

From : Ann Welch,
Chairman Rules and Classes Sub-Committee, C.I.V.V.

To : National Aero Clubs

June 1974

Dear Mr. Secretary General,

HANG GLIDING

This letter is to ask the views of your Aero Club on the subject of Hang Gliding.

As you know, FAI has a responsibility for records and standards for all forms of aeronautical sport. Since it currently registers records for space flight, it is logical that it should consider the introduction of records for the rapidly growing sport of hang gliding.

Many N.Ae.C.'s regard hang gliding as a separate activity from conventional gliding, and this has resulted in hang glider enthusiasts forming their own 'National' Associations. In general, these associations are not, or not yet, affiliated to their N.Ae.C. and are therefore not recognisable by FAI.

There is no doubt that hang gliding will continue to grow, although obviously to a varying extent in different countries. It is important, therefore, that this new sport is not excluded by default from the world of sporting aviation.

Technically, hang gliders are either SAILWINGS of a generally delta plan-form, taking up an aerofoil section only when air is flowing past the wing, OR they are rigid aerofoil ultra-light gliders. In both groups the pilot is suspended below the wing using his legs as undercarriage and take off power source (by running). Control is entirely by body shift in sailwings, but in the rigid ultralights may be weight shift, or by conventional control surfaces, or by a combination of both. Sailwings weigh some 15Kg and rigids 15kg - 45kg. It is becoming increasingly apparent that the simple sailwing will continue because it is cheap and easy to build, even though its performance development is limited. The ultralight rigid has greater performance potential, is less cheap, and is likely to develop more in the direction of the conventional glider, but with a large and healthy input of new ideas. Their performance is at present low, but is steadily improving and will continue to do so.

If FAI is to provide a record structure, or other proficiency or championship frameworks at world level for hang gliders it will be necessary to decide a number of matters. For example, what would be the chain of responsibility for this activity - should FAI set up a new Commission to look after hang gliding, or should it be dealt with by CIVV? Hang glider associations would need to be affiliated in some way to their N.Ae.C. if their members are to have their records etc internationally recognised. Would this be acceptable to N.Ae.C.'s? Further, it would be necessary to decide whether to put sailwings and rigids into two separate categories - on the basis that the rigids, in due course, could attempt records in the conventional glider category. Another possibility would be to create a conventional glider record sub-category for ultralight rigids?

Attached to this letter is a short questionnaire which it is requested that N.Ae.C.'s kindly return as soon as they can. From the information received FAI will better know how to proceed. Thank you.

AW/SP June 1974

Ann WELCH

juin 1974

AUX AERO CLUBS NATIONAUX

Monsieur le Secrétaire Général,

VOL "SUSPENDU"

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Comme vous le savez la FAI a pour mission d'établir les règlements régissant les différents sports aériens et les records. Certifiant les records de l'espace il est normal qu'elle envisage de reconnaître l'établissement de records pour planeurs "suspendus" qui prennent un rapide essor.

De nombreux A.C.N. considèrent ce nouveau sport comme étant en dehors du vol à voile conventionnel, ce qui a poussé les enthousiastes du vol "suspendu" à former leurs propres associations nationales. En général ces associations ne sont pas, ou pas encore, affiliées à leur Aéro Club National et ne peuvent donc être reconnues par la FAI.

Le vol suspendu va, sans aucun doute, continuer à croître, à un rythme différent selon les pays. Il est donc important que ce nouveau sport ne soit pas exclu, par défaut, du monde de l'aviation sportive.

Techniquement, les planeurs suspendus sont soit des "voiles volantes" du genre "delta" prenant la forme de profil d'aile lorsque l'air s'écoule le long de l'aile, soit des planeurs ultra légers à profil d'aile rigide. Dans les deux cas le pilote est suspendu sous l'aile, il se sert de ses jambes en guise de train d'atterrissage et pour le décollage, en courant. Les commandes se font entièrement par déplacement du corps pour les "voiles volantes" mais pour les planeurs ultralégers rigides elles se font par déplacement du corps ou par les systèmes de commande conventionnels - ou par les deux combinés.

Les "voiles volantes" pèsent environ 15 kg et les "rigides" entre 15 et 45kg. Il devient de plus en plus évident que la simple voile volante continuera à être populaire parcequ'elle est peu onéreuse et facile à construire, bien que ses performances soient limitées. L'ultra léger rigide à possibilités plus grandes quant aux performances est plus coûteux et tendra de plus en plus à se rapprocher du planeur conventionnel, tout en permettant l'application de nouvelles idées. Les performances actuelles sont faibles mais s'améliorent graduellement et ne cesseront de s'améliorer.

Si la FAI se préoccupe de l'établissement de règlements pour les records ou les championnats de cette nouvelle catégorie au niveau mondial, il deviendra nécessaire de prendre certaines décisions, par exemple celle de créer une commission réservée à ce sport, ou de le rattacher à la CIVV ? Les associations de "vol suspendu" doivent, sous une forme ou une autre, s'affilier à leur Aéro Club National si leurs membres désirent voir leurs records etc.. reconnus sur le plan international. Cela est-il acceptable par les A.C.N. ? De plus, il serait nécessaire de décider si les "voiles volantes" et les "ultralégers rigides" doivent être inclus dans une seule catégorie ou séparément étant donné que les rigides pourront éventuellement tenter d'établir des records dans une catégorie de planeurs conventionnels. Une autre solution consisterait en créant une sous-catégorie de records conventionnels pour les ultralégers rigides.

Un questionnaire succinct est joint à cette lettre. Les Aéro Clubs Nationaux sont priés de le remplir et de le retourner le plus tôt possible. D'après les informations reçues, la FAI se chargera de leur destination.

Avec mes remerciements,

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June 1974

To National Aero Clubs

QUESTIONNAIRE ON HANG GLIDING

1. How much hang gliding activity is there in your country ?

2. Does hang gliding have its own national association (s) in your country, or is the sport affiliated to your N.Ae.C. ?

3. What is the attitude of your N.Ae.C. to hang gliding - bearing in mind its increasing popularity ?

4. Do you think that a) delta sailwings and ultralight rigids should be considered as the same animal, or b) would you put delta sailwings in one category, with ultralight rigids as a separate category ?

5. What do you think of the idea of adding an ultralight category to the schedule of conventional glider records for the rigid aerofoil aircraft only ?

6. Do you think that FAI should a) set up a separate commission to deal with hang gliding, or b) should it be looked after in some way by C.I.V.V. ?

7. Additional remarks.

PLEASE RETURN TO FAI, 6 rue Galilée, 75782 PARIS CEDEX 16

QUESTIONNAIRE SUR LE VOL "SUSPENDU"

1. Quelle est, dans votre pays, l'activité du vol à voile 'suspendu' ?
2. Le vol suspendu a-t-il sa propre association nationale ou ce sport est-il affilié à votre Aéro Club National.
3. Quelle est l'attitude de votre Aéro Club envers le vol "suspendu" en considérant sa popularité croissante.
4. Pensez-vous que a) les voiles volantes delta et les ultra légers rigides doivent être considérés comme un même engin, ou b) mettriez-vous les voiles volantes delta dans une catégorie et les ultra légers rigides dans une autre catégorie ?
5. Que pensez-vous de l'idée d'ajouter une catégorie d'ultra légers à la série de records conventionnels qui serait uniquement réservée aux planeurs à profil d'aile rigide.
6. Pensez-vous que la FAI doive : a) créer une commission séparée réservée au vol à voile suspendu, ou b) que la C.I.V.V. s'en occupe d'une manière ou d'une autre.
7. Remarques additionnelles.

From Ann Welch

to CIVV

December 1974

HANG GLIDING, Consideration for FAI and CIVV

At present hang gliding is the fastest growing sector of aviation, but as yet FAI does not provide for it. At the last FAI General Conference - at the meeting of Presidents of Commissions - CIVV was asked to consider action on the sport of hang gliding.

There are various points that should be taken into account at this stage.

1. That hang gliding may develop sufficiently differently from gliding to need a Commission of its own : alternately, the two sports may grow towards each other so that two Commissions would result in duplication.
2. That because the sport is still in a relatively early stage of development it would be unwise to set up a rigid structure of records and badges ; alternately unless a start is made on international standards different national standards and records will be set up in different countries.
3. That any framework of standards introduced by FAI should aim to help the sport develop actively and safely, and should take into account the fact that hang gliding is the only form of flying that many young people can afford.

During last summer a questionnaire was sent to NAEs asking about hang gliding in their country, and also whether or not CIVV should look after the FAI end of hang gliding, at least initially. 18 replies were received, showing that the amount of hang gliding varies widely in different countries and that where there was very little the Aero Club would like to have advice and information from FAI. Of the 18 replies 11 said that CIVV should look after hang gliding at least initially ; 5 went for a separate commission and two indicated no action.

If CIVV is to discuss hang gliding at its March meeting with a view to taking any decisions, it may be useful to include here a brief comment on history and present position..

The hang gliding revival started in USA a few years ago as a form of revolution from expensive and sophisticated forms of flying. The infant sport evolved around the basic conical rogallo sailing developed by Francis Rogallo of NASA. There are now, worldwide, many thousands of conical rogallios of 16 - 20 ft keel length, several hundred Rogallo variants, truncated conicals, cylindricals, and high aspect ratio sail wings with and without some aids to control other than only body shift. There are also some hundreds of rigid aerofoil hang gliders ranging from conventional aeroplane platform to swept tailless aircraft, with or without conventional aerodynamic controls. Some of these aircraft have made use of thermals to fly short cross-country distances, and several pilots will be trying for Silver badge flights this summer.

The rigids behave like ordinary aircraft, stalling in a normal fashion. Sailwings tend to parachute at the stall, but are less safe if dived. If the angle of attack is reduced sufficiently the sail will collapse and no longer provide lift ; the aircraft becomes uncontrollable and dives into the ground. Devices are now being developed to cause the sail to reflate should luffing occur. Although fatal accidents have occurred due to luffing of the sail many of these occurred before the phenomenon was properly understood, and some because the Rogallo was being flown outside its very restricted performance and limitations. Used for training under supervision, and for slope soaring in suitable windstrengths on hills and mountains where there is no violent turbulence, the basic conical Rogallo is a robust and safe means of getting into the air and carrying out extended soaring flights. Most other accidents to date have resulted from shortage or absence of training facilities and experience. The future of the sport lies both in the continuance of the rogallo and in the development of rigid aerofoil aircraft of varying configurations, cost, and performance, plus development of training programmes.

The rapid growth of hang gliding has, however, not been without its effect on the conventional gliding scene. There is now a definite move by some pilots and manufacturers away from the pursuit of ultimate performance towards cheaper and simpler aircraft more suited to recreational soaring. There is, therefore, some development in hang gliding towards conventional glider performance, and some development in conventional gliding towards simpler and cheaper forms of flying. If this continues, and there is no reason why it should not, in 3 - 5 years time there is likely to be some merging of the two sports. The present performance gap between L/D 1:10 and the 1:20 of some school gliders will narrow and possibly disappear. This performance range is full of interesting and inexpensive possibilities especially for enterprising amateur constructors.

From the above it would seem that there may be no great case for setting up two quite separate systems of badges or records for hanggliding. For badges there is quite a case for using the existing Silver Badge as the performance link between hang gliding and conventional gliding. It could be enough to introduce, say, two lesser badges below the Silver solely for hang gliding. (Below these NAcCs could introduce such elementary training standards as they wished for their own conditions).

For records, there would be little reason at present for introducing any but distance records. These should be in a special category for hang gliders as defined. There is no reason at all for encouraging altitude or speed records, and with existing duration flights of 8 and 10 hours there is no point in encouraging anything more. Distance records, however, exploring along ridges with some thermal help would develop both pilot skill and glider performance in good directions. Free distance, straight distance to a goal, and out and return distance would all provide an interesting challenge.

The following is a draft of how these ideas might look if introduced into the CIVV Code as a separate section. If at a later date a separate Commission for hang gliding were thought desirable, the complete section could simply be lifted out and transferred.

DRAFT OF POSSIBLE SECTION ON HANG GLIDING

Definition of a hang glider. A hang glider is a heavier than air fixed wing (not rotating wing) glider capable of being launched and landed solely by the energy and use of the pilots legs. The empty weight of the aircraft shall not exceed 60kg. For the purpose of badge and record flights the hang glider must be flown solo and be foot launched by the pilot without any mechanical aid or external power source. A single helper is permitted to balance the aircraft at take off. The landing may be made on a skid or wheel(s).

FAI Badges. Flights for badges may not be attempted until the pilot has carried out at least 20 recorded flights on a hang glider.

International A Badge. 5 flights of not less than 30 seconds and 2 flights of not less than 1 minute all ending with a normal landing. within 3 metres of the centre of a designated spot.

International B Badge. 2 flights of not less than 20 minutes duration and 1 flight of not less than 1 hour duration all ending with a normal landing.

Silver Badge. Requirements as laid down in Chapter 5 of the Sporting Code.

Control and Measurement. The requirements in Chapters 1-3 of the Code apply except that no barograph is required for any flight made under the continuous surveillance of an official observer.

Note : Badges could be the standard international A & B badges except that instead of a dark blue background to the white birds, it could be light blue. Any Silver leg done on a hang glider would entitle the holder to paint 1/3 of the Silver badge wreath light blue. This system would be inexpensive.

Records. As indicated in text above, controlled as in Chapter 6 of the Code.

A. WELCH