

August 2010 Edition

Wine Country Flier



Next meeting: 21 September 2010, 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

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Prez Sez

By: Red Jensen

Greetings fellow modelers! Are you ready for the airshow? Don't forget the Wine Country Flyers will once again be a featured performer at the Wings over Wine Country Airshow Aug 21st-22nd. This year is shaping up to be once again a fantastic performance with a few new twists. Come on out and enjoy the thrills.

We have a schedule change. The Fun-Fly that was scheduled for September 5th has been postponed as there is quite a bit going on already that month. We will look at another date in the future.

As many of you are aware, the current financial climate has affected many things. Our clubs solvency is nowhere near being jeopardized, but it has caused us to evaluate our spending habits and some extra's that the club provides. To ensure that we are fiscally responsible, the board is currently undergoing a budget review. It has been decided that for the time being we will no longer be able to subsidize the monthly meeting prize raffle. Up to this point the club has been kicking in an additional \$125 a month. We will still have prizes at the meeting, but we will no longer be using our money to add to the prizes, so all money taken in by the raffle will solely fund the next month's prizes.

The last major flying event of the summer will be the Larry Frank/Neil Taylor fly-in September 26th. This is a free event & BBQ for all members and their families, and will include a Fun Scale competition and the presentation of the Neil Taylor award to a member or members who have provided outstanding service to the club. Look for an event flier soon.

See ya at the field!

Board Meeting Minutes

11 Aug 2010

- Air Show. Review of preparations for the show. Need to find a quiet generator for use at

the show. Adam and Steve to review this weekend. \$330 allocated to buy a Super Cub RTF for the kids raffle. An Apprentice RTF will be raffled for the paid raffle. Raffle tickets will be \$1 or 6 for \$5.

- Fun Fly September 5th and Larry Frank on the 26th, as this seems to be creating a lot of extra work in this busy time of the year the Fun Fly has been scrapped.
- Larry Frank, Neil Taylor. Nitro Planes (www.nitroplanes.com) want to sponsor this event. It was agreed that WCF will look into this further. The event will remain members only and food will be provided. Ian will do artwork for the flyer.
- WCF field porta-potty needs servicing, Robbie has called the company to get service.
- WCF finances, review of the finances shows that we are running a little low. We will no longer be subsidizing the monthly members meeting raffle. The raffle prizes will be bought from the takings at the previous month's meeting. This will begin at the next meeting scheduled for August 17th.
- Flying Snoopy doghouse is being built and will have its maiden flight this weekend, hopefully with smoke.
- WCF non-profit status has been reviewed by Robbie in an effort to ensure compliance with the Vets building administration.
- Membership fee structure will be re-evaluated over the next few weeks. Possible family membership will be introduced. Budget for 2011 needs to be reviewed with Jeff Penner.
- 2010 Christmas party free raffle is under review due to lack of funds.

Meeting adjourned at 8:05pm

General Meeting Minutes

20 July 2010

- Meeting started at 7:35pm.
- Jerry Laister is a new member welcomed to the club, as well as Michael Bunce a returning member.

- Winner of the \$25 gift certificate was Joel Pringle.
- Robbie Jensen is absent due to work duties so President's report will have to wait.
- Swap meet was a success netting WCF a small profit, next year the event will be run a little earlier in the season with more cross promotion in other hobbies.
- PCAM 2010. Jon Stychno. Review of the 2010 PCAM show which has a better line up than last year but with only 30 minutes for WCF due to the new full scale program.
- Air show will be August 21st and 22nd. Mandatory rehearsal August 15th.
- Fun Fly scheduled September 5th, this is a new event which will have multiple classes for the various power systems to make the competition more interesting.

Announcement.

Steve Birkhofer, a long time member of WCF passed away yesterday aged 63 any WCF members who would like to send their condolences to his family please contact a board member. (ed. [obituary](#))

Raffle.

Extra 300 went to Adam Clement
 JR transmitter donated by John Reade went to Dick Maddocks
 Flying Wing went to Julio Alvarez
 Hinges went to Jon Stychno

Red's Corner

By: Red Jensen

This month's question comes from a long time member and glider guider Bob Film. This type of thing is near and dear to my heart!

Since there are 100's of airfoils, and each one is usually efficient at an air speed, I would assume that the thicker the airfoil & under camber airfoils, would be for slower air speed, so is there a simpler formula to determine each one's angle of incidence (not dihedral). So, for instance, if you put different wings on a plane; how would you set its incidence for max performance. I assume that angle is always in reference to elevator being zero degrees.

Since I am a sailplane "NUT", this becomes more critical.

Thanks – Bob Film

Thanks for the question Bob. You have hit the nail on the head here. Airfoil selection and setup (incidence, planform, washout ect.) is the heart of how the plane flies. A simple incidence change sometimes can turn a dog into a thoroughbred. Unfortunately there is no simple formula to figure this out, but there are some guidelines that I like to use. There is much, much more, that can be added to this discussion, so I'll try to keep it in the context of your question. Please feel free to contact me for further discussion if you wish.

Up front I'd like to state that I generally am not a big fan of using incidence and/or decalage to trim an airplane. These are compromises to make a plane behave a certain way at a certain airspeed, and my feeling is airfoil selection plays a big part here and if done correctly, you won't need the incidence band-aid. More often than not, my designs will be setup with zero incidence. They certainly have their place, Trainers and Old Timers for instance, but since you asked about max performance, I'm going to assume you equate that to efficiency. It's all about trim drag. If you need up or down elevator trim at certain airspeeds, it means your incidence, CG or both are wrong and there is unnecessary drag from trim detracting from performance. Climbing under full power is a classic symptom of this.

First, you must define the purpose of your airfoil selection and its use. An Old Timer type aircraft with an undercambered section will likely be flown more slowly and benefit from some positive incidence. All airfoils have a natural pitch down tendency, but UC sections react more than most. This positive incidence coupled with a necessary more forward CG makes for a very sedate flying aircraft.

For a high performance TD (Thermal Duration) sailplane, Racer or even an aerobatic plane you'll find that incidence needs to be at or a fraction of a degree of within zero.

So how do you measure it? You are correct that on a sailplane the reference line, "0" degree or datum is often the elevator, and the wing is measured in degrees positive from there. Power planes are a different story, with their thrust angle, positive incidence, decalage (tail incidence), they often use a line through the center of the fuselage for reference.

For most airfoils you can find a published set of ordinates that will include useful information such as chord line, camber line, zero lift line and other fun things like lift vs. drag polars and laminar bucket information. In most instances you can use the chord line to measure from which is often simply a line from the leading edge to the trailing edge. For highly cambered sections, the chord and camber line can actually exit the bottom of the airfoil making measurement a bit trickier.

There are many online and printed references out there. For printed references I like Airfoils at Low Speeds (Soartech series) available from Carstens Publications (<http://soartech-aero.com/index.html>), and online there is the UIUC's webpage from Professor Michael Selig. With this reference material it will tell you specifically at what angle of incidence it will likely perform best.

Bottom line for me is I will set up a plane with the least amount of incidence possible (often zero) and move the CG aft incrementally until the trim change with speed goes away and I still have acceptable stability.

Tips & Tricks

From the newsletter of the Rogue Eagles R.C. Club, Medford, Oregon

Don't cut that wire!

When your cell count gets too high for your speed control's BEC and you want to disable it, cut the positive (red) wire that runs from the speed control to the receiver. If you cringe at the thought of cutting the wire on your expensive speed control, here is a simple solution: buy a short servo extension and cut its positive wire. Plug the servo extension between the speed control and the receiver; now, if you want to use the BEC in another installation, just omit the extension!

Plugged CA Applicators

The long, thin CA applicator tips work great, except when they're clogged or gummed up with dried glue. After you've finished using them, soak them in acetone; they will be clean and will last forever. This will even work for tips that have dried CA on them, and it works great on spray-can nozzles too.

Prop Balancing

I just read in a post about how a propeller was balanced by removing some of the tip of a blade. The better way to balance a propeller is by sanding the back (flat side) of the heavy side near the tip. You can also balance by applying clear dope, colored dope, or CA to the lighter blade. The CA can be sanded for smoothness.

A Repair Tip for Over-sized Control Horns

Mike DaBiere, Front Line Flyers, York, Maine

I have an interesting idea, at least to me. A few years ago I purchased a Bridi Big Bee at an auction. Set it up, flew it and had a great time with it. During the winter months I was inspecting the control horns and found excessive clearance at the clevis pin through holes. The horns (large style) were not the standard variety and needed to be replaced or repaired. I opted to repair.

This is so easy a caveman can do it. I drilled a 1/8-inch hole through the sloppy hole and inserted a piece of a plastic ink pen refill tube. CA glue and some minor trimming and the problem was solved. Works for me.

I hope this info has some value to others who may find the same issue.

Landings:

Touch-and-Go or Bounce-and-Go?

by Glynn Mount, from the Cam Journal, Central Arizona Modelers, Inc,

"Touch-and-go" is a great way to practice landings. It's a sure way to rapidly improve your technique. Even the best of us, however, will bring one down a little too hard once in a while, and the inevitable result will be a

bounce.

The size of said bounce will be in direct proportion to how enthusiastically your airplane meets the runway. If unattended, of course, the first bounce will be followed by a second, and if the second bounce doesn't break your propeller, you might be lucky enough to dribble to a stop before running off of the runway.

This type of landing often will bring an enthusiastic response from the critics sitting on the sidelines.

There are however, a couple of ways you could recover from a bad bounce and keep your dignity intact. One is to maintain "full back pressure" on the stick (i.e. full up elevator) in the hopes that there is enough flying speed to cushion the second bounce. If the bounce is more of a high-speed skip, this method works well.

The second method is to immediately apply power and return to level flight.

I've tried both methods, and a "bounce-and-go" with quick application of power will usually result in a more positive recovery from a bad bounce. If performed with finesse, you might even make it look as though you did it on purpose.

The best landing procedure is to hold the aircraft off the deck a foot high with idle power and try "not to land." The airplane will slow and "sink in" in spite of you, giving you a smooth transition from air to ground.

Aviation Wisdom

- Truly superior pilots are those who use their superior judgment to avoid those situations where they might have to use their superior skills.
- Rule One: No matter what else happens, fly the airplane.
- Forget all that stuff about thrust and drag, lift

and gravity; an airplane flies because of money.

- The propeller is just a big fan in the front of the airplane to keep the pilot cool. Want proof? Make it stop; then watch the pilot break out into a sweat.
- If you're ever faced with a forced landing at night, turn on the landing lights to see the landing area. If you don't like what you see, turn 'em back off.
- A check ride should be like a skirt, short enough to be interesting but still long enough to cover everything.
- Speed is life; altitude is life insurance.
- Never let an airplane take you somewhere your brain didn't get to five minutes earlier.
- Don't drop the aircraft in order to fly the microphone.
- If you push the stick forward, the houses get bigger. If you pull the stick back, they get smaller.
- Hovering is for pilots who love to fly but have no place to go.
- The only time you have too much fuel is when you're on fire.
- Flying is the second greatest thrill known to man; landing is the first!
- You know you've landed with the wheels up when it takes full power to taxi.
- Those who hoot with the owls by night should not fly with the eagles by day.
- Young man, was that a landing or were we shot down?
- Learn from the mistakes of others. You won't live long enough to make all of them yourself.
- Fighter pilots believe in clean living. They never drink whiskey from a dirty glass.
- Things which do you no good in aviation: Altitude above you. Runway behind you. Fuel in the trunk. A navigator. Half a second ago. The airspeed you don't have.
- If God meant man to fly, He'd have given him more money.
- Flying is not dangerous; crashing is dangerous.
- Flying is the perfect vocation for a man who wants to feel like a boy, but not for one who still is.

WCF 2010 EVENTS SCHEDULE

SID'S FLOAT FLY	MON SEP 6
PYLON RACE	SUN SEP 12
LARRY FRANK/NEIL TAYLOR DAY	SUN SEP 26
PYLON RACE	SUN OCT 3
PYLON RACE	SUN NOV 7
PYLON RACE	SUN DEC 5
CHRISTMAS PARTY	FRI DEC 10



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