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Official Newsletter of the Southern Ontario Glider Group Inc.

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Flying and other mysteries of life!

. Time! Time on my hands. I wish that I had enough time. Time to start building the new plane. Time Management. Launch time. Lunchtime. Flight time. Cummulative time. Supper time. About time. Are there really only twenty-four hours in a day? I really need thirty-six. Ten day week, thirty-six hour days, twenty-two weeks in a year. It sounds like it's that time of year again – will YOU be ready for the new flying season?

This flying season has all the makings of a busy one. There are new planes to build – Oly II's included – and old planes to repair, battery packs to check, transmitters to check and cheques to transmit. What with Sailplane Contests, Electric Fun Flies and Aerotoe Events there is hardly a spare weekend this summer! Oh, and don't forget the World Scale Championships in Tillsonburg.



“High in the sunlit silence, Hov’ring there, I’ve chased the shouting wind along, and flung my eager craft through footless halls of air...” – thank you John Magee for putting it so succinctly.

Transmitter Check-up: Check your radios before the season starts, take advantage of the free check seminar run by the experts at SOGGI

Trimming Your Sailplane for Optimum Performance...

by Brian Agnew

(Published in *R/C Soaring Digest*, May 1993. Revised October 1997.

Permission to reprint in club newsletters is granted provided appropriate credit is given.)

Well, for the fifth time in as many months, I've just finished reading an article in *RCSD* on how to properly trim a sailplane. All of the articles are based on the "Dive Test" and all were too technical and/or too confusing for the average pilot. I've been flying R/C sailplanes for about 18 years, and what success I have had is strongly related to what I have learned about properly setting up a sailplane. If you decide to finish reading this article, you may learn what took me almost 13 years to figure out.

My father taught me to fly when I was ten. We both loved sailplanes and regularly attended contests. We both became accomplished pilots - doing well, hitting our landings, but we were inconsistent in our flight times. When it came to setting up our sailplanes and reading air, we were the blind leading the blind. For 13 years we balanced our sailplanes per the manufacturer's specifications (usually, the middle of the spar), and flew with the assurance that the manufacturers know what they are talking about or they wouldn't be manufacturers, right?

In the summer of 1988, while preparing for the AMA Nationals, I built an LJMP Meteor and an Airtronics Sagitta 600. Both planes had the Eppler 205 and both were well suited for the thermal duration. At this time, I ran across an article written by Larry Jolly on "How to Fly the Eppler 205." Wow! Here is a world-class pilot telling me exactly how to set up and fly my sailplanes. According to Larry, the magic point on the 205 is 38% of the chord. Talk about eliminating the guesswork! I immediately got out my planes and found out that I was flying them near 35%, a 3% difference. No big deal, right? I moved them both back to 38% and headed for the field.

I cannot express the difference this made. It was like I had been hitting tennis balls on the edge of my racquet all my life only to find out that the racquet actually has a "sweet spot." My first impression was that all of a sudden there was an abundance of good air. The sailplanes no longer plowed through the air, but were actually "light on their feet," reacting to the subtlest of movements of the air and controls. My planes were jumping in light lift the way they previously did when I happened into a boomer.

Now, I knew how to fly the Eppler 205. Now all I had to do was convince Larry to write an article for every other section I might be flying. Either that or figure out a way to be sure that I know when I have found the "sweet spot" for a particular section. Before I tell you how to go about doing this, let me say as little as I can about the "Dive Test." I know the theory behind the Dive Test, and I know a lot of guys swear by it, but I have to say I believe that, for our application, it is nearly worthless. I do not know of any serious competition pilots that rely on this test to find if their sailplane is neutrally stable. Never the less, I watch pilots use it and I read about it to the point of frustration. There is a very simple flaw in the dive test. This flaw is more apparent in sailplanes with fixed stabs than those that are full flying. The response of your sailplane to the Dive Test is going to be directly affected by your elevator trim setting at the start of the dive. The same sailplane trimmed for best L/D or minimum sink will respond much differently to this test regardless of the C.G. point. So as not to totally offend all of the die hard dive testers out there, let me just conclude by saying that the dive test is far too subjective and inconsistent to be used for our purposes here - finding the optimum location for both C.G. and elevator trim. Whew! Try the following, and I think you'll feel the same way.

Assuming that you've purchased your world-beater 1000 and have spent the last several months piecing it together so that it's ruler straight and beautifully finished, let's find its "sweet spot." Go ahead and balance it according to the manufacturer's specifications, as this is always a good place to start. However you balance it, make sure you remove nose weight 1/8th oz. at a time.

Charge your sailplane and get to bed early because we're getting up early enough to be out at the field 1/2 hour before dawn. If we're going to test our sailplane, we need the deadest air Mother Nature can provide. By the time you set up your winch and plane, there should be just enough light to launch. It is imperative to get consistent launches, but if you can't zoom consistently, don't, just let the line fall. Time every flight. Each flight should be as hands off as possible and in straight lines to the limits of your vision. Go straight out and straight back 'til touchdown. Record your time. After each flight, change your elevator trim to maximise your time. Once the optimum elevator setting (longest flight) is found, remove 1/8th oz. of nose weight and start over, again. Every flight should be flown as close to minimum sink as possible. This is closer to a stall than you probably realize. It usually takes 3 - 4 flights to find the best elevator trim after removing weight. If the air is dead and you are launching consistently, your flights are going to get longer and longer as you remove weight from the nose and you are going to think, "There is no end to this process," until all of a sudden, your timer peak will start to suffer. This pattern will happen regardless of whether you are flying a Sink Buster 1500 or a Gentle Lady. What happens is simply that as the performance of your sailplane increases, your sailplane's stability decreases. This is the trade-off. You don't get something for nothing as they say. You will notice that as you remove weight from the nose, the performance (dead air times) increases, but at the same time you are having to put in more control input to keep the sailplane flying straight and at minimum sink. Eventually, the airplane requires so much input that the drag from the constantly moving control surfaces brings your Thermal Wonder 1500 down to Earth sooner. Put weight back into the nose until you reach your maximum dead air flight time and call it good. You will never have to wonder about your C.G., again, only your elevator trim.

Incidentally, I did this test on my Meteor and Sagitta 600 and, in fact, found that Larry was right. The optimum C.G. point for the E205 is 38%. How accurate and reliable is this test? Let me put it this way. I did this test several years ago on my Phoenix unlimited ship and on my Mariah 2-meter separately (both use the S4061). By the time I was done, both planes were balanced at not 42%, not 41%, but at 41.5%. That sold me.

Now, regardless of the airplane or section you are flying, you will be able to set it up for optimum performance. What this trial and error approach does not teach you is how to read air. I'll give you another pointer. If you want to learn how to truly be able to read air, stop flying at cloud-base. Buy yourself a good hand-launch sailplane, set it up for optimum performance and let the learning begin.

While I have probably oversimplified all of this, I should add a couple of points. As you move the C.G. back, you should move your tow-hook with it. I tend to put my tow-hook 1/16" forward of the C.G. This is conservative, but I'd rather give up a couple of feet on launch than pop-off.

The last point I would like to make is that regardless of how good your sailplane is or how well set up, the only things that will put you in the winner's circle is your skill. How far back you will be able to move the C.G. when testing your planes depends on your ability to keep the plane stable in its increasingly unstable state. 10 people at different skill levels will come up with different optimum C.G. locations for the same plane. This is the great part about testing your sailplane. This way, it allows you to find the optimum balance point no matter your skill level.

One final note. In competition, I fly a minimum sink the majority of the time. It is only when I know where lift is or when I am in sink that I fly at the best L/D. I always fly assuming I will not find lift and savor every bit of altitude - every point per second.

I am sure a lot of pilots will disagree with my opinion of the "Dive Test," but all I can say is that this system has made all the difference in the world in my contest flying. I wish that I had read an article like this when I was 10 and my father and I were just starting out. I hope it helps those pilots out there looking for the edge to get them in the winner's circle.

Good Luck!!

Stan Shaw forwarded the note from Ken Norris, which reads:

A soaring league/association proposal for your discussion and consideration

I believe that the clubs in Montreal/Ottawa/Toronto areas could support a soaring league or society similar to the Easter Soaring League (ESL) or the North West Soaring Society (NWSS). These clubs in a nutshell use their individual two-day contest(s) to accumulate points to determine a league champion for those who have joined the league.

The scoring for league points has a couple of possibilities it could be based on LSF points for each contest day or the percentage of the winners score ala F3J type scoring for each day.

The basic parameter would be that if there were 5 clubs participating, a member would need 8 (4 two day contests or a combination of days) contest days at "official" league events to be considered for the champion's trophy. Your best 8 scores are compiled and then you see how you do in comparison with all others. This means that you would need to travel, out of town, once or twice a year. Each club would need a point of contact as the representative of the league.

I will be the first to admit that I have been lax in my travels to Southern Ontario. It is only fair and fitting to expect that if "we" do not enter your contest you will not drive hours to mine. This league could entice me, or others, to travel should we expect to be in consideration for league points

The league need not start this upcoming summer but it could - should there be enough interest shown.

At ant rate, if there is genuine interest in this venture I will purchase and donate a suitable perpetual trophy.

The above ideas are obviously cursory and administrative/logistic details need to be worked out, but these should discussed, as things/events progress should there be favourable comment or it could be a non-starter.

Ken Norris

MAAC 359L

18c Arnold Dr.

Nepean Ont

K2H 6V9

E-mail nknorrisottawa@yahoo.com

This will give you something to think about while you wait for the two-hour epoxy to epox.

MINUTES OF SOGGI MEETING DECEMBER 9, 2001

The meeting was called to order by Bud Wallace at 2.15 P.M. There were 21 members present.

Minutes of the November 11 meeting were read by all. Motion to accept the minutes as read Derek Hartwell Seconded by Bud Wallace. The minutes were accepted as read.

Old Business:

Derek and Werner picked up the two club winches from Ben Schouten's barn. Derek and Werner tried to find the outhouse without any success what so ever. Gift baskets will be sent to the three field sponsors Ben Schouten, Hamilton Sod and the McNalleys.

New Business:

A motion to reimburse members Cliff English tabled \$50.00 maximum for the cartridge refills used in printing club activities seconded by Keith Armstrong. All were in favor.

A presentation was made to Fred Freeman in honor of Fred's past participation in SOGGI. This was a joint award from the Aero-Tow club and SOGGI. Fred was very happy to receive an N-scale model railway engine.

Treasurers Report:

Derek Hartwell reported the club has a balance of \$3,205.

Keith Armstrong said he would continue to audit the clubs books and file income tax forms. This also includes filing a Corporation form with the government each year.

Field:

The field at Fletcher Road is being stripped. Werner Klebert will check with Hamilton Sod about another field for next year. There is a possibility we may fly from Ben Schouten's field on Greens Road.

Contests:

Werner Klebert has finalized the contest dates for the year 2002. Except for the New York State event. June 30 2002 will be a 2-meter open contest run by GNATS. There are two other 2-meter contests May 19 2002 sponsored by COGG and August 11 sponsored by SOGGI.

Show and Tell:

Jack Linghorne brought in two different makes of batteries. Both were 1700 maps. The Sony 1700 weighed approximately 40 grams more than the CP-1700 SCR.

Bob Thayer showed the fuselage of the Olympic II that he had converted to an electric. The neat feature of this conversion was the way Bob had made a recoverable tow release. This will allow him to use the fuselage as a glider or an electric. This was done by installing a recoverable plate with the tow hook attached. Remove the tow hook and servo tray and you have a battery compartment.

Motion to adjourn Derek Hartwell seconded by Dick Colley

Meeting closed at 3.25 P.M.

Washday Blues:

Never know what to do with those used sheets of Bounce after you have finished drying the weeks laundry:

Repel mosquitoes:

Tie a sheet of Bounce through a belt loop when outdoors during mosquito season.

Wipe up sawdust from drilling or sandpapering:

A used sheet of Bounce will collect sawdust like a tack cloth.

MINUTES OF SOGGI MEETING JANUARY 13, 2002

The meeting was called to order by Bud Wallace at 2.15 P.M. There were 19 members present.

Minutes of the December 9 meeting were not available

Business from December minutes:

Keith Armstrong motioned that the editors cost for ink refills should be automatically included in his expenses. This is \$50.00 per year. Seconded by Derek Hartwell. All were in favor.

New Business:

Cliff English will purchase six pilot wings and four instructor's wings. And a new frequencies chart from MAAC.

Dick Fahey asked if the Flying Aces could use our field on Saturday mornings From June to September.

Motion to give permission Bud Wallace seconded by Keith Armstrong. All were in favor.

Field:

Nothing has been settled about a field for this year. Werner Klebert talked to Hamilton Sod about another field, he was told there would be no decision until the spring. We might be able to get back to Ben Schouten's field at the end of June.

Frequencies:

For the March meeting Stan Shaw will try to get a frequency analyzer. Members were told to bring their transmitters for testing. It was suggested that an updated list of members' radio frequencies be made at the next meeting.

A new frequency chart will be purchased from MAAC.

Industry Canada has eliminated certain frequencies. 72.080, 72.160, 72.240, 72.320, 72.400, 72.720, 72.800, 72.840, 72.960 from the old listing for model aircraft Refer to the MAAC magazine December 2001 page 71 for more details.

One Design Contest:

Stan Shaw said he contacted Hobby Hobby about Kits for the Olympic II they said they would get back to him about price and availability. Three members said they would be interested in getting the

Wing ribs precut. Stan said he would look into it. Foam wings were again discussed. Joe Banial can do this so can Carl at Sky Craft. Ken Lockwood says he can build foam winds also.

TIPS:

Build plug in wings; eliminate the first bay ribs to do this. Build the tail section light to keep from adding nose weight.

TIPS AND TRICKS:

1: To keep glue off your plastic canopy, mask everything that will not be glued.

2: Use RIT dye to color plastic parts.

3: Use water based contact cement for plastics.

4: When painting foam parts always use water based paint.

5: When building a complicated wing make a jig out of Styrofoam and build the wing upside down.

6: A method of covering foam airplanes is to use water based Varathane paint along with fibreglass cloth. Use a water-based latex paint to finish off the plane.

Motion to adjourn Derek Hartwell seconded by Bud Wallace

Meeting closed at 3.25 P.M.

MINUTES OF SOGGI MEETING FEBRUARY 10, 2002

The meeting was called to order by Bud Wallace at 2.15 P.M. There were 13 members present.

Cliff English read minutes of the January 13 meeting.

Business from December minutes:

Keith Armstrong motioned that for editors the cost for ink refills should be an unlimited expense.

Motion to accept the corrected minutes Keith Armstrong seconded Stan Shaw.

Field:

WARNING STAY OFF THE GRASS

Please use common sense when the field is wet and soggy. With this crazy weather we are having this winter if you decide to go flying park your vehicle on the side of the road.

The topic of gravel for the field lane-way was discussed. Depending on which field we will be flying from either Ben Schoutens` or the Fletcher road field it was felt the club should offer to help maintain the lane-way.

Werner Klebert said he would get in touch with Bryn Rennie about using his dump truck to haul the gravel. If we use Ben Schoutens` field Bud Wallace suggested the club purchase a ten-foot strip of sod beside the lane way. Last year the club paid \$100.00 to Ben Schouten.

Frequencies:

For the March meeting a frequency analyzer will be made available. Members were told to bring their transmitters for testing.

Stan Shaw updated the radio frequencies of the members present. Stan circulated a list of industrial frequencies, many of which were very close to the frequencies used for model aircraft. For more information about these frequencies contact

Vince Zvonar at 905-572-4019

NEW BUSINESS:

Keith Armstrong said he would build another out house for this year. The same design only a lighter roof made of Plexiglas.

One Design Contest:

The kit for the Olympic II is available from White Wings in the U.S.A Stan Shaw said he tried to contact Noel about cutting the wing ribs for the Olympic II but he was not available.

If you build the vortex wing tips you do not require washout in the wings. It was suggested that a quarter of an inch washout be built into the wings if required.

TIPS AND TRICKS:

1: When using Styrofoam use the pink or blue colored, this has a higher density and easier to work with.

2: Use varathane and fibre glass cloth to strengthen balsa when building the fuselage.

- 3: You can also sandwich fiberglass cloth between two sheets of One-sixteenth balsa for a stronger fuselage.
- 4: Werner Klebert gave some helpful hints on finishing varathane-coated cloth.

SHOW AND TELL:

Keith Armstrong had an Alfa 100-inch glider for sale. Which he sold to Jack Linghorne. As Jack built and then sold this plane to Keith I think he might have made a \$10.00 profit and gained a couple of servos in the bargain. Stu Watson circulated a catalogue of old time plane kits.

Motion to adjourn Derek Hartwell seconded by Bud Wallace
Meeting closed at 3.25 P.M.

Is there anybody out there? – Who has an article inside just bursting to get out
- We publish for free!

For Sale: Want Ads: Personals



For sale:

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The Southern Ontario Glider Group is a chartered club of MAAC

2002 SOGGI Executive

President:	Bud Wallace 1060, Eastmount Avenue Mississauga, Ont. L5E 1Z3	905-274-3177
Vice President:	Stan Shaw 39-383, Edinburgh Road, Guelph, Ont. N1G 2K7	519-763-7111
Treasurer:	Derek Hartwell 39, Isaac Brock Drive Stoney Creek, Ont. L8J 2P1	905-578-7991
Secretary:	Cliff English 24, Blackwood Crescent Hamilton, Ont. L8S 3H5	905-522-4561
Editor:	Dick Colley 101, Braeheid Avenue Waterdown, Ont. L0R 2H5	905-689-7761

Deadline for April Issue of Task: March 22nd 2002

2001/2 Calendar of Events

- 2002
- Mar 10 Membership Meeting Rockton Library, 2.00pm
- Apr 14 Membership Meeting Rockton Library, 2.00pm
- **Tentative Contest Dates:**
- May 8 Oly II Contest CD Bud Wallace/Cliff English
- Jun 12 Oly II Contest CD Bud Wallace/Cliff English
- Jun23 Golden Oldies CD Bud Wallace
- Jul 10 Oly II Contest CD Bud Wallace/Cliff English
- Jul 14 Club Day OB Memorial CD Stan Shaw
- Aug 11 2-Metre Contest CD Werner Klebert
- Aug 21 Oly II Contest CD Bud Wallace/Cliff English
- Sep 1 Big Bird Bash CD Werner Klebert
- Sep 11 Oly II Contest CD Bud Wallace/Cliff English

TASK

MEMBERSHIP LIST

Keith	Armstrong	219, Governors Road	DUNDAS	Ont	L9H 3J7	905-627-4011
Peter	Ashton	200, Edwin Street	Kitchener	Ont	N2H 4P2	519-576-6750
Roy	Auwaerter	9, Jamieson Drive	DUNDAS	Ont	L9H 5A1	905-628-8496
Joseph	Baltaza	19, Gaitwin Street	Brantford	Ont	N3P 1A9	519-751-3698
Josef	Banial	5248, Alicante Street	MISSISSAUGA	Ont	L5V 1S9	905-567-3925
Robert	Batt	612, Blue Forrest Hill	Burlington	Ont	L7L 4H3	905-632-8790
Jim	Bracegirdle	89-295 Water St.	Guelph	Ont	N1G 2X5	519-821-8506
Dick	Colley	101, Braeheid Avenue	WATERDOWN	Ont	L0R 2H5	905-689-7761
Cliff	English	24, Blackwood Crescent	HAMILTON	Ont	L8S 3H5	905-522-4561
Richard	Fahey	827, Shadeland Ave.,	BURLINGTON	Ont	L7T 2M2	905-637-5469
Fred	Freeman	511-120 Strathcona Ave N	HAMILTON	Ont	L8R 3J5	905-525-6509
Albert	Fund	73, Beech Street	CAMBRIDGE	Ont	N3C 1X6	519-658-9495
Arnold	Gardner	202, San Pedro Drive	HAMILTON	Ont	L9C 2E1	905-383-4418
Don	Guthrie	RR4	Belwood	Ont	N0B 1J0	519-843-4537
Bob	Hammett	183, Uplands Drive	KITCHENER	Ont	N2M 4X3	519-576-7636
Derek	Hartwell	39, Isaac Brock Drive	Stoney Creek	Ont	L8J 2P1	905-578-7991
Werner	Hildesheim	4, Foster Crescent	CAMBRIDGE	Ont	N1R 4R1	519-623-2663
Kevin	Intini	16, Blackwood Cres.,	HAMILTON	Ont	L8S 3H5	905-546-5307
Herb	Jenkins	238, Lloyminn Ave.,	ANCASTER	Ont	L9G 1J1	905-648-6123
Werner	Klebert	59, Byron Avenue	STONEY CREEK	Ont	L8J 2T1	905-578-9431
Otakar	Koprnicky	75, Hazelwood Crescent	CAMBRIDGE	Ont	N1R 8A4	519-740-9504
Herb	Lentfer	23, Walsh Court	BRANTFORD	Ont	N3T 5Y1	519-753-2856
Jack	Linghorne	55, Angelsey Boulevard	ISLINGTON	Ont	M9A 3B8	416-233-0230
Ken	Lockwood	29, Cross Creek Blvd.,	Guelph	Ont	N1H 6J2	519-821-9947
Tom	McCann	2206, Towne Blvd.,	OAKVILLE	Ont	L6H 5H4	905-257-2101
Mike	Penney	388, Massey Drive	ANCASTER	Ont	L9G 3J9	905-648-5843
Paul	Penney	388, Massey Drive	ANCASTER	Ont	L9G 3J9	905-648-5843
Bryn	Rennie	22/1255 Upper Gage Avenue	HAMILTON	Ont	L8W 3C7	905-385-3365
Zivko	Rizoniko	479, Fendalton Street	MISSISSAUGA	Ont	L5B 2L8	905-275-0597
Ann	Tekatch	19, Pheasant Place	Hamilton	Ont	L9A 4Y4	905-575-5433
Bob	Thayer	4108, Millcroft Park	BURLINGTON	Ont	L7M 3V9	905-336-3290
Mike	Thomas	61, Alhart Drive	ETOBICOKE	Ont	M9V 2N1	416-748-2833
Stephen	Threlkeld	89, South Oval	HAMILTON	Ont	L8S 1P9	905-526-9031
Walter	Tremmel	56-600 Silvercreek Blvd	MISSISSAUGA	Ont	L5A 2B4	905-270-5959
Stan	Shaw	39-383, Edinburgh Rd. S	GUELPH	Ont	N1G 2K7	519-763-7111
Juri	Vosu	3291, Candela Drive	MISSISSAUGA	Ont	L5A 2V1	905-279-9549
Bud	Wallace	1060, Eastmount Avenue	MISSISSAUGA	Ont	L5E 1Z3	905-274-3177
Stewart	Watson	26, Juanita Drive	HAMILTON	Ont	L9C 2G3	905-385-8214
Doug	Wilkins	8448, Twenty Road	HAMILTON	Ont	L9B 1H7	905-679-4973
Bill	Woodward	520, Pine Street	Cambridge	Ont	N3H 2S6	519-653-4251

Correction Notice:

NAME:
 ADDRESS:
 CITY/TOWN:
 POSTAL CODE:
 PHONE:
 e-mail:

