Official Newsletter of the Southern Ontario Glider Group

TASK

Affiliated to the Model Aeronautics Association of Canada

OFFICIAL NEWSLETTER - NOVEMBER, 1991

Vol: 7 - #6

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The Newsletter is published bi-monthly.

Any material for inclusion should be sent to:-

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EDITORIAL:

"ALL THE BEST"

The phrase I'm using as a heading for this piece is traditionally used as an expression of our good will and the words are usually the last words we say to folks we are unlikely to see for some time. But, among other interpretations is the one which carries with it the implication that the package we have selected contains, literally, all the best, whether it is a list of options on that new car, or our considered best candidate for a political party or committee.

Keeping this phrase in mind, I want to remind you that our next meeting will be the Annual General Meeting, at which it is usual for the selection of the committee to take place. It is the privilege of each individual to make known his preference for election to any committee formed for the purpose of carrying on the business of our organisation for the coming year. Selecting a new committee is the way in which most clubs like ours keep up the flow of original ideas; this fact alone ensures that whatever activities are planned will be carried out to the satisfaction of the membership; you may feel that it is not necessary to make any changes - if so you will have the opportunity of saying so. It is most important that all members should attend this, our primary meeting of the year in order to be certain that our leaders are "ALL THE BEST".

At this time I would like to express my gratitude to all those who have, throughout 1991 helped in any way to make the production of our Newsletter a success. Very special thanks to my wife, Gladys, who has once again spent the last 12 months correcting my mistakes and rendering invaluable service in typing up the material.

Now it's time to wish all members and their families the compliments of the season - and don't forget to

Drift with the lift

Fred

F. J. Freeman

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CHANGE OF ADDRESS:

Received a note from Paul Riedlinger to say that his address is now:-

553 CLair Creek Blvd.
Waterloo, Ontario
N2T 2B8

Phone number unchanged.

Please amend your club membership list NOW!!

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MINUTES OF MEETING HELD (AT FIELD) SUNDAY, SEPTEMBER 8th. 1991

2 members of the Executive present : Peter Ashton, Fred Freeman
8 other members:

Peter Ashton opened the meeting, explaining that Werner Klebert was unable to attend due to a re-scheduled contest at C.O.G.G. Alliston.

After reading the minutes of the May meeting Peter asked that they be passed as read. Proposed by W. Woodward, Seconded by C. Packham, Motion passed.

Peter Ashton then read the financial statement, informing those present that the club's account now stood at just over $89, thanks to Werner Klebert's sales of plans and raffle held at meetings.

Discussion arising from this statement elicited concern over the cost of the Newsletter. Fred Freeman gave a resume of the costs involved in printing, paper and postage etc. intimating that the average cost per annum was in the region of $275. It is difficult to cut down, due to various factors. David Woodhouse then suggested that this cost might be cut by havingthe Newsletter printed in his office.

A motion was tabled that David investigate the possibility and report back to the Executive as soon as possible

NEXT MEETING: - Dates for the next meetings were discussed. On Werner's instruction the meeting normally due in October is to be by-passed, and so the meeting in December will be the Annual General Meeting.

Proposed by W. Woodward and seconded by Al Hilborn that the next meeting be held on the second Sunday of December, December 8th. .

It was pointed out by Fred Freeman that, due to the proximity to Christmas, this date may not be available.

Amended motion from W. Woodward, seconded by D. Woodhouse that the meeting be held on the next available Sunday after December 8th.

There being no further business it was proposed by W. Woodward and seconded by Rob Campbell that the meeting be closed.

I M P O R T A N T N O T I C E

PLEASE NOTE THAT THE NEXT MEETING WILL BE THE ANNUAL GENERAL MEETING TO BE HELD ON SUNDAY, DECEMBER 15th. 1991 AT BEVERLY HALL COMMENCING AT 1300 hrs.

ALL MEMBERS ARE ASKED TO TRY AND ATTEND THIS IMPORTANT MEETING.

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S.O.G.G. SCALE DAY - September 22nd. 1991

At last our twice-delayed Scale Contest was entered into the Record Books. No-one could complain about the weather on this day - it was just perfect - light breeze and bags of sunshine with a temperature of 78° - the only thing that was lacking was a good number of entrants, since only 5 people showed up for the event - hopefully this will prod others to enter next year.

Fred Freeman was the only person available to judge the contest and the rules used were the modified B.A.R.C.S. rules.

When the dust finally settled, after a tie for first place between the georgeous DG-300 of Kurt Fritz and the super ASW 17 of Gerald Fritz - Gerald winning the fly-off - the standings were :-

1.	G. Fritz	ASW 17	575 points
2.	K. Fritz	DG 300	575 "
3.	W. Klebert	Discus 240	540.3 points
4.	W. Woodward	Slingsby T53B	505.1 "
5.	J. Baltaza	Grob Akro 340	403.1 "

A very enjoyable day for all concerned - next year should be even better (maybe we'll be able to furnish TWO Judges!! Ed).

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CONTEST NOTE:

FOR YOUR INFORMATION:

C.O.G.G. have given notice that they are soliciting entries for a Super-Contest which they tentatively entitle "CANADIAN SAILPLANE MASTERS". To be held at COOKSTOWN in August of 1992. Possible prize money for the winner is $500. This, they say, is similar to the Masters of Soaring held annually in California.

Entry fee suggested is $50. If you are interested in participation contact:

JACK NUNN
R.R. #1
MIDHURST, Ont.
LOL 1XO

(Ed. Note: I have the original notice of this contest in my possession, but the copy was virtually indecipherable. Anyone interested may have it).

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ANNUAL ZONE MEETING - BURLINGTON, OCTOBER 19th. 1991

Bill Woodward, Peter Ashton and Fred Freeman attended the meeting on behalf of the membership; Kurt Fritz was also present in his capacity with the Burlington R/C Club.

A lively meeting was chaired by Tom Lynch, who announced that this would be his final act as Zone Director, and that he would be asking for nominations for his replacement.

The meeting, which was well attended, was preceded by an auction and swap shop organised by the Burlington Club; we were unfortunately unable to attend the Auction, due to prior commitments, but we were given to understand that the event was quite successful.

Much of the meeting was routine and as such is not for mentioning in this brief report. Concerns were expressed (again!) about noise complaints, and loss of flying fields - we told them that the obvious remedy was to take off the engine and fit the plane with a tow-hook - most of the remarks greeting this suggestion were unprintable (they still don't believe!)

A very tentative proposal from Trent R/C Flyers that M.A.A.C. should give better publicity to events was noted, but it was pointed out that local publicity should consist of notices to clubs in the area, and was the responsibility of the host club. This gave rise to the old question of how to inform clubs as to the details of other clubs in their area. The proposal was referred to the Directors' Meeting, but the general consensus was that clubs should be their own publicity agents.

The subject of public awareness was raised and the Burlington Club was once again cited as a prime example of Good P/R (Public Relations) - it was suggested that clubs should be aware of the various boards of control in their own areas, and should attempt to establish contact with a view to having their names put on the "town list" -a list of organisations operating within the township boundaries (we are working on this one).

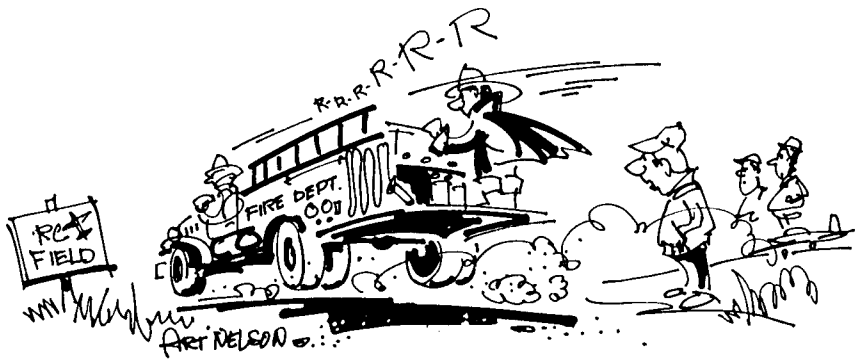
The Canadian National Championships will be held from July 4 - 12, 1992, at Centralia; C.D. will be our own Tom Lynch. All events are to be held on this site - It's not too early to begin planning to attend.

After a two-way vote between Wayne Bransfield and Jack Rousseau, Wayne Bransfield was declared as Zone Director to replace Tom Lynch (as of January 1st. 1992 - we understand).

This meeting was well organised and very well conducted, so well, in fact, that the decision to hold the AZM in the same location next year was unanimous.It would be nice to see more of our own members at the table next time.

W. Woodward
P. Ashton
F. Freeman

HERE'S AN ITEM YOU MAY HAVE MISSED !!



NOTHING COULD GO WRONG!

By Brian D. Gibson

It was early November in my first year of flying radio control airplanes and on this particular Sunday the sun was out, the winds were calm, and there were a few puffy, white clouds in the sky. I thought that this would be a perfect day for flying gliders.

Now, my wife has never been as interested in this hobby as I am, but just this once I convinced her to come along with me. We loaded up the car with my flight box, radio, drinks, sandwiches, lounge chairs, and my newly rebuilt Butterfly glider. We planned to make a day of it.

I mentioned the fact that my Butterfly glider was newly rebuilt because, you see, about four weeks earlier, it was nearly totaled on its maiden flight. It seems its owner forgot to make sure the batteries were fully charged. But with time, I mended it back to health, and this time I had fully charged the batteries and thought nothing could go wrong.

When we arrived at the flying field, my friend Wayne was already there, along with many other Sunday fliers. Wayne is the one who got me interested in flying radio control airplanes. Wayne helped us unload everything from the car. After checking my radio into the compound, we began going over a long checklist on the Butterfly. It was now ready and nothing could go wrong.

At last, the fellow who had been flying on the same radio frequency as my airplane, came in for a landing. He stopped his plane and returned his radio to the impound.

Now it was my turn. It was my turn to show off in front of my wife. With Wayne's assistance and guidance, we put the Butterfly in the air once again. It was a beautiful flight as I circled the field once with it. Then what I had said couldn't happen, happened. Something went wrong. The plane wouldn't respond to the controls. It veered left and right! I had lost control of my glider!

Most people would think, "No big deal. A glider moves slowly. There's plenty of time to recover." Well, being the novice that I am, I did the first thing that came to mind. I panicked. "Wayne, Wayne, help Wayne!" I cried. Wayne came rushing over and I threw him the controls.

Now Wayne has been flying remote control planes for years and if anyone could bring my glider safely to the ground, he could. Wayne tried his best, but the Butterfly was still mostly out of control. Somehow Wayne still managed to keep it circling the field. As it got closer I started looking for possible crash sites.

"The corn fields, yeah the corn fields, it's going down in the corn fields." At our flying field it's corn fields as far as the eye can see. The odds were in my favor, and the dried corn stalks would cushion the impact a little.

As it circled in close, I thought to myself, "The flying field --- it's going to crash in the middle of the runway, in front of everyone. Nothing could be more embarrassing."

Located near our flying field, in the midst of acres and acres of corn fields and pasture land, is a small patch of very tall oak trees. To this very day I still swear this tree actually reached out and pulled my airplane from the sky.

My newly rebuilt Butterfly was now being held prisoner by one of radio control fliers' worst enemies.

Wayne apologized. I don't know why. He did the best that he could with the doomed craft. As I put my radio back into the impound I told my wife, "It's no problem, I'll just climb up and get it down." Wayne and I then walked across the corn fields to the oak trees with a couple of other fliers.

There was my plane, in the top of the tallest oak tree in the world. The lowest limb to the ground was at least twenty feet high. "How in the world are we going to get it down?" I asked myself. We tried throwing a rock with string tied to it, in hopes to shake it down. Unfortunately, no one could throw that high.

It was starting to get late and I wanted my plane down. I noticed a smaller tree growing beside the villian oak. I could climb it high enough to where its branches tangle with the oak tree and then cross over. What a great idea — only when I got into the oak tree, I was in the wrong fork.

I found by hanging on to the small limbs of the smaller tree, I could shimmy down to where the forks meet. I did this, and let go of the small limbs which sprang back into place.

Looking up at my airplane, I realized that the fork of the tree that it was in, was steep, large, and had no smaller limbs. I couldn't climb it.

The sun was starting to go down now and I knew that my wife was probably worried to death, so I decided to come back for my plane the next day.

Now then, I just had to get down out of the tree. Easier said than done. The fork of the tree that I shimmied down, using the branches of the small tree, was just as steep and large as the one that had my plane, and it too had no limbs to climb on.

The enemy oak tree now held the plane and pilot prisoner. I would have been better off if my plane had crashed on the runway.

I explained my situation to Wayne and the other fellow, who were still under the tree watching. The other guy asked me if I wanted him to get a ladder for me to get down. I asked "Have you got a ladder that will reach this high?" He replied, "I can get one."

Thirty minutes later, and since I had the best view of anyone still remaining at the field, I was the first one to see the flashing red lights from the fire trucks and rescue squad trucks of the local Volunteer Fire Dept.

With the arrival of the V.F.D., everyone who had remained at the flying field was now under the oak tree. But darkness was on my side. No one could see me.

The firemen quickly unloaded a ladder from the fire truck onto a four

THANX FOR THIS ITEM GO TO KURT FRITZ (FROM R/C MODELLER MAGAZINE)

wheel drive pickup and across the corn field they came.

Once at the tree, the firemen jerked the ladder from the pickup with the enthusiasm of a S.W.A.T. team. Spotlights were now shining up at me from all directions. I felt like an escaped convict. But what the heck, I was tired, and I wanted down.

The ladder was raised against the tree, as I thought to myself "At last, I'm getting down." And I would have gotten down then, if the ladder had not been too short.

So it was back across the corn fields, in the dark, to get a taller ladder.

When the taller ladder was raised against the tree, it came right to my feet. But before I had the chance to start down, a fireman came rushing up, screaming, "Don't panic, stay calm, everything is going to be alright!" I said, "Listen, I'm not scared of heights. I just don't have any way to climb down."

Disappointment came across his face as he started back down the ladder. I quickly followed. Once on the ground I made a bee line across the corn field to my wife and car.

Believe it or not, my wife wasn't mad, just tired and cold. But she said not to climb any more tall oak trees, I had no problem agreeing with that.

I retrieved my airplane the next day. The man who lived on the other side of the patch of trees came out and climbed a different tree and pushed it out using a couple of old broom handles taped together.

The crash was caused by a radio being left on in the impound, so I was told. I've repaired the Butterfly. It's as good as new, but I haven't flown it. The radio is working fine. I've used it in an "Eagle 63" since then, and I haven't had any problems with it.

I left in such a hurry when I got out of the tree that day, that I forgot to thank everyone who helped me. I would like to thank the local V.F.D., who helped me down from the tree, the man who retrieved my airplane, and, most of all, I would like to thank my wife for understanding me and the predicaments I can get into with my hobby.

That Sunday afternoon hasn't discouraged my fascination with R/C models, but it does make for interesting conversation at flying fields. □

From the very informative catalogue of Northeast Sailplane Products the following two items may be of invaluable help to you.

(Thanks to PAUL RIEDLINGER for these items - Ed)

The Trailing Edge

Today's RC sailplanes utilize the newest airfoils such as the Selig series. It has been found that these airfoils benefit from significant drag reduction if the trailing edge is built properly and is of minimum thickness.

In a balsa-sheeted wing it is important to use materials that are hard enough to allow the trailing edge to be thinned down and still maintain adequate strength and rigidity. The use of fiberglass, 1/64" ply and/or graphite fiber mat sandwiched between the wing sheeting will result in that strong sharp trailing edge if applied properly.

One of my favorite techniques produces a strong trailing edge with a minimum of fuss and bother and has the added benefit of giving you a guide to help get an even, clean, thin edge:

First, prepare the trailing edges, top and bottom, by beveling them with a sandpaper block so they fit together. This does not have to be done perfectly. Next, cut strips of 2-3 ounce fiberglass cloth for the top and bottom trailing edges. Measure about a 3" width for a 10-12" chord. Also cut a strip of .5 ounce carbon fiber mat to be used on the top surface only.

After applying epoxy to the wing skin's inner surfaces, lay down the fiberglass cloths along the inner trailing edges, applying more epoxy to thoroughly soak the cloth. Apply extra epoxy to the upper wing cloth and put the mat on top of this cloth. Work the epoxy carefully into the mat and finish sheeting the wing. It is best to support the trailing edge while the epoxy is drying to insure a straight edge. Some kits come with a full-size saddle designed to support the trailing edge. If this isn't the case use strips of 1/8" spruce and clothes pins to clamp the edge straight.

After drying it is time to do the finish sanding to get a perfect, thin straight edge that will maximize the performance of the airfoil. The carbon fiber, being black, becomes a guide to gauge your progress. Simply sand down slowly until you can view a thin black line from either side of the wing and you are done. Be careful - don't cut yourself! *Sal DeFrancesco*

The L/D Ratio

Always remember when building a new kit that the designer has already selected the airfoil, planform, and configuration of the aircraft. This means that in general the way the wing generates lift (and drag) are fixed; or, in other words, under a given set of circumstances the lift curve for the wing is basically fixed. Most of us strive to squeeze the best possible performance from our ships and generally this means maximizing the glide ratio under any conditions at any speed. That is because the longer the glide ratio the longer you stay up or the slower your descent from some given altitude, like a winch launch. The term used to describe this glide ratio is what is called the lift to drag ratio, L/D. In real terms this ratio manifests itself as the ratio of horizontal units travelled to vertical units dropped. Any units will do. In technical terms it is the sum of all the vertical lifting forces divided by the sum of all the horizontal drag forces. The total lifting forces are closely related to horizontal surface areas. In a conventional aircraft the tail detracts from the total lift so a simple approximation of the total lifting force would be the lifting force related to wing area minus the stabilizing force created by the tail area. Total drag is a sum of forces that tend to hinder the aircraft from moving forward along its flight path, sort of like dragging a collection of sea anchors. These forces are related to several different things. One of these is the total exterior surface. This simply creates air friction and is to be minimized. Another source of drag comes about with a circulation or flow associated with a change in pressure in adjoining parcels of air. Air always flows from areas of high pressure to areas of low pressure. These pressure changes are created when air has to go around the curved surfaces of a sailplane. The wing is the worst contributor to this type of drag but this drag is a result of the way the wing generates lift, so you must accept it as a positive thing. The other parts of the aircraft contribute the rest of the drag forces. We can do some simple modifications to these parts to reduce the drag they produce. If we are successful we can reduce that total drag force appreciably and this will increase that lift to drag ratio.

Wing Fillets

One big source of drag on a model sailplane is the place where the wing joins the fuselage. Some kits have the wing bolted onto the top of the fuselage. Frequently there is a sharp corner left between the lower wing surface and the vertical fuselage sides. It is not hard to build a small faring on the sides of the fuselage that would bring this sharp corner up to about a one-half-inch radius. To maintain geometric integrity you also need to build up the faring in front of and to the rear of the airfoil. I wish I could give more specific instructions but each kit is different.Get out your plans and look at the juncture and you should be able to sketch on something that looks reasonable. These farings can be constructed from light weight solid balsa or you can use thin plywood as a fence and feather in a mixture of two parts epoxy and one part micro-balloons. Other kits have wings that plug onto steel rods. I have seen kits that have wing shaped farings on the sides of the fuselage and kits that don't. When there is no faring present you can build your own. Drill slightly over-sized holes where the wing rods are supposed to go through the fuselage. Next, make an extra set of root ribs from scrap 1/16th inch plywood and drill them for the wing rods. Now, assemble the wing and fuselage on a table in the middle of your shop and block up all the parts until they are aligned to the plans. Adjust the wings until there is a minimum of 1/4 inch between the new root ribs and the fuselage sides. After everything is set tack glue some 1/4 inch spruce blocks between the sides of the fuselage and the new root ribs. Tack glue the wing rods or the tubes that hold the wing rods as well at this time. Carefully disassemble the wings from the rods and you are ready to do the finishing work. The structural wing rod gluing should be done inside the fuselage before proceeding with shaping of the wing farings. A fillet of epoxy is called for in most kits. After that cures fill the gap between your new root ribs and the fuselage with scrap hard balsa. I use hard balsa, slow CA and lots of kicker. Fill up as much of the airfoil shape as possible. Next, mix up a big batch of 1/2 hour epoxy and fold in about half again as much micro-balloons. Build up enough of this mixture to create a large radius at the wing root. You may need to do this in four steps to keep it from running. While it is beginning to cure, smooth the fillet radius with a finger wet with rubbing alcohol. When the epoxy cures you should need to do very little sanding if you have done a good job and you can use normal finishing techniques to complete the fuselage. Additions like these can make the difference between a good ship and a great one. With a little practice you can get great results.