Check
2. Pay Cash to me directly
3. Fill Registration Form online www.sacramentoareamodelers.com

Bronze Class

Entry Fee: **\$25.00** in Advance
\$30.00 day of race

*Entry fee must be paid by
Sunday 8:15 am.*

Entry fee includes the \$5.00 Surcharge

Silver Class

Entry Fee: **\$35.00** in Advance
\$40.00 day of race

*Entry fee must be paid by
Sunday 8:15 am.*

Entry fee includes the \$10.00 Surcharge

Gold Class

Entry Fee: **\$50.00** in Advance
\$55.00 day of race

*Entry fee must be paid by
Sunday 8:15 am.*

Entry fee includes the \$15.00 Surcharge

Race Entries will be limited to the first 50 Entries and Must show proof of Current AMA

Registration (one per class)

Please write legible and complete full registration

Name: _____

Full Address: _____

Telephone: _____

Email: _____

AMA #: _____

Plane & Description: _____

Engine Size: _____ Frequency #: _____

Event Choice (circle one):

Bronze

Silver

Gold

2016 S.A.M. Open House



**Get ready for the next S.A.M. Open House
On April 24, 2016**

**Great Family Event!!!
Learn to Fly Radio Control Airplanes!!!
It's All Free!!!**

**Bring your family members, friends and neighbors to see
our premier flying site and have lots of fun!!!**



DO YOU HAVE A VALID AMA CARD?

Remember: Our By-Laws and the County of Sacramento require a current AMA Card to fly at the S.A.M. site. Also did you know that your current status as a **member requires a valid AMA card?** If you do not have a current AMA Card in your possession or proof in the form of a fax or e-mail from AMA, **do not fly**. If you fly without AMA membership, you will be in violation of our rules and may be suspended from flying at the S.A.M. site. Contact the AMA at 1-800-435-9262 for membership when paying via credit card.

FLIGHT INSTRUCTORS

Are you new to R/C flying? Or perhaps you need to brush up or even just want to talk with one of our "Pro's." SAM's corps of Flight Instructors stands ready to help you. You will usually find at least one of them at the flying site on Tuesdays or Fridays. You may call **Jim Lichtenberg** our Flight Instructor Coordinator at **916-681-5335** or e-mail at rcflyer999@comcast.net and he will arrange for the assistance you need. If **Jim** is not available, you can contact the Assistant Flight Instructor Coordinator, **Ron Davies** at **916-682-7902**. Or you can call our flight instructors directly.

Jim Lichtenberg <i>Flight Instructor Coordinator</i>	(916) 681-5335	rcflyer999@comcast.net
Steve Brown	(916) 765-3555	imredfox@comcast.net
Tim Sorenson	(916) 541-7009	tsorenson@rcip.com
Ron Davies	(916) 682-7902	rjdavies@frontiernet.net
Geoff Hodies	(916) 990-8938	greenfishbone@iclod.com
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SAM-Antics SUBMITTALS

Deadline for submissions to the SAM Antics is the 27th of each month. Please send articles as Word text or as text in an email to the Newsletter Editor, at info@sacramentoareamodelers.com.

Submittals may be edited for content and length.

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SAM 2016 SCHEDULE OF EVENTS

Date	Event	Location
4/10	Big Kahuna Warbird Race	SAM
4/24	SAM Open House	SAM
5/14	Spring Pattern Contest	SAM
5/15	SAM General Meeting	SAM
6/11 thru 6/12	Flying Ash Fast Warbird Race	Redding
7/31	Nitro Madness Warbird Race	SAM
8/21	SAM General Meeting	SAM
8/28	SAM Picnic and Fun Fly	SAM
9/8/ thru 9/11	11th Annual Trashman & YS Classic Warbird Race	SAM
9/18	SAM General Meeting <i>(Nominations for the Board)</i>	SAM
9/30/ thru 10/2	SAM Field is Closed for Flying	SAM
10/1	SAM Swap Meet	SAM
10/8 thru 10/9	Bud Garric Pattern Contest	SAM
10/16	SAM General Meeting <i>(2017 Events Scheduling)</i>	SAM
11/20	SAM General Meeting <i>(Board Elections)</i>	SAM
12/10	SAM Christmas Party	SAM

* Dates subject to change upon S.A.M. Board approval

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