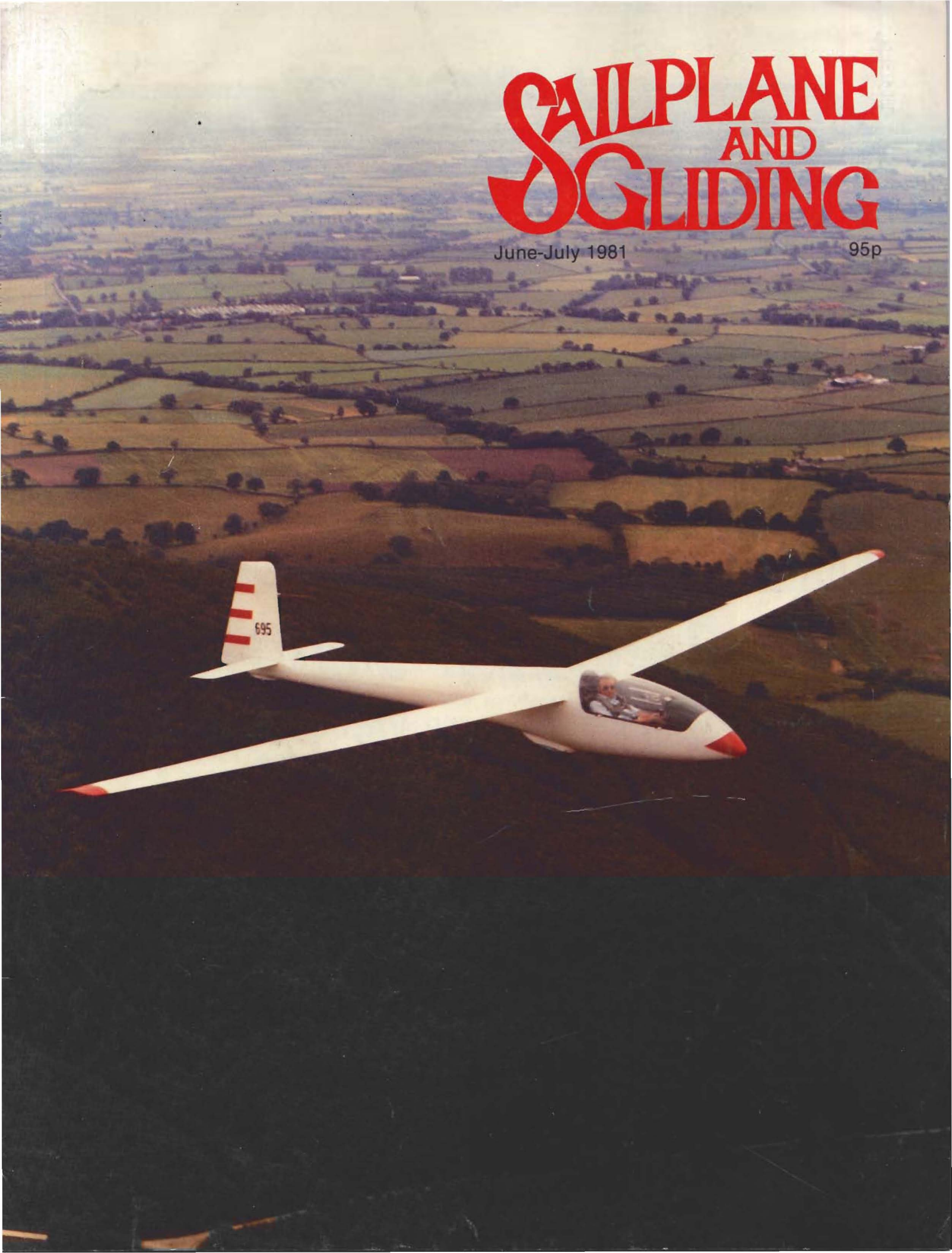
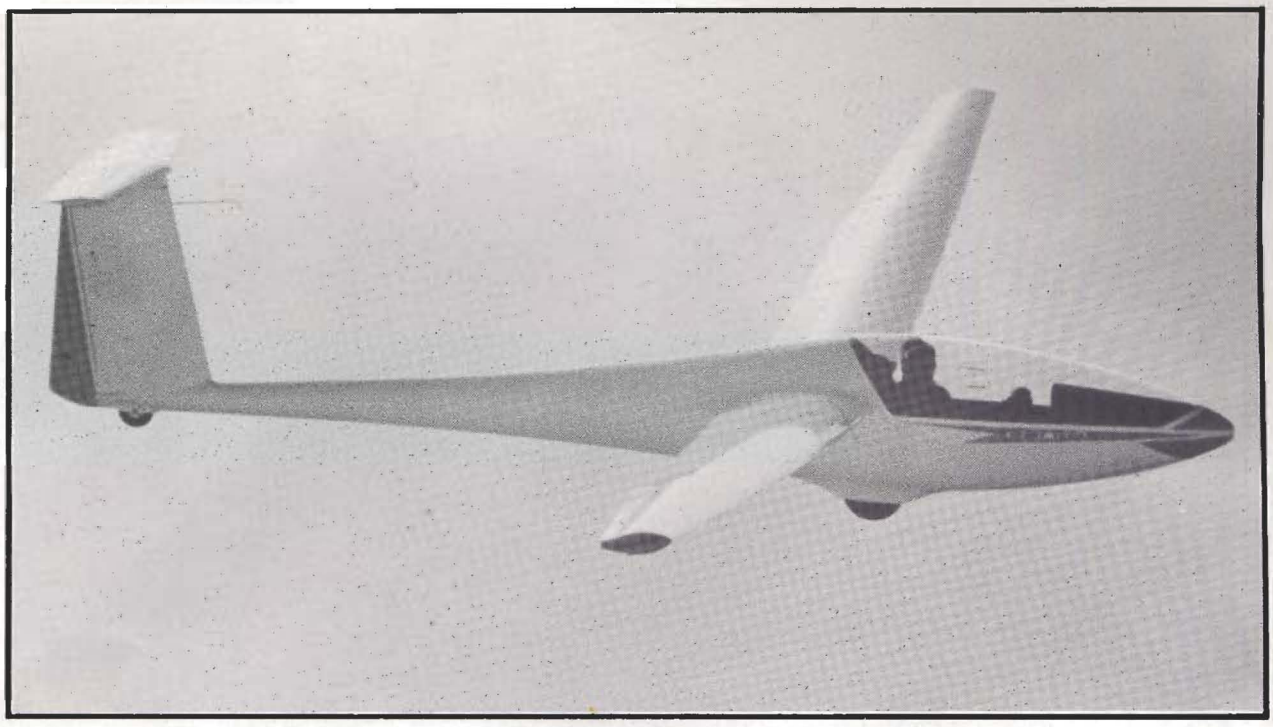
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June-July 1981 95p



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Magazine of the BRITISH GLIDING ASSOCIATION

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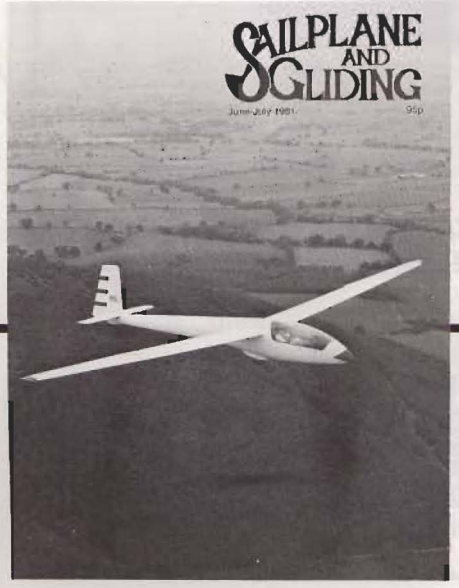
Consultant Editors:
Alan E. Slater
Rika Harwood, 66 Maisemore Gardens, Emsworth, Hants. Tel. 024-34 4580

Subscriptions:
Jenny Rolfe. Tel. Market Harborough 67084.

Committee:
A. W. F. Edwards (Chairman), R. Q. Barrett, M. Bird, F. G. Irving

Advertisement Manager:
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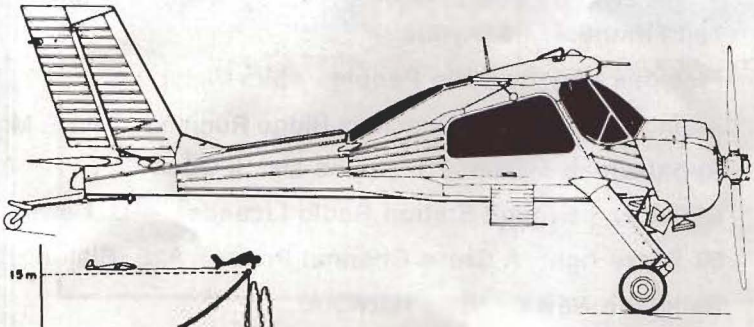
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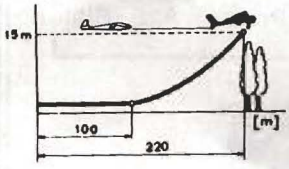
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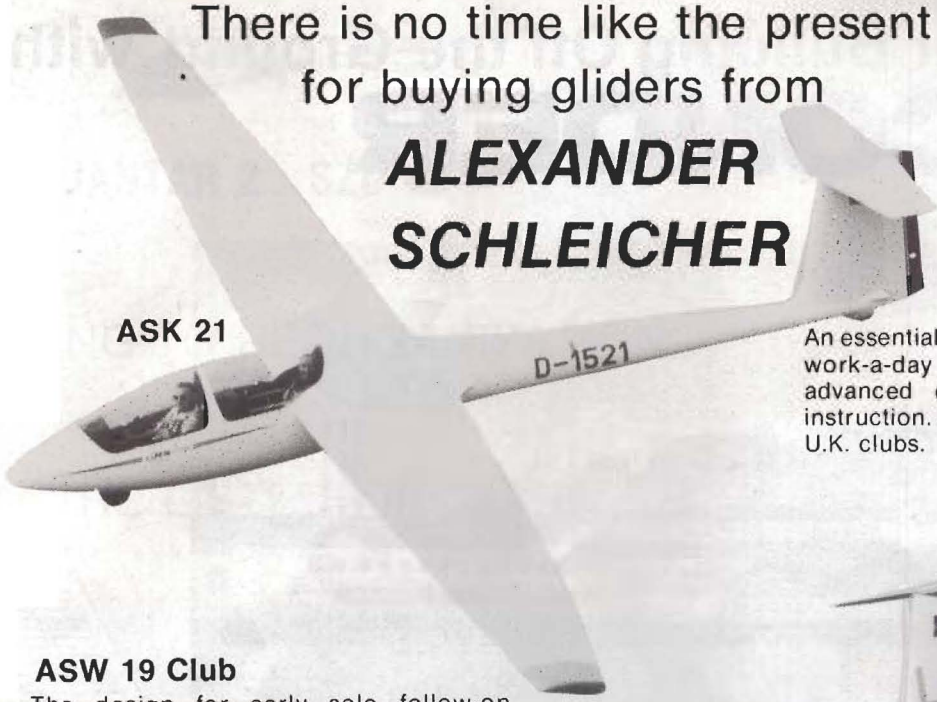
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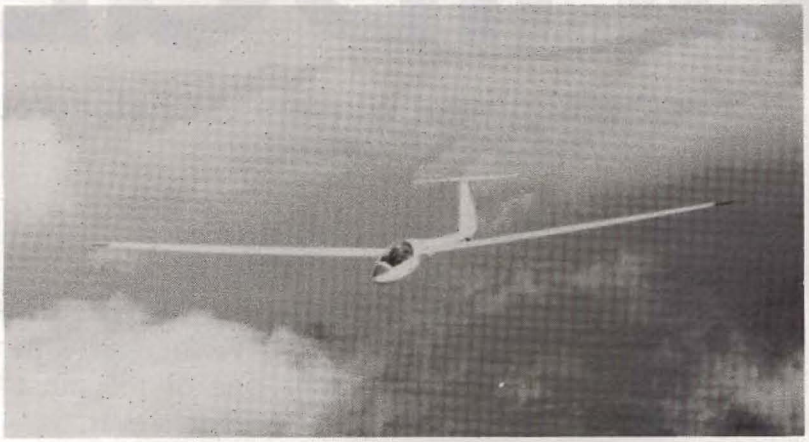
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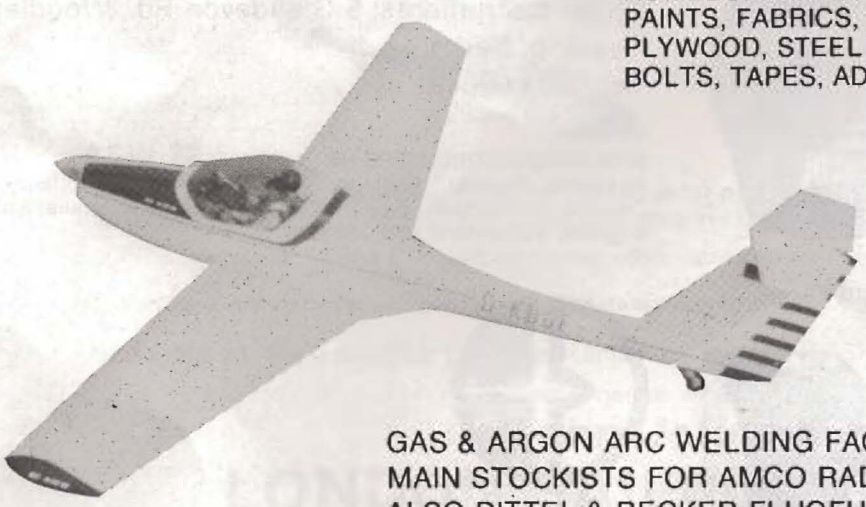
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A FINAL (KIWI) FLING

THE 18TH AIR NEW ZEALAND NATIONAL GLIDING CHAMPS



Map reprinted from *New Zealand Gliding Kiwi*.



DAVID CARROW writes about the 18th New Zealand Nationals in which he competed this January before hanging up his competition titfer

BARBARA and I had long planned a visit to the land of the Nor'west arch, the "Long White Cloud" of the Maoris, before we became too old to dream. My mother's South Island forbears were farming pioneers in Canterbury and Otago; we have family connections there and, following my involvement as crew for the Kiwis in the '65 World Championships, gliding friends as well.

Early 1981 seemed propitious for a short sabbatical from consultancy and the right season for the sunshine. Gliding however was NOT seriously on the agenda — cross my heart — until Peter Heginbotham, staying with us last August, calmly announced over a bottle of his Ch Pierre '79 that he had suggested Bruce Cunningham might send me an invitation to Alexandra (where's that?), that he had circulated S. Island private owners about this terribly competent pommie joker who wanted to borrow a glider for their Champs, and that I had been offered an ASW-17 (yes SEVENTEEN!).

Quick as a flash I hid the latest S&G with its Nationals rating list; a further deft flick locked away my logbook (no serious contest flying since Vinon '77) and the very next day I wrote off to the NZGA, Central Otago Flying Club, Dave McCracken and Gore Car Sales (yes, a great Kiwi deal — you buy and sell back!).

Panic soon set in but I gritted my teeth and, when Peter wrote to say that the motel was booked and that Simon Wright of the Wellington Club had kindly offered to crew, the die was clearly cast. Furthermore, both Bill Scull and Andy Gough assured me that the '17 was simple to fly and that I would fit in easily. So the evening of Jan 9 found me driving my very own Hunter Estate, with 126 000km on the clock, up onto Alexandra's modest, dusty airfield to find a barbecue supper in progress beside the club swimming pool and quite the warmest welcome any visitor, particularly after exactly 48 hours non-stop travel, could dream of.

Next day after fourteen hours' sleep and a couple of hours local soaring, Kilo Lima and I were blissfully in love (Dave, if you ever come to sell her . . .) despite her cockpit being exceedingly marginal for my six foot four. Works No. 007 (!) and with several World Champs in her logbook, she belonged originally to Schleicher's factory manager and then to Ian Pryde, and is thus superbly fitted out with sophisticated — and working — variometry, oxygen equipment and belly located drag 'chute.

New Zealanders are pioneering folk

To travel half way round the world and compete with unknown equipment demands — for me at any rate — an intense, concentrated and continuous effort to remain calm in the face of inevitable setbacks: oxygen leaking, parachute too thick, ground set not working, wheelbrake u/s, trailer fitting missing. But New Zealanders are pioneering folk, helpfulness is in their make-up. A fantastic bonus was the enrolment, by sheer luck, of an additional crewman in Gordon Hookings, a friend from Cambridge days and with World Class experience, full of enthusiasm, good humoured encouragement, and an excellent cook (until Barbara arrived!).

Disaster struck at the end of the practice week when a tug (let's not inquire his reasons) aborted my launch at about 50ft and, without releasing me, landed back onto the overshoot and through a ditch. So there I was . . . however dear sweet kind clever Kilo Lima never faltered, hard a'port onto the only possible landing area, thump into the soft dry brambly earth, inevitable ground loop, cloud of dust . . . so THAT'S why they fit ablative tail shoes. *Pas de problème*, except that we lost a good afternoon's soaring together while the rubber adhesive dried. Actually from that moment on, I was confident that KL and I could cope with anything; and so into the Champs.

Bare statistics: ten contest days out of 14, no accidents and, for me, 45 hours gliding, some 2000km flown and a rather low profile overall placing.

But how can one begin to do justice to probably the strongest, most volatile, lumps of air in the world?

. . . to the fantastic visibility, making compass navigation entirely superfluous.

. . . to the excitement, as I went onto one end of the Remarkables, of hearing Bruce (a professional aviator) landing at Queenstown the other end, telling his crew it had been the nastiest, roughest ride of his life.

. . . to a climbing run along the Hawkdun range (multiply the Mynd by four) to clear the Omarama saddle by 200ft, opening out the panorama of the Mackenzie basin and the glorious view of Lake Pukaki running up to Mt Cook.

. . . to flying home at dusk as passenger in Bruce's 180 from a paddock in Simon's Hill Pass, towing an SHK who picked up his own wing, and both of us landing along a 16 car flarepath.

. . . to flying back at first light under low stratus to a well picketed KL, wiping the dew carefully off the wings and being towed out slightly downwind.

. . . to slope soaring the top of St Bathans range, from the foot of which Ingo Renner had walked out three years ago, leaving his glider to be retrieved by helicopter.

. . . to a wildly extravagant 5kt climb to 21 000ft to look along the whole length of the Southern Alps.

. . . to the splendid flat paddocks and the *disinterested* friendliness of the farmers (crop dusting aircraft are part of their lives).

. . . to pushing KL along at 120kt at 16 000ft (almost 200mph, true) to penetrate into a strong sou'wester.

And so to the last contest day which dawns hot and still with a low inversion. No flying till the afternoon when KL and I get away early in blue thermals along the 302km five legged, final task. Alongside Errol in his sleek, home-built HP-18, we explore the steep Kawarau gorge, finding only fiendishly rough, unusable air. What did AJ say? "Keep high and fly straight ahead" . . . so keep going to beautiful Lake Hayes, round the first TP and suddenly the flank of the Remarkables lifts KL, ahead of the field, straight up to 7000ft.

"Fly the tops" along the second leg, with reduced sink far above the inversion in a long, incredibly flat, 60kt glide all the way to the second TP at Lake Hawea. No help from the adjacent mountain; I try all three flanks and even visitor Ernst Peter from Germany in his Std Libelle is scratching below. So take a photo and keep going across the lake — very low now but the paddocks are good — to the foot of Breast Peak.

Here at last is broken slope lift, enough to stay aloft and creep homewards, provided I don't misjudge our vast wingspan in a gully. Damn! There's Ernst 1000ft above me, away over the top of Trig Hill. But at last KL and I are up there too, in the first solid thermal for over an hour, steeling ourselves to edge right into the slope as the lift hardens.

On towards the Bendigo gold mines (crews still pan the Otago rivers on rest days) *via* an unusual line of no-sink, with a bonus thermal at the end where Ian joins me in Kilo Oscar, the other '17 (what a lovely sight, KL and I must look like that too!). Suddenly, near Clyde, the radio is full of urgent chatter with Prydie unbelievably low in the Cromwell Gorge. Someone suggests the concrete railhead depot as a possible landing spot and he makes it too, drifting in below the power wires . . . We all breathe again.

Unexpectedly the vario sings

Round Clyde bridge and back towards Hawea, calling up "Market" to follow us out. Simon replies he is local soaring at 3000ft and I tell him that's damn skilful in a Hillman Hunter. Same thermal at Bendigo, same line of no-sink, but the slopes on towards Lake Hawea are no longer working, it's past six o'clock. Maybe this fantastic glider and I can just round the TP and get back to Luggate airstrip for an aerotow retrieve (Champs party tonight!). John and Ian are on the ground there, and Helen about to land her Janus, while I worry about the grass strip's exact location and a simultaneous downwind landing across Helen's bows. Very low indeed but quite unexpectedly the vario sings and we are back at 4000ft over Luggate, relaying Helen's landing report and cancelling Market's instructions to come there.

At this point Market's understandable confusion leads to Gordon inquiring anxiously about my status. My reply "Of course I'm still b----y flying" seems to have been more widely heard than I would have wished — must be the Kiwi blood showing through. Billy remarks later.

Bendigo works for the third time of asking and suddenly interesting developments are possible. Market backtracks to Cromwell, KL and I creep along the slopes and ahead is a tiny thread of evening cumulus across our path. Six knots, one full turn, rock solid and "Market you may go home!"

Minutes later, rocketing along Cromwell gorge, brakes out to lose height for the finish line and Caustic Don, the Contest Director, says rather nicely "A *very* good finish Kilo Lima". Nobody on the ground except Ernst and he is in the other Class! Up and round, feeling good and suddenly Tony's urgent Dutch accents "Kilo Lima, your undercarriage!!" Nice to have friends.

Later that evening I warmly kissed the Kiwi air hostess who gave me the daily prize and vowed to hang up my competition titfer on this upbeat finale. The hardest thing of all in contest gliding is to know when to stop. So I have resisted a kind invitation to Matamata in 1982, and Dave has promised the exquisite Kilo Lima to Chris Garton the next time the NZ Champs are in the S. Island, unless of course he flies her himself.

Leading results: *Open, 15m Class, 1 Theo Newfield (Nimbus 2) 6389pts, 2 David Speight (Nimbus 2) 6054pts, 3 Ian Finlayson (ASW-17) 5849pts. Standard Class, 1 Ernst Peter (Std Libelle) W. Germany, 6768pts, 2 Ray Lynskey (Std Cirrus) 6716pts, 3 Peter Lyons (LS-4) 5946pts.*

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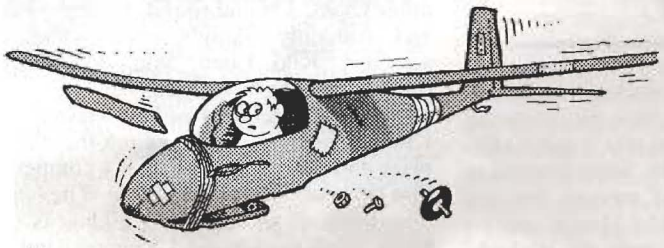
TAIL FEATHERS



by PLATYPUS

WHICH? SECOND-HAND GLIDER: An analysis

WHAT is the cheapest way of getting around the countryside these days? It is to buy an old glider of the type that used to win contests in the 1960s, look after it yourself and hope that it lasts forever. I have been looking through the S&G small ads (again!) and have calculated, from the prices asked and the BGA speed indices, the relative costs of cross-country mileage. I have *not* deducted any depreciation figure since I have no idea of what the expected life of a glider is; certainly there are many 40 year-old wooden gliders around and some 20 year-old glass-fibre ones.



Maintenance troubles of a 15-20 year-old glider

This little table shows that values in second-hand gliders (the cost-per-Speed Index) cluster together in pretty distinct groups. If you are prepared to put up with the maintenance troubles of a 15-20 year-old glider (which I'm assuming you do yourself) the cheapest category will deliver you roughly twice as much mileage per pound as class IV, today's hot ships.

	Aircraft	*Average Asking Price in £s/pt of Speed Index*	*Approximate Age (years)*
I	Swallow	33	20
	Skylark 4	54	18
	Olympia 2	56	22
	Spatz	57	?
	K-6CR	59	20
	K-6E	60	15
	Olympia 463	62	17
II	Std Libelle	73	8
	Kestrel 19	76	7
	IS-29	77	6
III	Std Jantar	90	Current
	Astir 77	93	Standard Class
IV	Vega	108	Current
	PIK 20D	111	15m Racers
	Nimbus	120	Current Open Class

To allow for the difficulties of getting between thermals, etc. in lower performance gliders I have allowed for a 20kt wind in calculating the Speed Index. The K-6E is one of the best bets in this class, though the interesting thing is how close the ratios are within each class — showing that the market (probably unconsciously) takes glider performance, age, etc. etc. into account in determining prices. I have assumed that all sellers ask for more than they might actually get, but that the exaggeration factor is uniform across the board.

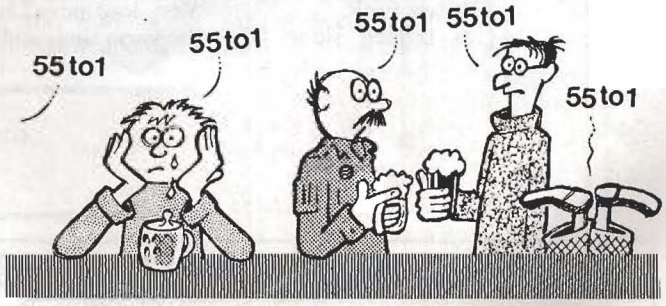
In the second group you have 1970s aircraft that represent very good value in the general high performance category, but which are not strongly competitive in any of their three respective contest classes. The Kestrel 19, if you are prepared to risk a hernia rigging it, still represents the best performance value in 1970s gliders for general cross-country work and handicapped contests.

A glider that is no longer competitive at Nationals level drops in value pretty sharply, in spite of the fact that Nationals pilots are a tiny minority of the whole movement. On the other hand, that creates bargains for the younger or more hard-up pilots, so maybe "planned obsolescence" is a good thing.

Certainly I get fed up hearing the perennial demands for a cheapo middle-performance glider to be specially designed and built. All such writers ignore the existence of a healthy second-hand market in excellent, tried and tested designs with scores of years of life left in them.

There's still no substitute for it! (Money, I mean)

Notwithstanding all the above, the power of the big ads for big gliders obliterates common sense. After seeing the polar curves in the last S&G my partner and I — and no doubt a few hundred others — have been stumbling around with glazed eyes muttering "55 to 1, 55 to 1, 55 to 1 . . ." like so many Tibetan



Glazed eyes muttering . . .

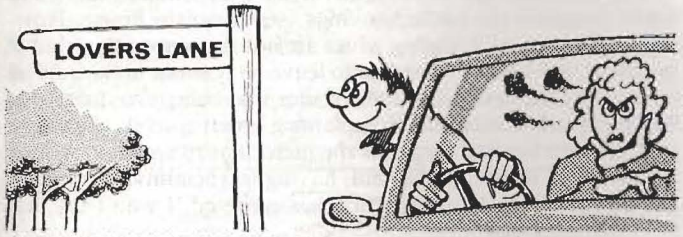
monks. The sales of one-million-scale maps and requests for the BGA's list of (soon to be obsolete) speed and distance records are booming. When will this madness end? Never, I hope. That really *would* be Old Age.

What is a Grandad? (Again)

Old age is a propensity to enjoy BGA weekends...

That includes me, of course. Shaking hands with old faces, as they say, and visiting the scenes of triumphs of 20 years past is something that I enjoy. It was certainly enjoyed by the visitors

to Buxton in March where, an independent observer puts it, the average age of those attending was 46. Unfortunately the attendance to these almost entirely social events is not only ageing, it is dwindling. When I asked a keen pilot in his mid-twenties why he did not go, he replied that for someone like himself there were better things that he could do with his time, not to mention his money. Anyone who has to run his own car might easily find



Visiting the scenes of past triumphs

that such a weekend, including travel and accommodation, could cost £100; there would have to be some very strong, and *practical,* attractions to make that worthwhile. What is sauce for an old Platypus is unfortunately not sauce for the next generation.

What would attract younger people to a BGA weekend? First of all there must be some way of keeping the costs down. Secondly we need a programme which really devotes less time to drinking and more time to a very specific set of useful objectives.

A British Gliding Congress

Such a new-style BGA weekend would, sadly, have to be much less scenic for a start. There are few sites to match Derby & Lancs or the Mynd. They have powerful nostalgic associations for me and their hospitality is unsurpassed. But they are so far from the motorways that they are not easily reached from major areas of population and therefore a great part of the weekend is taken up in travelling time. The venue for a new-style BGA weekend would have to be somewhere fairly boring near a motorway, within (say) two hours' drive of any major centre of population; that probably means somewhere in the areas of Rugby, Leicester or Nottingham.

For the really young and impecunious we might do a deal with local youth hostels, gliding clubs or even private individuals in the gliding movement who are prepared to put people up.

As for the programme of events, the first thing to remember is that between 10.00 on a Saturday morning and 6.00 on Sunday evening there are all of 32 hours. If you allow eight hours for sleeping, five hours for eating and drinking and washing behind the ears and one hour for other minor calls upon one's time, that leaves 18 hours for practical work, of which the BGA AGM might take at most two hours. We have room therefore to have two eight-hour sessions, a typical programme for which might be exemplified very well by the soaring conference held in America last year.

"Would you come to the BGA weekend if it had such speakers as these?* I asked my young friend. "Certainly I would!" came the answer.

Of course such an event would require a tremendous amount of work. It is not fair to expect both the social programme and the lecture programme to be organised by the same individuals. It also means a lot of carefully prepared work by the speakers; they cannot expect to improvise on the spur of the moment while hungover after a long night at the bar.



Private individuals prepared to put people up

Some costs of a new-style BGA weekend could be defrayed by the sale of tapes and books based on the papers delivered at the symposium. Quite clearly the period of preparation for a gliding congress of such quality would be about six months — so a start had better be made pretty shortly.

Any takers?

*Reichmann, Moffat, Holighaus, Waibel *et al.* Subjects: glider design, instrumentation, record-attempts, contest-flying techniques etc.

Sailplane & Gliding

The magazine can be obtained from most Gliding Clubs in Gt. Britain, alternatively send £7.15 postage included for an annual subscription to the British Gliding Association, Kimberley House, Vaughan Way, Leicester. Single copies, including postage £1.15.

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PLATYPUS AND THE LITTLE PEOPLE

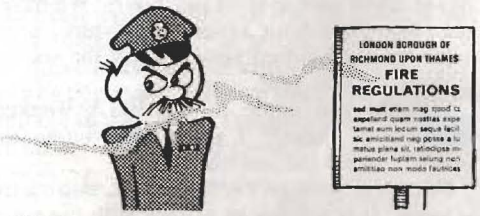


by Mrs PLATYPUS

Mrs Platypus reveals that the male of the species doesn't hibernate during the winter but takes up a scaled-down flying interest

PLATYPUS has recently revived a dormant interest in aeromodelling and I have wholeheartedly encouraged him in this. As my friend Gwen says (her husband is an aeromodeller too) the retrieves are so much easier.

I have to confess that I haven't excelled myself as aeromodelling crew any more than I have at crewing for the full scale versions of Platypus's models. In both cases, I'm afraid, I have managed more or less to write-off something dear to Platypus's heart. A psychologist might assert that there is no such thing as a true accident and that the incidents are evidence of a subconscious desire to eliminate my rivals for Platypus's affections. I do freely admit that I do regard almost anything with wings as a rival.

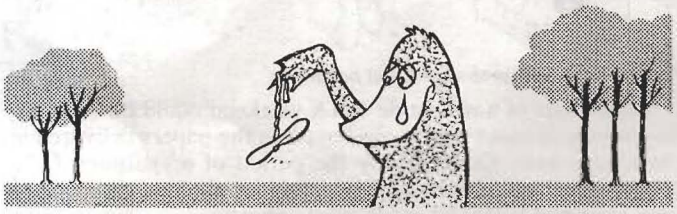


Probably started forest fire

However in the case of the Kestrel trailer which I overturned on the M1 I was exonerated by the insurers who said that the accident was caused by a fault in the car engine, though I have never felt able wholly to exonerate myself. In the case of the little rubber model to which I set fire in Richmond Park, it is even more difficult to free myself from guilt.

Platypus was holding the aircraft, lovingly constructed over a period of months from balsa specially imported from America, and being test flown prior to an important competition. I was lighting the de-thermaliser fuse. Suddenly — whoosh! the whole thing was in flames and Platypus was jumping up and down stamping vigorously on his model, looking rather like Rumpelstiltskin. I was helpless with hysterical laughter — largely nerves, as apart from anything else it was one of the few dry spells we had that summer, Richmond Park was like a tinderbrush and I thought that I had probably started a forest fire.

Within seconds all that was left was a charred patch of turf, a propeller, and a disconsolate Platypus who maintains to this day that it was the best model he had ever built.



Prop salvaged

We repaired for consolation to the house of a fellow aeromodeller who poured whisky into Platypus and, looking on the bright side, said how splendid it was that the prop had been salvaged in such excellent condition. Aeromodellers are very supportive of each other, I've noticed. At a recent competition for microfilm models (I wasn't invited to crew, Platypus evidently feeling that his chances were better without me) he reported afterwards that his model hadn't flown very well, and one of his fellow competitors had *breathed* on it. Things got rather confused because I misunderstood and became very indignant at this unsportsmanlike behaviour and suggested that the perpetrator should be reported to the FAI, until it was explained to me that breathing on the model had enhanced its performance and had been an act of unselfishness enabling Platypus to come sixth.

Anyway I did feel truly sorry about my first and last act of arson, and as a penance I betook myself to Henry's Models and bought Platypus hundreds of pieces of balsa. The advantage of accidents to Little Gliders is that there are no hassles with The Insurers, of course. I also bought Platypus his very own stripper, which cheered him up no end.

The disadvantage of being involved with Little Gliders and Little People is the Little Shavings — all over the house. However I know that big gliding wives are not immune to this kind of problem. A friend of mine had to leave her car out in the cold all one winter because a full scale trailer was being constructed in her garage. She rang me, complaining about the bits that were trodden into her hall carpet as the men came in and out for cups of tea not to mention, she said, having to vacuum the carpet in the garage all the time: her garage is carpeted. I won't say that

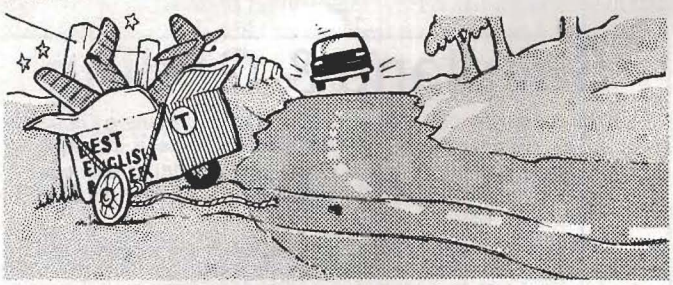


His very own stripper

her standards of housekeeping are higher than mine, though they undoubtedly are, but they are certainly different.

At least her trailer couldn't get lost which is what happened to Platypus's Little Trailer a couple of weeks back. It's a large cardboard box, like the one I bring groceries in each week, but *special*, and it simply vanished. I was suspected of having thrown it away and the children were interrogated in case they had converted it to a puppet theatre or something. Finally it came to light in the loft, a bit squashed but still competition-worthy.

The bonus of being married to an aeromodeller is the fascinating literature which comes into the house. Platypus subscribes to magazines from all over the world. I was leafing through some French ones in bed the other weekend, waiting for Platypus to decide whether it was gliding weather or aeromodelling weather or neither, when I came upon this amazing guide to aviation vocabulary in English, German and French.



Platypus's Little Trailer

"*Angle* = *winkel* = angle" it began. Having thereby captured the reader's interest in the first few words, as all good journalists are trained to do, it continued:

"*Epais* = *dick* = thickness"

No, I am not making it up. It is absolutely true.

It was, of course, a very selective vocabulary. It was preoccupied with thrust. There was *traction* = thrust, *cabreur* = upthrust, *vireur* = side thrust, *piquer en plane* = downthrust and *butel a billes* = thrust ball bearing.

After all that I wasn't at all surprised to come upon *helice* = airscrew. I loved *bracelet caoutchouc*, and in case you can't guess what it is, it's *gummiband* in German and rubber band in English. *Balsa tendre* sounds like a French endearment. It's soft balsa. *Enduit de tension* is dope.

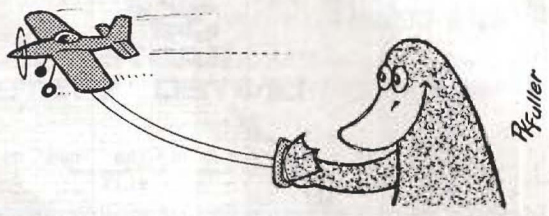
Chrono! is a timekeeper. GC (whatever that is) is CG, but PLM is mysteriously HLG. A *tube* is a tube, it said, and a *canard* is a canard.

"What are you laughing at?" Platypus asked me. In the ten years that I have lived with him, I told him, I have laughed more than in all the preceding years of my life. Ah, he said suspiciously, but was it because he was being intentionally or unintentionally funny?

"Does it matter?" I asked. Probably not, he said graciously.

It was two nineteenth century philosphers, Julius Charles Hare and Augustus William Hare who said that "Few men are much worth loving in whom there is not something well worth laughing at."

Or perhaps, to end on a slightly less lofty note, it's just that little things please little minds. ■



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Photon torpedoes away ..... look, I'm really sorry about all this and I expect to get over it soon — it's probably just a phaser I'm going through.

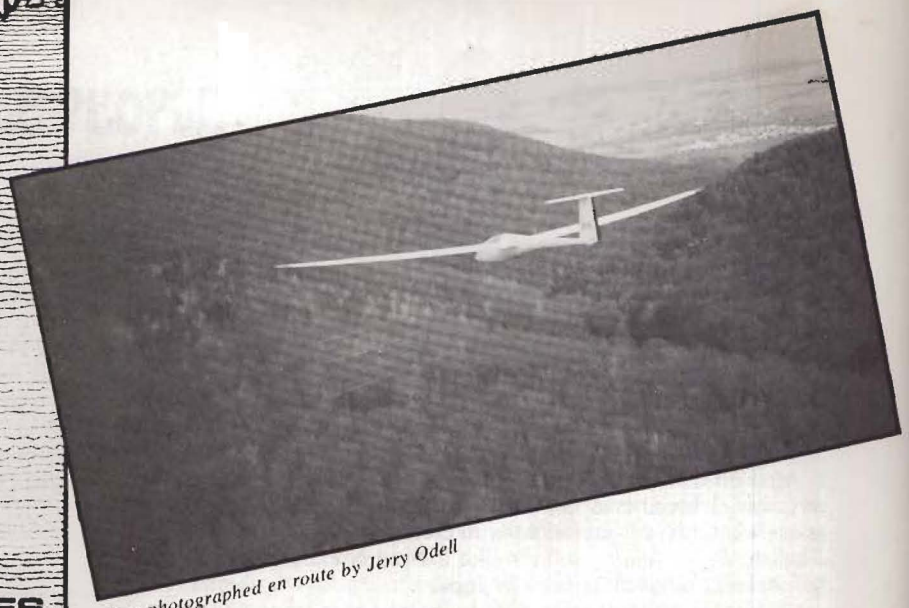
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Tony photographed en route by Jerry Odell

WILLIAM MALPAS gives the background to this exciting area followed by an account of Tony Clarke's 500km triangle by TONY and JERRY ODELL.

Introduction to Appalachian ridge-running

MUCH has already been written about ridge running by Karl Striedieck and Tom Knauff and others, mainly in *Soaring*. Perhaps a little geography and a touch of history would interest readers of S&G, together with some notes on how visitors to the USA might soar the beautiful Appalachian ridges.

A little geography

For soaring purposes they begin at Ellenville (New York State) in the north-east and extend almost to Knoxville (Tennessee) 1040km to the south-west. In New York they are called the Shawangunk Mountains, in eastern Pennsylvania the Blue Mountains. Further west in the Virginias they are called the Alleghenies where they extend eastwards as far as the Blue Ridge in the Shenandoah National Park.

They vary enormously in soaring potential. The best stretches may be as much as 140km long, beautifully shaped and as much as 2000ft high above the valley floor. The only limit on speed in these stretches is the pounding you can take in the turbulence that is usually associated with strong unstable north-west air flows. The more difficult bits may be only 200-300ft high — and totally useless in light winds. And then there are the **dreaded gaps!** Some gaps may be as much as 30km long and only negotiable in thermals or wave. Upwind jumps from ridge to ridge can also be exciting, especially when trying to jump the 14 or so ridges from Harrisburg to Ridge-Soaring.

Most ridges are wooded, with rocky outcrops here and there. They rejoice under such evocative names as Sleepy Creek, Knobly, Bear Garden, Warrior and Bald Eagle Mountains. Others have Indian names such as Nitatinny, Kittatinny and Tuscarora; and British pilots will feel at home on Wills Mountain and Jones Ridge.

They are the haunt of hawks in profusion, including redtails, goshawks, broadtails, roughlegged, and (more rarely) both the golden and bald eagles!

A touch of history

Historically, for long-distance flights, the northern end was the first to be exploited. On April 3, 1935, Lewin Barringer was bungy-launched off the ridge near Ellenville in a Bowlus/Du-Pont Albatross 2 and flew 250km to Indiantown, near Harrisburg, in 6¾hrs. Most of the flight was achieved in ridge lift, but he did use thermals to cross gaps. It was an unsuccessful attempt to beat Richard DuPont's American distance record of 254km, which was in the same general area starting from Elmira but crossing the ridges from north-west to south-east. Their routes crossed near Blairstown, NJ, and DuPont had spent about one hour ridge soaring at this point before finally picking a thermal off the ridge and continuing on his way.

It should be noted that Emerson Mehlhose had previously made a 67 mile flight along the Blue Ridge, Virginia, on September 20, 1933, in a Haller Hawk, but it is not clear to what extent this had been a ridge flight. It had been made as part of an exploration of the area to find suitable soaring fields, which discovered the Big Meadows site, where many good flights were made, but which is no longer in use.

Richard DuPont understood the potential of the area and made the uncanny prediction that someone would one day make a flight of about 900km from the Lockhaven area to Knoxville, Tennessee! He did not foresee what we know today: that it would be Karl Striedieck, and that he would also fly back again!

Karl has dominated these ridges since 1967, but he has not been alone in setting world records, as the table on the next page shows.

Exciting possibilities

More recently (April 1980) Tom Knauff (ASW-19) flew a 750km triangle from Ridge-Soaring using the ridges as much as possible; this, to the general surprise of the US soaring community and the chagrin of western pilots, turned out to be the

World O/R records along the ridges

Date	Sailplane	Pilot	Distance (KM)	Start
March 1968	K-8	Karl Striedieck	767	Lockhaven
Nov 1971	ASW-15	Karl Striedieck	916	Bald Eagle
Oct 1972	ASW-15	Karl Striedieck	1025	Bald Eagle
Oct 1972	Libelle	Jim Smiley	1046	Bluefield
Oct 1972	ASW-15	Karl Striedieck	1098	Bald Eagle
May 1973	Libelle	Bill Holbrook	1260	Lockhaven
March 1976	ASW-17	Karl Striedieck and	1299	Bald Eagle
March 1976	Std Cirrus	Roy McMaster		Bald Eagle
May 1976	ASW-17	Karl Striedieck	1633	Lockhaven

first "legal" 750km in the USA since the record was recognised and therefore, at the time of this writing, he holds the records for triangular distance and speed.

Besides ridge-running, the Appalachian ridges offer the most varied and exciting possibilities. The wooded ridges are interspersed with pleasant cultivated valleys of flat farmland (mostly well supplied with good landing fields). Thermals are usually better than surrounding areas, whatever the wind direction. Wave is fairly common in a north-west wind, particularly in the Cumberland area where it is most needed to avoid descending to the level of the sinister Knobblies, which are a series of low hills rather than a ridge. All the FAI badges can be won here — including, of course, the 1000km diploma. There are many airfields along the route, including some directly along the famous Allegheny "express-way", so there are good possibilities for long leisurely soaring safaris which have hardly been tapped.

When to go

The ridge days occur mainly from September to April and for a visitor I would recommend October and March/April/May, because the days are longer, the weather unlikely to be too frigid or the airfield too snowbound; and if the north-west winds refuse to materialise, the thermal conditions may be a recompense.

Ideal conditions for ridge-running call for a low-pressure area in the Lake Ontario/St Lawrence River region, high-pressure to the south, the passage of a cold front and winds of 20-25kt. These conditions are often predictable some two or three days in advance, but good timing requires about 12-24hrs notice.

Not without dangers

Before you come, consider this (from Karl Striedieck after his last world record):

"This sort of ridge-running is very demanding physically, exhausting mentally, and is hazardous. Rarely are you more than one minute from landing if your ridge lift quits. Rarely, also, are you above a safe landing field. The majority of Appalachian farmlets are hillside clearings that would write-off a glass ship. A good portion of the valleys are forested. Turbulence is a lurking danger that will peel off your wings just a hundred feet above the trees. And then there are those blasted snow-showers."

He was flying close to the limits of human and material endurance, with margins cut to the bone. A visitor will be flying much more sedately, well within his own personal limits. However, the passage illustrates vividly that ridge running is not without dangers, which commercial operators will be at some pains to stress before hiring out their equipment.

Where to go

To make distance flights you must have your own sailplane. The SSA will provide a "Directory of US Soaring Sites and Organisations" from Box 66071, Los Angeles, California 90066. The most active Appalachian sites are Wurtsboro, Blairstown and Ridge-Soaring, each having full-time, all-year, commercial operations which have sailplanes for hire. The first two are only 1½hrs from New York, with good bus services, but the best place is Ridge-Soaring, about five hours drive from New York.

You can hire gliders for local flying if you have an American licence or equivalent issued by the Federal Aviation Agency. (The FAA will usually issue one immediately on the presentation of a BGA gliding certificate or foreign licence.) Gliders for hire are invariably Schweizer machines and cost from $16 to $30 per hour, depending on age and performance. Tows presently cost around $10 to $13. You will also be asked to take a check-ride.

If you wish to make distance flights and do not have your own machine, Tom Knauff at Ridge-Soaring will make a financial arrangement which transfers the risk from him to you for the period you fly there; but you will need some capital to do it.

Relevant Soaring *magazine articles: Striedieck, K.: May 1969, March 1972, Nov 1974, May 1975, Oct 1976, Knauff, T.: Feb 1974; Vakkur, G. J.: July 1977 and Holbrook, W. C.: Dec 1972; July 1973.*

Other sources: Knauff, T. "Ridge Soaring the Bald Eagle Ridge" (available at $12 from Tom Knauff, RD, Julian, Pennsylvania 16844, USA) National Geographic *magazine, March 1978.*

★ ★ ★

A few days after William Malpas sent us this article we heard that a group Bannerdown GC (RAFGSA) members from RAF Hullavington took an ASW-19 to Ridge-Soaring at the end of last year and achieved more than 112hrs and covered 3785km. The coveted 1000km goal eluded them but Tony Clarke flew a 500km triangle in under five hours on a strong north-westerly day.

He used the Williamsport and Cumberland TPs to give him more or less unbroken ridge for the first half of the task. This gave him a chance to get used to the needed low altitude, high speed techniques before tackling the daunting gaps at Altoona and Bedford.

The glider was filled with a water/anti-freeze mixture, Tony put on four layers of clothing and was soon flying on the first stage of the task at 90kt. *The following are extracts from the account of the flight written by Tony and Jerry Odell.*

I wriggled down in the seat as far as possible and set off along the ridge towards Milesburg at a sedate 60kt to get the feel of the ridge lift. The lift was good and the turbulence was not as bad as the previous day — I only hit the canopy three times before reaching the Milesburg gap. Travelling in this direction the gap presented little difficulty and I tip-toed boldly across. As the lift was consistent I increased speed to 90kt and whistled along for a couple of miles keeping an eye on the possible landing fields in the valley. Soon afterwards, fields were replaced by a series of lakes so I converted speed into height and cautiously crossed the unlandable area.

Quite severe turbulence

As the valley terrain improved and escape routes became obvious, I again pushed the speed on and confidence in the conditions improved as I encountered no major problem all the way to my first TP at Williamsport, managing to maintain 90-110kt between 100ft and 150ft above the trees. By now the ridge was triggering thermals giving quite severe turbulence, but by hanging on to the airbrake lever and bracing my feet against the rudder pedals, I managed to stay in the seat most of the time.

At Williamsport I took a thermal to climb above the ridge and photograph the TP. Once back on the ridge, I retraced my track with blissful confidence in the steady ridge lift until I reached the one mile wide Milesburg gap for the second time. I now realised why the Milesburg gap can present a problem: the

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other side is much higher going in this direction! For the first time I was below the top of the ridge, down to 50kt and struggling. Fortunately, at my level the ridge lift was still working and with careful flying, tucked in close to the trees, I gradually climbed back to ridge top height while keeping one eye on available fields. After a quick diversion round an aerial mast I was safe again and soon passed my starting point, estimating my average groundspeed as 150km/h.

By now I had learnt a lesson and, as the ridge top began to climb near the Altoona gap, I slowed down to keep above it. Although the lift was reliable, the slightest mistake caused by over-confidence could have resulted in outlanding. Towards Altoona the ridge changes from its characteristic steep, angular summit and becomes a rolling curve, which makes it difficult to assess where the best lift is; once again I was tip-toeing along. To add to my difficulties, landing fields were now scarce and therefore I climbed in a thermal to give myself more gliding range. Remembering the advice "you need 3600ft to cross the Altoona gap" I took another thermal to its top — the inversion level at 3200ft. From there I flew from thermal to thermal; fortunately, at the other side of the gap the ridge was downwind and finally, at the third attempt, I made it just below ridge top height. Five minutes later I was back above the ridge and pushing on at speed.

At this stage snow storms were beginning to develop and I was extremely cold. I dodged a snow shower at Claysburg and flew as fast as possible to the edge of Bedford gap. The sky looked promising and making use of strong thermals I climbed to a now higher inversion level and was soon across the gap to the Buffalo Mountain Ridge. Here the ridge splits into the unlandable "fast route" or the safer "slow route". Noticing a rapidly approaching snow storm I elected to take the fast route and set off at 110kt. Near Cumberland I climbed to 4500ft over the Haystack mountain and moved on towards the TP.

A hugh snow storm was now approaching rapidly from upwind and threatening to clamp visibility to zero. I quickly realised that, to have any chance of completing the task, I would have to get back to Bedford before the storm. I threw caution to the winds and got back down onto the trees as fast as I could go, cruising at 100kt. With one eye on the fields and the other on the rapidly approaching storm, I quickly arrived back at the split ridge. As the lift was good I again opted for the fast route maintaining 100kt. At the Bedford gap I converted speed into height and flew across "dolphin" style from thermal to thermal to reach the other side just ahead of the threatening snow storm.

Point of no return

Back on the ridge I experienced no problems up to the Altoona gap, where a weak thermal only lifted me to 3200ft — not enough to cross. I was then faced with the problem of getting far enough upward out into the valley so I could negotiate the joggle in the ridge either side of Altoona. I eased out into the valley and circled in weak thermals, but after an hour of beating into wind only to be blown quickly back over the ridge I eventually found myself at the point of no return over the valley floor so I set off towards the far side of the gap. Reaching the ridge half way down I encountered weak lift which was only just sufficient to keep me airborne. So before I pressed on over the vast forested slopes ahead I worked the ridge lift in figures of eight patterns, gradually climbing just above the trees. After what seemed an age of white-knuckled tension I was back at ridge top height and breathing easier.

All that remained was to get home safely and caution dictated a lower cruising speed of 60kt. Finally, Ridge-Soaring airstrip appeared from behind a bluff in the ridge and I turned the jettison valves to dump the ballast, lowered the undercarriage and joined the circuit with waterballast streaming behind me. I landed having completed 500km in 4hrs 45min — to me a quite phenomenal average gliding speed. However, judging from the local residents' reaction — "Oh you're back then! The beers are on you," — this was quite a normal speed, but then it is a phenomenal ridge! □

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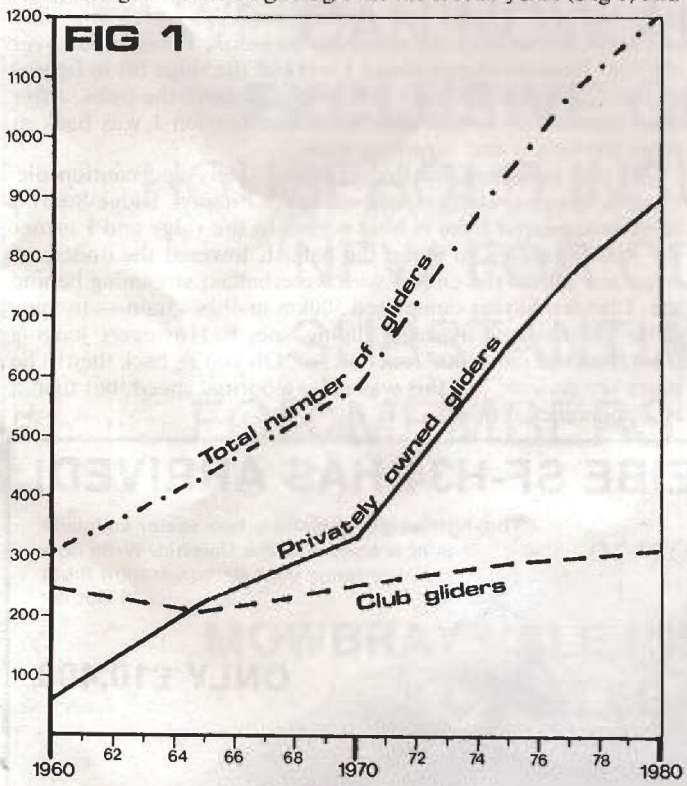
Glider and Ground Station Radio Licences

COLIN DEWS, chairman of the BGA Radio Committee

A FEW months ago the CAA invited members of the BGA, the British Hang Gliding Association, the British Balloon and Airship Club and the British Parachute Association to a meeting in London to discuss the use of the aeronautical radio channels by these aero sporting movements in the context of the existing frequency assignments, the change to 25KHz channel spacing and to explore a long-term proposal to group the aero sporting radio channels into one block of frequencies which may harmonise with our European colleagues.

During the discussion some revealing statistics emerged which I believe are worth noting — BPA have approximately 23 000 members 75 clubs, 20-30 drop zones and six centres operated on a full-time basis. BHGA have approximately 4000 members, 3000 of whom were flyers and they operate from numerous sites in the UK. BBAC have approximately 300 balloons, typically they operate either in early morning or late evening. The point being that with the exception of the BGA, the only radio channel used by all the other aero sporting groups is 129.9 MHz, the frequency we use for the ground recovery of our gliders and also share with many other commercial users.

We (BGA) had prepared our statistics to illustrate the enormous growth of the gliding over the last 20 years (Fig 1) and



GROWTH IN NUMBER OF PRIVATE AND CLUB GLIDERS (excluding Service Clubs)
1960 — 1980

emphasise the fact that severe congestion was occurring on our two glider-to-ground frequencies. 130.4 and 130.1MHz, particularly during weekends in the summer months.

Our primary objective was to present a case for an additional frequency within the existing glider frequency band 130.4 to 129.9MHz. We were able to show that starting in 1960 with two radio channels allotted to gliders, the BGA register recorded that there were only 60 privately owned gliders and 245 club gliders. In 1980 there were 900 privately owned gliders and 310 club gliders, but still only two glider-to-ground radio channels. Our presentation was going well but the CAA had also done their homework and produced the glider and ground station licence statistics for August 1980.

The figures are shown below —

Licences August 1980		**BGA registered gliders 1980 (not including Service clubs)**		
Gliders	Ground Stations	PO	Club	Total
650	448	900	310	1210

It did occur to me and certainly to the CAA that there were good grounds for suspecting that the majority of PO gliders were fitted with radio and that there were probably many more ground stations in operation but unlicensed.

At the end of the day, despite our mutual suspicion that many of our radio equipments were not licensed, the CAA agreed to consider the allocation of an additional frequency for glider and ground station use (this has since been released *ie* 130.125MHz). I came away from the meeting with a positive belief that the CAA want to help us and that we in return must put our own house in order. Our medium-term objective is to persuade the CAA and Home Office to issue long-term (ten years) licences for gliders and ground stations and to delegate the control of the licences to the BGA. To achieve this mandate we must insist that our members act responsibly about radio licences. I have written the following article in the hope that glider folk who are using unlicensed stations will reconsider their position and not jeopardise our future plans.

We shall consider the legal situation and the equipment licences required for both glider and ground stations operated in the UK.

Legal. Currently there is no requirement for a person to hold a radio-telephony *operator's licence* to operate glider or ground station radio equipment, provided the equipment is used only on the assigned glider channels for the purpose of communication with glider and glider ground stations on matters concerning instruction, or the safety or navigation of the aircraft (Ref Air Navigation Order Article 19).

Viz: 130.4, 130.125 and 130.1MHz glider/ground and 129.9MHz ground to ground only.

It should be noted that this is a *concession* and although 130.4, 130.125 and 130.1MHz are at present exclusive channels for glider operations, 129.9MHz is a shared channel with many users, some of whom are required to hold radio telephony operators' licences. In this context those who install 360 or 720 channel radio equipment in their gliders should recognise that the equipment must only be used on the glider assigned frequencies, unless the pilot/operator holds a *valid radio telephony operators' licence*. If he does not, or if the glider is likely to be flown by pilots not holding the appropriate operators' licence, a placard should be located near the radio clearly indicating the glider frequencies and identifying the legal position.

There is also a legal requirement for the owner/user of the equipment to hold a station licence before the equipment may be used to transmit on the assigned frequencies in the aeronautical band.

Glider and Ground Station Equipment Licences. Both these

licences are issued by the Home Office on the recommendation of the CAA. Two departments of the CAA are involved, applications for licences for *ground stations* are handled by NATS at Uxbridge, and *glider* station licences are dealt with by the Airworthiness Division at Redhill.

Application for licence forms for both glider and ground stations should be made to: Home Office, Radio Regulatory Department, Waterloo Bridge House, Waterloo Road, London and marked for the attention of Mr R. Horton. The Home Office will send the applicant a package of three forms reference numbers: BR21, BR22 and BR23.

Form BR21 sets out the general conditions governing the licencing and operation of the private mobile radio services for glider/hang glider/balloon operations. The significant points contained in the six paragraphs of the form are listed below:

1) The operational frequencies currently allotted are:
   (a) Glider operations 130.4MHz, 130.125MHz and 130.1MHz. Glider ground recovery is ground to ground only 129.9MHz.
b) Hang glider and balloon operations 129.9MHz.
   It is stated that these frequency assignments should not be regarded as permanent.
2) It is stressed that except for 130.4, 130.125 and 130.1MHz the channels are extensively shared with other services and that no priority between users can be recognised. To minimise the on channel interference, the maximum effective radiated power from the transmitter will be limited to *five watts for ground stations*.
3) *3.1* Only equipment type approved by the CAA may be used. The supplier should advise the applicant on the type and suffix codes required to describe the equipment on the BR22 Section 4.
   3.2 Special mention is made of the problems likely to be encountered if use is made of equipment intended for 12.5KHz channel spacing (the IF filter will need changing to a suitable 25KHz type, see "Glider Radio" in the February issue of S&G, p10).
   3.3 As stated in 3.1 all equipments must be type approved by the CAA before a licence can be issued, if it is intended to use equipment which is considered suitable but which has not been previously classified, the application for a licence should be accompanied by a certificate from the appropriate authority.
   (*ie* manufacturer or qualified radio engineer) stating that the equipment meets the CAA specifications OP11. (This document can be obtained from NATS, Tels S3 (b) Hillingdon House, Uxbridge, Middlesex.
4) **Licence Conditions**
   Private mobile radio services are licensed by the Secretary of State in accordance with the Wireless Telegraphy Act 1949, the relevant points are —
   4.1 It is an offence to install or operate a radio station (even on a temporary or trial basis) without a licence.
   4.2 Operators of ground radio stations should exercise strict radio discipline and procedures in current aeronautical service practice as outlined in the CAA publication Radio Telephony Procedure CAP 413.
   4.3 The transmission of messages other than those connected with glider/hang glider/balloon operations will not be permitted.
   4.4 On any frequency channels the relaying to the public by loudspeaker etc, of messages received at any of the stations will not be permitted.
   4.5 It is an offence to transmit any messages which are of an indecent or obscene character or which are grossly offensive. Breach of this condition may result in the licence being revoked.
   4.6 A licence may be withdrawn if any of the conditions of the licence are not observed, (*eg* non payment of *renewal* fees etc), or if the Secretary of State considers it necessary.
5) **The Licence Fees (1980)**
   (a) Ground stations — annual fee for each station £16.50 (for the first two stations and £10 each for subsequent stations).
   (b) Glider or balloon stations — annual fee for each station £8.00.
   (b) Hang glider stations — annual fee for each station £16.50 etc.
   The fees are payable to The Accounting Office, The Home Office. Cheques crossed A/C Payee.
6) **How to apply for a Licence**
   First consult manufacturers or suppliers about the availability of equipment. They will if required help you to fill in the application form when you are in a position to put forward detailed proposals. Please take care to fill in the application form completely at the outset then in the case of —
   (i) Ground stations: The BR22 form should be sent to National Air Traffic Services, Tels S3(b) Hillingdon House, Uxbridge, Middlesex UB10 0RU.
   (ii) Glider stations: The BR23 form should be sent to the Civil Aviation Authority, Airworthiness Division, Brabazon House, High Street, Redhill, Surrey.
   The appropriate licence fee should accompany the application form(s).
   Form BR22 is the application for a licence for the ground station and should be completed as shown in the example. Take special care to state the equipment details, manufacturer, type of equipment, as stated on the label and the supplier's name etc. (One case was brought to my notice where an applicant had mistaken the serial number of the set for the type reference.) Propose a call sign with not more than two syllables if at all possible, it uses less time and reduces congestion.
   Form BR23 is the application for a licence for the glider station and should be completed as shown in the following example.

To avoid mistakes in form filling, we have printed extracts of the more involved sections, filled in by Colin.

BR22

Type of aerial (if directional)	Omnidirectional 5/8WL (whip)
Manufacturer	Pye Telecommunications Ltd
Name and Type No.	Westminster W15 AMB VCC.6
Special identification suffix or mod No.	CD
Supplier's name and address	Pye Telecommunications Ltd, Cambridge

BR23

Registration and/or Constructor's No.	BGA No. 1855
Number of sets	One
Manufacturer	Pye Telecommunications Ltd
Type designation	ATO4452/1 PF2AMB
CAA approval ref	G14

In the Section "Aircraft Details", Sub Section 1, it would seem sensible to use the glider competition number for the call sign as this would enable both recognition and communication to be simplified. In Sub Section 3, use the BGA registration number of the glider.

Equipment details need some attention particularly Sub Section 4 CAA approval reference. If you cannot obtain this certificate number from your supplier, as may be the case if you have obtained the equipment secondhand, or if you are not sure that the equipment has been type approved, a telephone call to Mr H. Nichols at Redhill 65966 will resolve the situation and may save a delay in the issue of a licence.

Finally do not forget to sign and date both forms.

50 YEARS AGO

A Cross Channel Prize

A. E. SLATER

On June 11 1931 the *Daily Mail* announced an offer of £1000 to the first sailplane pilot to glide from France to England and then back to France on the same day, starting from an aerotowed launch each way: if the pilot couldn't make the return, he would nevertheless get £500. The BGA was to exercise control, and it may be assumed that this was their idea of publicising "gliding", the BGA having got into the hands of people who had completely forgotten — if they ever knew — that it had been formed to encourage the kind of soaring flights to great heights and long distances that were being made on the Continent. The crowning stupidity was to fix an opening date, a restriction which neither Blériot nor Paulhan had to suffer in their day.

This opening date was announced as Saturday June 20, with the result that the *Daily Express* secretly arranged for the "first glide across the Channel" to be made the previous day, and by an Englishman, Lissant Beardmore, stated to be a professional opera singer, and husband of novelist Barbara Cartland. (He died a few years later but Barbara is still going strong — on honey.) Beardmore was aerotowed up in a Professor, but refused to say where he was released: Latimer-Needham, calculating from such meagre figures as were given, claimed that he must have been towed at least part of the way across.

Came the day, and Kronfeld, the favourite, had not only his Wien at St Inglevert, but his 30 metres span Austria too, in case a strong contrary wind should require its better gliding angle at high speed. Another foreign competitor was Herr Krause, who had been hired by Lyons Tea to go around England giving gliding demonstrations in a Falke. Other entrants were C. M. C. Turner of the Channel Club, Lowe-Wylde, and P. Michelson with a Cloudcraft Phantom.

When the day came, it rained all morning and into the afternoon. Only two competitors took-off. Hans Krause had three tries: the first time he cast off at 7000ft because the tug, a Moth, was climbing too steeply; on the second he cast off at 3000ft because he had forgotten to take his barograph on board; and on the third he cast off at 9000ft because again the Moth climbed too steeply (did nobody tell its pilot the first time?).

Kronfeld succeeded: he took off from St Inglevert, climbed to 11000ft, cast off and landed near Dover after 2½hrs airborne; then took-off again, climbed to only 9000ft (there being a following wind) and landed in France at 10pm BST. He received the £1000 shortly before Britain went off the Gold Standard.

First Gliding Fatalities

The year 1931 saw the first gliding fatality under BGA auspices, as one might say. The pilot was T. E. Lander, aged 37, who had already learned to fly at an aero club. He seemed to have the sort of temperament that had to be different: on joining the London GC in mid-1930 he scorned the Daglings and bought himself a Prüfling, which he would pull over the ground gazing straight ahead into the distance, taking no notice of all the activity going on around.

Already at Ivinghoe in 1930 Lander nearly "had it". Latimer-Needham told me about it. Lander was bungied off Ivinghoe summit into a fierce wind and pulled so hard back on the stick that he shot almost vertically upwards. As he came to a dead stop, the wind blew him round facing the other way, then down he went in a vertical dive. Luckily there was a deep hollow just behind the launching point, into which he dived, and fortunately it was deep enough for him to pull up level and make a fast downwind landing.

Lander's next exploit was to find a soaring site to which the vulgar public had no access. It was 150 acres of farm land near St Albans consisting of a flat grass area, almost surrounded by low hills with slopes facing every direction but south, to buy which he proposed to collect £10 each from 20 fellow members, and he was inventing a car-driven winch for launching. However, his first trial with it was in a Scud 1, of very light weight with a highly sensitive all-moving elevator and, before he could get the feel of it, he flew at an estimated speed of 60mph into the ground, wrecking the Scud, and he died within a few minutes.

This was reported by all the press as the first British gliding fatality, but actually it was the third. The first was to Percy Pilcher in 1899, caused by breakage of the single wire holding up the tail. The cause of the second was so fantastic that it seems unlikely ever to happen again. In 1923 a gliding group was formed in the RAF, using one of the gliders from the previous year's Itford contest. They were flying on Pewsey Down in Wiltshire on a very rough day, and a newspaper report stated that the pilot was "thrown out of his seat by a gust".

In the absence of any further information I believed this story for the next 23 years until, when visiting the RAF gliding club at Detmold in 1946, I sat at dinner opposite an RAF Medical Officer who had been present at the incident. He said it was indeed a rough day, and the pilot was thrown about badly until at last he hit the ground hard and overturned. He then undid his straps, fell out of the seat on to his head and broke his neck.

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SAILPLANE NEWS



RIKA HARWOOD

NIMBUS 3

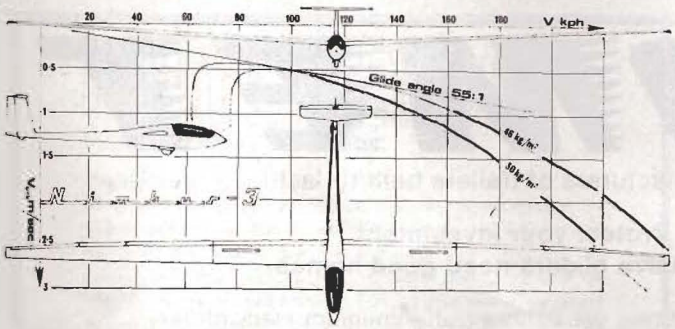
With the proven experience and ability of Klaus Holighaus as a designer as well as a top competition pilot — any sailplane coming from the Schempp-Hirth stable creates great interest, and the all-carbon Nimbus 3, which had its maiden flight on February 21, will be no exception.

As a result of the latest aerodynamic research all relevant factors, to achieve the best performance possible, have been incorporated in the wing design of the Nimbus 3.

With a span of 22.90m the wing is in four trapezoidal sections. They are thin and narrow thus reducing profile and induced drag. The outer panels are 7m long with ailerons over their full length ensuring a good rate of roll. The ailerons also serve as camber-changing flaps, changing position with each flap setting.

The flaps themselves are located on the 4m inner wing panels which also house the top surface Schempp-Hirth-type air-brakes. These combined with the special landing flap setting ensure good short and slow landing characteristics.

Both the inner and outer panels contain, separately controlled, waterballast tanks which can carry a total of 310kg water.



The T-tail fitted with a conventional elevator provides good pitch characteristics, while the long fuselage with large fin and rudder guarantees good yaw stability and control for such a large sailplane.

By the time this is in print the World Championships will have been nearly over and we should have a good indication on how the two or three Nimbus 3s entered are faring. So far as I know, there is only one other new type entered in the Open Class, the Schleicher ASW-22 (see S&G Feb 1980, p26) flown by George Lee, thereby providing the opportunity to observe from close quarters the battle for supremacy.

No doubt it is the dream of any designer to see his machine win — but for Klaus Holighaus, flying his latest design himself, it would be the greatest as well as most appropriate accolade of his long career if he could combine his name as a leading designer with that of World Champion.

Technical data

Span (m)	22.90
Wing area (m²)	16.20
Aspect ratio	32.3
Wingloading (kg/m²)	27-46
Payload (kgs)	75-120
Max AUW (kgs)	750
Max Waterballast (kgs)	310
Stall (km/h) (at 30kg/m²)	62
(at 46kg/m²)	77
Min sink (m/sec) (at 30kg/m²)	0.44
(at 46kg/m²)	0.52
Max Airspeed (km/h)	270
Best glide ratio at 125km/h	55:1

ASW-20FP

After extensive studies by a number of aeronautical test centres in France, followed by a series of flight tests during August to Dec. 1980, Centrair, who manufacture the ASW-20 under licence, have decided to offer detachable, 80cm tall, carbon-fibre vertical "winglets" as an optional extra.

Flight tests showed an increase in performance over the basic ASW-20F of 2.7pts at speeds up to 107km/h; the glide angle being the same at 160km/h with only a slightly reduced performance being noted at speeds over 160km/h.

Although the rate of roll (45° to 45°) is about 4-5km/h slower on the FP, lateral control and directional stability as well as its spin characteristics and high speed flight all contribute to a noticeable improvement in ease of handling.

The makers state that some National teams are flying with these new tips in the World Championships, and the results will show if this modification will live up to the anticipated success the makers hope it to be.

Another advantage contest pilots will appreciate apart from the improved performance is that these vertical "winglets" do not increase the span which allows them to fly in any 15m Class contest. Certification of the ASW-20FP will include VNE at 250km/h. A glide angle of 43:1 has been quoted. The "winglets" will be generally available at the end of 1981.

GLASFLÜGEL 304/17

The 17m version of the Glasflügel 304 and the replacement of the Kestrel 17 made its maiden flight last December and its test flight programme should by now be well under way. First impressions were very favourable, according to Martin Hansen, the test pilot. The spin characteristics were very docile and the manoeuvrability for a 17m sailplane was extremely good — which will be appreciated especially by Kestrel 17m fans.

The fuselage has been lengthened to carry the extra span and the tail area has likewise been increased giving a wing area of 10.6m², aspect ratio 27.3 and empty weight of 250kg.

No measurements have been issued yet but calculated on the 15m 304 the 17m version should achieve a minimum sink rate of 0.54m/sec and best L/D of 45:1. Production should have started by the time this is published. A carbon version, which is also the basis of the motor glider now being planned, should go into production in the summer.

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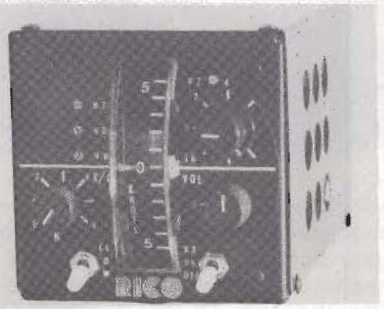
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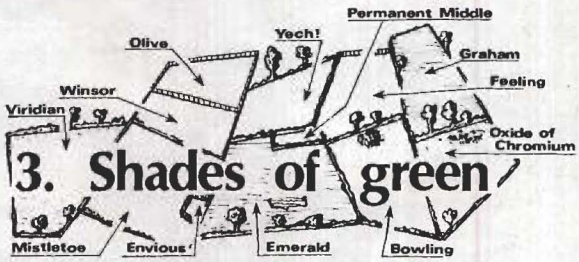
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The Cautionary Tales of Joe



3. Shades of green

BY MENTOR

Joe plugged away at his circuits, took some soaring lessons and at last got his Bronze badge completed. After his adventure with the trees his CFI had tightened up the standards somewhat and Joe had quite a time with the flying test. The club had added their own element which seemed a big hurdle at the time. This was a solo field landing and Joe did his one evening from an aerotow, about a mile away, in the K-8. It went well and Joe was pronounced fit for cross-country. In early June came the day! He was to fly to a neighbouring site, along the Silver C milk run, and claim The Mug.

★ ★ ★ ★

Joe's briefing was pretty comprehensive. It included an incidental dissertation from a farmer member. Joe was city born and bred and soon his head was spinning with advice about the likely appearance of the different crops he may see along the way. Standing corn, rippling grey-green in the breeze; darker green hay, ripe for cutting; darkest of all the green of the sugar beet crop. Hay swathes drying in the sun all fluffed up and waiting to catch an unwary wingtip; bright, almost yellow-white patches that would be silage recently cut short and eminently safe to land in. The mottled appearance of short, active pasture, and the scruffy, patchy look of old pasture, likely full of humps and hollows. Oh, yes! and don't forget the cattle that would enjoy eating the fabric and gallop frenziedly around, and the solitary cow that would turn out to be a bull! And so on . . .! Joe almost wished he hadn't asked!

★ ★ ★ ★

Magic! Joe thought. The first thermal straight to cloudbase, another, a third. But now, ahead, sky overcast, blue gaps closing, a curtain of summer shower off to the south and suddenly the magic is replaced by nagging doubt and then the certainty that he wouldn't get much further. He wouldn't reach the expected haven of that other gliding club where he had fondly thought to "lift" The Mug and carry it back triumphant to his own bar.

At 2000ft he looked ahead. Fields big enough a mile or so away and plenty of them. Green, all green. They all looked much alike! Suddenly the advice of his farmer friend became vital. Corn? Grass? Pasture? Joe looked this way and that for silage new-cut. Only one, and that stupidly small. Try again. Big fields but even at 1200ft he could see it waving in the wind — standing corn, too risky. A neat farm now, with cattle in two fields and three others empty. Mottled — pasture. And quite large. That's it — one with no cattle in it and fairly long into wind. Check for telephone and power wires. Work out best approach and base leg, and decide high key position.

Eight hundred feet, turn downwind, intently surveying field for signs of life. Quite empty — neat gravelled drive up to farmhouse from road! Funny! Field seems to have two — no, three — shades of green. Low key, downwind checks, turn base leg, increase to approach speed, turn finals. The farm house slid close beneath as Joe flew down the last 100ft of his approach — and then he saw it! A row of spindly metal poles from side to side across his field! Another, 200 yards beyond!! Joe kept his cool. Close brakes, hop over first row of poles, thin wire flashes beneath skid. Open brakes, down on ground, rub in skid and bump to a stop just ten yards from the second fence!

★ ★ ★ ★

Somewhat a-quiver, Joe walked up to the electric fence, mildly annoyed that anyone should spoil such a good field. He looked down at the cow pat at his feet and wondered why the grass was so much shorter on this side of the fence.

PILOT'S MANUAL

by J. S. EVANS

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WHICH GLIDER?

Swallow

Olympia

IF you are considering buying a glider for the first time you need to be able to compare the advantages and disadvantages of each type. This series of articles is intended to help you by describing the various older types which are available so that you can assess their features in relation to your particular needs.

By far the greatest demand is for information on gliders suitable for early solo pilots. They must be simple aircraft to fly yet should ideally have enough potential to take the pilot through to cross-country flying.

CFI's approval

There may be a slight difference between the use of certain types (marked*) as private and syndicate gliders and their use in the club environment. Where the club fleet has several different types, pilots who are relatively inexperienced may not do sufficient flying in a particular type to get used to its handling and flying characteristics. The private owner, however, will only be flying that one type and is therefore less likely to experience problems with it. In any case you should get approval from your CFI for the type you are going to buy.

Everything depends on the price and what is available at the time. Perhaps if the glider you really fancy is just out of your price range it is worth considering taking on another partner. You will find that every owner is convinced that their choice is the best. These notes may help to protect you if you meet the super salesman!

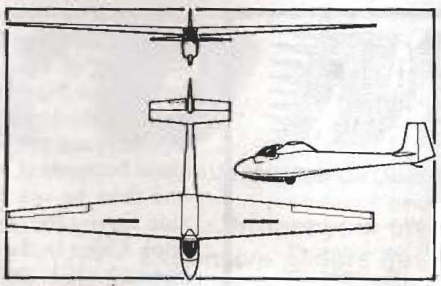
Obviously you must have the basic instruments; ASI, altimeter, compass and a good variometer. The modern winter, vane type vario is almost as fast as most electric varios and much better response than the older PZL type. You must have good total energy and later on you will also want a Netto system for cross-country flying. A radio will greatly increase the fun and utilisation of your glider by enabling the other syndicate members to know when the glider is going to land or whether anyone else intends to fly it that day. Anything else is a luxury item which will have little or no effect on your enjoyment and flying.

A usable trailer, parachute and barograph are also essentials if your syndicate need Silver C legs.

I would consider the following types of glider suitable for any early solo pilot of 30 to 40 solos operating from an airfield site. They are put in approximate order of performance and will be covered in the next few issues. It cannot be too strongly emphasised that the probability of reaching the next thermal depends on the gliding angle. 30:1 is a very great improvement on 25:1.

Swallow, Olympia 2B, K-8, Skylark 2, Sky, Olympia 463, K-6CR, Skylark 3 and 4, Pirat, K-6E*, Pilatus B-4.*

Slingsby Swallow



The Swallow was designed as a first solo club glider and was used by many clubs for that purpose. The wooden structure is particularly rugged and simple making the glider suitable for very rough sites.

A large amount of washout is incorporated in the wing to prevent the wingtip stalling induced by the rather highly tapered wing. As a result the performance at higher speeds is poor in spite of the alleged laminar flow wing section. The rate of roll and general handling is very good but the climbing performance is disappointing compared with the Oly 2B or K-8. The best gliding angle is probably a realistic 1:20 to 1:23 but deteriorates rapidly above about 55kt.

The elevator range is limited and should be restricted by a stop in the gap between the tailplane and elevator to prevent a more complete stall and risk of spinning. However, even with this restriction, in some circumstances the glider will still spin for a turn or so if provoked.

Problems regularly arise converting onto the Swallow which has a relatively light elevator from the T-21B and T-31 two-seaters. Note that a very large amount of the movement of the airbrake lever merely unlocks the airbrake so that the half way position of the lever is much less than half airbrake effect. On the initial flights on type inexperienced pilots frequently end up with excess speed and very little airbrake. This results in a very long float and unless the glider is held off until it has used up this speed it arrives in a nose down attitude for the touchdown.

Any bump in the ground will then cause a serious bounce whereupon an inexperienced pilot will often close the airbrakes altogether and try to put the glider onto the ground. This results in an even bigger bounce which frequently breaks the main skid and front bulkheads. A well held off landing using plenty of airbrake prevents all these problems which have made the Swallow unpopular in many clubs. Some Swallows have been fitted with an anti-balance tab on the elevator to increase the stick forces.

Nose lower

Aerotowing the Swallow is simple because of the quick response on the ailerons. It climbs well on the winch or car launches but the position of the nose is rather lower than on most gliders. The angle of the full climb is best judged by looking out sideways at the wingtip in relation to the horizon.

The airbrakes are very effective and dive limiting. They are easy to operate and do not snatch out badly at high speeds.

The cockpit is of average size in spite of the large fuselage. In particular the vertical height between the seat and the canopy is rather limited. The canopy detaches completely from the fuselage, and good habits are vital to double check that it has been locked down securely as it is difficult to determine the exact position of the bolt after it has been locked



DEREK PIGGOTT takes a look at some of the older types found frequently for sale in our classified section and gives details of their handling characteristics.

ia

K-8

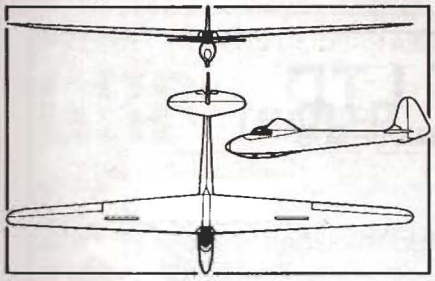
down. A removable canopy is less convenient and more vulnerable to damage than a hinged one.

The rigging of the wings is exceptionally easy and they are very light to lift. The wings can be mounted onto the fuselage and left with the wingtips on the ground. The wingtips are then raised as far as they will go against a stop and a single main pin is pushed home — a super system. The tailplane is bolted down using a spanner, an adequate but somewhat old fashioned solution.

Maintenance is excellent for a wooden glider. The structure is rugged and very simple and modern synthetic glue is used throughout. Incidentally, many Swallows were built from kits. However, standards of home building in the UK were very high with most of the builders producing beautiful work.

Summing up, the Swallow is a fun glider for local soaring. It is particularly suited to absolute beginners operating from small, rough and difficult sites. Most beginners should "outgrow" the Swallow after about one year because the performance is only just adequate for Silver C flights on good soaring days.

EoN Olympia 2B and the Meise



The Olympia 2B is a British version of the German Meise and a large number of Olys were built in this country by Elliotts of Newbury. The Olympia was and still is an excellent little machine although with a best gliding angle of only 1:20 to 1:22 (measured) it is totally outclassed by later designs. The majority of the British-built ones had a fixed main wheel whereas most of the German Meise had droppable wheels leaving a long main skid for the landing. The Meise also had a smoother wing root junction giving it a better performance. Droppable wheels are a pest as the glider becomes almost unmovable after landing and has to be lifted up to refit the wheels. Furthermore if the wheels are dropped below about 10ft they bounce and damage the fuselage whereas if they are dropped from above about 20ft the wheels themselves get damaged.

The stalling and spinning characteristics are good and the nicely harmonised controls make it a real pleasure to fly.

Aerotowing is very easy with the Olympia and for many years we sent our beginners off on a smooth clear day for their first ever aerotow with just a thorough briefing, *ie* without any dual aerotows.

Feet high

Winch and cartows are simple but the attitude is deceptive because of the angled seat back. The full climb is best judged by the angle of the wingtip against the horizon. During the full climb it should feel at first as though your feet are right up above your head. If the launch feels normal you will probably only get half the normal launch height which can lead to trouble on the first flight.

The cockpit is very large and will cater for almost any pilot. The canopy is removable but has a sensible bolt on each side which can be easily checked.

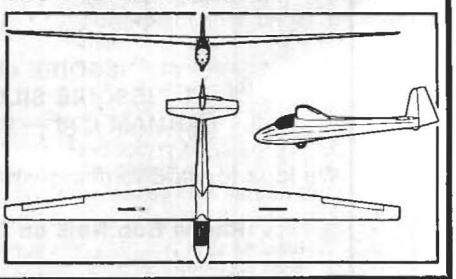
The airbrakes are very effective and dive limiting with a moderate amount of snatching if they are opened at high speeds. There is no obvious way of telling visually if the airbrakes are properly locked and adjustment of the airbrake system is very important. Slight maladjustment with one airbrake unlocking a little earlier than the other can cause the airbrakes to unlock and open in flight. To guard against this and pilots failing to lock the airbrakes properly before takeoff, we used to insist that the pilot put his left hand onto the instrument panel just below the release knob during the complete launch. This made sure that if the airbrakes did open in flight the airbrake lever hit his hand and made it obvious.

The rigging is very good and both wings can be mounted on the fuselage before raising them and inserting the two tapered main pins. These must not be wrenched up with a large spanner or they will seize in the spar fittings. One finger on the spanner is all that is required while both wingtips are being moved up and down to unload the pins.

The construction of the Oly is rather old fashioned with large numbers of very small pieces of wood glued in place to make up the ribs and frames. All the British Olympias are glued with Aerolite which has an infinite life in our climate. A certain amount of attention is needed on the annual inspection to glue back or replace any minor sticks which have become loose. The fuselage is skinned with thin birch plywood and is a very light but strong and rigid structure. This results in a rather harsh ride on any rough ground. A fully held off wheel and tailskid together touchdown is recommended to avoid the risk of a violent pitch back onto the tailskid in the event of running over a bad bump at speed with the main skid still on the ground.

Summing up, the Oly is a fun glider for local soaring. It is very suitable for inexperienced pilots and is easy to operate from small and difficult sites providing that the landing areas are not very rough. Like the Swallow it is good enough for Silver C flights but its superior low speed circling performance makes it better in weak lift. In expert hands it is capable of 300km or more. It is perhaps a little prone to minor defects and damage due to poor handling on the ground.

The Schleicher K-8



The K-8 was the German answer to the club glider requirement. It is easy to fly and the rugged steel tube fuselage makes it suitable for the roughest sites.

The low minimum flying speed gives it a similar small circling performance to the Olympia but with a better glide performance of about 24:1. This makes it ideal for early soaring flights.

Forgiving

The general handling characteristics are excellent. It is easy to fly on aerotow, gets high winch and car launches and the effective airbrakes make it simple to land accurately. It is forgiving and confidence building.

The cockpit is large enough to cater for most pilots wearing a parachute and really tall ones without.

Rigging is simple and light but both wings must be held up in position until the two tapered main pins have been inserted. A single trestle under the wing makes this a relatively painless procedure. Like the Oly, the nuts on the main pins must not be overtightened.

Some K-8s were assembled from kits by club members in Germany and may be slightly non standard. However synthetic glue is used throughout and maintenance is easy. The only problems may be surface corrosion on the steel tube fuselage.

Summing up, the K-8 is the best of the older really rugged club machines and has only been surpassed, in my opinion, by the K-18 which is virtually a scaled up K-8 with a better wing section.

The excellent handling and climbing performance largely offsets the poor high speed performance which limits cross-country flights against any significant headwind. Briefing pilots for their first flight in the K-8 after training in the K-7 and K-13 I used to say that there was only one "catch" to the K-8, the canopy catch. Experience shows that it is adequate but the little safety strap is the only thing that prevents the chance of unlocking it with an elbow.

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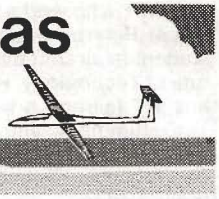
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Overseas News



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

AUSTRALIA

Due to political pressures Australia will not be represented in the World Championships, but instead will seek to attend alternative international events to allow Australia to maintain its position as a leading gliding country. It is proposed to hold an international contest at Benalla in early 1984 by invitation to leading pilots from overseas and top Australian pilots.

SCHLEICHER GLIDERS MOST NUMEROUS AT PADERBORN

Although there are still a few gaps in the provisional WC entry list the types of gliders named so far breakdown as follows:

Schleicher		Schempp-Hirth	
ASW-20	28	Nimbus 2B/C	6
ASW-19	6	Ventus A/B	4
ASW-17	4	Mini Nimbus	4
ASW-22	1	Nimbus 3	2
	39		16
Rolladen-Schneider		**SZD — POLAND**	
LS-4	16	Std Jantar	5
LS-3A	1	Jantar 2	4
	17		9

Two DG-200s, two LAK-12 and one each of DG-100 and a Glasflügel 304 make up the rest.

1000KM ALPINE TROPHY

In memory of Jochen von Kalckreuth, the exponent of alpine gliding, his club, Como Gliding Group, are awarding a trophy to the first pilot completing a goal and return exceeding 1000km over the Alps.

The *Volo A Vela* magazine are organising the award and for more details contact Smilian Cibic, Centro Studi Volo A Vela, Redazione e Amministrazione, Paolo Contri Airport, 21100 Calcinate del Pesce, Varese, Italy.

BACK TO BUNGY?

A writer in *Der Adler* reports that the mounting costs of glider training are forcing the authorities at Hahnweide to consider returning to open primary gliders for elementary training, and have already made trials of launching them by winch.

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BGA and General News



BASIL MEADS — NEW BGA PRESIDENT



Basil Meads, the new president of the BGA, has an association with gliding that goes right back to 1925 when the Gliding Branch of the Institute of Aeronautical Engineers was formed in Manchester. It was reborn on February 7, 1930, as the "Gliding Branch of the Manchester Branch of the Royal Aeronautical Society".

This eventually, in 1935, joined with gliding groups in Matlock, Sheffield and Derby to form the Derbyshire and Lancashire Gliding Club, of which he was continually chairman until he eventually became its president. Before doing so he had built up the gliding section of the Manchester RAeS until it was practically that body's only local activity. He also persuaded them to give up solo training and to obtain, and put together, the parts of a BAC7 two-seater.

Soon after the war Lord Kemsley, owner of a chain of newspapers including the *Daily Telegraph* and the Manchester *Daily Dispatch*, whose editor, Terence Horsley, was a gliding enthusiast, was persuaded (evidently by Horsley) to establish a £100 000 trust fund to make loans to gliding clubs, which would use the money to develop their activities and equipment and thus enable them to repay the loan.

Basil Meads was put in charge of this fund, dividing his time between its Manchester office and visiting various clubs to assure himself that they were deserving cases. Some of his funniest experiences were gained at attempts to form new gliding clubs: there was one would-be chairman who held one "inaugural" meeting after another at which he just woffled, and his club never got started — or, if it did, it got no Kemsley loan.

May Basil's presidency long continue: last April 9, this year, he was only eighty.

A. E. Slater

UK 100KM ▲ RECORD

Justin Wills (LS-4) is claiming the 100km triangle UK record with a speed of 120km/h over 102km on Easter Saturday. He took-off from Usk with Hendre, Pant-y-Cos and Creswall junction as TPs. The flight started at 14.37 and lasted 51min.

NATIONAL LADDER

Essex GC members head the Open and Club Ladders, with Deeside GC being the only other club represented so far this year. Mike Randle, national ladder steward, comments that the two clubs seem to have made the first ladder a joint venture and suspects the flights were at the same place and perhaps the same time.

Open Ladder

Leading pilot	*Club*	*Pts*	*Flts*
1. G. Corbett	Essex	3172	2
2. R. Wilson	Deeside	2980	2
3. M. Jefferyes	Essex	2343	3

Club Ladder

Leading pilot	*Club*	*Pts*	*Flts*
1. M. Jefferyes	Essex	2050	2
2. I. Brass	Deeside	1290	1
3. J. Allen	Deeside	770	1

HOME-BUILT COMPETITION NEWS

Paul Wheatcroft of Fleet has won the £3000 first prize in the BGA Home-Built Sailplane Design Competition with a 15m glider, Whisky One. Kelvin Davis of Peterborough is second and wins £500 with his 15m Merlin sailplane. Jerry Odell of Wooton Bassett, Wilts, gains the £250 third prize with his 10m Swift.

The prizes are intended to be used to further the construction of the designs and this is now being discussed with the winners, though Jerry, a Sqdn Ldr, is already building his Swift.

There were twenty entries for this competition which asked for proposals for a design, backed up by materials or kits, "of a thoroughly useful and practical sailplane of good performance" for amateur construction.

The jury, Alan Yates, chairman of the BGA Technical Committee, Doug Jones, Roy Procter, Howard Torode and John Williamson, BGA coach, with advice from Dick Stratton, BGA chief technical officer, are professional engineers and have been active glider pilots for a combined total of 194yrs. They met on five occasions, visited many of the entrants to discuss their designs and studied hundreds of pages of submissions.

Paul, a graduate apprentice with the British Aircraft Corp and at Bath University, served in the Royal Navy and now works with Rex, Thompson & Partners at Farnborough. His 15m design is of contemporary appearance with a tapered wing and T tail. The structure consists of an aluminium alloy box, riveted and bonded, with a polyurethane foam bonded to it. The wing and fuselage are then covered by a thin GRP skin. A prototype will be built and complete kits will later be available to home-builders.

Kelvin, who works for Newall Electronics Ltd at Peterborough, was a postgraduate student in aircraft design at Cranfield Institute of Technology. His 15m flapped design has a T tail and a wing of uniform chord. The aluminium alloy spar has foam ribs bonded to it to stabilise the metal skin which is also riveted to the spar and at the trailing edge.

Jerry is an aero engineer and is building his Swift of a GRP and foam construction and initial samples of the wing structure were said by the jury to be impressive. Longitudinal control is unusual in being by flap rather than elevator movement.

NATIONGLIDE

A group of Bannerdown GC pilots are planning a round England sponsored flight in the hope of raising enough money to buy and operate a two-seater motor glider for the disabled throughout England.

"We are determined that disability will not prevent folk from sampling the joy of flying and soaring," said Peter White, the organiser.

They are hoping to start the sponsored flight from RAF Hullavington, Wiltshire, in early June and then fly a series of 100-200km legs covering much of the country. Slingsby Engineering Ltd have offered a Sport Vega for the flight which will be covered by the "Nationwide" TV programme and the regional TV headquarters. The regional presenter Ian Masters from "Look East" will be the second pilot in the tug on the Norwich leg and it is hoped that other celebrities will do the same on other legs.

The RAFGSA and Ralph Jones are helping to supply tugs, Robin May, CFI of the Dorset GC, is arranging a tug and accommodation while in his territory and Derek Piggott will fly the Vega on the Lasham leg.

Peter White added that offers of help have been overwhelming with many clubs pledging their support.

"All we need now is good weather and enough publicity to ensure a generous response (*eg* ½p, 1p or 5p per mile flown on a local leg) to be sent to the Royal Association for Disability and Rehabilitation "RADAR", 25 Mortimer St, London W1N 8AB. Also any donations (however small) to help finance the flight would be gratefully received by RADAR.

Peter hopes gliding clubs in Wales will stage Nationglide 2 — a sponsored wave flight around Wales; Scottish clubs Nationglide 3 — a sponsored wave climb while Nationglide 4 in Ireland could be speed task aimed at raising funds to fly disabled people there.

If willing to organise any of the remaining three Nationglides please contact Peter White of Sunnybank Cottage, 48 Greenlands Road, Peasedown St John, Bath, Avon, BA2 8EX, tel 0761 32736.

AVIATION ART

The Guild of Aviation Artists are holding their 11th annual exhibition at the Qantas Gallery, at the corner of Piccadilly and Bond Street, from June 17-July 10 when more than 100 new paintings will be on show.

STRUCTURE OF THE BGA

The membership structure of the BGA is now made up of 83 full members, 3 of whom have affiljated clubs as follows: Army Gliding Association, 2, RAF Gliding and Soaring Association, 11 and Royal Naval Gliding and Soaring Association 3 clubs.

Operations. During the year ending September 30, 1980 (1979 figures in brackets), civilian clubs flew a total of 102 225 (86 375) hours from club sites from 294 743 (272 646) launches.

Club owned gliders totalled 306 (301) and privately owned gliders 923 (844). The combined Services flew 21 796 (22 347) hours from 92 960 (87 994) launches.

Certificates. Certificates were issued as follows: A endorsements 2014 (1611), B endorsements 225 (128), Bronze C 532 (526), Silver C 321 (264), Gold C 42 (52), Diamond goal 52 (56), Diamond height 29 (65) and Diamond distance 7 (6).

A certificates were applied for by 1223 (845) holders of the ATC proficiency certificate.

BGA WEEKEND

This year the BGA Weekend was at the Palace Hotel, Buxton, from March 6-8, and made a pleasant late winter break thanks to the competent organisation by Pat and Stan Armstrong.

Derek Piggott opened the programme with an entertaining talk on his experiences of American gliding, backed up by a superb collection of photographs. The AGM was amicable and uncontentious under the guidance of BGA chairman, Tom Zealley, though concern about field landing accidents and the erosion of airspace was expressed from the floor.

Basil Meads was elected president with Tom Zealley (chairman), Keith Mansell (vice chairman), John Cloke (treasurer) and committee members Vic Carr, John Ellis, Dickie Feakes, John Holland, Frank Irving, Pete Saundby, Terry Stevens, Ian Strachan, Ben Watson and Barry Rolfe (secretary).

The chairman thanked the retiring members of the Executive, Lionel Alexander and Chris Nicholas, for their hard work.

The annual awards, presented at the dinner-dance, were as follows: **Wakefield** trophy (longest flight originating in the UK) Dave Watt (Airways) for a 767km, Booker, Lasham, Stanhope and Buckingham in an ASW-20FL on May 9; the **Manio** cup (fastest declared 300km closed circuit) Dave Watt (ASW-20FL) for a 307km triangle, Salisbury, Stratford on Avon, on May 19 at 100.1km/h; **Volk** trophy (longest declared goal flight by pilot not holding Gold or Diamond legs on Jan 1, 1980) Mike Evans (Surrey & Hants) for a 306km triangle, Birdlip, Northampton, on August 25 in a Kestrel 19; **Frank Foster** trophy (fastest declared 500km closed circuit task) Brian Spreckley (Thames Valley) for a 530km O/R Lasham to Doncaster on August 25 in an ASW-20 at 83.6km/h; **De Havilland** trophy (maximum gain of height) David Benton (Nimbus 2B) for a gain of 33 600ft at Portmoak on April 18; **Douglas** trophy (maximum cumulative distance by three pilots from the same club) Wycombe Gliding School for flights by Dave Watt, 767km on May 9, Chris Rollings, 730km on May 9 and Laurie Beer, 335km on March 22, a total of 1832km; **Robert Perfect** trophy (for the club with the most instructors per member) Kestrel GC with 12 fully categorised instructors for a membership over two years of 155; **Rex Pilcher** trophy (earliest pre-declared 500km triangle of the year by pilot completing this task for the first time) Roy Pentecost (Surrey & Hants) for a distance of 519km, Sherborne, Melton Mowbray in a Kestrel 19 on August 24; **Enigma** trophy (highest points on the National Ladder flying a privately owned glider) Brian Spreckley (Thames Valley) and the **L. du Garde Peach** trophy (highest points on the National Ladder flying a club owned glider) Philip Gaisford (Swindon).

Sunday morning started with a useful question and answer session on cross-country flying chaired by Ted Lysakowski (chairman of the BGA Competitions Committee), with Brian Spreckley, Ralph Jones and John Glossop on the panel.

By far the most enjoyable part of the weekend in my opinion was the Sunday visit to the Derby & Lancs GC at Camphill where the club made everyone exceedingly welcome with a sherry party followed by an exceptional buffet lunch.

It was good to see old friends, meet new ones and indulge in unadulterated gliding talk.

G.B-S

JAMMED RUDDER PEDALS

During the approach and landing of a K-21 on its maiden flight recently the rudder pedals jammed. Excessive pressure freed them for a moment or two and then they jammed again for the rest of the flight.

The pilot, who had just taken over the controls from his partner in the back, reported an inch or two of movement which was sufficient for a safe landing but had they been doing spins etc the results could have been disastrous. After landing he found that in putting his feet back on the pedals his left foot hadn't gone under the toe-strap but had flattened the strap against the pedal (it is a soft leather strap). This caused a loop of strap to project on the inside edge of the pedal and the top corner of the right-hand pedal caught itself firmly into this loop and locked the two pedals together.

The pedals in the K-21 are very close together and the pilot said it is quite easy not to get your toe properly into the toe strap.

"I imagine the remedy," he said, "is to remove the toe-straps (and not fly upside down!) or alternatively fit rigid ones."

DOCUMENTATION IN PSEUDO TERMS

Manufacturers' service letters, bulletins, technical instructions, airworthiness directives etc are drafted by the originators in pseudo-legal-airworthiness terms to remedy some specified deficiency for which production liability and/or some degree of warranty may be implied or denied as appropriate. In some cases where a definite date is quoted by which compliance is expected to be achieved, production liability would terminate on that date.

Therefore the BGA is not empowered to vary the text of such airworthiness documentation. However where an owner/operator takes the initiative to seek either a short or long term solution by alternative means, achieving an equivalent standard of airworthiness, he is always free to seek my advice.

The manufacturer or his agent should supply his airworthiness information directly to the registered owner of the glider as well as to the airworthiness authority (CAA/BGA). Foreign government airworthiness directives are sent to all contracting states to ICAO. The BGA receives such directives from CAA and has also developed a worldwide airworthiness intelligence network with other gliding organisations.

R. B. Stratton, *BGA Technical Officer*

WHITBREAD AWARDS 1981

We are delighted to announce that Whitbreads have donated a sum of money again this year to enable us to make £25 awards to young pilots. Any member of the BGA or RAFGSA club (not ATC) achieving the Bronze C before their 19th birthday is eligible, but application must be made to the BGA Office at the same time as application for the endorsement to the certificate.

GLIDING CERTIFICATES

DIAMOND DISTANCE

No.	Name	Club	1980
1/173	M. Saunders	612GS (in USA)	8.1

DIAMOND GOAL

No.	Name	Club	1981
2/1007	S. Lloyd	Imperial College	24.8.80
2/1008	I. F. Fleming	SGU	10.1

DIAMOND HEIGHT

No.	Name	Club	1980
3/486	J. P. Marriot	Four Counties	30.12
3/487	K. R. Taylor	Humber	29.12
3/488	C. G. Starkey	Imperial College	11.3.81

GOLD C COMPLETE

No.	Name	Club	1981
793	I. F. Flemming	SGU	10.1

GOLD C DISTANCE

Name	Club	1981
I. F. Flemming	SGU	10.1

GOLD HEIGHT

Name	Club	1980
D. J. Johnson	Herefordshire	29.12
I. B. Kennedy	South Wales	7.2
G. M. Feeley	Wrekin	31.10
T. R. Jackson	Lakes	20.12
J. A. Charlett-Green	Clevelands	23.11
C. Plaskitt	643GS	3.9
B. R. Wise	London	1.2.81

"DELIBERATE" FLIGHTS. In the last issue, p92, Ivor Shattock asked whether his "deliberate" 30km on January 10 was the first 1981 cross-country. We have heard that on the same day two Southdown GC members declared and achieved O/Rs — F. J. Tucker (Std Austria) 90km and P. W. Wildbur (Libelle) 76km.

Make sure of getting S&G by taking out an annual subscription. See p107 for details.

THE BGA MOGAS TRIALS

Insurance cover will now be given on Mogas aviation fuel thanks to the dedicated efforts by Dick Stratton, BGA chief technical officer, who has been testing the cheaper alternative to Avgas in a series of trials. Some 100 hours have been flown in a Beagle Airedale fitted with a Lycoming 0-360-80hp engine with a compression ratio of 8.5:1, sponsored by the British Light Aviation and Gliding Foundation. This following account, which gives some idea of the exhaustive work of the project, is made-up of extracts from a BGA report and an article, both by Dick, published in *Light Aviation*.

In 1901 Wilbur and Orville Wright flew on motor spirit, and so must Bleriot have crossed the Channel on Mogas, while every other record breaker of that kind, (other than "speed" breakers), must have done likewise, since Military Avgas appeared on the scene only after 1934! In that year the director of Technical Development (RAF) published Military Specification DTD 230, which created 87 Octane! Prior to that specification, "Shell No. 1" was used for the official type test of the de Havilland Gipsy Major and the manual for that engine still calls up "good grade automobile fuel", without specifying octane rating or lead content.

Various brews

The "Speed" record breakers who had a special requirement for short periods at exceptional power (and would trade-off engine life for speed), used various brews including 100% Benzol and methanol. Power outputs increased from 400hp, out of 27 litres on 58 octane fuel in World War I, to 2000hp, out of 27 litres on 150 octane fuel in World War II. Military engines designed for 100 octane fuel were put in hand in 1935, only one year after 87 octane had been created, to meet military requirements. In 1936 "premium" motor spirit was introduced incorporating TEL (tetra-ethyl-lead), and in the 1980s, legislation exists to reduce the lead content, possibly eventually to zero!

In 1973, the fuel supply companies, world-wide, persuaded all concerned (engine and airframe manufacturers, certification authorities, vendors, owners and operators) that it would be in the interest of all of us, (and particularly of them) if only one grade of Avgas was used, and hence "100L" was forced upon us, whether our engines required this level of fuel technology or not!

In February 1976, the failure of exhaust valves had reached such epidemic proportions in Europe, (19 cases in the UK, nine of which were "in-flight" failures at one training school, using low compression Lycoming 0-320 engines), that the Swedish Air Board convened a conference in Stockholm attended by delegates from all interested parties, including UK CAA.

In June 1976, the 100L specification was modified to 100LL (100/130 grade, meeting MOD spec. DERD 2475) and whereas at the Swedish conference the operators claimed that they had done nothing new to bring about such a catastrophic reduction in engine reliability, the fuel companies likewise contended that they were not responsible either! So why the change of spec?

The Octane Rating of Engines. Our investigations have confirmed that the real octane rating capability of most (if not all) aero-engines is not known to internationally agreed engineering standards. It seems inevitable that the type test is conducted on the most likely grade of fuel available on a worldwide basis. Because there is now a unigrade of Avgas (100LL), it is inevitable that all present generation engines are type tested on this grade, regardless of engineering merit. Hence the Piper PA-38 Tomahawk with Lycoming 0-235-L2C engine (112hp, compression ratio 8.5:1) specifies "100/115 grade Avgas"!

Fuel Grades. Since real octane ratings are not known, the type certificate must specify a grade of fuel. Since the fuel companies have forced upon the community a single grade (100LL), the choice is limited! It is probable that the only engines in the UK that actually require high technology high octane 100LL Avgas are the 14 RAF Shackletons powered by Rolls-Royce "Griffons", as well as the few privately owned Spitfires and Sea Furies.

CRITICAL PARAMETERS IN APPROVING MOGAS

Knock Testing. Tests run by the BGA at manifold pressure 28.5" Hg, intake temp +19°C, 1650rpm clearly demonstrate that the Airedale engine is in no way knock-sensitive to changes in fuel grade from 100LL Avgas to BS 4040 "4 Star". Since the majority of tug aircraft are fitted with fixed pitch propellers, there is no way such engines can be operated at the BMEPs demonstrated in these tests.

Vapour Locking/Volatility. The critical parameter is that of fuel temperature, and it is well known for automotive vehicles to "cook-up" and vapour-lock at any altitude. Poor ventilation and inadequate screening of fuel system pipelines, pumps, filters etc from the exhaust system, are root causes.

Aircraft in-flight are not short of ventilation through the powerplant. Tests have shown that since the fuel arrives at the fire-wall at much the same (ambient) temperature that it leaves the fuel tanks, then any heat rise must be gained within the power-plant zone, through the short pipeline (heavily lagged for fire-resistance), through the fuel-pumps, and above all, in the carburettor itself. Since in the majority of light aero-engines from USA sources, the carburettor is bolted to the engine sump which contains some two gallons of oil at (say) 90°C, it is from this source that in-flight heat rise will occur. With in-flight flow-rates seldom below 5gph (cruise) and 8gph (take-off), a fuel temperature in excess of 30°C has not yet been measured. Ground "soak" temperatures of 39°C have been recorded, but this heat is soon dissipated once fresh fuel is flowing after start-up.

Therefore the critical vapour locking fuel temperature of 45°C (for high volatility fuel and 50°C for low volatility fuel) are never likely to be attained in typical installations in the UK. The Range of Reid Vapour Pressures tested are between 7.0 and 10psi.

Lead Content. Because of environmental pressures the lead content of MOGAS is being reduced and is already below that of AVGAS. Spectographic oil analysis comparisons between four aircraft powered by the same variant of Lycoming 0-360 engines, three on AVGAS, one on MOGAS demonstrates that whereas the AVGAS aircraft clock-up more than 1000 parts of lead, the MOGAS sample reads out at 884 parts. This feature is supported by widespread reports of less plug fouling and lower Mag-drops on all MOGAS powered aircraft.

Carb-Icing. The BGA tests have demonstrated that the carb choke-temperature may be lower, by some 7°C, on winter grade MOGAS (RVP10.2). However, this in no way varies the capability of a conventional hot-air system to provide the necessary degree of protection. In particular, the Airedale alternate air system does not produce a measureable increase in temperature, but does demonstrate a negligible reduction in dynamic pressure. No carb-icing has been encountered so far on MOGAS.

Water Content. There is probably not a single motor-vehicle in the whole world fitted with fuel-tank water-drains. The majority of USA light aircraft are so equipped, but very few UK designs have them. The water that is likely to occur in aircraft is a product of the "cold-soaked" airframe structure, after prolonged flight at altitude, acting as a condenser when high-humidity (warmer) air enters the tank at lower altitudes. A secondary consideration is that of draining out water that has been pumped in!

Since very few motorists can recollect cases of significant water contamination of their cars over many years, and since the accuracy of MOGAS dispensing pumps (as checked by Weights and Measures Departments), depends upon uncontaminated fuel passing through sensitive metering equipment, then an adequate level of fuel filtration is an inherent part of such equipment.

There is therefore, no evidence to support a case for different standards of fuel handling to those that are adequate for automobiles.

Gum Deposits (Valves). Since there is no evidence that MOGAS derived "gum deposits" effect the proper operation of the whole gambit of petroleum powered non-aero engines, there is no evidence to make a special case that it will do so on aero-engines referred to herein.

Storage Stability. We know from experience with Airedale G-AVKP, which lay dormant with residual AVGAS in its tanks for three years, that such "aged" AVGAS will not support combustion. We have no evidence to show that MOGAS behaves differently. In either case the engine will fail to start, or otherwise demonstrate poor performance on the ground.

Rubbers and Sealants. With the introduction of 87 octane (leaded) fuel to DTD 230 in 1943, it was necessary to develop PR (petrol resistant) fuel system rubberwear. There is absolutely no evidence to indicate that MOGAS will generate problems in this area, whereas it is on record that high aromatic AVGAS destroyed the tank sealant in Romanian built B-N "Islanders".

CONCLUSIONS

The tests completed to date, within the parameters sea-level to 14 000ft and within the ambient temperature range −4°C to +21°C, have failed to demonstrate any factor which might lower airworthiness standards. On the contrary, the lower levels of lead measured on MOGAS undoubtedly contribute to lower levels of plug fouling and engine malfunction.

1981 Meeting of the International Gliding Commission

IAN STRACHAN, BGA delegate to CIVV

The BGA chairman, Tom Zealley, and myself attended the meeting of the Commission International de Vol à Voile (CIVV) held at FAI HQ in Paris in March. This account is a shortened version of the full report that goes to the BGA Executive and other relevant BGA committees and officials. Twenty-seven nations were represented at this meeting.

Competition Licences. It was announced that the facility for "provisional" sporting licences had been withdrawn by FAI. Para 7.1.3 of the Sporting Code (general section, not the gliding version) should therefore be deleted. The implication to British pilots is that any pilot wishing either to compete abroad or to attempt record flights abroad must ensure that he has a current FAI Competition Licence issued by the BGA office.

New Sporting Code Section 3 Class D (gliders). This had now been issued by FAI and was valid from Jan 1, 1981. The BGA office is in the process of issuing copies and notes to all current British official observers. Para 1.4.3 describes how it is now possible to achieve 300 and 500km triangles with none of the three points of the triangle having to be the start/finish point. Clubs who had problems in fitting in the shape of triangles previously may now be in a better position because they can start "in the middle of a leg", the distance to count being that round the *three* TPs only.

Another difference is that for distance flights only, the declared departure point and finish point may be remote from the places of take-off and/or landing. The advantage of this may seem to be obscure but since a Silver C distance does not require an out-landing (para 5.2.1), it can now be achieved by a closed circuit task such as an O/R where the last leg is 50km long. A 100km (total) O/R will now count for Silver C distance, provided the TP is declared as a "remote start point" (the last leg being 50km long and therefore satisfying the Silver C requirement for "a straight distance flight of at least 50km).

Club Class Championship. There will be a European Championship in South Germany from June 5-20, 1982. Club Class rules are in the gliding section of the Sporting Code, para 7.4.1. The previous Championship were held in Sweden in 1979 and Chris Rollings, John Glossop and Andrew White represented the UK. A glider performance limit of about Club Astir (95% on BGA handicap) was used in Sweden, but there was discussion at this CIVV meeting on whether the performance limit should go up to, say, Std Cirrus and equivalent (100% on BGA list).

To help pilots flying abroad

The West German Gliding Association will make proposals on this, and also on whether handicapping will be used, because the object of the Club Class is to allow fair competition when flying the more basic, easy to fly gliders typified in the past by, say, the K-6E.

International Glider Pilot's Licence. Minimum criteria for this licence were agreed and were roughly similar to the BGA Bronze C. The intention is that if a licence, approved world-wide under the authority of FAI and CIVV, can be produced, it will help pilots who wish to fly abroad, although the production of up-to-date logbooks and dual checks in the overseas country will of course still be required. The detailed implementation of this by the BGA for British pilots is yet to be worked out, but could consist of the opportunity to have an international licence (for a small fee, regrettably) at the same time that a pilot qualified for Bronze C or Silver C.

The provision of the licence would then ease the path of anyone flying abroad, and in some countries might actually become a requirement of their air law. The hope is that in countries with legislation which at present restricts flying by overseas pilots, the standard licence may encourage the government aviation bodies to accept it as a standard criterion for, say, solo flight by foreigners.

1981 World Championships, Paderborn, W. Germany. Planning is well advanced and entries stand at 43 in the 15 Metre Class, 35 in Standard but only 20 in the Open Class. Thirty nations have so far entered. There will be no "penalty zones" round the TP observation zones, as in the BGA rules, and pilots taking photos even slightly outside the zone will be either disqualified or counted as "no control" at that TP.

1983 World Championships, Gonzales Chaves, Argentina. The Argentinian delegation announced a change of airfield to Gonzales Chaves, 3730S 60W, some 450km SW of Buenos Aires. Entry fee of US$3700 per glider will include pilot, two crew, one quarter of a team manager (!), food, accommodation, transport of people and glider to Argentina and the provision of a retrieve car and petrol. The dates will be Jan 9-14 for the practice and Jan 16-29 for the Championship.

1981 Feminine European Championships. Only 20 entries had been received for this event to be held from July 19-31 at Mantes-Cherence, 60km NW of Paris. Classes will be 15 Metre and Standard, entry fee being Fr1500. Women pilots with contest experience, please urgently contact the BGA office for full details.

1985 World Championships. Australia had prepared a most comprehensive bid for Benalla, 200km NE of Melbourne, from Jan 13-26. Italy also submitted a full written bid for Rieti, 80km NE of Rome for July 27-August 11. The USSR also announced that the Soviet Aero Club hoped to be in a position to bid next year. A decision for 1985 will probably be taken by CIVV in 1982 and applicants were asked to indicate whether their bids would stand for future years such as 1987 or 1989, also whether organisers would consent to run a Championship for less than all three Classes at once (*eg* 15 Metre and Open/Standard, as British Nationals is split at present) should the Class structure be modified in future.

Excessive numbers of records. Staff were worried about the vast number of records that were possible and the man-hours involved in checking and recording. FAI had over 100 000 aviation records on their books! A plea was made to eliminate multi seater and feminine categories and it was also pointed out that now that motor gliders such as the Motor Nimbus exist an extra soaring record category for MGs could be viewed as illogical. No decision was taken but discussion will undoubtedly take place later in both FAI and CIVV. The 100km triangle record is also being criti-

cally looked at because so little soaring is involved.

Lilienthal Medal. This is the highest award of international gliding and for 1981 was awarded to Hans Wölf who has been a pillar of Austrian gliding since 1935.

CIVV Bureau. The Bureau (*ie* the president, six vice presidents and secretary) was re-elected with the exception of Fred Weinholtz (FRG) who was retiring, and Per Weishaupt (Denmark) was elected to replace him. Per is the chairman of the CIVV Motor Glider sub-committee and is the longest serving delegate to CIVV with nearly 30 years' service.

Next Meeting. The next CIVV will be on March 26, 1982, and comments from BGA members on sporting matters (*ie* Sporting Code, badges and record policy, competitions etc) should be sent in the first place to the chairman of the BGA Competitions Committee, c/o BGA office. It is particularly important that official observers and cross-country pilots make their views known on both how the 1981 Sporting Code is working and what changes they would like to see to make soaring in the UK and abroad more interesting.

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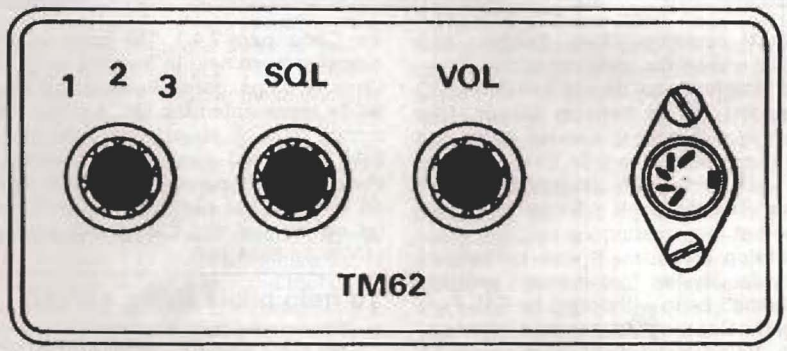
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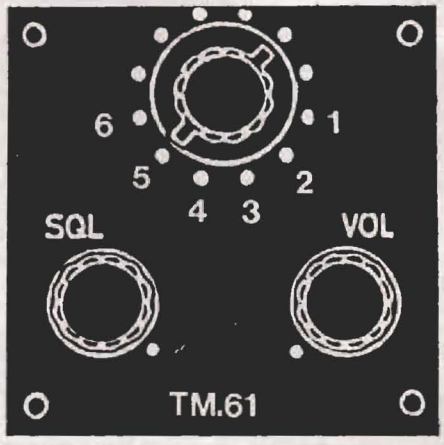
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"BLACKWOOD'S" ON GLIDING

After appearing monthly for the best part of two centuries, *Blackwood's*, the high class literary magazine to which many famous authors contributed, ceased publication last December. It specially favoured adventure stories, and this included aviation — once it had begun — and featured gliding in two notable contributions. The first, published in Nov 1937, was "When the wind is in the west" by R. S. Rattray, a veteran of the Boer War and an anthropologist specialising in the populations of West Africa, to which he would fly in his own Moth from England.

In the mid 1930s he took up gliding and, having to lecture at both Oxford and Cambridge, lived between the two near Dunstable where he had a share in the Cambridge 2, a kind of hotted up Grunau Baby.

Of his 12 000 word article at least half is a sort of potted textbook on gliding, starting with solo bungy hops, before he gets down to his own two Silver C flights. After three of his intended five hours over Dunstable Downs he was tempted into a passing cold front cloud and finished up beside the Barnet bypass. On the second he was determined to reach the east coast and, on seeing at last a bright streak on the horizon, shouted to himself "Thalassa, thalassa!" which was what the forward scouts of Xenophon's army shouted when it was struggling back to Greece after a marauding expedition into Persia. Blackwood's 19th century readers would have understood the reference, but its 20th century editor thought fit to translate this into a tame "The sea, the sea!"

Rattray landed at Burnham on Crouch on the private airfield of the Royal Corinthian Yacht Club and having arrived in the aerial equivalent of a yacht, was hospitably entertained.

The second article is "Gliding with the Germans" by Mary de Bunsen, published in July 1940 and describing how she took a course at Grunau gliding school just before the war. Among items she was ordered to bring with her was "a tooth glass" (whatever that is in German). Though already a light aeroplane pilot, she had to take the whole course, primary hops and all. Her purpose, she wrote, was to learn what ordinary Germans were thinking at that time, since the newspapers gave no clue. She sees the funny side of it all: The primary glider "looks like 'a compound of scaffolding and tea trays', and the Grunau type had a strut going up from the nose to a point above the pilot's head, to which the pupil 'would generally cling with the grip of a drowning man' ". Her conclusion is that "gliding is the finest game imaginable".

A.E.S.

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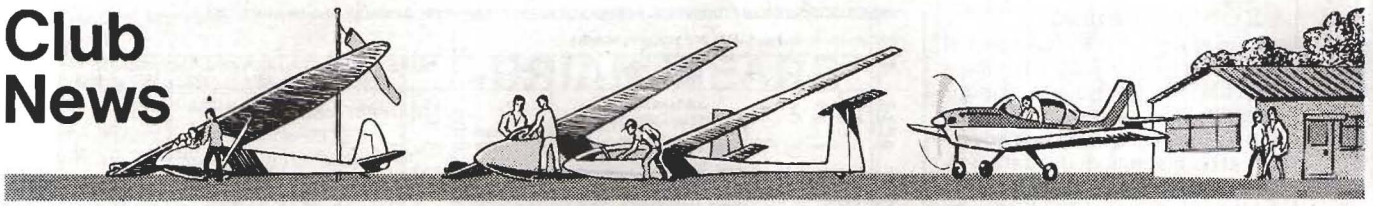
WORLD GLIDING CHAMPIONSHIPS — PADERBORN-HAXTERBERG, WEST GERMANY, May 24-June 7, 1981

PROVISIONAL ENTRIES AND PREVIOUS PLACINGS

No	Pilot	Country and T/Manager	Open 15M	Std	PREVIOUS PLACINGS 1978	1976	1974	1972	1970	1968	1965
RR	Rizzi, R.	ARGENTINA		LS-4	10-S	—	34-S	27-S	17-0		
AM	Mattanó, A.	L. Huljich		LS-4							
RJ	Riera, J.		ASW-20		4-S	24-S					
MR	Reinoso, M.		ASW-20								
ZL	Hämmerle, H.	AUSTRIA		LS-4							
63	Hämmerle, A.	H. Werner	Ventus A		13-R	13-S	9-0				
C6	Haggenmüller, R.		ASW-20								
06	Schubert, A.		Nimbus 2		15-0	13-0	14-0	9-0	18-0	4-0	
78	Stouffs, H.	BELGIUM	ASW-20		19-R	10-S	—	38-S	37-S	5-S	11-0,
76	Bluekens, M.	H. Mojet	ASW-20		7-R	—	27-S				('63/27-S)
AR	Huybrechtx, E.		DG-200								
GB	Bourgard, P.		Nimbus 2								
	von Schaffhausen, C.	BRAZIL		ASW-19	29-R	44-S					
	Soares Filho, R.	H. Krisch		?							
	Widmer, J.		ASW-20		4-R	29-0					
	Junqueira, C.		?		18-S	30-S	—	46-S	30-S	44-0	
										('60/17-S)	
S2	Sears, P.	CANADA		LS-4							
	Carpenter, J.	A. Schreiter		ASW-19B	6-S	28-0	21-0				
W2	Werneburg, H.		Ventus B		21-R	40-S					
VX	Werneburg, U.		ASW-20								
SR	Radic, S.	CHILE		Mini-Nimbus	30-R						
RU	Urbina, R.	Ursula Meier		Mini-Nimbus	31-R						
A1	Vávra, J.	CZECHOSLOVAKIA		ASW-19B	—	—	—	45-S	—	11-S	
A4	Stepanek, J.	M. Heinik		ASW-19B							
AX	Matousek, F.		Nimbus 2B		—	10-0	—	13-0	—	28-S	
AY	Brunecky, M.		Nimbus 2B								
KX	Øye, S.	DENMARK		LS-4	—	9-S	23-S	43-S			
C7	Hansen, M.	M. Petersen		LS-4	17-0						
CC	Sorensen, O.		ASW-20		17-R	22-S					
JE	Pedersen, J.		ASW-20								
IH	Pankka, A.	FINLAND	?								
MK	Kuittinen, M.	A. Oksa	ASW-20		—	32-S					
MA	Asikainen, M.		ASW-20		—	—	—	14-S			
TU	Uoti, T.		G/F-304								
SG	Chenevoy, G.	FRANCE		LS-4							
FL	Ragot, F.	M. Vergnieres		LS-4	—	17-0	6-0	7-S			
SM	Schroeder, M.			LS-4							
JR	Rantet, J.		Ventus A		8-0	14-S					
26	Lee, G.	GT. BRITAIN	Nimbus 3		1-0	1-0					
19	Fitchett, B.	M. Carlton	Ventus		4-0	18-0	4-S	32-S			
59	Spreckley, B.		ASW-20								
80	Davis, A.			LS-4							
25	Avgerinos, C.	GREECE M. Anthimos		DG-100							
34	Innes, D.	GUERNSEY Sheila Innes		NIMBUS 2C	23-R	43-R	—	12-S	26-0	30-S	
SB	Selen, B.	HOLLAND		ASW-19B	1-S						
NL	Paré, D.	N. van Geuns	?		10-R	23-S	14-S	20-0			
MS	Musters, C.		ASW-20		5-R	34-S	—	17-0			
MM	Schuit, G.		ASW-20								
H1	Kassai, B.	HUNGARY		Std Jantar 2							
H2	Petróczy, G.	J. Pentz		Std Jantar 2	—	6-S	—	22-S	9-S	17-S	17-0
H3	Papp, S.		Jantar 2B								
H4	Polonyi, K.		Jantar 2B								
BL	Brigliadori, L.	ITALY		LS-4	2-S	7-S	—	—	—	—	16-S,
41	Perotti, N.	P. Morelli		ASW-19	19-S						('63/4-S, '60/21-S)
82	Colombo, V.		ASW-20								
IX	Gavazzi, M.		ASW-20		18-0	22-0					
JA	Enya, J.	JAPAN S. Takehisa	ASW-20								
GE	Geiben, R.	LUXEMBURG N. Lucchini	ASW-20								
VD	Timmermans, A.	NEW ZEALAND F. Desborough	ASW-20		—	27-S	20-0	15-S			
LF	Kristiansen, S.	NORWAY		LS-4							
90	Ronnestad, E.	V. Halvorsen	ASW-20		15-R	35-S	—	28-S			
LE	Maelum, H.			LS-4	5-S						
PP	Bulukin, B.		ASW-20		26-R	—	35-S	33-S			
P9	Ribeiro, R.	PERU	?								
SX	Schulz, G.	G. Schulz	Mini-Nimbus								
1K	Berk, J.		Mini-Nimbus								
BB	Kepka, F.	POLAND		Std Jantar 2	—	18-S	3-S	3-S	3-S	—	3-S
VI	Witek, S.	T. Rejniak		Std Jantar 2							
KS	Kluk, S.		Jantar 2B		—	—	18-0	3-0			
MH	Muszczynski, H.		Jantar 2B		—	3-0	—	8-0			
31	Bradley, R.	SOUTH AFRICA		ASW-19	17-S						
27	Goudriaan, L.	B. Stevens	ASW-20								
	v. Niekerk, B.		ASW-17								
66	Goudriaan, K.		ASW-17		24-0	25-0					
AJ	d'Orleans-Borbon, A.	SPAIN	ASW-20		11-0	—	16-S	26-S			
AA	Anglada Nieto, A.	J. de la Cuevas	ASW-17								
AL	Lopez b. d'Queros, A.		ASW-20								
LB	Andersson, G.	SWEDEN		Std Jantar	14-S	19-S	11-S				
71	Ax, G.	L. Pennti	ASW-20		3-R	9-0	7-0	1-0	15-0	2-0	
V6	Persson, B.		ASW-20								
X7	Pettersson, A.		LS-3A		13-S	26-0	12-0	29-0	13-0		
6A	Nietlispach, H.	SWITZERLAND		LS-4	7-S	—	24-S	40-S	12-S	9-S	20-0,
BE	Obrist, B.	H. Frehner	DC-200								('63/19-0, '56/8Ss, '54/4Ts)
AS	Schulthess, A.		Ventus A		16-R						
50	Oswald, M.		Nimbus 2								
11	Greene, B.	USA		LS-4	—	—	9-S	9-S			
AH	Striedieck, K.	J. Brittingham	ASW-20		2-R						
VW	Gimmey, R.		ASW-20								
DB	Butler, R.		ASW-17 (23m)		12-0	5-0					
OP	Pasetschnik, O.	USSR	LAK-12								
33	Rukass, A.	I. Kovalev	LAK-12								
MG	Glöckl, H.	WEST GERMANY		LS-4							
61	Peter E-G	K. Ahrens	ASW-20		6-R	17-S					
YY	Gantenbrink, B.		Nimbus 3		2-0						
XX	Holighaus, K.		Nimbus 3		—	—	5-0				
		YUGOSLAVIA	?								
			?								

(Symbols: 0=Open; S=Standard; R=15m; Ss=Single-seater; Ts=Two-seater).

Club News



Copy and photographs for the August-September 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 June 16 and for the October-November issue to arrive not later than August 11.

April 15, 1981

GILLIAN BRYCE-SMITH

AVON SOARING CENTRE (Bidford Airfield)

Dave Harris went solo in March and our proprietor, Ralph Jones, gets set to defend his Nationals Open Class title in May.

Casual visitors are welcome, whether glider owners or in search of something to fly. A Std Cirrus has now joined our Libelle.

D.J.C.

BATH & WILTS (Keevil Airfield)

On the maiden flight of the LS-4, owned by Steve Parker and Mike Taylor-Beasley, Steve contacted wave near Devizes and took it to 12 000ft.

Our Auster has had a lengthy C of A and even Roger Slade, our engine fitter who has done all the work on the power plant, was delighted when it started on the first swing.

Work continues on the hangar roof and because our tenders were successful we are now tenants of a good part of the grass area of the field. Thanks are due to Richard Grundy, our secretary, for this achievement.

We look forward to seeing a large number of vintage gliders for the May Day weekend.

J.L.

BORDERS (Milfield)

Jimmy Hogarth, a founder member, resigned as vice-chairman at the AGM in February and John Marshall is filling the vacancy. A new trophy donated by the chairman, Alan Urwin, for the longest flight from Milfield was presented to Andy Penswick for a 14 000ft climb in wave before gliding to Portmoak.

Jim Shepherd now has Gold height to go with his recently acquired Silver height.

We are looking forward to the Northumbria GC's visit when it is hoped they will bring their tug to give us some aerotow experience.

A.J.B.

BRISTOL & GLOUCESTERSHIRE (Nympsfield)

A new Astir Club is arriving this month as a replacement for the Skylark 4. Our treasurer, David Barker, reported a moderately successful year financially at the AGM on March 14 when senior officers were returned for a further year.

We have installed a food dispenser and microwave oven in the clubhouse so that hot meals should be available at any time.

There are plans to extend our north hangar to enable tug overhauls and maintenance on site after the introduction of new legislation.

R.A.R.

BUCKMINSTER (Saltby Airfield)

We had little flying in February and March due to bad weather, however a few members went to Portmoak in March where Dave Mee completed his Silver C with a duration.

Jeff Roberts and Mike Jody returned triumphant from their instructors' course to give us quite a strong instructing team.

We are hosting the East Midland Regionals from May 30-June 7.

T.C.M.

CAMBRIDGE UNIVERSITY (Cambridge and Duxford)

Ted Lysakowski was a guest at our annual dinner in March and also at our last winter lecture the evening before when his advice on competition flying was much appreciated. Trophies were presented at the dinner to Steve Longland, Sigfrid Neumann and David Guest.

An ASW-17 and ASW-20 are recent acquisitions of club syndicates, John Glossop's 17 replacing his Kestrel 19.

New year instructors' courses have been successful for Janet and David Garnett who already look after the rota using a computer cleverly programmed to cater for personal preferences on days, times, etc.

NB. Don't fly into Duxford on the airshow days — June 14, August 2, September 6 and October 4. It's always a good idea to find out if we are operating by contacting the tower on Cambridge 833963. At all times land on the strip south of the runway and keep your circuit to the south.

P.E.B.

CONNEL (Connel Airfield)

Our mountainous terrain suited us well when a mountain wave system established itself over our site. Flying in strong lift in excess of 10kt at times our Swallow reached 12 000ft with the CFI aboard. Frequent systems are seen in our area, particularly in east winds. With our reverse pulley, fabricated by our club engineer from a car front wheel and stub axle ex the local dump, we are obtaining higher launches to increase our chances in wave and thermals.

Several Portmoak pilots enjoyed a hill soaring and thermal Sunday last month despite three inches of snow on the previous day.

R.R.

COVENTRY (Husbands Bosworth Airfield)

A SF-27 from Germany has joined our club fleet as an improved replacement for the Pirat. Winching is increasing in popularity and our new twin drum winch should soon be ready.

Airborne visitors to the site should carefully check for cables on the ground or in the air. If arriving in min-wind conditions, also keep a good lookout for hot air balloons.

John Coleman, last year's runner-up in the British Balloon Championship, is competing in America this year with "Big T" the balloon which operates out of Hus Bos.

Mike Hunt, a founder member and a vice-president, and his wife visited us recently from South Africa. Mike will always be remembered as the designer of our two 60ft long up and over hangar doors which have stood the test of time, despite the doubting Thomases.

B.R.

CRANFIELD (Cranfield Airfield)

Work began on cladding our new hangar just before Christmas and was completed after only eight weekend's work. It was interesting to note those who do great things in gliders do not necessarily get on as well when confronted with a ladder to climb! We are now awaiting the delivery of the doors and are looking to complete the whole structure by early May, then we can start to consider the installation of power, lights, etc.

At the end of March we were all shocked and saddened by the sudden and untimely death of Ron Dodd. Ron will probably be best remembered not only as pilot who shared his knowledge and enthusiasm with younger and less experienced members of the club but also when we were putting the roof on the hangar last winter when work was complete he would come around with "something" to liven up the coffee. We and Dunstable have lost a valued friend and member and we extend our sympathy to his family.

Organisation of the task week is well in hand. The Silene trophy was won this year by Derek Kilcoyne (Cirrus 129) and presented to him at the AGM.

D.P.S.

DEESIDE (Aboyne Airfield)

Spring thermals are with us and most of our visitors have had some soaring, although wave days are scarce. Our hangar roof has had a much needed repaint — our thanks to all who helped. The new clubhouse foundations

have now been concreted, and by the time this is printed, the masonry work should have been completed by Lemmy Tanner and his "press gangs". Visiting carpentry experts will be more than welcome on non-flying days this summer.

J.R.B.

DERBY & LANCS (Camphill)

We have had lots of flying, as the weather continues to be kind once morning fogs have cleared. Fred Neal, Nigel Hill and Stuart Macarthur have gone solo, Stuart as a result of our first full club week (our thanks to CFI, John Humpherson, for both organising and doing most of the instructing).

We note with pride and pleasure that our club president, Basil Meads, has received further recognition for his many years' service to the gliding movement. (See BGA News.)

S.G.

DEVON & SOMERSET (North Hill)

A farmer has agreed to the use of several fields for field landing practice. As they are some distance from the site we shall benefit from road and aerotow retrieves to keep our wits in trim.

Some members have just returned from Portmoak with indifferent flying results, except for Joe Watt (K-8) and son Colin (K-6) who kept each other company on their five hours. Colin subsequently completed his Bronze C.

After earlier disappointments with the Sports Council, our grant came through and we now have a K-13 with Finnish registrations.

Our first task week starts on June 1 with places available on the second task starting on August 17. A sixth course week has been fitted in for early August to cope with demand.

I.D.K.

DONCASTER (Doncaster Airfield)

Jack Sharples has stepped down as CFI after four years' of sterling service (and a lot of worrying on our behalf). Mel Morris is taking over and they both have our thanks and best wishes.

The Northern League held a meeting here in March when the rules and groups of clubs were agreed. We are flying against Trent Valley, Derby & Lancs, Newark & Notts and Humber GCs. The first meeting is in May at Kirton in Lindsey.

The early season weather has been abysmal with only odd soarable exceptions, but Nev Spencer managed the first field landing of the year (for the third year running) at Bently, almost 3km. The motor glider fuselage was recovered in March. Unfortunately it was damaged in a field landing two weeks ago but should be flying again in July.

E.T.R.

DUBLIN (Gowran Grange)

Our new 180hp Super Cub has done nearly 2300 launches in its first 11 months. Our new site, 30 miles from Dublin, is a licensed grass airfield and the owner has leased us space to build a hangar.

Wally Gahan crossed the lake early on the morning of January 4 to gain his five hours on the Lacken ridge, five miles from the site. Last August Dan Begley (Phoebus) completed 250 of a 300km triangle, the nearest anyone in the club has got to Diamond goal in recent years. His wife, Cecily, has her instructor's rating and won the Club Ladder trophy, contributing heavily to the club's 1500km cross-country total.

T.A.W.

DUNKESWELL (Dunkeswell Airfield)

Our two-seaters, resplendent in their new spring livery were put to good use by Alan George, who went solo, and Brue Bint, who found the first spring thermal. Congratulations to Les Baskwell on completing Bronze C.

Weekend courses are in progress and the holiday courses are well booked.

Changes in clubhouse management have, sadly, included the departure of Don Wilson and Richard Brooks whose hard work and tremendous service on the catering front have been greatly appreciated.

C.B.

ESSEX (North Weald)

The new Super Cub is proving a great asset. We have had a few winter weekend trips to the Long Mynd and the annual pilgrimage to Aboyne resulted in a number of Gold heights.

The clubhouse redecoration is progressing well, thanks to Brian Murphy and his team. Our thanks also to Peter Manly and his helpers in the workshop where one K-8 has been recovered and the K-13 is at present having a wing recovered. This will put the club fleet in fine fettle to face the soaring season which, according to rumour, could fall on a weekend.

Our congratulations to Eddie Kiff and Keith Martindale on going solo.

M.N.

ESSEX & SUFFOLK (Hadleigh)

Our first soaring day of the year was February 21 when several members achieved hour-long flights. Since then there has been virtually no flying due to bad weather.

Eric Richards, chairman for five years, resigned at our AGM on March 22 — he is now an honorary member. Geoff Thurtle is our new chairman. Various awards were presented: Peter Smart gained the instructors' cup, Alan Hall the Geoff Cork memorial trophy for the longest flight and our CFI, Peter Wilby, won the Club Ladder trophy and the trophy for the fastest time round the club 100km triangle.

Congratulations also to our newly qualified instructors, Tristran Llewelyn-Jones and John Ballance.

V.H.

HEREFORDSHIRE (Shobdon Airfield)

Early spring turned north-easterly beasterly and there wasn't the usual good wave. In January Tony Maitland ridge soared the Mini Nimbus O/R to Ludlow *via* Leintwardine and Downton Castle in a 20kt northerly, a distance of 36km with a 2000ft high point. This trip hasn't been done before.

On February 17 Dave Carson (resident instructor) wave soared the Falke to 11 200ft using only two engine units. The Twin Astir went to 10 000ft three times giving John Bastin, Dave Falls and Graham Mason invaluable advanced training.

John Warbey spent three weeks at Sebring, Florida and said "Splendid people, cheap power flying, reasonable priced gliding, grotty weather." He had cross-country clearance but no cross-country conditions.

Bruce Hunter has a DG-100G Std 15m arriving in the autumn, the first in the country, for a syndicate with Les Kaye and Graham Mason. John Hunt, chairman, spent 14 months rebuilding a K-6CR which he flew on April 4. Adrian Howley has converted to the K-8.

Tony Greatrix organised our first club dinner for ages which was a great success with Justin Wills as guest speaker.

R.P.

HIGHLAND (Dallachy)

After a disappointing start to 1981 with many non-flying weekends and far too little wave, the first thermals arrived early in March and Colin Dewhurst (Oly 2B) flew Silver distance and height, though unfortunately his barograph failed.

We congratulate Colin Dewhurst on being allowed to renew his instructor's rating, which eases our instructor shortage, and Alan Clark on going solo.

Edinburgh University GC sent their K-13 and seven members up from April 4-11 for their usual Easter visit — the best week ever with seven full flying days, four of them soaring days when flights of two hours or more were common. Of their members, Bruce Greer went solo and got a Bronze leg on his third solo flight and two of their early solos were checked out for our difficult site. Our CFI devised a 100km milk run for post Silver C pilots which he completed in just over 55min in the Astir to prove it could be done.

At our annual dinner on April 10, a rousing success, awards were presented to Jim Tait, our CFI for winning the Club Ladder with over 3000pts; to John Macfarlane and Stephen Sinclair for a height gain of 13 000ft in the Bocian (a new club two-seater record) and to Gerry Robson, our assistant inspector, the CFI's trophy in recognition of the tre-

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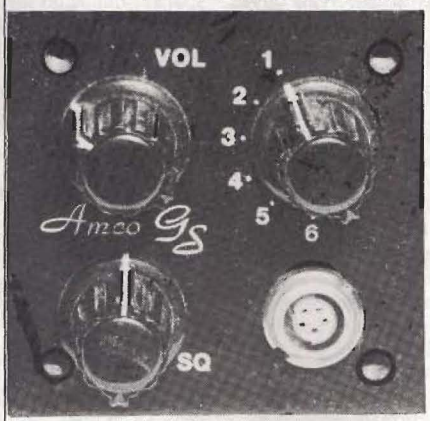
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mendous amount of work he has put in to keep our fleet flying.

After much stalling, the District Council have at last renewed our planning permission, but for two years only: they are still hoping to attract a large-scale industry onto our site, so "Keep Dallachy Undesirable" will have to be our 1980s motto!

R.E.T.

INKPEN (Thruxton Airfield)

We welcome visitors as we now have a full time tug pilot and instructor. We have completed our first week of seven-day flying which will continue until September.

The first of our 1S-28s is being used for advanced dual training — our plan is to use one of them for dual cross-country experience. We have been able to cope with many air experience flights and have an encouraging number of new members, both *ab-initio* and experienced. Amongst the latter, Les Dawson will strengthen our team of instructors.

P.B.

KENT (Challock)

Despite the wind and rain we flew throughout the winter and spring. John Bailey went solo and John Reeves got a Bronze leg off our new winch.

We bought an immaculate K-8 from Germany which is a popular, soarable replacement for the Swallow, now pensioned off into a loving syndicate within the club.

We are pleased that after a three year battle with the local council and other sundry bureaucrats, our chairman, Tom Rudge, has permission for us to fell an area of trees adjacent to the southern boundary of the airfield. This should mean safer tow outs, shorter landings and eventually, when the regrading has been completed, a longer airfield.

The March expedition to Portmoak hit disappointing weather although Hugh Colton managed five hours on a marginal day.

At the AGM on March 28 John Bailey, Jill Hoye and Alan Smith were voted on to the committee, Gavin McGuire is now secretary and Caroline Bunyan has taken over as social secretary from Jenette Gardiner. We thank Jenette and retiring committee members Helen Tyler and Roy Hubble for all their hard work.

J.H.

LONDON (Dunstable)

The weather has not co-operated recently and flying has usually been poor. Numbers were swollen by our friends from the Essex Club for Brian Spreckley's talk on cross-country flying. The first club task set on March 28 was a modest sounding 66km triangle but there were only two completions. We have better hopes of our forthcoming "Easter Comp."

The only points on the club ladder so far have been earned by Brian Wise at Aboyne; but Colin Cruse and Ron Page have followed him up there, seeking Diamonds.

Members were saddened to hear that Ron Dodd died from a heart attack at the end of March and our sympathies go to his family.

F.K.R.

MARCHINGTON (Marchington)

All the privately owned fleet has returned to the site after their Cs of A in various sheds, barns, garages and lounges, plus a Mosquito and a Dart.

A bulldozer has been clearing further areas of the site and has made numerous piles of uprooted trees and bushes creating a seventh heaven for the clubs' pyromaniacs. One or two pilots have even been seen setting light to these piles and then scrambling into their gliders in the hope of using their own personal thermals.

S.D.B.

MIDLAND (Long Mynd)

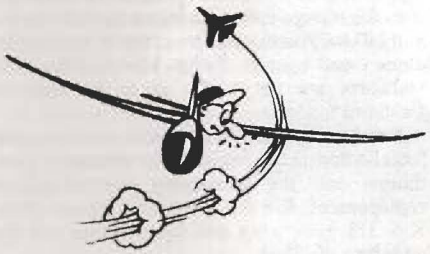
February and March gave good training weather and we are now looking forward to the arrival of our first club K-21.

The trophies were presented at our annual dinner and dance. Tony Crowden, Addie Brierley and Jeff Rowson each collected two, whilst Charles Wingfield, John Stuart, "Mac" MacArthur, Malcolm Allan and Chris Alldis won one apiece and Bob Scarborough bagged three.

Peter Salisbury was awarded the Maxam trophy for his long and much appreciated service as winch driver.

J.S.

NORFOLK (Tibenham)



Our part of Norfolk seems to have more than its share of military aviation so were glad to visit Lakenheath and Woodbridge USAF bases and to discuss the traffic problem with some of their pilots. Our thanks to Eric Ratcliffe and Dave Page for organising the trips. It was interesting to learn that the American equivalent of Cranwell does some of its training on gliders.

Our red K-13 has been stripped down and renovated by members. The soaring season got off to an encouraging start with good flights by Mike Watson (Astir) on April 9 and M. Haynes (K-6) on April 12.

We wish our tugmaster, Eric Titman, a speedy recovery after his operation. Those not going to Portmoak on the annual wave hunt are running the annual open day at Robin Combes's fish-farm.

M.T.R.L.

OUSE (Rufforth Airfield)

I was hoping to report that the airfield was now ours but the sale has been delayed yet again and at present there is no indication of the new sale date.

We have entered the Northern League and following his month's gliding (and spider spotting) in Australia, Barry Lumb is organising a ladder competition.

S.R.L.

OXFORD (RAF Weston-on-the-Green)

The renovated clubroom will be open for Easter after three months' of effort, mainly by a small team of members. Previously it was a disgrace but has now been properly waterproofed, given a suspended ceiling, new wall coverings and furniture, storage heaters and, of course, the bar. Since the building is rented we were able to do this only after lengthy discussions with the RAF.

We have a task exchange with Aquila GC over Easter here at Weston and two weekends later on at Hinton. The parachutists here have agreed to give us 1½hrs of uninterrupted launching on each task day, and this is a symptom of our improving relationship with them. They have encroached on our end of the hangar but that was half-expected now that the RAF Chilterns' gliders are no longer here.

Club finances are also beginning to improve. Local advertisements in early spring brought in a steady stream of customers for experience flights and we have taken on quite a number of new members. In addition we have saved over £500 this year on insuring the club fleet (five aircraft) by merely shopping around. Club treasurers please note.

The latest arrival is a Std Cirrus (873) owned by Phil Hawkins and chairman John Giddins. Astir 914, damaged last August, is still out of action at the time of writing, having been the subject of argument between owners, insurers and repairers over who was paying for what. It's a long complicated story but the moral is clear — don't bend your glider! But if you do, have an independent check carried out on the repairs.

P.H.

RATTLESDEN (Rattlesden Airfield)

We made use of the few good days recently and congratulate Dave King and Charles Portway on completing their Bronze Cs, Paul Steggles on his Bronze leg and Mick Arnold on going solo.

Our thanks to Paul Keeble and Co for their hard work in completing the two concrete runs up and into our hangar which were much needed. Rob Smith and Mick Arnold, group equipment officers, have totally transformed our abused twin-drum winch into a gleaming power pack. They now intend building a twin-drum winch from scratch having already obtained the engine.

We are sad at the loss of our T-21, pensioned off after a heavy landing. With the K-7 having a major overhaul this means we are without a two-seater at the moment.

R.W.

SOUTHDOWN (Storrington)

Following the arrival of a privately owned Sport Vega we had the demonstrator with us for extended club trials and it was highly recommended by pilots of a wide experience range.

There were no committee changes at the AGM. The trophy for height went to John Frampton; for distance and League I to Angus Buchanan; for League II to Ria Ward with Roger Combes winning the new David Knight trophy.

We are interested in building a winch for our rather short field and would welcome recommendations from any clubs with recent experience. Please write to John Ward, c/o Southdown GC, Storrington, Sussex.

B.A.B.

SOUTH WALES (Usk)

As always we are indebted to our inspectors, Peter Storey and Dennis Bryan, for the club fleet Cs of A. Our new winch, being built by Lyn Everritt, is nearly finished now that a vital part has been cannibalised from a fire engine.

Two special awards were made at the annual dinner. Dave Rowlands received the trophy for the most immaculate circuit into the wrong field and Lyn Everritt the award for his navigational abilities — "what goes up and doesn't get back."

Evening flying is now well underway and it is hoped to improve the effectiveness of *ab-initio* training.

P.A.C.

STAFFORDSHIRE (Morridge)

Arthur Lowens, our past CFI, gave about 12 members experience of flying the BGA Twin Astir during two very successful weekends.

We have recently acquired a portable petrol generator for £175 so we can now do our welding in the hangar or on the field. Our refurbished K-13 is back and attracting new members.

At the AGM it was decided that subscriptions and flying fees should not be increased for 1981/2 in an effort to maintain present membership and attract newcomers.

Our winter social season finished with a film night which included the excellent BGA film "Dawn Flight".

There are two club courses in May for normal club flying and for cross-countries. We start our Wednesday evening flying for visitors in May with Friday evenings for club members.

Tony Boyce commissioned a sign in wrought iron based on the World Championship emblem which has been installed near the site entrance.

P.F.

STRATFORD ON AVON (Long Marston Airfield)

It is a slow start to the season with revenue and launches down on last year, though membership is very healthy. We have a promising programme of air experience evenings and still have a few vacancies on four holiday courses in June/July.

At the AGM in March Andy Coffee retired as chairman after 6½yrs and was presented with a camera and inscribed card signed by members in appreciation of his invaluable service dating back to the old Worcestershire GC at Bickmarsh. Mike Coffee handed over the treasurership to John Shipston — thanks Andy and Mike. Peter Candy was elected chairman and Gary Print is CFI. Martyn Davies won the Club Ladder pot, with other trophies going to Chris Roberts for most promise and Ray Hopkins for best flight in a club aircraft.

Increased non flying activities on the airfield, plus parachuting and light aircraft, creates additional hazards at weekends. All visiting pilots please note that landings are strictly prohibited when drag meetings are in progress and extreme caution must be exercised at all times.

H.G.W.

STRATHCLYDE (Strathaven Airfield)

Unfortunately we say goodbye to our CFI, George Piggot, who has moved south of the border. We wish him all the best and thank him for his unselfish service during the past year.

This season could see our remaining instructors working very hard and if there are any assistant or full Cat instructors who would like to fly at our small friendly club we would make you most welcome; just call on 0357 20235 any Sunday.

Our new Jaguar winch has made a few trial launches with the Prefect, but until a pay-on gear is devised, it will play second fiddle to our reliable old bus.

The club Swallow will be returning to Feshie in May in search of some badge flights.

P.A.

SURREY & HANTS (Lasham Airfield)

It has been the poorest spring in the Lasham area for many years with incessant rain, gales and hill fog ruining any prospect of soaring let alone cross-country flying. Many of the club stalwarts are yet to fly or to be seen at Lasham!

Regrettably prices have had to rise this year largely due to an increase in insurance premiums and the increasing cost of glider replacement. K-8 383 has been sold and when K-6 313 goes a second Sport Vega will be added to the fleet.

One bright spot in our otherwise dismal scene has been Roy Pentecost's visit to Aboyne with the Club Mosquito. His two weeks in March produced 25hrs of enjoyable flying with cloudbases of 6000ft and a little wave.

C.L.

ULSTER (Bellarena)

There was excellent soaring in March and an encouraging number of new faces. A surge of constructional activity began in early April with the finishing touches being put to the hangar, the long-awaited loos are under construction and work has resumed on turning our derelict cottage into a clubhouse.

The importance attached to getting facilities below to match the standard of the soaring above was marked at the AGM by our enlarging the committee with a site and buildings boss, Jim Wallace being elected to the post. Other changes saw George Stewart succeeding Bob Rodwell as secretary and Jim Weston, Billy Craig and Mervyn Farrell being elected treasurer, technical officer and safety officer/tugmaster respectively.

On April 10 we mounted a special day's flying for UTV while BBCNI plans to devote the larger part of a BBC 1 *Sportsnight* programme to our activities later in the year.

R.R.R.

WOLDS (Pocklington)

It is with regret that we report the death earlier in the year of Roy Flude. Roy was a very popular and hard working member and will be sadly missed.

Our two new winches are now in service thanks to the efforts of several members led by Les Cooper.

With task weeks, flying weeks and Northern League it looks like being a busy summer. At our AGM on April 10 the retiring committee members, Avelyn Bennett and Pete Myhill, were thanked for their efforts.

H.N.

WYCOMBE AIR PARK (Booker)

We had all hoped that the 100km task completed by the pair-flying duo of Dave Watt and Alister Kay on February 11 would be a good omen for the season, but poor weather precluded all cross-country flying from Booker in March for the first time in recent memory. This has, however, left plenty of time for aspiring cross-country pilots to plan future sorties with the aid of the "computer-produced-route-planning-facility" in the clubhouse, and if the execution lives up to the planning we can look forward to a record-breaking season.

We warmly welcome our new course instructors/tug pilots, Mick Alexander and Steve Tomlin. Super Cub G-CUBB has a new 180hp engine and will shortly join the fleet.

Finally, the CFI's load of bull (S&G, Feb, p17) is steadily diminishing, much to members' relief, as we are not entirely sure about the effect all this raw meat may be having on him!

A.C.

YORKSHIRE (Sutton Bank)

The first thermals of the year were in February. A 150km trophy has been donated in

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memory of Malcolm Sutherland and should encourage the growing group of would be pundits.

Our CFI has recovered and resprayed the Falke, now in GT version, with an electric starter. Also following much work by Ian Stromberg on behalf of the Tutor syndicate we now possess what must be one of the best Tutors in the country — complete with see-through wings!

Our dinner-dance was a great success and our thanks to Bill Scull for being our guest. There are still a few available places on the holiday courses.

W.R.B. and J.R.

SERVICE NEWS



Culdrose Naval GC members after their mass parachute jump, see report on the next page.

ANGLIA (RAF Wattisham)

A good start to the year was marred by bad weather in March prolonging the time the airfield is waterlogged. Once we can use the grass again and the long run we may be able to teach people to fly in headwinds.

Our chairman, Grp Capt Peter Gover, is the first to solo this year — he also converted to the K-4.

Four members just back from Aboyne thank Alan Middleton for his hospitality if not for his weather. As usual Gold height climbs were made by those wanting Diamonds.

Unfortunately we say goodbye to Mike Parkin and thank him for his hard work as officer I/C. Dave Harrison is taking over the job.

Lastly our thanks to John Richardson and Ron Jackson for their little present.

M.B.

BANNERDOWN (RAFGSA)

Our congratulations to Jerry Odell and our CFI, Tony Clarke, on their Diamond goal flights on our club expedition to the USA in November (see p113).

Janice Gaydon, Pat Payne, John Jioner and Alan Quartely have gone solo, Alan soon gaining two Bronze legs. Mel Dawson and Dave Kelly completed their Silver Cs with distance flights and Alan O'Fee and Jim Walsh have become assistant Cats after a course at Bicester.

We now have the two best winches in the GSA thanks to our MT experts led by David Pickles.

M.D.

BICESTER (RAFGSA)

It rained on Whitsun Bush Jnr's 16th birthday so he went solo the following day. Our congratulations also to John Armstrong, Colin Barnfather, Richard Lovell-Butt and Stu Simpson on completing their instructors' courses in early April. Another notable achievement during the winter was Dino Dean's Diamond height in the DG-100 at Dishforth.

The switch to higher performance aircraft continues. The Janus B has been replaced by a C; "Nobby" Clark, Ken Hartley and Mike Sandy have bought a Nimbus and Steve and Jackie Hymers are flying the Mosquito here.

Our best flight to date was in the Janus in mid-March when Terry Joint and a passenger were launched into what he considered to be primary wave off the Cotswolds. They broke off the climb at 11 000ft in 3kt and flew round a 100km.

In April we said farewell and thanks to Tim Oulds of the Centre staff and are sure his many friends in the RAFGSA join us in wishing him a happy retirement.

J.W.

CHILTERNS (RAF Halton)

The RAF Sports Parachutists severely hampered our launch rate last year at Weston-on-the-Green and membership and flying hours dropped alarmingly. RAF Halton has proved to be our salvation. We settled in at the end of last August and have gained many new members. The RAFGSA has improved the fleet by swopping our K-18 for a Sport Vega, our K-4 for a K-7 and topped us up with an Astir.

Halton is under a ridge of the Chiltern Hills which works splendidly for much of the time. Hours and launches are booming and February 4 saw our first durations. Grp Capt Truelow, RAF Halton's Station Commander, got his five hours in the K-8 and Martyn Spence his in the Astir. Ian Trench flew two Bronze legs the same day.

At the AGM Rosemary Nicholls presented the club with a splendid miniature barograph which she had bought out of the proceeds of two years' hard work in keeping us well fed after flying. Mick Mahon got the Member of the Year award, Bob Spiller the CFI's trophy and Neil Edmunson the Aspirants trophy. Frank Wilson is now CFI, Nick Nicholls his deputy and Jock Manson is our vice-president.

M.G.S.

CRANWELL (RAFGSA)

The winter has been busy for most syndicates with gliders undergoing face lifts. The K-6 is now red and white, the Prefect red and the K-6 blue and white. Our new Twin Astir is being well utilised and our thanks to Bill Barker and Robin Simpson for building its trailer so quickly.

Malcolm Ward, Alan Boswell, Ted Scarborough, Val Ramsay and Steve Benn have gone solo, congratulations to John Hull on his instructor rating and a welcome to our new members from East Midlands GC.

G.A.B.

OBITUARY

On Sunday, March 8, two of our instructors lost their lives when the Blanik in which they were being winch launched was struck from behind by a powered aircraft.

Michael "Mick" Topham, aged 22, was an enthusiastic and cheerful fellow well liked by us all. He had been instructing for about a year, six months of which had been with the East Midlands GC at RAF Wittering. He was a competent and popular instructor and his thoughtfulness and patience was much appreciated by his pupils. He was a "black box" wizard and his electronic skills were much in demand both in the clubs and during the Inter-Services Regionals. The Twin Astir and the ground control bus will be mementoes of his skills.

Ian Gill had only been with us for that fateful weekend having transferred from the East Midlands GC. He was also an enthusiastic individual and his potential at Cranwell had yet to be realised.

They will both be greatly missed and our sincerest condolences are offered to their families.

Geoff Bolton

CRUSADERS (Cyprus)

There have been a number of changes and we were pleased to welcome Roger Crouch as CFI. Following the AGM, chairman Colin Pinnell handed over to Andy Wolton; Di Cox, secretary and ADC to Colin, managed to sell the job to Vernon Bradbrook, with Dave Smith holding the purse strings.

Visiting squadrons have provided us with instructors and pilots who have enjoyed our winter soaring — though this winter has been

the wettest for many years and some of our famous sea breeze fronts haven't appeared for weeks at a time.

Fred Howley is on an instructors' course at Bicester. In June we say goodbye to John Stenhouse who has provided immense help with our ground equipment.

R.V.B.

CULDROSE NAVAL (Culdrose Airfield)

On March 15 we once again entered the record books, this time as the first gliding club to lock up its gliders for a weekend and devote the time to a mass parachute jump over its own airfield. A Cessna 182 and two instructors came from the RN and RM Sports Parachute Association at Dunkeswell to train 15 club members. We jumped three at a time from 2500ft, using static line assisted double L sports parachutes.

We all landed safely and unharmed on the dropping zone except for one black sheep who flew further under a double L canopy than he has flown in a glider this year! The unanimous decision was "fantastic", and apart from the personal pleasure we will have great delight in handing over a cheque to the Mount Edgcumbe Cancer Hospice for over £800 gained in sponsorship.

H.M.D.

FOUR COUNTIES (RAF Syerston)

We had a good start to the season with Nick Lewington doing his 50km to Doncaster GC in early February. Congratulations to Dave Gordon and John Bull on going solo.

We say goodbye to Mick and Lynn Hernesaw who are emigrating to South Africa — Mick has just gained his Bronze C.

Pete Clarkson and Al Tolson have become instructors. Our Janus trailer is almost complete. The 25th anniversary party in March was a huge success with a lot of old members turning up.

A RF-3 has come to Syerston and is a nice addition to the fleet.

G.P.S.

FULMAR (RAF Kinloss)

We have had an excellent flying rate since the beginning of the year and an increase in membership. A Blanik has arrived to bolster our training capacity and we have two new full Cats, Wally Grout and Oscar Constable.

Nick Murphy has notched up his 1000th launch, "Griff" at last was successful in his duration at Portmoak, Shirley Stewart converted to the K-8, Jenni Duignan to the Blanik and Dave West re-soloed in the K-4.

A.F.D.

HAMBLETONS (RAF Dishforth)

Despite wet weather we flew as much as possible, and a group of stalwarts headed by Eric Thompson spent many evenings working on our bus winch. John Jones, chairman, has also spent long and often lonely hours cleaning the wings of our second Blanik, which we hope to have flying again very soon.

At our AGM awards went to Steve Olender (best cross-country flight) and Martin Cummins (best *ab-initio*). Terry Trolley has converted to the K-6 and Ken Jones to the Astir.

Although we have had a little wave and even thermals, the number of members appearing at the airfield on non-soarable days has sadly reduced. However, we hope with the coming of summer — heralded by the Easter task weekend — many of our defectors will return.

J.P.

HUMBER (RAF Lindholme)

Our K-8 is resplendent in its new coat and ready for the Inter-Services Regionals in which several of our pilots are competing. Keith Mitchell, who is unfortunately soon leaving us, and we thank him for all his efforts, will also fly in the Nationals. Phil Airey, our aircraft member, is also posted.

Bernie Shaw completed his Silver C with a duration during an expedition to Sutton Bank in March and Sheila Gildea has completed her Bronze C. Mick Marriott went solo fairly rapidly, being a power pilot. Geoff Phillips has just successfully completed an instructors' course at Bicester and we hopefully have two more potential instructors in the pipeline.

K.M.G.

PEGASUS (RAF Gütersloh)

Mick Mahon and Jamie Allen have joined us and are both full Cats, Mick having taken over as CFI. Our K-8 looks super after its major, thanks once again to Pete Carr and his crew.

Our membership is steadily increasing and over the Easter weekend we have a film show and cheese and wine party for new members. Preparations are well underway for our Comps at Detmold in June when, hopefully, we should have our Vega. Tony Evans is negotiating with contacts to get our second winch on line for the summer.

At the moment there is the annual pilgrimage to Sisteron, France.

B.P.

PHOENIX (RAF Brüggen)

Although hampered by bad weather we maintained a reasonable launch rate this winter with the following noteworthy achievements: Pat Nelson, Dave Kent and Dave Hoursten converted to the K-18; Pat Heady, Pete Atkinson, Colin James and Les Marsh to K-8; Bert Jamsen and Adrian Joice have gone solo and George Barber and Jim Nelson have their PPLs, John also converting to the Astir, and George is a full Cat.

The K-21 should be with us this spring. George Lee visited us recently and we have said farewell and thanks to Pat and Mick Wilson on their return to the UK.

D.I.H.

Wyvern (RAF Upavon)

It was reported at our AGM that despite last year's poor soaring weather our flying hours

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had increased considerably and cross-country distances were almost doubled. The chairman presented awards to Ray Hornbuckle for outstanding service as MT member; to "Stormy" Fairweather as the best *ab-initio;* to Gerry Sturgess for his Diamond height at Aboyne and to DCFI, Roy Gaunt, for the longest flight from the site. Mike Law donated a cup on his posting to Benbecula which went to John Hawkins for the best cross-country by a junior pilot.

The chairman thanked Pat and Merv Kelly and Arthur Pears for their hard work in completely renovating the clubhouse interior.

Congratulations to John Langston on going solo and we welcome Alan Millson back to gliding.

J.R.H.

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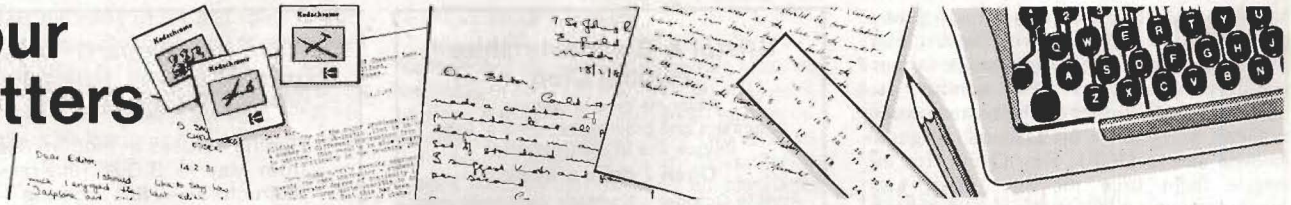
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Your Letters



VISUAL METEOROLOGICAL CONDITIONS

Dear Editor,

Referring to Mike Emmett's excellent airspace article in the last issue, p56, I would like to make the following comment. Inside the Controlled airspace of Special Rules airspace which gliders are permitted to enter, they can only do so if they remain at least 1000ft vertically and at least 1nm horizontally from cloud in a flight visibility of at least 5nm.

Outside Controlled airspace there are no VMC requirements for glider pilots (Mike talks loosely about pilots). Clearly if this were not so, then thermalling to cloudbase when above 3000ft or entering cloud either above or below 3000ft would be complicated by "Instrument Flight Rules" and it isn't — for glider pilots.

Could I ask that the next reprint of **Laws and Rules for Glider Pilots** states this clearly and concisely rather than a whole lot of irrelevant stuff on VMC outside Controlled airspace above and below 3000ft and 140kt and quadrantal rules which have nothing to do with glider pilots? Let's make this complicated subject easier for all to understand.

Returning to Mike's article, his statement that "none of the rules are applicable to gliders" appears to give us *carte blanche* to go anywhere anytime above FL245. My understanding is that for *glider pilots* the airspace above FL245 should be treated in the same way as that below FL245, and for instance rules about penetrating airways are the same and danger area rules are unchanged and so on. It is also worth pointing out that our half million maps only show Controlled airspace up to FL245, so cannot be used!

BERNIE MORRIS, **Newbury, Berks.**

Mike Emmett, chairman of the BGA Airspace Committee, replies:

Bernie is quite correct. There is no legal requirement for a glider pilot (or indeed any other pilot) to maintain VMC in open Flight Information Region. The VMC criteria were included in my article because they are relevant to the crossing of airways and the penetration of certain Special Rules airspace. Bernie refers to "complicated Instrument Flight Rules". In fact for flight *outside* Controlled airspace they are very simple:

1) A rule defining the minimum permitted terrain clearance.
2) A rule describing the allocation of cruising altitudes for aircraft in *level* flight.

Clearly gliders are not normally affected by either rule. In the statement that "above FL245 none of the rules are applicable to gliders" I was referring to the rules for flight in the upper airspace Special Rules area, namely:

1) A flight plan must be filed.
2) ATC permission must be obtained before the area is entered.
3) A continuous listening watch must be maintained on the appropriate frequency.
4) The flight must be conducted in accordance with ATC instructions.

These rules do *not* apply to gliders, so as Bernie says, there is no distinction between airspace above or below FL245 for glider pilots. The Upper ATS Route (airways) structure is not shown on the half million topographical charts, so those pilots intending to fly above FL245 should consult the **UK Air Pilot** (RAC Section) pgs 3-7, or the appropriate AERAD or Jeppesen Radio Navigation charts. I am indebted to Bernie Morris for raising these points which I hope are now clear.

PETREL'S MAIDEN FLIGHT

David Chalmers of Beech Hill, Berks, commenting on Petrel's prototype maiden flight (Feb issue, p19), said that the real prototype was constructed by British Aerospace Preston apprentices under the expert guidance of Sumner Miller with the first flight made by Roland Beament at Warton on June 1979.

Roy Procter explained that he gave a set of early Petrel plans to the apprentices but the Petrel he flew last November had been changed and developed considerably.

BEST-SPEED-TO-FLY

Dear Editor,

Anthony Edwards was good enough to send me a copy of his article "Why does the best-speed-to-fly construction work? (see S&G, June 1980, p126), but unfortunately not in time for my comment because his earlier letter had gone astray. So I missed the opportunity of meeting him when I was in Cambridge recently.

I have no papers available to support my memory of the 1947 article, which I had written independently of Dewing. I seem to think that I assumed the accuracy of my diagram because it could be verified algebraically, which I did, quoting the famous VC/C+S ratio.

At the time I thought little of the Dewing "proof" for two reasons. First it was too complicated for the average glider driver, and second I was getting married, selling my Olympia to Keith Turner, and off to work in Aberdeen far from gliding sites.

I had gleaned most of the Construction from Philip Wills and Fox during CUGC camps at Huish, so ably reported by Doc Slater. When S&G printed some woolly articles on the subject in 1947, I was therefore able to produce my reply immediately. Perhaps I should add for the sake of today's readers that I had suffered a severe bout of impact disease at Easter 1939 which almost put an end to my gliding as well as Duggy Davy's H-17. The war had then removed gliding from my interests except for training ATC cadets.

G. W. PIRIE, **Auckland, New Zealand.**

WHO MADE KRONFELD'S VARIOMETER?

Dear Editor,

There has been a tendency in British gliding circles to credit Kronfeld with the "invention" of the variometer and Peter Riedel's article in the Oct Issue, p228, was useful in correcting this impression. William Malpas has, I think, steered us towards an appreciation of the contemporary thinking by pointing out in the Feb issue, p40, that hill soaring does not require a variometer, and it is probable that because he had detached himself from hill lift more frequently than others Kronfeld was the first to feel the need for such an instrument.

I find it difficult to follow Riedel's reasoning that because a Badin type was fitted in the Rhöngeist in 1932 this must have been the one used in 1928. Surely all the stories circulated about Kronfeld's secretiveness indicate that the instrument was installed and *removed* by him personally? I should have thought that the Askania telegram of 1931 was a better clue. The Pioneer Instrument Co was selling rate-of-climb indicators in 1927 and Kollsman shortly afterwards. Was Kronfeld engaged upon tests of an Askania prototype? If so the secretiveness may have been imposed by that firm and not of Kronfeld's choosing. Peter Riedel does not say whether he has made any inquiries of that firm. English texts at that time referred to these instruments as "rate-of-climb indicators" and still do unless directly relating to gliders, and I do not know how the term "variometer" originated. In **Modern Aircraft** by Major V. W. Page (Pitmann-1928) a glossary of aircraft instruments gives:

"STATOSCOPE — An instrument for detecting minute changes of altitude. The indications of the instruments usually depend on small changes of the static pressure of the air."

"VERTIMETER — A device for indicating the rise and fall of an aerostat. A rate-of climb meter serves the same purpose although of a different form."

Major Page describes the type 165C Pioneer rate-of-climb indicator which could change function from variometer to

altimeter by merely turning a knob below the dial.

A clear illustration confirms this. Could this type of instrument be the cause of confusion between the use of the two terms when **Kronfeld on Gliding and Soaring** was translated?

None of the variometers made by Pioneer, Kollsman or Askania required a thermos flask and it is therefore probable that Kronfeld's thermos contained what he said it did — coffee!

CHARLES ELLIS, **Ilford, Essex.**

ORIGINS OF THE VARIOMETER

Dear Editor,

I'd like to make a small contribution to the discussion about the introduction of the variometer into soaring.

The first point worth emphasising is that instruments were available long before anyone actually fitted one in a sailplane. Although they were regarded as rather a luxury, powered aeroplanes were flying around with sensitive rate of climb indicators even before 1920 and some of these gadgets were not at all clumsy and could have been fitted in a glider. In the NACA Report No. 126, published in 1921 (but dated a year earlier), some 15 pages were devoted to careful descriptions of all the different rate of climb and descent indicators available and it is specially significant that one of the German instruments mentioned was reported to have only five seconds lag. Some of the "statoscopes" used in ballooning were capable of indicating rises or falls of only 10ft, though it is true these would have required a good deal of refinement to make them convenient for use in the small sailplane cockpits of the twenties.

In the British Report, R&M No. 1144, by Meredith and Gardner, there was even a description of an *electric* "variometer" which worked on the Wheatstone bridge principle with hot wire coils in the in-and-outflow tubes. I believe something similar was suggested in France *for sailplanes* even earlier, but cannot now trace the reference, which was in a very ancient copy of *L'Aerophile*.

RAF pilots in the 'twenties flying the air-mail route from Baghdad to Basra had actually used a device, constructed by their own ground staff, which they called a "dunt indicator". It was a simple but effective rate of climb or descent meter working on the capillary leak principle, and they used it for *soaring*. The aircraft they were provided with were underpowered and overloaded, so it was often necessary to find "dunts", which we should call thermals, in order to gain altitude. Richard Miller mentions this in his book **Without Visible Means of Support** and it is confirmed in F. D. Bradbrooke's **Light Aeroplane Manual** of 1931.

So the instruments were ready and even the idea of using them for soaring was not entirely new. There is every likelihood that Georgii, or Lippisch, or both of them, realised the possibility of using such a device in a sailplane once the existence of strong thermal currents had been proved, as it was by Kegel's storm flight of 1926. There would be nothing surprising if both men suggested the idea to Kronfeld, either separately or together.

As to the secrecy question, this seems relatively unimportant. No doubt Kronfeld kept his use of the instrument to himself for a season, but within a year he was flying the Wien, and photographs of the Wien show that he had his variometer mounted, face up, on the decking of the fuselage just forward of the "dog collar" type cockpit canopy. He could not have kept it secret once he was flying this great sailplane and when he toured England with it any Englishman could have seen it too.

Hirth obviously would have known all about it and his "blue thermal" soaring flights in the USA seem to have been made without a variometer. The "secret", such as it was, was well out by that time, and his failure to mention a variometer indicates that he didn't have one, not that he was still trying to keep it secret. All the more credit to him for managing to soar in thermals without such aid — he mentions seeing birds circling which guided him to a thermal at one point in the flight, and we should not underestimate the importance of flying by "feel".

It is surprising that there is no reference to variometers in *Flugsport* until 1933. But Stamer and Lippisch certainly did mention them in their small book for beginners in 1929, which reached England in translation in 1930. Then Georgii spoke of them and emphasised their value in his detailed account of the 1931 Rhön competitions which was published in Germany (in the academic journal, ZFM) in that year. This account was published in translation in both England and America in 1932. And by January 1933, Hirth was reported in S&G as saying, "the first essential is a reliable variometer".

In case there should remain any doubts about translation it is worth adding that the word "variometer" is no more German than it is English. We both took it from the French balloonists, and so when the Germans spoke of the variometer they used the word "variometre" and this word appeared on the early instruments.

MARTIN SIMONS, **Adelaide, Australia.**

". . . ACCIDENT WAITING IN THE WINGS"

Dear New Beginner,

You will in your early days in gliding pick up a lot of information from sources which, like that information, may be good, misleading or bad. One of the excellent services of good knowledge is S&G and, if like me, you read every word from the title to the back page advertisement you will realise that we are all reading to learn more.

Some of the early well meant but misleading things you gain can root so deeply that the instructor can actually fail to convince his student of the facts.

New beginner, I grovel before you in order that I may extract two promises from you that will help to avoid the accidents waiting in the wings (pun intended).

1) Please learn: the-rudder-does-not-turn-the-glider

and 2) Go to your favourite instructor as soon as possible and repeat the following lines: "I've just read a letter in S&G by some fool trying to convince me that the rudder does not turn the glider. Can you explain what he means, with a flight maybe, and will you also tell me the story of 'wassisname' who made sufficient circuit judgment errors to bring him to the airfield low and slow and who finally tried to line-up by turning the glider with the rudder? . . . and why he is not here today?"

NB. Dear Doc, please don't think that this assistant rated fledgling is trying to step on some imaginary ladder rung at your expense. He is not. It's just that I feel so strongly about deep rooted misunderstanding of the use of the rudder — and the accident reports bear me out — that I must say something. Your letter in the last issue (p91) was, of course, understood as it was meant by most people but perhaps new beginners may read it differently.

ANGUS MUNRO, **Oslo, Norway.**

SHUT UP-A YOUR BRAKES

(with apologies to Joe Dolce)

First you waggle your parts, and make sure your straps are sound,
Then the dials look good, and you wave the flaps around,
Next you check the trim and lock the canopy down,
Shut up-a your brakes!

When you're going up the wire, the whistling she's not right
You look along the wings and give yourself a fright
You pull back on the stick till knuckles they go white
Shut up-a your brakes!

When you're flying a cu-nim, the world she spin around
The rushing of the wind, a b.....y awful sound
Stuff the Diamond badge, you are safer on the ground
Pull out-a your brakes!

When you make an undershoot, the site she's far away
Perhaps you'll hit the cows or the hedge that's in the way
Remember if you can what the CFI he say
Shut up-a your brakes!

When you go back to the Bar expecting to have fun
The pundits they hold forth of the races they have won
You'd better realise there's nothing to be done.
Shut up-a your face!

KESTREL GLIDING CLUB

Please send all contributions to S&G to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH.

BOOK REVIEWS

Flying Sailplanes: A Practical Training Manual by Helmut Reichmann, translated from the German by Max Bishop and published by Thomson Publications, 1980. Available from the BGA at £11.95 inc p&p.

This short manual is brilliant; it is short in spite of its large format (the same as Reichmann's **Cross-Country Soaring**) because much of the space is taken up with diagrams and fault-finding tables, and it is brilliant because the former world champion somehow manages to recall and treat all those problems and doubts which assail the beginner, without inundating him with technical detail. Reading it was, for me, to relive my own training twenty-five years ago, and I came across many remarks which reminded me of things which I have had to learn the hard way, such as the wisdom of keeping one's head still and moving one's eyes instead, and even the importance of being seated centrally in a glider (or else one tends to fly with one wing low).

Being married to a categorised instructor means that there are all kinds of "How to glide" books lying around the house, and I have long felt that most of them make flying gliders seem more difficult than it really is. Some years ago I was so appalled at the BGA's Bronze C multiple-choice question paper that I wrote a parody of it for S&G which involved questions about the technique of riding a bicycle. Since then the books have not improved (I have not seen any recent papers), until now at last Reichmann has given us one which is masterly.

A characteristic of a good teaching book is that it makes you feel the author knows much, much, more than he reveals: you then know that he has selected from his experience just those things he thinks you ought to learn. This book displays that characteristic abundantly.

THE ARM-CHAIR PILOT

The Club Treasurer's Handbook by M. A. Peters, F.C.A. Published by Rose/Jordan Ltd and available from the BGA at £7.30 including p&p.

As many gliding club chairmen and treasurers will know, the running of even a small to medium sized club can be a considerable administrative burden. The role of the treasurer is probably the single most important job in the club (CFIs apart), in the sense that if he or she "gets it wrong" or fails to control the club's finances adequately, the consequences can be at best an embarrassment and at worst a disaster.

Probably with this in mind, and the fact that many clubs may not have the benefit of the free services of a professional accountant or book-keeper, or similarly experienced individual as treasurer, the author has written this extremely useful and well presented handbook. It is not aimed at gliding clubs specifically but at clubs in general, and it covers most of the topics that the average club treasurer will have to deal with.

The book starts by explaining in straightforward language the theoretical and practical aspects of double entry book-keeping, and develops the theme by covering the use of analysed cash books and bank reconciliations, leading to a full ledger system and the preparation of annual accounts. A minor shortcoming at this stage is the lack of a comprehensive theoretical explanation of *why* day-to-day book-keeping is translated into final annual accounts involving adjustments to produce an income and expenditure account and a balance sheet. The book concentrates on *how* to do this but a good grasp of *why* should be a pre-requisite. The reader will glean this from the middle chapters.

The book contains a particularly useful section on the various aspects of bar accounting, the necessary controls that need to be operated and the risks involved in not exercising proper control. This is especially relevant in many gliding clubs where "amateur" involvement may appear to be the most expeditious but often in the long run proves to be expensive if tight controls are not in evidence.

Accounting for income, VAT and the role of the auditor and certain aspects of taxation for charitable clubs are also covered in sufficient depth for the average club requirement. Throughout there are numerous excellent worked examples that any budding treasurer who has not kept previously a set of books should be able to follow. It closes with a brief chapter on the preparation of reports.

The book is recommended for those treasurers without accounting experience and I suspect more qualified ones might also benefit from reading some of the chapters (*eg* bar accounting). If all club treasurers were to run their accounts as efficiently as the book tries to teach them, then the important by-product of good financial management by the treasurer (not just book-keeping), would more easily evolve.

For a 125pp book the price may appear a little steep, but on the other hand it is aimed at a fairly specific and limited market and so can be justified on that ground presumably.

DAVID ROBERTS
Chairman, Cotswold Gliding Club

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TWO SCIENTIFIC PAPERS

Height Without Altimeters

John F. Crawford, in a paper sent from Switzerland, points out that when you make a turn high up, the lower wingtip appears to move backwards in relation to the landscape below; but when you turn low down, the wingtip appears to move forwards in relation to the ground. There is therefore an intermediate height at which it appears stationary against the background, and once you have found out the height of this "stationary" point, you know when you are at that height without looking at your altimeter. So, when approaching a familiar landing field, if you already know the position on the ground which must be crossed at this height there is no need to watch your altimeter. The knowledge can be useful when making a forced landing.

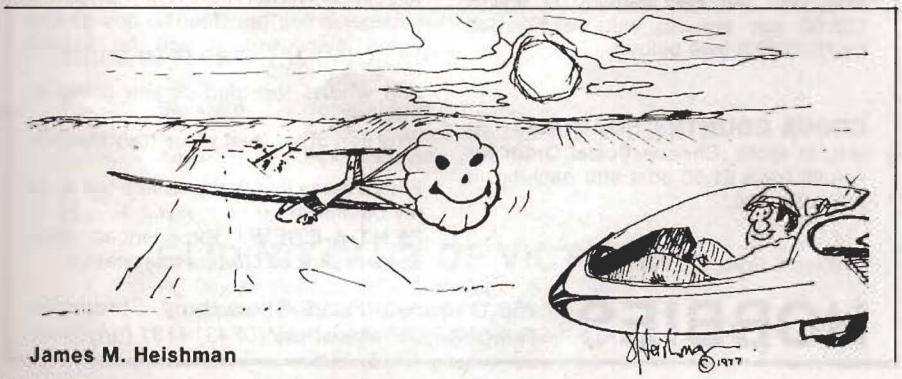
Comment: The author admits that when you are flying against the wind, the critical "stationary wingtip" height is lower down. However, you need to approach your landing field higher up the stronger the wind against you. Nevertheless, this interesting fact about the critical height for an apparently stationary wingtip does not appear to have occurred to anybody before.

Albatross Flight

John Wilson of University College, Cardiff sends a reprint of a paper "Sweeping flight and soaring by albatrosses" published in *Nature* of 25 September 1975 in which he claims that the albatross, in addition to its well known dynamic soaring by using the strong increase of wind with height over the sea, makes use of the slope lift caused by the wind blowing up the windward flank of a wave, which he calls "sweeping flight" because the bird sweeps along the flank of the wave. His list of references includes papers by gliding experts such as C. J. Pennycuick and G. R. Whitfield.

Comment: The one factor ignored is the speed of the wave which, according to a leading authority, Vaughan Cornish, travels at four fifths of the wind speed when fully grown, so the strength of the upcurrent would only be one fifth of that of the same wind blowing up a stationary hill of the same slope. But it takes time for a wind to build up such a wave, starting from a lee shore, and during that time the wind can blow considerably faster than the wave is moving.

Mr Wilson was a member of the South African group which bought the Blue Wren from its London Club owner in 1938. *A.E.S.*



James M. Heishman

classified section

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MARJORIE HOBBY wishes it to be known that she no longer has any connection with Flow Technology 2000 Ltd. She would like to take this opportunity of thanking all suppliers, customers and friends for their support, tolerance and courtesy during her two and half years with the Company.

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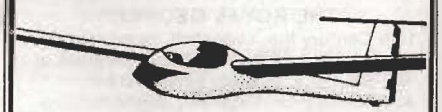
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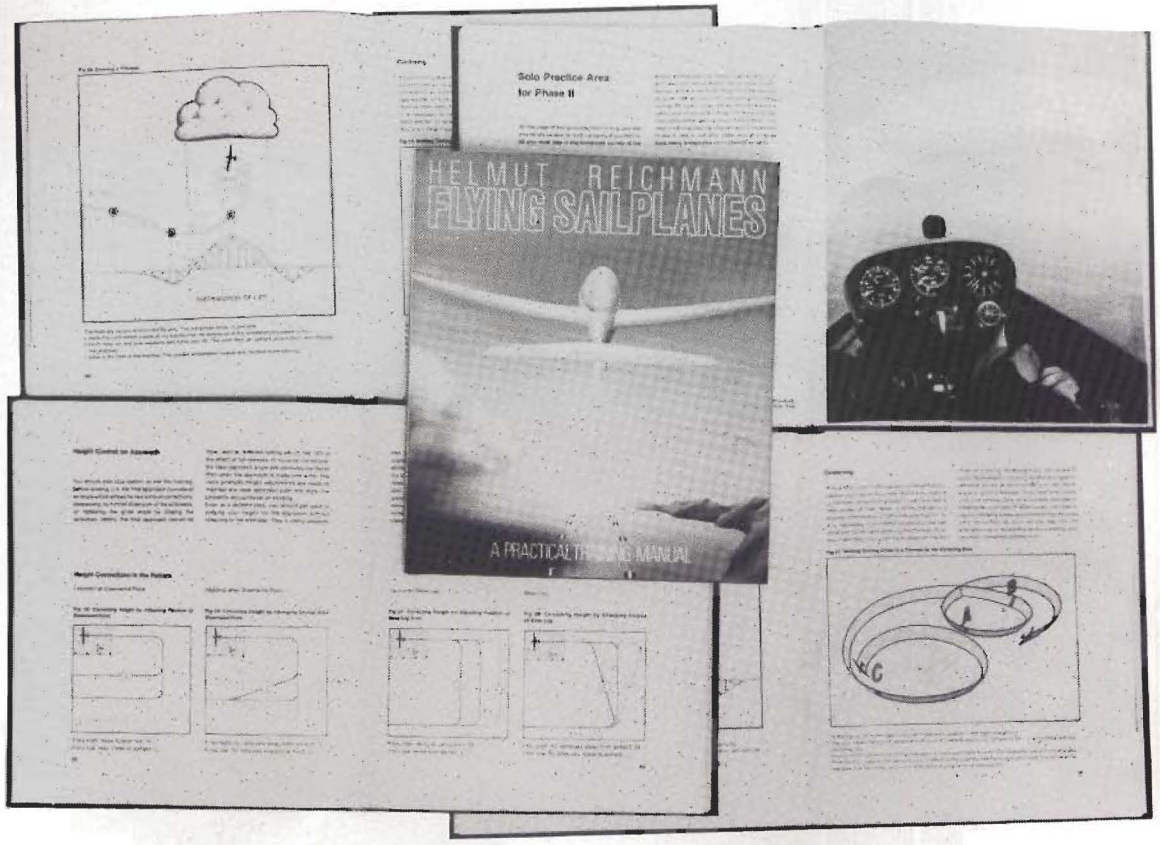
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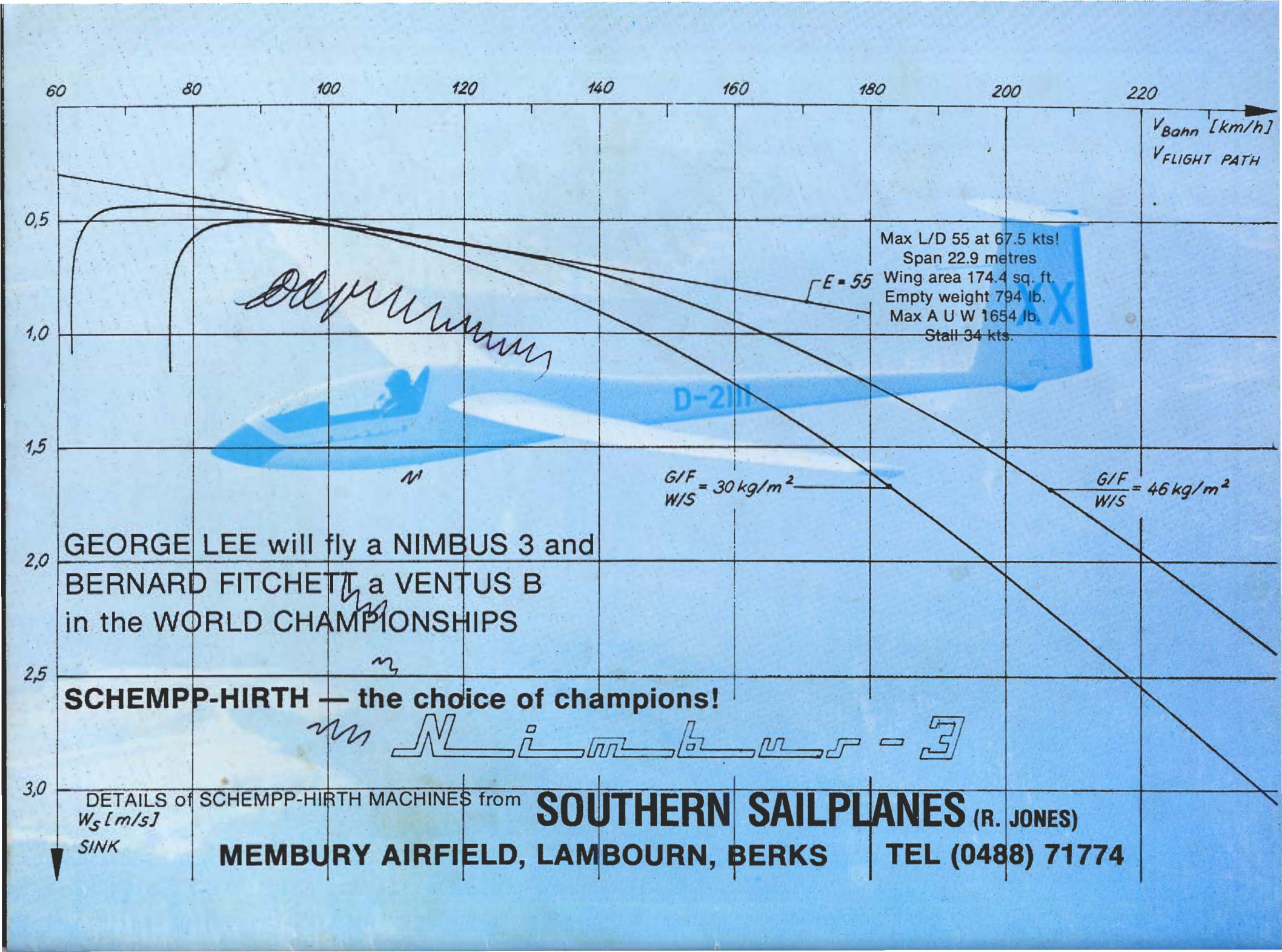
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