

PROP KICKS

The Cloud Kings R/C Club, Oxford, PA



Bill Brueckman - President
Dan Crawford - Vice President
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AMA # 579



From the President's Bench

Bill Brueckman
President@Cloudkingsrc.org

I would like to take this opportunity to thank those club members who helped with the grub project at the field this past Wednesday: Henry Bohe, Ray Crowley, Jack Douglas, Jr., John Flynn, Buddy Harlan, Cecil Miller, Dick Martin, Roger Smith, Ken Marron and a very special thanks to Ross Carson for his expertise and the use of his equipment. Without Ross this project would not have been possible.

Thanks again guys, great job.

Clean out your closets, get under the bench and bring your unwanted treasures to Johnson Field on June 18th for our annual Buy and Fly. Vendor registration is \$10 while pilots can register for free. If it rains, we can try again on June 19th. See you there.

Bill



The Editor's Desk - Mike Denest
Editor@Cloudkingsrc.org

I'm finally back on US soil after three trips to the United Kingdom for work. Needless to say, my shop projects have been backing up so I'm happy to be able to get some things done and get some flying in.

We have a good issue for this month (May and June actually), with reports on the grub project, first flights, some new techniques on foam airplane design and construction and a treatise on flying with only a rudder and engine control so sit back and enjoy.

As always, see you at the field.

Mike

Submissions to Prop Kicks

Prop Kicks is a bi-monthly publication of the Cloud Kings RC Club. Your pictures, ideas, articles are needed for publication. Send your submissions to Editor@Cloudkingsrc.org. Please submit your articles and photos in electronic format by e-mail or cd.

Scene at the Field - The Grub Chronicles

Photos by Ross Carson



Ross writes:

We had a great turnout to help apply Milky Spoor on our field. This application should rid our field of grubs which attract moles, raccoons etc., causing unwanted holes (runway pot holes). Thank you all for your great participation.

Scene at the Field

Photos by Ross Carson



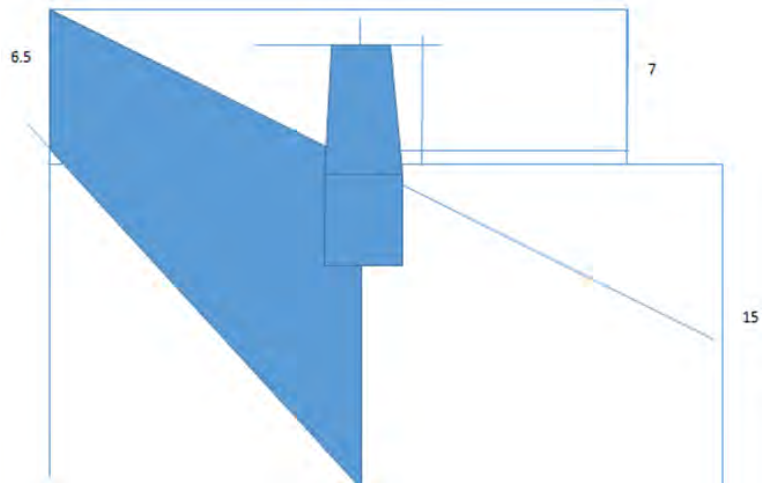
Designing in Foam—Jorgen Pedersen

Many people have asked me how I design and build flying wings, some have tried and some have apparently failed. Flying wings are like any other form of plane, they require lift, have drag, need control surfaces, there needs to be a source of power and a source of thrust, which due to my aversion of getting my hand amputated, is required to be pointing forward, well away from the arc of that spinning disk.

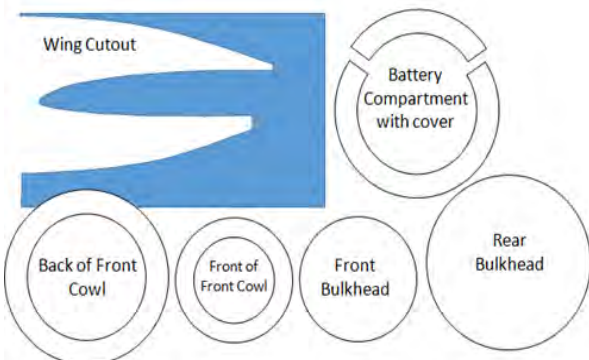
The thing that most people fail to comprehend, is that almost anything can fly, given the right CG Centre of Gravity, sufficient control, and an abundance of power, one could get even the marital bed to lift off, in fact the flying bedspread (not the marital bed) was designed and flew, and like our current quad copters had the aerodynamic capabilities of a brick, yet fly/flew rather well, and of course we all know about the humble bumble bee, which technically shouldn't be capable of lifting off. Weight is always a consideration, but with the weight to thrust capabilities of current electric motors, this is now less of an issue than it perhaps was when our pressie started flying.

To remember – We must design something we can control. It cannot have an abundance of weight. We must make sure the CG is in the right place. Now one more thing, while all the above is true of any plane, the CG placement of a flying wing is critical, even $\frac{1}{4}$ " back from the designated point will render the wing pretty much unflyable.

So, how to design, I do all my ideas and sketches in PowerPoint, but they can just as well be done using any drawing tool which provides a scale representation of what is to be delivered. The Plane which flew this weekend, was conceived from this basic sketch.



From this, I then started working on the basic fuselage shapes, and the construction approach, and created a number of additional sketches which enabled me to maintain the basic shape I had sketched out, while making sure I had room for battery, radio, and ESC. In general I always create a minimum of a 3 view, as well as cut-away view where I physically add boxes for the battery, ESC etc., to make sure there is sufficient space to put everything in the plane.



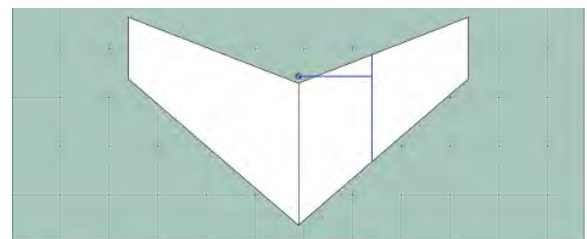
Once one is happy with the design, and one has made sure that one can fit the electrics, next comes the all important step of determining the Centre of Gravity.

For this I cheat. I have found a great tool on the Internet at http://wingcgcalc.bruder.com.br/en_US/. This allows one to add all the measurements which one has designed to, to be plugged in and Hey-Presto, a CG position provided.

In the case of the model we have just designed, about $\frac{3}{4}$ of an inch in front of where the wings meet, which is pretty standard for forward swept wings.

Now, all that is left is to get out a chunk of foam, cut the parts, glue them together, install the electrics, cover the plane, and take to an unsuspecting field to wow and confuse your friends by having a plane which most think should be unflyable.

One last thought: A question I often get is – why forward swept, does this improve the flying characteristics? Nope – it just looks cool.



Measures	Results
Options	Wing Area: 337
Unit System: <input type="radio"/> Metric <input checked="" type="radio"/> Imperial	MAD Distance: 7.51
CG Position: 20 (15% for biplanes, 30% for gliders, 35-50% for airplanes)	MAD Length: 11.31
Weight: 21.15	CG: -0.78
Measurement: <input type="checkbox"/> Draw the measures.	Wing Load: 7.87
Panel 1: <input type="button" value="+"/> <input type="button" value="-"/>	Deep linking URL: <input type="text"/>
Panel span: 15	<input type="button" value="Short It!"/> <input type="button" value="Save Image"/>
Root chord: 15	Note: We are limited by the current available API and can't choose an appropriate name of the saved file.
Tip chord: 6.5	
Sweep: -7	
Angle: -21.25	

Scene at the Field

Photos by Roger Smith

My Senior Telemaster flew really well on her maiden flight 5/11/2016. Tommy Bedsole helped trim her in flight. This was my first kit-built model (from die-crushed balsa); it was a most enjoyable build. Powered by a Saito FA-72; covered with Solartex. Many thanks to Ray Crowley for his suggestions) Solartex/DuBro fiberglass landing gear/extra 1/2 in. rudder extension/struts...)



Vintage Thoughts – By Mike Denest

At the end of April, my wife and I traveled down to Eden, MD to visit with John and Patti Haffner. As you may know, John is an annual visitor to Johnson Field for Octoberfest and an accomplished rudder only flyer. I completed my Ambroid Charger restoration in the late fall, too late to get any flying in. All modelling activities stopped whilst (that's for you Jorgen) I spent my winter "vacation" (translate as rainy, damp, dismal, dark) in jolly olde England. I must have done a great job as I was offered two more trips by the company. However, I'm getting off on a tangent so I'll get back to the tale of the Charger.



My Ambroid Charger with John's Midwest Esquire at the MARKS flying field

The first thing you need to know about flying rudder only is that the throttle is your friend. To increase altitude, add power, to lose altitude retard power. Simple, isn't it? Not so fast. When you're climbing away, you notice that the airplane is getting smaller and you have to turn this buggie around. There's a balancing act where you add just enough rudder to start your turn. But wait! As the airplane turns, it has a natural tendency to drop the nose. This is caused by the wing inside the turn stalling or moving slower whilst (I guess I spent too much time there) the outside wing generates more lift as it is moving faster than the inboard wing. The trick is to learn how to add throttle to raise the nose just enough to complete the turn then lower the throttle just enough to return to level flight out of the turn. Do enough of these and you can perform a nice figure eight pattern up and down the field. At some point, you have to land. Ok, you have no elevator to flare for a nice touchdown so what do you do? There's two ways to do that. One is to apply small rudder movement from side to side to rock the wing and raise the nose up just enough for a

flare to touchdown, the other is to raise just enough power to raise the nose to land. It's a tricky technique that's learned with lots of practice (and broken props).



With practice, a rudder only airplane can be fun and a challenge to fly. In the next issue, I'll discuss how to flight trim and perform aerobatics.

The Cloud Kings RC Club Presents Buy and Fly



Date: June 18, 2016

Rain date: June 19, 2016

Time: 8:00AM to 4:00PM

Location: Johnson Field

160 Cream Rd. Oxford, PA 19363



Tired of looking at that half completed project? Need more space in the shop? Bring it to Johnson Field and sell it. Johnson Field is open for flying so bring your favorite flying machine for a day at the field.

Vendor spaces \$10, pilot registration is free. Pilots must show current AMA membership to fly. Food available on the field. AMA Sanction #803.

Event Director: Mike Denest

610-316-3570

mjd12k@yahoo.com

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25TH ANNUAL
JULY 6-9 2016

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- Registration forms and info at DelawareRC.org
- RV's on site (no facilities) or at adjacent campground w/facilities
- Giant Lunchtime/Halftime Show on Saturday
- Many vendors on site
- Pit Passes available to spectators \$10/ea (kids free)

The Last Word

And now for something completely different, a message from our token Briton.

Hi Bill and the other rif-raf,

I have enjoyed my time here in PA, it is one of the few places I have ever lived which I could call home. That's saying a lot given the number of places, states, countries and villages that I have lived in. However, the 7 hour daily commute has finally gotten to me and I have elected to purchase a house in CT, which will afford me just a 3 hour daily commute, allowing me to once again enjoy both morning and evenings and give me back a large portion of my life.

I was rather hoping that we were meeting last Saturday at the Post House, as that would have been my last club meeting. My house here in PA is sold, with a move out date scheduled for June 30th. I do intend being at next Saturday's bash, as I have a number of planes, kits etc., which are almost as well traveled as me. Time to let someone else enjoy them and get them in the air, now that I have my machine I prefer the dynamic of designing and building my own, some of which work and some of which don't. Lol. So come along to the field with your hard earned greens, I think I have about 12 planes/kits, ARFs to get rid of.

On that note, I flew a new thin wing forward swept this week, in fact both Derrick and I flew one. They flew great. Mine left the field in one piece, alas Derrick's didn't. Lol. I also aim (if I have time) to have a few of those kits made available for sale, please note these are kits, and you will have to figure out how they go together, of course I will be available by phone and e-mail.

Anyway. I just wanted to thank you all for your camaraderie, friendship, and humour, I will truly miss both Cloud Kings and Oxford PA.

Kind regards
Jorgen
571-223-8969

From the editor:

I want to thank Jorgen for stepping up and keeping Prop Kicks in circulation whilst (geez, there I go again) I was away conquering British soil. His wit and humour made the newsletter a very enjoyable read and I hope that Jorgen remains in contact with the Cloud Kings, relating his tales of bravery, accomplishments, conquests and his quest for the Holy Grail of foam airplane design in the midst of the rebel hoard commonly known as the Connecticut Yankee. Just think Jorgen, if George III had listened to his subjects, all of this could still have been yours. I've sent warnings to Boston, Hartford and points north alerting them that the British are coming (again). Travel safe Jorgen and be wary of that New England rabble. I hear they're quite rebellious up there.

Cheerio, pip pip and all that rubbish,

Mike Denest

PS. I'm hoping for at least one more trip across the pond so I can have the privilege of sitting at my desk at Boscombe Down on July 4th with my statue of George Washington and playing "Yankee Doodle" in the background on an endless loop. Nah, forget that, I'm going to Hawaii for July 4th!

Calendar of Events

Club Meeting - June 15 7:00PM West Field

7/6/2016 - 7/10/2016 - WARBIRDS OVER DELAWARE. Lums Pond State Park Sponsor: DELAWARE RC CLUB

7/22/2016 - 7/24/2016 -- HELIS OVER DELAWARE. Lums Pond State Park. Sponsor: DELAWARE RC CLUB

National Model Aviation Day - August 13

8/5/2016 - 8/7/2016 -- Lock Haven, PA WINGS OVER PIPER. Site: Wm T Piper Airport.

8/19/2016 - 8/21/2016 -- Bethel, PA (C) GOLDEN AGE MODEL FLY IN. Site: Golden Age Air Museum.

Octoberfest October 8 & 9 Johnson Field



Prop Kicks
2 Whitehaven Ct.
Newark, DE 19711