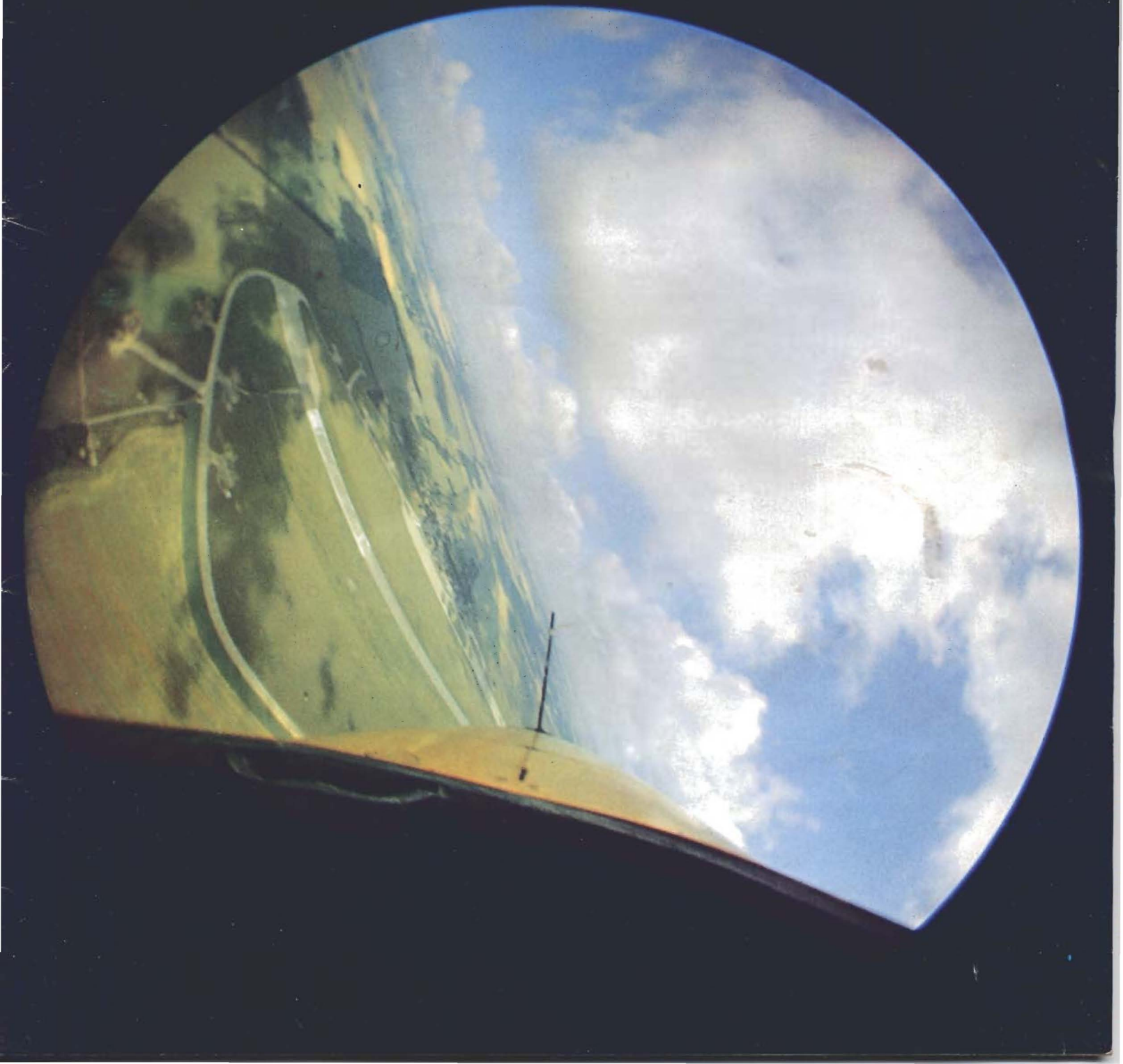
SAILPLANE & GLIDING

DECEMBER 1978 – JANUARY 1979 65p

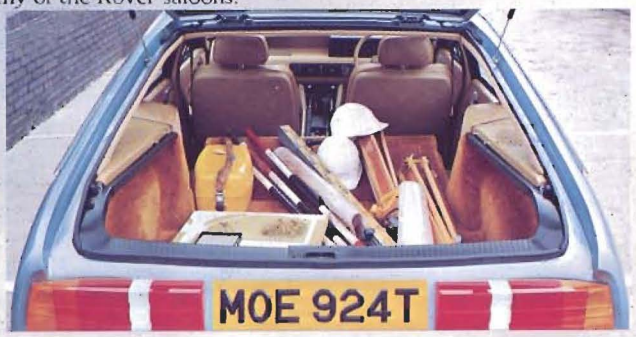


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Magazine of the BRITISH GLIDING ASSOCIATION

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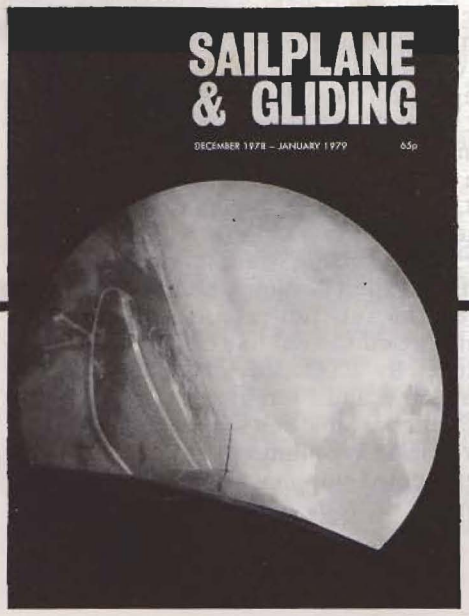
Consultant Editors:
Alan E. Slater
Rika Harwood, 66 Maisemore Gardens, Emsworth, Hants. Tel 024-34-4580

Subscriptions:
Jenny Rolfe. Tel. Market Harborough 67084.

Committee:
P. B. E. Thompson (Chairman), M. Bird, F. G. Irving

Advertisement Manager:
Peggy Miéville, Cheiron Press, 8/10 Parkway, London, NW1 7AD. Tel. 01-267 1285

Cover: A fish-eye lens shot of Duxford airfield taken from a Swallow by John Kirsch.



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IF PIGS HAD ENGINES

RODNEY WITTER, who visited the Eiri Avion factory and flew the PIK 20E on a recent visit to Finland, gives his views of this new motor glider.

The idea of a high-performance self-launching sailplane is one which will never be accepted by the true purist. However there must be a large number of glider pilots who will welcome the advent of a machine which offers tremendous freedom and flexibility.

Eiri Avion have decided that a good market exists and have developed from their world beating PIK 20 the motor version – the 20E. Originally flown in 1976 with a 30hp Kohler engine, the first version was found to be underpowered. The production model is now to be equipped with a modified snowmobile engine, the 43hp Rotax 503, a two-stroke using 98 octane in a 40 to 1 mixture.

Hearing of these developments our syndicate took an option on a 20E in September, 1977, although at that time a production date could not be forecast. In March 1978 the pre-production prototype made its first flights and an extensive testing and certification programme began, as the factory prepared the jigs and fixtures for production.

I was fortunate to visit the Eiri factory at the beautiful location of Jamijarvi and inspect and fly the 20E at the end of August. Throughout my visit Technical Director, Hannu Korhonen and his assistant, Stefan Nyström, were most generous with their time in showing me the factory, and patient with my questions about the 20E.

An increased use of carbon-fibre

The engineering maxim "If it looks right it probably is right" could have been coined for this aeroplane: From the first sight of the glider one feels that here is a machine which will fulfil its purpose. The 20E is not a converted 20D but obviously borrows most of its features from the earlier machine. Notably weight has been saved by increased use of carbon-fibre. At the fuselage/wing fairing, adjustments have been made to increase the main spar depth by 20mm and save weight. The wings have been swept back about 1½ degrees to give the correct C of G. The nose of the glider has been extended 80mm to provide for a flat, 33 litre, fuel tank behind the backrest, and the tailplane has been increased in area by 25% in the interests of stability. To aid taxying, 120mm wheels have been built into the wingtips and a steerable tailwheel is provided. The empty weight is about 300kg with engine, fuel tank, battery and auxiliary wheels. The wing loadings can vary between about 36 and 47kg/m^2 (with maximum waterballast at 120kg).

The engine itself is mounted on a pylon which swings up, with the assistance of a gas strut from its compartment behind the main spar. The propeller axis is set above the crankshaft line of the inverted two cylinder engine and is geared down 2:1 by a toothed belt to aid noise reduction.

Inside the cockpit two large levers on the righthand side are used to extend or retract the engine: One lever first opens the doors and then 15 quick turns are applied to the second lever to erect the engine, then the doors are again closed with the first lever. Engine controls are mounted on the left of the instrument panel comprising ignition switch (single ignition) starter button, choke, throttle, electric fuel pump switch and decompressor. Other controls are as



the 20D with the droop of the full span flaperons controlled from a sliding knob on the left.

Start-up procedure is – open doors, extend engine, close doors, brake on, fuel cock on, main switch on, fuel pump on, choke set, throttle set, ignition on, press starter. With the

Choke pushed in immediately with engine running

engine running the choke can be pushed in immediately and the fuel pump switched off, there being an engine driven pump. Engine checking consists of ensuring that full rpm are being developed before a take-off is attempted. In the case of the prototype about 6300rpm is the maximum static.

Taxying is very simple with good rudder control when the throttle is "gunned". The into wind wingtip is kept on the ground when taxying but I was unable to prevent it "changing wings" of its own accord as I turned crosswind to line up for take-off. Being more than apprehensive about being entrusted with the only 20E at present in existence my pre take-off checks were religious. To leave nothing to chance I went through a powered check list and followed it with CBSIFTCB for good measure before easing the throttle forward to the maximum.

The glider quickly moved off on the rough stony strip and I was able to level the wings and easily balance on the wheel as the speed built up. With zero flap selected the 20E required lifting off at 90km/h and the climb was trimmed out for 100km/h. From the ground it was estimated that the 20E was 50ft up within 300yds from standstill, this with a 5kt headwind, 180lb pilot, no water and a roughish strip. From standstill, 1000ft came up after two minutes which is very acceptable, especially as I was flying with the wheel down, and no doubt in a far from expert fashion. This was the only occasion that I tested the full power performance as unfortunately I misinterpreted the red line on the cylinder head temperature gauge: By 1000ft the temperature had reached the red line at 200°C and I throttled back. I learnt later that in fact 230°C is permissible and maximum throttle setting is available for at least five minutes.

For an hour I experimented stopping and retracting the engine, then going through the restart procedure, this being

best done at about 100km/h (the maximum engine manoeuvring speed being 140km/h). To put away the engine the ignition is switched off and the decompressor handle operated. After a surprisingly long time the rotation (viewed in a small mirror) slows down and with the propeller in about the four o'clock position the decompressor is released – this slows the rotation further enabling you to catch the propeller at exactly the six o'clock position with the main door lever which also operates the engine brake. The engine can then be wound away and the doors closed.

Not being a plastic pundit I cannot comment on the flight characteristics of the 20E as a glider – no doubt it is very similar to the 20D although a small sacrifice in performance must be accepted for the wingtip wheels and tailwheel. I had not anticipated the rather flat approach however; using +8° of flap and full brake I landed much further up the field than planned. The production version will however have a 10% area increase of the Schempp-Hirth top surface brakes.

As regards noise the 20E has been measured at a very acceptable 65dba at full throttle at 1000ft. Further modification to the propeller is hoped to bring this down to 62dba. The generous fuel capacity means that 300km can be flown by the dolphin technique of climb and glide. Consequently the 20E can be used for pleasure flying even on a no-lift day.

The production plans of the factory are to start initially with an output of about three units per month from January 1979 – thereafter building up to meet the expected heavy worldwide demand. Our syndicate is certainly most impressed with the machine and will have to wait with patience for serial number 20 which is planned for next June.

The ALPLA "SAMBURO"



RICHARD SMITH, Flying Secretary of the Oxford University GC, went to the Alpla works at Hard, Austria, where, as well as making plastic bottles, they are producing the Samburo motor glider at a rate of 1½ a month. Now it is coming to the UK and Richard gives his opinion, having flown the motor glider over three countries, Switzerland, West Germany and Austria, in 30 minutes. The designer is Herr Voegel.

We were shown an uncovered airframe – conventional, familiar metal tube fuselage and wooden wings. One or two details show that some telling extra thought has gone into the design. The control circuit has ball-raced bearings imparting a super smooth feel, low stick forces and minimal backlash. The wooden stringers are attached to the basic corrosion proofed steel tube fuselage by metal plates, constructed in such a way that damage to the stringers does not cause corresponding damage to the metal tubing, making the repair much simpler. The wing has Frise ailerons: the extra drag is more than outweighed by the reduction in adverse yaw and who needs 40:1 in a motor glider anyway? Wet wings are less of a problem thanks to the Samburo's special wing section. Anyone who has experienced pre-stall buffet at 55kt will be glad of that! A lot of effort goes into the finishing making the final result very attractive.

Good rear view

The cockpit accommodates two side-by-side and some luggage. Visibility is excellent; the cockpit sides are comparatively low, the view over the nose is unobstructed and the angled canopy gives a particularly good rear view. The canopy slides back on runners: no more worries about prop wash or gusts of wind and you don't have to hold the thing up when you're climbing in! The instrument panel is sensibly laid out with ample extra space for additional instrumentation or flying aids.

The power plant is the standard 68hp Limbach: proven reliability, and no problems with spares or servicing for English buyers. The cowling comes off in one piece, leaving the engine mounted free of the firewall, completely accessible. Starting procedure is normal: switches can be reached from either side of the cockpit. The noise level is very low even at full throttle and conversation/instruction can be carried on at normal volume instead of at a muted bellow.

On the take-off run the tail is lifted and once airborne the Samburo is considerably more glider-like to fly power on than some of its competitors. The controls are well harmonised – those Frise ailerons work and are surprisingly crisp. Balanced turns are easy to achieve, even for the novice. Fixed or variable pitched versions are available, the latter offering a significantly better glide performance, comparable with the aircraft's competitors. Power off, the handling is equally pleasant: stall and spin recovery is straightforward.

The approach is controlled with effective spoilers: pushing the lever past a positive gate gives you sufficient wheel brake to hold the airbrake against full throttle. Landings again are routine, but it will bounce if you don't round out with precision. I know!

On the continent, flying training in motor gliders is the norm. With their low operating costs, they can be the only aircraft which pay for themselves. Perhaps this newcomer will usher in a new trend in flying training in this country, too. Certainly, Oxford University GC with its regular three-year student turnover, would find this aircraft ideal for imparting the basics. The name? It's either a South American bird of prey, or a warlike African tribe – the designer wasn't sure. Don't be misled – the aircraft is highly civilised.

300 feet to freedom



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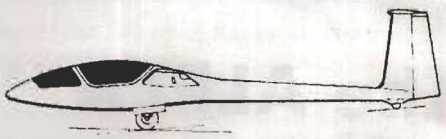
4 minutes to tow a glider to 1,000 m
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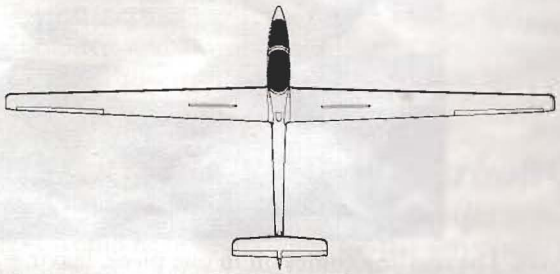
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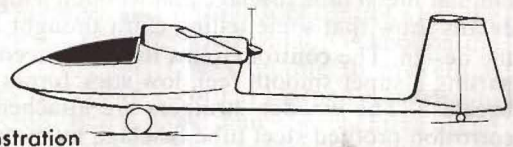
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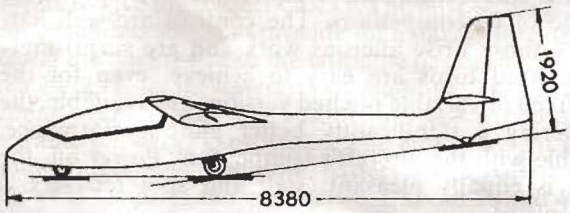
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ACCIDENT PREVENTION



BILL SCULL, Senior National Coach, reiterates his concern at the number of tug accidents this year.

Complacent or oblivious to the hazards!

THE fifth towing accident this year (and the fourth fatal) makes one wonder whether we aren't either complacent about the inherent hazards in aerotowing or oblivious to them. The note of caution sounded in previous articles on this subject that one shouldn't over-react to what, after all, are rare occurrences starts to have a slightly hollow ring to it.

One possible risk in the present situation is that somebody will produce a statistic - of fatal accidents per 100 000 aerotows, say, - and this figure will be used to justify or quantify the acceptable risk.

Whatever the statistical significance of this year's spate of accidents, what must be examined are the inherent risks and the ways in which they can be minimised. What must be recognised is that training to deal with potentially fraught situations may in itself be hazardous; even to the extent of creating accidents in the training phase. Since the critical case would seem to be one where the glider gets rapidly out-of-position, with increased risk to the tug pilot if the rope is slack, then it follows that the training must be along these lines (if it were to be given). It is probably true to say that situations which arise accidentally are really very difficult to contrive - certainly with realism. As it might reasonably be argued that every pilot knows what to do in such extreme circumstances, then the case for providing training becomes a marginal one.

The crux of the matter would seem to be getting a reaction from either the tug pilot or the glider pilot soon enough to either stop the situation becoming potentially hazardous or causing an accident. Critical, in this respect, is the time scale of the events; if the situation can go wrong in less time than it takes the pilot to react and operate the release then evidently nothing can be done to avoid the accident. The accident rate would suggest that this is a fairly rare circumstance. Much less rare are the incidents that don't become accidents and as a consequence never get reported. In these cases the accident is averted by the prompt action of one or other pilot. The factor which determines whether the incident becomes an accident is the time scale of the deteriorating circumstances in relation to the pilot's action or reaction time.

Given quick enough reaction on the part of the pilot(s) then the only other factor might be termed the "fumble" factor. The fumble factor from the tug pilot's point of view (and maybe from the glider pilot's) is "groping" for the release knob. If this is due to the pilot's lack of familiarity with the cockpit layout, whether due to the lack of emphasis in the type conversion briefing or not, then this is inexcusable. The ease with which the release can be operated also depends on the location of the control in the cockpit; in this respect some arrangements are not beyond criticism. If the release is far removed from the throttle, then the distance the hand has to move may make for a sufficient delay. If the release is so badly located that the pilot has to grope for it then this, conceivably, will result in too long a delay in the extreme case.

There is not, nor can there be, a simple solution. Measures can be taken, however, to increase a tug pilot's awareness of the risk thereby, hopefully, minimising it. The ways in which this can be done are:

1. Familiarity with the release position so that the hand moves quickly and unerringly from the throttle to the release; try practising this with your eyes closed. (No - not while you're flying.)
2. If the release is so badly located that it has to be foot operated then practise this too.
3. It might be of value to give a pilot (every pilot) some practice in dropping the rope (without this becoming a licence to do beat-ups). At a few clubs this is done as a matter of course in the interests of reducing the wear on the rope on a runway for example. But where it's not absolutely essential the practice is usually discouraged on the grounds that at the height at which the rope is released it will be better if the pilot has his hand on the throttle. Here again one is concerned with equating the risks in training or practice with the potential reduction in hazard that the practice may confer.
4. The practice of dropping the rope in itself may not be sufficient if the release becomes more difficult to operate (usually the case in a genuine emergency). The sooner the pilot has the experience the better and despite the alleged hazards of the rope lashing back at the glider, deliberate practice might well be worth the risks involved.

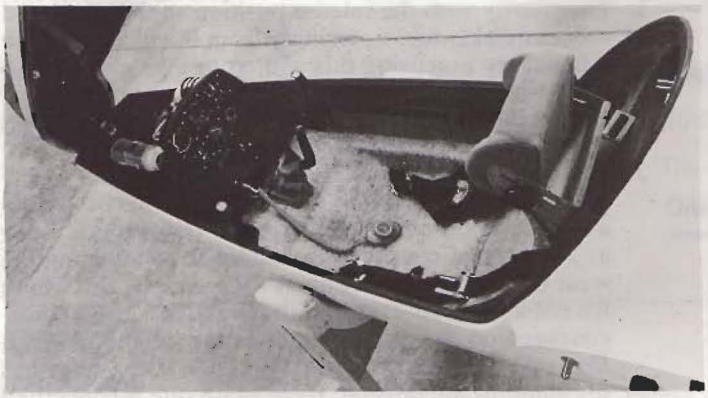
From the glider pilot's point of view it may be stating the obvious to suggest that operating the release sooner rather than later is essential. Situations which may become critical in less than a second are:

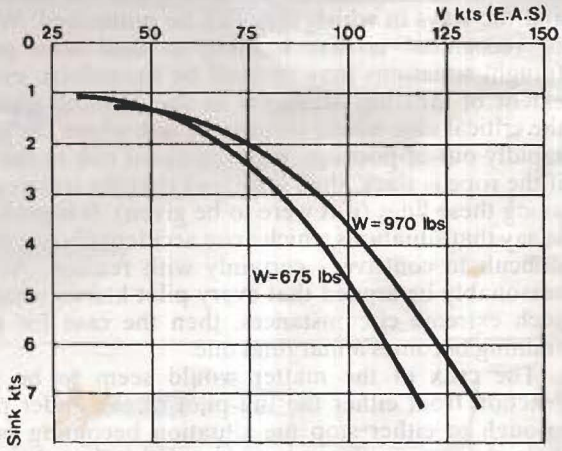
1. When the rope is slack (and most likely the glider is out of position as well).
2. When the glider is going rapidly out of position.
3. When the glider pilot has lost sight of the tug.

For the tug pilot the situation remains potentially fraught up to a height of several hundred feet and his only protection is quick reflexes. Maintaining concentration at a high enough pitch in what is, for the most part, a repetitive and therefore a complacency-inducing operation is very difficult; only a greater awareness of the hazards all round will serve to improve the record.

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IT CAN HAPPEN TO YOU

P. A. HEARNE

Yet another accident in an Auster tow leads me to recount an incident which occurred to me several years ago in a Beagle Husky.

I was towing an old Dart 15, flown by a glider pilot with some 300hrs power experience, including about 50hrs tugging. He was not however very experienced in gliders with a total of around 50hrs. The tow-out was on the W/E direction of the main Lasham runway and there was a considerable amount of turbulence and thermal activity over the trees at the end which meant a healthy tow speed to maintain a reasonable amount of control of the combination.

The tow speed of 65-70kt was higher than the glider pilot had previously experienced and the higher control loads at this speed apparently caused him difficulty in maintaining position. As we climbed away I was able to reduce the speed, but the jerks on the back end of the aeroplane indicated the glider pilot was continuing to have difficulty in maintaining position.

At about 800ft the aircraft's nose dropped slightly below the attitude I was maintaining above the horizon and I eased the stick back to correct. As the stick came back against the rear stop the nose continued to rotate smoothly and rapidly below the horizon and within a very few seconds we were in a steep dive.

My immediate reaction was to release the tow rope but with the tug and aircraft diving towards the ground the load on the tow rope was such that my first pull was insufficiently powerful to release it. The amount of flowing adrenalin ensured that at the second pull it came off and with the stick still hard back in my stomach I executed a rather neat, but inadvertently high *g* recovery some 450ft above the ground.

I later discovered that the glider pilot had got out of position above the tug, lost sight of it and opened his airbrakes to gain his position with the results described above. Further investigation revealed that the pilot's conversion to glider flying had been very sketchily carried out and indeed it is doubtful if he had ever received a proper briefing on aerotowing techniques; although as the towing pilot one can hardly be expected to know the qualifications of the individual behind.

There are two lessons I think should be impressed upon all tug pilots flying Auster type aircraft –

Firstly, the boundary between having control over one's pitch attitude and complete loss of control is a very narrow one reached only when the control column comes up against the rear stop. There was no previous warning this event was likely to occur and when it does the change of attitude is extremely rapid.

Secondly, there is the question of recovery technique and here I think I was guilty of a totally wrong procedure which I suspect might even have been followed by others less fortunate than me. The immediate emotional action would always seem to be to get rid of the glider. However, clear thought (not usually possible in the circumstances) shows that at the time one is trying to drop the glider one is proceeding in a high speed dive towards the ground under full power. Since there is only one pair of hands and one must remain on the stick, I feel that the correct procedure when a pitch upset occurs must be first and foremost to close the throttle. This will greatly reduce the rate of descent and hopefully reduce the load on the tow rope so that it comes off cleanly with a relatively light pull on the release.

Lucky to get away with it

I feel very strongly that had I closed the throttle before attempting the jettison action, my loss of height would have been some 150ft, instead of the 350ft I experienced. All in all I was very lucky to get away with it.

A final comment I would like to make is that this type of accident/incident is undoubtedly related to the control power of the tug. Having carried out several hundred tows flying Tiger Moths, it is noteworthy that the elevator power of that aircraft is sufficient to maintain control of the tug glider combination, even when the aircraft on the back is an Eagle or T-21, with a very hamfisted pupil in control.

On the other hand, the apparent record of some other types and the number of fatalities, leads one to suggest very reluctantly that some form of Certification/Calculation and Test Procedure should be completed before aircraft are cleared for glider towing. In that way, although we might cause more difficulties with the supply of tugs than we already have, we might move towards a rather safer future.

Bill Scull, Senior National Coach, adds: It's interesting how many tug pilots have had exciting experiences on tow. It would seem that there may be more to learn from incidents than from accidents. Perhaps what we need is a system of an aerotow incident reporting – even for a limited period – which might give sufficient evidence to pinpoint the hazards.

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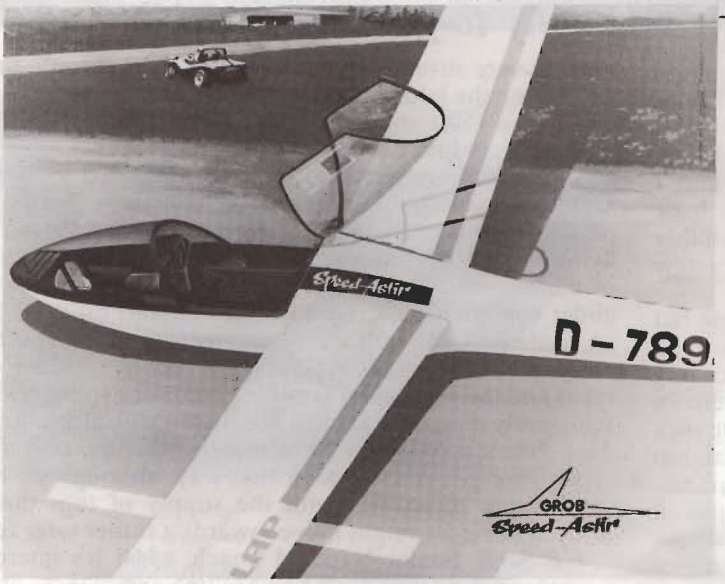
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"OUT FOR A SPIN"

BARBARA WEBSTER



Barbie started gliding in 1960, went solo in 44 launches and became the Bristol & Gloucestershire GC's second woman Silver C. She also obtained her PPL. Total (and not altogether successful) replacement of her hip joints has happily affected neither her enthusiasm nor her skill and courage in the air. The incident report relating to this article pays tribute to her "very high standard of flying and airmanship". She still flies with the same club and is the wife of one of its instructors in whose DG-100 (which has superseded the K-6E) she is pictured.

It seemed quite a small snatch; in fact, the cable had back-released and immediately jammed in the wheelbox. I couldn't see, nor could the launch crew who continued with the launch as usual.

It did seem a little odd to me that the K-6E lept off with quite so much abandon, however, I put it down to a new winch driver and lowered the nose in case of a cable break. (Pity it didn't, as it happened.) At this point our incomparable course instructor, Dave Millet, who happened to be bringing back the Blanik with the tractor, muttered: "Must speak to Barbara about jumping off the ground like that!" He watched the rest of the flight with increasing interest.

All seemed well with the rest of the launch, except that I only reached 800ft instead of the usual 1000 or so; still, this seemed reasonable since the nose had been fairly well down for the first part.

I pulled the release twice. Nothing happened. I pulled twice again and glanced at the instruments. The variometer was stuck at 10 down and poor little 125 felt like a wounded bird, heavy and fluttering.

Maybe the brakes had slipped out? I checked them. No. Oh my God! Then I must still be attached to the winch! The adrenaline started to flow . . .

Too low to parachute. OK then. I dived to back-release or break the cable. Unsuccessfully, because, as I later found out, the very resourceful new winch driver had not only had the axe close at hand, but also the courage to use it. (He later said there were about nine axe marks on the winch where he had missed the wildly leaping cable!) This left me with hundreds of yards of wire cable still attached - but a better chance of survival.

As I couldn't break the cable and thought that 125 was still connected by its umbilical cord, I decided my best chance was to circle near the winch, nose well down, until I got low enough to land downwind; this would give me the length of the cable for the landing run.

One circle completed (pulling the release hopefully) brought me across the road where the cable tangled with the powercable, tearing it down and breaking off part of the winch cable. (Apologies to Dave and the course members who didn't get their customary cup of tea!) Feeling the jerk, I thought for a moment I was free at last, but the antics of the gallant 125 soon convinced me that this wasn't so.

Almost immediately afterwards, between 100 and 150ft, she suddenly dropped a wing and went into an incipient spin. The cable, of course, was lying partly on the ground by now and as it was jammed in the wheelbox, the C of G had moved aft and the wingloading increased dramatically, significantly altering the spin characteristics.

Intrigued by close view of trees and grass

I was furious at having lost control and forced the stick forward, stamped on top rudder and waited, intrigued by the *very* close view of the trees and grass turning below.

I had accepted that I must plough into the ground fairly hard. I hoped my end would be reasonably tidy and that Jim's beloved K-6E wouldn't be irretrievably damaged, when suddenly the miracle happened. The top rudder bit - a lovely, wonderful feeling - the little K-6E -bird answered happily and I turned her downwind, brakes out a little and she floated gently onto the ground. The downwind component had, perhaps, saved my life?

I thought long and hard about this flight from the safety point of view. They say you learn something from every flight and on this one I think I learnt four things:

1) To watch like a hawk when I am being launched and be ready to pull off or signal *if there is any doubt whatever.* Every launch is potentially dangerous and a few minutes waiting might mean a lifetime's relief.

2) To check the feel of the glider and the instruments *immediately* at the top of every launch and be ready to cope with anything out of the ordinary.

3) I realised that adrenaline *does* come to the rescue in a dangerous situation and that it is true that one is able to think very, very fast (a fairly rare occurrence for my somewhat stagnant brain!) and therefore is able to deal with a situation better than one might normally.

4) Never, never to give up trying to *do* something. Even at the last moment the miracle might happen. As it did.

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SAFETY SHOULDN'T BE AN ACCIDENT

KEN STEWART, mindful of the need to tighten up on the safety side of gliding, takes a look at one possibility of achieving this by making better use of the Safety Officer.

When there is an accident a club member usually arrives and clears up the paperwork necessary for the accident report which is sent to the BGA and other interested parties. After completing the task which, if it involves chasing witnesses or even pilots, may take up to a month, our club member once again dissolves back into gliding life and remains just another pilot until someone breaks another ship. Such a person is called a Safety Officer and is appointed by the club to do the necessary **after** a crash. Occasionally he can be seen posting notices or safety bulletins but he is seldom involved in any other matter.

If you look around at the various gliding clubs in Great Britain you will probably be surprised at the standard of pilot appearing on the BGA annual return as Safety Officer.

On the shoulders of the relatively inexperienced

Small clubs generally lack sufficient instructors and the work load on them is bound to be heavy. As well as their weekend duties, they may have to double as Secretary, Treasurer and certainly one will have the responsibility of CFI, so it is likely the appointment of Safety Officer may end up on the shoulders of some relatively inexperienced pilot. He might be thorough at form filling but may not have the experience, let alone the courage of his convictions, regarding some safety matter frowned on by a club pundit. The choice of such a person means the club has an accident administrator, not a safety officer.

The problem disappears as the club becomes larger and some may have a number of members who meet the desired experience and requirements and can choose a Safety Officer as opposed to just giving the task to the only willing candidate.

Having selected a Safety Officer, what should be his duties? Is handling the "after the crash" paperwork really what the job is all about?

Surely he is responsible for safety? Picking up pieces doesn't prevent accidents or improve safety. I have yet to see action being taken at club level to prevent a similar accident of the kind which happened at another site. Even an attempt to let members know the real facts and not the rumoured variety, which can often bear little relation to the truth, might help to prevent a local repeat performance. Incidents are just accidents which almost, but didn't quite, happen. Again, word of mouth appears to be the only medium to prevent a more developed recurrence. All accidents and incidents need to be clarified, reported and publicised at club level and this is one of the Safety Officer's tasks. All right, it gives him more work but the work involved in preventing an accident will surely be more challenging and interesting than chasing witnesses and completing insurance reports.

The Safety Officer should work in close liaison with the CFI and could organise lectures by experienced pilots and instructors on general safety, accident causes and their avoidance. Even the most unimaginative could find definite trends as lecture subjects by taking a quick glance at **Accidents to Gliders**. Such lectures and discussions could well be combined with the general training programme. He would also be responsible for keeping members informed as much as possible about safety practices at other sites and maybe even supervising the introduction of them at his own club.

Parachutes are now worn at some stage in club flying but their use isn't fully understood by many pilots – a job for the Safety Officer? They are, after all, safety devices so why shouldn't members have more information on them and their use?

So what are the requirements for such a job?

Must have the respect of every member

To be able to decide on priorities and the potential of incidents or accidents, the Safety Officer must have at least some experience, preferably a considerable amount, and be given some authority in order to steer a course for safety. It may even be best if he is a deputy to the CFI, thus giving him recognition. He must have the respect of every member and will probably get this if seen to be active and his work is in evidence. Here personality may help and certainly will go a long way to brightening up a dull subject.

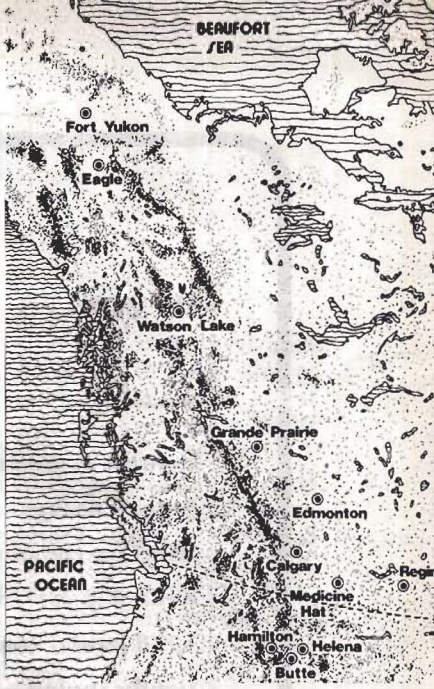
Undoubtedly a lot of time will have to be devoted to the job in order to keep in touch with the operation and the pilots. Willingness and devotion must be available and it will help if the Safety Officer doesn't live 100 miles away. For this reason, where possible, not being a committee member or having too many other club commitments will be advantageous if, of course, the club's size permits such freedom.

So perhaps we can do a little better by tightening up all round on the training and education side, by making our techniques for launching a little safer and yet not compromising efficiency or having to re-organise the whole club administration. Let's see if we can do better by developing what we've got. We wouldn't need accident administrators nearly as much if we had Safety Officers.

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A Possible Site for World Distance Records – the Rocky Mountain Trench

BRENNIG JAMES



Most of us are familiar with Karl Striedieck's achievements in eastern USA. The question is whether these can be improved on and since we are unlikely to get any very dramatic improvement in glider performance or pilot technique the problem is one of geography and meteorology.

In British Columbia there is a deep, wide, straight valley called the Rocky Mountain Trench which runs roughly NW-SE. It fades out in the northern USA roughly near Hamilton where there is an airfield and to the north near Watson Lake in the Yukon Territory, but further to the NW it starts again as the Tintina Trench, finally fading out at Fort Yukon in Alaska. The total length is 2000 miles so the problem, given a good day or days, may be merely that of keeping awake. Fort Yukon is north enough for the sun not to set in summer, so you could set off at about 10pm and when you get to the end of the Tintina Trench it will be about 10am next day. (Thermals start at least at 8am).

The next 100-200 miles could be covered in thermals or lee waves so that when you get into the really good part of the Trench you will have plenty of airfields in reach and be at the easiest part of the flight when you are beginning to get tired, which is as it should be. How long can a pilot keep flying? AVM D. C. T. Bennett, who flew the Mercury part of the Mercury/Maia composite aircraft, had no trouble staying awake for 48hrs because he had a basic overall objective in view. If the wind has a tail component I think the flight could be completed within 24hrs. Possibly with a two-seater it might be possible to turn around and fly back all the way.

All this raises a lot of questions. Do we want to push records to the point at which they become endurance records? I think yes, for the same reason that the first frog leapt onto dry land. How does one organise it?

One way is for a wealthy dedicated pilot to ship himself to America with his glider and organise it off his own bat. The day length is the initial factor so it has to be June-July. It may be possible to get sponsorship but if the flight starts and ends in the USA an American firm would like the pilot and preferably aircraft to be American too. However, the major part of the flight will be over Canada so there are possible National implications there as well.

In the event of an out landing NW of Watson Lake there may be no human being for 100 miles. Canadian Air Law demands that if you fly over sparsely settled areas you have to carry survival gear and a beacon as well as your VHF set, all of which you are going to do anyway. The aircraft should be modified to have a dorsal hook above the loaded C of G. You will have constant VHF contact, so if you land out you call up a charter helicopter of which there is an adequate supply. He flies out and hooks onto your dorsal hook, you get into the cockpit and get lifted out to be towed to the nearest airfield. It all seems a perfectly reasonable and practical proposition to me and, since the landscape and scenery are of great beauty, it should be a very rewarding experience for the lucky pilot who makes the flight.

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STILL WELL UP IN COMPETITION (EUROGLIDE 1978)



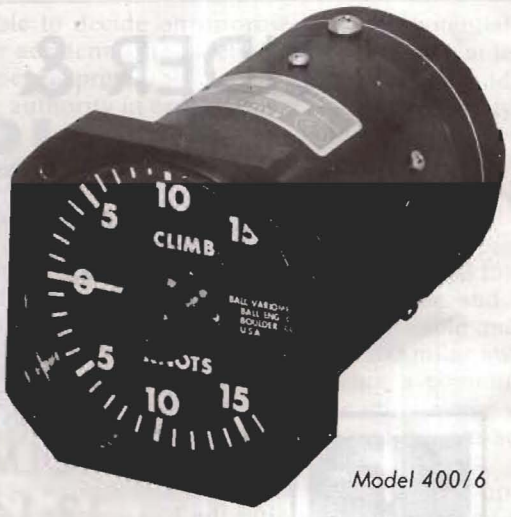
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THE LONGEST DIAMOND

by ERICA SCURR, who is one of the few British women to have All Three Diamonds.

It's a long way in time and space from the rolling English countryside between High Wycombe and Basingstoke to the purple-brown ridges of the Appalachian mountains. That same distance separates my first Silver badge cross-country flight in 1967 and the last Diamond flight in 1978.

I had attempted to fly 500km three times, in Texas, in Poland and along those Appalachian ridges. Each attempt had resulted in a new personal best distance but the third Diamond still eluded me. Now, with the added performance of an ASW-15B at my disposal and plans for a long spring holiday, I set off once more into the hills.

Ridge Soaring, Inc is just over the mountain, west of State College, Pennsylvania, and about a 350 mile drive from my home in Columbus, Ohio. It is run by Tom Knauff and Doris Grove on a 3500ft grass strip at the foot of Bald Eagle Ridge. The site has become famous as "The World's Longest Diamond Mine" and now attracts pilots from all over the world.

Discovering the mysteries of the new bird

I arrived with my partner on April 15. Neither of us had had much opportunity to get used to our new toy which had been snowed into a hangar in central Ohio through a long and bitter winter. After Lew had returned to the business of business in Columbus I was left to discover the mysteries of our new bird for myself. In the next two weeks, between rain showers, the inevitable problems were resolved and I slowly gained the confidence I needed for that long cross-country flight.

It was, and still is, my belief that the ridges will produce one Diamond day each week through April and May. Several 300 and 500km flights were made the weekend I arrived but by the middle of the second week I was beginning to doubt my own optimism.

Thursday afternoon, after a high cirrus deck moved out; produced strong, rough thermals to 8000ft amsl. Conditions were forecast to remain clear through Friday and the temperature was expected to reach 70°F. I began to get fidgety.

At dinner that evening I voiced my ideas to Miles Coverdale, a Libelle pilot from Long Island who had also been waiting a long time for the last Diamond. Long ridge flights in Pennsylvania usually require a strong north-west wind which was not in the forecast. I felt, however, that if the good thermal conditions continued on Friday and were workable by 11.00hrs we could both complete the Diamond triangle without using the ridge. No one was truly convinced but we did agree to meet for breakfast at 7.30am.

By 10.00hrs on a blue, clear and cool morning we were both prepared with gliders rigged and ready to go and the forecast winds were now looking good for ridge lift. I followed Miles into the air at 10.45hrs and climbed easily to 5000ft in the "house thermal". Ten miles out I got a radio call from another pilot starting out on a 300km attempt. He wanted to know if the ridge was working. "I don't know," I replied, "I'm at 6000ft and I'm not going down to find out."

The valley floor through this section of Pennsylvania undulates from 800 to 1200ft amsl. The long, sharp, tree-covered ridge which we followed rises from about 1800ft near Ridge Soaring to a high point of almost 2800ft near our first turning point, 100 miles to the south-west.

There was very little cloud that morning and visibility was a comfortable 25 miles. Thermals were forming, as expected, along the high slopes of the ridge so my progress was good. The six mile gap near Altoona slipped quickly by and, approaching Bedford and the second gap, I spotted Miles. Our radio communication was poor but we climbed together and crossed the ten mile break in the line of the ridge before going our separate ways.

At about 13.00hrs I took my first turning point pictures near Cumberland, Maryland. The turn point made me nervous. I had experienced problems there on my last attempt by misinterpreting wave conditions. But on this day I homed on a wispy cu that was just forming and climbed steadily to 8500ft. A nice way to start out on the long 155 mile leg back up the ridge to Williamsport.

The working band was now up to 8000ft but the work was getting harder. The wind strength had increased and the miles seemed to pass slowly even though I was cruising fast between thermals.

Finding myself at 9500ft on the north side of the Altoona gap I decided it was time to get more aggressive. Time was passing. Through the Ridge Soaring area at 15.30hrs I got lots of radio encouragement but I still had 110 miles to go and I knew I was slow. Long high speed glides which ate up 4000ft of altitude and a good few miles finally speeded things up. Miles was getting encouragement too and seemed to be about 20 miles behind me. I was beginning to believe we would make it.

Near Williamsport, and the second picture taking session, I had a friendly chat with an airline, and obviously also glider, pilot who wished us both luck.

Only 55 miles left now, with some help from the wind. Nearly 17.00hrs, but the thermals were still good to 6000ft. Out on the plateau to the west two brush fires were raging and their smoke streamed onto our ridge. There was probably really no need to fly thermals anyway.

Piper Memorial Airport at Lockhaven was beneath me. Thirty miles to go and the glide calculator, and Tom, told me I had it made, but I was not ready to believe it yet. Just one last climb to be absolutely sure and then I headed for home. Miles was back in the smoke but he was going to make it too.

It's not until after you land that you realise you are cold, stiff, hungry and tired. And that really was seven hours of very hard work. The barograph trace was continuous and showed that I was never below 4000ft. Not exactly a risky day. There are some flights you just don't take risks with.

That night we celebrated two new, completed Diamond badges and champagne never tasted so good. And what do I reply when friends ask "What next?" why "1000km of course."

NB. Tom Knauff doesn't currently hire gliders for 500km attempts but does have a 1-26 available for 300km flights for suitably qualified pilots.

A Gulp and a Swallow

RICHARD LOWNDES

The setting, Dorset task week, the weather, hot and blue, a light nor'-easter. No thermals to speak of and an over-optimistic task to the west. There's no way I can get back to the airfield from here, my second cross-country's just begun and my second field landing is about ten minutes away. Got the picture?

Mindful of a lesson learned on my other cross-country, I pick my field early, 1500ft, and set off on a large lazy circle of the chosen field, carefully savouring the last minutes of life. No premonitions, I just feel about flight that way.

It always amazes me how blind I am; at the top end of my circuit I suddenly pop over this amazing coomb, a hidden valley with two buzzards soaring its funnelled end. Here is life again, a chance to survive to remain disinterred. How could I have missed it from higher up? Too busy field spotting, I suppose. I enter the chute of rising air and quickly fall out the other side. Lose 100ft coming round to it again, then a second attempt to stay in, desperate weavings from side to side, seemingly filling the whole valley. Oh for the wingspan of a buzzard.

Still losing out, only 900ft now, must go back and find my field, too late now to do the kind of circuit of which my instructors would be proud. Turn downwind and re-identify my field, crop's short corn. I can see the earth between the rows. Slope? Uphill then flattening towards the top. Turn crosswind, the speed and the trimmer, Gulp! I'm lower than I thought. Of course, I've made this mistake before, I'm landing higher than I took-off. Still, cut the corner and I'm approaching just right over the hedge. No need for airbrakes.

Wires? Wires! Telephone wires, along the hedge, why didn't I see them before. I'm sinking right at them, help, will I, won't I, won't I? HELP! The speed's fallen off, subconsciously I'm lifting the glider over those wires. Nothing for it now but stuff the nose down straight for those wires, closing rapidly now and zoom – I'm over them with ease.

The rest was dull. I sat in the shade of the Swallow's wing and contemplated all the dumb things I had done and resolved not to do them again – again. A shepherd and his daughter come panting up the hill: "Have you crashed?" they inquire. "No" I say. Do other people have these problems?

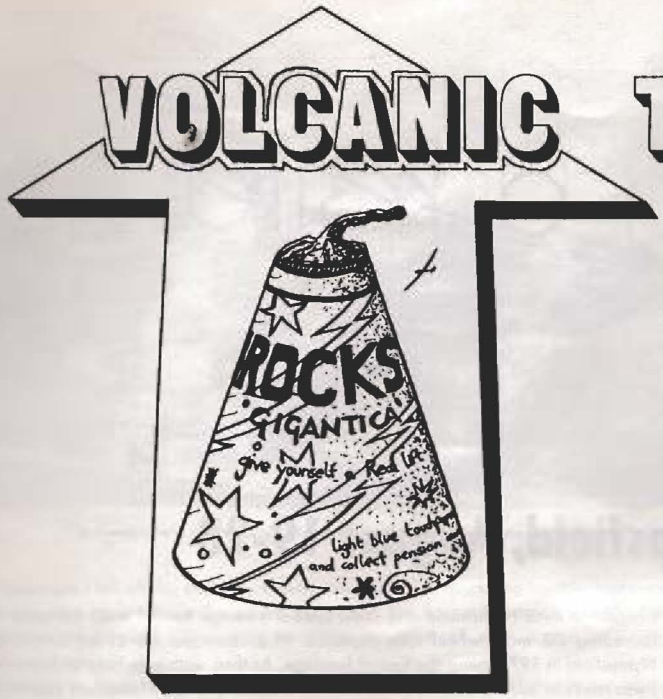
T-TAIL

Douglas Menzies

The tantalising temperatures tenable –
trailers, tediously towed to tangent tarmacs,
Throngs, tacitly talk of topical tasks
through tranquil topographic territories.
Teams tearfully telephone termination of
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Telling tales to terrestrial tenants.



VOLCANIC THERMALLING



MIKE JOYCE

Tired of the paltry 4kt British Standard Thermal? Then why not try one of the world's truly great soaring experiences – an expedition to an active volcano. Much of the basic groundwork and techniques for this once in a lifetime, never to be repeated experience has recently been published in *"Der Volcano Flüg Für Fun"* by Herr Dokter Skawchtarz, the well known and most intrepid of German aviators. He vividly describes the heart stopping thrills of flying amidst the hot toxic gases and sulphurous vapours, the incandescent lavas and the explosive pyroclasts of the "burning mountains".

For those who find the lure of the volcano too hard to resist there are a number of alternatives. Take for example Vesuvius, one of the more modest volcanos but yet an easily accessible one. To quote Dokter Skawchtarz "after ein short aerotowen Vesuvius vas cummen unter der nose unt seconds later ein paroxysmal eruption mit collossal power shooken ze glider, I vas at 40 000ft within seconds". Centreing is of course simple, the white hot cone glowing at 1200°C makes a perfect pinpoint day or night.

The man after a height Diamond might try Cotopaxi in the Andes, the highest active volcano in the world. This has been recorded as hurling 200 tons of lava nine miles into the sky, so consider for a moment the potential of a K-6 at a mere 1/5 of a ton. Hawaii and Java have their fair share of volcanoes. Here of course there are always the beaches to cool off on – one essential ancillary requirement of volcanic thermalling. Kilauea has managed to push solid fountains of white hot ash to 1900ft but titanium alloy is recommended for all airframes entering such a holocaust.

Colours to be avoided

Nuée ardentes or "glowing avalanches" can present a visibility problem at Mount Pelé so check that the turn and slip is working before venturing in; it could be well worth it – 13 000ft in four minutes is a conservative estimate of a recent eruption. Mind you, don't let the elation make you forget that vital extra field landing check – avoid anything looking even slightly white or red.

The cross-country *afficionado* might have the Alaskan cold and visit the Valley of Ten Thousand Smokes – yes it really is called that and it reminds me of Dokter Skawchtarz's useful mnemonic check recommended for use at no more than ten second intervals whilst volcanic thermalling.

F Fire-check airframe, flying suit and sandwiches
A Ash and clinker-check accumulation on canopy, leading edges and control surfaces
G Gas-check lungs operational or canary if carried.

The ultimate goal of all volcanic thermallers must surely be Krakatoa; the biggest eruption on record. Just imagine four cubic miles of rock hurtling into the stratosphere, upcurrents of 1200kt and a total height gain of 50km – that's a Silver distance vertically.

Well, if I've whetted your appetite and you have sufficiently limited mental development then contact me at Doncaster GC, because Stromboli and Paricutin here we come – as soon as we have solved the asbestos canopy problem.

all pilots can read – but the BEST PILOTS read

Sailplane & Gliding

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Euroglide 1978 – Nympsfield, August 19-28

Many of the pilots entering Euroglide were concerned at the influence the weather might have on a Nympsfield based competition, even though the 1974 Euroglide organised by the Bristol & Gloucestershire GC had given some excellent cross-country racing. Their fears were realised with quite a number of days lost through low cloudbase but a combination of the task setting by Colin Pennycuick and the accuracy of the Met by Peter Baylis enabled seven contest days to be achieved. On several occasions we launched late on the tasks which were incredibly short.

Regrettably once again foreign entries were low in number – namely Arend-Frans Versteege, a Dutch fighter pilot flying an ASW-20. There were a total of 38 gliders, 11 Open Class, 12 Standard and 15 15m Class.



The Dutch entry: left to right, Egbert Kamp, an international basketball player, Arend- Frans Versteege (ASW-20) and Jan Heermite.

In the Standard Class Andrew Davis, the 21 year-old Nationals Champion, flew his Std Cirrus so consistently he won by nearly 800pts. In both the other Classes competition was tighter and the lead changed as a result of the last task. This ruined Bernard Fitchett's record of having won every Euroglide Class he had ever flown.

By early afternoon on the Bank Holiday Monday it looked as though Ted Lysakowski (Nimbus 2) had won his first major competition, but a 145km task changed the position and Ted's old syndicate partner, Chris Garton (Nimbus 2), become the Open Class Champion with a speed of 78.69km/h. This illustrated how an unfortunate loss of time on a short task can have a major effect on a competition result.

Bernard Fitchett (ASW-17) at 74.62km/h took second place overall with Ted (55.17km/h) third.

As with Chris Garton in the Open Class, Dave Watt (ASW-20) won his first major competition with his performance on the last day in the 15m Class. His 15km/h margin was sufficient to displace Chris Rollings (PIK 20), the leader that morning.

Euroglide was officially opened by Rika Harwood who wished all competitors "good, safe flying"

Day 1, Saturday, August 19

Task: Open and 15m Class, 145km out-and-return, Didcot r/s; Standard Class, 122.5km out-and-return, Wantage.

I began to think Nympsfield had some special message for me when just prior to launching the main wheel tube ruptured. This reminded me of my arrival at Nympsfield in 1974 minus the Kestrel fuselage. As then, with help from all quarters, I was ready to launch within 1½hrs, Ralph Jones having made available a tube from his Nimbus spare wheel. Don Spottiswood, flying the World Championship ASW-17, also had a delayed launch with control problems.

While working on the Kestrel one was aware in the background of gliders starting the task (260 was away at 13.08) and on getting airborne at about 14.15 I felt conditions were already deteriorating. It seemed only moments after starting at 1000ft low on a saving attempt, I heard Frank Pozerskis (ASW-17) call "260 final glide five minutes."

Conditions were in fact better than I assumed and over-caution, together with a low point at Didcot of 700ft asl, resulted in a slow time. I ignored a large stubble fire north of my track, although the radio indicated others on the way back from the turning point hadn't. Alastair Koy (Jantor 2) later said it had given him a climb of 20kt. All three Class winners attributed their fast times to using cloud streeting wherever possible.

Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Fitchett (ASW-17)	97.98	1 Rollings (PIK 20)	81.33	1 Davis (Std Cirrus)	69.56
2 Lysakowski (Nimbus 2)	95.40	2 Watt (ASW-20)	80.44	2 Shephard (Std Cirrus)	63.33
3 Jones (Nimbus 2)	92.44	3 Aldous (Mini Nimbus)	79.92	3 Hood (Cirrus 75)	58.95

The next three days were lost to contest flying, basically because of the reluctance of cloudbase to rise to a safe level. But there was an unexpected bonus on the Monday after the task was cancelled. It appeared that some wave activity was developing and several pilots launched into a clearing sky. During the next few hours there was some interesting flying with Chris Garton reaching 11 000ft and the majority of the others going to 7-8000ft north-west of the Severn.

Day 2, Wednesday, August 23

Task: Open and 15m Class, 282.5km quadrilateral, Frome, Didcot, Gaydon, Standard Class, 213.5km triangle, Frome, Didcot.

This time I decided I would have battery trouble and elected Bernard Fitchett to get me out of trouble. The first two legs were flown in good conditions, the Standard Class completing their triangle with few problems, only three out of the 12 failing to complete the task.

The Open Class heading north on the tail of the 15m Class soon ran into the murk suggested by Peter Boylis at briefing. This was confirmed by radio transmissions from the 15m gliders ahead. The deterioration was quite rapid and north of Enstone we were flying wherever we thought we could stay in the air. The race was over. Chris Garton was the last to land and got within six kilometres of Nympsfield to win the day in the Open Class. Ralph Dixon (ASW-20) won the 15m Class by landing a kilometre closer to Nympsfield.

Open Class	km	15m Class	km	Standard Class	km/h
1 Garton (Nimbus 2)	276	1 Dixon (ASW-20)	277	1 Davis (Std Cirrus)	69.38
2= Kay (Jantor 2)	244.3	2 Rollings (PIK 20)	273	2 MacFadyen (SHK)	61.27
2= Lysakowski (Nimbus 2)	244.3	3 Spreckley (Mosquito)	271.9	3 Hood (Cirrus 75)	58.77

Overall leaders Fitchett (Open), Rollings (15m), Davis (Standard)

Day 3, Thursday, August 24

Tasks: All Classes; 197km triangle, Ludlow Castle, Northleach.

A cloudbase in excess of 3000ft asl gave us better margins and reasonable progress could be made into the stiff northerly wind helped by the streeting. Just short of



The Nympsfield bus which became the start and finish line control.

Leominster I fell off the end of one such street and was quickly in trouble, however the residue of a stubble fire saved me. Again the barograph trace touched the Nympsfield baseline. From then on from my point of view it was relatively straightforward.

The final leg from Northleach gave us the familiar Nympsfield return into sun when knowledge of the shape of the hills is so useful. The conditions were the best so far, borne out by the fact that all the Open Class got home and only four gliders landed out.

Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Fitchett (ASW-17)	93.53	1 Watt (ASW-20)	86.88	1 Davis (Std Cirrus)	72.24
2 Jones (Nimbus 2)	88.14	2 Versteege (ASW-20)	83.86	2 Blackmore (Std Jantar)	68.79
3 Lysakowski (Nimbus 2)	84.94	3 Burton (Vega)	81.05	3 MacFadyen (SHK)	68.46

Overall leaders: Fitchett (Open), Watt (15m), Davis (Standard)

Day 4, Friday, August 25

Tasks: All Classes; 152km out-and-return to Banbury r/s.

Once again a late start meant a reversion to the fall-back task. With a northerly component in the wind, several of us in the Open Class went north of track along the Cotswolds edge before running into Banbury. On the way back Frank Pozerskis and Ted Lysakowski made the right decision by choosing a more southerly route and becaming two of the five in the Open Class to finish. Frank's speed of 63.78km/h gave him his first day win in a major contest. Alistair Koy's Jantar 2 and my Kestrel veered north again on the return leg and struggled to a landing near Chedwarth.

Ralph Dixon, having his second win of the contest in the 15m Class, felt luck was on his side. Andrew Davis on his fourth successive day win in the Standard Class completed the task at 63.82km/h, 1.11km/h faster than the Open Class winner. He had a marginal final glide, just making the field.

Ted and Sue Lusted ballasting the DG-200, helped by Jo and Albon Nash, John Glossop's crew.



Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Pozerskis (ASW-17)	63.78	1 Dixon (ASW-20)	58.83	1 Davis (Std Cirrus)	63.82
2 Gorton (Nimbus 2)	62.67	2 Rollings (PIK 20)	58.76	2 MacFadyen (SHK)	58.55
3 Lysakowski (Nimbus 2)	60.22	3 Aldous (Mini Nimbus)	58.29	3 Cowderoy (Phoebus 17)	52.68

Overall leaders: Lysakowski (Open), Watt (15m), Davis (Standard)

Day 5, Saturday, August 26

Tasks: Open and 15m Class, 247.3km triangle, Stratford-on-Avon, Newport Pagnell; Standard Class, 137.5km triangle, Worcester, Moreton-in-Marsh.

The Open and Standard Class were entertained today by the sight of the 15m Class being launched with a "somewhat variable" cloudbase. After much discussion Competition director, Dave Wales, cancelled the task on the radio and recalled the airborne gliders, who returned in flamboyant style led by Dave Watt. Allowing a suitable period to enable the scattered gliders to be regridded, a rebrief resulted in the fall-back task.

The majority of the task was flown under 8/8 cloud cover and once again diversion from the planned track was often necessary. So much so that an early position report of mine caused Jo, my crew, to question whether I knew which turning point was first. Eventually Stratford-on-Avon was rounded and a long glide south to a stubble fire gave yet another low point for the record. The second turning point was approached along the reciprocal of the third leg. Having been alone for the last hour and making such slow progress, it was encouraging to find myself back in company with both Open and 15m Class gliders. The last leg was flown without too much trouble using several stubble fires, including one at Calvert which seemed to house half the Bicester fleet as well as Euroglide.



The rebriefing on Day 5 with a roll call on the grid by Dave Wales, Director.

Tim MacFadyen (SHK) won the Standard Class at 56.64km/h in spite of recovering from a low point of 500ft. The popular 15m winner was Arend-Frans Versteege who at briefing next morning gave a detailed impression of his tactics – in Dutch. Bernard Fitchett presented the Director with a memento of the chaos of the previous morning's initial launching.

Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Fitchett (ASW-17)	63.50	1 Versteege (ASW-20)	56.39	1 MacFadyen (SHK)	56.64
2 Kay (Jantar 2)	63.01	2 Redman (LS-3)	54.78	2 Cowderoy (Phoebus 17)	56.47
3 Glossop (Kestrel 19)	61.89	3 Spreckley (Mosquita)	53.62	3 Gaunt (DG-100)	56.22

Overall leaders: Lysakowski (Open), Watt (15m), Davis (Standard)

Day 6, Sunday, August 27

Tasks: All Classes; 285.7km quadrilateral, Didcot, Lasham, Gillingham.

With cloudbase once again slow to rise it seemed sense to start a little later and, hopefully, higher. In the event Ted Lysakowski and I started at 13.31hrs, the last of the Open Class, with cloudbase lowering! We were almost at Didcot before conditions markedly improved, No. 29 taking more than an hour to round the first turn.

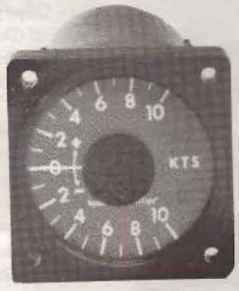
The leg to Lasham was flown in much improved weather and turning west to Gillingham the soaring was superb. Bernard Fitchett zig-zagged the whole of this leg using the north-westerly cloud streets, a factor which must have helped him win the day at 94.50km/h, nearly 6km/h faster than Ralph Jones (Nimbus 2) in second place.

Turning north for Nympsfield the influence of the Bristol Channel again became apparent. Cloudbase lowered considerably and progress into the northerly wind was much more difficult. Andrew Davis, one of the three Standard Class finishers, took one hour to cover the last eight miles.

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Dave Watt, left, the Standard Class Champion, with Brian Spreckley.

Span obviously counted as all but two of the Open Class completed. Leigh Hood (Cirrus 75), winning the Standard Class at 68.74km/h, needed to take a few hundred feet into cloud to final glide successfully while the two Kestrel 19s in the same thermal got back from cloudbase. The day ended with Brian Spreckley (70.52km/h) in his Mosquito and Chris Rollings, the only two 15m pilots to finish, having to contour fly across the line to give Brian his first day win.

Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Fitchett (ASW-17)	94.50	1 Spreckley (Mosquito)	70.52	1 Hood (Cirrus 75)	68.74
2 Jones (Nimbus 2)	88 90	2 Rollings (PIK 20)	69.57	2 Davis (Std Cirrus)	66.44
3 Garton (Nimbus 2)	83.44	3 Aldous (Mini Nimbus) 274.7km		3 Blackmore (Std Jantar)	63 55

Overall leaders: Garton (Open), Rollings (15m), Davis (Standard)

Day 7, Monday, August 28.

Tasks: Open and 15m Class, 145km out-and-return, Didcot; Standard Class, 151km out-and-return, Gillingham.

In spite of the current rule which devalues tasks of short duration, the final placings were still altered as already described.

Open Class	km/h	15m Class	km/h	Standard Class	km/h
1 Garton (Nimbus 2)	78.69	1 Spreckley (Mosquito)	77.76	1 Hood (Cirrus 75)	57.58
2 Kay (Jantar 2)	75.67	2 Watt (ASW-20)	69.20	2 Davis (Std Cirrus)	56.05
3 Fitchett (ASW-17)	74.62	3 Aldridge (PIK 20)	61.45	3 Cook (DG-100)	50.01

As we gathered for the prizegiving by Roger Barrett, BGA Chairman, outside the Cotswold stone clubhouse, we were treated to a formation low pass by Ralph Jones pacing his Regent tug with the Nimbus – and the glider won!

Once again Nympsfield produced a friendly and enjoyable contest giving us seven interesting contest days and their customary generous hospitality.

Final Results

Open Class		15m Class		Standard Class	
1 Garton (Nimbus 2)	6103	1 Watt (ASW-20)	6260	1 Davis (Std Cirrus)	6827
2 Fitchett (ASW-17)	6028	2 Rollings (PIK 20)	6166	2 Hood (Cirrus 75)	6029
3 Lysakowski (Nimbus 2)	5910	3 Versteege (ASW-20)	6026	3 MacFadyen (SHK)	5898

All the photographs were taken by John Glossop.

SIXTH INTERNATIONAL VINTAGE GLIDER MEETING

Brienne le Château Airfield, July 8-16.

CHRIS WILLS

After the first day of rain, the Meeting became a festival of vintage gliders, sunlight and champagne. The weather had been bad previous to the meeting and became bad again after it, so that just for our week the French countryside was transformed into a summer paradise.

Forty-three vintage gliders from Switzerland, France, Holland and Britain, three tow planes, one of which was a vintage Morane 317, and many historic aircraft were packed into the hangar and presented such a sight as has never been seen before. No less than 11 entries came from Britain and the most numerous type entered was the Slingsby Prefect, two from Britain and two from Holland. With us for the first time were sailplanes which had been the basis of French gliding since the war. However, we believe that only the little Castel 301 achieved maximum production during the war. The oldest glider entered was Ted Hull's 1934 Rhönbussard.

Mostly duration tasks were set but on Tuesday, July 11, there was a 24km out-and-return to Monsieur Ferté's farm. He was the Patron of our Meeting and President of the Gyro Club of Champagne who operate from the airfield. Among those to complete the task, were Ron Davidson (Petrel), Willi Schwarzenbach (Spalinger S-18), Werner Tschorn (Weihe 50) and Jan Vermeer (Prefect). There were many outlandings achieved without damage, in spite of the uncut corn fields and the famous pre-war Rhön pilot, Peter Riedel, flew Ernst Walter's Mü-13b for 7hrs 20 min!

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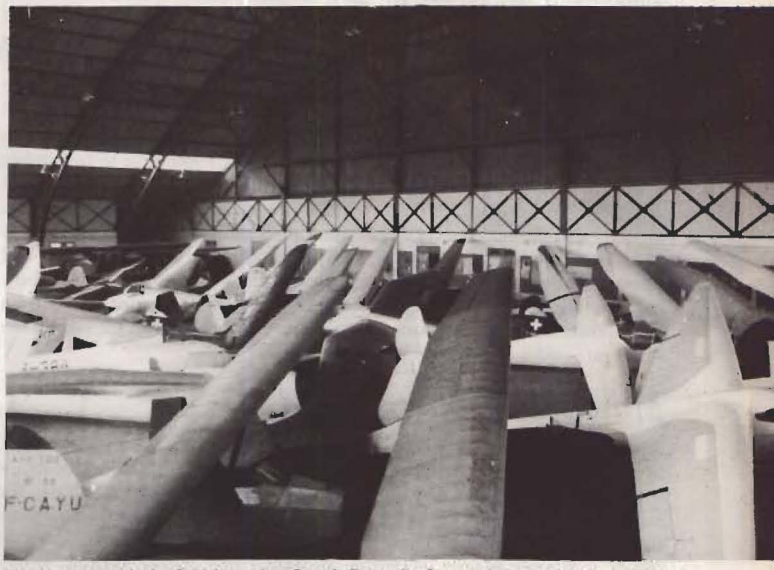
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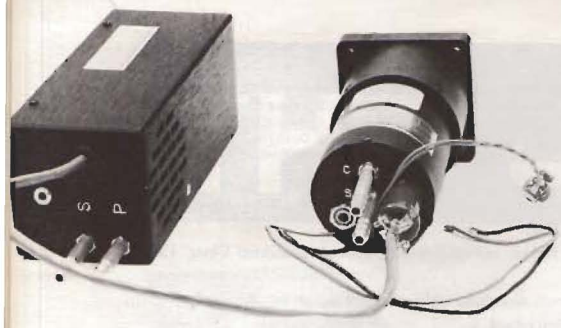


The Hangar with the British entries, Petrel, Tutor, Prefect and Rheinland, to the fore. Photo: Ted Hull.

The second cross-country on July 14 was a 104km out-and-return to the great airfield of Marigny le Grand. A light crosswind and haze made the task too difficult for some gliders but it was completed in about 3hrs by Chuck Benson (SB-5), Werner Tschorn in his Weihe 50, Frank Descatoire (AIR 100) and Chris Wills and Tarik Wildman in the Kranich 2A. All prizes were bottles of champagne from a seemingly endless supply.

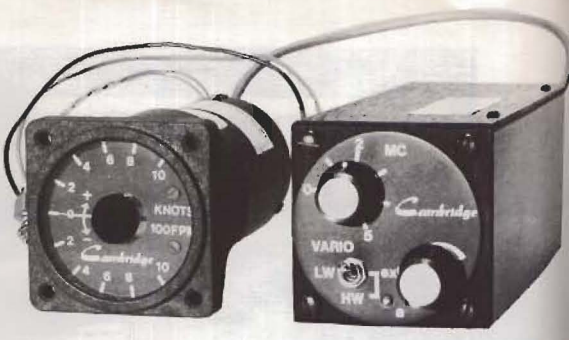
Among the famous people at the meeting was Hans Sander, former chief test pilot and engineer of all types of Focke Wulf until 1945 and former Aachen University student, who designed and built the FVA 9 (Blue Mouse 2) in 1934. He was at last reunited with the FVA 10B Rheinland after so many years and revealed that he still knew how to fly it well.

The efficient organisation was mainly by two young Frenchmen, Didier Fulchiron and Guy Hamon, with at least two others in close support. Also assisting was Gabiel Lacote, President of the Aero Club de Goeland which lent us the winch. The meeting would not have been possible without the kindness of Madame Lamerasse, the owner of the airfield. So ended by far the largest Vintage Glider Meeting ever held when more than 600hrs were flown during the seven days.



Consumer Report:

The Cambridge Audio Director



FRANK IRVING

The "Cambridge" in the title of Cambridge Aero Instruments Inc may be taken to refer to both places: to the ancient seat of learning in England where Raouf Ismail graduated whilst becoming a prominent member of its gliding club; and to the more modern Cambridge, Massachusetts (which also houses a seat of learning with a gliding club) where he now operates his firm. His basic product is an electric variometer which has enjoyed an excellent reputation for some years and has been much praised by G. Moffat *et al.*

It is now supplemented by other plug-in goodies: straightforward audio, an integrator, and now the audio director. The whole range of devices forms a genuine integrated system. You can have the vario by itself or together with the integrator and either audio device, or you can omit the integrator. The subject of this report is the audio director coupled to the miniature variometer, loaned by Southdown Aero Services and temporarily installed in Std Libelle 466.

Each device can be mounted in the standard "small instrument" panel hole (see S&G, February, 1976, p8) and, apart from the mounting screws, requires only one further ¼in hole for the switch. One's immediate impression is that the whole package is neat, functional, well-finished and outstandingly simple to install. A seven-pin plug and cable from the flight director plugs into a socket provided as standard on the back of the vario case - perhaps a slightly delicate plug for club use, but fine for a careful owner - the switch is already wired-up and the only other electrical connection is the supply from the battery. This can be anything from 11 to 18 volts, and the usual nominal 12v is splendid. All you have to remember is that in Cambridge, Mass, "positive electricity runs in red wires and negative electricity runs in black wires". The vario is connected to a ½-litre capacity and the total-energy head (total energy is essential if any sense is to be made from this combination of instruments) whilst the speed director is connected to the aircraft pitot and static lines, so it knows how fast you are going. On the speed director, the pilot is confronted by a three-position switch, a volume control knob, another knob for setting the climb rate and a microscopic trimmer screw.

Matches the pilot's mood

The *modus operandi* is very straightforward. With the three-position switch set to VARIO, the system functions as a normal electric variometer with audio. The audio functions in both directions: when climbing, the note is interrupted so as to "bleep". As the rate of climb increases, both the frequency of the note and the rate of bleep increase. At small rates of climb, it sounds a little plaintive: at high rates, rather excited. When sinking, it emits a continuous note whose frequency diminishes as the rate of sink increases. At high rates of sink it produces a note like a Russian bass opera singer conveying an air of profound gloom, and rightly so, as Mr Wogan would say. It certainly matches the pilot's moods, and perhaps accentuates them. The volume can be varied from silence to too much, which seems very sensible. The loudspeaker is not mounted separately but lurks in the side of the case.

With the switch set to LW ("low weight") and the RC ("rate of climb") knob set to what you fancy, it changes gear and works as a flight director for an unballasted glider. If it is set up correctly and you are flying at the correct speed, the vario shows zero. If it shows climb, the pilot should decrease the speed; if it shows sink he should go faster. In effect, he points the nose the same way as the needle. All this is accompanied by the appropriate sounds from the audio. Switched to HW ("high weight") it does the same job for a glider full of waterballast. It is not too clear how it knows how much ballast is carried but presumably it just works on the basis of an average figure. On the ground, switching it to LW or HW produces a large sink indication because, being zero, the speed is *much* too low. The switching can also be done remotely and could be automated by coupling it to the flap lever.

The speed director tested was suitable for Standard Class gliders but it has to be trimmed in the air for the individual machine. This is done at dawn or thereabouts, when the atmosphere is substantially calm. The RC knob is set to zero and the glider is flown at the speed for Max L/D (50kt for the Libelle). With the selector set to LW, the trimmer is twiddled until the vario reads zero. So, on the first Sunday of the Nationals, long before it was thought to be soarable, I had a tow to 3000ft in an atmosphere which had previously been treated rather poorly by the Common Market. The trimmer screw is all of 1mm in diameter so there I was in the middle of a lot of nasty haze, peering at this minute screw through the bottom half of my bi-focals, whilst wielding an instrument screwdriver in one hand and trying to fly quite accurately at 50kt with the other. The things we do for gliding! The vario was showing quite a lot of climb, and a tentative twiddle had little effect. It was a little while before I realised that the minute screw worked a multi-turn potentiometer: thereafter, more determined twiddling produced the desired result. I also learnt that it pays to mount the two units so that the vario indicator is not obscured by the pilot's hand when adjusting the trimmer. In fact, the adjustment is straightforward enough and it only has to be done once.

Useful for marginal lift

The soaring was conducted around Lasham over the final weekend of the Nationals when the thermals were, shall we say, elusive, disorganised and not particularly strong, separated by patches of down, and turbulence, and nothing at all: excellent conditions for assessing such a device. Used in the VARIO mode, it is an excellent instrument. When conditions were reasonably steady both it and the Winter "steam" vario agreed very closely. The damping of the Cambridge is very nicely organised, giving a response somewhat faster than the Winter, but not so rapid as to respond to every little burble. Incidentally, it comes with a little restrictor to be inserted in the plumbing to the capacity, in the absence of a gust filter. The audio signal, being unfamiliar, required some effort to interpret. After a while, it became more automatic and no doubt one would eventually respond instinctively. Having both climb and sink audio signals is particularly useful for scratching around in marginal lift, particularly in the company of others, since it helps to locate the worst place.

In the LW cruise mode (no ballast in 466) it functions as described above and once again, in those rare moments when conditions were reasonably steady, the speed one was encouraged to fly at agreed very well with that shown by the Winter in the Netto mode. This is not a guarantee of accuracy since the latter was adjusted by using a wind tunnel and Paul Bikle's performance figures and hasn't been finally trimmed for this specific machine. Nevertheless, the agreement between the two instruments was remarkably good.

The audio is something of a mixed blessing in this mode, or so I and my partners thought. On the one hand, it is useful to have an audio signal, so you don't need to peer at the instruments. On the other hand, you are almost always flying at the wrong speed so the audio is incessantly bleeping for slower or groaning for faster. This happens even when the errors are quite small, with the vario showing as little as half a knot up or down, and one eventually feels to be the subject of electronic harassment. It also tends to encourage vigorous corrections: perhaps a good thing, but not very comfortable. Maybe it becomes instinctive with practice, but we all thought that it would be nice to achieve a little blessed silence as a reward for flying more-or-less at the right speed. It is, after all, a very non-critical figure so it would be worth experimenting with a zone of silence over about 5kt either side of the "correct" speed, if this is electronically possible. In the VARIO mode a zone of silence around zero is definitely not desired, so the switching would certainly be more complicated. However, this is a subjective judgment based on relatively

little flying: the instrument certainly works very well in the cruising mode. It seems to provide accurate indications, so far as could be judged without some complicated calibrations, and does so with just about the right rate of response. Although most pilots would prefer to retain a mechanical vario as back-up, it would be entirely reasonable to use the Cambridge, plus the speed director, as the sole source of information on "energy management".

The prices are £120 + VAT for the mini-vario and £148.50 + VAT for the speed director. By way of comparison, a mechanical vario is likely to cost about £100 and it is easy to spend £500 or more on rival electronic devices.

To summarise, it is a thoroughly professional product with an excellent finish and convenient controls. Installation is simple and neat. Its indications appear to be accurate and the response in both the climb and cruise modes is quick enough without being twitchy. The audio signal is helpful particularly when thermalling but I, for one, would prefer a little silence when cruising at roughly the correct speed.

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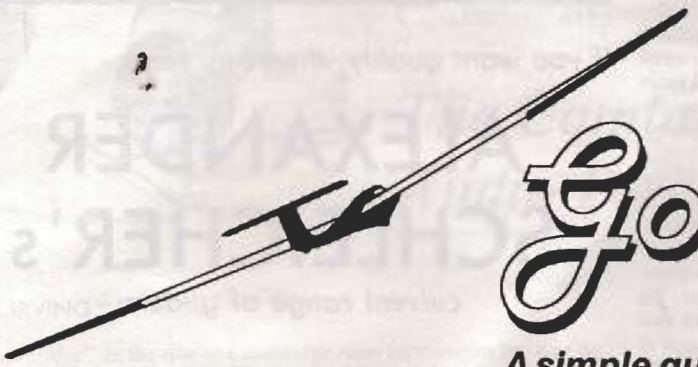
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Book Reviews

Cross country Soaring by Dr Helmut Reichmann. Published by Graham Thomson Ltd., USA, at $25.00.

No one can fail to be impressed by the sheer beauty of this book which must be the most comprehensive and authorative work on cross-country soaring techniques ever written. (This book was published about 2/3 years ago in West Germany under the title *Streckensegelflug*. ED.).

The use of colour in the large number of superb drawings makes the most complex figure easy to interpret and even beginners will find the majority of the book easy to understand and very worthwhile reading.

The writing is clear and concise and the beautiful lay-out, bold print and clearly headed sub-sections make it easy to read and to find the particular point you want to re-read at a later sitting. This is a book that you will want to possess and to read again and again.

For the uninitiated perhaps I should mention that Dr Helmut Reichmann is currently World Gliding Champion for the third time (twice in the Standard Class and at present in the 15m Class) as well as being the honorary trainer for the German National Soaring Team for many years. He is obviously a marvellous instructor as well as a formidable pilot in competitive flying.

Credit is due to the publishers Graham Thomson Ltd and to the translators who together have done such a splendid job and given us this masterpiece in the English language.

DEREK PIGGOTT

An extract from a review by George Moffat of the same book.

Reichmann's book is, very simply, the best and most comprehensive work yet published on competitive cross-country soaring, an encyclopaedia of the art. Pilots of Silver C level will find the information easy to comprehend; pilots with a couple of World Championships to their credit will find plenty to learn.

I found the discussion of dolphin flying especially valuable as it has not been well covered in any previous work. Reichmann's whole approach to contest flying is that simple is good. The book reflects this philosophy. No time is wasted on things that won't lead to better understanding and better techniques. Somehow, amidst all this economy, the author manages an informative, readable, often humorous style. On crews, after suggesting that one's wife generally makes the best one: "Since the presence of one female generally rules out the presence of any other such pinnacles of creation, the other crew members are men - a grouping which has wondrous effects on the improvement of courtesy within a tight group that may spend weeks together." (Lady pilots will, of course, have to make similar but slightly different arrangements.).

Helmut Reichmann's book is, like its author, quite simply the best.

Going Solo by Derek Piggott. Published by A. C. Black Ltd. Price £3.25, available from the BGA at £3.40 including p&p.

With the publication of his fourth book on gliding one begins to wonder if Derek Piggott will ever exhaust his subject. **Going Solo** does not contain any radically new material - its value is rather in its conciseness. In less than 100 pages of text and drawings are all the briefings and diagrams a student pilot needs before "going solo". The book should prove an excellent supplement to the hasty briefings and sketches on the backs of envelopes that form the theoretical part of most students gliding training.

With luck some instructors may read the book too and try to improve their own briefings to this standard. Until then they can at least encourage their students to read it and discuss the contents with them.

CHRIS ROLLINGS

A Course in Elementary Meteorology (Second Edition), Meteorological Office 1978. Published by HMSO London. £4.95.

This is a most useful book for anyone who has a keen interest in the weather but does not wish to study the mathematical side of the subject. The first edition, written by D. E. Pedgley, was published in 1962. This second edition has been revised by H. Heastie. Much of the 1962 text remains unaltered in the second edition but major revisions have been made to the chapters on precipitation and forecasting. New appendices have been added on the use of radar and satellites.

The book is in two parts. The first deals with Physical Meteorology starting with temperature and stability and continuing through winds and water vapour to clouds and precipitation. Convection is described from the initial relatively simple bubble of warm air which forms a thermal up to the very complex airflow which develops in and around the giant cumulonimbus clouds which produce severe thunderstorms and hail. In between these extremes are illustrations of phenomena such as the spreading out of cumulus to form a layer of stratocumulus, a process which spoils so many otherwise good soaring days. Other features of special interest to soaring pilots are briefly mentioned, these are lee waves and sea breezes. Cloud streets and waves over convective clouds are not mentioned at all.

The second part of the book is headed Synoptic Meteorology. This covers weather charts, air masses, fronts, depressions and anticyclones. The diagrams of fronts show not only the traditional cross sections to be found in almost every book on meteorology but also the cross sections of weak (but often observed) fronts which are classified as warm or cold but appear very different to the pilot who flies through or over them.

Although the book is described as a course in elementary meteorology it is not necessary to work through it from beginning to end in strict sequence. One may dip into the book at almost any chapter and extract a clear summary which answers many of the questions set in examinations for pilots licences or Bronze "C" tests. Readers who want to pursue a subject further will find a bibliography at the end of each chapter.

For less than the price of two aerotows you can buy a book which contains a mass of useful information. It does not set out to teach instant "do it yourself" forecasting but it does provide a good understanding of many of the important processes which affect the weather.

T. A. M. BRADBURY

Segelflugzeuge vom Wolf bis zum Mini Nimbus by Peter Selinger. Published by Motorbuch Verlag, Stuttgart, W Germany.

This is a study in depth of aircraft produced by the firm of Schempp Hirth from the Göppingen 1 Wolf of 1935 until today's Mini Nimbus. It is a superbly produced book with three view drawings, text and photographs, most of which have been published for the first time. Indeed, so much is revealed for the first time, that it will be of interest to everyone interested in gliders and gliding and also to air historians, even if they cannot understand German.

All versions of the Wolf, the Gö-2, the Gö-3 Minimoa, including the two-seater version (Gö-6 or Minimoa 2A), the Minimoa 39, Gö-4, Gö-5 (H-17), the Habicht in full size and clipped wing versions, including the one with the machine gun, the H-20 motor glider, the H-21 variable wing sweep two-seater, the Minamu etc, are of particular interest.

Fascinating are the late war time efforts to convert glider builders on to constructing major wooden components for high speed combat aircraft that had hitherto been built of metal. For the first time is revealed the 25m long, heatable press that was being prepared to produce the world's first plastic laminar flow profile aircraft wing for the Hütter 211, long range, high altitude, high speed reconnaisance aircraft. Here was born the idea that later led to Hütter's H-301, the forerunner of the Std Libelle and all the other glass fibre sailplanes.

The second half of the book is devoted to the firm's post war production, which included the powered Klemm 35, the Akrostar, wooden and glass-fibre sailplanes. The final pages are filled with Werk Nummers and registrations, so far as some of the pre 1945 ones are known. This book compares well with the latest, new wave of gliding books from Germany. Peter Selinger is to be congratulated. We have waited so long for such a marvellous book. Let us hope that more will follow.

C. WILLS

Weather Observation by Bill Giles. Published by EP Publishing Ltd at £3.50.

A better understanding of the weather is a basic must for newcomers to gliding and they couldn't do better than read **Weather Observation,** the latest in the Countryside Leisure series, written by Bill Giles the television Met man.

While the book is aimed at a wide section of the population, there is a chapter on "Weather aspects for gliding" as well as details on gathering your own information and making weather forecasts. It's all very elementary stuff, presented in an admirably clear and simple way, and makes the perfect stepping-off pad to more comprehensive Met literature.

GILLIAN BRYCE-SMITH



The BAC Drone photographed with Concorde in the background.


Mike Russell.


Mike with a newcomer, the Hawk

TOWARDS A NATIONAL GLIDER COLL

alister raby

Duxford aerodrome, just south of Cambridge, has become internationally known for its unique collection of military and civil aeroplanes. To the gliding world it has longer been familiar as one of the main bases of the Cambridge University Gliding Club. What better place could there be for the establishment of a comprehensive flying collection of veteran gliders? This is exactly what is coming about.

Mike Russell, a Boeing 737 captain with Britannia Airways, has been flying gliders since his seventeenth birthday. He made early acquaintance with the late Espin Hardwick's pre-war Slingsby Petrel and was so impressed that he vowed one day he would own one himself. Unfortunately only three were built before production stopped in 1940. The dream was denied realisation for some twenty years. Then in 1973 routine airline work took him to Dublin, where hanging from the rafters of an Aer Lingus hangar was one of the two surviving Petrels, pensioned off several years earlier as being too old to fly. This discovery, although a surprise, was not entirely an accident as Mike had been a dedicated researcher into back numbers of S&G (he is the lucky owner of a complete set from number one). The Petrel was duly brought back to England, C of A'd, provided with a trailer and taken to the Mynd to fly again in spring 1974.

The Petrel somehow set the ball rolling. By the end of 1974 an ex-Luftwaffe DFS Kranich two-seater and the oldest surviving British sailplane, the 1932 Manuel Willow Wren, had found their way to the Russell home at Henham in Essex. Chris Wills's Vintage Glider Club newsletters told of other veteran gliders awaiting rescue. There was also the question of finding a suitable tug to get the eventually restored gliders into the air. But space at Henham and labour were becoming a problem.

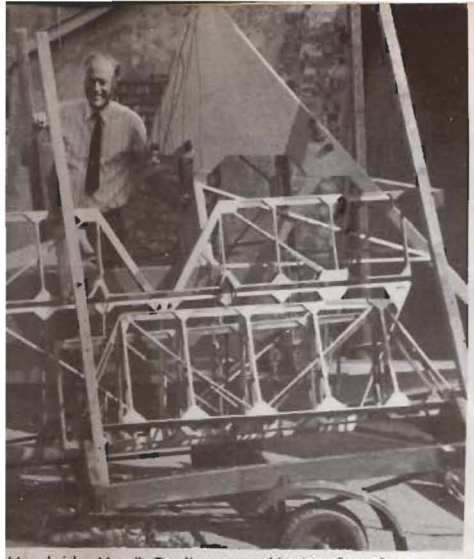
About this time the efforts of the Imperial War Museum to turn the ex-RAF fighter station at nearby Duxford into a living historic aviation centre were bearing fruit. The Duxford Aviation Society was formed, whose members help to maintain Museum aeroplanes. These members are also allowed hangarage and workshop facilities for their own aeroplanes. These aircraft have to be of approved historic interest and are technically exhibits on loan to the Museum. Their owners undertake that when airworthy they will be flown on air days for the benefit of the public. Mike Russell was an early member of DAS and the Museum took little persuading to see the value of widening their display by including a collection of vintage gliders.

Once workshop space had been allotted Mike found surprisingly little difficulty in recruiting a team of enthusiastic and skilled helpers. The first arrivals in the workshop in autumn 1976 were the Kranich and Tiger Moth G-APMM. The latter had been acquired in a somewhat sorry state to provide an answer to the tug problem. Both were soon stripped to their bare bones. The main activity in the winter and spring 1976/77 however was a feverish period of trailer building, which much intrigued the members of the public who filed through the workshop. The skills in Workshop 63 led by Dave Braham, a BGA inspector, and Ron Lake, a licensed aircraft engineer, soon led to its becoming the centre for all Duxford's wood and fabric work. Today at the opposite end other DAS members work on the Museum's World War One RE-8 and the Society's own DH Dragon Rapide.

All to fly again

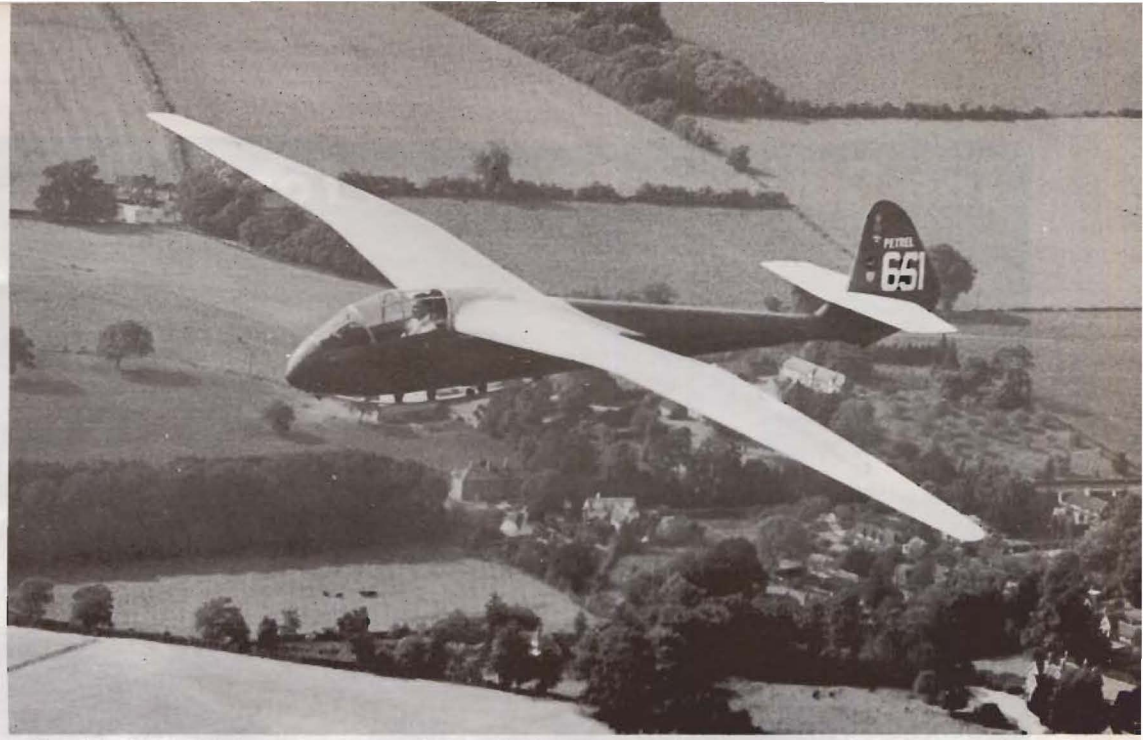
The collection has now grown to some ten gliders (listed on the next page) and the adventures and mishaps in retrieving them would fill another article. These ten are distributed between Duxford and Henham, in storage or various stages of restoration, all eventually to fly again – with no doubt more to come.

Behind this growth has been Mike Russell's conviction that in its natural concern with the present and future the gliding movement has been neglecting its heritage. Too many relics and records have been thoughtlessly condemned to the bonfire for the lack of space in the last few years. A unique opportunity to widen the scope of the collection arose only a few months ago, when word came through the grape vine that all of Slingsby's working drawings (which escaped the disastrous 1968 fire) were available to a suitable home. Slingsby's were soon convinced that Mike could provide just that. The result was a trip to Kirkbymoorside, returning with several hundred-



Hawkridge Nacelle Dagling, owned by Ivor Stretch.

LLECTION ?



The Petrel which Mike Russell waited more than 20 years to own. Photo: Lorna Minton.

weight of paper. The plans cover all Slingsby gliders from the 1931 Falcon and the 1933 Primary onwards. The formidable task of sorting and indexing is being undertaken by Andrew Coates, another member of the group (author of the recently published **Jane's World Sailplanes and Motor Gliders),** and his wife Rosemary.

The collection has recently received formal recognition by election to membership of the British Aircraft Preservation Council under the title of the "Russavia Collection". It is the first and only historic glider collection to achieve such membership, which is a measure of the esteem in which Mike Russell's efforts are now held.

An early powered glider

Finally mention must be made of three powered aeroplanes which are also part of Russavia. The first acquired last year was already a Duxford resident although rather neglected. This was the BAC Drone G-AEDB. It is entirely relevant to the collection as one of the earliest powered gliders, being essentially Lowe-Wylde's 1932 BAC VII sailplane with a Bristol Cherub attached. It is expected to be flying shortly. The major parts, including another Bristol Cherub engine and propeller of a DH-52 Humming Bird have also been retrieved. The Humming Bird, built for the 1923 Light Aeroplane Trials at Lympne, is of interest as a direct descendent of the DH-52 glider built by de Havilland's for the historic 1922 Itford Gliding Competition.

The third of the powered trio has no claim to gliding associations being one of the very few remaining Miles Geminis. It was found languishing at the back of a hangar at Shobdon in the course of a trip to collect a fine pitch towing propeller for the Tiger Moth. Fully airworthy following a little expert attention from Ron Lake, it has given all Mike's team the chance to get airborne as a relief from their restoration labours. It has also this summer, along with the Petrel, been a welcome participant on Duxford air days.

The long run aim is an all-flying historic glider collection, to be flown for the pleasure of its members and the education and enjoyment of the public. The team, now reaching twenty or so, is too numerous to name individually but includes both pilots and novices with a wide variety of backgrounds. The non-fliers have the prospect of learning and making their first solos in vintage style as a reward for their efforts. Who knows it may be possible to celebrate the Diamond Jubilee of Itford in 1982 with a Duxford pageant of the history of the gliding movement.

THE RUSSAVIA COLLECTION

GLIDERS

BGA No.	Type	Year of Manufacture	Remarks
162	Manuel Willow Wren	1932	Stored. The oldest surviving British sailplane, awaiting restoration to airworthiness
651	Slingsby T-13 Petrel (c/n 361A)	1940	Current C of A, airworthy. Registered G-ALPP
2362	Schneider Grunau Baby 2B (DFS 108-49-IU) Works No. 030892	1942	Ex NSFX glider LZ-AR. Manufactured by Flugzeugbau Petera. Under active restoration
2400	Schneider Grunau Baby 2B (DFS 108-49)	1942	Ex NSFK glider LN-ST. Used post war by RAF as VN 148. Stored
1147	Jacobs-Schweyer Kranich 2 (DFS 108-30)	1942	Ex Luftwaffe, history being researched. Under active restoration
909	A/B Flyg-Flaw Kranich 2	1942	Swedish built version of the Kranich. Stored
493	Hawkridge Nacelle Dagling (c/n 10471)	1946	One of five built post war by this company. Stored
470	Short Nimbus (c/n S1312)	1947	Prototype only. Placed 3rd in 1947 BGA Two-seater Comp. Undergoing C of A, overhaul
2493	Elliot Eton TX 1 (c/n 063)	1948	Primary glider based on the SG-38. Under active restoration
618	EoN Olympia	1958	Stored. To be made up from parts of several airframes

POWERED AIRCRAFT

Registration	Type	Year of Manufacture	Remarks
G-EBQP	De Havilland DH-53 Humming Bird (c/n 114)	1925	Stored. Requires new fuselage to be built
G-AEDB	BAC Drone	1936	Awaiting C of A renewal
G-APMM	DH-82A Tiger Moth	1943	Ex RAF DB 419. Under active restoration as a tug
G-AKKH	Miles M-65 Gemini 1	1948	Airworthy, current C of A

c/n = constructor's number

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UNIGLIDE – '78

KEN GERBER

Sixteen pilots gathered at Portmoak on September 23 for a rather unusual gliding event – six taking part hadn't gone solo, there was no cross-country flying and the hottest ship was a K-6. Uniglide was a get-together for members of five university clubs and the whole idea was to **enjoy** gliding.

Andrew Wood was in charge of the flying and set the tasks which were within the reach of pilots of all standards – who could soar the highest, the quickest to 2500ft and who could make the spottiest spot landing. Such tasks involved flying accurately and to eke out the most from any soaring conditions, which is surely what gliding is all about yet such (basic) skills are difficult to get right.

Although points were given, Uniglide wasn't a competition and the informal, friendly atmosphere increased the pleasure of the event. I should point out that the non-solo pilots flew with an instructor, but the pupil was trusted to have done the material parts of the flight. The participants covered a wide range stretching from a mere 20 launches to a genius with All Three Diomonds, yet everyone derived much enjoyment and value from the experience.

As for achievements – John Beveridge soared the highest with 4100ft, was the quickest to 2500ft with a time of eight minutes and ended this gleaming performance by landing right on top of the marker. Also four Unigliders did their five hours.

We had a diverse and stimulating programme of talks with a discourse on bungy launching and bungy expeditions by Peter Whitehead; George Lee told us about the World Championships; Bob Lyndon spoke on wave soaring; Malcolm Shaw on Met and Peter Williams covered the theory of flight. Our thanks to all our speakers who helped fill the existing vacuum of ground instruction.

Uniglide was different, it was educational and fun. We intend to hold a Uniglide '79 which will be bigger and even better. If any university or college club or individual student is interested, please contact me at 217 Albert Drive, Pollokshields, Glasgow G41.

Gliding Club of Victoria

The Gliding Club of Victoria, based at Benalla, north-east Victoria, celebrates its 50th anniversary in 1979. It has more than 500 members and the most modern fleet in the country.

The club attracts a number of overseas visitors and is ideal for a family holiday, the surrounding area offering a vast variety of diversions. For further details write to the Director of Operations, Ed McKeough, c/o Gliding Club of Victoria, PO Box 227, Benalla, 3672, Victoria, Australia.

FIRST TIME IN TYPE! by JAMES M. HEISHMAN



BGA AND GENERAL NEWS

TWO FATALITIES

There has been another fatal aerotowing accident, this time at Aboyne on Wednesday, October 11. The pilot, Stan Easton, who was an instructor at the ATC Centre, Syerston, was flying a Citabria towing a K-6E. At 2-300ft the glider got too high and pulled the tug's tail up; the rope broke but the tug pilot was unable to recover. Impact with the ground was at an angle of 30-40° nose down and in a banked attitude. At the time of the accident although the SW wind was light there was moderate turbulence. AIB have made field inquires but are not investigating.

Note: The BGA Executive has tasked the Instructors' Committee with investigation and action on aerotowing accidents. A working group has been formed which will be led by Don Hanson who is an ex-Transport Command pilot and now a full-time instructor at the RAFGSA Centre at Bicester; Don has 26 000 tows to his credit.

An accident involving a K-13 at Camphill on August 18 resulted in the death, some days later, of the student, Dr J. R. Allan. The flight was an instructional one and according to the preliminary report the glider stalled on the approach at a height of 20ft or so.

W. G. Scull,
Senior National Coach

TUG PILOTS - ANY COMMENTS?

This has been a grim year for accidents and several of our articles in this issue reflect the current anxiety to help prevent further tragedies. We already have two articles exclusively on aerotowing plus one letter and within the last few days of going to press a number of tug pilots have sent us further material.

To get the greatest impact and give the widest coverage on all aspects of aerotowing safety, we are inviting readers to give us their opinions. Bill Scull has agreed to extract the most worthwhile points to form one main article for the February issue.

The only snag is a very tight deadline due to the Christmas holiday. All copy must reach me by December 5.

BRITISH TEAM TRAINING COMMITTEE

The BGA Executive Committee has set up a new sub committee called the "British Team Training Committee" and we are delighted to announce that it will be chaired by our World Champion, George Lee.

The Committee is responsible for:

1 Identifying young pilots with the potential to be selected for future British Teams.
2 Assisting them to reach the highest standard in the shortest time.
3 Administering funds from the Sports Council Preparation Training Grant and from elsewhere for the benefit of the selected pilots.

There will be further details in a future issue.

Roger Barrett,
BGA Chairman.

KEMBLE PENETRATION ARRANGEMENTS

During the second half of 1978, Kemble ATC have been listening out on 130.4 awaiting calls from glider pilots wishing to transit the area. Kemble are still happy to clear gliders through the Red Arrow practice area, but it seems a little unfair (if not downright cruel) to subject them to the frequency permanently. It has therefore been agreed that they will only listen out for about 30 minutes prior to the movement planned previously by telephone.

For these pilots with multi-channel radios (and the appropriate R/T licence) they will be happy to accept calls on their normal frequency.

The Cotswold Club have been getting calls asking them if it is OK to go through the zone. This is perhaps not a good idea, and any information they are kind enough to give, should be treated purely as advisory and unofficial.

John Ellis,
BGA Interim Airspace Chairman

COMPETITIONS AND AWARDS

1979 National-level Contests. The 1979 National Championships will be held from May 19-28 at the London GC, Dunstable, and the 1979 Euroglide Competition will be hosted at the Coventry GC, Husbands Bosworth, from August 18-27. Applications to enter the Nationals or Euroglide must be received by the BGA by January 31, 1979. Entry forms, which include full details of entry fees and Classes, are obtainable from the BGA office.

Regionals. Regional competitions confirmed so far are the Western Regionals at Nympsfield (June 2-10); Lasham Regionals (July 28-August 5) and the Northern Regionals at Sutton Bank (August 4-12). Applications should be made direct to the organising club. Bids from other clubs to run Regionals are still welcome.

Competition Enterprise, which is unrated, is being organised by the Herefordshire GC at Shobdon from June 16-24. Applications should be made direct to the host club.

A New Trophy. A new trophy is being presented to the BGA by Mike Carlton in memory of Rex Pilcher. Called "The Rex Pilcher Trophy", it will be awarded to the earliest pre-declared 500km triangle of the year flown by a pilot completing this task for the first time. The award dates from January 1, 1978.

1978 Annual Awards. Claims are invited for the annual awards for the year ending December 31, 1978, to be received by the BGA by January 31, 1979. The trophies awarded are as follows: **Wakefield** - longest flight originating in the UK; **California-in-England** - longest flight by a woman; **Volk** - longest pre-declared goal flight by a pilot holding no Gold or Diamond legs on January 1, 1978; **Douglas** - maximum cumulative distance by three pilots from the same club; **Seager** - longest distance in a two-seater; **De Havilland** - maximum gain of height; **Frank Foster** - fastest pre-declared 500km triangle; **Manio** - fastest pre-declared 300km triangle and the **Rex Pilcher** trophy.

Trophy Rules. Claims for the above awards must be substantiated by an Official Observer's statement that the following minimum requirements were satisfactorily met:

- Turning points and goals pre-declared in writing or on film. (Closed circuit flights may be of any shape approved for FAI badges.)
- Photographic evidence of rounding turning points, in accordance with FAI badge rules.
- Barograph trace.
- Pilot's evidence of start and finish times for speed awards.

Gordon Camp,
Chairman, BGA Competitions Committee.

BGA SPEED INDEXES FOR 1979

For several years the glider speed indexes used for BGA handicapping have been based on a minimum step size of 2%, *ie* only even speed indexes have been used. It has now been decided to reduce the minimum step to 1% which will allow smaller differences in performance to be taken into account.

An explanation of the method used to calculate the indexes was given in the December, 1974, issue of S&G, p266. The indexes for new gliders are calculated from the best information available and may be adjusted after experience and comparisons with well proven gliders.

Speed indexes for 1978 were published in the 1978 Competition Handbook. This list will be used as the basis for the 1979 list. In general, indexes will either be unchanged or changed by only 1% but in a few cases, where further evidence on performance suggests it is necessary, larger changes may be made.

The definitive list for 1979 will be published in the BGA Competition Handbook.

Ron Sandford,
BGA Competitions Committee

HOME-BUILT SAILPLANE COMPETITION

As evidenced by inquiries of the BGA Technical Committee, there is considerable interest in the home-building of sailplanes. The major difficulty is in finding a suitable design to be built.

The Technical Committee has given some thought to sponsoring, or otherwise encouraging, a suitable design. With the positive encouragement of the Council of the BGA it is intended to promote a competition with the objective of stimulating more amateur construction of sailplanes in the UK by offering a suitable design to potential builders.

Before fixing and publishing the rules for such a competition, it was thought it would be a good idea to solicit views from the gliding movement as a whole as a check on our own views - hence this piece.

The Design. It is difficult to decide what this should aim at. It is unlikely that a World Champion Class machine will be possible - or even necessary. On the other hand many people

BGA WEEKEND 1979

March 24-25 is the weekend to mark in your diaries for next year – 1979 being the 50th anniversary year of the Association we hope for a bigger than ever turnout at the BGA Weekend which will be held at the Post House Hotel, Leicester.

The price will be £8.00 a ticket for the dinner and party and accommodation at the hotel will be at the special rate of £7.00 per night for bed and breakfast. All bookings will be through the BGA office and registration forms will be available shortly.

The preliminary programme includes the AGM on Saturday afternoon plus various sessions at which you will be encouraged to express your opinions of BGA progress (or lack of progress) in 50 years! After this there will be plenty of food and drink with lively music at the dinner and party in the evening. Sunday will include a visit to the BGA offices in Leicester and, hopefully, some flying at Husbands Bosworth.

will feel if the machine is too low on performance it will not be worth building. It is suggested that a single-seater of L/D in the range 30:1 to 37:1 would be acceptable. Lower L/D would not be good enough. Higher is probably becoming too difficult.

The design should have good stability and handling. It must be "practical", both constructionally and operationally.

Controversial or totally unproven concepts (*eg* Vee tails, all wing designs, etc) are best avoided. This is to avoid waste of money and resources in the development phase getting these things right – it is difficult enough with a straightforward vehicle.

To improve the chances of success, existing designs or proposals from designers who have already proven their capabilities are to be preferred.

Materials. Choice of constructional materials is important. Some people feel happy with wood, but can not cope with metal. Others *vice versa*, etc. It is felt that importance should be attached to the following:

a) Availability of materials of known and repeatable quality.
b) Cost.
c) Ease of working – including tools/facilities required.
d) Inspectability of materials and resulting components.

The "conventional" materials, wood, metal and glass-fibre all have plus and minus considerations in the above list.

It is also believed that unconventional materials should be avoided due to higher risk to the success of the programme. Similarly it is believed that other than glued wood, structural adhesives should be avoided. Quality control and inspectability is difficult. Particularly under non-factory conditions.

Purchaseability. A good design from easily acquired materials is still no guarantee of success. A wide range of materials, and some already fabricated parts and some standard hardware, all have to be acquired. If done by individuals, then in uneconomic quantities.

"Know how" varies between people. To some welded control details are "impossible". To others, a glass-fibre fairing would produce a mental blockage. Therefore, a really good "How to do it" book or set of notes written by a practical person is an essential ingredient.

It follows that the results of the competition should be made available by a firm. Taking the small boat concept of a kit as a basis, the firm should offer:

a) Basic materials.
b) Basic standard hardware kit.
c) Drawings and comprehensive instructions.
d) Details and/or sub-assemblies ready made.

Various standards may be offered, *eg*, a) and c) leaving b) and d) to the scroungers and the ingenious. The above may also be split into "whole aircraft" or fuselage only, tail only, etc. This would spread the builders financial load through the building cycle in an equitable fashion.

Any thoughts would be welcomed, particularly on the standard of performance to be called for. Please write to me c/o the BGA office with your views marked "Sailplane Competition".

And while you are thinking up your views may I invite you to re-read Michael Beach's letter, "We Can Do It", in S&G, October 1977, p229.

R. G. Procter,
Technical Committee Member

AN ADDITIONAL NATIONAL COACH

The BGA wish to appoint an additional National Coach to start work early next year. Applicants should hold a full instructor rating and a PPL or PPL (motor gliders). The salary will be commensurate with age and experience. Please apply with full details of qualifications etc to the Chairman of the Instructors' Committee, BGA, Kimberley House, Vaughan Way, Leicester.

THE PENULTIMATE LADDERS

The points are creeping up on the National Ladders as we reach the end of the season.

Open Ladder

Leading pilot		Club	Pts	Flts
1	G. D. A. Green	SGU	5410	4
2	D. Hodsman	Bristol & Glos	5096	4
3	L. Beer	Thames Valley	4958	4
4	N. Hackett	Coventry	4623	4

Club Ladder

Leading pilot		Club	Pts	Flts
1	C. Cockett	Thames Valley	2688	4
2	A. B. Crease	Imperial College	2170	2
3	R. Christey	London	1699	3
4	J. Roland	Airways	1380	2

CHRISTMAS TASK

Compiled by M. H. YATES

The "KNISLLA" fly for fun open competition only managed one day's flying. At the end of the race the six leading gliders crossed the finishing line almost together. The Observers were somewhat confused over the finishing order. However, they did notice the following points:

There were no dead heats.
The Jantar was immediately in front of the Nimbus.
The Irish pilot was just behind the green glider.
The PIK only just beat 504.
The red glider had a bare-headed pilot.
The English pilot wore a bobble hat.
The pilot with a bowler hat used the callsign Foxtrot.
The Vega was last.
The PIK was next to the Libelle.
The German pilot was right behind the Kestrel.
The pink glider used callsign Bravo.
Callsign Whiskey beat the Welsh pilot.
The white glider just beat the blue one.
The third glider was not No. 10.
The yellow glider was fourth, callsign Whiskey.
The French pilot just beat No. 333 but was immediately behind No. 10.
"Charlie" was a Kestrel.
"Lima" was next to No. 8 and just in front of the pilot with a cap.
The pilot with a turban was in No. 40.
No. 1 was just behind the pilot wearing a deerstalker hat.
The second glider was behind callsign Foxtrot.
There were two machines between the Kestrel and the pilot with a bobble hat.
What was the finishing order?
Which glider did the Scottish pilot fly?
Which glider used callsign Sierra?

NOTE. To all manufacturers and owners who thought that they were the sole users of types, callsigns, competition numbers or headgear, apologies.

In future, spare a thought for the Observers and scorers, they may see more than you think.

The answer is on p286.

NEW VENUE FOR ENTERPRISE

Competition Enterprise has been held at North Hill for the past five years, with the usual mix of weather, but always with great enjoyment by all entrants. One of the original concepts of this competition was that it should not be permanently fixed to a particular club but should travel in order to sample the varieties of the English weather and to educate a wider variety of pilot in its spirit of endeavour. After one of the best years at North Hill in 1978, it was felt that 1979 might be a suitable year to sample some different weather, with the hope of being invited back to North Hill in the future.

With this in mind the Herefordshire GC was approached and has welcomed the idea of holding the sixth Competition Enterprise at Shobdon from June 16-24. There it is hoped to sample a different variety of conditions including hill, wave and thermal, but still under the orders of John Fielden as tasksetter, whose aim, as always, will be to allow each pilot to extract his best from the day, perhaps to the extent of final gliding to the Mediterranean or the Iron Curtain.

Tony Maitland,
Organiser.

S&G PRICE INCREASE

We regret that S&G will be increased to 75p per copy from the February-March issue. The annual subscription, which includes postage, will be £5.50.

NEW MANAGING DIRECTOR

James Tucker took over as Managing Director of Vickers-Slingsby in October from George Burton, having previously been the Technical Director until May of this year when he became the Marketing Director of Vickers Offshore Engineering Group.

Mr Tucker, who gained a degree in aeronautical engineering at London University in 1962, retains his directorship of the Vickers Offshore Engineering Group.

He assured S&G that a "change of Managing Director doesn't reflect any major change in the direction of the company".

BRUNT TROPHY

The Brunt trophy is awarded annually for the best gain of height by a student member of a university gliding club. The flight must have been made during the period October 1, 1977 to September 30, 1978. Claims should be sent to Dr Peter O'Donald, Emmanuel College, Cambridge, to reach him by December 30, 1978.

SOLO AT 73

Josée Mosley-Williams, daughter of Britain's gliding pioneer of Alsation origin, Jose Weiss, went solo at Wycombe Air Park in August at the age of 73, having been told by one instructor that she would never be allowed to fly alone. She is a member of the Vintage Glider Club and is congratulated in the Club's current newsletter. (See also Southdown Club report).

Josée felt she owed it to her father, whose pioneering gliders, unmanned and manned, made British glider history before 1914, to fly a glider solo just once. In fact she has now made at least three flights and gained her B certificate.

The answer to the Christmas Task

First, Libelle, 8, white, **Scottish,** Foxtrot, bowler hat.
Second, PIK, 10, blue, English, Lima, bobble hat.
Third, Jantar, 504, green, French, **Sierra,** cap.
Fourth, Nimbus, 333, yellow, Irish, Whiskey, deerstalker.
Fifth, Kestrel, 1, red, Welsh, Charlie, bareheaded.
Sixth, Vega, 40, pink, German, Bravo, turban.

The Super Falke motor glider used by the BGA is to be replaced early next year and G-AYBG is now available for sale. It is three years old and has done approx 1500hrs including 850 engine hours. Recently top overhauled and it has a new three year C of A. The price is in the region of £10 750 plus VAT and further details can be obtained from Bill Scull.

1979 PRIORITY AND REGIONALS PROMOTION LISTS

The following provisional lists have been prepared in the manner described in S&G, August, 1978, p185. Any pilot doubting his position is asked to write to the BGA as soon as possible quoting his placings in all the rated competitions he has flown during 1977 and 1978.

On January 31, 1979, the lists will be frozen and employed if necessary to determine entry to the year's National-level competitions. For convenience the lists total only 180 pilots but everybody who has ever taken part in a BGA competition has a position which can be calculated. If you want to fly but don't appear on the lists then apply anyway. You may be lucky.

A. J. Burton,
BGA Competitions Committee

PRIORITY LIST 1979

	BGA Comps Licence No.																
1	103	LEE, D.G.	WC	26	650	COOK, P. G.	E	51	114	ALDRIDGE, K. R.	E	76	1054	HOY, S. L.	R
2	49	FITCHETT, B.	WC	27	1066	KAY, A. E.	E	52	943	CRAWSHAW, G. H.	N	77	1038	RANDLE, Jane	E
3	478	WHITE, S. A.	WC	28	565	GLOSSOP, J. D. J.	N	53	593	ROBERTSON, D. J.	N	78	278	SANDFORD, R. A.	M
4	324	DELAFIELD, J.	WC	29	525	HOGG, A. J.	N	54	229	JEFFRIES, J. R.	R	79	330	GREAVES, C. M.	R
5	875	DAVIS, A. J.	N	30	189	REDMAN, S. J.	E	55	291	WATSON, A. J.	N	80	135	ZEALLY, T. S.	N
6	1014	ROLLINGS, C. C.	E	31	249	WILLIAMSON, J. S.	R	56	99	POZERSKIS, P.	E	81	138	ELLIS, C. A. P.	E
7	956	GARTON, C.	E	32	1286	COOPER, B.	E	57	868	GAUNT, N.	R	82	1035	FORREST, R. C.	R
8	1159	HOOD, L. S.	N	33	-	MALPAS, W. E.	M	58	512	WALLER, C. J. N.	R	83	1029	BLEAKEN, L.	E
9	1009	WATT, D. S	E	34	1113	TAYLOR, J. R.	N	59	60	TULL, V. F. G.	N	84	1101	MEIKLEJOHN, N.	R
10	838	SPRECKLEY, B. T.	N	35	549	BURTON, G. E.	R	60	914	LUSTED, E. F.	N	85	1092	MACLEAN, A. S.	N
11	1263	PIGGOTT, A. D.	N	36	277	CAMP, G. W. G.	N	61	527	GAUNT, T. R. F.	N	86	955	HERRINGSHAW, G. H.	N
12	169	LYSAKOWSKI, E. R.	N	37	972	HANFREY, A. W.	N	62	521	FARMER, A.	E	87	1312	LUCK, V.	R
13	1048	MACFADYEN, T. E.	E	38	131	SHEPHERD, E. G.	R	63	799	TANNER, L. E. N.	R	88	1226	TAYLOR, N.	E
14	978	ROWLAND, C. D.	N	39	1071	HACKETT, N. G.	N	64	361	LILBURN, D. W.	N	89	695	COCKBURN, D.	R
15	853	WELLS, M. D.	N	40	1008	WEBB, M.	E	65	398	DOBSON, B.	R	90	-	DIMOCK, H. R.	M
16	707	DIXON, R.	E	41	293	JONES, R.	N	66	1097	TIPNEY, C. J.	E	91	87	WARMINGER, A. H.	N
17	1103	SHEARD, P. G.	N	42	637	CARTER, M.	R	67	763	SHARMAN, R.	R	92	495	TORODE, H. A.	R
18	221	RANDLE, M.	N	43	252	GOUGH, A. W.	N	68	954	PHILLIPS, D. M.	N	93	-	STAFFORD-ALLEN, P. R.	N
19	686	ALDOUS, R. F.	N	44	200	BURTON, A. J.	N	69	1007	MURDOCH, I. H.	R	94	137	BIRD, M.	R
20	115	STONE, A. J.	R	45	678	CRAWSHAW, G.	R	70	714	MILLER, A. S.	E	95	232	ORME, H.	R
21	994	COWDEROY, R. I.	E	46	693	BROWN, H. F.	N	71	960	HEAMES, C.	E	96	507	GAUNT, T. R.	R
22	400	WILLS, J.	R	47	203	PURDIE, P. G. H.	N	72	810	FOOT, R. A.	N	97	320	WEBSTER, J.	E
23	912	ROBERTS, D. G.	N	48	374	SPOTTISWOOD, J. D.	R	73	1117	CAMPBELL, D. R.	N	98	929	HART, J.	R
24	655	CARDIFF, J. D.	N	49	849	BLACKMORE, R.	E	74	877	ST. PIERRE, A. H. G.	E	99	1240	PARRY, N.	R
25	313	WHEELER, J. H.	N	50	-	COLE, D.	R	75	811	COLE, R. A.	N	100	31	GIBBONS, J.	R

REGIONALS PROMOTION LIST 1979

	BGA Comps Licence No.														
1	833	WOODFORD, J.	N	21	637	CARTER, M.	P	41	1166	KING, J. R. C.	ES	61	1234	HYNES, K.	BC
2	671	WILTON-JONES, M.	BC	22	1229	CHERRILL, J. G.	EO	42	-	COOK, P. G.	P	62	-	WALKER, R.	P
3	293	JONES, R.	IO	23	943	CRAWSHAW, G.	P	43	777	ROBSON, R.	N	63	350	VESTY, I.	ES
4	884	CARLTON, M. R.	EO	24	1049	BREEZE, D.	N	44	810	FOOT, R. A.	P	64	507	GAUNT, T. R.	P
5	1258	HUTLLEY, C.	N	25	-	SPOTTISWOOD, J. D.	P	45	-	STAFFORD-ALLEN, P. R.	BS	65	1200	RITCHIE, A.	IO
6	1074	ODELL, J.	IS	26	1293	HALL, R. A.	BC	46	1054	HOY, S. L.	P	66	1092	MACLEAN, A. S.	P
7	1139	BLACKLIN, P. A.	ES	27	646	LOMBARD, W.	IO	47	1034	MARCZYNSKI, Z.	BC	67	-	HARTLEY, K.	EO
8	1181	CORBETT, C. G.	N	28	229	JEFFRIES, J. R.	P	48	1113	TAYLOR, J.	P	68	926	HART, J.	P
9	308	KEOGH, B.	BC	29	1029	BLEAKEN, L.	N	49	550	VENNARD, D. A.	EO	69	854	McLANE, L.	N
10	246	HALE, R. J.	IO	30	-	GAUNT, N.	P	50	1035	FORREST, R. C.	P	70	877	ST. PIERRE, A. H. S.	N
11	661	THROSSELL, M. G.	EO	31	1230	ELKIN, D.	BC	51	1324	PARKS, D.	N	71	1240	PARRY, N.	P
12	386	AUSTIN, D. C.	N	32	291	WATSON, A. J.	P	52	1101	MEIKLEJOHN, N.	P	72	1151	FORSEY, L. K.	BS
13	1228	GORRINGE, J. P.	BC	33	208	POPE, M. H. B.	EO	53	848	JURY, A. J.	IO	73	478	WHITE, S. A.	P
14	1057	SMITH, G.	N	34	-	COWDEROY, R. I.	P	54	-	LUCK, V.	P	74	683	GREEN, G. D. A.	BC
15	650	COOK, P. G.	IO	35	949	MORTIMER, R.	N	55	1272	HYMERS, S.	IS	75	-	BRADBURY, T. A. M.	P
16	1038	RANDLE, Jane	BS	36	398	DOBSON, B.	P	56	495	TORODE, H. A.	P	76	244	OULDS, T.	IO
17	1002	POBJOY, I.	IS					57	859	YOUNG, J. R.	BS	77	1260	SIMMONDS, M.	IS
18	351	WELSH, J. H.	BS	38	763	SHARMAN, R.	P	58	232	ORME, H.	P	78	1026	MASON, E. J.	EO
19	1117	CAMPBELL, D. R.	BS	39	-	LIDBURY, D. P. G.	IO	59	81	PURSER, H.	N	79	-	BACON, M.	P
20	1276	BROMWICH, R. C.	ES	40	914	LUSTED, E.	P	60	-	KAY, A. E.	P	80	1270	SWANNACK	N

WC: World Championships, Chateauroux; N: Nationals (Priority List), Northerns (Regionals Promotion List); E: Euroglide; R: 1978 Entry List; BC: Wycombe Club Class; BS: Wycombe Sport Class; IO: Inter-Services Open Class; IS: Inter-Services Sport Class; EO: Eastern Open Class; ES: Eastern Sport Class; P: 1977 Regionals and M: Vinon (France).

OBITUARY

STANLEY JAMES EASTON



With the death of Stan, British gliding has lost a man of outstanding professional ability and total dedication to the sport. Whether as an instructor with the Air Cadet Central Gliding School, CFI of the Norwich Soaring Group, helping out at other clubs during his leaves or involved in competitions, he was a tireless worker on the ground and in the air.

He first flew with the ATC at Plymouth and joined Henlow 616 Gliding School as a staff cadet, later as an instructor. He then left De Havillands in order to become a full-time instructor and spent some nine years at Swanton Morley before transferring to Syerston last summer.

Stan held an Inspector's Licence, A1 category, with CFI endorsement, a PPL with IMC rating and qualified for his third Diamond three days before the fateful accident.

Those last days we shared at Aboyne must have been amongst the happiest of his 39 years. In seven consecutive days of wave he took Kestrel 44 first to 22 000ft and on the next flight to 24 500ft. It was characteristic of him that on an occasion when the weather deteriorated sharply and another pilot airborne began to display a touch of anxiety, Stan, although also preparing to land out, calmly gave him sound and reassuring advice on the radio. Perhaps his personality is best illustrated by the story of how after baling out in a cloud collision, Stan hitched hiked a ride in an ambulance back to the airfield. He went into the competition control room with his parachute wrapped up under his arm and his first words to the somewhat startled officials were: "Well, did I get past X?"

There was certainly never a dull moment with him around.

Our thoughts and sympathy go out to his wife, his three young daughters and other hearts that are sad and heavy with his passing.

A.H.W.

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GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1978
90	G. S. Neumann	Cambridge Univ	16.9
91	W. E. Malpas	Buno Bannevoux	8.8

DIAMOND DISTANCE

No.	Name	Club	1978
1/148	L. Bleaken	Catswold	3.9.77
1/149	A. T. Farmer	Four Counties	1.7

DIAMOND GOAL

No.	Name	Club	1978
2/882	P. A. Gaisford	Swindon	17.8
2/883	A. L. Housden	Catswald	3.9
2/884	S. Foggin	Swindon	3.9
2/885	M. A. Clarke	London	17.8

DIAMOND HEIGHT

No.	Name	Club	1978
3/352	G. S. Neumann	Cambridge Univ	16.9
3/353	W. R. Davidson	Angus	16.9
3/354	A. J. Dibdin	Cambridge Univ	16.9
3/355	R. J. Williams	Imperial College	21.9
3/356	W. A. Malpas	Buno Bannevaux	8.8
3/357	L. M. R. Stevens	London	26.9

GOLD C COMPLETE

No.	Name	Club	1978
676	G. P. Hawkins	Oxford	15.8
677	C. Dews	Cambridge Univ	13.9
678	G. C. Metcalf	Surrey & Hants	4.9
679	F. J. Davies	Coventry	24.9
680	H. Walker	Doncaster	24.9

GOLD C DISTANCE

Name	Club	1978
P. A. Gaisford	Swindon	17.8
A. L. Housden	Catswold	3.9
S. Foggin	Swindon	3.9
G. C. Metcalf	Surrey & Hants	4.9
M. A. Clarke	London	17.8

GOLD C HEIGHT

Name	Club	1978
W. A. Brierly	Midland	5.7
G. P. Hawkins	Oxford	15.8
C. Dews	Cambridge Univ	13.9
W. R. Davidson	Angus	16.9
F. J. Davies	Coventry	24.9
H. Walker	Doncaster	24.9
L. M. R. Stevens	London	26.9

SILVER C

No.	Name	Club	1978
5083	R. Jefferies	Surrey & Hants	25.7
5084	D. M. Smith	Derby & Lancs	25.7
5085	R. G. Tee	Eagle	25.6
5086	K. P. J. Gibson	RAE	28.7
5087	G. Prestwich	Derby & Lancs	29.7
5088	T. C. Wright	RAE	24.7
5089	A. C. Harris	Kent	26.7
5090	M. J. Nield	Swindon	25.7
5091	J. Mooney	SGU	28.7
5092	A. Cleaver	Avro	24.7
5093	K. Mockley	Wyvern	28.7
5094	J. E. Harber	Fulmar	29.7
5095	P. Wright	Surrey & Hants	3.6
5096	D. R. Allen	Coventry	25.7
5097	E. J. Lee	Midland	4.8
5098	J. R. Mottershead	London	19.7
5099	F. L. Hill	S Yorks & Notts	29.7
5100	W. H. Mienory	Greylag	11.6
5101	W. Clarke	Portsmouth	24.6
5102	J. S. McCracken	Derby & Lancs	29.7
5103	M. J. Guard	S Yorks & Notts	13.8
5104	J. C. W. Mills	Doncaster	13.8
5105	S. D. Minson	Devon & Somerset	13.8
5106	A. F. Ramsey	Swindon	13.8
5107	M. Hudson	Airways	9.6
5108	R. I. Godden	Peterboro & Spalding	25.7
5109	A. C. Hogarth	Kent	17.8
5110	R. M. Wilson	Phoenix	29.7
5111	R. Parsons	Kent	17.8
5112	S. Jackson	Herefordshire	13.8
5113	A. Hall	Essex & Suffolk	11.8
5114	B. Emms	Inkpen	13.8
5115	D. Dungey	Essex	19.8
5116	R. Waltan	Airways	17.8
5117	J. Nash	Pegasus	19.8
5118	E. E. Ratcliffe	Norfolk	11.8
5119	K. J. Fyfe	Two Rivers	20.8
5120	J. M. Littletan	Bicester	13.8
5121	S. P. Tomlin	London	17.8
5122	D. L. Tribe	Dowty	9.8
5123	H. Johnson	Aquila	13.8
5124	D. I. Lowes	Borders	19.8
5125	B. R. Wise	London	17.8
5126	W. Dyer	Albatross	31.8
5127	K. M. G. Pitts	Devon & Somerset	28.8
5128	S. Balaam	Two Rivers	28.8
5129	P. W. Hunter	Thames Valley	17.8
5130	P. H. Carr	East Midlands	19.8
5131	T. Hope	Bannerdown	27.8
5132	M. N. Davies	Stratford	13.8
5133	A. R. Barton	Chilterns	27.8
5134	P. M. Sims	Cotswold	26.8
5135	O. Cowley	Derby & Lancs	23.8
5136	P. R. Norrison	Wolds	26.8
5137	W. Young	Wolds	26.8
5138	C. S. Worthington	Derby & Lancs	2.9
5139	M. Oulds	Bicester	3.9
5140	T. Eastelow	Dunkeswell	3.9
5141	N. L. Murphy	Bicester	19.8
5142	Sally Dudley	Doncaster	26.8
5143	T. S. Conway	Southdown	3.9
5144	J. T. Everest	Surrey & Hants	4.9
5145	J. Simpson	RAE	19.8
5146	G. Gregson	Tyne & Wear	2.9
5147	J. C. Bastin	Surrey & Hants	4.9
5148	A. Buchanan	Southdown	3.9
5149	H. J. Bradley	Midland	3.9
5150	R. Jackson	Wrekin	26.8
5151	W. C. R. Wilson	Surrey & Hants	2.9
5152	G. Osborn	Essex	13.8
5153	M. Albert-Recht	Deeside	26.8
5154	R. Beckers	Two Rivers	19.8
5155	M. A. J. Everett	Two Rivers	28.8
5156	D. S. McKay	Aquila	13.8
5157	P. J. Shearer	Crusaders	23.8

NORTHERN REGIONALS – Sutton Bank, August 5-13

Final Results

No.	Pilot	Sailplane	H'cap	Day 1	Day 2	Total Points
1	Woodford, J.M.	ASW-15	98	315	725	1040
2	Hutley, C.	Skylark 4	86	281	677	958
3	Corbett, G.	Std Libelle	96	345	559	904
4	Austin, D.C.	DG-200	108	150	686	836
5	Smith, G.	Skylark 3	84	169	610	779
6	Breeze, D.	Astir CS	100	251	526	777
7	Bleakein L.	Diamant 18	108	220	554	774
8	Mortimer, R.	Jantar 1	116	195	571	766
9	Robson, R.	Kestrel 17	108	177	571	748
10	Parks, D.	EoN 463	82	108	631	739
11	Purser, H.	Oly 465	84	58	673	731
12=	McLane, L.	K-6cr	84	423	298	721
12=	St Pierre, A.H.G.	PIK 20e	104	132	589	721
14	Swannack, J.	Std Libelle	96	149	571	720
	Rice, J.					
15	Forrest, D.	Skylark 3F	84	363	354	717
16	Collins, P.S.	Oly 463	82	398	277	675
17	Brown, T.	K-6cr	84	112	560	672
18	Jackson, R.	Dart 15	88	48	597	645
	Earnshaw, J.					
19	Jefferyes, M.B.	Astir CS	100	43	594	637
20	Russell, F.	Kestrel 19	112	-	616	616
21	Ramsden, P.	Kestrel 19	114	23	589	612
22	Spink, E.	DG-200	108	90	511	601
23	Lloyd, K.	Std Jantar	100	-	540	540
24	Docherty, T.P.	Kestrel 19	112	5	520	525
25	Hulme, A.J.	PIK 20	106	23	444	467
26	Haughten, J.	Kestrel 19	112	-	450	450
27	Grainger, J.	Std Jantar	100	8	409	417
28	Carr, S.	Cirrus	102	32	372	404
29	Fox, R.L.	Cobra 15	96	117	277	394
	Kirbitson, A.					
30	Taylor, C.	Consort	82	132	218	350
31	Townsend, A.	Dart 15a	88	5	234	239
32	Cook, R.	Astir CS	100	28	210	238
33	Chaplin, D.	Pilatus B-4	92	-	194	194
34	Lumb, B.	Cobra 15	96	-	184	184
35	Hill, J.	IS-29a	94	-	154	154
	Gregson, B.					
36	Giles, E.	Foka 5	94	55	88	143
	Batters, A.	Std Libelle	98	26	DNF	26
38=	Hayes, D.					
38=	Procter, R.	IS-29a	94	DNF	DNF	
38=	Stott, B.	K-6cr	84	DNF	DNF	
38=	Milner, C.	K-7	72	-	-	0

Day 1, 11-8, 191km ■, Stamford Bridge, A1(M)/M18, Ripley.
Day 2, 13-8, 117km ▲, Scotch Corner, Ripley.

OVERSEAS NEWS

Please send news and exchange copies of journals to the Overseas Editor: A. E. Slater, 7 Highworth Avenue, Cambridge, CB4 2BQ, England.

ITALIAN CHAMPIONSHIPS

Many visitors attended the 1978 Championships at Rieti in August, when the weather allowed six contest days. Leading in the Open Class were de Orleans (Spain, ASW-17, 5853pts), Brigliadori (Italy, DG-200, 5795pts) and Justin Wills (Gt Britain, Mosquito, 5768pts). Standard Class: Glöckl (LS-1), Nietlispach (Hornet) and Sinn (Hornet). – *Aerokurier*

TO SOAR TO HONG KONG

"Tug" Willson, having at last obtained permission to import a two-seater motorised sailplane into Hong Kong, wishes to soar it all the way there from Britain by stages, using the motor only for launching. His proposed route is via Austria, Yugoslavia, Greece, Turkey, Iran, Afghanistan, India, Nepal, Burma and China: total distance 12 000km. He asks any gliding people who can tell him about facilities along the route to write to him at: Serene Bay Villa, Hang Hau, 12½ miles Clear Water Bay Road, Kowloon, Hong Kong.

FIRST HANGING SILVER C

The world's first Silver C badge to be earned in a hang glider has been awarded by the FAI to Ernst Reichholt of Salzburg, Austria, according to *Flugsportzeitung*, which calls it a "Delta Silver".

The pilot made his distance and altitude legs on April 2 this year across mountainous country on a good thermal day. Starting at 13.45 from the Wildkogel mountain station near Neukirchen by the Grossvenediger, 2100m asl, with the intention of making a local flight, he sank to 1800m then caught strong cumulus lift to 3100m, then at 3350m decided to go off on distance. He overflew Zell am See, 38km from the start, but then began to feel cold and limited his climbs to 2800m. Finally, "fully frozen through", he landed at Taxenbach beside the local doctor's house, having covered 55km in 2½hrs. It was some time after this that the opportunity came to fly the five hours' duration leg.

Reichholt flew an American type Class 2 Seagull with a gliding angle of 1 in 8, in which the pilot lies horizontally on his stomach. He carried a variometer, altimeter and ASI. – *Flugsportzeitung*

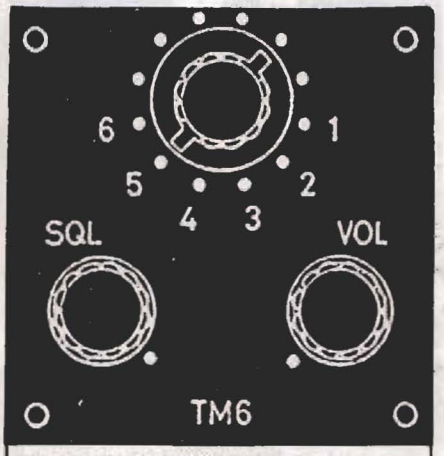
OBITUARY

WILLY MESSERSCHMITT

Born on June 26, 1898, Willy Messerschmitt was involved in German gliding well before achieving worldwide fame as an aeroplane designer. In 1910 he was befriended by Friedrich Harth, a pioneer of the idea of soaring by the use of gust energy rather than upcurrents. He eventually took Willy to the Wasserkuppe for trials with a glider which he insisted on calling a "Harth-Messerschmitt", though only Harth seems to have flown it. In 1914 their glider kept up in a wind of 15m/s (33mph); in 1916 he maintained height for 3½min in a wind of 8-10m/sec (18/22mph); in 1920 he climbed 50m without loss of airspeed, and in 1921 he put up a world record of 21min 37sec entirely by gust energy, except for a 6° slope of the ground to windward but this ended in a crash due to a control breakage and he broke both legs. Gust energy was obtained by changing the incidence of the wing, each hand working a lever for its own side.

In 1922 the two of them started a gliding school on the Wasserkuppe, at which Wolf Hirth was a pupil. After this Harth began to fade out and Messerschmitt began designing gliders on his own, eventually giving up the variable-incidence wing and finally adding a motor.

A.E.S.



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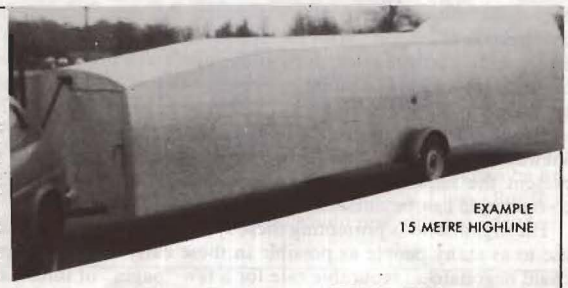
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NEW ZEALAND: "Gliding Kiwi" official Gliding Magazine of the N.Z. Gliding Association. Printed October and alternate months. Write N.Z. Gliding Kiwi, Private Bag, Tauranga, New Zealand. £4.00 sterling for year's subscription (inclusive of postage).

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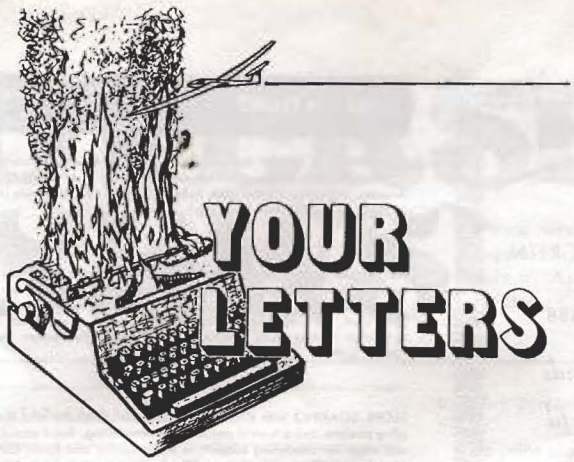
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MET BRIEFING BY TELEVISION

Dear Editor,

May I thank you for the excellent article by T. A. M. Bradbury ("A Good Soaring Guide," p155), in the August issue. A pilot armed with such Met information for a particular day would indeed be well placed to judge what task might or might not be possible. Unfortunately this type of data is not available on the standard Met report for gliding clubs and I do not feel that a regional Met office would welcome dozens of telephone calls from information seeking glider pilots on a promising cross-country morning.

Could the appropriate BGA Committee examine the possibility of this Met data being made available through the new Teletext information channels on television? With the growth in the number of sets capable of receiving this information, most glider pilots will probably, within a year or two, have access to a suitable receiver from which a Met briefing could be obtained.

The number of "pages" available, particularly with the Post Office Viewdata (Prestel) system, is almost limitless. It should be possible to present the required synoptic and regional data very economically, if co-operation can be obtained from the Met authorities.

The organisations promoting these systems are anxious to make them of use to as many people as possible in these early days. Perhaps the BGA could negotiate a favourable rate for a few "pages" of information which would prove invaluable to members in the future?

Chester RODNEY WITTER

NO OUTLETS FOR ORIGINAL IDEAS

Dear Editor,

I was interested to read Helmut Reichmann's article on the Akaflieg Braunschweig SB-11 in the last issue (p208). I felt he hit the root of the problems of British general aviation with regard to innovation and production when he discussed German University Flying Groups. Britain has no comparable groups (except possibly Cranfield with the A1). The blame for this must be the universities which produce "aeronautical engineers". The courses probably haven't changed much for 25yrs. There are no outlets for original ideas in the present set-up.

I would like the opportunity through S&G to contact other university/polytechnic gliding clubs as I feel sure we have all got the same problems (lack of money!) and I'm sure some form of contact would be beneficial.

Southampton University GC D. C. RICKETTS

SOME COMMENTS ON THE WORLD CHAMPS.

Dear Editor,

After spending the first part of my summer holidays at Chateauroux to watch the final days of the World Gliding Championship may I, as a "non-gliding, but interested in the sport" wife of a pilot, make these few comments about the event in France?

Firstly, we all know that glider pilots do it quietly, but must they do it so quietly that no one at home in England hears even a whisper of the success of the British team? Perhaps a better motto might read . . . "Glider pilots do it quietly - and without publicity."

Secondly, if we should be so fortunate as to repeat our success at the next World Championships, will someone please see that we have a respectable sized Union Jack to fly at the prizegiving ceremony? I felt quite embarrassed at the tiny scrap of red, white and blue compared with the enormous, billowing flags of Holland and Germany.

Thirdly, there was the gift of flowers to Mrs George Lee "as a token for all devoted and long suffering wives of glider pilots" - what a lovely idea. Sitting at home today, wondering whether to tackle the gardening or the decorating (husband is no doubt merrily soaring somewhere above South Yorkshire), the thought is very much appreciated.

Chesterfield, Derbyshire ANNE SINGLETON

SAFE TUG OPERATING

Dear Editor,

Following Mike Carlton's letter in the last issue ("Focus on Tug Accidents", p242), I would like to make the following point with regard to the suggestion that tug pilots should fly with their hand on or near the glider release handle. I do not agree with that point because depending on the type of aircraft one is flying, whether holding the stick with left or right hand, the other hand should always be on the throttle lever holding it fully open, or on some types sufficiently open for the climb required.

In my experience of towing I have found that tug aircraft throttle friction nuts are worn, allowing the throttle to vibrate to the closed position with a gradual drop in rpm unless held open. This can be embarrassing if you have a fully waterballasted Kestrel on the back.

I can think of a dozen other points that would reduce tug accidents but space precludes mention here. I would like to think that tug pilots while towing go through procedures in their minds for power failure, and after glider release on returning to the airfield such drills as engine failure or fire. One day it might just happen to them.

York TONY SIMMS

NO CHOICE BUT INCREASE THE SPAN

Dear Editor,

Recent correspondence relating to the prospects for small amateur built gliders, indicates the writers have little practical experience of designing or building a glider. The problem is simply that the minimum practical wing area for a man carrying glider is about 10m^2 or 100ft^2. Thus you could design a modern version of the H-17 and try for an L/D of 20, or alternatively stretch it to a 15m span with an aspect ratio of 25 and shoot for an L/D of 40. Incidentally between these extremes the price of materials and the time for design and construction does not alter greatly. Although the weight increases slightly, due to an increase in spar material, everything else improves for little extra effort. Even the rate of sink decreases!

Thus there is really no choice but to increase the span, at least up to 15m where there is a convenient limit set by the Standard and Racing Classes.

Paul Williams, in his letter in the June issue, p139, "A Glider in the Garage", is about right with his guess of £1500 for materials. He is also correct in suggesting a three-piece wing for spans over 12m, but not for the reason he puts forward. Anyone who could contemplate building a sailplane would surely be able to knock up a single extension on one corner of the garage.

My own design 15m span sailplane features a three-piece wing. This is easier to construct than a two-piece wing, which latter requires heavy and hard to make rigging connections at the point of maximum bending. Those interested in details of construction can refer to articles in the September 1977 and June 1978 issue of *Soaring*.

The centre section of my design spans 20ft and weighs 120lbs. This is about the limit for one person to handle without assistance. Incidentally the chord is only 28in which facilitates rolling the wing over to work on the other side, an operation which occurs every second day. The tips weigh 75lbs each and are correspondingly easier to handle. The alternative home-built with a two-piece wing is only 12m span, the wing panels are no lighter and they are harder to handle due to the large root chord. The performance is limited to a maximum L/D of about 30. You still require two people to rig.

The home-built glider movement was strong in Australia in the period 1935/55. In addition to primary types there were ten Hütter H-17 and four Dunstable "Kestrels" constructed, followed by a series of local designs such as the Jarvis J1 ("Joey"), J2 ("Jumbuck") and the Pascoe EP-1. Then commercially manufactured sailplanes became available and development virtually ceased.

Ted Pascoe presented a paper to the 1974 OSTIV Congress at Waikerie on the design and construction of the EP-2 sailplane. This is one of the few home-built designs in Australia since 1955. It has an 11m span laminar

profile wing and an excellent performance. Ted Pascoe regularly competes in Sports Class events and invariably runs away from the opposition 15m "commercial" products like the K-6 and Pilatus B-4.

Readers of S&G will know that Martin Simons tried to sponsor the design of a 13m span amateur-built sailplane some years ago but without much success. While I am sympathetic to the small sailplane proponents I can see no way of this Class reviving without the prior establishment of an international competition category, as was done for the Standard Class. The mini-sailplane movement has been stirring since soaring began without getting anywhere - like an H-17 trying to make progress in a 20kt wind. Perhaps the time has at last arrived when there is a definite need to encourage a "dinghy" Class of a restricted span amateur-built sailplane, similar in concept to the small yachting classes. A set of rules, rather than a set of drawings, is the necessary first step. The politicians of soaring have fiddled with the 15m Class(es) often and long enough to give it a rest for a while and could devote their efforts to establishing another Class. Once the rules are drawn up and recognised the designers in the movement will follow the lead.

Heatherton, Australia G. SUNDERLAND

ANOTHER SUPER SYNDICATE IDEA

Dear Editor,

With reference to Ken Hynes' proposal in the August issue ("Sailplane Building Made Easy", p169), I propose a different scheme. I suggest forming a super syndicate as described in the article but to buy a single type of sailplane chosen from those already certified and in production in Europe.

This super syndicate could buy the sailplane in kit or finished form at a better price than in the usual way, because they could make a better contract and have members from all over Europe. I don't want to enumerate all the other benefits such a scheme would bring as they are the same as those expressed by Mr Hynes, but my idea would be quicker to implement and more certain.

Rome, Italy PIERFRANCO DOTTI

MORE ON HOME-BUILDS

Dear Editor,

I was interested to see that once again the home-built glider has raised its head. The article by Ken Hynes in the August issue "Sailplane Building Made Easy," p169) reads like the prospectus for a nationalised company. He has made the common error of confusing the home-build design with a kit and it would appear from his article that his kit would be like a large Airfix model which one would slip together in one's garage. If he is aiming for a share capital of £75 000, I am intrigued to know who the full-time staff would be and who would receive the finished prototypes - sounds a bit suspicious to me, being a "coarse" glider pilot.

Rather than wallow in my own cynicism, let us attempt to be constructive and analyse the requirements for a glider, not necessarily a home-build but one which would be acceptable by all sections of the gliding movement. The sure answer must be something between the K-8 and an Astir. We now have a problem - the pundits want a glass ship, but the necessity for moulds would preclude this type as being a basis for a home design. The dirty fingernail brigade would be quite happy with a wooden machine, because this is very definitely a home-built proposition and would probably be happy with the performance. There is a machine which combines the best of both worlds - the K-18. It has K-6 performance and only suffers a lack of popularity because production stopped prematurely.

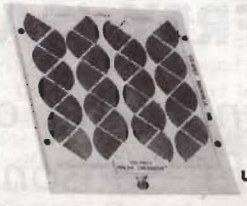
The immediate cry now is "what about the tubular steel fuselage?" Anyone who has seen such a construction must marvel at its simplicity. Fixing points for controls etc are easily fabricated, it is quickly constructed and I can see no reason why such a fuselage could not be tacked together by the home constructor and finally welded by a CAA approved welder. Unless, of course, the BGA want to change their ruling on welding, for I would much prefer to trust the integrity of a weld made by someone who knew what they were doing, than the many glue joints found in a wooden fuselage. The wing construction would have to be wooden, with Gaboon skins (*ie* thick ply construction, with minimal number of ribs), for this is again a material which is easy to work and requires no special techniques or processes as would glass or exotic alloys. The spar booms could be composite using alloy strip and Araldite giving the machine the weight advantage of an Oly 463.

We now have a machine which I wish to build. It may not be Mr Hynes's cup of tea, but it is a machine which would meet most people's requirements. It would also be a saleable commodity rather than some hybrid in low volume production and would command a substantial market as a club machine. I would estimate the total cost of raw materials for such a machine to be in the order of £750, which is Mr Hynes's deposit requirement. The only major problem, and it is the root cause of the failure of this country to produce a home-build design, is the lack of a designer to produce such a machine. The only way to overcome the problem is to pay someone to do it. Let us not forget that the BGA is an Association and at the next AGM if sufficient people really are interested, it should be possible for member clubs to table a motion that a home-build project is undertaken.

I can only iterate my previous offer (see S&G, February 1977, "Demise of Coarse Gliding," p35) which is to arrange the construction of a prototype machine, at no charge, if a suitable design is forthcoming. I am sure the BGA would volunteer to test fly it on the same basis, so what are we waiting for?

Worcester J. B. PAILING

Ken Hynes comments: Mr Pailing has clearly seen through me. The dreadful truth is that I *would* rather fly an ASW-20 than a K-18. Unfortunately I find it hard to find that much money and to justify spending it on a personal pleasure. Sound as Mr Pailing's design outline is it is not a design I wish to build nor an undertaking that I have sufficient time for. We are talking about different things. Time *is* money and unless the actual building process is a pleasure it is too expensive. For other people I am all in favour of it, which is more than can be said of Mr Pailing with respect to my choice. Whatever can I have done to him? I don't remember forcing him out of a thermal at 600ft! Professor Marsden has already started building his prototype at his expense with two partners. I would like to be part-time manager but I have no control over whether I would be chosen. Apart from that we need full-time engineers but I have no idea who they would be. If the scheme does get off the ground it will obviously need trustees but it has not developed that far yet. On the question of BGA sponsorship for the design, I have no wish to subsidise Mr Pailing nor do I see any reason why he should subsidise me. It can be no part of the BGA's function to spend our money in such a way. But if a hundred people would put £75 into a kitty it would probably provide them



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with a respectable set of plans for a home-build. What are you waiting for indeed? Can I finish off with a brief progress report. I have about 20 people who wish to partake. Apart from Mr Pailing I have only encountered one person appreciably against the idea. I have met several who think it can not be made that easy. In general I have convinced them that it can but that probably needs another article.

(We now have news of a "home-built sailplane competition", see p284).

ANOTHER LOOK AT SPEED INCREASE IN A DIVE

Dear Editor,

Len Chadwick in the last issue ("Comment on Speed Increase in a Dive." p244) has entirely forgotten the attitude change due to angle of attack. This is over 10° for the speed range of a glider, while the change in glide angle will be less than 4°.

The total attitude change (angle of attack plus glide angle) of about 2° for a K-8 between 50 and 60kt will only see a Std Cirrus from 50 to about 57kt. This is due to the latter's much greater wing loading which requires the use of much higher lift coefficients at the lower speeds and hence also a more rapid change of angle of attack with speed. Between 40 and 90kt a K-8 will require about a degree less attitude change than a Std Cirrus, though of course it is always very much more nose down. However, if the K-8 wing loading were to be increased to that of the Std Cirrus, it would require about a degree more, this being due to the difference in glide angles. For reasons also to do with wing loading, a K-8 will actually start to accelerate faster than a Std Cirrus from a given speed for the same initial change in attitude.

Difficulty with speed control of a Std Cirrus for a K-8 driver arises from several causes, but attitude change with speed is not one of them. Three main differences explain the problem. Smaller stick travel with lighter forces require the pilot to adapt to a more delicate touch; lower longitudinal static stability requires small changes in elevator trim angle and the large differences in actual attitude due to wing loading and wing-fuselage setting mean that the 75kt K-8 attitude would have the Std Cirrus ASI right off the scale.

St Annes, Lancs. JOHN GIBSON

NEWS OF THE "HARKER HAWK"

Dear Editor,

Since the mention of my aircraft in the Newcastle and Teesside club news report in the last issue (p249), I have had some requests for information about the "Harker Hawk".

With the tug situation as it was a while back, I decided to design and build a glider tug. The result is a parasol, swept back, mono-spar wing, supported on inverted V cabane and lift struts. Full span ailerons are used with the idea of adapting them to droop if necessary. Two seats are positioned side-by-side with a central control column hanging down from the centre section, where it is connected directly to the aileron push-pull tubes. This type of stick layout gives more leg room and there is no possibility of anything fouling the mechanism.

The wing D box is covered with birch ply over closely spaced ribs and



good visibility is assured by providing a large cut-out over the cockpit. Wood provides the main airframe building material, covered with a man-made fibre fabric. Power is supplied by a Lycoming 0-290 engine with direct drive to a 6ft diameter wooden airscrew.

I was extremely pleased to find that the C of G calculations proved to be correct so the aircraft does not require any ballast. At the moment all drawings are in the hands of our club member, Andy Hardie, who is arranging the calculations in a professional manner before a C of A can be requested. I was much indebted to Andy for spending his time on what to me is a rather tedious job.



One of the main problems with designing and building an aircraft is the amount of time involved. On top of this, as well as BGA inspecting, I inspect for the PFA which differs from the usual glider work in that the building of ultra-light powered aircraft has to be inspected at all stages.

However, taxy testing of the "Hawk" has gone off successfully, except perhaps for high speed runs. Every time the throttle is pushed through the gate the confounded aircraft lifts off. There are no electrics, so starting has to be by hand swinging. This isn't a great problem as the glider tow hook can be coupled to a ground picket point which ensures the tail stays down.

On reflection if I were to start again I'm sure I could design a basic single-seater, single purpose tug, which could be completed in one year by one person, but it wouldn't be for a while yet. The latest project is a "self-sustaining" glider in which I can chase and return from those elusive waves.

Nunthorpe, Cleveland. D. HARKER

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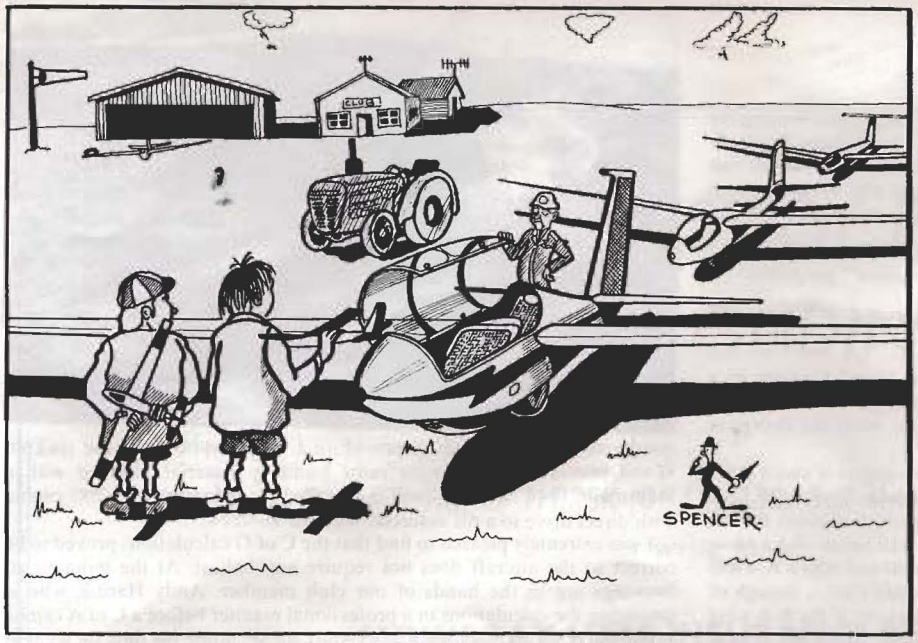
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"These men must be strong, Jimmy, to throw these big gliders into the air!" By Mike Spencer.

CLUB NEWS

Copy and photographs for the February-March issue of S&G should be sent to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH, tel. 47725, to arrive not later than December 5 and for the April-May issue to arrive not later than February 13.

October 14, 1978

GILLIAN BRYCE-SMITH

ALBATROSS

After much debate and long committee meetings, it was agreed to buy a Blanik despite the "life" restrictions and it arrived at the beginning of our first course week. Unfortunately, though, the week was washed out on all but two days. However our soaring at the end of August and the beginning of September made up for the disappointing season.

Congratulations to the following – Bill Dyer on completing his Silver C with a duration; Fred Sloggett and Harold Moore on their Silver distances in their syndicate K-6cr; Mike Sloggett on gaining a Bronze leg only a week after the syndicate Olympia 2b arrived; "Spike" Edwards and Alan Izat on their Bronze Cs and Barris Laing and Herb Leverett on going solo.

Various social activities are in hand and there are plans to improve the clubhouse and hangar space as well as to build a diesel launch vehicle.

M.S.



BATH & WILTS

Thanks to an improvement in the weather we have had several notable achievements and now found wave at Keevil from all wind conditions. Andy Smith, Nick James, Edward Thomas, Terry Dagger and Robert Grantham have gone solo and Mike Hughes, Bernard McBride, Alan Langlands, Ray Payne and Roger Boor have their five hours.

Our congratulations to Andrew Davis on winning the Standard Class at Euroglide. We have an expedition to Aboyne at the end of October.

J.L.

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BORDERS

Phil Marks, who joined the club in 1975 and went solo on August 27, his 16th birthday, is now well on the way to his 400th flight.

Our Chairman, Alan Urwin, has his SLMGPPL for the Falke. R. Coulson (K-6e) has a Bronze leg and Silver height; I. Lowes (Skylark 3) his Silver C; R. Johnson (K-6e) finished his Bronze and did his five hours while visiting Portmoak and J. Hogarth (K-6e), who has often given up chances of flying solo to instruct, completed his Silver C. Our congratulations to them all.

Our new hangar is now in full operation – what a relief from rigging every morning!

B.R.F.

BRISTOL & GLOUCESTERSHIRE

Ron Sandford was kept busy during Euroglide giving joyrides in Ralph Jones's new Janus two-seater – for many it was the first chance of sampling the delights of high-performance glass ships. Everyone was impressed with the ease of handling and the apparent high-performance.

It is hoped to take the Blanik to the Shobdon wave weekend to give as many as possible of the two-seater pupils a chance of soaring from a new site.

"Chalky" White has almost finished work on the Auster tug which viciously attacked a group of trees on the approach (and lost) while progress on repairing the Super Cub at Oxford seems to be taking forever. Thanks, however, to Colin Pennycuick's Cruiser we have managed to keep aerotowing all summer.

R.A.R.

BUCKMINSTER

Our congratulations to Peter Albrice who, despite his thalidomide handicap and poor weather conditions, went solo on his 16th birthday after 115 launches. Mike Alton is another young member who achieved solo status on his 16th birthday and now has aspirations to fly his father's ASW-20.

We have had a change of CFI with Roy Spreckley, after doing a grand job, passing on the position to Mike Webster, our tug pilot.

We have some new gliders at Saltby – ASW-20, Mosquito, Bocian and K-6 with hopes of a PIK 20 and Mosquito coming in the near future.

M.J.W.

CAMBRIDGE UNIVERSITY

An expedition to Aboyne in late September brought Diamond height for Alan Dibdin (Dart 17r) and Sigfrid Neumann (Kestrel 19), giving Sigfrid All Three Diamonds, with Gold height for Colin Dews (Kestrel 19).

Our congratulations to Chris Chapman, Duncan Cumming, Steve Foster, Mike Grimwood, David Guest and David Park on successfully completing instructors' courses and best wishes to the Alexander/Edwards' syndicate Astir, which they recently collected from Germany.

Now that we have three tugs, the latest a

second Citabria, launching has speeded up tremendously in the last few weeks and we are now aerotowing from Duxford as well as Cambridge.

A.N.

COTSWOLD

(A printer's error in the last report attributed Cotswold GC with five cross-countries this season instead of five 300km flights.) Largely due to a good weekend in September, this has been increased to eight although a 500km still hasn't been managed this season. One 300km was by Tony Housden completing his Gold/Diamond leg in the club Astir with a long final glide into the furthermost corner of the airfield. The pundit diploma also goes to Gary Fryer who made a Diamond height climb at Portmoak, thus reaping the reward for many annual treks.

Bad weather hasn't deterred Tim MacFadyen who climaxed completing his Diamond by finishing third in the Standard Class at Euroglide.

Last winter our friends at Usk based a K-13 with us so as to continue their training while their own field was water-logged. They repaid us in fine style in September by radioing to invite us over to share one of their best wave days. This was much appreciated and a couple of trailers left immediately. Four of our pilots had climbs from 7000 to 12 000ft and the irrepressible MacFadyen returned to Aston Down in a straight glide.

Congratulations to Pat Sims, our second lady to complete her Silver. She also achieved the distinction earlier of completing her first parachute jump (from an aeroplane!). We are slowly but surely building up a ladies section and congratulations also to Marion Coates on going solo. Chris Clark and David Morgan have soloed and Bob Gardner and Brian Gilmore have their five hours.

Unfortunately our Astir has entered the accident statistics after stalling on the approach to a field. Hopefully it will be stuck together again for the spring although one of the new items will be the fuselage!

With membership at 170 we have never been as strong.

J.D.H

DERBY & LANCS

As we haven't appeared in S&G for almost a year a lot has happened since our last newsletter. On New Year's Day we had a bag full of Gold and Diamond wave climbs. Mike Armstrong did two Diamond climbs as his barograph wasn't working properly on the first occasion. Our wave has worked very well this year and climbs between 10 000 and 20 000ft plus have become almost commonplace.

Early in the year we spent £6000 on the field which meant that large areas weren't available for landing so spot landing techniques had to be brushed up! The new grass is now established and the surface is much smoother.

Geoff Prestwich, who was a grandfather before he started flying, has completed his Silver C and recently narrowly missed his Gold C height in wave.

The new winch, which includes some new and novel ideas, is finished and we can now field eight wires if pushed. Colin Ross from New Zealand was so impressed he photographed the winch and has taken details back for study by his club's winch committee.

Granada TV visited us during the summer and some splendid gliding sequences were beamed to viewers in the north-west. This summer we introduced "club weeks" which, with only four trainee pilots to one instructor, have proved very popular and successful.

D.F.H.

DEVON & SOMERSET

Some unusual things have been happening. As well as our usual north-westerly wave giving enjoyable flying in conjunction with the ridge, Mike Fitzgerald and his son Steven found that we can't disregard a south-westerly - wave from this direction took them to 6500ft in the club Capstan. Terry Jenvey (K-8) launched right into the wave and got to 7000ft. This proves there is good flying here even when the sun doesn't shine.

Thermals have been uninspired, rarely reaching more than 2000ft above the site, but Dave Minson took his Skylark 4 more than 200km to Lasham and halfway back, 95% of the time below 2000ft.

Arthur Ball and Phil Turner have gone solo while Mel Pitts completed his Silver C with a distance flight, making this our sixth Silver this year.

Steve Barber easily regained the Woodspring Cup while a sneaky piece of skullduggery allowed a lucky Dorset GC member to take the Tarrill cup back to Tarrant Rushton.

Our Husky has a new engine and a clean bill of health. Plans are being made for the annual pilgrimage north in the spring. Finally, we welcome back Louise Norton, having climbed Everest the hard way.

M.G.P.

DONCASTER & DISTRICT

Wave has been our preoccupation with several good days in September. David Hessey broke his own club record of 16 500ft with a climb of 21 800ft, so gaining the first local height Diamond. On the same day Harry Walker and Nev Spencer gained Gold height with most members flying at 10 000ft plus.

Our site negotiations are proceeding very slowly, but at least we are still here. Our social events are mostly organised for the winter with Justin Wills accepting our offer as guest at our annual dinner. The actors amongst us watch with trepidation as Geoff Singleton writes the club pantomime at the top of our new tea bus.

J.A.S.

DOWTY

At the invitation of the Cornish Club, members and wives enjoyed a good week at Perranporth in holiday weather. Congratulations to Derek Tribe on his five hours and Dave Marsh and Bob Stafford on getting Bronze legs. Members presented the Cornish Club's CFI, John Turner, with an inscribed tankard for his help and co-operation during the week.

The two open days at Bickmarsh during the August Bank holiday attracted a crowd of visitors - our thanks to everyone who made this such a success.

A.S.R.

DUMFRIES & DISTRICT

Congratulations to Dave Chesney on going solo on September 17, the day members later contacted what appeared to be wave.

Our new clubhouse is on site, albeit in two halves. It's going to take a lot of hard work before occupation which we hope will be by the new season.

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Wednesday evening flying stopped in the middle of September but we hope the weather allows us to go on flying at weekends for some while yet – our peaty runway can't take a lot of rain.

Ryan Fenion is repairing a bent Pirat acquired from SGU, so we could see four gliders airborne early next year.

It is pleasing to note the increase in the number of launches and new members, especially the younger ones, so next season could see a bumper crop of first solos.

F.S.S.

DUNKESWELL

An August course produced solos for Mike Goode and Stephen Charlton, an A, B and C for Malcolm Hitch and a Bronze leg for Vince Lean. Tony Eastelow is congratulated on completing Silver C in one season with a 6½hr scratch in mediocre conditions on September 3.

A rare appearance of contactable wave produced a climb of 6600ft in early October and late autumn thermals have compensated for the poor season.

B.H.F.

EAST SUSSEX

The August course was very enjoyable and successful with several pupils achieving A and B certificates. Congratulations to Jackie Manley, our second home-grown female solo pilot; Ken Manley, Mark Darby and Lew Pring on gaining their Bronze Cs; Tom Blades on Silver distance and Doug Gardner on successfully completing his instructors' course.

Members are proud and enthusiastic about the Super Cub 150. Tugging facilities are now available most weekends and we look forward to aerotowing next season.

An enjoyable barbecue supper and dance in the hangar on September 2 was arranged by Barry Clarke, Social Secretary, with a first class supper prepared by our ladies. Our thanks to them also for voluntarily providing a meal in the clubhouse every Sunday evening.

We have an expedition to Portmoak in March, arranged by Mell Vanblerk, Course Secretary.

B.W.

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ESSEX

The poor weather has made cross-country flying this summer compare most unfavourably with previous years. Tim Healey tops the list with a 191km flight on a most indifferent day, but there were only eight flights of over 100km from the site for the whole season. Many pilots finished this summer with considerably enhanced field landing experience.

Congratulations to Lionel Callow on successfully completing his instructors' course and our thanks to Robin Abbott, the retiring Clubhouse Manager, for his superb efforts. We welcome Tony and Teresa Manwaring in his stead.

The privately owned fleet continues to expand and now numbers 22, including four Pirats and five K-6s. There is a newly arrived PIK and a DG-200 is expected soon. The club K-6cR has been sold to a syndicate and the club fleet now includes two K-8s.

We were very disappointed the visit from our sister club in Germany (Ludwigshaven) was cancelled due to bad weather, but hope they will join us next year.

We congratulate Messrs Throssell, Manwaring and Corbett on their success in Regionals. The Aboyne expedition was a great success. We took eight gliders, including a club K-13, to be rewarded by balmy weather and superb wave. The first week alone yielded 23 flights in excess of 10 000ft and nine height claims.

S.E.C.

HIGHLAND

The wave season has started with a flourish this year – at Aboyne. Jeff Howlett (Astir) went to Diamond height at 20 500ft and Neil Collier repeated this performance with a flight to 19 500ft the following week.

Our Bocian has returned from its lengthy repair, and a healthy queue of two-seater pilots is again building up. We have made a good start on our new clubhouse, which will be bigger, more comfortable and, we hope, more secure than our present ageing caravan.

R.E.T.

LAKES

Since the successful completion of the summer courses, flying has been limited by the weather, but two more members, Jim McGuigan and Alan Lakeland, have gone solo and Alan followed up with two Bronze legs – on the slag-bank of course.

Regrettably, Roger and Carly Bull are leaving us; they have been prominent in all club activities for many years and we are sorry to see them go, but wish them the very best for the future. We welcome a new member, Reg Curwen, and report that a syndicate of our members has bought a Super Falke.

E.G.A.

LONDON

The end of season's extraordinary good weather brought a flurry of achievements. Peter Milner, Dick Cooper, Peter Barber, Mick Clansey, Tim Wilson, Geoffrey Fransell, David Starrer, Peter Roberts and Steve Tomblin all got various Silver legs, while Maurice Clarke completed his Gold and Diamond distance. The Lasham Plate is with us again, the last collector being Peter Bourne.

We have had a positive invasion of new, mostly 15m glass-fibre, gliders which might explain, with the fantastic weather, such activity. We have had the use of wave on most days be it westerly or easterly. It has become a familiar sight to see a dozen or so gliders just hovering in some part of the sky at 3 or 4000ft, or beating up and down quite often very obvious and visual lenticulars. On the day Mike Garrod and Laurie Stevens trailed their Jantar 2 to Aboyne (September 15), John Jeffries climbed to 13 000ft over Leighton Buzzard. (At Aboyne Mike and Laurie actually got Diamond height on every day except one.)

Our club ladder is headed by John Cardiff who has had some super flights in his ASW-20, including an 140km out-and-return at 109.3km/h and at the end of September a 365km out-and-return to the Long Mynd. We have threatened, however, to deduct some of his points because when lent a Tutor to do a winch circuit, he landed out! John Jeffries also had problems getting used to a lower glide angle when he flew his precious and unique Scud 2 for the first time in several years. It was a gusty west wind day and after an exciting hill soaring flight he decided to land. The BBC were filming the whole thing and had asked John to land half way up the field where a camera was positioned. To leave the hill John had to fly at V_{NE} (45kt); he did make the field – just – but miles away from the camera. All that could be seen was a large grin! Thanks must go to Margaret and Dave Richardson who did all the work to get it airborne again.

D.Y.

MIDLAND

The winter season has begun with a promise of a return to the prevailing hill soaring westerlies accompanied by the best wave conditions for some time. Don Brown climbed to 13 500ft and Mel Hinks to 12 500ft in their Darts, while visitor John Giddins achieved Gold height in his Astir. Ron Cook (8500ft) and Ken Screen recorded Silver heights and there were many other wave flights in late September.

The westerlies have also produced a crop of duration flights, the tedium of hill soaring being relieved by long periods in wave or thermals. Congratulations therefore to H. Stephenson, T. Jones, N. Clements, G. Cox, M. Whitcutt, P. Swain, R. Bancroft and O. Bull and also to Howard Bradley (Dart) and Keith Dumville (K-6) on Silver distance; to Gary Williams and Liz Chisman on going solo; to Pete Orchard on successfully completing his instructors' course and to Sue and Nigel Holmes on the birth of their first son.

Our thanks to Jack, Gary, Pete, Brian, Tony, Graham and staff for their various contributions

to the smooth running of the summer courses. Despite the less than perfect weather, very few flying days were lost and a large number of people enjoyed flying at the Mynd. The end of the course season marks the beginning of the winter programme of repair and maintenance (including improvements to the airfield surface) and social activities, notably the Christmas dinner on December 17 and the dinner-dance on March 31.

D.L.W.

NORFOLK



No one has come up with £10 million to buy our airfield, so we are still at Tibenham. Phew! And the Sunday market is still with us adding interest to our approaches - and providing a source of ice-cream and hamburgers. Our new fuel tank has fuel in it to quench the thirst of the two Condors but, alas, the Super Falke has gone sick with an expensive engine malady.

Mike Watson achieved a creditable 334km in the Astir and John Tarrant went to America for his Gold height (a mere 19 000ft asl). We have had superb lennies over Norfolk recently.

Having committed an appalling number of outlandings at Ridgewell recently, we were pleased to be invited over for a weekend to try our hands at winch-launching.

Our "at home" this year was the usual success, with 74 passengers flown and - hopefully - many incipient new members. In fact, organised air evenings are quite a regular summertime feature at Tibenham. Six *ab-initio* training courses in the Super Falke and an advanced K-13 post-solo course, all residential and of one-week duration, have supplemented regular flying this season.

Conscious of our ever-changing membership the committee invited the more recent rookies for a drink and a chat to get their views. With unerring accuracy they immediately put their fingers on all the current weak points of our organisation, like the need for more tug pilots and for after-solo instruction in soaring. That's what we wanted to hear!

A winter programme of films and lectures is being dreamed up for the dark nights.

M.T.B.

OUSE

Dick Boddy has taken over from Leon Laidler as Chairman. This is a difficult time as far as our site problems are concerned and Dick has already organised a working party to scour the area for likely looking sites and we are all encouraged to look out for suitable fields. In spite of our uncertain future we are still pleased to welcome visitors plus aircraft, although being on Crown Property we require them to have £250 000 third party insurance.

There have been some brave attempts at cross-countries with John Taylor and Julian Day gaining Silver distance, Julian claiming Silver height a fortnight later. Congratulations also to Helen Beard, Alan Beer, David Hey, Eric Rogers and Mark Thompson on their Bronze Cs; to Dennis Dinsdale on going solo and Eric Carter on becoming an instructor.

The Northern Regionals was well supported by the club and Cyril Hutlley, Treasurer, came overall second, won his Class and was declared the best new entrant. The Std Libelle unfortunately ended its holiday at Slingsby's after a field-landing.

Various film sessions and social events have been organised for the winter.

We are sorry to announce the sudden death of Patricia Ramsden on September 18. This is a sad loss to the club and she will be missed by us all.

H.B.

OXFORD

After the demise of his Pilatus following a groundloop, Ian March has bought the ex-World Champs ASW-19 giving our private fleet a touch of class, and there are definite signs of a general shuffling of syndicates this winter. The best competition result was Mike and Jane Randle's third at Booker (they also took the team prize) while Richard Hall in his first competition managed fourth place in the other Class, flying his Skylark 4. Our pilots have also competed at Euroglide, Sutton Bank, Saltby and Enterprise.

After generally poor weather this season, the conditions during our annual three weeks of daily flying were much better than last year. Gordon Craig (K-8) flew his five hours only a few weeks after going solo, and a good crop of recent solos includes John Colles, Vivien Gouldstone, David Haigh, Guy Parker and Stephen Smith.

Steve Noujaim has his Silver C also in the K-8 while Phil Hawkins (Astir) took his artificial horizon up to 11 800ft for the club's only Gold C this year. John Giddins (same Astir) recently obtained his Gold height in wave at the Long Mynd.

A very choosy thief wandered along our row of parked trailers at the beginning of September and stole all the best fittings on view. A set of rear lights here, pair of side reflectors there. Tow hitch here, a jockey wheel there. Bulbs, bungys, wire, sockets, nearly every trailer lost something. Somebody must have had a pretty tight budget for his new trailer!

P.H.

ROYAL AIRCRAFT ESTABLISHMENT

We have recorded more cross-countries than ever before, but have not gained any Gold so far this year. We have done very well with Bronze Cs and Silver legs, Silver Cs being completed by Daphne Knowles, Chris Gibson, John Simpson and Bill Wright. This upswing in achievements is mainly due to the efforts of our CFI, John Stone, aided by Colin Paterson, in running comprehensive evening Bronze C courses.

Much midnight oil and adrenalin was burnt by Pete Harmer, John Knowles, Colin Paterson and Mick Wells to pass their full Cat rating tests.

While preparations were going on for the international air show we dispersed to other sites, with our club gliders imposing on the Chilterns Club's hospitality again. Our thanks once more to our friends at Weston-on-the-Green.

M.J.W.

SCOTTISH GLIDING UNION

We are sad that Roy Surtees has resigned as CFI for personal reasons. Roy must take a major share of the credit for the large increase in cross-country flying and the Chairman and Board express their gratitude to him and his wife for all the hard work. Our best wishes to Andrew Wood who has taken over.

The heavy gang from Lasham are with us and their first week alone made the journey worthwhile (see Surrey & Hants). Six Diamond

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heights and a probable Portmoak out-and-return best of 300km by Alan Purnell must be considered good going.

A recent innovation was Uniglide-78 (also reported in this issue).

R.H.

SOUTHDOWN

Although our cross-country kilometres are much reduced this year due to the atrocious weather, September produced numerous days when the wave worked well for long periods, or the sea breeze front formed beautifully over long distances or the ridge worked well and enabled fast 140km flights to be achieved.

The potential of our Southdown wave has at long last been explored on a cross-country flight by Brian Bateson, who completed a 140km flight from west of Petersfield to east of Lewes in East Sussex, reaching a height of 6100ft in the process. The system appeared to extend further eastwards, going out past Eastbourne.

Both our oldest and youngest members have gone solo – Josée Moseley-Williams, a sprightly septagenarian, and Penny Anscombe, aged 18. A veritable rash of first solo flights have taken place, including Susan Sathaye, Geoff Burtenshaw, Dave Pierson, David Whitmore and Rob Adams.

Angus Buchanan, showing complete disdain for Silver distance, flew the K-8 to Lasham, landed, had his certificate signed, then flew back to Parham, thus completing his Silver C.

B.A.B.

SOUTH WALES

Sunday, September 24, was probably one of the best wave days we have ever had for results. All 14 available gliders, including two visitors from Aston Down, soared over 10 000ft in wave and four exceeded 13 000ft. The highest was Norman Evans in the Astir at 15 400ft to earn his Gold height together with John Phillips (Oly) and Eric Duffin (Sky 2), the latter urged on at 500ft intervals over the radio from 9000ft up.

John Murphy and Paul Cullen gained Silver heights in the same wave. Congratulations to Paul who, on having his Silver distance disallowed, did it again the next weekend on September 17.

We are having "10-plus" pots made to commemorate any flights over 10 000ft by visitors.

I.H.S.

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SOUTH YORKS & NOTTS

A very mixed season. The Swallow was written-off on April 1 and hasn't been replaced yet. We were very sad to hear of the death of our good friend and one of the club's most able instructors, David Assinder. He is sorely missed.

Our congratulations to Messrs R. Mackay, J. Salmon, N. Meakin, J. Brassington, D. Simmons, K. Allen and S. Holstead on their A and B certificates; to Sue Patrick for going solo and gaining her C and first Bronze leg; Andy Lloyd on his Bronze and John Sentance, Steve Grublys, Malc Guard and Les Hills on their Silver Cs.

John Sentance has been on an instructors' course and is a most welcome addition to our much depleted roster.

Stan Denner rebuilt the T-31 and it is now thrashing the circuit. Our one and only dance was a great success and our Friday evening air experience sessions have proved popular with local Scouts and school groups.

A plea – will someone please collect the cross-country kettle acquired by John Sentance from Ashbourne? Somebody will be mashing tea in it before long.

S.D.

STAFFORDSHIRE

We have bought a K-8 to replace the Swallow. Bad weather restricted flying to just the first two days of our course week in late September. Even so, ten members had a total of 7½hrs from 39 flights and raised over £40 for club funds.

Another series of winter lectures has started with wide ranging subjects. We are now on the telephone and intending visitors can contact us at the weekends on Blackshaw 369.

P.F.F.

SURREY & HANTS

During September George Metcalfe completed a well earned 300km triangle round stubble fires and the Farnborough Air Show controlled airspace. His flight was the only badge 300km from Lasham this year. Earlier in the summer Tony Crease had flown a 500km in the club Kestrel, arriving back at about 20.00hrs.

The Portmoak expedition, however, has begun with much excitement. After several nice soaring days of hill, wave and thermal it all went up on October 4. Diamond heights came to Dave Saunders, Jeff Morriss, David Ince, Colin Lewis and Gary Fryer. Golds went to John Davies and Richard Thorley in the club fleet and many others reached between three and four miles up with Paul Thompson topping out at 20 500ft, Alan Purnell at 19 000ft and Chris Lovell and Mike Cowburn, expedition admin officer, to 18 000ft.

Down to earth activity has also been evident. The club fleet is having a pair of Mosquitos added for 1979 to bring the top end up to scratch. Radios and oxygen are now standard fitments in all the fleet except the K-8s.

C.L.

ULSTER

Grenville Hill stepped down as CFI on September 27 after 12 years' sterling work, to be succeeded by Jeremy Bryson. Grenville can take much credit for our emerging from several enforced and unfruitful years at Newtownards in reasonable shape to exploit the great promise of our new site.

The year was almost barren of cross-country possibilities in NI, with the paradox of consistent and sometimes excellent local soaring at Bellarena which gave short out-and-returns and cat's cradles over an extensive area of counties Derry and Donegal. The first season's best altitude from the site was 11 800ft by Billy Craig (SHK) in wave but no one expects this to stand for long.

Bellarena's first visitor from Britain, Jonathan Walker of the Coventry Club, flew his five hours on our ridge before completing his Silver C with a cross-country in the club Skylark 2 during the Irish task week at Carlow. Another most welcome visitor – and we hope he spread kind words when he got back home – was BGA Chairman, Roger Barrett, who came on September 30. Roger was making a quick out-and-return – by road – from the Irish Ballooning Championships at Boyle, where he was due to compete. Pity they were rained off as it's normally a great country for hot air.

Loudon Blair has designed a small steel-framed tug hangar which we plan to erect during the winter, to cut out costly position flying between Bellarena and the tug's present weekday home at Mullaghmore.

The Twin Astir, which entered service in May, is proving popular. But some metallurgical shortcomings in the undercarriage/brakes department have caused fraught approaches and some belly scrapes in which, apparently, we are not alone.

After a springtime expedition to Germany to buy a pristine SHK, Billy Craig and Mervyn Farrell went there again in September to acquire a K-6CR, stripped ready for recovering. This is now growing a new finish in Alan Sands' outhouse and should fly before the end of the year.

R.R.R.

WOLDS

Despite rather poor weather this summer, flying has progressed well at Wolds. A large influx of new members has greatly increased usage of the club K-7s and we hope our K-6 will shortly be

returned after being damaged in the Northern Regionals. A club K-7 flown by an instructor with solo pilots as navigators was entered in the Northerns for experience, and also the syndicate Cobra took part.

Several badge flights were completed this summer, including Gold height by Bob Kirbitson. Our congratulations to Kate Flude, Julie Emslie and Alan Wheatley on going solo. Mike Waudby and Bill Young have recently returned from an instructors' course.

Autumn has brought plenty of work with the clubhouse being redecorated by volunteers and a new bar installed. The "rose bowl" regularly competed for between Wolds and Doncaster is back at Pocklington to grace our new bar - probably for the duration of the winter.

A.J.B.

WYVERN

John Dabill, CFI for five years after three years as deputy, has taked a well-earned rest and we are grateful for all his hard work. We welcome Major Howard Jarvis as our new CFI. Lt Col Ian Moss has taken over as Chairman from Major Sid Fella to whom we are indebted for three years in this post.

We have been visited by many gliders recently from a Baby Grunau to Mike Elsom's Kestrel 19. A syndicate owned Skylark 4 from RAE Farnborough stayed with us for the duration of the Air Show.

The Jackeroo is now airworthy after much hard work on the engine and we are now back in business for aerotows.

Our congratulations to Leigh Hood for coming second in our Std Cirrus at Euroglide and to Pete Cook for coming fifth in his DG-100 - both in the Standard Class.

A and B certificates were gained by Dave Gidney, Mike Shapland, Lucinda Johnstone, Mike Thelwell, John Reaves and Ray Hornbuckle; Bronze legs by Ian Crane, Nigel Cemm, Chris King, Danny Kelly and Berni Hull; Bronze Cs were completed by Mike Stamp and Ian Crane; a Silver distance was flown by Dan Archer and Pete Ferryman completed his Silver C with a duration.

Most of the hardcore members have left for three weeks at Aboyne in search of Diamonds.

J.S.

YORKSHIRE

It has been a great end to the season with many gliders at 14-15 000ft last weekend and a visitor at 20 000ft and Diamond height. Hamish Brown had spent most of the preceding week at around 15 000ft.

Competitors in the Northern Regionals spent most of the treasure hunting, trailer test driving and generally taxing the ingenuity of Competition Director, Mike Carter, and his crew. But congratulations to Jack Woodford on a well-deserved win.

David Lilburn finished the season at the top of the club ladder, with the longest flight and greatest gain of height, and Dick Stoddart is in a very well deserved second place. John Shanley has completed his duration on his 12th solo flight. Well done John. Perhaps it's going to be a good flying winter!

E.S.

Service News

CHILTERNS (RAF Weston on the Green)

There have been a lot of changes. John Burn has returned to the Fulmar Club and is sadly missed. His place as Secretary and Bar Member has been taken by Sarah Strawson who, incidentally, has gained her Silver height. Clive Bailey is looking after the daily running of the bar and Jock Manson, who leaves the RAF later this year to fly "something bigger than an Islander", has handed over his CFI's hat to Al Fox. And we lost our beloved Eddie Wright to the Two Rivers Club. We are still looking for a Treasurer.

It has been a bad season with at least 20 attempts at 300km and no successes. But the Silver seekers fared better and Al Barton completed all three legs.

The three soaring weeks were a great success with visitors from Fulmar, RAE, Clevelands, Two Rivers and Phoenix taking part and gaining lots of Silver legs. Harry Orme rebuilt the RF3 at least three times but still found time to repair the Doppelraab wing and upgrade Mick Mahon and Keith Earnden to full Cats.

A very successful disco and barbecue was run jointly with our friends and neighbours, the Oxford GC, and another barbecue in September was for the RAE and Kestrel Clubs.

It is planned to celebrate the club's 21st birthday in suitable style on January 13, 1979. All ex-members will be made most welcome.

J.M.

CULDROSE (RN & RMGSA)

The summer course was a resounding success and resulted in 13 A and B certificates. Our thanks to members from Portsmouth and Yeovil Clubs who gave their support and helped in setting a new launch record with 130 aerotows.

The club fleet is still giving good service thanks mainly to the efforts of Keith Robinson, our Technical Member, who sadly will be leaving us in November. His departure will prove a real problem since as yet we have no one qualified to take over.

Following the loss of one Pirat in a field-landing accident we now look forward to acquiring a replacement.

Congratulations to George Pilch and George Kosak on becoming full Cat instructors and to Mary Squire and Ross Jones on their five hours.

The annual dinner is on January 13 when we hope to welcome home some of our "floating" members.

J.G.K.

KESTREL (RAF Odiham)

The annual trek to Aboyne has commenced and the latest news is that Peter Richie has his Diamond height. Ernie Downing and Martin Eldridge have soloed. Martin has also flown his first Bronze leg as has Peter Jay. John Cockfield and Gary Livings have completed their Bronze flights and Jackie Pobjoy has her Silver height and duration. Father, Mike Popjoy, is now a full Cat instructor, but has disappeared for three months holiday in Australia before settling down to civilian life. Harry Chapple has rejoined the ranks of instructors, a welcome addition.

Mark Thorpe landed out after 32km, whilst Ian Roberts managed 48km after a large "dog-leg" due to the Farnborough Air Show. Ken Rogers and Paul Mulhern are posted, but not too far away so we hope to see them at weekends.

P.W.A.

PHOENIX (RAF Brüggen)

We are sad to say goodbye to Gina Knowland, former Field Treasurer, and to Tony Radnor and John Hughes, both hard working members. We welcome Luke Lucas and the three assistant Cats, Pete Haig and Carol and Mike Simmons.

Recent achievements are solo flights by John Duncan, Nigel Demery (our tame Jaguar pilot), Tony Lever and Arthur Maxfield; Bronze legs for Chris Hands and Nigel Demery; Bronze Cs for Tony Radnor, Roger Davies, John Hughes, Al Thomson, Colin Davey and Andy Deighton; Silver legs for Al Thomson, Colin Davey, Mike Wilson, Geoff Philips, Roy Twigg and Glen Connor with Terry Mitchell completing his Silver C. There have been two aerobatic displays - one for 17 Sqn at Brüggen by Bill Tootell (Blanik) and the other for the Canadians at their Armed Forces base at Sollingen by Kev Kiely (ASW-19).

Canadians Ed Lowden and Danny Peterson (the latter recently went solo at Brüggen) have visited us several times with their K-6CR from Laar in southern Germany and Ed is currently on our expedition to the Vennebeck Ridge, where the only notable flight so far was Harry Worth's five hour (less 12 minutes) attempt. Ian Smith, also re-visiting Phoenix, was the leader for the first week.

M.T.

PORTSMOUTH NAVAL

There have been a few more changes recently. Paul Wheatcroft, who goes on an instructors' course soon, has taken over as AEO from "Dusty" Rhodes. Pete Fryer is now Bar Supervisor and Eric Young has handed over as Bar Member to Edna Clarke. Fred Stephenson is our new Liaison Officer.

The social side has been very successful with several social evenings being well attended with the bar making a good profit. The spot landing competition was cancelled because of bad weather but the disco and buffet the following

evening was a great success. A joint "going away" and "C of A" party was organised by Eric Young and Phil Moore – now we learn that Eric isn't going yet but G-ASZE did get its C of A.

Our thanks to the Sailors' Fund and Fleet Amenities Fund for the £9700 grant to buy a new Blanik and accessories. The T-21 is back in the air and the K-7 and Pirat went to Culdrose for a two week summer course.

Dan Archer is leaving after two years during which he put in a lot of hours both instructing and generally helping. He will be best remembered for his aerobatic displays and his unorthodox solution to problems.

Finally congratulations to Brian Chant on going solo; Nigel Clark and Simon Owens on gaining Bronze Cs, "Nobby" Clarke on completing his Silver C and to Bob Potgeiter and Phil Moore on their full ratings.

H.C.

WREKIN (RAF Cosford)

Tony Shipley is leaving the Service and has handed over as Secretary to Marty Platt. Also leaving us after two years are Ron Jackson, who has completed his Silver C and Jerry Frew. Our thanks to them all for their help. Congratulations to "Mossie" Williams on re-soloing, to Rich Arnall for two Bronze legs and to Mick Boyden on getting his full Cat.

We made good use of the wave during the last weekend in September with John Russell, John Marriot and Ron Jackson having their first taste of wave flying.

J.B.R.

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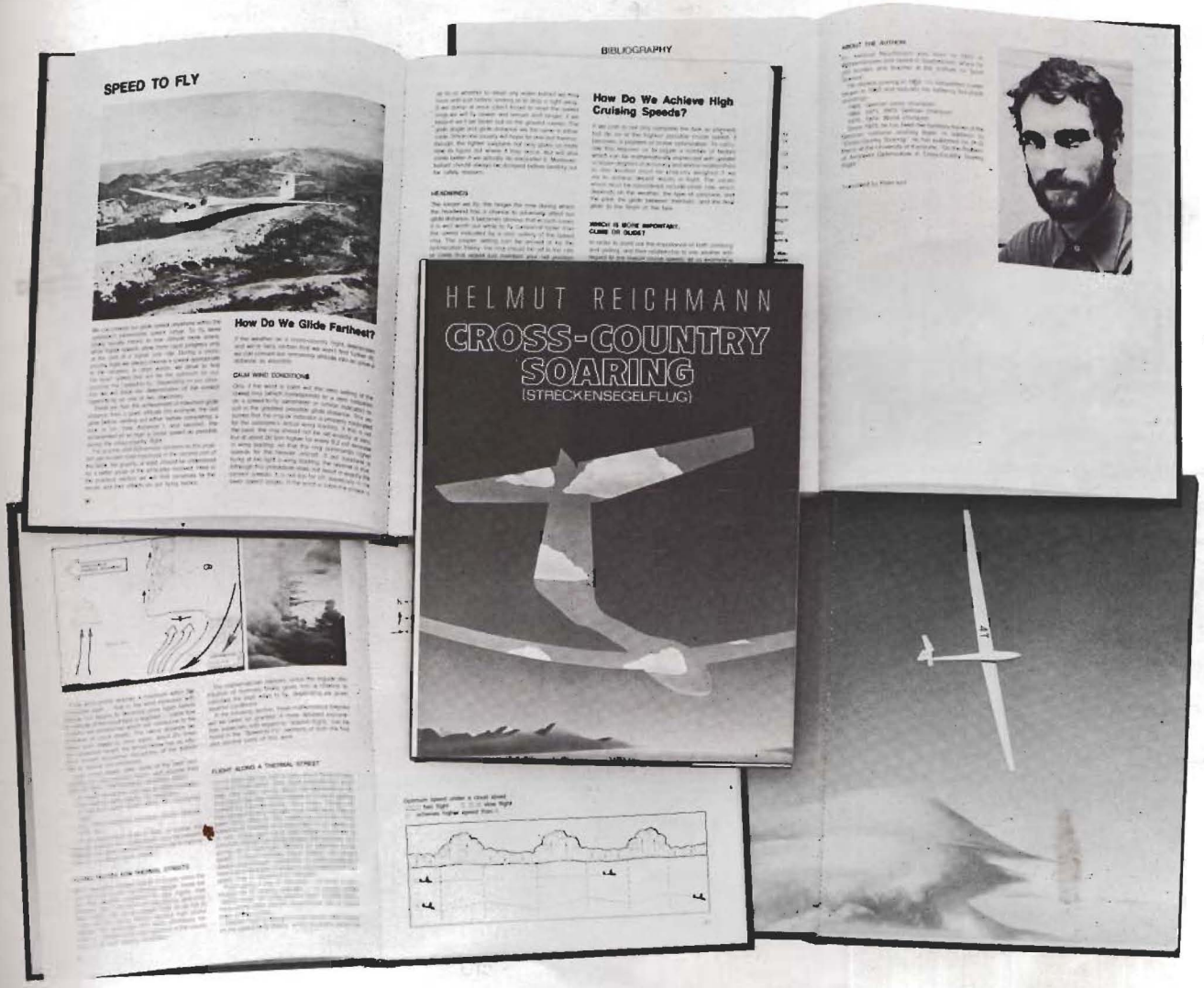
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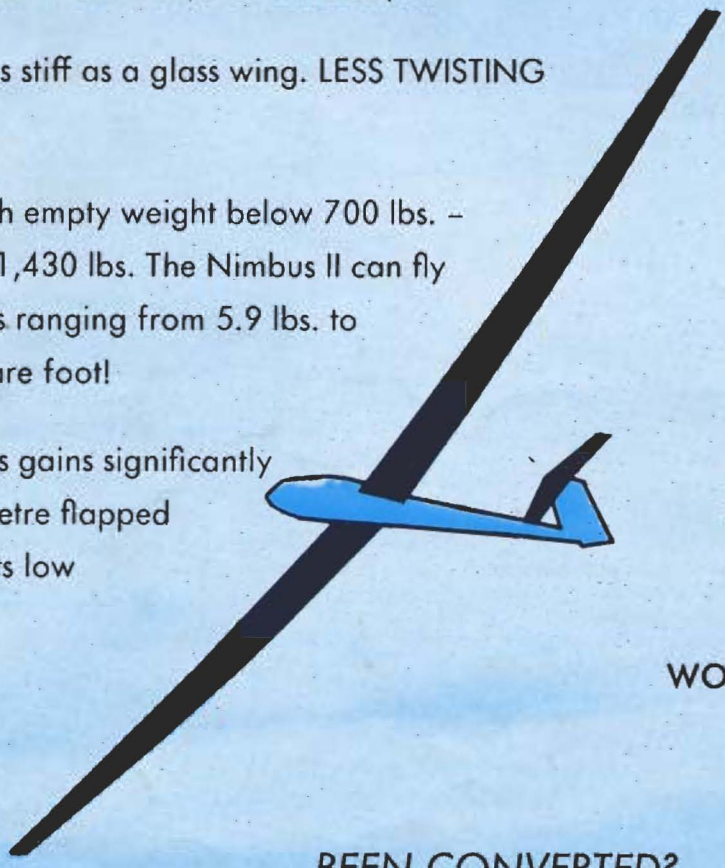
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