



Soaring News



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"Newsletter of the Orlando Buzzards R/C Soaring Society"

September 1997

CLUB OFFICERS

Rick Eckel, President (407) 365-9757
John Masiello, Vice President (407) 366-8918
Lewis Gray, Treasurer (407) 365-6766
Jerre Ferguson, Secretary (407) 295-0956

NEXT MEETING

Oct. 5, Noon at Club Field
Nov. 2, Noon at Club Field

Corner

Rick Eckel

President's

Time for another newsletter? Seems like it was just the other day I was writing a President's Corner informing you of Don Cleveland's departure. Time is flying and we've got quite a few things going on. Problems with the new field, HLG and Gentle Lady Contests, preparations for the Tangerine as well as some more mundane club business continues. And October will be the month to again elect officers. As those of you have been out there know, the Snow Hill Field is a really nice place to fly. Unfortunately there are some problems and unresolved issues with that field. As noticed the weekend of the HLG and Gentle Lady contests the field is not always accessible. Heavy afternoon showers in the area two weeks before the contests left the field about half covered with water and the entrance road close to impassable. Continuing rain the next week made the road totally impassable. (Ask Rich Kiburis and Terry Cusack) A quick change had to be made to move the contests back to the home field. Everything went OK but we sure would have preferred to use the Snow Hill Field. (The home field was in excellent shape in spite of the rain!). We will also need to discuss how we will maintain the Snow Hill Field in the future. It is so large that it has proven to be more expensive to mow than originally anticipated. If we are to continue using the field at all, we will have to mow at least once per

year. If we don't do that, it will quickly become overgrown and covered with scrub. Perhaps we can maintain a single yearly full mowing and some kind of partial mowing. We'll be discussing this further at future meetings. Later in this newsletter you will find the results from the HLG and the Gentle Lady Contests. The overall turnout was a bit light but I think everyone had a good time. The Gentle Lady Contest attracted a number of first-time contestants and even a few power pilots looking for something a little different. Hope we see them again next year. The HLG contest attracted a lot of our club HLG pilots as well as Mark Kummerow from down south and a pilot named Jim O'Reilly from up in Tallahassee. Jim brought one of the new Maple Leaf HLGs to fly and it created quite a stir. (Although it didn't win - right Scotty?) I am grateful for all the help I'm getting on the Tangerine. I think that things are progressing well. Lewis Gray is getting ready to send out literature to previous contestants and Rob Rierison has been contacting vendors for raffle prizes. Rich Kiburis has the winches and retrievers in excellent operating condition and Ed White has committed to jump in when I need him to pull the thing together at the end. Thanks to all of them and the others that I have unforgivably failed to mention here. Buzzards continue to do very well at FSS contests and I want to congratulate them all. But right now I must get back to work!

*"Thermals,"
Rick*

Future Contest Dates:

Sep 27-28 FSS#8, West Palm—2 meter/Unlimited
CD: Charlie Brecht
Oct 18-19 FSS#9, Morriston—2 meter/Unlimited

Nov 29-Dec 1 CD: Bob Wargo
Tangerine Championship, Orlando
CD: Rick Eckel, Ed White



There were four contests since the last Soaring News, but it appears that the Nats were not on anyone's agenda this year, so we have coverage of three. First, there was the Buzz Chuck HLG contest, followed by the Gentle Lady Plus Contest and then Hoot N-Holler at Kenny World.

FSS#7 HOOT-N-HOLLER RESULTS

PLACE/CLASS	EVENT	NAME
1-Sportsman	2meter	MIKE CONTE
2-Sportsman	2meter	JIM STANADFER
3-Sportsman	2meter	ROSEMARY SOWA
1-Expert	2meter	RICH KIBURIS
2-Expert	2meter	GARNETT WHITE
3-Expert	2meter	ART MILLER
1-Master	2meter	MIKE AGNEW
2-Master	2meter	RUSTY ROOD
3-Master	2meter	MARK ATZEL
1-Sportsman	Unlmt	RICK SPENCE
2-Sportsman	Unlmt	JIM McCUDDEN
3-Sportsman	Unlmt	JIM STANADFER
1-Expert	Unlmt	SCOTT HUNT
2-Expert	Unlmt	LEWIS GRAY
3-Expert	Unlmt	RICH KIBURIS
1-Master	Unlmt	ED WHITE
2-Master	Unlmt	RAY ALONZO
3-Master	Unlmt	RUSTY ROOD

HOOT-N-HOLLER REPORT. The weather was HOT and the winds remained light all weekend. You really couldn't have asked for better, yet the thermals tried to be

elusive on some rounds. The Sportsman field suffered from limited entries (5), but the Expert and Master competition was extremely competitive (13 each), with a majority of scores reaching 2800+ points! Four airplanes met the ground in an untimely fashion, causing the pilots to walk away with more pieces than they came with. One of them, Mike Conte, borrowed a plane from Kurt Carlson and flew to First Place in Sportsman! This was very generous of Kurt, because he was also one of the victims of a crash later, and chose to let Mike continue flying his plane rather than use it himself!

There was an impromptu HLG contest after Saturdays flying. Eddie White demonstrated that he is still the king of low altitude scavenging. I proved that I'm still the junior Expert with a lot to learn (let's see again; a cool breeze before launch, is a good thing or bad thing?). Rich Kiburis proved that practice does lead to success, with a First on Saturday and a Third on Sunday. Lewis Gray was "Mr Consistent" and Garnett "you can't win with a 3-minute first round flight" White won the "Over-the-Hill" Points Trophy. Rusty Rood, from Tallahassee, took home the Highest Total Points Trophy.

This is such a great contest site, with rolling hills, an air-conditioned shop, and camping. Everyone should get over to Kenny World and participate in the next FSS contest. It's always a great show by the Buzzards!

BUZZ CHUCK HLG CONTEST RESULTS

PLACE	NAME	AIRCRAFT
1 (4810)	SCOTT HUNT	Climmax
2 (4205)	DON CLEVELAND	Cricket
3 (4031)	JACK LAWTON	Cricket
4 (3907)	MARK KUMMEROW	Cricket
5 (3050)	JIM O'REILLY	Maple Leaf
6 (2957)	TERRY CUSACK	Monarch
7 (2561)	DAVE VEATCH	Cricket
8 (1583)	GARY GREEN	Climmax
9 (561)	RICK ECKEL	Climmax V

BUZZ CHUCK REPORT. Ed White was out of town, so the Contestants battled-it-out under the direction of Rick Eckel and his Scoring Computer. This was my first exposure to this form of contest, and let me tell you, it's not an easy task nor is it easy on the timer. There were a lot of sore arms and some writer's cramps after the day was done. Scott Hunt demonstrated that "it's not what you fly, but how you fly it" that counts. While Jack Lawton

showed that a Kummerow Cricket is just as good with a standard tail configuration. Those Crickets were everywhere! Rick tried to reduce the competition early, clipping the tail off of Lewis Gray's Monarch. Then Rick lost his "rubber ducky" antenna and attempted to fly with a "custom" antenna installation in the next round. His airplane must have missed the rubber ducky, because it headed into the pond to find it! Rain was slowing invading and I with-drew to go retrieve my van from the mud puddles of the Snow Hill Field. As the scores show, it was a close battle for second thru fourth, but Scott Hunt and his well-trimmed Climmax pulled well out in front to take the title of "TOP BUZZ CHUCKER". Meanwhile, Mark Kummerow was mumbling something like; "I'm always being beat by my own airplanes" (whatever that means). Rick is considering more HLG contests and I can't wait! I love this simple, challenging and efficient type of soaring.

GENTLE LADY PLUS REPORT. This contest had some great organization and creative forethought (I believe Rick Eckel gets the credit here). If you missed this event, I think you missed a great opportunity, not only to compete, but to share the sport with juniors, power flyers, and newcomers. This contest was setup to gain experience, both from the variety of rules as well as the mix of competition levels. The father/son team of Tony and Mark Kummerow was outstanding. Tony (10 yrs old) did some

great flying and even managed to bag some landing points too! Warren Cusack had his first taste of competition with his well-trimmed Gentle Lady. Several pilots using AM radios received interference on channel 50. Congratulations to all who participated, AND A VERY BIG THANK YOU TO THOSE THAT ASSISTED IN THE OPERATION!!! (Gary, Rick, Cy, Jack, etc). Volunteers will be needed in November when we host the 24th Annual Tangerine Soaring Championship, so mark your calendars and plan to volunteer. If you need more information, contact Rick Eckel or John Masiello.

GENTLE LADY "PLUS" CONTEST RESULTS	
PLACE/CLASS	NAME
1-Novice	CHRIS H.
2-Novice	TONY KUMMEROW
3-Novice	WARREN CUSACK
1-Expert	JACK LAWTON
2-Expert	MARK KUMMEROW
3-Expert	DON CLEVELAND
Father/Son Team	MARK & TONY KUMMEROW
Top Kid	TONY KUMMEROW
Top Gentle Lady	JACK LAWTON

TECH-TIPS

DON'T LOSE YOUR SLIP-ON NOSE CONE!

Ever see a fellow modeler lose his nose cone? It can easily be prevented by adding a tether, either string or rubber band. I prefer the rubber band, which allows me to stretch open the cone without removing the band. Simply release the cone and it closes tight and can't come off. Try it, you'll like it! (from Jim T of Orlando)

BEWARE OF THOSE SUB-MICRO SERVOS!

(from Terry C) I recently purchased four CS-20BB sub-micro servos from Hobby Shack. I had to send one back because it did not work, right out of the box. I also had one slip from it's center position while pulling out of a high speed dive! I have since seen lots of message traffic about these servos on RCSE. They are identical to the ones sold by FMA and similar manufacturers and seem to have a common problem. An internal pot shaft breaks free, causing the servo to lose its' center and/or fail. But FMA inspects and test each one before they ship it. So for \$2 more, it might be worth the peace of mind to buy

FMA's. Beware: the breakage may still occur during your flying, so you may want to tune-into RCSE and find out how to fix them. Boy, are they small...

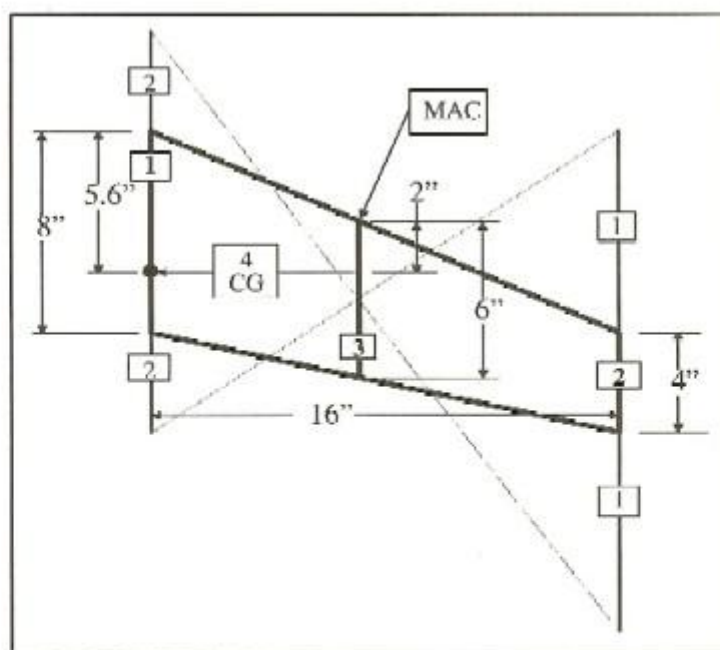
FIND THE CENTER OF GRAVITY ON TAPERED WINGS.

Ever wonder how to find the Wing Mean Aerodynamic Chord (MAC) and Center of Gravity (CG) Location on a tapered or swept wing? The following example shows how.

Wing Shape: Let's start with an arbitrary wing having an 8" root, 4" tip, 16" half span (center of fuselage to wing tip) and a leading edge sweep of 26.6 degrees as shown in the figure (next page).

Mean Aerodynamic Chord Location: The first step is to find the span-wise location of the MAC. This is accomplished as follows:

a. Draw the wing shape to scale on a piece of graph paper. All the following measurements can then be taken directly off your drawing.



b. Take the length of the wing root (1) and add it to the forward and aft ends of the wing tip.

c. Take the length of the wing tip (2) and add it to the forward and aft ends of the wing root.

d. The intersection of the two lines connecting the extensions of the wing root and wing tip is the span-wise location of the MAC (3).

The length of the MAC (6") is the distance between the wing leading and trailing edges at the intersection measured parallel to the aircraft centerline. This method will

also work for a delta wing since it is simply a swept wing with a zero wing tip length.

Once the location and length of the MAC is determined, locating the CG is simply applying what ever rule of thumb you prefer. As a starting point, I like to place the CG aft of the leading edge a distance of 1/3 the MAC length. In the above example, with a 6" chord length this equates to 2" aft of the MAC leading edge (4) or 5.6" aft of the intersection of the wing leading edge and the aircraft centerline. (from Tom Tomasetti of Orlando)

ODDS-N-ENDS

☐ **FOR SALE:** 120" Alcyone with 6 servos and wiring harness (Jfr/Futaba compatible). Fiberglass Fuse, Ultracote (White w/blue trim), Looks good, never crashed, one minor midair, 1st and 3rd - Export in two contests. \$350 - add receiver, flight battery and go fly!! Call Rick Eckel (407) 365-9757.

☐ **FOR SALE:** Great Planes Spirit 100 - \$50....Neon HLG - \$50....Climax I HLG - \$50.00....Pulsar XL kit (wings done, glass fuse) - \$90/or descent offer! Also: Three v-tail fuses (2-HLG, 1-GL) These are free to anyone who can use them, preferably new members. Call Rob Rierson (407) 273-1127.

☐ **FOR SALE:** Airtronics Sagitta 600. Still unassembled in box except for tail feathers are started - \$35.

Contact Terry Cusack (904) 789-0323.

☐ **CHECK OUT THE BUZZARD LIBRARY!!!** (Part two) Last month we distributed a partial list of items maintained in our Member Library. The list of items included reference materials, videos, and other exciting information and entertainment about Soaring. Each item can be checked-out from our Treasurer, Lewis Gray, and retained for a reasonable time. This is another great benefit to our Club Members that can be utilized to increase your knowledge or impress your friends!

☐ **CHECK OUT RC SOARING WEB PAGE.** Just a reminder. The address for the RC soaring web page is: rcsoaring.com. There is a lot of neat pictures and links to Florida Soaring groups. So get online Today.

GENERAL REFERENCE MATERIAL:

SOARTECH: CONTENTS BY VOLUME AND PAGE - TABLE 1 of 3

Vol.	Page	Subject	Author(s)	Notes
1		12 Topics / 148 Pages - Published November 1982		
	1	Soartech Introduction	Gray, Jim et. al.	
	7	Soartech and You	Cromer, Lynn	
	12	Turbulation	Abell, Bruce	
	23	Flying Wing Sailplane Development	Bates, Ken	
	29	Book Review: Profilen Fur Den Modellflug	Simons, Martin	Book by Althaus, D.
	31	Model Sailplane Performance Calculations	Simons, Martin	
	58	Airfoil Moment Coefficient Calculations	Lounsbery, Walt	
	77	Aileron Flutter in Type SB-9 Glider	(LSF)	German Translation
	80	Sailplane Aerodynamic Design Considerations	Wehren, Helmut	
	85	Batteries for Cold Weather Flying	Scidmore, Al	
	89	Lateral Control Research by NACA	Weick, F. E. and Jones, R. T.	NACA Report #605
	117	Aircraft Woods: Properties and Selection	Markwardt, L. J.	NACA Report #354
2		12 Topics / 192 Pages - Published November 1983		
	3	Balsa Wood: Mechanical Properties	Selig, Michael	
	5	Lateral Control of Model Sailplanes	Cromer, Lynn	
	14	Flying Wing Sailplane Development (Cont'd.)	Bates, Ken	
	18	Aerodynamic Center Calculation	Schlosser, W. M. J., J. P. A. and F. A. B.	
	24	Flapped Eppler Airfoils	Phillips, Hewitt	
	29	New Airfoil for F3B Gliders	Girsberger, Rolf	
	34	Flapped Quabeck Airfoils	Girsberger, Rolf	
	38	Sailplane Lateral - Directional Stability	Anderson, Chuck	
	43	Equivalent Dihedral Angle	Beron-Rawdon, Rhaine	
	46	Vee Tail Theory and Analysis	Furser, P. E. and Campbell, J. P.	NACA Report #823
	68	Sailplane Design Optimization (Standard Class)	Simons, Martin	
	129	The System R/C Sailplane (Performance Calculations)	Saxer, Armin	
3		3 Topics / 96 Pages - Published July 1984		
	4	Sailplane Drag Characteristics	Nicks, Oran W.	
	10	Sailplane Design Optimization (2-Meter Class)	Simons, Martin	
	30	Airfoil Design at Low Reynolds Numbers	Selig, Michael	
4		13 Topics / 87 Pages - Published January 1985		
	3	Cover Story	Dees, Gene	
	6	Flying Wing Sailplane Development (Cont'd.)	Bates, Ken	
	12	Analysis of Frost Formation	Fritz, F.	
	18	Comments on Frost Formation	Selig, Michael	
	22	All-Moving Wing Model Sailplanes	Norholm, Preben	
	25	Effect of Gaps on Flight Characteristics	McLellan, Steve	
	30	Airfoil Design at Low Reynolds Numbers (Addendum)	Selig, Michael	
	66	Double-Hinged Rudder Design	Phillips, Hewitt	
	74	All-Moving Horizontal Stabilizer Design	Stokely, Herk	TMSS Tech. Jnl. #16
	76	Sailplane Vertical Fin and Rudder Design	Stokely, Herk	TMSS Tech. Jnl. #18
	78	Fuselage Aerodynamic Design	Stokely, Herk	TMSS Tech. Jnl. #23
	83	R/C Sailplanes: An Artist's View	Dees, Gene	
	86	LSF: An Artist's View	Dees, Gene	

SOARTECH: CONTENTS BY VOLUME AND PAGE - TABLE 2 of 3

Vol.	Page	Subject	Author(s)	Notes
5		8 Topics / 94 Pages - Published January 1986		
	3	Composite Molding Techniques	Popko, E. S. and Smith, J. G.	
	43	Weight and Wing Loading Estimation	Schlosser, W. M. J. and E. A. B.	
	49	Drag Coefficient Interpolation at Low Reynolds No.	Schlosser, W. M. J., E. A. B. and J. P. A.	
	56	Sailplane Design Comments (2-Meter Class)	Oglesby, Denis	
	65	Sailplane Performance Comments	Simons, Martin	
	69	Althaus Wind Tunnel Tests (Introductory Text)	Fraser, David	German Translation
	79	New Airfoils for R/C Sailplanes	Girsberger, Rolf	
	92	Balsa Wood: Mechanical Properties	(AcroModellet)	
6		10 Topics / 154 Pages - Published March 1987		
	2	Planned Airfoil Tests at Low Reynolds Numbers	Selig, M. S. and Donovan, J. F.	
	9	English/German Dictionary for R/C Terminology	Saxer, Armin	
	33	Sailplane Performance Calculations (Refined)	Saxer, Armin	
	91	Airfoil Properties for 12A, 14A, 15A	Girsberger, Rolf	
	101	Longitudinal Stability Analysis	Fraser, David	
	121	Airfoil Drag Evaluation	Phillips, Hewitt	
	142	Weight Estimation Program (BASIC)	Chernoff, Max	
	144	Airfoil Plotting Program	Anderson, Chuck	
	147	Performance Calculations (Comment Only)	Karns, Ed	
	153	Longitudinal Stability Calculation	Currington, Eric G.	
7		10 Topics / 120 Pages - Published January 1988		
	4	Performance Analysis of Horten IV Flying Wing	Gyorgyfalvy, D.	
	13	Wind Tunnel Tests of Dog-Faced Bat	Pennycuik, C. J.	
	29	Icarosaur Flying Wing Model	Dees, Gene A.	
	36	CG Calculation for Flying Wings	Dees, Gene A.	
	42	Airfoils for Flying Wings	Selig, Michael	
	49	Electric Modification of "Standard Plank"	Thornburg, R. A.	
	51	The "Merlin II"	Falconer, Noel	
	53	The "Keeper"	Bates, Ken	
	59	Wing Flapping Replica of Pterosaur (QN)	Macready, Paul B.	ATAA Paper 85-1446
	69	Aircraft Design: Gossamer Condor/Albatross	Burke, James D.	Report AV-R-80/540
8		1 Topic / xxx Pages - Published 1989		
	1	Airfoils at Low Speeds	Selig, M. S., Donovan, J. F. and Fraser, D. B.	
9		6 Topics / 126 Pages - Published November 1992		
	3	Use of Wind Tunnel Data in Design of R/C Sailplanes	Simons, Martin	
	55	Static Longitudinal Stability (CROCCO Method)	Gale, Ferdi	
	89	Fear the Flying Wing	Falconer, Noel	
	101	Wing Load Distribution Calculations	Chernoff, Max	
	107	What Can Be Learned From Paper Airplanes	Phillips, Hewitt	
	117	Built-in Sheeting for Accuracy of Leading Edge Shape	Oglesby, Denis	

SOARTECH: CONTENTS BY VOLUME AND PAGE - TABLE 3 of 3

Vol.	Page	Subject	Author(s)	Notes
10		12 Topics / 226 Pages • Published September 1993		
	5	All Molded Fiberglass Sailplane Construction	Barnett, Martin	
	55	Eyesight and Soaring	Stokely, Herk	from "Silent Flight"
	61	Stability and Control Calculations	Stephens, Jim	
	107	Book Review: Engineering Analysis of Flight Vehicles	Chernoff, Max	Book by Ashley, Holt (Dover)
	109	The Selig S-4233 Airfoil	Wilson, Oliver	
	117	Airfoils for Aerobatic Sailplane Wings	Raskin, Jeff	
	127	Another Look at Wind Tunnel Results	Simons, Martin	
	143	Towing Model Sailplanes by Electric Powered Winch	DeFilippis, V. and L.	
	179	Two PC Programs for Structural Design of Wings	Pituch, Steve	
	207	Downwash at Tail Due to Circulatory Flow at Wing	Chernoff, Max	
	211	On Wing Load Computation	Chernoff, Max	
	221	The Advanced Plank (AP 86) Planform	Oglesby, Denis	