April 2006 Edition

Wine Country Flier

Next meeting: 18 April, 7:30 P.M.
Veterans Memorial Bldg. (Northwest Room) Across from Fairgrounds
Get there early for your free door prize raffle ticket!
www.wcflyers.com
Promoting Model Aviation in Sonoma County

2006 Club Officers:

President:	Guy Nicholas	(707) 544-2141	Guy@Gui-Soft.com
Vice President:	Brody Carlson	(707) 545-8272	brody@connectionsit.com
Secretary:	Larry Miller	(707) 577-0496	exefire@aol.com
Treasurer:	Brian Blackburn	(707) 527-9645	bblackburn@santarosa.edu
Member @ Large	John Reade	(707) 545-9831	johnereade@earthlink.net

2006 Board Members:

Steve Cole	(707) 566-8838	stevecole@awesomehobbies.com
Mike Cracchiolo	(707) 291-2739	vdubbub@hotmail.com
Phil Leech	(707) 538-8557	leechstudios@sonic.net
Sid Maxwell	(707) 584-4428	airmanx@inreach.com
Jerry Williams	(707) 762-5368	jerrywilliams99@comcast.net

Newsletter and Website

Newsletter Team:	Guy Nicholas, Phil Leech, Larry Miller, Sid Maxwell, Red Jensen
Website:	Patrick O'Halloran

Presidents Report

Guy Nicholas

Guess what I saw today! The sun! Man, it was glorious. Most years it seems like opening day is kind of late, like why is it called, “Opening day”, we have been flying for months. This year, perhaps it really will be opening day.

Since our last meeting I have had several people get in touch with me giving suggestions or telling me of possible field sites. I think it is great that people are getting motivated to get out there and help. Keep it up. Sid has something coming up FAST that you will read about here, join up and help.

One of the possibilities for our current field is that it be used as an all electric flying site so I included an article in this issue about the basics of electrics.

As some of you may know I am a software engineer. Currently I work on Photoshop Elements for Adobe. My software background was part of what made me so excited about Futaba’s 14MZ radio. I thought, how cool would that be, something that had an interface written in such a fashion that it could be fixed or changed. Years ago I had a Hitec Focus 4 that had a bug in the expo on the throttle channel. When I called their technical support and described the problem they checked it out and agreed that it was a flaw. I asked when would it be fixed…the response was that they typically burn enough chips for the life of the product. Bummer. My radio came out about a year ago and I just downloaded the second revision to the software. The first revision was mainly bug fixes which are to be expected anytime something completely new comes out. This second revision however, was mostly feature changes. They listen to their users and update things as needed. Software updates are much cheaper and can be done much more frequently than hardware updates. Technology in this hobby is changing fast, and I think it is making this a much more exciting hobby. Enjoy!

WCF Board Meeting

3/28/06

By Phil Leech

The meeting was called to order by President Guy Nicholas at 7:00 pm. Members present were Steve Cole, Sid Maxwell, Mike Cracchiolo,John Reade, Brian Blackburn, Brody Carlson and Phil Leech. The primary topic for discussion for the meeting was the letter from the Dept of Transportation and Public Works informing the club that our lease for the field will expire in April 2007 and it will not be renewed. They cited the reasons for this action based on complaints from neighbors about noise over the years and the imminent encroachment of urban development to the south. The results of two meetings with County officials that took place yesterday, March 27 were presented and discussed. The first meeting was with 4th district Supervisor, Paul Kelley and was attended by Guy Nicholas, Sid Maxwell, Phil Leech and guest, Earl Duran. The meeting centered on possible alternate sites that might be available and whether we could look to Sonoma Regional Parks for support or to the Sonoma Co. Agricultural Preservation and Open Space District. Paul Kelley suggested that we contact the City of Santa Rosa about the possibility of sites on Llano Road where they have water treatment facilities.

The second meeting was with John Merget of the Dept of Transportation and Public Works and was attended by Sid Maxwell and Phil Leech. We asked Mr. Merget if there was a possibility of an extension of time for our lease and were told that wasn’t possible. The purpose of the letter was to give us approximately one year to find another flying site and to remove all of our field improvements by that date. We enquired if we limited the use of the field to only electric planes whether this would mitigate the County’s complaint due to noise. Mr. Merget thought that was a reasonable proposal and promised to present our request to the department director, David Knight and to Integrated Waste Manager, Ken Wells. He thought he

could give us an answer in about a week. Mr. Merget informed us that if we do not get permission to continue with electric only flying that they would expect us to remove everything on the site and that if we do not , they would have their crews do the work and they would bill the club for the work.
There was discussion regarding efforts we can make with regard to petitions to be circulated with the public to gain support for our activities. Various potential sites were also discussed including land that the Salvation Army holds, land that the Army Corps of Engineers has and privately held sites that we would have to negotiate leases with monthly payment substantially more than the current $105/month that we pay to Sonoma County.

Sid reviewed the upcoming Model Airshow 2006 and presented the flier that he and Brian Blackburn have been working on. They plan to have 500 copies printed and Brody offered to print 200 in color for distribution to hobby shops etc. Sid told us that he has commitments from our five local hobby shops for substantial ARF kits and that he expects a raffle to be popular and a money maker. He also distributed a schedule of duty assignments for the Airshow.
The meeting was adjourned at 8:30 pm.

Respectfully submitted for Larry Miller,

Phil Leech

WCF General Meeting

3/21/06
By Larry Miller

-The meeting was called to order at 7:30 pm by President Guy Nicholas.
-We had 36 members and 2 guests present.
-The free door prize drawing was held with Jerry Williams winning the gallon of fuel.
-The president read a letter from the county concerning our time left to fly gas powered models at our present flying site at the dumps.
-Sid Maxwell, Steve Cole, and Art Sutter are all working on possible leads for a new flying site. All members should be on the lookout for any possible location.
-Treasurer Brian Blackburn gave his monthly report to the membership.
-The secretary's report was approved as printed in the previous newsletter.
-Sid gave us a rundown on plans for our annual Opening Day event.
-After much discussion on locating another flying field, it was time for the evenings raffle. There was a large assortment of goodies to choose from tonight.
-Mike Cracchiolo reviewed the prizes he had picked out for tonight's raffle.
-New member David Mercer held the first winning ticket and he picked out a Showtime .90 size 4-D ARF model. Kurt Hiner had the next ticket drawn and he got a brushless electric motor followed by Ken Milani who chose a Flatout electric foamie. Brian Blackburn grabbed the hinges before anyone else had a chance at them and Brian Germone picked up a Superstand. Julio Alvarez held the next ticket and he got an Add-On program for his flight simulator. There were too many more prizes won to list all the winners, but a lot on folks went home with something nice.
-There being no more business, the meeting was adjourned at 8:30 pm.

Respectfully submitted,
Larry Miller, Sec.

TIMELY TIPS - Corrosion X

By Sid Maxwell
584-4428

Before you put that plane in the water be sure to spray some,"Corrosion X", on all your radio equipment and electric plugs. Corrosion X is a spray that will stop the water from shorting out your radio equipment in case your plane goes in the Lake. The claim is, "you can spray your servos, drop them in a bucket of water and they keep working". What about that !!! If you want to try some, give me a call. My can

has lasted 4 years. If you want a can for yourself call, Corrosion X, 800-638-7361 or corrosionx.com.

Basics of Electric Flight

by Pat Tritle
From the Albuquerque Radio Control Club, Albuquerque NM

I really enjoy getting together with clubs and speaking to the group about the basics of electric power. However, because there is so much information that needs to be passed along, it would be difficult, if not impossible, for those attending to remember much of the pertinent information. For that reason, it's better to write up the basic guidelines so that those who are interested in getting into electrics would have the information available for reference at a later date.

Here goes. I'll keep the numbers as simple as possible to avoid unnecessary confusion.

OK, here's how it all shakes out. The basic power required to fly an electric model is as follows:

Direct Drive Systems 60 watts/pound
Gear Drive Systems 50 watts/pound
Mild aerobatic performance 70-80 watts/pound
For all-out aerobatics 100-110 watts/pound
3-D performance 150 watts/pound or more

The above numbers are based on models with wing loadings from 8-16 oz/square foot. As with gas models, higher wing loadings require more power since they must fly faster to support the added weight. By the same token, a lightly-loaded model with a wing loading in the 3-5 oz/square foot range will fly very well at 25 -30 watts/pound.

What's a 'watt'; and where can I get some?
Wattage is the term used in electric flight to relate the level of power that an electric drive system will produce. To relate it to terms we're familiar with, 746 watts = 1 horsepower. To calculate the wattage delivered by a given system looks like this: amps x volts = watts. So where do these numbers come from and how do I know how many volts and amps are needed to fly a given model?

Okay, let's say you want a mildly aerobatic sport model with a 14 oz/square foot wing loading that will weigh in at 2 pounds. We already know that the power requirement for a model like this is about 70 watts/pound, so we're going to need to generate about 140 watts. Let's assume that you are going to use an eight-cell Ni-Cd battery. At 1.2 volts per cell, eight cells will deliver 9.6 volts. To arrive at the necessary current draw to achieve 140 watts, simply divide 140 (watts) by 9.6 (volts) and you arrive at 14.58 amps.

Now, let's assume that you have a three-cell Li-Poly battery for the model, which is rated at 11.1 volts. The formula is the same; 140 (watts) divided by 11.1 (volts) = 12.6 amps. As you can see, as the available voltage increases, the lower the current draw needs to be to deliver the necessary wattage.

Now here's something to consider when selecting your system: the higher the current draw, the shorter the flight duration on any given battery. Therefore, the ideal setup would be to use a higher-voltage battery with lower current draw for maximum duration. On the downside, when using Ni-Cd and NiMH batteries, as the cell count goes up, the weight will increase significantly as well. It works that way with Lithium too, but Lithium batteries are dramatically lighter then the old "round" cells.

Okay, let's say we're going to use an 11.1 volt Li-Poly battery. All we need to do now is select a motor that will swing enough propeller at 12.6 amps to fly the model at a top speed of around 40-45 mph and we're in business. Now that you know the parameters, visit your local hobby shop and select a motor that fits that description.

Gear Drive vs. Direct Drive: Why is one better then the other?
Well, it all depends on the kind of performance you're looking for. If you're looking to go fast, go with direct drive. Going fast requires a high-pitch propeller turning high rpm. The formula to calculate propeller pitch speed is an easy one; it looks like this: rpm x pitch (in inches)/1056 = mph.
Let's say that you are turning a 7-6 propeller at 14,000 rpm. 14,000 x 6 = 84,000/1056 = 79.55 mph

Now, let's assume you are setting up a slow, relaxing park flyer with about a 5 oz/square foot wing loading. If we swing a 9-7 propeller at about 3,500 rpm, we'd be looking at a top speed of roughly 23 mph. To swing that much propeller with a small, light drive system, we would use a gear drive unit at a very low current draw and a small, light battery.

Again, to make a known comparison, we can relate all this to riding a 10-speed bicycle. A gear drive swinging a big propeller is like riding your bike in low gear. You pedal like mad with little effort, you don't go very fast, but you can climb steep hills with ease. The direct drive system could be compared to riding the bike in high gear. It'll really go fast, and even though you're pedaling slower, it requires considerably more effort.

What all this boils down to is "propeller disc loading." We all know what wing loading is: it's the amount of the model's weight that each square foot of wing must carry. Prop disc-loading works the same way. A large propeller will be more lightly loaded, thus delivering more torque then a smaller propeller turning high rpm. The tradeoff, of course, will be speed.

One more thing to cover and we'll give you a rest. Batteries are rated in "voltage" and "amperage." Voltage dictates the amount of power the battery will deliver. The amperage rating dictates for how long the battery will deliver that power. To relate that to glow fuel, consider the voltage as nitro content. High voltage (nitro) means more power. The amperage is related to the quantity of fuel, or simply the "size of the tank."

To figure the size of battery needed, let's go back to our 140-watt sport airplane. If we're pulling 14 amps from a 1400 mAh (1.4 amp hour) battery, we will have full power duration of five to six minutes. In the real world, with proper throttle management, you'll see flight times of approximately eight minutes. These are common flight times, even with liquid-fueled models.

To arrive at that number, divide the battery amp rating by the current draw: 1.4 (amp hours)/14 (amps) = 0.1. Then take 60 (minutes per amp hour) x 0.1 = 6 minutes. Now, to double the duration, you must either cut the current draw in half (to 7 amps), or double the battery size (to 2800 mAh or 2.8 amp hours)—again we see tradeoffs. To reduce the current draw, we can use a larger, higher-pitch propeller turning slower with very little weight penalty. If we double the size of the battery capacity, the weight penalty is quite high unless we go over to the new Lithium batteries in which we will discover we have benefited from a tremendous weight reduction, but at a higher price then conventional batteries.

Okay, I promise I'll quit before we all end up in "system overload." Once again, there's a tremendous amount of information here for a newcomer to electrics to digest, so let's do this: if you have specific questions about setting up an electric model, please feel free to drop me a line and I'll do what I can to steer you in the right direction. For now, I'll offer up one last piece of advice. To get started, work with a known good design, and use the recommended equipment that has been proven to work. Talk to the people who are successful and copy what they're doing. The one thing I do know about modelers is that they are always willing to share their knowledge with those interested in what they are doing.

Contact Pat at patscustommodels@aol.com

Float Fly at SAL Lake

By Sid Maxwell

It's only three weeks away. On April 29 we are going to Sal Lake for the first float fly of the year. The water level is high, right up to the top. That's one thing good about lots of rain. I bet you are ready to go, I know I am. Flying off water is really fun, everybody loves it.....This will be the first of five times to the Lake so we can get our fill this year. Flying at Sal Lake is looking better all the with the losing of our lease at our flying field The flying field will be OPEN that day so you will have to get a frequency and leave a cell number before you come to Sal Lake. Come thru the CDF parking lot to the Lake. We will have a Deli lunch served and cold drinks available. Get your float plane ready because, "Float Fly Madness", is upon you

AEROBATICS CLINIC

By Sid Maxwell

On May 6 there will be an Aerobatic Clinic by Joe Hunt at our field. This is a good time to learn some new tips on flying Aerobatics. It will be featured around the IMAC maneuvers.

Model Air Show-Open House

By Sid Maxwell

The Model Air Show will be on May 20 at the Alexander Valley Field in Healdsburg. It will be open to the public so bring all your friends and relatives and don't forget to bring yourself. Because of the County's desire not to renew our lease in April 2007 we are circulating a PETITION stating, "We are in favor of having a flying field in Sonoma County". The Petition will be at the Info booth. We are also in the process of negotiating to stay on after April 2007 with an all electric field....maybe.

The Hobby shops are sponsoring the show with Raffle prizes:

Awesome Hobbies
Hanger One
Hobbytown
Sonoma Hobbies
Mendincino Hobbies
Absolute Adrenaline Skydivers

We will have many events to keep us going all day including a money and candy drop for the kids.....

Topped off with a Bar-B-Q lunch for everyone.

It looks like an action packed and fun filled day.....Don't miss it.

Work Party

By Sid Maxwell

Well guys it's time to clean up the field. We have visitors coming on May 20 and the clean up date is May 13 with another work party for the final touch on May 19. The Chain Gang said they will cut the grass if they are not to busy elsewhere. So if they can't make it , Manny Gonzales will cut the big grass but we need weed trimmers for all the edges. We will need all the help we can get. So set the date on your calendar and we'll see you there

A DAY AT THE AIRPORT

By Phil Leech

Maybe some of you remember an article I wrote a couple of months ago about the Citabria that Mike Cingari bought from Ralph Grella. Mike completely rebuilt the engine and refurbished the airframe to a really high standard. He had projected that he would have the plane ready to fly about the end of March or the first of April. And as the weather gods have prevailed lately it turned out to be April instead of March. Wednesday, April 5 was to be the magic day for the first flight and several of WCF flyers were present to witness the event as represented in the pictures below.

The weather was more on the marginal side as it was partly cloudy with light mist and variable winds but Mike flew the first hour off on the newly rebuilt engine with no problems

except a small (very small) oil leak that was discovered after landing. Mike promptly had the cowl off and tore into whatever had caused the leak.

"I'm tellin' ya, the motor's right there!" Ralph said.

The long awaited event was almost upstaged by another activity just a few hangars away. Deep throated rumbling of a radial engine nearby distracted most of us to see what was causing all of these great aviation noises. It turned out to be an amazing new arrival to Charles Schulz Airport that we all realized was the Russian WW2 Yak 3 replica that we had been hearing about.

Our own Red Jensen and his good friend, Will Whiteside have purchased the Yak with intentions of racing it at Reno this September. Will was in the airplane running up the engine and testing the radio and intercom system. This is a truly spectacular airplane including all of its flush rivets and stainless steel exhaust port extensions and shrouding. Beautiful workmanship! It is still in primer but I'm sure it will be properly painted before making its debut in Reno. It is powered by a 2000 Cu. In. Pratt and Whitney (I think) radial engine that once saw service in a DC3 and it has room for pilot and passenger with dual controls. We'll have to ask Red for more details about the Yak and of course the race plans. You can find more info on their Website: www.teamsteadfast.com

WCF MEET WITH COUNTY

By Sid Maxwell

The WCF Committee met with the County Supervisor Paul Kelly and John Merget of the Dept of Transportation and Public Works on March 27,2006 in Santa Rosa. Exploring our options were the main topic of the meetings along with showing what good people we are to have around.

Come to the April meeting for more details.....

Also we now have a name for our ,"find a field committee", it is now called, F.A.S.T. ,"find a site today".

This committee now has the addition of Phil Leech, Ralph Grella and Brian Blackburn, and Merle McGregor.

The FAST committee is trying to find a field, fast.

EVENTS CALENDAR 2006

April 29	Float Fly Madness - Sal Lake
May 6	Aerobatic Clinic by Joe Hunt at Healdsburg
May 7	Pylon Races
May 13	Work Party at Alexander Valley Field
May 20	Open House-Model Air Show
May 27	Float Fly Madness
June 3	Northern California Cup at Ukiah
June 4	Pylon Races
June 9-11	Float Fly at Red Bluff
June 17	Learn to Fly Day
June 17-18	Dan Sullivan Memorial at Ukiah - Scale Masters
June 24	Swap Meet - Vets Hall Santa Rosa
July 2	Pylon Races
July 4	Day on the Pond - Sal Lake
July 15	Northern California Cup at Healdsburg
July 22	Larry Frank Fun Fly
July 22-24	Down on the Deck at Ukiah - Open flying and Demos
Aug. 6	Pylon Races
Aug. 19-20	PCAM - Santa Rosa Airport
Sept. 3	Pylon Races
Sept. 4	Day on the Pond - Sal Lake
Sept. 9	Neil Taylor
Sept. 14-17	Reno Air Races
Oct. 1	Pylon Races
Oct. 14	Float Fly Aftermath - Sal Lake
Nov. 5	Pylon Races
Dec. 16	Christmas Party at Santa Rosa

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