August 2007 Edition

Wine Country Flier

Next meeting: 21 Aug, 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

2007 Club Officers:

President:	Jon Stychno	(707) 888-6885	jon@epsinsurance.com
Vice President:	Guy Nicholas	(707) 544-2141	Guy@Gui-Soft.com
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Treasurer:	Brian Blackburn	(707) 527-9645	bblackburn@santarosa.edu
Member @ Large	Adam Clement	(707) 433-4113	adampclement@comcast.net

2007 Board Members:

Phil Leech	(707) 538-8557	leechstudios@sonic.net
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Newsletter and Website
Newsletter Team: Guy Nicholas, Phil Leech, Brooks Robertson, Sid Maxwell
Website: Patrick O'Halloran

Presidents Report

By Jon Stychno

Last month I mentioned that we were talking with a few local land owners about possible flying fields locations. Since then some progress has been made. At this point we are in discussions with a land owner very close to our current site. Things are still in the initial planning stages and we are currently working out insurance issues. When more detailed information is available, I will let you know.

I would like to thank all the Wine Country Flyers members for their participation in the Wings Over Wine Country Air Show. Without your efforts and volunteered time, there would be no model airplanes at the air show to put smiles on kid's faces. I have been very busy prepping for the air show, thus this month's President's report will be short and sweet. Later!

Board Meeting Minutes

6 Aug, 07
By: Brooks Robertson

The August board meeting started shortly after 7pm. Adam Clement gave a quick rundown on the months pylon racing. He said "It was a lot of fun." However there are not quite enough people to help with the event. "We didn't have enough spotters" said Adam. All of the scores from the pylon racing are available on the website. All club members are encouraged to come to the pylon races to help with spotting and counting for the pilots.

Moving along at 7:17pm a debrief of the recent learn to fly event was next. A den of cub scouts had come to the field for day of flight training. The turn out was great and there were no crashes reported by the NTSB. Thank you to all of the club members who participated in the event. Also a big thanks to the scouts for showing interest in the event. Brian Blackburn has enthusiastically volunteered for the up coming learn to fly day next month.

The Trentadue winery flying field prospect was the next topic for discussion. At 7:34pm President Jon Stychno gave board members the latest progress report. A recent meeting with Jon and the owner of the winery took place. The winery is now processing insurance information and discussions with their board of supervisors are currently taking place. Some discrepancies are being reviewed, however our chances still look great.
More test flights at the location are going to take place. These flights are for noise testing and some training for Victor.

At 8:00pm there was the Sid report. Earlier in the year a flying site prospect in Petaluma was brought up. Sid recently met with land owners and decided that it is not going to work. He mentioned a few reasons. Next was the trek to Ukiah. It will go down in September. All members are welcome. Also a new hobby shop in Sebastopol will open. Sid ended his report in a timely fashion at 8:12pm. We quickly moved in to the most anticipated event of the year, PCAM. The down to the minute flight schedule was the main focus. We will have thirty minutes this year to choreograph an exciting mix of war birds, sport planes, a banner drop and 3D maneuvers. A time was set for the weekend of the 11th and 12th of August for a dress rehearsal.

Display planes are needed for our booth. Members are encouraged to bring their coolest birds for static display. More

information on PCAM is available on the website.

Last item on the list was the Neil Taylor event scheduled for September 8th. Phil Leech will be in charge of day. Again more information is available on the website. The meeting ended at 8:38pm.

Your 07 Secretary Brooks Robertson

Dead-stick landings

By: GARY THOMPSON
from "Transmitter" Palomar RC Flyers, San Marcos, CA.

Superior Pilot: Def. A pilot who uses superior judgment to keep himself out of situations that might cause him to have to use his superior flying skills. Knowing how to make a dead-stick landing can help make you a superior pilot. Some of us think that if you prepare well enough, a dead-stick landing will never happen. But even the best preparation in the world can still allow for this event to happen. All it takes is for your engine to top just once during flight. To make the best of this sudden event, you should be well-prepared.

1. Practice for a sudden loss of power. When looking for something to do during your next flight, why not try a few dead-stick landings. Just cut the power back to idle and try to make the runway. Even better, have a helper call dead-stick and then cut to idle. This will introduce a sense of urgency to the drill. Your helper may even get some kicks out of trying to see if he can force you not to make the runway without adding power.
2. At the first sign of a loss of power, head toward yourself. This gives you the maximum amount of altitude and the minimum distance to make the runway or landing area.
3. Keep your altitude when your airplane is distant. Don't fly low and far away. If you are distant, you will need altitude to trade for speed in order to make the runway.
4. Use a timer. If you prudently set a timer to time out when you have used no more than 75% of your tank, you will be able to more easily determine when your gas supply will run out. Electric fliers have a leg up here because they automatically receive a warning when the batteries begin to loose power.
5. Watch your speed and altitude. Without power (dead-stick), the only way to gain flying speed is to dive. If the airplane stalls, it may lose all of its altitude at once.
6. Pay attention to ground speed. You can cover more ground going downwind than up. When dead-stick and turning into the wind, you will lose a lot of ground speed, so make your final turn short, or if you can't make the turn, land downwind.
7. Set up your tank clunk. Make sure the fuel pickup clunk is not touching the back of your fuel tank. Set it up so that the fuel pickup is free to move from the bottom to the top. Now go fly right and practice a few dead-stick landings.

Neil Taylor Day
- Sept. 8, 2007 -
Coming Up

By: Phil Leech

Neil Taylor Day is on the horizon, the weekend after Labor Day, on Saturday. This is a club event designated to honor one or two of our current members who have contributed by serving on the Board, serving as Officers or continuously contributing to planning and directing events. Usually the award is given to one of the guys who has been active over a period of several years. The award is normally given to one member but there have been occasions in the past where two awards were presented. Last year the award was given to Brian Blackburn and the year before, 2005, our past President, Guy Nicholas was the recipient. This year's award winner was selected by the Officers and Board at the July Board Meeting and I am sure you will all agree the recipient for 2007 is well deserved.

The award will be presented at noon after we have all pigged out on Giant Burgers and Dogs, Chili and Drinks that are all FREE. Yes, the BBQ is on the house (our house) so bring along the kids and your significant other for open flying and lots of fun.

Winging it

from “Ruf Stuf” Green Bay Model Airplane Club Jim Sanders, editor
Green Bay WI

Here are some rules for flyboys and flygirls:
When in doubt, hold on to your altitude. No one has ever collided with the sky.

The propeller is just a big fan in front of the airplane used to keep the pilot cool. When it stops, you can actually watch the pilot start sweating.

The only time you have too much fuel is when you’re on fire.

Stay out of the clouds. The silver lining everyone is talking about might just be another airplane traveling in the other direction.

You start out with a bag full of luck and an empty bag of experience. The trick is to fill the bag of experience before emptying the bag of luck.

There are three simple rules for making smooth landings. Unfortunately, no one knows what they are.

Day on the Pond

By Sid Maxwell

On Labor Day, Monday September 3, the field will be closed so we will go to Sal Lake (the Salvation Army Lake) across the Freeway from the field and fly Float Planes. We will have a Deli Lunch served and cold drinks will be available. Enter through the CDF parking lot for the Lake.

Sid Maxwell

Learn to Fly

BY Sid Maxwell

We have another Learn to Fly event coming up on August 25, our second one of the year. We will have a Hamburger Lunch available. There will be 4 Instructors ready at the flight line. Bring everyone interested in flying Radio Control airplanes.

Sid Maxwel

Learning the Art of Model Building

From the Westlake RC Club, Inc., North Olmstead, Ohio

Building model airplanes, like any other artistic medium such as sculpture, landscape, painting, or flower arranging, is an art form in its own right. And like any other art form, it's a learned skill that takes time and dedication to master.

I try to bring a new model to the meetings every chance I get, and I always hear many who look at them say, “I could never do that,” or “it would take me 10 years to build that.” For the less experienced modelers among us, I can certainly understand how that could come to mind. However, those models are a culmination of more than 45 years at the drawing board and work bench, with the last 12 years having been “full time.” It’s safe to say that I have been fortunate enough to have packed a dozen average modelers’ lifetime achievements into my last five years of modeling!

With that being said, we all must understand that mastering the art of modeling will span a lifetime, and we can’t expect to start out where those who have been doing it for many years have aspired to. The good news is that modeling skills are not difficult to learn, it just takes practice. The main thing is that someone new to modeling must begin with a project simple enough to complete successfully—after all, there's no better motivator than success!

So where does one begin? Most of us in the club are RC fliers that fly Almost-Ready-to-Fly (ARFs) models; so naturally, the first thought would be to build an RC model. There are

those among us who could accomplish this task just fine. However, that depends on many factors, such as wood-working skills, plans reading ability and so forth. For most, all of those skills will have to be learned right from the start, which might seem like a monumental undertaking! So here's how I'd suggest going about it.

First: Keep the main objective in mind—learning to build models!

Second: Start simple!! The fact that your primary interest is flying RC models doesn't mean your limited to building only RC models. Remember, the goal is learning to build. If you're flying ARF's now, you can still hone your flying skills while you're learning to build. Then when you do build your first RC model, your flying skills will be in good shape too.

Third: Don't get in a hurry, and don't get discouraged. There are no time limits on any project that are not self induced! And remember, this is a hobby and hobbies are about filling our time with enjoyable activities.

Here's a suggestion for, shall we say, testing the water! Start out with a simple stick-and-tissue type Free Flight kit. The investment is minimal—$15.00 will go a long way in that realm, and the skills required to complete the model are really pretty minimal, but will go a long way toward building your skills. Then when you get it done, take it out and fly it. Learning to trim these models will also go a very long way in understanding RC models and what makes them tick. Then with each step, move up to something a bit more complex, and through just a few small steps, you will have learned the basic building and plans reading skills required to build an RC model.

Now, don't expect the first try to produce a world-class model. Keep in mind that this is a series of small steps toward the larger goal of mastering the art of modeling, and with each step, work toward improving something, not everything, on your next model. Give special attention to the areas that were the most difficult on the first one, and before you know it, your basic skills will be forming nicely.

And finally, if you find yourself in a little over your head, ask questions of those of us who do build. Modelers by nature are a pretty good bunch of folks, and I haven't met many who are not willing to help someone who is truly interested in learning the art of modeling.

FAST

By Sid Maxwell

Two Rock:
This month the FAST (Find A Site Today) Committee went to Petaluma at Two Rock in the search for a new field. Keith Prosser told us about 85 acres down at Two Rock. Josh Kloepping owns the land which is 4 miles from Petaluma. It is on a slope, close to a Duck Farm and very windy. Not too good.

Sid Maxwell

Composite Materials: Kevlar

By: Art Gajewski
From the Jet Pilot's Organization

This article will provide some insight into aramids commonly known as Kevlar. As jet modelers, most of us are familiar with the popular fabrics used in the construction of our aircraft. Certainly, we have all built or flown models made of fiberglass and even some with carbon fiber and Kevlar. However, have you ever wondered how these materials are made and what are some of the tricks to use them properly?

Introduced commercially in the 1970s, Kevlar aramid is an aromatic organic compound of carbon, hydrogen, oxygen, and nitrogen. Kevlar fiber is produced by spinning long-chain polyamide polymers using standard textile techniques. The low-density, high-tensile strength, low-cost fiber produces tough, impact-resistant structures. The compressive properties of Kevlar laminates

are low (because of poor coupling of resin matrixes to the aramid fibers), so, applications are typically secondary structures or tension-critical applications.

Kevlar fiber, originally developed to replace steel in radial tires, has found increasing use in the belts of radial car and truck tires, where it saves weight and increases strength and durability compared to steel belts.

Two Common Kevlar Alloys

Kevlar 29 is a low-density, high-strength aramid fiber designed for ballistic protection, slash-and-cut resistance, ropes, cables, and coated fabrics for inflatable and architectural fabrics.

Kevlar 49 aramid fiber is characterized by low-density and high-tensile strength and modulus. These properties are the key to its successful use as reinforcement for plastic composites in aircraft, aerospace, marine, automotive, other industrial applications, and in sports equipment. It is available in continuous-filament yarns, chopped fiber, woven and unidirectional fabrics, tissues or veils, and tapes for reinforcement applications.

Kevlar 49 aramid is used in high-performance composite applications where lightweight, high strength and stiffness, vibration damping and resistance to damage, fatigue, and stress rupture are key properties. Reinforced composites can save up to 40% of the weight of glass-fiber composites at equivalent stiffness. The aramid composites resist shattering upon impact, and the presence of the fiber inhibits propagation of cracks. Depending upon the selection of resin systems, aramid composites have a useful temperature range from -320° to 400° F (-196° to 204° C).

Kevlar 49 is not a carbonized or graphitized material. Unlike other organic materials, its stress-strain behavior is linear to ultimate failure in tension at 340 kips/square inch (2344 MPa) and 1.8% elongation. Toughness of the fiber composites is significantly higher than carbon graphite composites. Furthermore, the very low density of the fibers provides a higher specific strength than glass or carbon reinforcing fibers. The specific modulus is between four and five times higher than that of glass fiber. The usable strength of Kevlar 49 reinforced epoxy is about four times that of 7075T6 aluminum at less than half the density.

Kevlar—Getting the Most Out of Yours

Kevlar is lighter than fiberglass (for a given strength) and tougher than carbon fiber. Therefore, it sounds like the ideal composite, right? Well, yes and no. Let's see how to best use this aramid material.

First, cutting it can be a real pain. Special shears are required to cut Kevlar fabrics and tapes. These shears are designed to hold the fabric securely as the cutting blade does its job. If you look at these shear blades closely, you'll notice that there are serrations on the "holding" edge and a sharp edge on the cutter. These shears are a specialty item and are therefore somewhat expensive, but they are well worth the price in reduced aggravation and improved results. Don't try to cut Kevlar without them.

Second, use a compatible resin. Kevlar does not bond well with polyester resins. Keep it simple and use epoxy resins for the best results.

Last, use Kevlar for specific applications including reinforcements as opposed to entire structures, predominantly tensile loads, vibration damping, or scuff resistance. Kevlar works well as reinforcement in fiberglass structures. Cost may become prohibitive when used as the only fabric in a composite structure and its compressive strength isn't as good as some other materials. I have seen Kevlar canoes, but I don't know how well they perform. Kevlar works really well as localized reinforcement in vibration-prone applications (e.g. engine-mount boxes in Giant Scale airplanes with gasoline engines). Scuff

resistance is another good application—wing tips, fuselage bottoms, etc.

Always use high-quality, engineered resin. Some hobby resins may not have all of the strength properties we desire in our applications. I personally use and recommend WEST Systems 105 resin with fast or slow hardener. WEST Systems is competitive on a cost-per-ounce basis. This resin dries hard, is easy to sand, it's tough and not easily damaged compared to some other hobby resins intended for the same application.

Once again, a quick word about hybrid fabrics (carbon fiber and Kevlar)—these hybrid fabrics are popular because not only do they look attractive but they also can provide the best of both worlds. They provide the lightweight, high strength, and stiffness of carbon fibers with the lightweight, toughness, and abrasion-resistance of aramids. I have built hybrid composite landing gear using alternating layers of carbon fiber and Kevlar with excellent results. One would need to understand the application very well to select the right composite properly (fiberglass, carbon fiber, aramid, or a hybrid). Hybrids have their place.

Note: Information in the article is adapted from Composite Materials Handbook, M.M. Schwartz, McGraw-Hill Book Company, 1984.

Trek to Ukiah

By Sid Maxwell

The Trek to Ukiah will be September 29. We will join the Ukiah Propbusters at their field in the vineyard. It will be a Fly-In, Swap Meet and a FREE Hamburger lunch.
We have (2) Treks each year, one at Healdsburg in April and one at Ukiah in September. When we had the one in Healdsburg this year we had tons of rain but we still had 35 people attend. So now we go to Ukiah. The Swap Meet will be Free, the Hamburger Lunch (Fat Burgers) will be Free and the Fly-In will be FREE.

Flying at Ukiah adds extra enjoyment to your flying with all the green from the grass and the vineyard. A good feeling.
Join us.

Sid Maxwell

(ed. Had some extra room)
Here is my son jumping his car. Notice the tightly clenched body position. He does that on EVERY jump.

Notice the bulging neck in the blowup shot.

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EVENTS CALENDAR 2007

Aug	18-19	PCAM -Santa Rosa Airport
Aug	25	Learn to Fly Day
Sep	2	Pylon Races
Sep	3	Day on the Pond - Sal Lake
Sept	8	Neil Taylor Fun Fly
Sept	12-16	Reno Air Races-Reno
Sept	21-22	Red Bull Air Races, San Diego
Sept	22	Wine County Aerobatics
Sept	29	Trek to Ukiah
Oct	7	Pylon Races
Oct	13	Learn to Fly Day
Oct	20	Float Fly Aftermath - Sal Lake
Nov	4	Pylon Races
Dec	15	Christmas Part

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