



Free Flight

THE NEWS LETTER OF THE SOARING ASSOCIATION OF CANADA

Issue 6/70

October-November, 1970

S.A.C. NEWS

WORLD CHAMPIONSHIPS FUND:

The Association has been advised by the Fitness & Amateur Sport Directorate of the Department of National Health and Welfare that the sum of \$5,826.00 has been allocated to help defray the expenses of our International Team at Marfa, Texas, in June of this year. The announcement came after the World Championships were completed, and it was welcome news indeed. The money will help a great deal in alleviating the very high expenses that are necessarily incurred by pilots and crews, while representing Canada, at an event such as this.

1970 WESTERN INSTRUCTORS' SCHOOL:

This was held the week of September 6th to 12th, at CFB Penhold, Red Deer, Alberta. This year the School was handled by Don Skinner, of Cu-Nim, with the help of Fred LeReverend of the Edmonton Club. The attendance was disappointingly low in that only three of the six accepting candidates showed up.

A representative of Alberta's Department of Youth & Recreation (the Provincial voice for sport) was in attendance for a whole day, and was very impressed with the fact that the School lasted a whole week. He advised that the longest sport clinic he knew of previously had lasted only 4 days. He has promised next year, the full cooperation of his Department in helping to organize the 1971 School. It is hoped that the Clubs of the two Western Zones will show more enthusiasm for future Schools, by encouraging their new and prospective Instructors to attend!

MAIL VOTING:

It will soon be time again for the Voting, by Mail, for the 1971 Directors. Early in November each Club will receive the first of several letters with voting instructions.

Now is a good time for the Officers of each Club to think about the qualifications and abilities of suitable candidates to be nominated. Remember, this is your Association, and it can only be as effective as the energies, drive and enthusiasm of the Directors, that you, as individual Club members, elect.

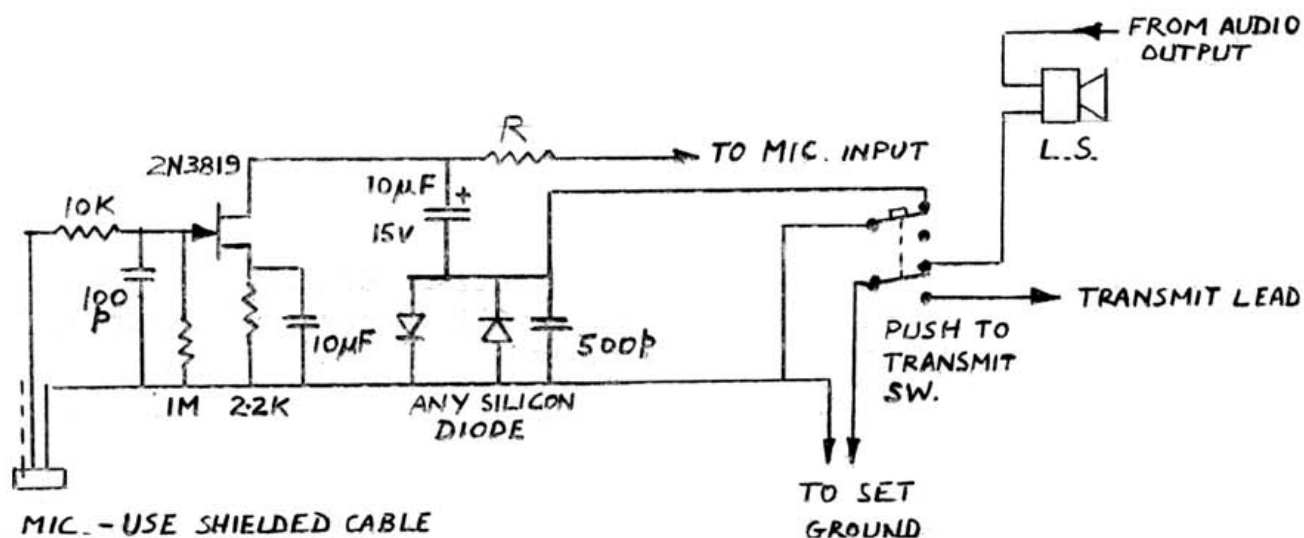
Walter J. Piercy,
President

RADIO COMMITTEE

While radio discipline has been improving, even though new owners need frequent reminders that they have not merely acquired another telephone, occasionally someone literally sits on the mic. button. This must be an uncomfortable experience even for the thick skinned, but it is audibly painful for others trying to use the channel through heterodyne squeals. Usually 123.3 is unusable till the offenders' batteries run down. Hopefully this happens fairly quickly, but there are better ways of stopping the problem.

- (1) Install the press to talk button on the stick.
- (2) If you must use a hand held mic. and button, add a lamp on the panel which glows when transmitting.
- (3) If your radio is strangely silent for some time, check for proper operation.

To facilitate (1) and improve the speech quality over the usual carbon microphone, a circuit is shown below which enables a \$1 crystal mic. to be used with standard aircraft radios designed for a carbon mic.. It incorporates a simple compression circuit to improve modulation depth. The microphone should be mounted on a boom close to the mouth. On those sets which annoyingly talk back to you while transmitting, it is necessary to use a Double Pole Switch to disconnect the loud speaker during transmit and the mic. during receive. Resistor R nominally 10K ohms is adjusted to give proper modulation on the particular set used. Anyone with a small knowledge of electronics should be able to build this circuit.



John Firth

HIGH ALTITUDE INDOCTRINATION COURSE

The Institute of Aviation Medicine in Toronto was asked by letter on 14th August, as to whether high altitude courses could be put on for S.A.C. Glider Pilots in Ontario and Quebec, and also asked to supply information on the location of other centres across the country which were equipped to provide such courses.

No reply was received. A phone call on 8th September revealed that the Institute had been on holiday. A spokesman said they were willing to run courses for S.A.C., but a three month course was just beginning and courses for S.A.C. could not be put on until the end of the year. A reply to the request for information on other centres was promised but so far has not been received.

In the above situation, it is requested that those interested in a high altitude course should not telephone the Institute for information, as a number of individual calls only wastes the time of their staff and may prejudice our relationship with this body.

Further information will be published in "Free Flight" as soon as it becomes available.

R.C. Gairns

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COVER DESIGN CONTEST FOR FREE FLIGHT

A total of seven designs were received from six people. The time and effort taken by the following people is very much appreciated:

Mr. T.R. Beasley, 173 Leslie, Dollard des Ormeaux, P.Q. (2 designs).
 Mr. A. Blanchet, 190 Rue Des Bernières, Quebec 4, P.Q.
 Mr. Don Bruner, 1315 Barlesan Road, Peterborough, Ont.
 Mr. R.I. Carlson, 72 Humbervale Boulevard, Toronto 560, Ont.
 Mr. Arthur H. Martin, 1207 Kenneth Avenue, Peterborough, Ont.
 Mr. Gil Parcell, 37 Compton Drive, Scarborough, Ont.

I have pleasure in informing you that Mr. Gil Parcell's entry has been selected as the winning design by an impartial committee headed by S.A.C. President, Walter Piercy. Mr. Parcell's design is artistic and most appropriate to "Free Flight" and Canadian gliding, as well as being of professional calibre.

As "fall out" from the remaining designs, S.A.C. Director, Terry Beasley, has suggested that the most popular design of a Maple Leaf with soaring gulls be made available as lapel pins, etc. for purchase by S.A.C. members. The design would be unique in that no words or initials would be necessary to identify it with Canadian gliding. Such a pin could also be used as a handout at World competitions.

INTERNATIONAL F.A.I. BADGES

By Vic Shobridge

The following were approved in Canada during the months of August and September, 1970.

DIAMOND GOAL:

418	Kingsley Walton	Ka8	Nephi (Utah)	
419	Dennis Gyorffy	Libelle	Rockton, Ont.	SOSA
420	Richard Robinson	Pirat	"	"
421	Dennis Pandur	Libelle	Cooking Lake, Alta.	ESC
422	Charles E. Bonds	HP-11	Rockton	SOSA
477	Peter Lamla	Ka6	Wenatchee, Wn.	VSA

GOLD BADGE:

85	Douglas Winger	Skylark	Sugarbush (Vermont)	SOSA
86	Lothar Schaub	Ka6	Wenatchee	VSA
87	Richard Robinson	Pirat	Rockton	SOSA

GOLD BADGE LEGS:

418	Kingsley Walton	Ka8	(Dist.)	Nephi	
477	Peter Lamla	Ka6	(")	Wenatchee	VSA
484	Dennis Gyorffy	Libelle	(")	Rockton	SOSA
486	William Windover	1-26	(Alt.)	Colorado Springs	
487	Lorent Jenvay	Ka6	(")	Peterborough	COSA
490	Dennis Pandur	Libelle	(Dist.)	Cooking Lake	ESC

SILVER BADGE:

256	Michael Potter	1-26		Pendleton, Ont.	GGC
257	J.M. Thiemann	Ka-8		Hawkesbury, Ont.	MSC
258	Gerald Dixon	1-26		Regina, Sask.	RGC
259	Douglas Winger	Skylark		Sugarbush	SOSA
260	Alan Sunley	1-26		Pigeon Lake, Man.	WGC
261	Leo Haunsberger	1-34		Wenatchee	COSA
262	Manfred Ernst	1-26		Rockton	SOSA
263	Julius Nagy	Std. Libelle		"	"
264	Gerry Nye	1-26		Hawkesbury	MSC
265	Bela Kacso	Skylark 4		"	"
266	James H. Pick	Pirat		Rockton	SOSA
267	Charles Grant	Ka7		Wenatchee	VSA
268	Jean Bellavance	Ka6		Paquet, Que.	QSC
269	Dennis Pandur	Libelle		Cooking Lake	ESC
270	Dake Goulin	BG-12B		Erin, Ont.	ESS
271	Gabriel Orday	Grunau		Chemong, Ont.	COSA
272	Chris. Scalet	Ka7		Wenatchee	VSA
273	Michael Frijters	L-Spatz		London, Ont.	LSS
274	Harold Hardy	Ka6		Chemong	COSA

CANADIAN RECORDS

By Vic Shobridge

Multi-seat (Fem.) 100 Km. speed triangle - 31 kmh by Antonia Cservenka in a 2-32 at El Mirage.

Single-seat 200 Km. speed to goal - 70 kmh by John Firth in an HP-11A at Pendleton.

NOTICE OF CITIZEN'S RECORD (Not yet homologated).

100 Km. triangle - 70 mph - by Dick Cook in a Standard Cirrus in California.

Note: Claims for F.A.I. badges and records should be sent direct to Mr. Victor Shobridge, 1849 Burrill Avenue, North Vancouver, B.C. (Record flights should be filed within 48 hours of flight).

Flights to qualify for the "Five Best Flights" & "200" trophies should be sent to Mr. Paul Thomsen, 2675 Vaudreuil, No. 11, Sherbrooke, P.Q.

ICAO MEETING IN MONTREAL

(Taken from "Sailplane & Gliding")

A meeting of the Division of the International Civil Aviation Organization, which is concerned with setting the standards for pilot training and licensing, is to take place in Montreal this November. One of the proposals for discussion is the minimum age qualifications at which a PPL may be granted.

With the advent of the motor glider and its potential as a training aircraft, this situation deserves special consideration.

Mr. Godfrey Harwood in Sailplane & Gliding writes that presently in the U.K. they have the anomaly that a youth of just 16 years of age may fly solo in a glider but must wait a whole year, until his 17th birthday, before flying a powered aircraft. Accordingly, one of the proposals at Montreal will be a reduction in the minimum age PPL qualification from 17 to 16 years.

(Editor's note: Mr. Gerry Nye, of M.S.C. and I.C.A.O., has undertaken to obtain a copy of the proceedings of this meeting so that an excerpt can be published in "Free Flight").

HOMEBUILDERS

A good book to obtain is "Basic Glider Criteria Handbook". It can be obtained by sending \$1.00 to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

THE BOY SCOUT AEROSPACE VENTURERS

by Nigel Swettenham

Every now and then you get a chance to do some of the things you can only dream about. If it was not for the Aerospace Venturers, I probably would not have learnt to fly this summer, nor had the chance to visit Kennedy Space Center. The Venturer Group, which has the use of the Boy Scouts' Schweizer 2-22, is intended to teach the basics of flight and then go on into advanced fields of Aeronautics and Astronautics.

Last winter we received a request from Boy Scout H.Q. in Ottawa to select someone to represent Canada at an International Space Seminar. By process of elimination this was narrowed down to two people. Both of us were then questioned about Astronautics and the Space Program in general. At the Spring banquet, the selected person was announced. It was a long six weeks until I was on my way to Orlando, Florida, then to Patrick Air Force Base where we stayed for the week.

The Seminar was sponsored by the Hugh O'Brian Youth Foundation and Pepsi Cola and turned out to be a great success. It was built about the idea of Man's future in Space, but it also dealt with what is happening at the moment. We were taken to every part of the Space Center to see the Past and the Present, to help us understand the Future.

Kennedy Space Center is really a strange place in that, with all the advanced technology behind it, it is located in the middle of a swamp. The Saturn Complex is built on a number of islands and connected by causeways. This robs the whole area of its actual size and leads one to believe the area is really smaller than it is. I honestly feel that the Seminar has done a lot to help those of us who attended, to obtain a better understanding of what Man can, and hopefully will, do in Space.

Note: Nigel Swettenham (age 15) is a very enthusiastic member of the Aerospace Venturer Group who operate with the Montreal Soaring Council at Hawkesbury, Ont. Naturally M.S.C. are very proud of Nigel who has progressed much farther than most. However, the boys who operate under this Boy Scout Group are a great asset to the Club in many ways, and their youthful enthusiasm to fly is very stimulating.

All Soaring Clubs in Canada have an opportunity to serve Scouting and themselves by organizing a Scout Aerospace Venturer Company. The advantages of serving Scouting are obvious. The Club gains by having a training aircraft (supplied by a Scout organization or Service Club) and utilizing the early hours of the day (before thermals) for training. Besides the personal gratification one benefits by participating, there is the distinct opportunity of "learning by teaching". Anyone wishing further information on organizing a Venturer Company should contact Dan Lewis at M.S.C., P.O. Box 1082, St. Laurent, Montreal 379, P.Q.

THE "CANADIAN GLIDER BOOSTERS"

(Written by the late Norm Bruce
in January, 1948)

PART I

In 1935 an exhibition tour was organized to give demonstrations of gliding covering a great circular route, from Calgary, Alberta, through Lethbridge, Medicine Hat, Moose Jaw, Regina and Winnipeg, over to Prince Albert, across to Edmonton and south to Calgary. The ambitious tour was organized to promote gliding in Canada and the three men called themselves the "Canadian Glider Boosters." The glider owned by the writer was specially fitted up with flying struts for ease of dismantling and assembling and was transported by trailer from exhibition to exhibition. James Fretwell, gliding instructor of the Stettler Gliding Club, combined his efforts with the trio and his fine showmanship was greatly responsible for the huge success attained by the Canadian Glider Boosters on their adventurous tour, a planned route of some 2,500 miles. While the writer organized the chain of exhibitions, Fretwell carefully selected the ground for the flying, if no local airport was available. Particular care was taken by the trio to encourage and promote gliding and interviews were encouraged. The third member, Paul Pelletier, a French Canadian, although not a pilot, joined the Boosters for the novelty and sport of the trip. His good sense of humour and pleasing mannerisms bonded the Boosters together into a strong team. His job was to take up a silver collection to assist in defraying expenses and also to help in the work of assembling or packing, the glider.

These three men, with their own car, glider and plenty of initiative and no capital, set out on May 25th, 1935, from Calgary in a down-pour of rain just after midnight on an ambitious goodwill tour that was to show what could really be done with a glider in capable hands.

Members of the Calgary Gliding Club came down to extend their best wishes at the start. The car, owned by Fretwell, was specially fitted up for sleeping accommodation by letting down the front seats, and the glider trailer carried a full kit for repairs. The 145 miles to Lethbridge, our first stop, was covered without incident, except that the rain found its way into the sedan much to Fretwell's discomfort.

The first exhibition before a huge crowd was a grand success. Members of the Lethbridge Gliding Club welcomed us so royally that it was decided to remain there a few days. For the first time in Western Canada, two gliders were flown on exhibition. A coin was tossed to see who would get "The Lawrence", our glider. I lost the toss to Fretwell, so while he used the long rope, I made a lower flight in the big Lethbridge machine. It was a grand sight to see Fretwell flying about 200 feet higher than myself and I could see him distinctly as he leaned forward in his seat to grin at me as he went overhead. I remembered reading of a remark made by a witty German to his fat friend who with great skill caught a thermal and floated above his friends. His bantering remarks were spoken in a particularly loud voice that carried

well, "Only fat floats on top." This incident came back to me as Fretwell waved and probably accounted for my own mirth at the moment.

On the last exhibition in Lethbridge, before a huge crowd of spectators, one remarkable flight made by Fretwell did much to create new enthusiasm. While flying only one hundred feet above the crowd, he was caught in a thermal bubble, caused by the air rising off the hot engines of the many cars below and from the sun's heat radiation off the metal-work. The glider in full view banked overhead, turned down wind, came round and flew with all the grace and beauty of a bird, without losing height. Seasoned bush pilots who had flown in many remote parts of Canada, remarked on the beauty of gliding flight and how much impressed they were with it.

This was our first victory. Seasoned pilots, who had often scoffed before, had gliding actually brought home to them. Our fourth exhibition was scheduled for Medicine Hat, my own home town. This fine old western town had, for the past twelve years, witnessed the development of my six machines. They knew of the many years of my experimenting, and yet I knew this homecoming was not to be without the awakening of a sad accident. My brother Lawrence, one of Canada's best loved musicians, was killed while gliding only two years previously. The townspeople greatly loved him and with the coming of our exhibition naturally felt some resentment. Lawrence and I were greatly attached to one another and to his memory my glider was named. Gradually our exhibitions caught the enthusiasm, particularly of the younger people, and I may say with pride that we left with their best wishes of goodwill.

Pelletier with all his wit and spontaneous humour, found his way into the hearts of all who met him. He made the silver collections with all the grace of a showman, and he has stated that during our flights, people have come up to him and given into the collection a second time, saying, "Your show is worth it, here's more with best wishes."

Once on the road again, Fretwell usually driving, Pelletier seated in the centre, and the writer occupying the outside, we reverted back to our crusade, discussing events and possible gliding clubs. One incident, a daring exhibition in a very small village, always found pleasant discussion.

Driving up onto the main street of this little western town, we left our glider in full view with posters advertising the time of the exhibition. Townspeople soon gathered. As usual, always tired and hungry, we made the shortest possible bee-line to the restaurant. A good meal, a cold brisk wash, often in a clear spring or river if this presented itself to us, after a hot dusty drive and we were ready to prepare our show.

.. To be continued

Norm Bruce, who died earlier this year at the age of 62, was made an Honorary Life Member of S.A.C. to commemorate nearly half a century of distinguished personal service to the sport of soaring & gliding. See "Free Flight" Issue 4/70 for further details. Ed.

Although the following article was written many years ago, it is still a valid and simple method of checking out your basic instrument set-up. (Any person wishing to delve further into Total Energy systems and Electric Variometers, etc. should obtain a copy of the Proceedings of the 1970 Symposium on Competitive Soaring and read the article by Mr. Gene Moore).

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CALIBRATING VARIOMETERS by Nicholas Goodhart

In the past few years there has developed an increasing interest in flying for maximum cross-country performance using a table of air-speeds based on variometer readings. To use this table successfully it is necessary to have a variometer whose readings can be interpreted reasonably accurately, and this certainly cannot be said for many variometers in use, particularly after modifications for total energy have been made.

Figure 1 shows the relevant parts of my own instrument panel which are:-

(a) A standard 0-35,000 ft. Mk. XIV sensitive altimeter.

(b) A Kelvin Hughes KB220/02, 10-130 knot, airspeed indicator.

(c) A "Memphis" variometer. This is a sensitive short-lag American instrument with pointer presentation similar to a Horn. It is graduated in knots from 20-up to 20-down.

(d) A Cosim variometer, which has been re-calibrated to read in knots. The capacity is provided by a thermos flask and by -

(e) a total energy device consisting of two standard industrial copper bellows suitably mounted in a casing which is fed with pitot pressure.

In order to check and calibrate the above panel the following rather elementary test rig was developed. It has proved so successful that it may be of interest

FIG. 1

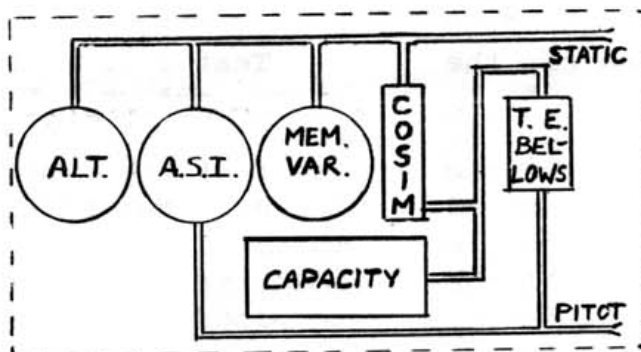
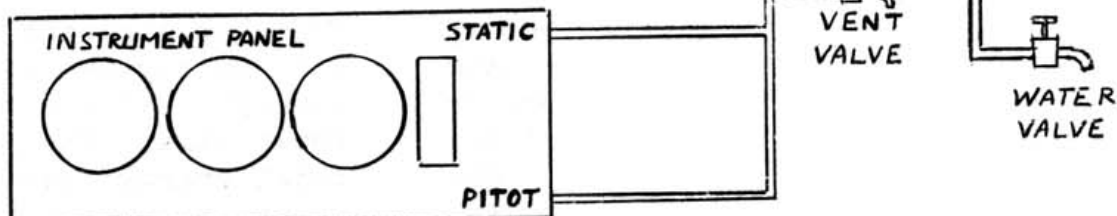


FIG. 2



to others who wish to calibrate their own panels.

The calibrator consists of an old paint tin (two gallon) with a screwed airtight cap through which it can be filled with water. At the top a pipe is soldered on, which is led to the instruments under test via a T-piece. The third leg of the T-piece leads to a short length of pipe with a clamp on it which is used for controlled flow of air into the system. The bottom of the paint tin is led via a four-foot length of hose to a cock discharging into a bucket. The principle of use is equally simple and consists of letting the water out at a controlled rate, thus progressively increasing the depression in the top of the tin. If an altimeter & variometer are connected to this depression, rates of climb can be measured by timing the altimeter over a range of a few hundred feet while observing the indication of the variometer. Rates of descent are achieved by closing the water cock and CAREFULLY opening the air venting clamp. It is essential that all movements be made carefully to avoid getting indicated rates of climb in excess of the capacity of the instruments. It is recommended that all testing be done in the range 0-500 ft. on the altimeter to reduce the risk of damage to any instrument; it is also a good plan not to fill the tank to more than about three-quarters full so that there is always a good air space capacity.

Figure 2 shows the calibrator connected for the testing of my panel. Note that the pitot and static lines are both connected to the calibrator. The first test consists of a leakage test. The cock is opened until, say, 200 ft. shows on the altimeter; the cock

is then closed & both variometers should return to zero and the altimeter should remain steady. If this does not happen, the leak can be found by squeezing off various pipes & watching the instruments.

When ALL leaks have been removed, test 2 is a calibration run on the variometers. Calibration can, of course, be made in ft. per min. or anything else one prefers, but my own variometers are calibrated in knots. This may seem a curious unit to choose; however, it means that one can make direct glide-ratio calculations, e.g. speed 50 knots, rate of sink 2 kts - glide-ratio = 25; it may seem an even less curious unit when it is realised that 1 knot = 100 ft. per min. - for all practical purposes. For this test the water cock is opened until some steady reading is obtained on one of the variometers, say 500 ft. per min. (5 knots). This reading is kept steady by small adjustments of the water cock while the altimeter is timed over a range of, say, 400 ft. A similar descending run is then made. By doing a series of runs, a calibration can be produced for both variometers.

Test 3 is a check on the total energy set-up. For this test the pitot line is disconnected from the test rig, which is now fed only into the static system while the pitot line is left open to atmosphere. The effect of this is to produce an apparent increase in airspeed at the same time as the height increases; this deludes the total energy system into believing that the aircraft is gaining kinetic energy as well as potential energy, and a little calculation shows that the net result is a total energy variometer reading which is exactly double that timed on the altimeter. For those who

are interested, the mathematical reason for this is added as an Appendix. If the A.S.I. is connected while carrying out this test, care must be taken not to exceed its limits. On my own panel I do not exceed 500 ft. on the altimeter, which gives 105 knots on the A.S.I. Incidentally, should there be any doubt on the calibration of one's A.S.I. the test rig can be used to calibrate it from the altimeter. For all practical purposes the correct reading of the altimeter for a given A.S.I. reading can be calculated from

$$h \text{ ft.} = \left(\frac{V \text{ (knots)}}{1.48} \right)^2$$

APPENDIX

A total energy variometer does not in fact show the rate of change of total energy of the aircraft, but rather shows the rate of change of the sum of actual height plus "kinetic height"; this latter term is coined to mean the kinetic energy divided by the aircraft weight, and its units are feet.

In the case of Test 3, the kinetic height (h_k) is given by

$$h_k = \frac{v^2}{2g} \dots\dots\dots (1)$$

where V ft./sec. is the apparent airspeed.

But this apparent airspeed can be obtained from

$$p = \frac{1}{2} \rho V^2 \dots\dots\dots (2)$$

where p is pressure applied to A.S.I.

But in this case the same pressure is applied to the altimeter; hence

$$p = \rho gh \dots\dots\dots (3)$$

There from (2) and (3) we get

$$\rho gh = \frac{1}{2} \rho v^2$$

$$\text{or } v^2 = 2gh$$

Substituting this in (1) we get

$$h_k = \frac{2gh}{2g}$$

$$\text{i.e., } h_k = h$$

Since the T.E. variometer shows the rate of change of $h_k + h$, it will in fact show the rate of change of $2h$, or more simply, twice the rate of change of h .

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(I am sure this is all painfully obvious and could be written in about two lines, but I had to write it to prove it to myself!)

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Reprinted from "SAILPLANE AND GLIDING"; (when it only cost 2s.6d!)

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(The Proceedings of the 1970 Symposium on Competitive Soaring can be obtained from:

Soaring Symposia,
408 Washington Street,
Cumberland, Maryland 21502.

Price: \$5.25 ppd)

YOU, TOO, CAN BUILD A FLYING PLANK

By Lee Gilbert

The decision to build a 'Flying Plank' was arrived at by seeing a description and picture of this ideal type for home construction in a magazine. It had a short span of 25 ft., being a flying wing of medium performance made completely of wood. Aileron and elevator control work through one control surface on the wing, and directional control is by drag rudders on the wing tips. For landing there is one central wheel complete with brake.

After checking with DoT and finding I could license this type under the homebuilt category, I started construction. First my shed had to be enlarged as the ship was all one piece. A heating system already installed meant I could glue all year round.

Materials used in the project were Sitka spruce for Main Spars & ribs, plywood was all aircraft-type birch. Steel fittings to Spec. SAE 4130. Dacron was used for covering - the interesting thing about this material was that you shrink it to a good fit by heating it with an iron. Finally the paint was a plastic epoxy type brushed on.

Construction took about eight years, on and off, governed by funds available.

Now the problem of transporting the glider raised its ugly head. I decided on a completely enclosed trailer with big doors at the end. I could then put the glider on a small trolley and, on rails, remove it out of the end. I constructed this trailer but found problems with the width out on the highway, so I decided on a completely new design which covered the wing part with a removable aluminum frame, and covered the pod and the drag rudders with tarpaulins.

As this glider is an unusual design I get asked many questions about its flying qualities and the prototype testing. This was stable and completely normal.

And, now, comes the flying .. ! (Reprinted from "Cross-Wind" - Champlain Soaring Association)

A D V E R T I S E M E N T

The ultra-reliable Bertea ML200 Transceiver is now approved and available in Canada. This space-age beauty is fully transistorized, modularized, and expoxied to resist temperature variations, vibration, and humidity. Only 3.5 lbs., adaptable to any 3 1/8 inch cut-out, and less than 10 inches long. Adds a new dimension to soaring fun. Team up for enjoyable cross country flying and organized retrieves!

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C L U B N E W S

ALBERTA SOARING COUNCIL

In a letter from Frank Holman, President of the A.S.C., we learn with regret of the death of Walter McKinnon in a glider flying accident. Frank writes: "Walter McKinnon died of injuries received when his Tern went into an immediate spin on release from a tow which was too slow for him to control the glider. Walt was not completely familiar with the Tern and, in fact, was in the process of doing test flights to establish such things as the best tow speed, etc.

"We are going to miss Walt a great deal for he was one of those kind who would drop anything he was doing if he thought he could give you a hand, especially if it had anything to do with flying. His wife, Claire, is also one of a rare breed, who actually encouraged her husband to fly because she knew this activity was his greatest joy."

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CENTRAL ONTARIO SOARING ASSOC.

(Taken from C.O.S.A. "Crosswinds")

This past summer has been a very busy one for the Club, in spite of some of the worst soaring weather we have ever experienced.

Our East/West runway has finally been completed and some landings have been done on it already. Pilots seem quite happy with it & at last we can say goodbye to cross-wind landings! Our only towplane has just had its engine overhauled, and despite some minor problems, is running smoothly once again. The 1-23 that Cliff Bruner and Paul Puky purchased last year from Al Baldwin, has been sold to another Club member, Peter Gaittens who plans to share the flying with

his young son. We are hoping to sell the old TG-3 soon. Not that it's unsafe, it has many years of flying left, it's just that our 2-22 is getting almost all the flights.

This is the first year that cross-country flights have been made from our field, and we are very proud of the results. Six people made Silver C distance, and two of the six have fulfilled the requirements for their badges, i.e. Cliff Bruner made a flight of 44.5 miles to Stirling to obtain his Silver badge. (This was the first cross-country flight for the Club). Lorant Jenvay, who earned his Silver badge elsewhere, made flights to Belleville (58 miles), Gananoque (110 miles) and Brockville (136 mi.). Leo Haunsberger, Barbara Puky and Paul Puky also made flights to Stirling (44.5 m). Barbara is one of our Junior members, 17 years old! Last but not least, Gabe Orday completed his Silver badge with flights to Hastings (24 m) and Barrie (64 miles). Both flights were in a Grunau 11b. In all, we covered a total of 570 statute miles. The fact that out of the number of Silver C distance flights made, only 2 Silver badges were completed, hints at the lack of strong enough conditions for height gains or 5 hour durations. The Club altitude record was set and beaten by the same man, Lorant Jenvay, in his Ka-6. He reached 13,000 ft. a.s.l. on one cross-country, and on the next one got to 14,000 ft. a.s.l.

Gabe Orday and Lorant Jenvay participated in the Annual Labor Day Weekend Meet at Gananoque. (For their standings, see Rideau Gliding Club News. ED.)

A few organizational changes have been made as a result of the resignation of Ted Lipinski, our Secretary. Ted has always done an

excellent job and his dedication will always be appreciated. Ken Steeves is taking over, and to ease the workload, and following the example of other Clubs, the position of Membership Secretary has been created. Gabe Orday has agreed to take over the new position. To avoid confusion, the Club now has a Post Office Box to which all mail should be sent; merely indicate the person to whom it is to be directed and send it to C.O.S.A., P.O. BOX 762, Peterborough, Ontario.

D.B.

CHAMPLAIN SOARING ASSOCIATION

(Taken from "Cross Wind")

Solo flights were made by Gilles-André Seguin, Dr. Fernand Lavigne, and Lee Gilbert.

Our social activities started this year when Brian Baldry and Gilles-André Seguin organized the best steak party and barbeque we have ever had. Club members and visitors extended their appreciation to Ian Harding for kindly making available the facilities of the Richelair Clubhouse.

We are sorry to report that Max Pelt and family have been transferred to Ottawa. Max was one of the early towpilots in the club's history and he has spent much tender loving care keeping our towplane (HVT) going.

GATINEAU GLIDING CLUB

(Taken from the 'Gatineau Glider')

1971 NATIONALS: The dates tentatively set for this event are 29th June to 8th July; these dates will be confirmed later.

Notable Flights: Congratulations are due to John Firth and Peter Coleridge for excellent flights over the Labour Day weekend to Gananoque & a considerable distance back towards Pendleton.

If the weather had lived up to its earlier promise and the lift had persisted until 5 or 5:30, there is not much doubt that Peter Coleridge would have completed a Gold Dist. or a Diamond Goal & return.

Sports Award: The Ontario Sports Award given by the Ontario Government for higher achievement in amateur sports, was awarded to John Firth in July of this year.

Life Membership Presentation:

To express the gratitude of the Club for valuable and outstanding services, the Directors awarded a Life Membership to Marc Legault.

WINTER STORAGE: Hangar space is available from Oct. 15 - Apr. 1 Contact: Mrs. Terry Tucker, c/o, G.G.C., P.O. Box 883, Station "B", Ottawa, Ont.

Rates are as follows:

Tent Trailers	\$20.
House Trailers (17 ft.) ..	\$30.
(over 17 ") ..	\$40.
Boats (on trailers to 20').	\$14.
(\$5 per foot thereafter).	
Aircraft (36' wing span) ..	\$80.
(over 36' ") ..	\$100.

LEAGUE OF ONTARIO AIR CADETS

(Letter from Wayne Caston).

No. 1 Gliding Centre, C.F.D. Mountainview, Royal Canadian Air Cadets completed 3,574 launches for 288 hours in the eight weeks of Air Cadet Summer Camp, usually using two of our three SGU 2-22E's at any one time.

MELVILLE DISTRICT SOARING AND GLIDING CLUB, MELVILLE, SASK.

(Letter from R. Bolt, Sec-Treas.).

For the first time, I believe, here is some news from our Club.

We managed to struggle along with our small Club and although we have nothing spectacular to report, we have had a fairly good

season. Two of our members have licenses and one is solo. Lots of interest has been shown & we hope by next year to have a qualified instructor.

Our equipment consists of a 2-22E, a trailer, a rebuilt winch with a level wind and a hangar. Our season started on May 4 and as soon as the snow disappears (this year), we hope to have some more flights. A total of 55 airtows & 208 winch tows have been made so far. The airtows were made during the time our glider was leased to the Air Cadet League. No accidents were encountered, except for the occasional cable break, the last one at about 75 feet. As mentioned we did not set any records, but we have great fun and are getting pretty good at spot landings using spoilers. We even managed to soar a few times, finding weak thermals at 800 feet. Our main activities have been in the evenings; and in the winter time we will be having study sessions and discussions. Our Club has 10 members with room for more."

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MONTREAL SOARING COUNCIL

Bob Gairns' writes:

After the frustration of a prolonged period of relatively poor conditions at weekends, Saturday, 29th August, looked like a promising day, and a number of pilots took the opportunity to go cross-country. A wind of 20 mph from the Northwest was not the best for a flight to Quebec, but nevertheless John Chamberlin (Skylark 2b), Kurt Kovacs (SHK), Wilf Jonah (Kestrel) and Bill Roach (Ka6E) set off in that direction.

With the wind, thermals were narrow and Wilf Jonah showed a barograph trace which indicated 2 points where he was down to 600 ft indicated and from which he got

away by making very steep turns at 65 kts. Things went fairly well to about Three Rivers (120 m. out) when overconvection made the going difficult. It was then a case of working weak lift, and some pilots got low in the process, being forced to drift along under an overcast with a few sustaining patches of lift now and then.

John Chamberlin got further than most with 160 miles, with Kurt Kovacs in the same area. Bill Roach made 125 miles and Wilf Jonah turned back to land at Drummondville A/P, 106 miles. Flying more directly downwind, Gerry Nye had a good flight in a 1-26, 75 miles to near St. Jean's, Que., and Bela Kacso (Skylark 4) flew downwind to reach the U.S. border at Arlberg, about 100 miles. Kirk Hatcher (K8) bravely set off on his first cross country and made a safe landing at Rigaud, for 20 miles.

The best flight of the year was made on a Friday (Sept. 11th) when John Bisscheroux (Skylark 2b) used a westerly wind to help him get to beyond Montmagny, for 235 miles, before poor conditions forced him down.

On the social side, an excellent party was enjoyed Sept 19th when our Swiss Colony within the Club entertained us with traditional food and music.

Membership in the Club is the highest ever, with 210, and our 3 Supercubs are all kept busy. There are moves afoot to purchase a 2nd Club Blanik and a syndicate high performance single seater.

Gunter Geyer-Doersch and Helmut Hermes eventually flew their LS-1 at Hawkesbury for the 1st time on Oct. 4th. This aircraft was promised for delivery in July and several calls to Germany were made to expedite it. In the end, a trip to the plant was made, where a very "patient"?? Gunter waited for

it and saw it safely on the plane to N.Y. (Prospective LS-1 buyers please note: they were originally allocated Works No. 24 and they finally received No. 54).

QUEBEC SOARING CLUB

(Taken from "Le Pingouin")

So far this year our Club has enrolled 22 new members. We now have a brand new Blanik (CF-CVQ), and hangars in which to house this aircraft and the K6. A telephone has been installed and our runway now has markers.

Claude Rousseau and Keith Park have completed their HP-14 after 3½ years, and Alex Krieger has succeeded in getting his AIR-100 back. Let's hope he gets the ship ready soon enough to fly it this season.

Several excellent flights have been made including one by Maurice Laviolette (K6CR) - St. Raymond-Côteau Landing via Drummondville, Granby and Valleyfield. Jean Belavance (K6CR) made a 50 km flight to earn his Dist. & Benoît Morency and Bill Cleary obtained their Cs. In addition to this six students passed their D.O.T. examinations.

RED RIVER SOARING ASSOCIATION

(Taken from "RRSA Newsletter")

Rick Smith, our winch-winding wizard, has done a great job this summer. A couple of weeks ago we had a problem in effectively grounding the winch truck. The result was that as Rick talked over the two-way field telephone during a launch, he received minor electrical shocks up his arm from the telephone. He carried on that way for 6 or 7 launches before we rectified the problem, his conversation during these launches being punctuated by gasps and grunts. To carry out each launch under those adverse conditions requires real

fortitude. Rick also spent two weeks out at the field working around the hangar and ground. (A real live wire ..?)

Our J-3 Piper Cub had an unfortunate bit of bad luck about a month ago when it was taxied into the trailer carrying our L-Spatz. Although there was little or no damage to the L-Spatz, the J-3 had the prop bent and broken, and suffered damage to the carburetor and oil tank. However, it has been repaired now, & seems to be working better than ever! The L-Spatz was laid-up for a spell with troubles of its own. However, by the time this goes to press, it is likely these minor repairs will have been effected & the ship will be airworthy again, thanks to Pete Smith and Paul Krauss.

C.F.I., Dunc Marshall, is introducing a new regular feature which will involve each instructor preparing an in-depth paper on a particular aspect of the flying operation relating to safety and efficiency. Franck Pellerin kicks off this series with an article on the effects of crosswind components on the choice of a left or right circuit pattern.

RIDEAU GLIDING CLUB

(Letter from Jim Sleeth)

A very enjoyable Labour Day contest was held at Gananoque A/R. Points for out & return tasks were pre-set, with the choice of task left up to the pilot. Free distance flights were scored at half a point per mile. Six sailplanes took part, 2 from Hawkesbury, two from Peterborough, one from Erin, and one local. The one really surprising thing was that there were n't any competitors from Pendleton.

Saturday turned out to be a washout with a solid overcast and very little convection, and all flights were therefore local.

Things straightened up over night, and with launching starting around 11:30, it turned out to be a good day for quite a few. There were 5-10 mph winds from the North and most elected to go south. Best flight of the day went to Bob Gairns in his Libelle H-301 with a 173 mile flight to a sports field in the suburbs of Albany, N.Y. Next best for the day went to Geo. Adams in a Diamant 16.5 for 65 mi. to Lowville, N.Y. Lorant Jenvay, (Ka6CR) was third with 40 miles to Black River, N.Y. Next came the local boy, Walter Piercy, again trying for that evasive Silver "C" distance, but unfortunately missed it with a 26 m. flight to Lyn, Ont. Bob Patterson (Ka3) made the shortest flight of the day in a machine with a glide ratio of 17.5 and a higher sink rate than a 2-22 but just the same he made 5 miles on his first cross-country, with a 2 mile down-wind tow.

Monday, 7 September, started out pretty well in the morning & early afternoon, but conditions worsened as the afternoon wore on. Nearly everyone decided to head in the general direction of their home base. Again Bob Gairns got the best distance with a 95 mi. flight to Pendleton. Next Lorant Jenvay made a 61 mile flight from Gananoque to Maitland, then most of the way back to Lansdowne, Ont. A creditable flight of 55 miles was made by Gabe Orday (Grunau Baby) to Belleville, Ont., and a short flight was made by Bob Patterson who, this time, released over the airport to make 3 miles. Other flights made by J. Dennis (Ka6CR) and J. Agnew (Diamant 16.5) were local.

The day was livened up a bit when, after hearing a loud whistling from above, we looked up to find John Firth screaming across the field at about 4-500 ft. Ob-

viously he still wasn't too sure of Mr. Keirans' Post Office after the mess up this summer, as he delivered the Labour Day Contest trophy, that he won last time, by Glider Mail from Pendleton. After a short stretch of the legs and a bite to eat, he was on his way again back to Pendleton with a friend in a Skylark 3, who had just made his turnpoint at Gananoque for his Gold distance. Not long afterwards, another Skylark 3 came along also trying for the same flight. Unfortunately none of the three made it back to Pendleton.

<u>Results of the Meet:</u>		<u>Pts</u>
1. Bob Gairns (MSC) Lib.H301		134
2. Lorant Jenvay (COSA)Ka6CR		50½
3. George Adams) (MSC)		32½
John Agnew) Diamant 16.5		
4. Gabe Orday (COSA)Grunau B'y		27½
5. Walter Piercy) (RGC) Ka6CR		13
Joe Dennis)		
6. Bob Patterson (Erin) Ka3		4
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VANCOUVER SOARING ASSOCIATION

(From "Vancouver Soaring Scene")

At the General meeting held August 25th, the President (Jack Barron) noted that all the Directors had read and approved the contract offered by D.O.T. for VSA to operate Hope Airport. He also noted that VSA would be entitled to collect all landing fees from April 1st, 1970.

C.F.I. George Eckschmiedt and Monty Williams have equipped the Club planes with G.R.S. (citizens' band) radios. These radios are the 100 milliwatt type walkie-talkies but their operation was enhanced by the installation of outside antennas. These antennas are individually tuned and marked for each plane and they are to be installed and removed every flying day. The

intended use of these radios is to provide instructions from ground for any necessary correction, especially while on the winch. Initial tests proved them to be useful for a couple of miles.

The Club is in need of a transistorized 5 watt base station to be used at the take-off area. This would increase the communication range considerably. We only want a single channel so low price is important, but the unit must be the transistor type. Anyone knowing the whereabouts of one please contact Monty Williams at V.S.A.

Club President Resigns:

V.S.A. President, Jack Barron, has resigned and left to train as a Meteorologist in Ottawa. Jack was on his second term as Club President and has served as an Officer and Instructor for many years. Jack is a tremendous worker in the Club, was involved with the Air Cadet League, is Vice-President of S.A.C., sailed and repaired sailboats and was involved with the homebuilders and antique aircraft rebuilders. Though we hate to lose him, we wish him every success in his new career.

S.A.C. ORGANIZATION AND ADDRESS CHANGES

Please note that Mr. Kerry Bissell, Air Cadet Liaison Committee Chairman, has changed his address to Box 715, Yellowknife, N.W.T. Mrs. Terry Tucker has taken over the office of Treasurer from Mr. Don Wood. Terry is also Membership Secretary and her address is 786 Chapman Boulevard, Ottawa 8, Ontario. The Central Ontario Soaring Association (C.O.S.A.) has changed its Club address to P.O. Box 762, Peterborough, Ont.

NEXT ISSUE OF FREE FLIGHT

The deadline date for receipt of material for the January 1st issue is Friday, December 4th. The new format will commence with this issue, i.e. there will be a thin card cover on the front featuring Mr. Gil Parcell's design and the S.A.C. Organization Chart with names and addresses, and also a list of S.A.C. Supplies, will be included. A technical article entitled "Local Stability Analysis" will be featured and also Part 2 of the "Canadian Glider Boosters", but the rest is up to YOU.

Articles or news should be sent to "Free Flight" Editor (Mrs. Sylvia Webb), 234 Villeneuve Street, St. Eustache, P.Q., or c/o the S.A.C. P.O. Box in Ottawa.

CHRISTMAS GIFTS

Since the S.A.C. Supplies are not included with this issue, here are just a couple to note as possible Christmas gifts:

S.A.C. ties (Navy with Glider Design)	...	\$2.75 each
" blazer Crests (Navy)	...	\$6.50 "

Order from S.A.C., P.O. Box 1173, Station "B", Ottawa 4, Ont.

FOR SALE

PHOEBUS C (17-metre) water ballast model. Complete with: British 'Export' C. of A.; covered light-weight trailer designed and built especially for this Phoebus. Good range of instruments; oxygen bottle; other 'extras'. Under one year old (Dec. '69). Holder of the British 300 Km. triangle record (112 Kph). PRICE: \$9,500.00. (At Canadian border). Offers accepted. Please contact: John Delafield, Suite No. 2, 3088 Don Mills Road, Willowdale, Ont. (Toronto). Phone: (416) 491-1984.

STANDARD AUSTRIA (CF-PHH) includes trailer, parachute & full instrumentation; artificial horizon. Insured until June 30, 1971. Wings and fuselage to be refinished during winter. PRICE: \$5,500. Call: Alf Marcelissen (416) 664-4743, or write: P.O. Box 297, Stoney Creek, Ontario.

SCHWEIZER 1-26. Completely rebuilt, modified to latest model. Complete with parachute, trailer, sport canopy. Contact: Mr. Albert Masseau, 450 Ave Larivière, Iberville, P.Q.

SCHWEIZER TG-3A, (CF-ZBU), with trailer, basic instruments front & rear. Always hangared, good condition, ideal for starting Club. PRICE: \$1,600. Contact: C.O.S.A., Box 762, Peterborough, Ont.

SCHWEIZER 2-22 Prototype (CF-ZBL). With instruments. PRICE: \$1,500 or best offer. Contact: M.S.C., Box 1082, St. Laurent, Montreal 379, P.Q. Or call: (514) 671-2420 or 259-1437.

SCHWEIZER 1-19 - PRICE: \$750.00. WINCH: \$250. Contact: Cu-Nim Gliding Club, Box 5922, Station "A", Calgary, Alberta.

CF-MOZ CINEMA TGL, last flown Dec. 1968. Subsequent repairs executed to fuselage, but wings require partial rebuilding. Trailer could be made available. Offers to: Red Deer Soaring Association, Box 963, Red Deer, Alberta. Or call: (403) 346-5276.

RADIOS: Car set - Pye Cambridge 7 watt, 6 channel, 12 V, with magnetic rooftop aerial. Glider set - Pye Bantam 12V, 3 channel, portable, aerial tuned. Range of 70 miles air-to-ground, dependable. Any offer over \$500 for the pair will be considered.

WINTER BAROGRAPH: Ink trace on chart paper. Non-freezing ink; good to over 35,000'. PRICE: \$90. PARACHUTE: 26 ft. U.S. Navy Back Pack. Just modified to install latest quick opening pilot chute. PRICE: \$60.

J8 HORIZON & INVERTER: Use with rechargeable 12V motorized battery, 10-12 hrs. per charge. PRICE: \$150. Write or call: C.M. Yeates, c/o, Moirs Ltd., 1820 Argyle St., Halifax. 902-423-8141.

Advertising in FREE FLIGHT of personal equipment (such as your own glider, instruments, parachute, oxygen equipment, radio, etc.) is FREE as a service to S.A.C. members. For non-SAC members and for commercial advertising (aviation supplies and aircraft sales by dealers) a charge of \$8 for a full page is made. (Ads of ½ page at \$4 and ¼ page at \$2 are acceptable). Cheques for the latter should accompany the ad & be made payable to the Soaring Assoc. of Canada.

A d v e r t i s e m e n t

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DUPONT JACKETS & FLIGHTS SUITS

The nylon squall jackets and flight suits similar to those donated by Du Pont of Canada to the International Team members this year are still available. (See picture and write-up in "Free Flight" issues of July and Aug-Sept 1970, respectively). Please use the form below when ordering and send it to Bob Carlson, 72 Humbervale Blvd., Toronto 560, Ont. Three to four weeks should be allowed for delivery and a cheque (postdated acceptable) should accompany the order.

NAME & ADDRESS: _____

- (1) SQUALL JACKET at \$12.00 each (Delete words not applicable)

Size: (Ladies' cut) Short Chest/Bust:
 (Mens' ") Medium Sleeve
 Tall length:

Colour of jacket: White/Blue/Red

Colour of contrasting stripe: White/Blue/Red/Other:

CREST at \$2.75 each (additional) Maple Leaf with soaring birds

Club initials: Or other:
 (Crests are not obligatory)

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- (2) FLIGHT SUITS: (a) Blue - nylon/cotton fabric at \$40.00 each.
 (b) Variety of colours - plain cotton at \$25. ea.
 (Crests are an additional \$2.75 if required).

Colour of suit (if (b) only) Stripe:

Size: Ladies/Mens: Chest/Bust Leg:

(Short; Tall; Waist: Sleeve
 Medium). Neck: length:

Crest details: