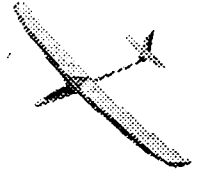


TASK

Official Newsletter of the Southern Ontario Glider Group Inc.



Volume 13 Issue 2

April 1997

Hopefully, this issue won't appear like I slapped it together at the last minute, even though that's exactly what happened!

I have been spending far too many of my evenings observing and photographing Comet Hale-Bopp. (Actually, with an astronomical event of this magnitude, it really isn't possible to spend "too many" nights gazing in wonder at it. I hope all of you have had a chance to see Hale-Bopp. We're not likely to see another like it in our lifetimes.) Cloudy evenings have been spent in the basement, frantically assembling airplanes. Until tonight, "zero" evenings have been spent putting TASK together!

Fortunately, Fred Freeman found the time to write another wonderful and helpful article - this time on modifying our wings to bolt on with nylon bolts rather than band on with rubber bands. I'm sure you'll all find his methods as helpful as I did.

I have a report on our First Annual Indoor Glider Contest. Let me take this opportunity to thank you all for coming out and participating in the contest. I had a lot of fun and I know everyone else did, too.

April is our last meeting at the Rockton library this season. From now on, we can get out to the field and do what we all love best: FLY!!!!

See you there!

P.S. Bud Wallace has asked me to tell everyone that the field is a soggy mess. Not only can't we drive on it, but as of today (April 12), it's not advisable to



even walk on it. Please check with someone before heading out to the field.

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BANDS TO BOLTS

by Fred Freeman

Let me say at the outset that I have nothing against the use of the practical and popular rubber band, which has been a basic requirement of our hobby for many years - some of us

can remember the days when it was the only source of power that we were able to afford! However, used to hold down large wings, rubber bands do have a few drawbacks (no pun intended). First, they soon lose their elasticity, secondly, they finally wear out, and thirdly, you always seem to run out when you need them most urgently; there is another disadvantage to them in that, when you go to replenish your supply, the store has almost invariably got them on "back order".

The alternative is to use some other means to secure the flying surfaces; various types of fastener have been tried, but none of them has caught on like the nylon bolt. Power fliers have used them for years; I can't think why more glider designers don't call for bolts on their designs; although the change from bands to bolts in an existing design requires some work, the job shouldn't be beyond the skills of the average glider-glider. Decisions must be made as to which bolts will be used and how many, of course, but the main decision - must be made before you begin to build; that is whether you are going to go this route or not, because it's difficult to convert after construction has been completed. If you decide to use bolts, you'll have to be prepared to cut extra wing ribs, add another former to the fuselage, and provide

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a means of securing the t/e bolt or bolts. You'll also need to reinforce the wing joint at the centre section with f/g cloth and resin. The benefits are, apart from the fact that you won't have to dash out to buy rubber bands, you'll have no drag-producing dowels, resulting in a cleaner aeroplane, which may just show an improvement in performance.

My own preferred method is as shown in fig.1. It makes use of a dowel at the l/e with one bolt to secure the t/e, and an incidence peg to ensure alignment.

The wings are built in the normal way, but the root ribs of each panel are not glued in place, nor are the centre ribs and the upper spars.

Using a tracing of the full sized rib as a template, cut out 4 new ribs from ply (1/8" or 1/16")-Mark off the position of the tubes which will hold the steel rod joiners, and also the position of the incidence peg (see Fig.2) It may prove necessary to juggle the height of the hole for the joiner tubes in order to accommodate the correct dihedral angle without encroaching on the spars,

but try to leave as much meat between the top of the hole and the upper surface of the ribs as you can- this will ensure that there will be less chance of failure at the joint.

Pin, clamp, or bolt the ply ribs firmly together and drill holes as marked to accept the size of tubing that you are going to use, and the hole for the incidence peg (keep this 1-2" from the t/e). If you are fitting spoilers you will need to drill holes to take the sheaths of the cables etc.

Next, lay out the inner panels, making sure

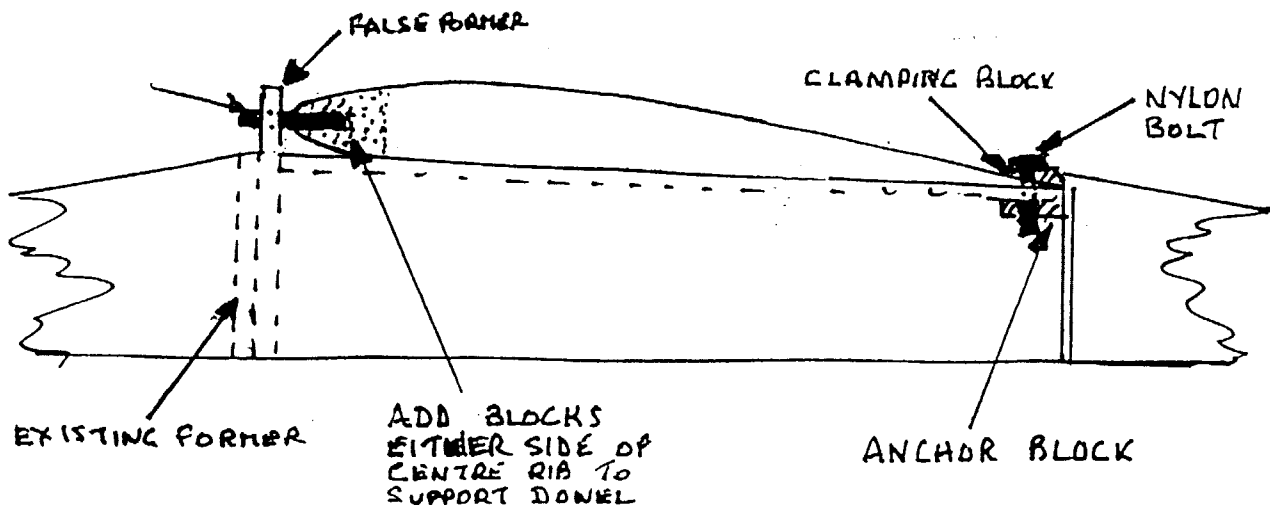


FIG. #1

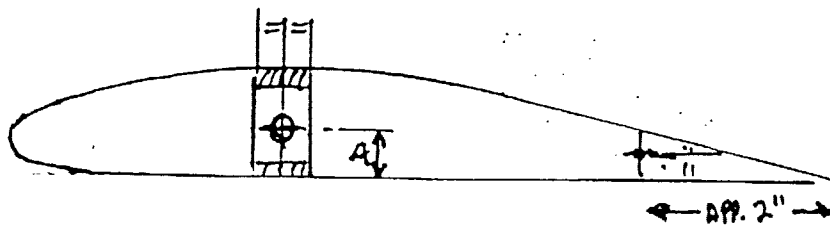


FIG. #2

that they are on a good flat surface, and glue in the new root ribs; normally, the ribs of the inner panels are set at rt. angles-make sure that the panels are absolutely square; set the outer panel root ribs in place and glue in at the correct angle-keep glue off the joint between the two root ribs and ensure that there are no gaps between them.

When these have dried, lay out the panels of both halves parallel to each other and support the tips at the required dihedral angle with a suitable length of lumber,

making certain that they are held firmly in position-leave a space (1/16") between the inner and outer ribs of each panel to allow them to be cut apart later. Measure the distance between the rib on the outer panel and that on the inner panel-this will give you the length of the brass tubing you will need. Cut two pieces and check that they fit without binding on the spars. Remove the tubes and roughen their outer surfaces with emery paper. Replace them in the wing root, and coat with epoxy.

Referring to fig3. cut wooden blocks as

shown to fit the spaces between the spars and the tubes, then cut the webs to fit over the front and rear of the spars of both wings-don't fit the upper spars yet-make sure that no epoxy gets into the spar seatings

When dry, take a thin bladed saw and cut the two panels apart, fit the incidence peg, clean up any burrs on the tubing, and glue in the upper spars on the outer panels only.

Set the inner panels on a flat board, and

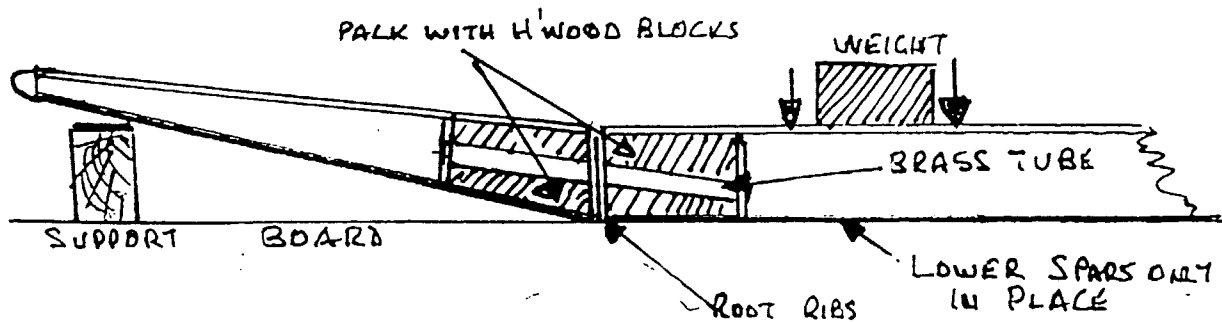


FIG. #3

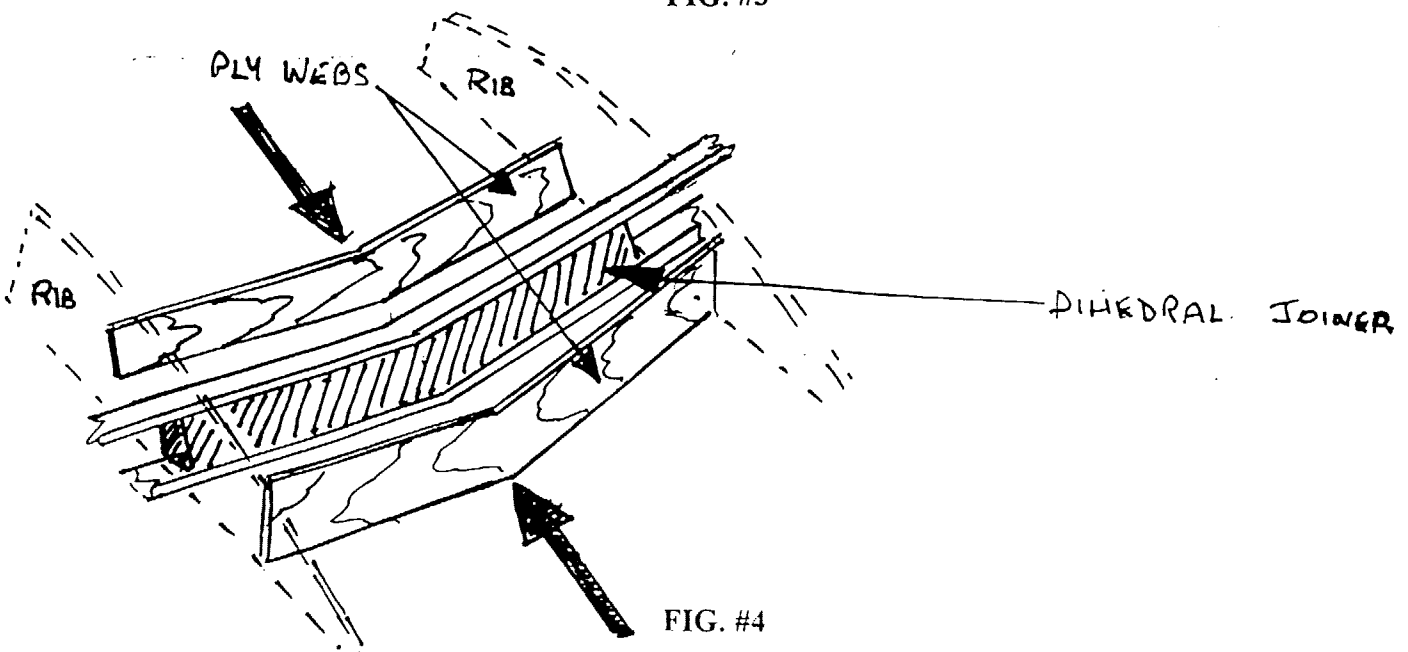


FIG. #4

check them for squareness then carefully trim the ends of the l/e, spars, and t/e, to reflect the dihedral angle on the plans; check that the trimmed ends fit cleanly together, with no gaps, and that the whole assembly is aligned.

Next, raise one panel to give the dihedral angle, and pin it firmly to the building board, then butt the second panel up to the first, and weight it so that it, too, will not move—make a dihedral joiner from material (plywood, carbon fibre) to fit snugly between the spars and the two adjacent ribs, if possible use material that is close to the width of the spars—you may find it necessary to make two joiners and glue them together. Measure the depth of the assembly over the spars—this is the dimension which gives you the width of the webs which will cover the joint; to get the length, measure carefully the distance between the two adjacent wing ribs, allowing for the dihedral. Cut two webs to the dimensions you have just ascertained; it's best to draw them out carefully on the ply before cutting—remember "measure twice—cut once"—it is important to get these webs exactly right—check the angles and the fit very closely. Glue these in place, and clamp together firmly—clean out any glue which may have spread into the spar seatings, and fit the upper spars. Now cut and fit the centre rib between the newly reinforced spar joint; make up two blocks to fit either side of the rib at the l/e—these should be large enough to give solid support for the dowel which will locate the wing (i.e. for 1/4" dowel, use 1/2" thick wood) and should be shaped if necessary to allow the centre section sheeting to be glued in place. With the centre section sheeting completed, cut a piece of 4" wide f/g to wrap the joint—apply resin and leave to cure.

From 1/8" ply make up a new former to fit the fuselage at the wing l/c—this should extend 1" above the line of the fuselage—cut the former 1/4" wider than the fuselage, and from a point 1" below the top, mark off a 1/8" step so that the lower part of the former will fit inside the fuselage; mark a centre line vertically on the former, and glue it in place in the fuselage—you will have to decide whether to put this piece in front or behind the existing former.

When the resin on the wing has cured, assemble the wing to the fuselage, so that the l/e bears directly on the former, and mark on the former the point at which the l/e crosses it, and the point on the fuselage indicating the t/e. With the whole assembly firmly held together drill a 1/8" pilot hole through the former at the previously established point, and continue on into the l/e about 3/4"; work very carefully and keep the drill in line both horizontally and vertically—it sounds difficult, but it really will make a difference to the way in which the wing mates to the fuselage; this hole can now be opened out to accept the dowel—the pilot hole helps to make things a little easier. Using epoxy, you can now glue in the dowel, which will help in the next sequence of the procedure.

Make up a suitable block to serve as an anchor for the wing bolt; this could be plywood or good hardwood, and should be thick enough to ensure good purchase for the threads of the bolt. It's a good idea, if the fuselage has longerons conveniently situated at the wing seating, to cut this block so that it fits right across the width of the fuselage, with a shoulder engaging under the longeron. Glue in place in a position which will enable you to drill

through the t/e and the block to line up the bolt.

Now, assemble the wing once more to the fuselage and clamp it as tightly as possible, taking care not to crush it in the process, and, with the dowel firmly engaged in the false former, drill a hole to the correct tapping size for your bolt, through the t/e and the block—try to remember to stop before you go right through to the surface of the workbench! All that remains is to drill out the tapping hole in the t/e, tap the hole to suit the bolt, and cut and glue in place a suitable clamping block.

This is one job that takes longer to describe on paper than the time taken to do the job!

(P.S. I have made a start on construction of the Cadet and intend to write a progress report, along with any changes or snags.)

Till next time I hope you'll be able to keep on drifting with the lift!

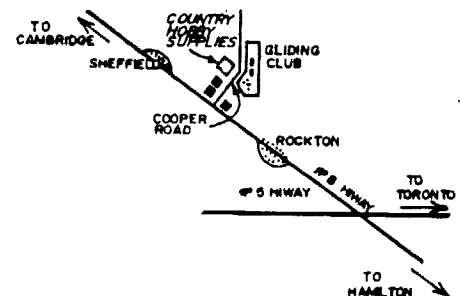
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Closed Tuesdays and Sundays except by appointment

Report: SOGGI 1st. Annual Indoor Glider Contest

There was stiff competition at our first indoor glider contest on March 9th. We had models of all shapes, sizes and complexity!

Bill Woodward and Fred Freeman even demonstrated (well, they tried to demonstrate) a scale bungee launch of a scale glider. Their tiny highstart couldn't handle the monstrous forces, however, and snapped continually under the strain.

Cliff Englisch chose to avoid inflicting certain pain on the crowds and considerable property damage to the walls:

he didn't launch his heavyweight gliders. (He did make quite an "impact" at the Flying Tiger's earlier indoor contest, however!) Cliff helped me keep track of who landed where. Thanks again, Cliff!

I was quite surprised (and amused) at how much practice everyone insisted on! (You people are serious about your contests!)

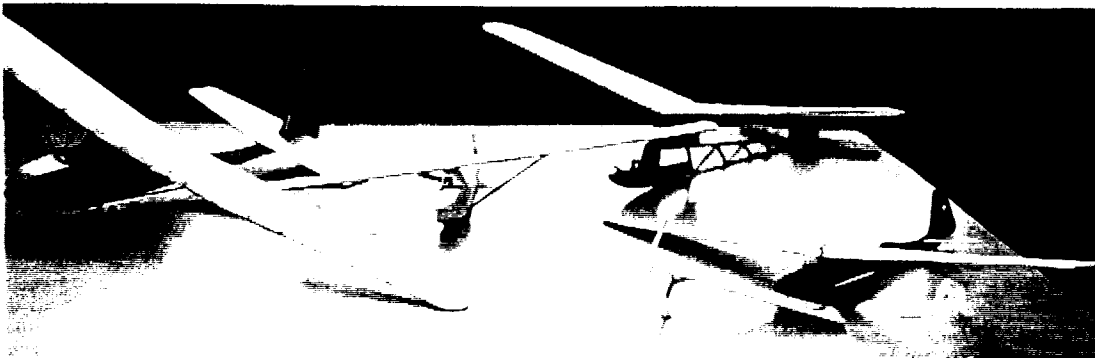
The task consisted of coming closest to a target (our logo enlarged to about 8" in diameter) mounted on the room's back wall. The winners were: Bill Tekatch, 1st place (yes, he's my husband; no, there wasn't any favouritism! By the way, I'll have you know that *I* built the plane that he flew!); Charlie Rader, 2nd place

and Bill Woodward took third place. Honourable mention goes to Paul Penney for the most innovative glider designs! (You'll have to work on them for next year, Paul!)

In addition to the certificates awarded to the winners, Stan Shaw provided key chains as prizes, too. Thanks, Stan!

I took several photos of the event and you'll find them gracing this month's newsletter. My thanks to everyone for a great afternoon.

Ann Tekatch





Minutes of the SOGGI Meeting Sunday March 9, 1997

Bud Wallace opened the meeting at 2:16 p.m. with eighteen members present along with guests Gerry Knight, Secretary of GNATS, and Don Smith, President of GNATS. The minutes of the last meeting were distributed to the members. A motion was made by Ann Tekatch and seconded by Al Hilborn to accept the minutes. Carried. No errors or omissions were noted. Fred Freeman moved that we pass the minutes. Seconded by Stu Watson. Carried.

New Business

Bill Woodward inquired if Bud Wallace had contacted Mr. Campbell regarding the flying of powered models for the Aerotow event in September. Bud was unable to reach him but will try again. Next Fred Freeman reported on arrangements for the model display at St. Paul's Church on Saturday April 19th. The set-up begins at 8 a.m. with doors opening to the public at 10 a.m. A number of members expressed interest in participating and Fred took their names. About six models will be needed for the display.

Bud Wallace next read a letter requesting

money in support of the Canadian F3A Team that will be competing in Poland this fall. The members expressed no interest in supporting the team. Stan Shaw will send the reply expressing regrets. Stan Shaw then read some MAAC office news. The Board of Directors approved a new insurance company GAN Canada headquartered in Burlington. Our agent is Tim Steele of Steele & Ferraro from Guelph, ON. This has reduced our premium from \$2.75 per member to \$2.00 per member. As well the deductible is \$500 (Formerly \$1000.) on property damage claims, the member pays \$250, and the association covers the other \$250. Any questions on insurance can be directed to the insurance committee chairman, Mr. Frank Basso (519) 822-8933. Furthermore the magazine was put out for tender through three different newspapers. Of the six proposals received the Board of Directors decided to change to Stonebrook Marketing in St. Catharines, ON. The new editor, Mr. Henry Zwolak is a MAAC member and promises to give us a better magazine for less money. Mr. Zwolak has taken charge of the magazine effective with the April issue. Details on deadlines will remain the same for the time being.

Bill Woodward announced that Neil Tinker has stepped down as Sailplane Committee Chairman and Ken Norris of

Ottawa is now the acting Chairman. He can be reached at (613) 820-9097. Bill also distributed a list of models for sale by Kevin Skerritt (519)823-0911.

Next Bud Wallace introduced Gerry Knight, who spoke about our new MAAC editor. The editor wants to know what MAAC members want to see in the magazine. He will be at the GNATS meeting on March 29th if members wish to see him or give him a call. Gerry then gave the floor to Don Smith. He took the opportunity to personally thank the members for their donation of \$75.00 for the Scale Rally. This enabled GNATS to show a profit of \$2.16 after the donation. After some discussion Fred Freeman moved that \$50.00 be donated to GNATS for this year's Scale Rally in August. Seconded by Bill Woodward. Carried. Fred Freeman announced a recall of the Kadet plans he gave out last meeting. There is an error in the dimensions. Allan Hilborn moved the meeting be closed.

Ann Tekatch organized an indoor glider contest. The winners were: Bill Tekatch, 1st place; Charlie Rader, 2nd place; Bill Woodward, 3rd place.

Stan Shaw

SOGGI MEMBERSHIP LIST

Armstrong, Keith	219 Governors Rd.	Dundas	ON	L9H 3J7	(905)627-4011
Ashton, Peter	200 Edwin St.	Kitchener	ON	N2H 4P2	(519)576-6750
Baltaza, Joseph	19 Gaitwin St.	Brantford	ON	N3P 1A9	(519)751-3698
Batt, Robert	612 Blue Forest Hill	Burlington	ON	L7L 4H3	(905)632-8790
Bewley, W., Sr.	#309-155 Park St., S.	Hamilton	ON	L8P 3E7	(905)544-7548
Campbell, Rob	34 Hopkins Court	Dundas	ON	L9H 5M5	(905)627-9435
Colley, Dick	101 Braeheid Ave.	Waterdown	ON	L0R 2H5	(905)
Englisch, Cliff	24 Blackwood Cres.	Hamilton	ON	L8S 3H5	(905)522-4561
Freeman, Fred	#706-75 Main St.	Dundas	ON	L9H 2P9	(905)627-9090
Fritz, Gerry	19 Pepperwood Cres.	Kitchener	ON	N2A 2R4	(519)893-7558
Fritz, Kurt	R. R. #2	Dundas	ON	L9H 5E2	(905)689-4171
Fund, Albert	73 Beech Street	Cambridge	ON	N3C 1X6	(519)658-9495
Gardener, Arnold	202 San Pedro Dr.	Hamilton	ON	L9C 2E1	(905)383-4418
Giles, Stan	1567 Gordon St.	Guelph	ON	N1L 1E1	(519)824-5412
Guthrie, Don	R. R. #4	Belwood	ON	NOB 1J0	(519)843-4537
Hammett, Bob	183 Uplands Dr.	Kitchener	ON	N2M 4X3	(519)576-7636
Hartwell, Derek	39 Isaac Brock Dr.	Stoney Creek	ON	L8J 2P1	(905)578-7991
Hilborn, Al	175 Hewat St.	Cambridge	ON	N3H 4H2	(519)653-0049
Hildesheim, Werner	4 Foster Cres.	Cambridge	ON	N1R 4R1	(519)623-2663
Hobson, Bert	#1205-530 Scarlett Rd.	Weston	ON	M9P 2S3	(416)244-3032
Kirkland, John	5 Carswell Place	Weston	ON	M9R 3K6	????
Leach, Jim	10 Belvidere Ave.	Hamilton	ON	L9A 3B7	(905)383-5024
Linghorne, Jack	55 Anglesey Blvd.	Islington	ON	M9A 3B8	(416)233-0230
Lockwood, Ken	R. R. #5	Guelph	ON	N1H 6J2	(519)821-9947
McHugh, Chris	261 Broadway Ave.	Hamilton	ON	L8S 2W7	(905)527-3607
Moar, Bill	944 Concession #6 W.	Millgrove	ON	L0R 1V0	(905)659-1053
Newberry, John	73 Southgate Rd.	Cambridge	ON	N1S 3P8	(519)623-4594
Penney, Mike	388 Massey Dr.	Ancaster	ON	L9G 3J9	(905)648-5843
Penney, Paul	388 Massey Dr.	Ancaster	ON	L9G 3J9	(905)648-5843
Rader, Charles	4533 Ivygardens Cres.	Beamsville	ON	L0R 1B5	(905)563-4108
Schmidt, Paul	37 Wells St.	Guelph	ON	N1E 6B7	(519)836-7131
Shaw, Stanley	31 Wilsonview Ave.	Guelph	ON	N1G 2W5	(519)766-9966
Stevens, Peter	#15-170 Caroline S.	Hamilton	ON	L8P 3K9	(905)572-9316
Tekatch, Ann	19 Pheasant Place	Hamilton	ON	L9A 4Y4	(905)575-5433
Thomas, Mike	61 Alhart Drive	Etobicoke	ON	M9V 2N1	(416)748-2833
Threlkeld, Stephen	89 South Oval	Hamilton	ON	L8S 1P9	(905)526-9031
Vandereyken, Gerry	56 32nd. Street	Etobicoke	ON	M8W 3G4	(416)255-4517
Vosu, Juri	3291 Candela Drive	Mississauga	ON	L5A 2V1	(905)279-9549
Wallace, Bud	1060 Eastmount Ave.	Mississauga	ON	L5E 1Z3	(905)274-3177
Watson, Stewart	26 Juanita Drive	Hamilton	ON	L9C 2G3	(905)385-8214
Wheten, Waldo	90 Duke St., Pent#5	Hamilton	ON	L8P 1X6	(905)527-4457
Wilkins, Doug	8448 Twenty Rd., E.	Hamilton	ON	L9B 1H7	(905)679-4973
Woodward, Bill	520 Pine Street	Cambridge	ON	N3H 2S6	(519)653-4251
Yates, Paul	96 Highman Ave.	Cambridge	ON	N1R 3L7	(519)740-0122

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Deadline for June issue of TASK: May31/97.
 Phone, fax,email, modem, mail, hand-deliver or float your articles/photos to me!

1997 Calendar of Events

- April 19/97 Dundas Hobby Show at St. Paul's Church, Dundas, Ontario
- May 10/97 Fun Fly at the field. Open class and golden oldies. C.D.'s Stan Shaw and Al Hilborn
- May 25/97 COGG 2 meter contest
- June 1/97 (Raindate: June 2) Otto Bandman Memorial Club Day/Fun Fly at the field
- June 7 & 8 Electric Fun Fly at the field. C.D.'s Bud Wallace and Stan Shaw.
- June 13-15/97 Harris Hill Aerotow, Elmira, New York
- June 22 Scale Rally at the field. C. D. Bill Woodward
- June 28 & 29 COGG Grand Prix
- July 5 & 6 Great Lakes F3J meet at our field! Two day contest with a flyoff on the 6th. This is an international event. Don't miss this opportunity to compete with the best. Stay tuned for more details!!



The Southern Ontario Glider Group Inc. is a chartered club of MAAC.