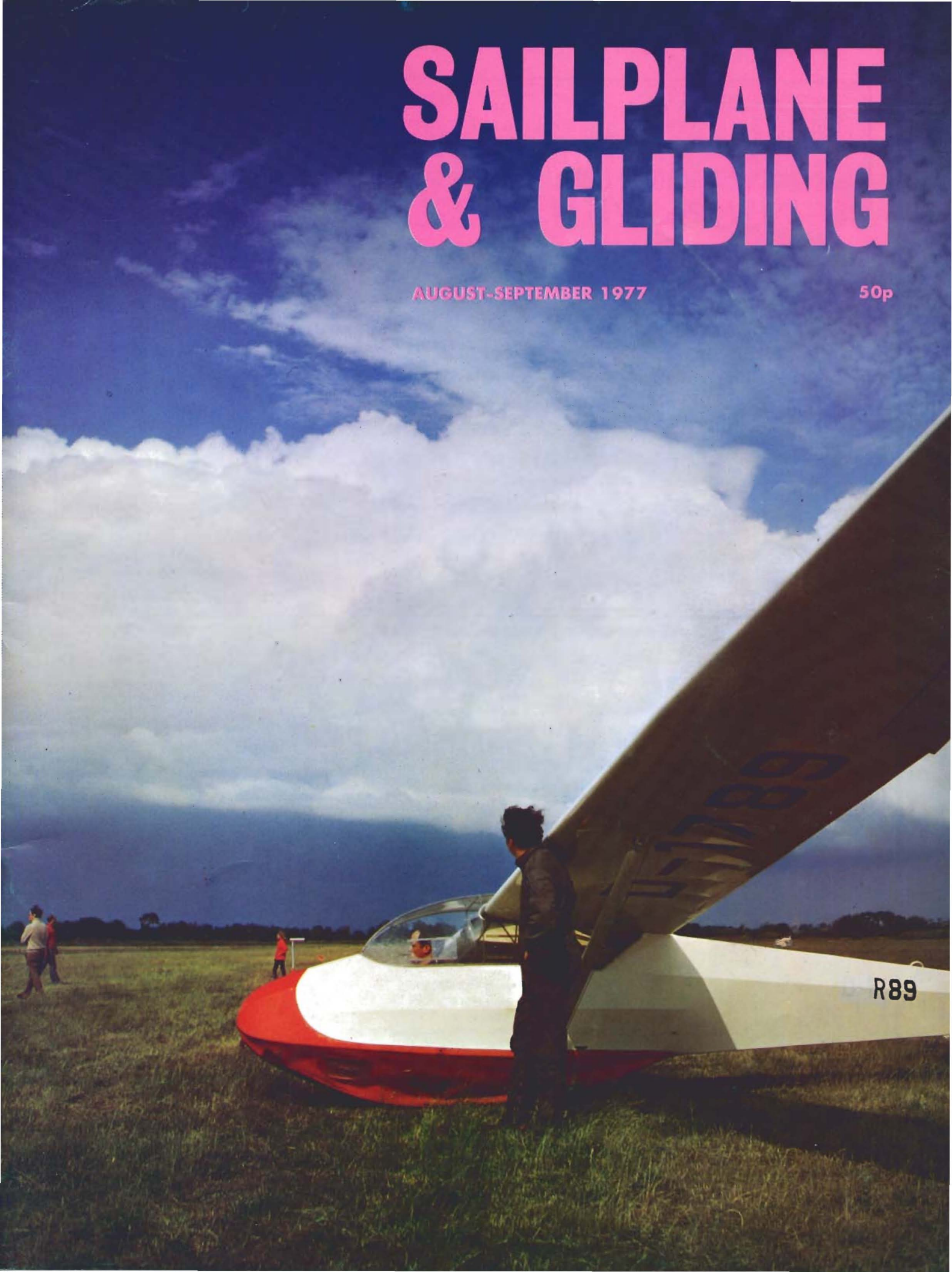
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SAILPLANE & GLIDING

Magazine of the BRITISH GLIDING ASSOCIATION

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SMIRNOFF DERBY



GEORGE LEE, World Open Class Champion, came second in this USA contest and writes about his experiences.

The sixth Smirnoff Sailplane Derby started on May 3 from Whiteman Airport, Los Angeles, and finished on May 17 with a ceremonial "fly in" of the five competitors to Dulles International Airport, Washington. Between those dates there had been ten contest days with flying aplenty over the most varied terrain that a glider pilot could wish for. At the end virtually every record relating to the event had been broken: the weather was the best ever, there had been the greatest number of task completions and Ingo Renner won with the greatest points total ever achieved on a Derby.

It is an annual trans-continental race from Los Angeles to Washington, the last leg being of a ceremonial nature for the benefit of the media. Participation is by invitation and I found myself competing against Al Leffler (1976 US Open Class Champion, flying a PIK 20D), George Moffat (World Open Class Champion in 1970 and 1974, and 1975 Smirnoff Derby winner, flying a PIK 20B), Ingo Renner (1976 World Standard Class Champion, flying a Schuemann Libelle H301) and Wally Scott (Smirnoff Derby Winner in 1972 and 1976, flying a Schweizer 1.35A).

It had become almost traditional for Ed Butts to direct the Derby but this year Hannes Linke took the helm, having been involved in the event over several years as crew, tug pilot and competitor. The route was divided into 11 stages giving a total contest distance of just over 2700 miles. Variations went from 16°E to 8°W and goal elevations ranged from 300ft asl to 4500ft asl.

I was fortunate in having the use of a PIK 20B with a carbon spar (A8) belonging to the Seaborns (Walt, Pat and John), who own a cattle ranch in California. They kindly offered to crew for me and made their recreation vehicle available as the retrieve car. I was fortunate in having the services of Albert Johnson who crewed for me in Finland in 1975 and 1976 and was therefore no stranger to challenging terrain. Arrangements were finalised after a considerable number of letters and telephone calls between Scotland and the US during the winter months. I arrived on the Wednesday before the start of the Derby, giving me a couple of days to recover from jet lag prior to getting some practice at El Mirage over the weekend. The weather wasn't exceptional but was good enough for some useful practice, which I appreciated as I had never flown over the desert and had only flown the PIK 20 twice before going to the States! Fortunately A8 was in good condition and the only change I felt necessary involved replacing one of the two electric varios for a PZL.

But it wasn't all work over the weekend – there was a most enjoyable party in the El Mirage hangar.

We were given a good briefing on the Monday morning by Hannes Linke and Ed Butts and then a good send-off that night with a party at Helen and Graham Thomson's house.

Day 1 (Rabbit Dry Lake to Phoenix, Arizona, 287.5 miles).

The morning was unusually clear and warm at Whiteman airport as we made final preparations for the off, preparations which were closely followed by a considerable number of TV and press reporters. Crews were allowed away early to get a head-start on the long journey to Phoenix, and after a final brief by Hannes we arranged the gliders on the runway. Shortly afterwards we were leaving the sprawling city behind as we headed towards the desert accompanied by several press aircraft. After nearly an hour on tow, during which time we overtook the crews on the freeway below, we released and organised ourselves into our first Lufberry circle at about 5000ft above the dry lake which was our start point.



Having satisfied himself that we were all at the same height, George Moffat started the countdown and shortly afterwards we were on our way. Conditions were not exactly "Texan" for the first third of the leg, nor were thermals particularly predictable, and there were several occasions when I was down to 2000ft over some fairly inhospitable terrain wondering what persuaded me to agree to participate in such a masochistic activity. Fortunately conditions improved just before the Colorado river and held for the remainder of the route. My unsuccessful early wanderings in search of good lift contributed towards my finishing last with a speed of 52.9mph, Ingo having won with 60.9mph. We had achieved 100% completion of our first race.

Day 2 (Phoenix to Las Cruces, New Mexico, 314.5 miles).

The day started warm and sunny and after a successful racehorse start we began working our way to the Superstition Mountains to the east of Phoenix. Conditions were difficult and a broken area of strato-cu was approaching track from the south to improve our morale. A prolonged struggle in the foothills resulted in my being forced into a valley to the north of the highest ground instead of going over it as I would have wished. A developing thermal finally rescued me from an uncomfortable 500ft and an extended glide resulted in my meeting up with Ingo and George – conditions over the high ground hadn't been so good after all!

We then went our separate ways and I went south of track where the sun was shining. The quality of the thermals bore witness to the evident wave activity but I slowly covered ground and a succession of evening thermals finally put the 4500ft asl goal within reach. There I learnt that Ingo had made it after some scrapes on the way in and that I was the only other finisher. I was now in second place overall.

Day 3 (Las Cruces to Odessa, Texas, 267 miles).

After a rest day at Las Cruces while a cold front cleared our route, we were on our way again. It was another day of blue conditions and again things were slow at first as we skirted the White Sands missile-testing area. Soaring improved progressively as we crossed the desert although I would have preferred to have shared the 12kt thermal that George and Wally were enthusing about over the 8700ft Guadalupe Peak as I clawed my way up the side in a mere 8kt!

Conditions remained pretty good all the way to Odessa, although the terrain continued to be daunting and it was frustrating to watch a band of good looking cumulus remain tantalisingly out of reach all the way to the goal. As on Day 1, I was fifth for the day but this time I was only 11 minutes behind Ingo who had again won the day. Our crews were not too far behind us and we all enjoyed the hospitality of Dr and Mrs John Muxworthy who lived at the side of the airfield. I remained in overall second position but I was now only 33 points ahead of George.

Day 4 (Odessa to Dallas, Texas, 327 miles).

We set out for Dallas the next morning – Diamond distance and all within Texas! For the first time since we left Los Angeles cumulus clouds lay along our route. Things looked promising but appearances proved deceptive. Only about one cloud in four was working and even then the position of the lift in relation to the cloud seemed to vary. Furthermore, the forecast helpful tailwind turned out to be an anything but helpful headwind, and my earlier feelings of optimism dissipated as I struggled along between 2000 and 3000ft above the ground. Fortunately the fields were good *en route* and it was a welcome relief when I came to rest in one some six hours after our departure from Odessa.

Nobody made the goal and I was placed third for the day with 224 miles, having landed nine miles behind George and some 32 miles behind Ingo. My experiences after landing included being bitten by a dog, but that's another story! George's performance put him into second place overall, but only by two points! The weather had become noticeably more humid but the sun still shone and we all enjoyed a rest day in Dallas by the motel swimming pool in preparation for the next leg of our journey which was to be to Oklahoma City. In the evening we were guests at a party organised by members of a local club.

May 9 (Dallas to Oklahoma City, 201 miles).

The morning was hot and humid with deep cumulus development evident on the horizon. Eventually sufficient clouds were forming within reach and Hannes took the decision to launch. Cloudbase was low and lift proved to be weak as four of the five pilots slowly edged their way around the western side of the Dallas TCA. Unfortunately, as time progressed, the "blow-off" from a cu-nim spread across track from the west and downed Al, George and myself within 30 miles of our start point. Ingo managed to progress a respectable distance up track but Wally achieved the best distance of the day having wisely elected to go around the Dallas TCA to the east. It was a no-contest day, but any feelings of disappointment were forgotten as we sampled Bill and Helen Cleary's generous hospitality that night at their home.

Day 5 (Oklahoma City to Springfield, Missouri, 275 miles).

For the first time since leaving Los Angeles we made our preparations for the day under a sky that was completely overcast with medium cloud. There were no obvious signs of convection by early afternoon but we stayed by the runway and Hannes sent Ingo up to assess conditions. Although Ingo was unable to contact any lift, Hannes was not prepared to write the day off and everybody was offered a contest launch with the start time being time of release.

Incredibly, as we commenced launching, convection started and as we edged along track the overcast broke up and cumulus clouds started forming. After about 50 miles of good soaring the clouds dispersed and it was a case of

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changing down a gear as we pushed out into the blue. I met up with Ingo and George over Tulsa and we used the last thermals of the day together to land within nine miles of each other. Wally also landed in the same area but Ingo had again won the day with a distance of 166 miles. The owner of the field I landed in turned out to be a cattle rancher in his seventies who claimed a daily intake of corn liquor had cured his blood pressure problems: he appreciated our giving him a sample of our sponsor's products!

Day 6 (Springfield to St Louis, 198 miles).

A warm sun accompanied by only a breeze raised everyone's hopes for a 100% completion of the day's task. In fact we had some difficulty in finding an adequate thermal for the racehorse start and the first 20 miles proved to be very slow. Conditions then improved somewhat although it was possible to make long glides without contacting any lift. The late departure from Springfield made it unlikely that many would reach St Louis and so it turned out.

Al landed 60 miles short of the goal and Wally ended up 39 miles out in a small field owned by a farmer who didn't appreciate the intrusion. As Wally landed I was climbing nearby in a thermal that had forgotten how late it was. He advised me not to land near his field but by then I had enough height to glide out a further nine miles to one of the good fields in the area. Although my crew were nearby there were a lot of high trees around and it would have taken a long time for us to get together had it not been for Knute Johnson directing things from above as "Smirnoff Air". Ingo had again flown furthest, landing 16 miles short of the goal. George only flew 31 miles having followed the wrong freeway out of Springfield and then been unable to remain airborne having realised his mistake.

Day 7 (St Louis to Chicago, 248 miles).

Again the morning was warm and sunny and again conditions were difficult for the start. The difference this time was that conditions remained difficult over most of the route! Although there was no medium or upper cloud to reduce the sun's heating, thermals were unpredictable and difficult to use. A couple of excursions down to 1000ft and not meeting good lift to get me up again contributed to my being the slowest of the four finishers. Ingo was fastest with 58.7mph, followed by Wally and George, while Al had landed 87 miles out. I was still in second place, ahead of Wally but by only 48 points. The final glide into Howell airport was quite interesting as it is only a small field and is encompassed by the sprawl of Chicago! We met members of the local soaring community over drinks at the motel in the evening.

Day 8 (Chicago to Columbus, Ohio, 267.5 miles).

The weather gods continued to favour the Derby as the temperature rose into the eighties. We had been given the impression that soaring may well not be too good in the Chicago area but that seemed hard to believe as I spiralled up in 5kt to 6000ft to the south of the TCA. I was rather relieved to be able to relax in good lift as the initial part of my tow by a below par Citabria over the roof tops had been interesting to say the least! Conditions were pretty good over most of the route and a favourable wind component assisted progress.

The blue thermals had arranged themselves into streets but use of them was limited by the wind being 40° off track. Ingo landed 3½ miles short of the goal having dropped low on the final glide slope. This gave me the day with a speed of 75.4mph, followed by Wally, Al and George in that order. We were looked after by the airport staff in a most friendly manner. I now had a 90 point lead over Wally. The next day was a rest day and we went to admire Bob Fergus' magnificent aircraft collection at nearby Marysville, Bob was most generous with his aircraft and I thoroughly enjoyed a flight with George Moffat in an open cockpit Great Lakes trainer that dated from the 1930s. We further enjoyed his hospitality at a supper party at his house that evening.

Day 9 (Columbus to Latrobe, Pennsylvania, 194 miles).

The weather conditions were again like those of Day 6 and 7. A considerable amount of water was dumped and a protracted start was followed by a slow 30 miles. Conditions then improved somewhat until within 50 miles of the goal when things slowed down again and it took some time to reach a final glide position. My speed of 44.3mph was good for second place behind Ingo's 47.7mph, followed by Wally, George and Al in that order, Ingo remained clearly in the lead and I gained another seven points on Wally!

Day 10 (Latrobe to Frederick, Maryland, 123 miles).

A mere 123 miles of ridge-running country lay between us and the formal completion of the Derby and the first spine formed an impressive back-drop to the airfield at Latrobe. We achieved a difficult start above that ridge but conditions quickly picked up and I enjoyed a fast run in company with George to an area about 50 miles short of the goal. Here we met up with Ingo but we fairly quickly split up again to do battle with the poor conditions in the area. The next 30 miles were very slow until we reached an area of better conditions which was well positioned to set us up for final glide. George won the day with a speed of 55.7mph followed by Ingo, myself and Al in that order. The area of poor conditions grounded Wally some 40 miles out.

The final points spread had been decided and Ingo was a very deserving winner. We had a memorable "fly in" to Dulles International in order of standing the next day for the presentation of medals in front of the media. It just happened that Concorde was due to take-off 45 minutes after we arrived, so Ingo and I posed by A8 as "Speedbird" rolled down the main runway behind us. We then derigged the gliders and everybody got together at the airport hotel for a buffet lunch.

The Smirnoff Derby is a unique and prestigious annual event in the international soaring calendar. The Sixth Derby was the most successful one so far in terms of distance flown, number of finishers etc, and the weather seemed to be complimenting the efficient organisation.

Many people contributed to the success but specific mention must be made of Hannes Linke (Contest Director), Connie Linke (for assisting Hannes), Gus Briegleb (operations), Knute Johnson (chief tug pilot), Bertha Ryan (scorer), Charles Lindsay (Met) and Ed Butts (consultant). The event would not be possible without the generous sponsorship of Smirnoff under its parent company Heublein Inc, whose representative on the Derby was Gregg Reynolds. Although there are no prizes as such for the event, Smirnoff give $6000 annually to the US World Champs team fund. The Derby represents a great and varied soaring challenge and its existence is a valuable asset for the American soaring movement. As it has become traditional for reigning World Champions to be invited to compete, it also provides an extra incentive for non-Americans to win the Championships, if any is needed!

The final results were as follows: 1. Renner (Australia), 9685pts; 2, G. Lee (Gt Britain), 9137pts; 3, W. Scott (USA), 8568pts; 4, G. B. Moffat (USA), 8290pts and 5, A. L. Leffler (USA), 7388pts.

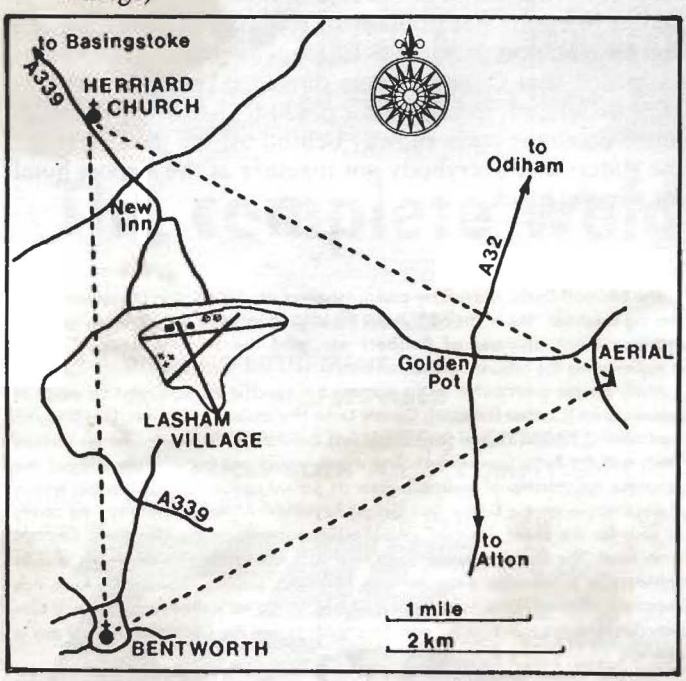
TRY THE TINY TRIANGLE

ALAN PURNELL

Do you ever get bored when local soaring? Do you have the urge to go cross-country before you have permission? Has it been good at your site – and nowhere else? Would you like to practise cross-country flying without the worry of outlanding? Have you been without a retrieve crew or car on a good day? Would you like to improve your cross-country speed? Have you had an evening date and dare not land out? Would you like to try out new techniques against known yardsticks? Have you ever taken turning point photographs?

Even the greenest of Bronze C pilots can savour the delights of cross-country flying without going out of the local soaring range by trying the tiny triangle. The particular tiny triangle I use at Lasham is:

(1) The big green aerial on the Holybourne road near The Golden Pot.
(2) Herriard Church (on the A339 towards Basingstoke).
(3) Bentworth Church (about two miles beyond Lasham Village).



None of these turning points is more than two miles from the airfield boundary, so (providing the wind is light) each turning point can be rounded at say 1500ft without undue worry (make it 2000ft if you're inexperienced or anxious). Each leg is about 6km long so the total distance is 18km (11 miles). You only have to go round three times for 50km, so that budding Silver C people will find out how easy a 50km task can be. A 100km task is six times round, and 300km 17 times.

You must choose a suitable triangle round your own site or persuade your CFI or local pundit to find one for you. It does not have to be symmetrical or exactly 18km in length – anything between 15 and 20km should be acceptable. Ensure the turning points really are recognisable (not whole villages) such as churches, road junctions, large buildings or small ponds.

I think also that we had better all agree to always go round anticlockwise – not that there is any special significance in going that particular way round rather than clockwise – but if the idea catches on we do not want to find hordes of sailplanes charging round in opposite directions. Come to think of it, the clear vision panel is usually on the left of the cockpit so going anticlockwise should make it easier to take photographs.

The first thing to do is to wander gently around looking for the turning points and fixing the layout of the triangle in your mind. Also note the features on the ground that lead up to the TPs. Gold C aspirants should mark the photographic zone on their maps and note which features must be included. With these preliminaries over, you, our intrepid potential pundit, can start flying the triangle in earnest. You are bound to start circling in the first thermal you find, and the second, and the third. Eventually you complete the first circuit of the triangle and note how long it took – probably half an hour. That's an average speed of less than 35km/h (22mph) so that 50km would take over an hour and a half.

By the time you have done this a few times you will get bored – not surprising with all that circling you have been doing. So how can you improve your speed? A simple extension of the normal technique is to choose strong thermals only to circle in. But how do you know how strong is strong? If cloudbase is high the best way to find out is to go round without circling at all. How else can you be sure what's around?

It doesn't require nerves of steel – just determination.

I will not circle on this circuit. Don't worry about speed at this stage - just fly round without circling. Pull back in lift if you like and speed up a little in down, but ***don't circle.*** One circuit at 53kt is 100km/h, and will take about 11 minutes. You will lose on average between 1200 and 2500ft depending on the sailplane, provided no undue down is found. The down should normally be counterbalanced by the ups. If you don't believe it now, you will when you've tried it.

So what have you learnt so far? In trying to find out how strong the thermals are you have actually gone round at 100km/h, a very respectable speed for anyone, so you have learnt that it pays not to circle, you have discovered the variation in thermal strength, their width and distribution and how many there are. You will be surprised how closely spaced they actually are. I know you cheated a bit on this particular circuit because you had height to start with. The next time you can say to yourself, ***I will not circle in anything less than three knots.*** You will find that a 2000ft climb will take ten minutes from start to finish (where did that other knot go, do you think?) and your time round the triangle is now 10+11=21 minutes or about 50km/h. At least you have improved from the original 35km/h, and if conditions allow you can try a minimum of four knots and so on.

What else can you do? How about flying faster? Try 60 then 70 knots. That's funny - the average speed is not improving very much: in fact you seem to be losing out because you are having to climb for a longer time to regain the greater height lost by flying faster.

Even better not to circle at all.

All this shows that it is far more important to circle in the strongest thermals than to belt around at high speed. Going back to our original exercise - it is even better not to circle at all if you can. Remember that it is only by deliberately flying straight that the point becomes obvious. How often when you've decided to land and stopped circling that the sky seems to fill with thermals? There is only one thing better than not circling, and that's flying straight and gaining height whilst doing so. Keep a good lookout for streeting thermals when flying on whichever leg is up - or downwind. It will even pay to divert quite a bit if climbing straight ahead is possible.

This brings up the point of avoiding the down. The down forms into streets as well, so develop a nose for down-streets as well as up-streets. A few moments in strong down will ruin all carefully prepared MacCready speeds to the next thermal.

Remember also to deliberately look for patterns in the lift near the clouds. Is the lift near the upsun edge, the upwind edge, the middle, slightly upwind or a combination of these? Are the best thermals not associated with the clouds at all? I call these "blue days with cu". Quite often with small cu the lift below has disappeared by the time the cloud has formed.

Another devastating effect on your time is your navigation. You will find that your times are much longer than you expected or calculated merely because your track is not exactly in line between the TPs. I know it pays to divert to good lift but even so you may well find that unconsciously you are diverting just to pass close to the site. Poor course flying or neglect of any wind will soon show up as extra minutes round the triangle.

You are doing very well so far - you have learnt about flying straight, selecting strong thermals, avoiding the down, and are averaging 100km/h. It's getting boring again - too easy - so let's make it more difficult. Try limiting yourself to not circling until you are below say 2000ft. Drive yourself to knock another half minute off your best circuit time.

You will have clocked up a respectable time.

Note that three unnecessary circles is over one minute - a large slice of the triangle time. Try two or even three circuits without circling. Deliberately avoid circling in the local standing thermals which you are bound to have discovered by now. Break off the thermal when the rate of climb is reduced below your criterion for the day. By the time you have done all this you'll find that you've clocked up 100-200km in quite a respectable time.

Another thing - let's not cheat. It is all too easy to miscount your circuits or to go round in bunches like pundits in competitions, all using the same thermals together. By all means use thermals that other sailplanes are using but discard it before you even circle if it is not strong enough. Also keep an eye open for sailplanes circling along a line - and then fly straight through them all.

Aspiring Gold C pilots will soon find that 300km is within their grasp, so now is the time to practise taking photographs. Any fumble at each of the three turning points will make a considerable difference to your speed around. You will soon realise that there is no point in going a mile beyond the TP to take a photo - that will add about 40% to the size of the triangle. This is why a definite point should be declared - not a town or an airfield.

Remember that if you point the camera down at 45° and then bank at 45° the camera is now pointing straight down! So now you can reduce the fumble at your turning points by shooting off a whole roll on your Instamatic. Your times around your tiny triangle will show you are improving. But don't forget to get your photos developed and examined critically.

I had better say that I have actually tried the Lasham triangle myself on several days. On one overcast afternoon I went round 14 times (I think) - the best time being 7min 30sec, 143km/h (90mph). My best time to date is 5min 45sec, 188km/h (117mph) and I am aiming to reduce this to less than five minutes.

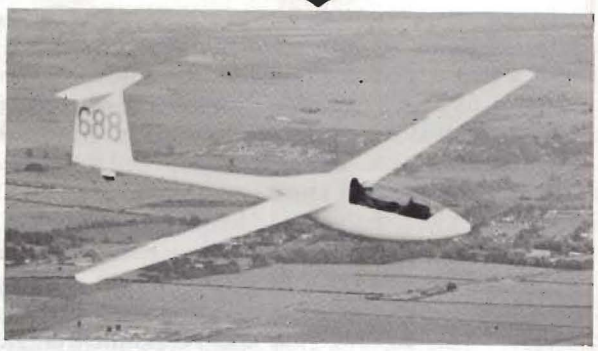
I haven't been round more than twice consecutively without circling, but am still trying; three times round without circling is well worth achieving. If however I find hordes of you charging round my pet triangle, you will not find me there - I shall find another tiny triangle.

You should be able to maintain 50km/h before attempting your 300km, and 70km/h before the 500. Remember that three times round is 50km and 17 times round is 300km and that only 28 times is the magic 500km! Good luck! May I meet you further afield one day.

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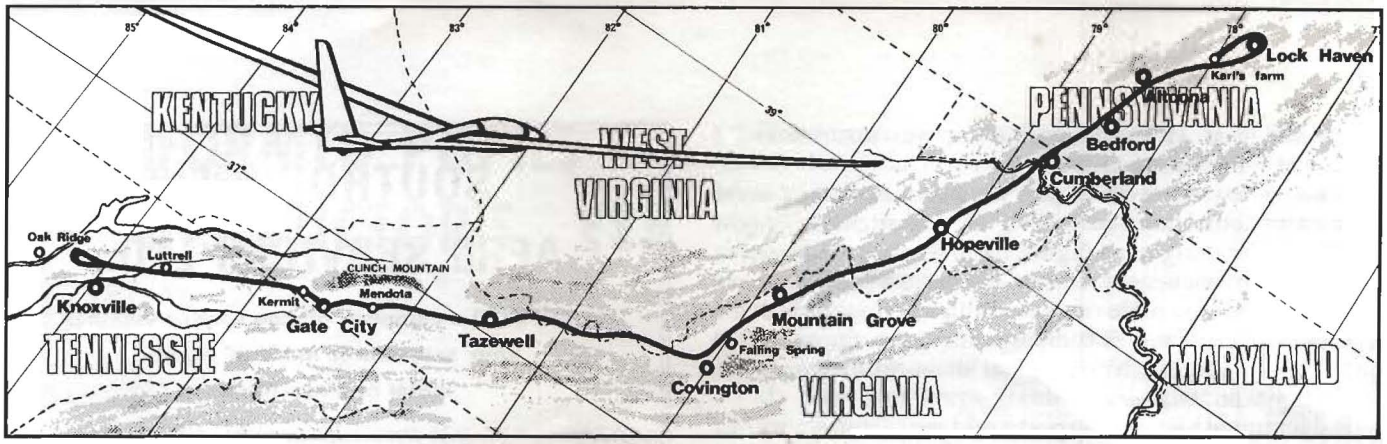
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NEVER SAY DIE – ANOTHER 1616KM

KARL STRIEDIECK, USA, who broke the 1000 mile barrier on May 19 last year with his 1616km goal and return flight, flew the same route again on May 9 in his ASW-17. He describes it as "primarily a photographic exercise since my identical flight was not approved due to the turning point photographs being improperly positioned". Karl, who is a fighter pilot with the USA reserve force (Air National Guard) and the Schleicher representative for the States, has written us this account of the flight which took 14hrs 15min at approx 115km/h as against 123km/h for his previous effort. He has also sent the two sets of turning point photographs, reproduced below.



Karl Striedieck



May 19, 1976 (outside 90° quadrant).



May 9 1976, (within 90° quadrant).

Flight preparations began at 4am with a weather check. This consists of walking to the top of the ridge (I launch from my ridge-top runway 200 yards from our house) and listening to the wind. If the trees sound sufficiently agitated and the direction within limits (290-300°), the observer is summoned.

It usually takes two hours to get airborne from alarm clock reveille and that is about what it took this time to get the cameras, barograph, water and other goodies loaded and ship in position. The Jeep took up slack at 5.52 and 20 seconds later I was heading north-east to begin my flight at Lock Haven, Pennsylvania. The reason for the remote start was to fly more of the flight on the ridge and still exceed 1000 miles. The remote start adds 70 miles to the flight but costs only 15 minutes to accomplish.

Starting at 6.07 I headed south-west at 120kt skimming along the crest of Bald Eagle Ridge. Turbulence makes the ASW-17 look like a huge seagull as the wings flap through a ten foot arc. I watch the *g* meter for a clue to how rough the air is. Sometimes it is necessary to fly slower to avoid overstressing the ship.

No circling was necessary until the Bedford Gap, an eight mile wide hole in the ridge, 90 miles from the start point. I had no trouble thermalling up 1500ft above the ridge and coasted across to the safety of ridge lift. The Appalachians are ideal for ridge running because there are few gaps to cross and they are uniform in height (1500 to 4500ft asl). The ridges are generally 1000ft high from valley to peak.

Occasionally wave lift is used and I was able to cover about 100 miles in 45 minutes at 8000ft on the way to Covington, Virginia. More ridge running at 110kt got me to Narrows (pronounced "Nars" by the locals) at 9.07 and Tazewell at 9.25hrs. I had by then covered 400 miles in three and a half hours which isn't too shabby.

The mountains get lower for the last 100 miles and since the low pressure system that generates the wind is farther away the going is usually slower at the southern end of the ridge I flew conservatively in ridge lift and thermals and made the turn at 12.30. I was forced to dump water just before the turn because I was low and barely holding on. Due to a plugged dumping port I got a bath which wasn't too bad in sunny Tennessee but quite uncomfortable back in cloudy Pennsylvania.

The return was slower due to a slight headwind component and a detour around the Bedford Gap. Back on Bald

Eagle Ridge at 19.30 the start point was assured and I landed at Lock Haven at 20.10.

While a few more miles can be stretched out of these mountains for out-and-return flights, my attention is now shifting to the straight out flights. Ideal soaring conditions in the south-east are associated with the same weather systems that make for good ridge running. With a noon arrival at the end of the ridge and 500 miles already on the meter, it shouldn't be too tough to thermal down into Florida for another 400 or 500 miles.

Ridge running is a great sport and I suspect there will be more national and world record flights made along the Appalachians. At least I will be watching the weather maps from March 15 to May 15 in the years to come.

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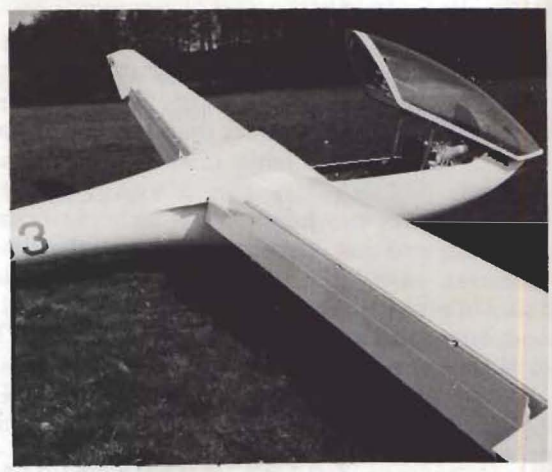
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MISINFORMED PUPILS – AN INSTRUCTOR'S EYE VIEW

MIKE BOND

The February 1977 issue of S&G, p9, featured an article on instructor quality – Instructors – A Worm's Eye View by G. Haworth. Reading between the lines of his article it is quite clear that the problems he relates are the problems many pupils wrestle with during their early flying career.

To clarify one misguided point in Mr. Haworth's article – "instructors enjoy enormous prestige and power". It is quite obvious he has never been numb with cold in the back seat of a T-31 on a cold winter's day, when a pupil in the front decides, despite advice to the contrary, that full rudder turns the aircraft *far* better, and that 50kt during that turn is *much* safer. Neither has he sat boiling in a T-49 on a roasting hot windless day, waiting for that self same pupil to complete his painfully slow cockpit checks!

As for power it should be made quite clear that the Chairman of the Committee appoints a CFI, and he in turn appoints instructors. The instructor possesses little or no power therefore, for his appointment is reviewed annually by the CFI. He does possess authority – but surely someone has to be the leading light? Bear in mind that an instructor bases his decisions on a mixture of previous experience and safety, and not on popularity.

Whilst eavesdropping on the conversations of pupils certain cliches catch my ear time and time again so I am going to list a few of them. The comments which follow are those of an experienced instructor. "I wish my instructor would note that I do have eyes and ears." *He has noted – he has also noted that on occasions they appear to be disconnected from your brain. Concentrate more please.*

"I wish my instructor would give me the benefit of the doubt and play the advantage rule occasionally." *In gliding* **there is no advantage rule.** *There is a safety limit and that is final.*

"My instructor keeps telling me that I fly too slowly just when I am desperately trying to put the matter right." *Pushing the stick forward half an inch does not require desperate measures. Try flying by attitude.*

"My instructor assumes that the ability to fly is inherited." *A totally wrong assumption. Learning to fly requires a lot of hard work; but just how much work are you the pupil doing? Ten minutes in the air each weekend will suffice the practical element, but how much reading are you* **not** *doing? When you sit in the aircraft you should know exactly what exercise you are about to undertake – because you asked your instructor the previous week just what you would be doing. You should also know every aspect of that exercise because you took the trouble to consult reference books midweek. Your instructor should merely have to prove the theories that are so soundly implanted in your brain.*

"That instructor annoys me. He is so particular about really clear outlooks prior to turns." *What a very good instructor!*

"That instructor is not as good as this one." *Please, do realise that good instructors do not evolve overnight. To become a good instructor requires an enormous amount of hard work, hour's of work study and lastly, perhaps of greatest importance, practice. Yet there is no manner of obtaining this practice save that of experimenting on you the pupil. Beating a hasty retreat every time a 'green' instructor appears on the scene will prove nothing, and is tantamount to biting the hand that will eventually feed you.*

"My instructor keeps grabbing the stick on approach." *For this comment one should cast one's mind back to the time when every approach was monitored verbally by the instructor. It was easy. Do just as the chap in the back advised for the perfect landing. But as your launch figures grow, and your expertise develops, it is the object of the instructor to pass more of the decisions onto you. If he grabs the stick therefore, it is probably because he has allowed you to make a decision – which you have made a mess of! The fact that he grabs the stick merely means that you failed to rectify your error, and there is not enough height available to safely talk you back to the path of righteousness. Don't be surprised if he points out an error nice and early on the following launch.*

"Even though I have gained my Bronze C that instructor makes me spin the aircraft every time we fly together and I hate spins, they frighten me." *What a quality instructor you possess at your club. Fear of any particular aspect of flight is usually brought about by lack of experience on that self same facet. Spinning, although unpleasant initially, can be great fun once you have mastered all the posers concerned with entry and recovery. Assuming that you have gone solo, when did you last spin your glider – and I mean intentionally? It's great fun to loop and chandelle excess height away but aerobatics do not save lives. Expertise of the former however does. If you therefore find yourself at 5000ft with nothing to do; why not find out exactly what makes your glider spin – at what speed – to left* **and** *to right – with airbrakes open and closed – how many revolutions to recover – how much height lost per second – the effect of aileron application. Lastly, try over-correction and see how quickly it spins in the opposite direction. Learning these basic principles during an unintentional spin at 300ft is definitely not recommended.*

In conclusion, I hope that some of your comments are contained in the above: and I hope as a result that I have motivated you to look within yourself to remedy any instructor-pupil belligerence. Above all, those who feel flying is a difficult art to master, and that sub-standard instructors are not helping the mastery of this art, let me impress one thought upon you. An *unresponsive* pilot may reach triple launch figures before going solo. If one totals the time of 100 winch launches of say five minutes duration, a grand total of eight hours 20 minutes flying time is arrived at. But how long does it take for a *responsive* driver to do "solo" in a motor car? The usual *starter* is a course of 12 hours. This is supplemented by five or six hours with Uncle Fred, three hours with pal Jim and, coupled with a two hour pre-test drive, we arrive at a grand total of somewhere in the region of 20 to 24 hours. Working on the assumption that it *is* in fact more difficult to learn to fly than to drive a motor vehicle, what explanations can be offered for the former taking roughly one third as short a time to master. Could it possibly be that the quality of gliding instruction is higher that that of professional driving instruction?



Window shopping in Paris

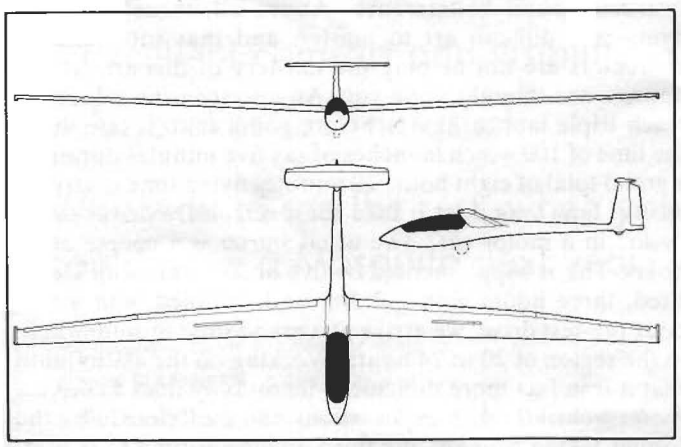
BOB RODWELL reports on the gliding exhibits at the 32nd Paris *Salon*

Romanian, Italian, French and Swiss exhibitors showed sailplanes at the 32nd, and largest ever, *Salon de l'Aéronautique* at le Bourget, Paris, in June. Newest glider at the show was the prototype Romanian 20m IS-32 high-performance tandem two-seater, which flew only the day before it was trailed across Europe to appear at le Bourget.

Chief designer Iosif Silimon told me he had taken the proven fuselage of the popular IS-28B two-seater and mated it with an entirely new 20m wing incorporating waterballast tanks and full-span "flaperons". Modifications to the standard IS-28B fuselage are very minor, involving only ballast system details and a new fully-retracting wheel, but the tail unit has been redesigned with a new aerofoil.

A crisp roll rate

The inter-connected flaps and ailerons would give the IS-32 a roll rate as crisp as that of most 15m sailplanes, predicted Silimon. The flaps are connected with and act as ailerons in both the negative high speed cruise and positive thermalling settings, but disconnect when extended fully for landing. Approach control is effected through what are possibly the largest Schempp-Hirth airbrakes to be found anywhere. Predicted glide ratio is 46:1 at 53kt.



"At present we are building six gliders a month but we're stepping up production to about ten a month as the market is so good", said Silimon. "The IS-32 widens our range and we now have a whole family of sailplanes to sell on the world market." The factory, some 200km from Bucarest, had totally escaped damage in the recent disastrous Romanian earthquakes, he added.

Technical data – IS-32

Span (m)	20	AUW (kg)	590
Wing area (m^2)	14.68	L/D ratio at 98km/h	46
Aspect ratio	27.24	Min sink at 85km/h	0.53
Max wing loading (kg/m^2)	40.6	Max speed (km/h)	232
Empty weight (kg)	350	Stall-speed (km/h)	74

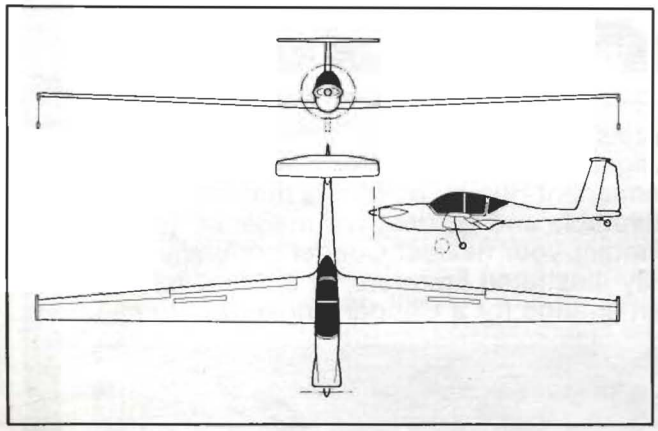
More than 100 IS-28BS and single-seater IS-29s have been shipped to the United States, Australia and the UK in the past two years, I was told by Silimon and Tehnoimportexport's overseas sales manager, Iosif Zelenac, and at Paris they signed an agreement with a French distributor to enter that market too. Their US distributor, Don Sprague, confirmed the impact that the Romanian range has made in the US, where it is marketed as the "Lark" family of sailplanes.

Sprague and the Romanians both have high hopes for the IS-28M2 side-by-side two-seater motor glider which was also shown at the *Salon* and which was the first displayed at Farnborough last year. First production models are due off the production line in September and are destined for the British market through distributor Vickers-Slingsby, with the first export sales to the United States to follow before the end of the year. Production is beginning at two a month, rising to six a month next year.

The distinct American preference for all-metal aircraft rather than glass-fibre or tube-and-rag gives the Lark series a pronounced advantage in the United States, the Romanians believe. Sprague sees the IS-28M2 as a practical light touring aircraft apart from its potential as a self-launching training sailplane. "We believe the entire US soaring market, and particularly the commercial operators, are on the brink of a big swing over to motorised self-launching sailplanes," he said. His point about the touring aspect of the M2 was borne out by a member of Boeing's YC-14 STOL transport flight-test crew who walked into the Romanian caravan to slap down a deposit on one of the first US

deliveries, saying that at $26,500 it was "a helluva better funship" than anything produced in Wichita.

Silimon showed me photographs of the prototype tandem-seater variant, the IS-28M1, which was due to make its first flight shortly after the show. Unlike the M2 with its narrow track retracting undercarriage, the M1 will have a single retracting wheel on the centreline and two small fixed wheels on the underside at the wingtips. The motive force, a Limbach SL 1700E1 VW-derivative, is unchanged.



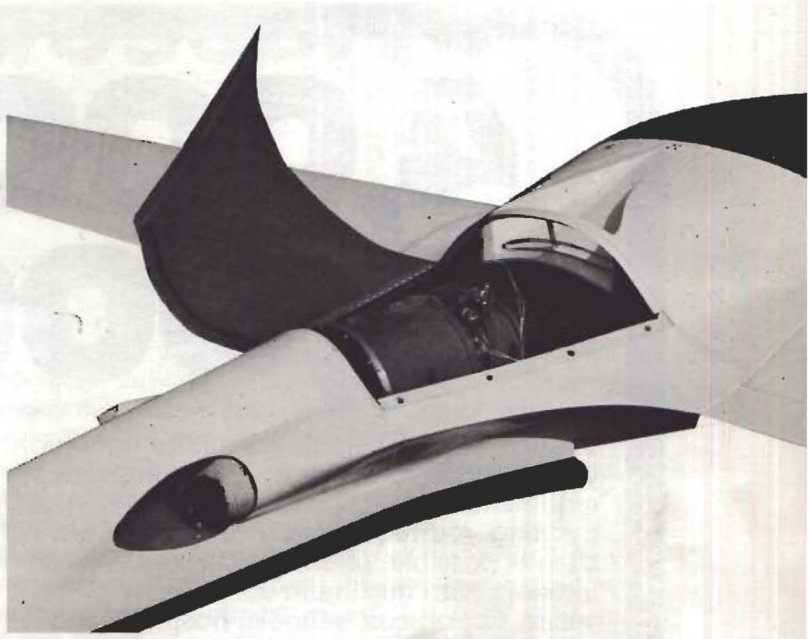
Technical data – IS-28M1

Span (m)	18	Empty weight (kg)	510
Wing area (m^2)	18.54	Max take-off weight (kg)	730
Aspect ratio	17.48	Max power weight (kg/hp)	10.74
Max wing loading (kg/m^2)	39.4	Rate of climb (m/sec)	2.8
L/D ratio (best)	32	Range (km)	450
Min sink (m/sec)	0.82	Take-off (m)	180
Power plant	Limbach SL 1700 EI 68hp	Stall-speed (km/h)	70

Italy's Caproni-Vizzola was bidding for the carriage-trade end of the motor glider market with the latest, and definitive, A-21J Calif jet-powered two-seater sailplane. Caproni made a false start in 1971 with an earlier jet variant, in which the tiny Microturbo jet engine was mounted low in the fuselage, with low intakes and effluxes, thereby being particularly prone to foreign-body ingestion while scorching the grass and eroding airfield surfaces wherever it flew.

Technical director Dr Livio Sonzio has now raised the engine location to solve these problems and to simplify engine maintenance. The engine now draws air through a flush topside intake behind the canopy, which is then beautifully flush-faired by a panel which rises when the engine is shut down for soaring flight.

About 50 A-21s unpowered Califs had been built to date, of which ten had been exported to the United States, said Sonzio. With the definitive A-21J flying for the first time on May 12, licence negotiations had begun with potential manufacturers in both North and South America. Meanwhile, Caproni-Vizzola are themselves planning to build up to five a month in Italy. All Califs may be built as unpowered sailplanes with provision to install the minute 225lb-thrust TRS 18 turbojet easily. The engine has now been certified by the US FAA and may be built by the Ames Corporation in the United States. First Jet Calif sales to the States are expected before the end of the year, at a price of over $50,000. Caproni are promoting the aircraft as a practical two-seater tourer as well as a sailplane, with an operational ceiling of 30,000ft. But with a glide ratio of 43:1 the possibilities of fuel saving by soaring *en route* whenever conditions permit are obvious.



Engine location of the definitive A-21J Jet Calif, showing flush intake with hinged fairing panel which seals it for soaring flight.

Pilatus showed a standard production model of their well-known B-4 aerobatic sailplane, of which more than 250 have now been delivered and which remains in production at a volume rate. For the initiated, the B-4's flying displays were one of the heart-stopping highspots of the entire show, the glider being flown through an *outside* figure-of-eight on several flights.

The French hope in the modern two-seater stakes, the CE-75 Silene, was displayed in the static park together with its single-seater 15m stablemate. With its unusual staggered side-by-side seating the 18m Silene is an attractive glass-fibre aircraft but the manufacturers seem to have abandoned plans to market it in the UK, judging both from their comments at Paris and an earlier response of complete disinterest to a serious inquiry from my own gliding club.

Enlightened French aviation policies have resulted in a very vigorous home-built aircraft movement in France, which displays far greater adventurousness and imagination in design than its British counterpart. A large display of home-builts, and of actual home-building, by the movement's spearhead, the *Réseau du Sport de l'Air*, included two home-built gliders, both JP 15-36s. The type is available ex works complete, or as a kit which enables purchasers to build the fuselage and empennage themselves, to be mated to factory-built glass-fibre wings. A number of such sailplanes are under construction at various *lycées* and technical schools as part of the pupils' standard curriculum.

A possible first-ever French item in at least one day's flying display during the *Salon* was a four-glider tow by Socata's Rallye 235 GT four-seater tourer, which has been featured in several advertisements in recent issues of S&G. Unfortunately, I witnessed it only from about two miles away while stuck in the middle of perhaps the world's biggest traffic jam on my way out of Paris to le Bourget. As bored, irritated and carbon monoxide-poisoned as I was, it couldn't fail to impress.

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FLYING THE MOSQUITO

DEREK PIGGOTT

There is nothing very new about the flap system of the Mosquito. It is much the same as on the Caproni Calif and doubtless if we looked carefully back to the days of World War I, we might well find a similar idea in use then. However, the new breed of 15m high-performance gliders using this kind of flap – the Mosquito, Mini Nimbus, and the Vega – do introduce new standards in approach control for glass-fibre machines combined with improved performance at high speeds.

So far I have only flown the Mosquito and it is far too early to say if there will be significant differences between the performance of these aircraft. The Mosquito is an impressive glider to fly and one, together with the Astir, which will go a long way to dispel our present concept that you require a high degree of skill and experience to be safe in a "glass" machine. I have always disagreed with those pilots who think there is something special about "glass". Up to now the only thing special has been the rather poor features of the past breed of "glass" gliders with their totally inadequate airbrakes, poor control on the take-off and landing runs and frequently uncomfortably small or narrow cockpits. After all, the majority of the 15m gliders are very similar to a Dart 17R in their performance at approach speeds, and no one complained about the difficulties in making accurate landings in the Dart!

The Std Libelle, Kestrel 19, Club Libelle, Hornet and now the Mosquito all come from Glasflügel, a firm which has an outstanding record for high quality in both design and construction. Considerations such as good and easy access to the control systems etc makes them easy and less expensive to service.

The Mosquito features camber changing flaps with the ailerons moving in harmony as the flaps are raised or lowered. For approach control the same flaps lower fully to about 60°, helped by an additional portion moving up above the wing to further increase the drag and to help reduce the load in the airbrake control lever so that they can be used as dive brakes and opened at any speed. The airbrakes may be opened with the cruise flaps in any position, but once the airbrakes are in use the cruise flap control lever is locked and cannot be readjusted. This is of no importance operationally since the pilot will have selected zero or positive flap for low speed flight in the hope of soaring or in preparation for a landing. The purpose of this is to prevent the possibility of inadvertently raising the flaps on an approach. The system looks similar to the Kestrel 19 but with enough room to use both levers without losing half the skin off your knuckles. The air brakes themselves are easy to operate, cause virtually no change of trim and have a light progressive feel without any tendency to snatch.

In my opinion it is best with this type of airbrake if they are designed to produce no extra lift as they are opened. This allows the pilot to reduce the amount of brake if he finds himself wanting to float on to clear some rough ground, or an electric fence during the final stages of the hold off and landing. With normal flaps and with many trailing edge airbrakes, any attempt to extend the float results in the glider sinking heavily onto the ground. The Mosquito airbrakes seem to be close to the ideal which makes them simple to use and not much different to normal airbrakes. The very large area of the flap makes them very effective as an airbrake and makes judgment on the approach and landing almost as easy as with a K-13. Excess height may be dispensed with by diving it off so that marginal approaches a few knots above the stall are quite unnecessary. This transforms this high-performance racing machine into a practical aircraft for early cross-country flying. However, it cannot be denied that there is still a lot of energy to be used up during the landing run itself and any bad landing into a small rough field could be bad news for the underwriters.

Easier to fly than most intermediate machines.

Like all good modern machines the stall in straight flight and in normal turns is remarkably docile and in general it is far easier to fly than most training and so-called intermediate machines. Every now and then the stall is more complete and the aircraft stops flying for a few seconds and drops the wing or nose more abruptly. The warning buffet and the sudden loss of control makes it obvious what has happened and a small movement forward on the stick results in a rapid recovery with very little loss of height. On most occasions the glider can be kept under full control with the stick almost right back and with the marked buffetting shouting at you to do something about the situation.

The ailerons are reasonably light, but not so light that as you take-off you wonder if they have been correctly coupled up. In fact on the Mosquito all the controls automatically couple themselves up once the glider is rigged. Apart from the single main wing pin, there are no connections to be made or parts to drop and loose. The controls are nicely harmonised with the cruise flaps up or in the neutral position. Like most other machines in which the ailerons droop with the positive flaps settings, the aileron drag increases and the handling deteriorates a little. In turbulent conditions, therefore, it might be best to select neutral flap for the landing. The ailerons themselves look much the same size as on the older Standard Class machines but seem much more effective during take-off and landing. I found that take-off in a light crosswind or even downwind was a non event and ground loops should be a forgotten hazard, in spite of the single launching hook just ahead of the main wheel. The large tail wheel gives a good grip which prevents any weathercocking at low speeds.

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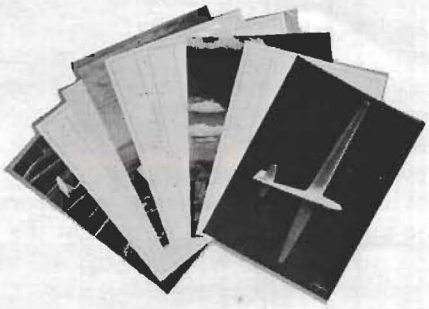
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Three-views sold out. But if you hurry, you can still get our set of 14 sensational lithos — the super shots of the great ships from 1-26 to AS-W12.

All the good features of the Std Libelle/Kestrel 19 stick unit and the press button trimming are retained, Any time you feel you have a push or pull force on the stick a quick press of the button on the stick results in instant and perfect trimming. The fixed tailplane and conventional elevator results in pleasant handling with none of the twitchiness at high speeds often found with all-moving stabilisers. Indeed this is a pilot's aircraft with very nice handling, as good as I have flown.

Retracting undercarriages, flaps and waterballast all sound complicated, but do not forget that if you are inexperienced and flying the Mosquito for the first time you can always leave the undercarriage down and the flaps set at neutral for the first few flights. In this way you are flying a simple glider with very good handling and excellent air-brakes. But do remember that these trailing edge brakes are very powerful and that you need a steep approach to maintain speed with full brake. Once you are in the air you will find the flaps easy and logical to operate and that they hardly constitute a complication. For low speed flying and thermalling you just pull back one or two notches to lower the flaps and then as you want to gain speed, you ease the flap lever forward to neutral at about 50 to 60 kt and to the forward position for negative flap above about 70kt. If you happen to forget to raise the flap there is a little danger of exceeding the maximum for flaps down which is 108kt! In practise you have your left hand almost permanently on the cruise flap lever making these changes as you dolphin your way across country, occasionally stopping for a few turns if the lift is strong.

After a bit you begin to understand why an automatic flap movement as on the ASW-20 could be a help; you just haven't got a spare hand to hold the map or sandwiches. Even on your first flight in the Mosquito there is no need to get uptight about the landing. Anything over 50kt will do and the only thing to remember is to make sure that you hold off for as long as possible. Unless you touch down main wheel and tail wheel together you will leave the ground again. Try if you like to touch down tail first and after landing keep a gently increasing backward movement to keep the tail wheel firmly on the ground. This stops any bouncing or swinging.

Of course, like all aircraft, the Mosquito has details which are not so good. The separate wheel brake lever which necessitates the pilot either taking his hand off the stick or the airbrake comes to mind. Perhaps this will be changed in future models but I do not think it will influence your choice if you are about to order one of these new machines. The forward hinging canopy seems complicated but if you are going to get the extra view behind together with a good seal the designer has some real problems.

If you are thinking of a new machine the obvious questions which come to mind are:-

Can I afford it? Can I get in it? Can I get delivery of it? and most important, can I fly it?

I am sure that if you are an average well trained pilot you can fly it and enjoy flying it.

Warning

Although with trailing edge airbrakes a spectacular almost vertical approach can be safely made using full airbrake, on normal steep approaches it is vital to maintain enough speed for the roundout. Closing them will not prevent stalling, or a heavy landing, as it would with normal airbrakes.

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IAN ROBERTSON



Ian, the Standard Class Champion of Rhodesia, works as a research geologist (PhD) for a large South African mining group. He was born in Derby and came to gliding in 1970, having been a keen scuba diver with the British Sub-Aqua Club's coveted first-class award. Within three years he had Silver and Gold Cs, three Diamonds and won the Limited Class in the Rhodesian Nationals in 1972, all in a K-6E. Ian is now flying a Std Cirrus 75.

A question I often hear asked is "How long will my oxygen last?" It's like asking how long is a ball of string. It depends on three factors, the size (capacity) of the cylinder or cylinders used, the pressure to which the cylinder is charged and the rate at which oxygen is consumed. Let's look at these three factors more closely.

CYLINDER CAPACITY

This is expressed in two ways:-

a) The "water capacity" or true internal volume of the cylinder. This is generally expressed in litres.

b) The volume of "free" (atmospheric pressure) oxygen the cylinder holds when charged to its working pressure. This is generally expressed in cubic feet.

The cylinder capacity is found stamped somewhere on the upper part of the cylinder. Obviously the larger the cylinder the more oxygen it will hold at any given pressure. The first method - "water capacity" - is independent of pressure and is preferable to the pressure-dependent "free volume".

PRESSURE

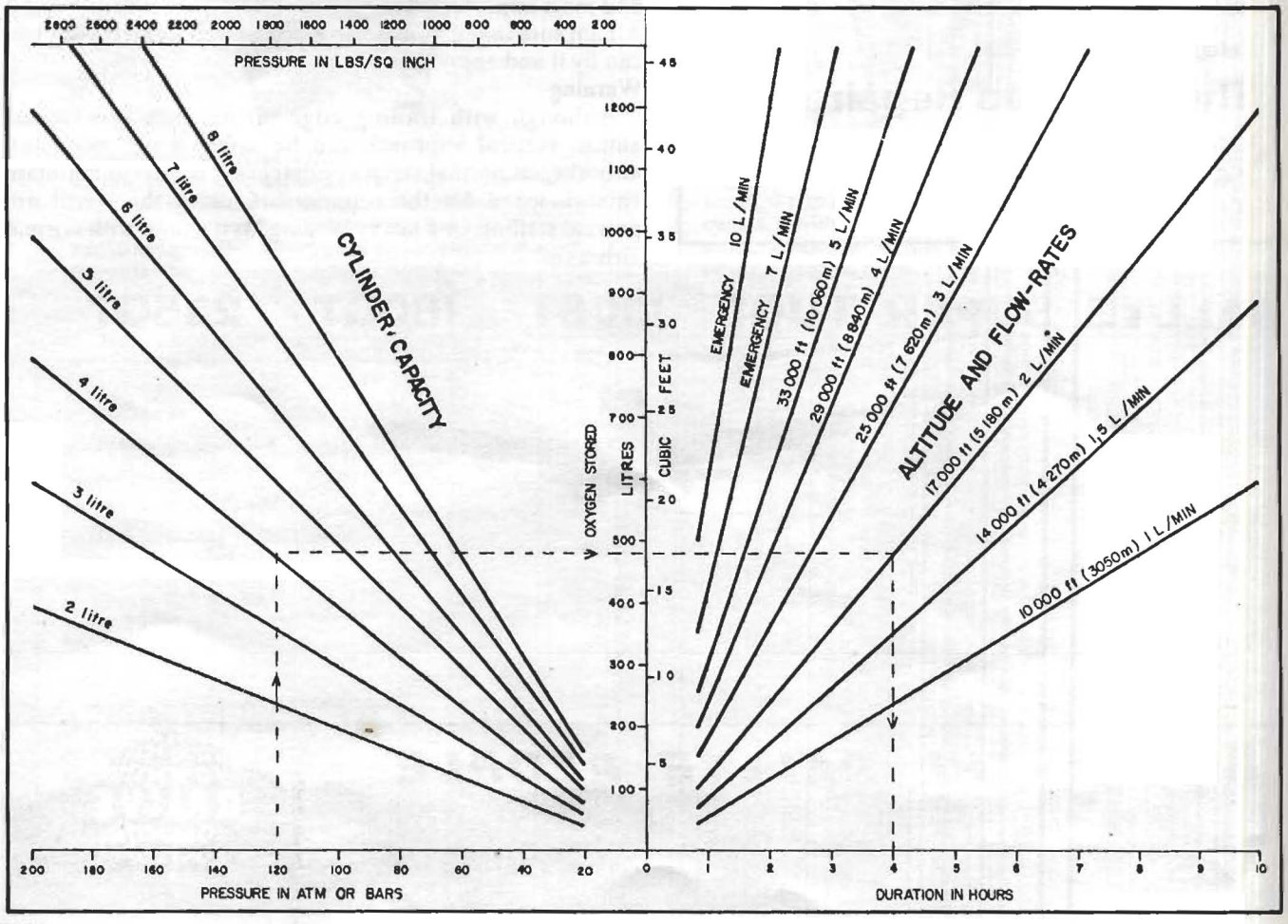
The working pressure of the cylinder is stamped on its upper part. Working pressures vary from 1800psi (120 bars) to 3000psi (200 bars). **Do not under any circumstances charge a cylinder to a pressure greater than its working pressure.** If in doubt ask someone who is familiar with cylinders. An exploding cylinder will kill you and you'll be grounded for good!

The amount of oxygen (V) stored in a cylinder is found by multiplying the water capacity (C) by the pressure (P) in atmospheres or bars.

$$CP = V.$$

For a five litre cylinder charged to 100 bars 5 x 100 = 500 litres. Alternatively multiply the free volume (F) by the pressure (P) divided by the working pressure (W).

$$\frac{FP}{W} = V$$



For a 25 cu ft cylinder at 1500psi with a working pressure of 1800 psi

$$\frac{25 \times 1500}{1800} = 20.83 \text{ cu ft}$$

See the advantage of metrication? Don't lose heart – there's more to come! Obviously the greater the pressure the more oxygen is stored in the cylinder – up to a limit, the working pressure – remember?

FLOW RATE

This depends on altitude. Some regulators are adjusted manually, when flow rates of 1.5 to 5 litres per/min are common, corresponding to altitudes from 14000ft to 33000ft respectively. In diluter-demand regulators the flow rate is rather difficult to measure as it depends on the depth and rate of the pilot's breathing as well as on altitude.

DURATION

The amount of oxygen stored in a cylinder is divided by the flow rate to give the duration. Thus for a 4 litre cylinder, charged to 120 bars at a flow rate of 2 litres/min (17000ft):–

$$\frac{4 \times 120}{2 \times 60^*} = 4\text{hrs}$$

**To convert minutes to hours.*

A GRAPH - THE EASY WAY

Some time ago, to solve a similar problem in scuba diving, Barney Hutton and I published a graphical solution. This cuts out all the arithmetic and formulae. I've modified it for this problem. Take the last example – you'll find it worked out on the graph.

Start at the pressure to which the cylinder has been charged (bottom left), move vertically up the chart until you find the diagonal line corresponding to the water capacity of the cylinder. Now move horizontally to the right until you cross the altitude/flow rate diagonal you want and move vertically down the chart to read off the duration (bottom right). Easy isn't it. While doing all this you calculated the oxygen stored in the cylinder (480 litres) in the centre part of the graph but this is not really important now is it?

For those who still desperately cling to the English (or American) system I've included pressures in pounds per square inch and capacities in cubic feet (top left and centre respectively).

PRECISION

Don't take the accuracy of your answer too seriously as a pressure gauge lies like an Irish goat and flow rates are only approximate. At least it gives you an idea how long your oxygen will last with a given set of circumstances.

USE IN FLIGHT

Don't carry the graph in the air. You've got enough to think of already. Your cylinder capacity is fixed. Make a short table of durations from the graph for your cylinder at say ¼, ½, ¾, and full, at three or four altitudes that you are likely to use. Type it out and stick it up in the cockpit where you can read it in flight.

A bit better than a ball of string isn't it!?

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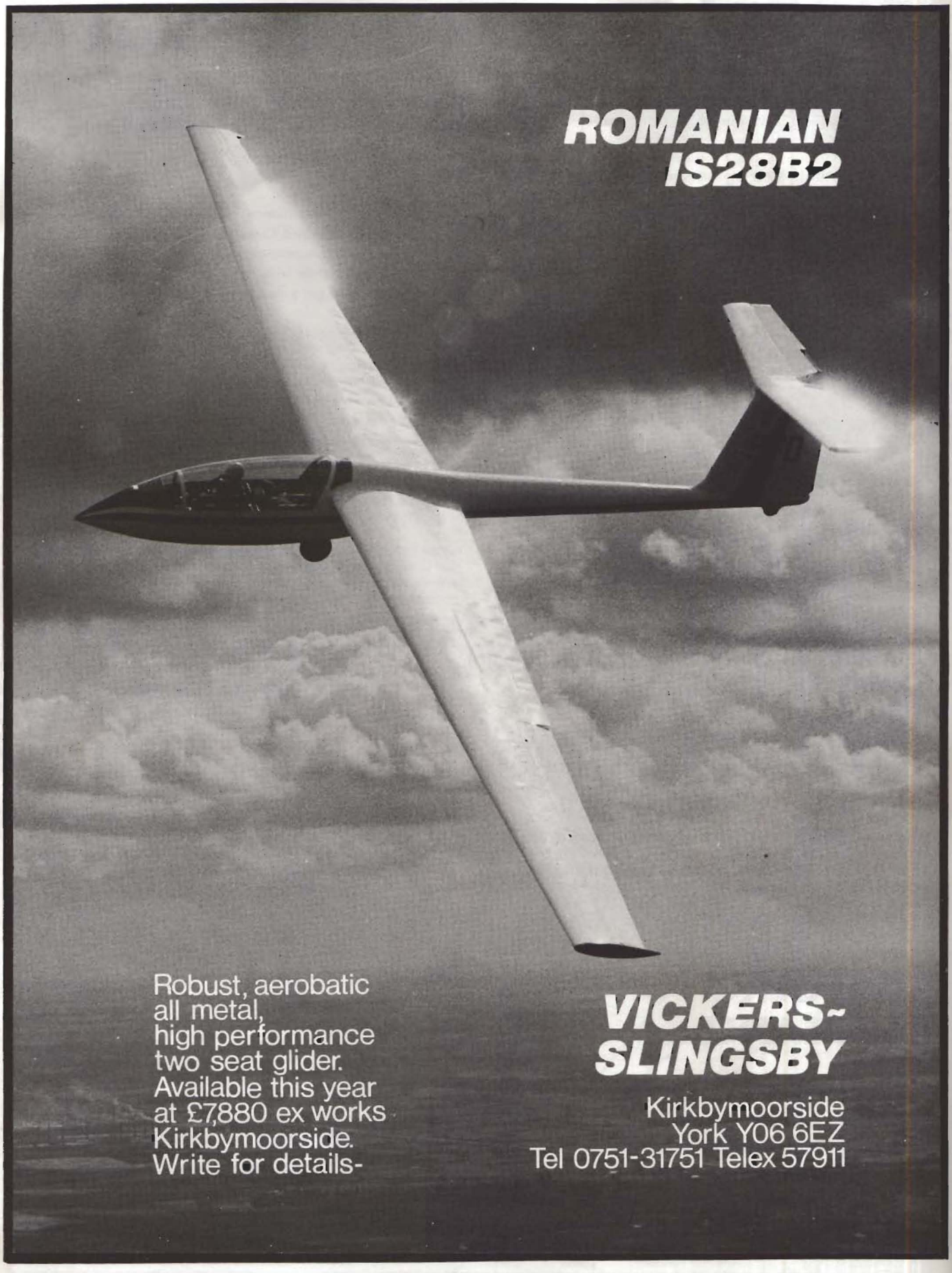
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COST-EFFECTIVE AEROTOWING

CHRIS ROLLINGS, following Vic Carr's warning in the June issue, p 120, that some clubs need to change their policy if they are to survive, turns his attention to tugs. In this article he gives advice on getting the figures right so that aerotowing can be offered without becoming a drain on a club's financial resources.

For a club to provide an aerotowing facility for its members over a period of years and stay financially viable, the economics have to be right. This may seem like an obvious statement, but in the present inflationary situation it is very easy to get it wrong. The classic mistake is to start with what you think a glider pilot should be expected to pay for a tow and fudge your costs to suit this. The correct approach is to start with what it costs the club to do a tow and from that arrive at a cost to the pilot (usually showing a modest profit).

What are these costs? It is normal accounting practice to divide costs into fixed (your landlord will not charge you any less rent for your hangar just because you never open the doors to get the tugs out) and variable (the tug didn't use any fuel while it sat in the hangar). Some costs, of course, may fall partly in both categories.

1. VARIABLE COSTS:

a) Fuel and oil. Achieved fuel consumption per tow is the required figure. Fuel consumption per hour is not important unless you are going to do a lot of non-aerotow flying.

b) Short term maintenance (50hr checks). These can cost a lot of money (£100-£200) if done professionally. They can also cost a lot of money (several weeks of towing revenue) if done by a keen and qualified club member.

c) Engine life. Aero engines are only permitted to run for so many hours after which they must be fully reconditioned or replaced. (This may change in the future, but that will not make the engines last forever.) The commonly used 150hp Lycoming engine has a life of 2000hrs (which may be extended by up to 400hrs), costs about £3000 (plus labour) to replace, and not much less to recondition.

2. FIXED COSTS.

a) Insurance. Commonly about 2½%-5% of the value of the aircraft insured, but any broker will quote for your particular situation and tug on request.

b) Hangarage. Very few clubs really get their hangars for free, most are paying for shelter in some way. The tug should bear its fair share of the burden.

c) Long term maintenance. Cs of A, refabricating, respraying, etc. This is only partly fixed; a C of A costs money even on an aircraft that has done little flying but it costs more on a heavily utilised aircraft.

d) Depreciation. This could be the subject of a book when considered relative to inflation, however there is a simple approach that will work. First, forget all about engine life, you are budgeting that separately, and therefore assume you sell the aircraft with the same number of hours on the engine as when you bought it. (What you do in real life is adjust the price up or down according to hours left to run.)

If you bought a new tug and you sell it when it is five years old and it has been well maintained, you might well sell it for considerably more than you paid. However, it will still be less than the current new price for the same type of aircraft. This difference between the selling price of the old aircraft and the price of a new one of the same type is the real depreciation. That is the fixed cost you must include in your budget. The same considerations apply to secondhand aircraft, although since these may be types no longer in production it is often necessary to consider equivalents. One should only be replacing with an aircraft of similar age and condition as that of the one when it was obtained. Anything better than that constitutes an improvement in the fleet which should be paid for out of profits or from some other source.

Having said all that, how does one arrive at an actual figure? Oddly enough, provided the aircraft is well maintained and the C of A kept current, the conventional accounting figure of ten per cent of purchase price per annum will serve well enough. An example should help to illustrate this:

New Bellanca Citabria purchased in 1973 for £6400.

Market value in 1977 with new engine and C of A, approx £9000-£10000.

Depreciation allowed over four years, £2560.

New cost in 1977 of £12000 is just about covered.

Now that we have seen where the money goes on an aerotow, now let us consider how much each item costs on a variety of tugs.

Paradoxically the variable costs vary surprisingly little from one tug to another. Fuel tends to be around one gallon per tow plus or minus .25 of a gallon. Fifty hour checks are of course on a per hour basis and therefore cheaper per tow on the more powerful tugs and on the newer and more serviceable ones. An arbitrary £100 per check will be taken for now. Engine replacement is also per hour and at present a rate of £1.50 per hour is reasonable on a modern flat four engine. Gipsy engines are becoming so unreasonable to overhaul that where feasible a conversion to a Lycoming or Continental engine is a cheaper alternative. Where the engine change is more than a year away a figure of £2 per hour is probably a better one to use as a hedge against inflation.

Three of the fixed costs vary considerably from one type of tug to another. Depreciation is a function of purchase price as is insurance (assume ten per cent and three per cent respectively). C of A costs depend on the age and type of tug and the amount of use/abuse it has had to put up with. A professional job will rarely be much less than £1000 for a well used tug and could be quite a lot more for one in need of new fabric or other major work. (This is for a two year C of A unlike the annual glider one.)

Again beware of the false economy of a cheap amateur job which leaves you without a tug (and the revenue from it) for half the season. Hangarage is, of course, a straightforward fixed cost. A general aviation airfield in SE England will charge £300-£400pa for hangaring an Auster. Gliding clubs don't charge on that basis, of course, and in comparison an arbitrary £100pa might be considered a fair figure.

The one remaining variable is the number of tows per hour that the tug will do. This is dependent partly on the pilot and the figures I give will be averages; an excellent tug pilot might do two or three tows per hour more, a poor one two or three less. It is also possible to do two or three tows per hour more by ignoring procedures designed to prevent overcooling of the engine on the descent. This is only an economy in the very short term. The general range of launches per hour is probably from four up to 16, depending on type.

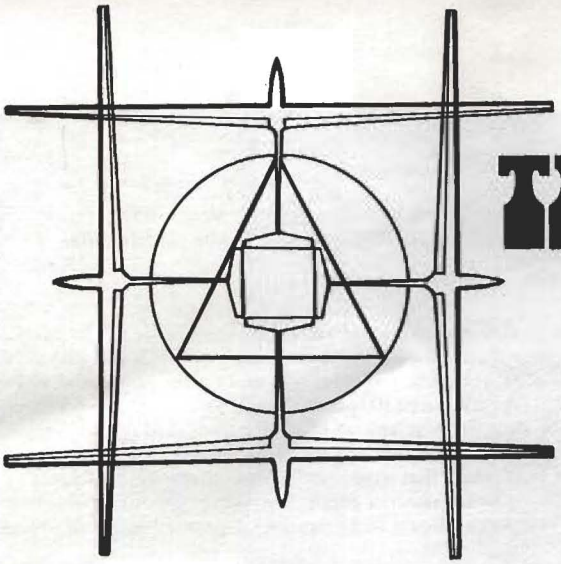
From the figures now available it is possible to construct a table of variable costs per tow for each of the commonly used tugs. Since the fixed costs per year are also known these have only to be divided by the projected number of tows and a total cost per tow can be arrived at. Local circumstances (cheap, professional, or reliable club maintenance of aircraft, cheap Cs of A or genuinely free hangarage) may enable you to alter some of these figures. Bargain aircraft purchased at well below the market price should be considered for depreciation and insurance purposes at the full market price since you can't rely on being so lucky a second time when you have to replace them.

TABLE OF VARIABLE COST PER TOW ON A VARIETY OF TUGS

Type	Tows/Hrs	Fuel/Tow (£)	Maint/Tow (£)	Eng Life/Tow (£)	VRCL Cost/Tow (£)
Auster					
Cessna 180/182					
Chipmunk	7	1.00	.60	.30	1.90
Citabria 150	8	1.00	.50	.25	1.75
Rallye Commodore 150					
Rallye Commodore 180					
Rallye Minerva 220					
Rollason Condor					
Super Cub 150	9	1.00	.40	.20	1.60
Super Cub 180	13	.80	.30	.15	1.25
Cub 90					
Wilga	13	1.40	.40	.20	2.00

The above table shows even with the few examples I have been able to provide that the lower variable costs per tow are generally associated with the higher capital expenditures on the effective modern tugs. In other words you can buy excellence in tugs, but it is only worth it if you can be sure of doing enough tows per year to get your money back.

If anyone can provide figures to fill the gaps in the table, I should be interested to hear from them.



THE NATIONALS

Dunstable 1977
May 28 – June 7
or
Seven Unstable Days

TED LYSAKOWSKI

To the regular *aficionados* it looked as though the time stood still: the scene at Dunstoble on the eve of the '77 National Championships was very much like the early days of the '76 Euroglide.

The same hot, sunny comfortable weather, the same spectacular Downs in the background, mostly the same gliders and the same competition crowd at the caravan site and in the bar. The key officials were also the same, only looking one year younger. Once again, we had Geoffrey Stephenson setting the tasks, John Honds shepherding us around the airfield and into the air, Rika Harwood getting us across the start and finish lines and Phil Wilcockson telling us how many points we failed to get, all under the overall command of John Jeffries.

But there were also other aspects which were new or different.

The combination of the Spring Bank Holiday and the Jubilee Day promised an 11 day competition for the price of one week's holiday. That couldn't be bad!

Structure of the Championships was new

It was the beginning of an important season, the season which would eventually produce the British Team for the 1978 World Championships and the expectations were high. The structure of the Championships was new; this year, for the first time, there were four different Classes – each producing a National Champion – namely:-

–Open Class
–15m Class
–15m Restricted Class (now renamed "Standard" by CIVV)
–Sports Class, which included both of the 15m Classes, plus many other sailplanes with the 1977 Speed Index of 104% or numerically lower (there were two – a Dart 17R and an SHK), all using handicapped scores.

There were 21 pilots in the Open Class, four in the 15m Class, 24 in the 15m Restricted Class and 30 in the Sports Class.

A nursery riddle: How many pilots were there altogether?
Answer: 51. If you did not get it right, read again the definition of the Sports Class.

The scorer's role was straightforward: to score the first three Classes separately and then merge and re-score the 15m Classes and the less than 104% SI additions using handicapped results. Phil Wilcockson coped admirably, but by the end of the Competitions he was no longer the young man of the pre-Jubilee Week.

Around 20% of the participating pilots were new (well, almost new) to the game and this must be an indication that the system of qualifying competitions (we persist in calling them Regionals) works well.

Eight of the 12 pilots shortlisted for the British Team for 1978 World Championships were taking part, five in the Open Class (George Burton, John Delafield, Ralph Jones, John Williamson and Steve White), two in the 15m Class (Chris Rollings and Ron Sandford) and one in the 15m Restricted Class (John Cardiff).

Some of the sailplanes were also new. In the 15m category the Nimbus 15 made its first appearance in the UK and looked good in the hands of Andrew Davis. In the Open Class, Jantar 2 (of Räyskala fame) and Kestrel 22 made their first Nationals appearance and both performed very well flown by Steve White and George Burton, respectively.

Like it or not, there is a steady drift towards higher-performance aircraft. In the 15m/Sports category the wooden ships seem to have been replaced by Astirs (five flying) and greater proportions of Std Cirri, Std Libelles and Std Jantars. Gone were the K-6s and only one Dart 17R and one SHK represented the pre-glass-fibre era. In the big ships Class the same holds true: only ten out of 21 were of the 19m variety, Five pilots flew Nimbus 2s while other designs or variations thereon were represented in ones or twos.

The weather during the Competitions was initially dominated by an anticyclone approaching slowly from the North Sea to south-western approaches, but became unsettled during the last few days. Peter Bayliss and Frank Wilson were the fortune tellers (with the blessing of the Met Office), whose job was to lecture us about low inversions, strong winds and TTs in the sky (it's their symbol for medium strength thermols), and occasionally to lull us into a false sense of security with catch phrases like "freezing rain", "heavy icing" and "35 knot winds".

Some aspects of the flying were new, others followed the previous patterns, confirming a trend.

The held startline, which was the subject of experimentation last year, is now a mandatory rule in the 1977 Competition Handbook. It was almost universally liked and accepted, although during the usual rainy day Flying Committee forum some pilots believed that the held startline should be advisory but not mandatory to allow greater flexibility. The lawyers amongst us pointed out that the rules allow a practical – if somewhat devious – way out. If a pilot does not wish to cross the line he may refuse to take a launch at the allocated time, launch after the line is open and go straight away from tow. He would then be timed from take-off. If the organisers do not wish to hold the line for some reason all they have to do is to offer a launch to every pilot at some unlikely time, collect refusals, open the startline ten minutes later and presto – everybody will be timed from launch.

Held startline and fast gaggles

Like it or not, but it seems that gaggle flying – particularly on difficult days – is here to stay. Perhaps somewhat paradoxically the high performance of the sailplanes and the ever-increasing standard of competition flying seem to be contributing factors: it is more difficult to get away from a following glider and it is easier to follow, but it seems that the held startline is also a contributory factor. Those who travel to the Continent have been telling us that gaggles there ore a fact of life and that the trick is to get established in the "fast gaggle" and wait for an opportunity to pound them.

The Competition was almost free of glider prangs in spite of 186 field landings and this should be a useful statistic to have at your fingertips when negotiating with insurance underwriters. The only exception was damoge to Mike Bird's Kestrel 19 sustained in a trailer accident during a retrieve on the last flying day.

In spite of the efforts of the Met men it was in the end possible to have only six contest days – out of a probable 11 – in each Class. The last one was on Saturday, June 4, the final three days were non-flyable and thus the competition fizzled out in the pattern established at the Nationals and Euroglide of 1976.

Steve White emerged as the 1977 UK Open Class Champion, followed very closely by John Delafield. They both flew consistently well, making the most of the available conditions on most days, and were separated from John Williamson in the third place by a significant margin.

The 15m Restricted Class Champion, Rocky Stone, also had a convincing win over his nearest rivals, Martin Wells and Leigh Hood.

In the 15m Class the winner, Chris Rollings, and the number two, Andrew Davis, were comfortably separated from Peter Stafford-Allen and Ron Sandford, the other contestants in this category.

Some differences but none that really mattered

The handicapping in the Sports Class made some differences at the top, but none that really mattered: the Sports Class National Champion was the same Rocky Stone, followed by Martin Wells, with Chris Rollings slotting into third place, Leigh Hood dropping to fourth and Andrew Davis taking fifth place.

All too soon it was over; time to go, reflect and get ready for another Competition.

Dunstable were the gracious hosts once again, and at the prizegiving Steve White, in the Open Class Champion's closing remarks, expressed the sentiments of us all when he thanked the organisers, the helpers and the crews for their work to make the '77 Nationals a yet another memorable Competition.



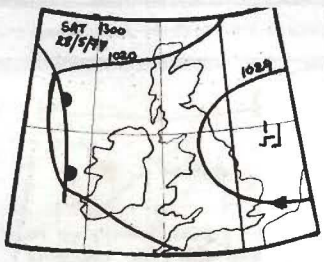
The trophy winners:- back row (l to r), Andrew Davis, Martin Wells, Rocky Stone, Leigh Hood, Chris Rollings and Peter Sheard; front row (l to r), John Delafield, Steve White and John Wiliamson. Photo: Dee Reeves

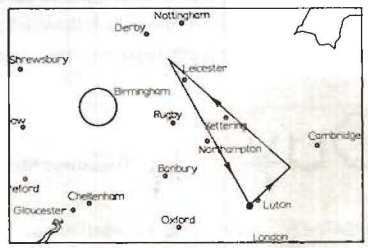
Day 1

Saturday, May 28 – all Classes

WEATHER: Dry air. Wind ENE 10/12kt, up to $\frac{4}{8}$ cu within 30km of Dunstable, otherwise blue and affected by sea air. Thermals 4-6kt up to 5000ft asl at max heating, narrow cores, turbulent.

TASK: 251.1km triangle *via* Caxton Gibbet and Markfield – all Classes.





The 15m/Sports Classes were launched around mid-day into good improving local conditions and most of the pilots were underway within 40 minutes after the startline was open.

The Open Class followed, with Ralph Jones being the last pilot to cross the line for real shortly after 2.00pm.

The day turned out to be better than forecast and all pilots completed the task, although blue conditions and the ingress of sea air affected the confidence and performance of many.

Some of the 15m/Sports Class pilots found the going on the first leg rather difficult, but later the conditions improved sufficiently to bring Chris Rollings home at 93.8km/h in the PIK 20 and Leigh Hood only marginally slower at 91.2km/h in the Cirrus 75. All the other speeds were within 70% of the winners.

For the Open Class the first leg was good, but relatively poorer conditions prevailed on the second leg and round the second TP.

Ralph Jones was choosy about his climbs and did a lot of cruising at around 80kt, gaining height here and there in lesser thermals; this was good enough for a convincing win at over 108km/h, while the slowest Open Class pilot took nearly 1.5 times longer to get nearly 72km/h. The following day at prizegiving, Ralph said that he needed that win because it convinced him that he wanted to continue competition gliding. At the end of last season he contemplated giving it all up. A lot of prizegiving chat is somewhat unreal, but his remarks seemed genuine.

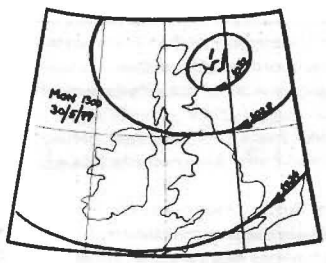
Brian Spreckley was dolphining on the first leg, together with the Calif driven by Fitchett/Carlton consortium and after a while was surprised to see them stop and take what he regarded as a "grotty" thermal. He pressed on until some strange large town began to appear underneath. It took him a while to orientate himself and return to the track. The Calif's "grotty" thermal turned out to be the first turning point!

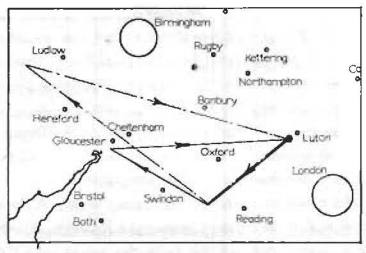
Day 2

Monday, May 30 – all Classes

WEATHER: Wedge of cold North Sea air under inversion lid. Wind NE 15kt up to $\frac{7}{8}$cu and strato cu initially, reducing to $\frac{2}{8}$ cu on track with full high cover, improving locally towards Dunstable in late afternoon. Thermals 1-3kt when available, cloudbase 3000-4000ft asl.

TASK: 15m/Sports Class: 375.4km triangle *via* Hungerford and Shobdon. Open: 265.2km triangle *via* Hungerford and Gloucester.





– – – 15m/Sports Class – Open Class

Initially all Classes were set the same task and the 15m/Sports Class was the first one to be launched around mid-day. However, the weather clearly did not develop as per forecast and the pilots could be seen to be laboriously struggling to get enough height to safely get underway. Several pulled out of the grid to await a better patch and a few returned for relights.

The Open Class watched the proceedings and showed little inclination to fly. There were mutterings that the task was too ambitious for the conditions and the time of the day (by then approaching 1.00pm). The organisers were thinking along the same lines and soon Geoffrey Stephenson declared that the fallback task would be flown.

Four of the 15m/Sports Class pilots landed near the first turning point, amongst them John Cardiff. Most of the others got into Shobdon area and the pins for outlandings began to appear on the return leg into wind. Altogether 23 pilots exceeded 200km and the leaders got within 80-90 km of Dunstable. The best distance was Tony Burton's 297.1km, but there were many long retrieves.

Open Class initially made reasonable progress, Lloyd Forsey being the only one to land in Swindon area on the second leg. The difficulties began on the third leg, the most promising conditions appearing to be downwind and south of track in the Brize Norton Zone. Landings began shortly after the second turning point, with a great cluster in the Oxford/Upper Heyford area. However, four made it back to Dunstable after some anxious low moments in the region of Princes Risborough.

Of the four, Steve White and John Delafield sought better conditions south of Brize Norton Zone, while Hamish Brown and Mike Bird (the day winner) flew essentially on track. The speeds were of the bicycle variety, between 50 and 54km/h, but both Steve White and John Delafield again showed high form which they were to maintain throughout the competition.

The following day John Glossop received a special prize (a wooden spoon) for "a shop steward of the best organised impromptu meeting of the Union of Open Class Pilots".



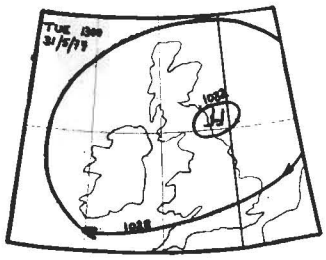
Steve White fettling his Jantar 2A with Mike Randle on the left. Photo: John Glossop.

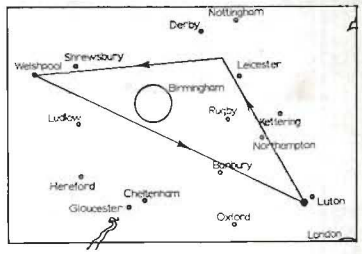


Open Class pilots and crews waiting for the Standard Class to get av

Day 3

Tuesday, May 31 – all classes





WEATHER: North Sea air continuing, wind NE 15-20kt, initiolly up to $\frac{2}{8}$cu/strato cu breaking to $\frac{4}{8}$ in the afternoon, cloudbase 3500-5000ft asl, thermals 2-6kt.

TASK: Open Class – 427.6km triangle *via* Markfield and Welshpool.
15m/Sports Class – 281.5km triangle *via* Gloucester and Thurlaston.

Initially the conditians were somewhat tricky but they improved rapidly in the early afternoon over most of the task area. After 4pm the final 40-50km of the third legs were affected by large areas of overdevelopment which made the return to Dunstable into 20kt wind, not an easy proposition.

The Open Class was the first to be launched and with the cloudbase firmly at 3500ft asl and little chance of immediate improvement, most pilots were on their way within half an hour after the startline was opened. At the end of the day ten got back and 11 landed out, most of them on the final 40km.

George Burton's 85.6km/h was the best speed of the day but a 50pts penalty for an infringement of Luton Zane put him into fourth position. The speeds of John Delafield, John Williamson and Steve White were virtually identical and about 3km/h slower than George's. John Delafield flew carefully on the first leg in a group with four or five others, but the weather boomed at the first TP and after taking a 6kt climb he flew most of the second leg at around 90kt without circling. Further on track he contacted a "fast gaggle" and flew in company through most of the third leg.

The last one home, shortly after 7.30pm, was Frank Pozerskis, now getting used to scrapes in his "spare" Nimbus. His ASW-17 was damaged in a take-off incident on the eve of the competition.

No news from the Jones' camp was bad news. Ralph landed out on the first leg after 80km. His flying was not helped by C of G problems caused by about 20lb of waterballast leaking from the tanks into the fuselage and collecting in the tail.

The 15m/Sports Class found the conditions good except for the last leg where the clag took its toll. The eventual split was also 50/50: 15 got back and 15 landed out. Chris Rollings' PIK was again the fastest home at just over 68km/h but Dave Watt's "cooking" Libelle was only 1km/h slower, sufficient to give him a comfortable first in the Restricted and Sports Classes. Rocky Stone took a convenient cloud climb near Silverstone to get over the difficult part while Tony Burton, the renowned cloud flyer, was denied such an opportunity and got home only after long scrapes and tricky final glides well documented on the radio.

Ron Sandford was one of the few who landed out around halfway on the triangle.

On a task that is long and not too easy the radio chatter can be fascinating. From a husband and wife team:-

– matter of factly . . . "approaching Brackley"
– patiently . . ."good, keep going"
– doubtfully . . ."it does not look too good ahead"
– surprised . . . "it is good here"
– testily . . . "but it does not help me over here".

Fram a frustrated Astir Pilot who spent 45 minutes nursing a patch of sunshine near Wolverton, the only one for miles around, to a big Kestrel coming to join him . . ."go away this is only a Standard Class thermal".

Quizzically . . ."How long is this triangle?" . . . "About 425km Lemmy" . . . Agitated . . . "and Mattie told me it was only 250km!" Lemmy Tanner had to collect his car from repairers that morning. Arriving at Dunstable around 2pm he jumped into the Kestrel, collected a bundle of maps from his wife, asked how long was the task, thought "that's reasonable", and set off. Past Long Mynd it dawned on him that something did not quite add up, hence the last exchange.

John Delafield's "mod" to Ralph Jones' Nimbus 2. Photo: John Glossop.

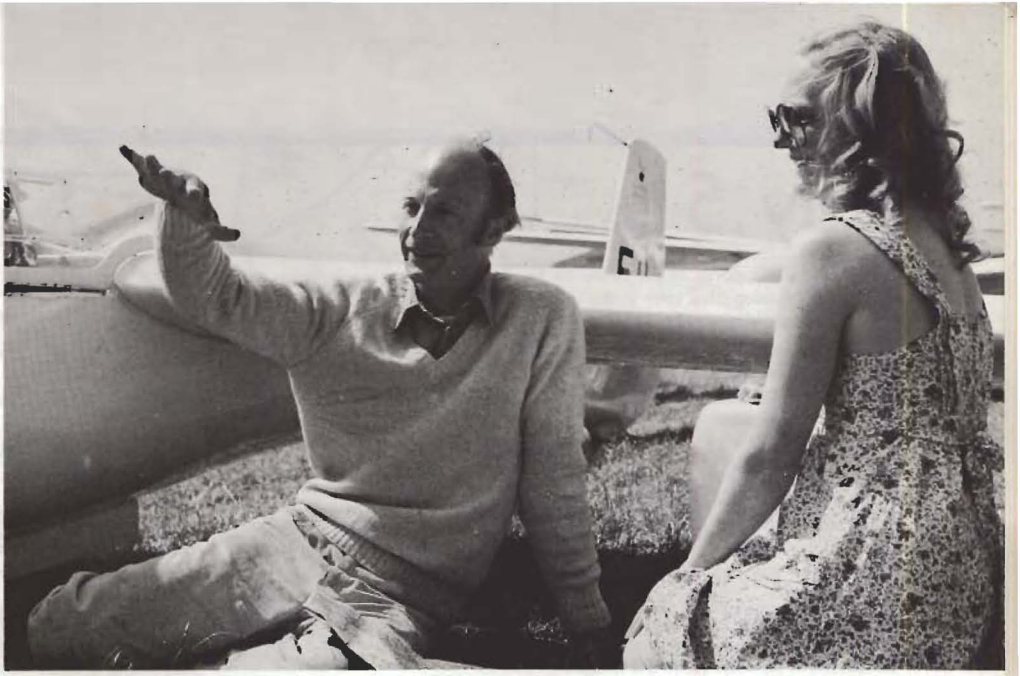


Dickie Feakes, the British Team Manager. Photo: John Glossop.





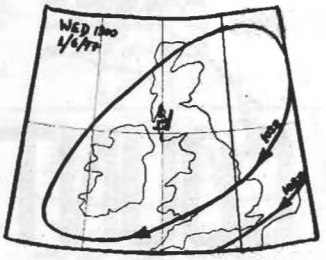
get away on Day 2. Photo: John Glossop.

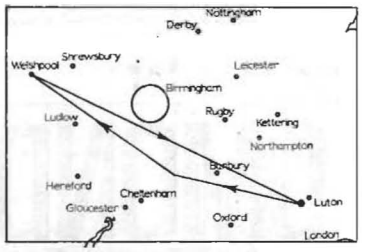


John Cardiff explaining how it should be done to Dilys Yates, his crew. Photo Maurice Hammon.

Day 4

Wednesday, June 1 – all classes





WEATHER: North Sea air, initially ⅜ cu, turning blue at around mid-day, increasing cirrus cover in pm. Wind NE 15-20kt, max temp 18°C.

TASK: 399km Triangle *via* Chipping Campden and Welshpool. All Classes.

After it was all over John Delafield described this day as "grovel" and grovel it was.

The sky looked good locally at first and the 15m/Sports Class seemed to be getting underway from great heights. Very soon it became clear that all was not well, the convection barely reaching 3500ft asl and rapidly turning blue. From then on it was weak and blue to the first TP, moderate and blue past Pershore, moderate to strong and blue in the mountains and weakening, blue and windy on the way back.

It was the day of picturesque gaggles of more than 20 gliders. It was also the day of low brushes with the mountains. First Open Class Pilots arriving at Welshpool found the valley filled with gliders, mostly still moving. Dave Watt, who eventually won Sports and Restricted for that day, was at one point down to what looked like 200ft, with Andrew Davis and Andy Gough still below him!

In the end most of the 15m/Sports Class simply ran out of time. The leaders got to within 20km of Dunstable only to go down in the shadow of a wide band of cirrus which cut off the sun and squashed any late convection. Others landed out on the third leg, some as far as Wales. Retrieves, many of them long, were again the order of the day.

In the Open there were some losers, but no winners. The former included John Hoye who landed in Wales and whose car/trailer outfit was written-off in the process of getting there. It also included Alf Warminger who landed at Long Mynd and was faced with a long retrieve. Otherwise 16 pilots were on the ground within sight of Dunstable, all brought down by the cirrus, sometimes after long struggles and waiting games. Nobody got back and when the distances were measured 16 out of the 21 got more than 950pts for the day!

Photographic problems

Tony Burton had one of the best distances of the day, but it turned out that he photographed not Chipping Campden but Blockley on the way out. Although in the correct photographic zone it did not qualify as evidence under the current rules and Tony was scored only 33.5km, as though he landed on the way out. The irony was that Tony himself re-wrote the rules last winter! Ben Benoist and Chris Heames also had TP photography problems and suffered the same fate.

Trailer races to the Cotswolds were also the order of the day and the roads between Banbury and Edgehill with about 35 outfits moving this way and that way looked very spectacular from the air.

Nick Hackett (Jantar 1) coming in to land. Photo: Maurice Hammon.



John Hoye pondering on the task with his crew. Photo: Maurice Hammon.

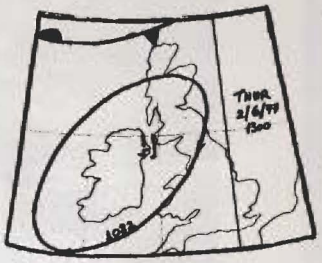


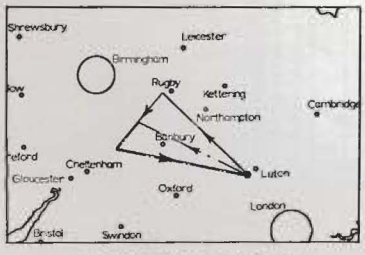
Day 5

Thursday, June 2 – all classes

WEATHER: Early cover of cu/strato cu breaking up in early afternoon and turning blue later in the day. Thermals 2-4kt up to 3500-4000ft asl in task area. Wind NNE 20kt, max temp 18°C.

TASK: Open Class: 206.2km triangle *via* Thurlaston and Chipping Campden.
15m/Sports Class: 181.8km triangle *via* Kineton and Chipping Campden.





---- 15m/Sports Class – Open Class

The full cover of cu/strato cu persisted into early afternoon and the Open Class was launched around 1.30pm into $\frac{6}{8}$cu with cloudbases which seemed to begin at launch height and with generally very poor visibility.

The radio was filled with suitable aggro chatter, but the conditions were good locally and by 2.30pm all the pilots were on the way. Within 30km the weather changed into almost complete blue, with only an occasional trace of haze on a short lived small cu. The progress into the stiff 20kt NNE wind was slow, but there were enough thermals around to see everyone around the first TP. The second leg was downwind and the only problem was not to get carried away and over-run the second TP, a small Cotswold village.

That is exactly what happened to Alf Warminger who spent a long time clawing his way back into wind and eventually ended up in a field for the day. Thirteen pilots got back to base, some after epic struggles into the cold and strong crosswind on the final leg. John Delafield won the day by catching up near the first TP, with Steve White and John Williamson, his principal opponents, and staying with them for the rest of the triangle. His speed was 77.4km/h, while the slowest pilot got nearly 48km/h.

The poor visibility delayed the launching of the 15m/Sports Classes until around 14.30hrs, and it was not until around 15.10hrs that the startline could be opened for them.

Thirty pilots tried to cross the line within minutes after that and the radio exchanges that followed were dutifully played back at the briefing the following day, adding a tragic-comical touch to the proceedings. It still took only 13 minutes for everyone to get away, with only one pilot "lost" by the startline. Rika was upset, but it was an excellent effort under duress anyway.

The conditions on track were virtually the same as for the Open Class, wind was strong and not much sunshine left. In the end the 15m/Sports Classes again simply ron out of day and ended up on the ground in the Brackley/Bicester/Banbury area, with the day leaders, Peter Stafford-Allen, Rocky Stone, Dave Watt and Richard Aldous, covering in excess of 150km. Ben Benoist and Paddy Hogg had photographic problems with Chipping Campden, Ben for the second day running.

Overheard in the bar from an unhappy crewperson . . . "I know ground handling of the Standard Class is supposed to be easy, but this is ridiculous . . ."

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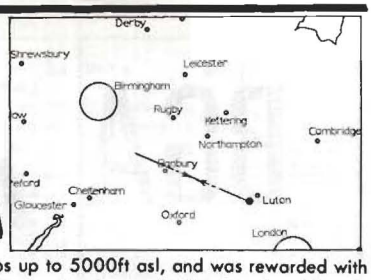
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Day 6

Friday, June 3 – 15m/Sports Class





WEATHER: $\frac{4}{8}$ alto cu decreasing rapidly in pm, increasing cirrus in pm, some lenticulars, wind NNW 15/20kt, max temp 25°C.

TASK: 147km out-and-return to Kineton, 15m/Sports Class only.

By 1.30pm it was blue, John Jeffries in a K-8, could only climb slowly to obout 2000ft agl over Dunstable town in the only thermal for miles around and the rate of temperature rise was slow. The Open Class task, a 151km out-and-return to Thurlaston was scrubbed and the 15m/Sports Class remained on the grid to await further developments. These followed quickly: the low inversion popped and soon after launching the pilots were climbing to 4500ft asl in 4kt thermals. Nobody wasted any time after the startline was opened and all 30 gliders were on their way within 11 minutes.

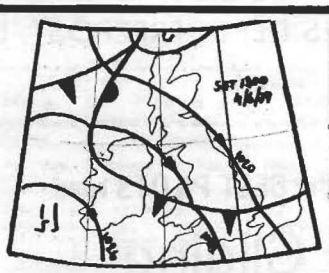
Andrew Davis (Nimbus 15) attributed his 65.9km/h, best of the day, to recognising that there was some wave activity which was augmenting conventional thermals.

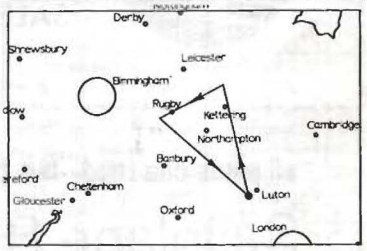
Leigh Hood, on the other hand, followed the conventional blue day tactics, flew all the towns on track, got 4kt climbs up to 5000ft asl, and was rewarded with 62.3km/h which gave him first place for the day in the Restricted and Sports Classes. Ron Sandford and Rocky Stone also exceeded 60km/h, while the slowest finisher, Peter Stafford-Allen, achieved 45.2km/h. Many thought the day was very variable: there was the time to go and the time to stop. This must have been true: there were five outlandings, including Dave Watt, the overall leader of the Sports Class, and John Cardiff. However, for a majority this was a good day and a welcome change from the retrieves.

The finish line spectators were treated by Chris Rowland to a unique one point landing: on his wingtip. Fortunately luck was on his side and a more conventional landing, helped by the contour of Dunstable, followed seconds later; there was no damage.

Day 6

Saturday, June 4 – Open Class





WEATHER: Cold front passing over Dunstable at 14.00hrs, moving south, ridge behind. Increasing cirrus during the day. Inversion lowering in pm. Wind N 15kt, changing to WNW 20kt.

TASK: 200km triangle via Stoke Dry Reservoir and Thurlaston. Open Class only.

A second briefing had to be held at 11.30hrs and the 162km triangle for the 15m/Sports Class was cancelled because of the slower than anticipated progress of the front.

Open Class was launched shortly ofter 2.00pm into overcast sky, cloudbase of around 2700ft asl and 1-2kt thermals.

The remains of the front still lingered on and only Lemmie Tanner and George Burton got underway at around 2.45pm, shortly after the startline was opened. Several pilots returned for relights and others soared the ridge trying to avoid Luton Zone. Within half an hour the cloudbase rose to 3800ft asl, the weather on track became inviting and the others were on their way between 3.10 and 3.30pm The first leg presented few problems, but by 4.30pm the weather past the first TP was all blue, affected by sea air and the wind changed to 20kt WNW, with the friendly clouds receding fast towards Dunstable.

Lemmie Tanner and George Burton had difficulties on the first leg, but later managed to stay with the better weather and completed the task at around 57km/h.

Steve White (65.8km/h) and John Delafield (64.8km/h) also managed, but only just. Others were uniformly scattered on the second and third legs. For Lemmie this was a reward for Day 3, but the spoils belonged to the brave: Steve White, down to 300ft agl, announced that he would land at the second TP, but then decided that he had enough height to cross Draycote reservoir (SE of TP) and land on the other side. Over the water he found a ½kt and "94" was "OK" – the rest was a downwind float into improving conditions. John Delafield was better off: he was down to only 600ft agl past the second TP, but got away. Ted Lysakowski, one of the last ones to leave, landed within 3km of the finish line in full view of about 150 well-wishers at Dunstable.

Police escort

John Glossop, also a late starter, landed 9km up the road in a sports field. He was surrounded by kids and friendly policemen. His crew were intercepted on the outskirts of Bletchley and given police escort to the field. Ralph Jones spent a long time below the radio aerials SE of Rugby and eventually landed at the second TP.

The trophies were presented as follows: Londonderry cup (winner of the Open Class), Steve White; Pilcher cup (second in the Open Class), John Delafield; Slingsby cup (winner of the Unrestricted 15m Class), Chris Rollings; Dart trophy (second place in the Unrestricted 15m Class), Andrew Davis; EoN cup (winner of the Restricted 15m Class) and the Furlong trophy (highest place in Sports Class), Rocky Stone; Schleicher trophy (second place in the Restricted 15m Class), Martin Wells and the Firth Vickers trophy (highest placed pilot in the Nationals for the first time), Peter Sheard.

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FINAL RESULTS – OPEN CLASS

		DAY 1 28.5 231.1Km ▲ Caxton Gibbett, Markfield			DAY 2 30.5 265.2Km ▲ Hungerford, Gloucester			DAY 3 31.5 427Km ▲ Markfield, Welshpool			DAY 4 1.6 399Km ▲ Welshpool, Chipping Campden			DAY 5 2.6 206.5Km ▲ Thurlaston, Chipping Campden			DAY 6 4.6 200Km ▲ Stoke Dry, Thurlaston				
Pilot	**Glider**	**Speed**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**(Dist) Kms**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**Total Points**	**Finol Pos**
White, S. A.	Jantar 2A	102.4	917	2	53.0	995	2	81.5	966	3	(384.5)	990	2=	74.4	964	3	65.8	1000	1	5832	1
Delafield, J.	Nimbus 2	98.9	868	4	50.3	981	4	81.9	969	1=	(388.2)	1000	1	77.4	1000	1	64.8	996	2	5814	2
Williamson, J. S.	ASW-17	102.0	912	3	(215.7)	673	8	81.9	969	1=	(379.5)	976	8	75.2	974	2	(175.7)	742	7=	5246	3
Burton, G. E.	Kestrel 22	92.4	779	8	(217.4)	679	6=	85.6	950†	4	(376.6)	948*	12	69.3	903	5	57.0	962	4	5221	4
Lysakowski, E. R.	Nimbus 2	92.2	776	9	(214.9	670	10	73.8	902	7	(384.7)	990	2=	61.1	805	9	(195.9)	838	5	4981	5
Brown, H. F.	Kestrel 19	94.2	804	5	51.2	986	3	(415.4)	624	11	(379.0)	974	9=	67.9	886	7	(123.2)	499	10=	4773	6
Glossop, J. D. J.	Kestrel 19	87.4	710	12	(197.8)	606	13	78.0	936	5	(382.7)	985	4=	55.7	740	11	(183.0)	776	6	4753	7
Tanner, L. E. N.	Kestrel 19	88.4	724	11	(186.1)	563	14=	(333.4)	494	18	(382.0)	983	6=	68.4	892	6	57.5	964	3	4620	8
Randle, M.	Kestrel 20	80.7	618	16	(217.4)	679	6=	66.4	840	8	(375.1)	963	15	47.9	627*	13	(175.7)	742	7=	4469	9
Pilcher, R. R.	Nimbus 2	93.4	793	6	(243.2)	775	5	(408.0)	612	15	(379.0)	974	9=	67.9	886*	8	(102.3)	392	15=	4412	10
Bird, M.	Kestrel 19	90.0	746	10	53.9	1000	1	(386.8)	579	16	(376.6)	968	11	52.2	698	12	(107.8)	418	14	4409	11
Spreckley, B. T.	Kestrel 19	74.9	538	19	(213.2)	663	11	77.5	933	6	(382.2)	983	6=	60.6	799	10	(110.1)	429	13	4345	12
Jones, R.	Nimbus 2	108.4	1000	1	(215.5)	672	9	(80.0)	95	20	(382.7)	985	4=	70.6	918	4	(123.2)	499	10=	4169	13
Pozerskis, P	Nimbus 2	92.7	783	7	(177.0)	529	17	56.9	761	10	(375.1)	963	13=	(176.7)	449	16	(94.0)	353	19	3838	14
Lilburn,D. W.	Kestrél 19	82.6	643	15	(169.0)	499	18	68.8	810	9	(365.0)	935	17	(182.3)	465	15	(95.0)	357	18	3709	15
Tull, V. F. G.	Kestrel 19	77.7	576	18	(168.2)	496	19	(409.0)	614	14	(375.1)	963	13=	(182.6)	466	14	(102.3)	392	15=	3507	16
Zealley, T. S.	Kestrel 19	86.5	698	13	(156.2)	451	20	(413.4)	621	12=	(291.4)	730	19	(92.8)	201	20	(116.3)	459	12	3160	17
Bleaken, L.	Kestrel 19	80.6	616	17	(179.8)	539	16	(343.8)	511	17	(372.7)	957	16	(115.6)	268	19	(73.5)	255	21	3146	18
Forsey, L. K.	Jantar 1	82.7	647	14	(98.7)	237	21	(218.0)	312	19	(319.9)	809	18	(165.4)	415	18	(129.9)	524	9	2944	19
Warminger, A. H.	Kestrel 19	71.9	436	21	(212.0)	659	12	(413.4)	621	12=	(178.5)	415	21	(79.6)	162	21	(102.3)	398	15=	2685	20
Hoye, J. M.	Kestrel 19	72.7	507	20	(186.1)	563	14=	(53.5)	53	21	(221.0)	533	20	(172.0)	435	17	(83.8)	300	20	2391	21

* = barograph penalty; † = airspace infringement penalty

Results calculated on HP 9815 desk-top computer loaned by Hewlett Packard Ltd

FINAL RESULTS – 15m CLASS

		DAY 1 28.5 251.1 Km ▲ Caxton Gibbett, Markfield			DAY 2 30.5 375.4Km ▲ Hungerford, Shobden			DAY 3 31.5 281.5Km ▲ Gloucester, Thurlaston			DAY 4 1.6 399Km ▲ Chipping Campden Welshpool			DAY 5 2.6 181.8Km ▲ Kineton, Chipping Campden			DAY 6 3.6 147Km ⇄ Kineton				
Pilot	**Glider**	**Speed**	**Pts**	**Pos**	**(Dist) Kms**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**(Dist) Kms**	**Pts**	**Pos**	**(Dist) Kms**	**Pts**	**Pos**	**Speed (Dist)**	**Pts**	**Pos**	**Total Points**	**Finol Pos**
Rollings, C. C.	PIK 20s	93.8	1000	1	(284.4)	952	2	68.2	1000	1	372.7	973	2	(147.7)	614	2	59.3	885	3	5424	1
Davis, A. J.	Nimbus 15	76.5	722	4	(290.4)	974	1	59.4	903	2	382.2	1000	1	(145.9)	604	3	65.9	1000	1	5203	2
Stafford-Allen, P. R.	PIK 20D	80.2	783	2	(210.1)	668	4	257.6	514†	3	350.2	909	3	(158.0)	665	1	45.2	638	4	4177	3
Sandford, R. A.	PIK 20s	79.0	763	3	(219.4)	704	3	161.0	319	4	318.6	819	4	(141.0)	580	4	63.6	960	2	4145	4

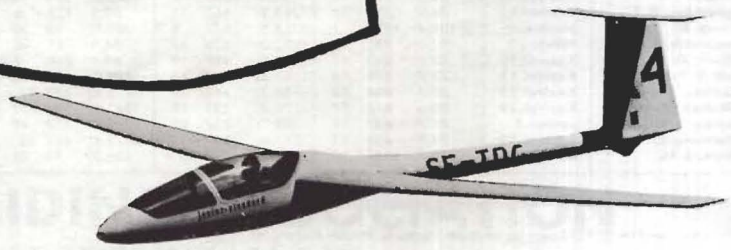
FINAL RESULTS – 15m RESTRICTED CLASS

Stone, A. J.	Std Cirrus	88.8	920	2	(287.4)	963	4	61.0	921	3	(373.3)	975	3	(156.2)	656	1	60.2	900	2	5335	1
Wells, M. D.	Std Libelle	79.4	770	9	(263.4)	871	6	55.2	857	9	(375.1)	980	2	(131.7)	533	13	57.6	855	8	4866	2
Hood, L. S.	Cirrus 75	91.2	959	1	(249.4)	818	8	(268.6)	592	14	(361.3)	941	4=	(133.0)	540	10=	62.3	937	1	4787	3
Aldous, R. F.	Std Cirrus	76.6	724	12	(284.4)	952	5	51.6	818	11	(320.7)	825	15	(152.3)	636	3	54.1	795	11	4750	4
Shephard, E. G.	Std Cirrus	75.7	710	14	(210.1)	668	13=	58.0	888	5	(341.8)	885	6	(141.0)	580	4	58.2	866	6	4597	5
Cole, R. A.	Std Cirrus	79.7	774	8	(210.1)	668	13=	61.3	924	2	(325.2)	838	11=	(133.0)	540	10=	56.3	833	9	4577	6
Sheard, P. G.	Std Cirrus	84.0	843	3	(296.4)	997	2	56.8	875	6	(158.3)	364	22	(135.4)	552	8=	58.4	870	5	4501	7
Watt, D.	Std Libelle	74.6	692	17	(289.1)	969	3	67.1	988	1	(379.0)	991	1	(156.0)	655	2	(50.8)	103	23	4398	8
Dixon, R. T.	Astir CS	78.3	753	11	(236.5)	769	9	(254.3)	556	18=	(341.3)	884	7	(131.1)	531	14=	59.5	888	4	4381	9
Gough, A. W.	Std Cirrus	75.1	700	16	(216.9)	694	12	55.0	855	10	(229.5)	566	20	(141.0)	560*	6=	55.7	822	10	4197	10
Rowland, C. D.	Std Cirrus	73.3	673	18	(210.1)	668	13=	(263.9)	580	15=	(361.3)	941	4=	(109.1)	421	19	57.7	857	7	4140	11
Wheeler, J	Astir CS	73.0	667	19	(202.2)	638	18	(254.2)	556	18=	(289.7)	737	18	(138.9)	570	5	53.7	788	12	3956	12
Watson, A. J.	Std Libelle	79.9	778	7	(223.4)	719	10	(185.1)	381	21	(327.5)	845	9=	(128.4)	517	16	47.3	676	18	3916	13
Burton, A. J.	Std Libelle	80.8	792	6	(297.1)	1000	1	56.4	871	7	(33.5)	10	24	(117.5)	463	18	49.7	717	16	3853	14
Heames. C.	Astir CS	71.1	637	20	(210.1)	668	13=	(261.7)	575	17	(332.9)	860	8	(105.5)	403	21	48.0	688	17	3831	15
Camp, G. W. G.	Astir CS	83.3	832	4	(220.6)	708	11	47.2	770	12	(214.8)	525	21	(131.8)	534	12	(131.7)	374	19	3743	16
Blackmore, R.	Std Jantar	76.3	720	13	(94.8)	228	21	(263.7)	580	15=	(325.2)	838	11=	(108.7)	419	20	59.8	893	3	3678	17
Hagg, A. J.	Std Cirrus	70.5	628	21	(210.1)	668	13=	(242.2)	526	20	(311.1)	798	17	(73.5)	243	23=	52.7	770	13	3633	18
Hackett, N. G.	Std Jantar	82.4	817	5	(262.9)	870	7	(170.1)	343	22	(317.8)	817	16	(131.1)	531	14=	(67.4)	159	20	3537	19
Cardiff, J.	Std Libelle	78.7	759	10	(79.7)	171	24	61.0	920	4	(327.5)	845	9=	(136.9)	560	6=	(55.1)	117	21	3372	20
Hartley, K. J.	Std Cirrus	75.5	707	15	(85.1)	191	23	55.4	859	8	(325.2)	838	11=	(135.4)	552	8=	(30.3)	34	24	3181	21
Phillips, D. M.	Std Libelle	65.8	533	22	(147.1)	428	20	(152.8)	299	23	(252.2)	631	19	(126.9)	509	17	50.0	722	15	3142	22
Harrington, T. C.	Std Libelle	64.7	535	24	(93.4)	223	22	(130.4)	242	24	(325.2)	845	11=	(80.5)	278	22	51.5	749	14	2865	23
Benoist, B.	Astir CS	65.6	549	23	(200.0)	630	19	(269.1)	594	13	(60.5)	87	23	(73.5)	243	23=	(52.4)	108	22	2211	24

FINAL RESULTS – SPORTS CLASS

Stone, A. J.	Std Cirrus	88.8	960	2	(287.4)	903	4	61.0	888	5	(373.3)	932	3	(156.2)	656	2	60.2	961	3	5300	1
Wells, M. D.	Std Libelle	81.1	833	8	(270.8)	844	6	57.0	846	8	(384.5)	962	2	(136.8)	559	9	59.2	944	5	4988	2
Rollings, C. C.	PIK 20s	88.4	954	3	(262.9)	816	8	62.2	901	3	(347.5)	862	8	(133.3)	541	14	54.8	863	14	4937	3
Hood, L. S.	Cirrus 75	91.2	1000	1	(249.0)	766	10	(268.6)	549	18	(361.3)	899	4=	(133.0)	540	15=	62.3	1000	1	4754	4
Davis, A. J.	Nimbus 15	72.0	685	24	(268.4)	835	7	54.2	816	12	(356.3)	886	6	(131.6)	533	19	60.9	975	2	4730	5
Aldous, R. F.	Std Cirrus	76.6	759	14	(284.4)	892	5	51.6	790	13	(320.7)	789	18	(152.3)	636	3	54.1	849	16	4715	6
Shephard, E. G.	Std Cirrus	75.7	744	15	(210.1)	627	16=	58.0	856	7	(341.8)	846	10=	(141.0)	580	6	58.2	925	8	4578	7
Watt, D.	Std Libelle	77.8	779	13	(306.0)	970	2	71.7	1000	1	(398.5)	1000	1	(168.5)	718	1	(53.8)	106	27	4573	8
Cole, R. A.	Std Cirrus	79.7	810	11	(210.1)	627	16=	61.3	891	4	(325.2)	801	16=	(133.0)	540	15=	56.3	890	12	4559	9
Sheard, P. G.	Std Cirrus	84.0	881	5	(296.4)	935	3	56.8	844	9	(158.3)	348	27	(135.4)	552	10=	58.4	929	7	4488	10
McFadyen, T. E.	SHK	73.6	710	21	(234.5)	714	12	44.5	715	15	(353.7)	878	7	(135.4)	552	10=	57.7	915	11	4484	11
Dixon, R. T.	Astir CS	78.3	788	12	(236.5)	721	11	(254.3)	515	22=	(341.3)	845	12	(131.1)	531	20	59.5	949	4	4349	12
Gough, A. W.	Std Cirrus	75.1	734	18	(216.9)	651	15	55.0	825	11	(229.5)	541	25	(141.0)	560*	8	55.7	878	13	4189	13
Burton, A. J.	Std Libelle	84.2	885	4	(314.4)	1000	1	60.3	881	6	(32.2)	14	30	(127.0)	510	23	52.6	821	19	4111	14
Rowland,C. D.	Std Cirrus	73.3	706	22	(210.1)	627	16=	(263.9)	538	19	(361.3)	899	4=	(109.1)	421	25	57.7	916	10	4107	15
Watson, A. J.	Std Libelle	81.6	841	7	(229.7)	697	13	(191.3)	367	26	(335.7	830	13=	(133.3)	542	13	48.7	749	21	4026	16
Wheeler, J.	Astir CS	73.0	700	23	(202.2)	598	22	(254.2)	515	22=	(289.7)	705	23	(138.9)	570	7	53.7	842	17	3930	17
Heames, C.	Astir CS	71.1	669	26	(210.1)	627	16=	(261.7)	533	20	(332.1)	822	15	(105.5)	403	26	48.0	736	22	3790	18
Sandford, R. A.	PIK 20s	74.5	724	20	(202.9)	601	21	(147.0)	263	29	(297.0)	725	22	(127.2)	511	22	58.8	936	6	3760	19
Stafford-Allen, P. R.	PIK 20D	75.6	743	16	(194.3)	570	24	(235.2)*	420*	25	(326.5)	805	15	(142.6)	588	4	41.8	621	23	3747	20
Camp, G. W. G.	Astir CS	83.3	870	6	(220.6)	664	14	47.2	744	14	(214.8)	502	26	(131.8)	534	17=	(131.7)	350	24	3664	21
Hagg, A. J.	Std Cirrus	70.5	659	27	(210.1)	627	16=	(242.4)	487	24	(311.1)	763	20	(73.5)	243	29=	52.7	824	18	3603	22
Blackmore, R.	Std Jantar	74.8	729	19	(92.2)	205	28	(255.5)	518	21	(317.5)	780	19	(104.9)	399	27	58.2	924	9	3555	23
Cardiff, J.	Std Libelle	80.4	822	10	(81.9)	168	30	62.9	908	2	(335.7)	830	13=	(142.2)	586	5	(56.7)	115	26	3429	24
Hackett, N. G.	Std Jantar	80.8	828	9	(255.9)	790	9	(164.8)	305	27	(310.3)	761	21	(126.5)	507	24	(65.6)	143	25	3334	25
Phillips, D. M.	Std Libelle	67.2	605	29	(151.2)	416	25	(157.9)	289	28	(258.5)	620	24	(131.8)	534	17=	51.4	799	20	3263	26
Hartley, K. J.	Std Cirrus	75.5	741	17	(85.1)	179	29	55.4	829	10	(325.2)	801	16=	(135.4)	552	9=	(30.3)	32	30	3134	27
Harrington, T. C.	Std Libelle	67.5	610	28	(98.8)	229	26	(129.5)	245	30	(341.9)	846	10=	(87.0)	310	28	54.5	857	15	3097	28
Davis, F. J.	Dart 17R	71.6	677	25	(96.6)	221	27	(292.1)	604	16	(343.0)	849	9	(127.4)	512	21	(46.0)	82	29	2945	29
Benoist, B.	Astir CS	65.6	579	30	(200.0)	590	23	(269.1)	550	17	(60.5)	83	29	(73.5)	243	29=	(52.4)	102	28	2147	30

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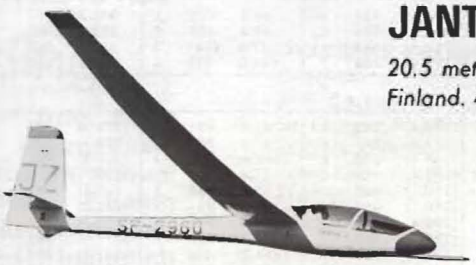


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INTER-SERVICE REGIONALS

GORDON CAMP

It seemed last winter that RAF Halton, nestling peacefully at the foot of the Chiltern ridge in Buckinghamshire, would be an idyllic setting for this year's Inter-Service Regionals. The only difficulty envisaged was ensuring that pilots made their 1000 metre startline crossings on the northern side of the airfield, since the boundary of the London TMA (base 3500ft asl) runs directly over the centre of the airfield.

In the event, the mediocre weather ensured this was a purely hypothetical problem! By the tenth day of the 12 day contest, the longest flight had been 146km, and the finish line had been crossed twice by an ASW-17, and once by an Astir, Sky, and K-8, despite comparatively short tasks.

However, Saturday, May 14, provided the highlight, when the Open Class was sent on a 305km triangle, with proportionately smaller triangles for the Sport and Club Classes. Over half the total field of 58 gliders circumnavigated the snowstorms to complete thir tasks.

In the final results, Don Spottiswood won the Open Class in the World Champion ASW-17, with Peter Cook second and Harry Orme (motto: *Per Ardua Ad Astir*) third. John Jeffries in one of his Dunstable ASK-18s set the pace in the Sport Class, with Stu Hoy close behind in his IS-29D. The Club Class was convincingly won by Mick Boydon who scored 1000pts on each of the last three days.

FINAL RESULTS (HANDICAPPED)

Open Class

No.	Pilot	Sailplane	H'cap	Day 1 4.5 146km ▲	2 7.5 141km □	3 10.5 116km ▲	4 14.5 305km ▲	Total pts
1	Spottiswood, J. D.	ASW-17	118	833	171	967	891	2862
2	Cook, P. G.	DG-100	102	789	0	903	904	2596
3	Orme, H.	Astir CS	100	540	126	663	955	2284
4	Randle, Jane	Kestrel 20	116	532	192	291	935	1950
5	Welsh, J.	Std Cirrus	100	449	159	408	907	1923
6	Brindle, G. F.	Std Cirrus	100	832	39	568	481	1920
7	Wishart, R.	Std Cirrus	100	460	111	435	906	1912
8	Throssell, M. G.	SHK	100	306	39	493	1000	1838
9	Gorely, T.	Std Cirrus	100	338	159	223	995	1715
10	Lyndon, R. J.	Std Cirrus	100	387	69	801	406	1663
11	Wood, D.	Std Cirrus	100	167	39	425	900	1531
12	Oulds, T.	Std Libelle	98	511	71	521	391	1494
13	Cooke, J.	Std Libelle	98	468	163	316	438	1385
14	Lidbury, D.	Astir CS	100	31	39	1000	275	1345
15	Wren, J.	ASW-15	100	215	190	487	448	1340
16	Honcock, A.	Astir CS	100	389	39	0	885	1313
17	Roberts, R.	Astir CS	100	332	39	337	425	1133
18	Miller, R.	Cobra 15	96	9	117	518	427	1071
19	Mullholland, S.	Kestrel 19	116	246	86	370	337	1039
20	Jury, A. J.	Astir CS	100	0	69	449	469	987
21	Bolton, P.	Astir CS	100	335	159	0	425	919
22	Hyett, A.R.	Std Libelle	98	0	33	299	458	790
23	Mahson, J.	Std Cirrus	100	0	0	136	201	337
24	Elsam, M.	Kestrel 19	116	120	DNF	DNF	DNF	120

Sports Class

No.	Pilot	Sailplane	H'cap	Day 1 6.5 186km ▲	2 7.5 128km ▲	3 10.5 84km ▲	4 13.5 113km ▲	5 14.5 214km ▲	6 15.5 113km ⇄	Total pts
1	Jeffries, J. R.	K-18	84	159	234	227	118	1000	467	2205
2	Hoy, S.	IS-29D	94	162	373	199	56	935	414	2139
3	MacLean, S.	K-18	84	89	352	208	116	821	460	2046
4	Joint, T.	K-18	84	0	336	281	82	888	105	1692
5	Webb, M.	Pilatus B-4	92	0	272	211	92	977	96	1648
6	Pobjoy, M.	K-6E	90	73	314	135	0	931	97	1550
7	Fox, J. A.	K-6E	90	79	292	62	47	859	156	1495
8	Butler, D.	K-18	84	75	12	208	200	872	106	1473
9	Dean, M.	Olympia 419	88	35	332	83	152	821	0	1423
10	Smith, E.	K-6E	90	0	92	272	78	951	DNF	1393
11	Cunningham, G.	Olympia 463	82	0	8	108	37	898	72	1123
12	Wright, E.	K-18	84	29	407	208	30	441	DNF	1115
13	Stevenson, H.	K-18	84	54	64	156	0	838	DNF	1112
14	Allsopp, T.	K-6E	90	66	344	194	49	320	DNF	973
15	Foey, J.	K-18	84	49	40	179	78	344	262	952
16	Wynch, J. W.	Pilatus B-4	92	0	54	82	103	409	DNF	648
17	Armstrong, T.	Pirat	82	11	49	147	4	358	DNF	569
18	Brownrigg, D.	K-18	84	0	335	46	20	107	DNF	516
19	Falla, S.	K-6CR	84	0	49	0	33	352	DNF	434
20	Hunter, G.	Pilatus B-4	92	32	0	35	0	297	56	420
21	Turnbull, J.	Pilatus B-4	92	32	36	54	DNF	DNF	DNF	122

Club Class

No.	Pilot	Sailplane	H'cap	Day 1 7.5 93km ▲	2 10.5 72km ▲	3 12.5 85km →	4 13.5 81km ⇄	5 14.5 141km ▲	6 15.5 80km ▲	Total pts
1	Boydon, M.	K-8	78	21	132	318	1000	1000	1000	3471
2	Taylor, J.	K-8	78	114	160	148	252	988	930	2592
3	Fearon, W.	Sky	76	167	214	32	209	951	678	2251
4	Ritchie, P. J.	K-8	78	81	213	113	269	722	666	2064
5	Whitehead, P.	K-8	78	20	261	298	259	201	889	1928
6	Gibson, P.	SF-26	78	21	152	94	234	945	387	1833
7	Bould, A.	K-8	78	21	152	3	65	712	874	1827
8	Brown, R.	K-8	78	29	88	0	241	732	503	1593
9	Raffan, A.	K-8	78	19	152	148	214	734	258	1525
10	Milson, A.	K-8	78	5	152	134	234	415	503	1443
11	Swanson, G.	K-8	78	21	152	148	110	277	321	1029
12	Grout, R.	K-8	78	0	0	0	0	277	DNF	277

DNF = did not fly

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BGA & general news

TWO CFIs HONOURED

Our congratulations to two CFIs, Derek Piggott (Lasham Gliding Society) and Ted Warner (Cambridge University GC) on being awarded the Queen's Silver Jubilee Medal.

UK RECORDS HOMOLOGATED

The following UK local records were homologated on the recommendation of the Competition Committee:

Single-seaters: Straight distance, 626.1km. T. P. Docherty, Kestrel 19, 31.7.1976, and 718km, J. Wills, Std Libelle, 1.8.1976.

Restricted Class: Straight distance, 718km, J. Wills, Std Libelle, 1.8.1976. 400km Goal Speed, 73.8km/h, J. Wills, Std Libelle, 7.6.1976.

Single-seaters (Women) 300km triangle, 76.8km/h, Jane Randle, Kestrel 19 (mod), 18.8.1976.

JOIN THE TEAM!

With 12 pilots shortlisted for the 1978 British Team, fund raising is already well on the way. In addition to the normal "begging bowl" approach, the gliding movement is being asked to "join the team" and buy British Team tee shirts, car stickers and badges. A striking motif has been designed – see the advertisement – in patriotic colours. All the profits will go to the British Team Fund – so hurry, these are on sale at your club **now**.

FOUL WEATHER FOR COMPETITION ENTERPRISE

Philip Wills reports that Competition Enterprise was dogged with the worst conceivable weather. They only flew twice, the first time on Saturday, June 12, and the second on Saturday, June 19, the latter being a task from Usk.

Not being bound by BGA rules, the organisers ran a couple of ground tasks, one a trailer rally, and marked these as well.

The results were as follows: 1 and winner of the Enterprise trophy, Tony Maitland (Diamant 18), 856pts; 2 Justin Wills (Mosquito), 788pts; 3 Ivor Shattock (Std Libelle), 700pts; 4 Chris Simpson (Kestrel 19), 581pts and 5 Mike Pope (Kestrel 19), 579 pts.

BGA NORTHERN REGIONAL CONFERENCE

Geoff Crawshaw of the Yorkshire GC is organising a Regional Conference in October of this year for members of all BGA clubs in the northern area. The venue is still to be settled but will be an hotel in Yorkshire and the dates will be the weekend of October 29-30.

The programme for Saturday will include a session on advanced flying so that pilots can hopefully learn how to squeeze the last drop out of the northern thermals! There will also be an opportunity to discuss techniques with leading cross-country pilots. The Sunday programme will include a session on cost control for gliding clubs and there will also be a separate meeting for inspectors and technical officers. Full details will be circulated to clubs in due course, but it is hoped that clubs in the northern region will make a date in their diary now.

COMMITTEE TRAVELLING EXPENSES

The Executive Committee has been concerned in recent years that the increasing costs of travel has fallen heavily upon people attending BGA committees and working parties. It felt that this may well discourage members of clubs at some distance from London from taking up membership of committees. The Executive Committee discussed this at the June meeting and decided that the reimbursement of travelling expenses should commence from October 1, 1977, and that the rate should be 4p per mile for single journeys in excess of 50 miles for members of the Executive, its sub committees and working parties, or any persons invited to attend those meetings.

The Committee was well aware that this was no more than a contribution towards expenses and would by no means cover all costs. It would involve an extra £1500 on the budget for the next financial year but the Sports Council Administrative Grant would include a factor for this.

Joan Cloke, *Treasurer.*

NEW MAGAZINE

The first number of a new magazine, *AERO*, dated Summer 1977, has appeared. Unlike the last magazine of the same name, which ceased publication about 60 years ago, the name of this one has a double meaning: AERO stands for Air Education and Recreation Organisation, a body which seeks to promote an interest in aviation among schools and colleges, to encourage and help young people to take up careers in aviation.

This issue of *AERO* contains articles on a wide range of relevant subjects, including the industry, model making and even astronomy.

Sent to us with this magazine is a 33-page booklet "Gliding in Schools" by Lionel J. Pike and Graham Joyce, which covers every aspect of the subject most efficiently and costs 35p plus postage.

Membership of *AERO* is chiefly made up of educational institutions and authorities, and firms, but individuals can join as Associate Members for £2.50. The address of the secretary, Mrs Diana Brown, is Carwarden House, 118 Upper Chobham Road, Camberley, Surrey (Tel: 0276-61951).

A.E.S.



SHUTTLEWORTH DISPLAY

The Shuttleworth historical collection at Old Warden, near Biggleswade, is laying on a special flying display on Sunday, August 28. Among the types demonstrated will be Swordfish, Sea Fury, Trislander, etc, and a hot-air balloon. On Monday, 29, the display includes earlier historic types, the Wallis autogyro and precision parachute descents.

OBITUARY

W. GREY WALTER

Dr. Grey Walter, who joined the Bristol Gliding Club in the late 1950s at about the same time as Sir Peter Scott, did not, unlike the latter, distinguish himself as a pilot, but he must be the only author to have introduced sailplanes into a science fiction novel. A man with an outstandingly original mind, he obtained a degree at Oxford for studies on the Greek Testaments; then moved on to Cambridge, where he fell among scientists and soon became a leading authority on electro-encephalography – the electrical activity of the brain: some may remember his TV demonstration of a mechanical tortoise with a primitive "brain" that enabled it to respond to light signals. In 1960 he contributed a paper on "The Human Brain in Space Time" to a symposium on the Biology of Space Travel.

His novel, "Further Outlook", published in 1956 by Gerald Duckworth & Co, London, describes how a sailplane pilot goes to the Scottish hills for a weekend's sport but vanishes. He has, by some means connected with snowflake crystallography, flown a century ahead and witnesses, in China, a sort of aerial ballet dancing competition between "male" and "female" sailplanes, lit-up at night by bonfires which also provide the necessary thermals. (See review in S&G, April 1957, p93). He died aged 67.

A.E.S.

M. J. FIELD WORLD ALTITUDE RECORD CLAIMS

As previously announced the BGA rejected the claims from M. J. Field for the new World Absolute Altitude and Gain of Height records due to unsatisfactory evidence.

Certain features of this evidence caused the BGA Competitions and Badges Committee to investigate these claims further. As a result of the most thorough examination of the barograph trace by a forensic laboratory and of evidence from independent observers, the BGA has concluded that M. J. Field submitted the trace with the intention of deceiving the Official Observer.

In view of the weight of the evidence supporting this conclusion and of the public attention these world record claims received, the BGA Executive Committee unanimously decided to take the following actions concerning M. J. Field and to make them, and the reasons for them, public:

1) Permanent withdrawal of BGA approval for the issue and/or renewal of an FAI Sporting Licence.
2) No future claims for any type of certified gliding performance will be approved by the BGA.
3) The BGA has withdrawn recognition of M. J. Field's British National and UK Height Gain and Absolute Altitude records and his FAI Diamond Height resulting from his flight on May 9, 1972. Accordingly his name has been removed from the Records and FAI Diamonds lists.

Before making this public statement the Executive Committee gave Mr Field the opportunity to comment. He alleged that the trace we were examining was not the one that had been taken from the barograph in the glider and signed by the Official Observer. This allegation has also been fully investigated and the BGA remains entirely satisfied that the claims were fraudulent.

Roger Q. Barrett,
Chairman
BGA Executive Committee

If you have any contributions to S&G please send them to the Editor at 281 Queen Edith's Way, Cambridge, CB1 4NH, tel 47725 and not the BGA office at Leicester.



GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1977
78	A. J. Burton	Surrey & Hants	30.4

DIAMOND DISTANCE

No.	Name	Club	1976
1/143	R. Larkinson	in Australia	1.12
1/144	J. R. Young	Lasham	15.4.77

DIAMOND GOAL

No.	Name	Club	1976
2/801	D. M. Philips	Inkpen	10.8
2/802	J. R. Horst	Bicester	7.7
2/803	D. Hatch	Derby & Lancs	17.7
2/804	P. H. B. Cole	SW District	28.4
2/805	G. K. Hollaway	RAE	6.8
2/806	T. W. Slater	Phoenix	24.5
2/807	P. Wildbur	Southdown	5.4.77

DIAMOND HEIGHT

No.	Name	Club	1977
3/289	G. McLean	Hambletons	5.3
3/290	D. B. Eastell	Southdown	6.4
3/291	A. P. Moulang	Kent	14.4
3/292	A. J. Burton	Surrey & Hants	30.4
3/293	J. M. Bishop	in France	13.4

GOLD C COMPLETE

No.	Name	Club	1976
603	J. R. Horst	Bicester	12.8
604	R. Larkinson	Staffordshire	29.11
605	T. W. Slater	Phoenix	24.5
606	E. Drummond	Bristol & Glos	14.4.77
607	W. N. Ferguson	Borders	14.4.77
608	P. Wildbur	Southdown	5.4.77
609	A. P. Moulang	Kent	14.4.77

GOLD C HEIGHT

Name	Club	1977
P. D. Craven	Lakes	2.1
J. R. Horst	Bicester	12.8.76
P. J. Richie	Kestrel	9.10.76
R. Larkinson	Staffordshire	29.11.76
W. T. Lewis	Carnish	8.10.76
R. Spencer	Buckminster	3.3
W. Tootell	Phoenix	18.2
D. Dimmer	Cotswald	2.4
K. Roesch	Deeside	3.3
R. S. Maxwell Fendt	Inkpen	4.4
G. P. Cogman	Norfolk	5.4
E. Drummond	Bristol & Glos	14.4
J. L. Buchan	Angus	12.4
M. Eastell	Southdown	5.4
A. P. Moulang	Kent	14.4
I. R. P. Abel	Kent	14.4
G. James	Norfolk	5.4
D. Aldridge	Portsmouth	1.5
M. J. Hellewell	Norfolk	14.4

GOLD C DISTANCE

Name	Club	1976
D. M. Philips	Inkpen	10.8
J. R. Horst	Bicester	7.7
D. Hatch	Derby & Lancs	17.7
P. H. B. Cole	SW District	28.4
G. K. Holloway	RAE	6.8
T. W. Slater	Phoenix	24.5
W. N. Fergusan	Borders	14.4.77
P. Wildbur	Southdown	5.4.77
P. W. Andrews	Kestrel	27.4.77

SILVER C

No.	Name	Club	1977
4695	Geraldine Henderson	Yorkshire	4.7.76
4696	H. R. Phythian	Welland	6.6.76
4697	C. W. Vigar	Rattlesden	15.8.76
4698	D. S. I. Elliott	London	10.8.76
4699	N. R. Foster	London	20.2.76
4700	Sally King	Airways	10.1
4701	T. W. Cockett	Thames Valley	16.1
4702	D. N. Frapple	East Sussex	3.3
4703	F. D. Kennedy	East Sussex	5.3
4704	B. Colthorpe	SGU	2.4
4705	W. Aspland	Airways	3.4
4706	D. Chalmers	Airways	8.4
4707	T. W. Oakey	Bicester	8.4
4708	B. W. Boor	Bath & Wilts	8.4
4709	K. Richardson	Essex	11.4
4710	J. Pirquet	Bannerdown	8.4
4711	P. Faley	Surrey & Hants	8.4
4712	Ann McMonnies	Surrey & Hants	3.4
4713	M. Gilmartin	Essex	11.4
4714	G. E. Brown	Bannerdown	16.4
4715	M. F. Humphries	London	8.4
4716	M. Charlett-Green	East Midlands	3.4
4717	J. G. Harrisan	Eagle	10.4
4718	B. Abbott	Clevelands	9.4
4719	G. M. Turner	Newcastle	14.4
4720	D. Webb	Avro	17.4
4721	A. O. Horkins	Eagle	10.4
4722	D. J. Park	Cambridge Univ	5.4
4723	D. G. Barnes	Surrey & Hants	18.4
4724	D. Connaway	Southdown	4.4
4725	C. S. McKenzie	Cornish	14.4
4726	R. Grundy	Bath & Wilts	8.4
4727	B. S. Flower	London	23.4
4728	B. J. Lusher	Dorset	21.4
4729	G. A. Bolton	Lincoln	30.4
4730	A. C. Blampied	Culdrose	9.4
4731	A. Kennedy	SGU	16.4
4732	A. R. Morley	Cotswald	9.4
4733	W. A. Bevan	Airways	24.4
4734	J. Elliot	Lincolnshire	1.5
4735	A. A. Wright	Stratford	30.4
4736	C.T. Davies	W Wales	30.4
4737	D. Count	Four Counties	18.4
4738	P. M. Walland	Hambletons	1.5
4739	R. E. Baker	Portsmouth	1.5
4740	A. J. Baldwin	Airways	12.3
4741	G. J. L. Russell	RAE	1.5
4742	P. Collier	in Australia	8.1
4743	M. E. Trew	Bath & Wilts	14.5
4744	R. T. Swancott	Midland	23.4
4745	G. C. Metcalf	Surrey & Hants	14.5
4746	D. A. Wilson	Enstane	15.5
4747	J. M. Kirby	Essex	14.5
4748	D. J. Silcock	Ouse	1.5
4749	J. Rochelle	Southdown	14.5
4750	M. J. Evans	Surrey & Hants	15.5
4751	J. T. Philips	S Wales	27.4
4752	G. W. Matthews	Devon & Somerset	1.5
4753	W. W. Fries	Lincolnshire	15.5
4754	A. G. Parry	Swindon	25.7.76
4755	A. Coombes	London	14.5
4756	T. N. Rodgers	Trent Valley	15.5
4757	P. S. Murray	Clevelands	21.5
4758	D. S. Innes	Deeside	22.5
4759	A. W. H. L. Wright	Landon	15.5
4760	G. Humphreys	Woodspring	15.5

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overseas news

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LAST PRE-WAR WORLD RECORD BROKEN

A world gliding record in itself is that for 38 years Olga Klepikova, USSR, has graced the feminine world record list with her distance flight of 749.20km on July 6, 1939 in a Rot Front.

The new claimant is Lilienthal Medal holder, Adela Dankowska of Poland, who flew a Jantar 1 on April 19 over a distance of 810km.

It is unlikely that with today's high performance gliders this new claim has any chance of lasting so long. No doubt plans have been hatched by the "leading ladies" to claim the first 1000km record and Diploma.

AUSTRIAN EVENTS AND RECORDS

Austria holds its first Sailplane Aerobatic Contest at the beginning of September at Schard-ing-Suben. This month it hosts the international light aircraft and military parachuting contests. The Class 1 Gliding Nationals will have been held in May, to choose the international team for 1978. Visitors from Poland were expected to take part.

As elsewhere in Europe, 1976 was an outstanding year for gliding in Austria and eight new national records were set up. Three feminine ones were flown by Irmgard Pilscheneder, starting with Austria's first feminine record for 500km. She then beat her own previous record for the 300km triangle, and followed this on November 6 by a feminine height record with which she bade farewell to her Std Libelle, to replace it with a Kestrel 17. With these feats she became the first Austrian woman to qualify for all three Diamonds.

The Austrian goal-and-return record was beaten on May 1 by Alf Schubert with 820km and on June 8 by Karl Bräuer with 835km. The height record was beaten by Alf Schubert but also by Guido Achleitner the same day, the latter getting highest. Herbert Lackner on July 4 beat the 300km speed record but failed to get official confirmation. Another pilot who failed to get official confirmation in Austria was Dr K. W. Hinkel, an Austrian technician working in Holland, who on April 28 flew a K-8B from Terlet in Holland to Rochefort in Southern France, 847.1km, in 8hrs 42min; nevertheless it was recognised as a Netherlands record.

Austrian pilots by the end of 1976 had 103 Silver, 44 Gold and 32 complete Diamond badges. Hans Wolf, who led the Austrian team at Camphill in 1954, obtained Austria's first Diamond in 1957 and his own third Diamond last year at the age of 67. – *Flugsportzeitung.*

GLIDING IN LUXEMBURG

Luxemburg's only aviation organisation is the gliding club, 20km NW of the town, founded in March 1958. Hans Tajessen is the moving spirit, and there are 40 active members. It has a large and a small hangar, a clubhouse and seven aircraft: Blanik, K-7, Bergfalke, Zugvogel, and three of the Spatz type. The flying season is from May 1 to October 24, and 2075 launches were made last year; there were no accidents or noteworthy incidents. The Grand Duke of Luxemburg turned up with his family and all were taken for flights.

Dr Wolfgang Vollrecht, writing in *Aerokurier,* recommends glider pilots to land there and partake of the club's hospitality. This is in contrast to the occasion, during the 1956 Championships in France, when a Turkish two-seater lost its way and landed there on the first day, and was kept by the authorities for four days while they disentangled red tape.

Luxemburg is within glider reach of England: last year, flying from Devonshire, Justin Wills crossed the country and landed just beyond its border at Trier in Germany.

DANISH MOTOR GLIDER RALLY

The first Danish motor glider meeting was held at Arnborg from May 19-22, and 17 of the 21 in the country took part or paid visits. It was run on similar lines to the Burg Feuerstein meetings in Germany with competition flights – mostly 100km triangles – lectures and discussions. Soaring time was 90.6% of total flying time between crossing of start and finish lines. Apart from the contest, our National Coach demonstrated that even the good-natured Falke can spin if sufficiently provoked. He took up an instructor from each participating group. (Per Weishaupt.)

SWEDES IN AFRICA

Bengt Micrander describes in *Flyg Revyn* a visit by a party of Swedish glider pilots to a gliding club in Zambia. It has about 40 members, all Europeans working in the country on short-term contracts. The club possesses a Bergfalke and Capstan (two-seaters), Olympia, Sagitta, Std Austria and a 160-hp Tripacer tug. First solos are done in the Olympia – not the most suitable type, Mr Micrander thinks – and the first soloist must have already shown that he can get out of a spin. Landing outside the field is precarious due to bogs and small trees hidden in long grass. Nevertheless 300km flights are made. Cloudbase is at 2-3000m (6600-10000ft).

The climate is a thirsty one, and the members do not usually fly in the mornings. The Swedes wanted to do so, to make the most of their opportunity, but a tug pilot was not always available.

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GERMANS MAY GLIDE AT 14

German youths may start training for the A gliding certificate at the age of 14, according to a prospectus of the Oerlinghausen gliding school in NW Germany, inserted in *Luftsport*. It runs five types of course: in the second, still at 14, they may progress to B, C, Silver C and aerotowing. For the third they must possess a gliding PPL, and training is for Silver and Gold legs. In the fourth they train for competition flying and Diamond legs. The last is a three weeks' course for PPL, presumably power flying, as the minimum age is 17.

Charges range from DM150 to 300 per week, with 25% rebate for youths (undefined) and 20% off for out-of-season courses (DM4 = about £1). Accommodation is in four-bed dormitories.

MOTOR GLIDERS IN GERMANY

About 1400 motorised sailplanes have been built in West Germany, but, says an article in *Aerokurier*, they are more expensive than two-seater conventional light aeroplanes and this is probably the reason why the market for them seems now to be satisfied.

STILL GOING STRONG

Willi Messerschmitt was co-designer of the Harth-Messerschmitt glider in which Friedrich Harth set up a World's duration record of 21 minutes in 1921. Now his firm, MBB (Messerschmitt-Bölkow-Blohm) runs a "Flight-sport-group" which has just acquired a Std Cirrus. – *MBB Intern.*

FACTS AND FIGURES FROM NEW ZEALAND

Max Stevens, Secretary of the New Zealand Gliding Association's Technical Committee, sent some interesting statistics to the BGA office. There are 198 gliders on the register and approximately 25 tugs, 30% of the gliders being glass-fibre.

Winch and motor launching are comparatively rare, although recent enormous rises in the price of Avgas and of engine spares are causing some clubs to investigate winching. Duel aerotowing has been practised in New Zealand for many years but was officially approved nearly four years ago.

OBITUARY

JOCHEN VON KALCKREUTH

The famous expert on Alpine soaring, Jochen von Kalckreuth, lost his life on May 4 while on a return flight from Brenner after taking-off from Eschenlohe in Upper Bavaria, in circumstances which have not yet been clarified. In his Kestrel, named "Orion", after a 15 minute flight in the morning, he took-off again at 13.12 and contacted a wave. At 15.00hrs a motor glider pilot, flying in a Foehn wave above Innsbruck, recognised the "Orion" about 4000m higher up. At about 16.00hrs a radio message from von Kalckreuth stated that he was above the Brenner, about 75km from base, at 7300m (24000ft). No more messages came, and at 21.00hrs an emergency was declared.

Next day, May 5, 19 helicopters from nine different centres took part in a search, temporarily called off during the passage of a front, putting in a total of 81hrs flying, but found nothing. On the following day motor gliders and aeroplanes joined in the search; then a message came from Krun that two falling wings had been mistaken for parts of a model; so the search was concentrated in that area and the air searchers were reinforced on the ground by firemen, police, 40 members of the Mountain Watch and 65 soldiers. At 11.30 the wings were found, little damaged; then the fuselage on its back 3km south of the wings; then von Kalckreuth's body was found 800m south of the fuselage, with his unopened parachute attached; his flight watch had stopped at 16.18hrs. On May 15, 85 searchers found the instrument board, but the barograph is still missing. The aircraft parts have been sent to Braunschweig for examination; but at present the cause of the accident remains unknown: contact with a violent rotor, or a lack of oxygen, are among the suggestions.

Jochen von Kalckreuth was no keeper of secrets: his book *"Segeln über den Alpen"* (reviewed in S&G April 1973, p132) gives not only descriptions of his flights with some wonderful photographs, but a vast amount of useful knowledge about Alpine soaring. To quote Fred Weinholtz of the German Aero Club, he "did not like competitions between man and man; he enjoyed alone the beauties of motorless flight and therewith was a fighter against himself and against the forces of nature: the mountains which he loved above all brought him to his end." He leaves a widow and three children.

A.E.S.

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GLIDER IDENTIFICATION

Dear Editor,

At first sight the idea of basing glider identifications and call signs on combinations of three letters seems attractive (see S&G, June, p118). However, I believe that when pilots come to speak them aloud, call signs such as "Uniform, Sierra, Juliet" and "November, India, Romeo, Mobile" will prove to be too much of a mouthful. Two character identification should give enough combinations provided that:

a) The complete character set of ten numerals and 24 letters excluding I and O is used instead of just letters, *ie* combinations like X7. These, together with the present three figure competition numbers, will give a total of 2089 combinations.
b) Identifications are recycled from gliders which are written-off.

The inclusion of numerals, in addition to increasing the number of combinations, also tends to keep the call signs short. If 2000 identifications prove to be too few, the addition of a numerical prefix (identifications like 5X7) would bring the total to over 10000 while still keeping the call signs relatively short.

Swindon, Wilts. KEN BROWN

BGA APPROVED DESIGN FOR HOME-BUILT GLIDER?

Dear Editor,

As a coarse glider pilot and a simple soul it seems to me that the great service the BGA could do for the "other 98%" would be the approval and publication of a design for a home-built glider of moderate performance which could be built from materials and components *readily available in the UK.* I suppose it would be 13m to 15m, wooden, with about the performance of an Oly 463.

Standards of construction would, of course, need careful supervision and the personnel and administration for this already exist through the clubs and the BGA. The Popular Flying Association has been doing this kind of thing for years. Why not us?

I suppose one quick answer would be an "English translation" of the very interesting Duster, which is simple enough and cheap enough to build, if you could get the right materials. Again the BGA has the right people for this job . . . and with our tradition of self help and with the image of our founding fathers getting themselves launched off the Yorkshire moors, isn't it something they *should* be doing? It would be a real service to the movement.

As a longer term proposition, possibly this is an occasion for a BGA design competition such as that run after the war for two-seaters. The project would lack the glamour of Sigma, but it would be a challenge, and perhaps more of a contribution too – in terms of more enjoyment for more people anyway, which is what we're all about, I hope!

Redruth, Cornwall. R. T. VINSON

PROOF AN ECONOMY GLIDER IS WANTED

Dear Editor,

After my letter in the April issue of S&G, p80, on cheaper coarse gliding and the Duster, the do-it-yourself sailplane, the response was extremely revealing. I received 35 letters and half a dozen telephone calls for more information, which I have answered and supplied. They were all from individuals and groups looking for a machine which will perform well and not break the bank or mortgage them for life with its purchase.

It is going to be a slow job getting a Duster into the air working individually, but I'm sure that if we can get a manufacturer, such as John Sinclair of "JJ Glider Repairs" in California, building a run of the machines they would get orders for at least 25 machines, half the price of a hot GRP sailplane. As has been said many times before, 90% of club members want to fly as much as possible as cheaply as possible.

Bude, Cornwall. DENIS RATCLIFFE

NOT A DESIGN FAULT

Dear Editor,

I would like to comment on Kenneth Hynes' article in the April issue of S&G (p58) concerning the ASW-17 and P10's. The reader of this otherwise excellent article is left with the impression that ASW-17s in general have a design deficiency with respect to P10's when in fact the reason for my difficulty was the result of a change I made in my ship.

In the process of mounting a bicycle brake handle on the stick I found I couldn't get the stick all the way forward without the brake handle hitting the instrument panel. My solution, however unscientific, was to put an S curve in the stick and this in turn produced a rearward moment under positive *g* loads.

I feel an obligation to clarify this matter since my unwise modification of the controls and subsequent flight description reflect unfairly on Gerhard Waibel. When it comes to aerodynamics Waibel does not make mistakes.

My experience might serve as a warning to others who contemplate tampering with the control systems. Be careful, there is more than meets the eye!

Port Matilda, Pennsylvania, USA. KARL H. STRIEDIECK

COULD THERE BE DISCRIMINATION!?

Dear Editor,

Three thoughts come to mind as I read "Follow My Leader" by Rhoda Partridge (S&G, April 1977, p62).

Why is it called "team flying" when two men fly together and "follow the leader" when a woman flies with a man?

Have any of you guys out there ever "followed" another pilot, or used other pilots, around a contest course? Now, let's be honest fellows! And you did disqualify yourself that day didn't you?!

Yes Rhoda, or any other English pilot, any time you want to come and try the famous Pennsylvania ridge I'll lead you around a 500km triangle. I fell 100km short on the first try but I know the way – I found it on my own! I think I would enjoy it again as a *team*!

What would you call it if a woman was the "leader" anyway, "Follow that Feminist"!

Columbus, Ohio. ERICA SCURR

IN DEFENCE OF THE ASW-15

Dear Editor,

Bill Scull (Coaching Corner, June issue, p 180) claims that the ASW-15 has poor approach path control and puts it in the same class as the Std Libelle, Std Cirrus and LS-1.

Unlike many Standard Class glass aircraft, the ASW-15 has both top and bottom surface airbrakes and is not noticeably inferior to the K-6 and K-8 in this respect. To suggest otherwise is an excellent way of giving a good aircraft a bad reputation!

Cumbria. D. J. CAREY

AUTONOMIC EFFECTS OF FEAR

Dear Editor,

Knowing Dr Brennig James' sense of humour, I wasn't sure whether his comment on the Autonomic Effects of Fear in the last issue (p107) was intended to be serious!

The physiological effects of fear in a human being are well documented, whether caused by a visit to the dentist or a malfunction of one's first parachute jump! Pallor, perspiration, increased adrenaline flow, high pulse rate, and hyperventilation are the usual symptoms.

Should the ambient temperature be low, or the relative humidity be very high, the combination of perspiration, evaporation and heavy breathing in a small enclosed space will result in condensation on uninsulated surfaces such as canopies, windows, spectacles, beer glasses, etc.

In the motoring example quoted (with four people in the car) the situation is quadruply exacerbated. One should also add the extra humidity supplied by the steam issuing from the irate driver's ears, and the super-saturation of his passengers' nether garments.

Hyperventilation will be of interest to all pilots, especially when using oxygen. My learned friend and CFS tutor, Wg Cdr Peter Saundby, could doubtless provide an interesting paragraph or two on the subject.

Since it's a good idea to treat the inside of your canopies, spectacles and windows with an anti-mist liquid available from any motor accessory shop, this isn't really a problem to get "steamed up" about.

Doncaster. RAY GREENSLADE

INFORMATION WANTED ON KENT AVIATION

Dear Editor,

The recently formed Kent Aviation Historical & Research Society wish to record the wealth of aviation history in Kent before it is forgotten and to preserve any mementos such as photographs, letters, posters and programmes connected with aeronautical events in the county. Eventually we hope to publish an anthology of our work as a tribute to those who took part in or witnessed the development of aviation in the south-east.

Any information, reminiscences or photographs of the pre-war activities of the Kent GC, the Channel GC at Folkestone and the North Kent GC at West Malling would be appreciated together with any material on private gliding, or powered flights, in pre-war Kent. All material will be treated with the greatest care and returned if requested.

25 Pilot's Avenue, Deal, Kent. DAVID G. COLLYER

BOOK REVIEW

Aviation in Manchester by Brian R. Robinson. Price 96p,or £1 post free from Royal Aeronautical Society, 4 Hamilton Place, London W1V OBQ.

Gliding has its share in the great amount of historical material in this paperback book, which starts with the flight of an unmanned hot-air balloon from Manchester Infirmary grounds 43 miles into the Peak District on December 26, 1783, only a few months after the Montgolfier brothers' first success in France. The aeroplane era began in earnest in 1911, mainly through the activities of A. V. Roe (born in Salford, 1877); his brother H. V. obtained its first airfield, and Louis Paulhan won £10000 from the Daily Mail for the first flight from London to Manchester. Further aeroplane history is extensively described.

Gliding in the region started in 1921 with John Leeming's decision to build a glider - a monoplane with wheels and cabane. He and companions were still building it in 1922 when news of a three-hour glider flight in Germany roused tremendous enthusiasm among them; yet they seemed to have no idea how it was done. All the glider ever did was autotows along level ground, and eventually, instead of launching it from a hill, they put a little engine in it. The trouble, I suspect, was that the press, including the aviation press, persisted in referring to a large continuous area of slope lift as "currents" in the plural, as if you had first to learn how to find the things and then how to use them when found. Even Leeming, in his autobiography "Airdays", uses the same word when explaining how pilots at the Itford competition kept up - an event which neither he nor the glider attended.

Manchester's contribution to modern gliding is largely described in the book by Basil Meads. It started in 1925 as a gliding branch of the Institute of Aeronautical Engineers, but when that body was merged into the Royal Aeronautical Society in 1929 the small gliding branch was disbanded. It was reborn on February 7, 1930, as a Gliding Branch of the Royal Aeronautical Society.

This time its membership quickly rose to 153. The Branch set about building a Zögling Primary, but long before this was finished it absorbed a Stockport Gliding Club which already had a Prüfling (damaged). But Basil Meads, its Chairman, insisted even at that early date that training must be done on a two-seater. So the club bought the main components of a BAC-VII from Lowe-Wylde, its designer, for £53 and completed it. In fact, the Gliding Section of the Manchester Branch of the RAeS, to quote Basil, "was so major an undertaking even before the war that it now became a big tail wagging the Branch dog". But not till 1949, 14 years after helping to form the Derbyshire and Lancashire Gliding Club, did it separate finally from the Royal Aeronautical Society.

A. E. SLATER

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club news

Members of the Humber GC photographed during their tenth anniversary celebrations at RAF Lindholm.

Copy and photographs for the October-November issue of S&G should be sent to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH, tel Cambridge 47725, to arrive not later than August 17 and for the December-January issue to arrive not later than October 12.
June 16, 1977
GILLIAN BRYCE-SMITH

ANGUS

It's some time since we have been in these columns but we are alive and thriving. Throughout the last two years, although our coastal weather tends to botch things up, we have had our share of soaring and cross-country badge attempts. Congratulations to Dave Miller and Andy Eddie on passing their instructors' courses; to Bob McLaren and Phil Siddons on gaining Bronze C and to Bruce Wyer, Alan Davidson, Derek Kydd and Tom Craven on going solo, all of whom are now flying the Swallow.

Our thanks to Bill Buchan for the many hours of work converting our winch for the safe use of piano wire and to Pete Murray and helpers for recovering the Bocian wings, also for their continuous work on the Cs of A. Our K-7, on C of A at the moment, has done a tremendous amount of work since last year when it replaced the T-21, blown over by a gust of wind.

We have quite a few new members as a result of our group flying evenings. The 45-minute film made of the club throughout last summer by Mr Bill Anderson, the father of one of our members, will be shown at an open night to attract new members. We also intend to stage a marathon fly-in over the longest weekend which should help club funds.

A.E.

AQUILA

Despite the wintry weather over the Jubilee weekend our Vintage GC visitors managed to get a few flights in their wonderful old gliders. A competition was organised with trophies being won by Francis Russell (Weihe 450) and Graham Saw (Rhönbussard). A successful barbecue was held on the Sunday evening – our thanks to the organisers of the rally and barbecue.

Congratulations to Ron Sangster, who is the first Aquila member to get his five hours at Hinton, and to John Needle, Geoff Whalley and Steve White, our first three solos of the season.

E.A.C.

BLACKPOOL & FYLDE

We have used each sort of rising air this spring, hill, thermal and wave. We have soared on the east, south and west faces of our hill and been joined by hang glider pilots. Fortunately they only use our east face and go elsewhere for other wind directions.

Wave developed in an east wind on May 22, and was easy to find and use despite the blue sky. Roy Greason made the best climb of 9400ft. Thermals are rarely of the "fat and happy" sort in this area, but on June 9 Gil Haslam set off north on a 300km triangle and got near Carlisle before turning for home as the thermals deteriorated, achieving a 200km out-and-return. Dick Seed (Olympia) started later and flew 60 km for Silver distance. Such flights are tricky, because you have to pass some daunting hill country and regions of small and sloping fields, to reach the plains beyond. However many of our pilots are now reaching a suitable level of skill, and with 12 private groups we are talking of task weeks and a club ladder. We rarely fly midweek, but the first of this year's course weeks produced a good crop of Bronze flights, conversions and solos, plus a lot of good club flying, considering our all-amateur organisation.

K.E.

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BOOKER

Despite a very disappointing start to the soaring season, Laurie Beer has managed to amass a substantial number of points to lead the club ladder competition.

Nine Booker pilots flew in the Nationals at Dunstable and three of them achieved the grand slam: Steve White (Jantar 2A) won the Open Class, Chris Rollings (PIK-20) the 15m Unrestricted Class and "Rocky" Stone (Std Cirrus) the Sports and Standard Class with Richard Aldous third. Dave Watt won several days and was leading the Sports Class until the final day. Mike Pope is currently flying his Kestrel in Competition Enterprise.

M.H.B.P.

BORDERS

Congratulations to Bill Ferguson who completed the club's first home-grown Gold C in April with a 305km flight to Grantham in the syndicate K-6CR. Careful planning and the right day resulted in a time of 3hrs 55min, so there is life in the old wooden ships yet.

Elsie Forrester and Fred Hardwicke have gone solo and Brian Forrester has completed his Bronze C. We discovered that a number of Skylark pilots hadn't flown the Tutor and this sad omission was soon corrected with varying degrees of co-operation.

We hope to recruit new members from our Friday evening courses and the Saturday courses run for the Northumberland Council. Members who help on these stay the night in the hope of finding the elusive wave said to occur around 5am on summer mornings.

For those *en route* to Diamond country in Scotland, there will be a warm welcome at Milfield should you be able to find time to stop.

G.B.

BRISTOL & GLOUCESTERSHIRE

There has been very little flying of note although John Alway achieved five hours on the ridge and Bernard Smythe flew to Gaydon in

very marginal conditions during our task week for Silver distance.

Although being ready for solo during the last 12 months, Mike Strathearn finally made it during May on his 16th birthday. Two days later he completed two Bronze legs, confirming all our hopes that we have a budding pundit among us.

Ed Meddings, a professional pilot, has taken over from Howard Johns as CFI. Many thanks to Howard for his efforts and good luck to Ed.

Our task week was a washout but the bar sales must have beaten all records. Let's hope that by the time this is printed our Regionals (June 19-27) will have become a happy memory under the capable management of Dave Wales and helpers.

R.A.R.

BUCKMINSTER

At the AGM our founder Chairman, Roger Alton, retired to be succeeded by Don Bricknell. David Earle has taken over as Treasurer and Arthur Keeling is now Secretary. Our thanks to Roger who chaired the club through its formative years to its present position with a secure site, a hangar and a club fleet.

We were saddened by the recent death of Frank Eaton, who joined the club as an *ab-initio* pupil and progressed to instructor. Frank, a man with a real love of gliding, a dry sense of humour and the ability to communicate his knowledge and enthusiasm to his pupils, was always there when there was work to be done - he is sorely missed. Our sympathy to his wife, Helen, who continues to do sterling work in the bus catering team, his son, Pat, who is our "air-tech" member, his daughter, Gillian, an early solo pilot, and the other members of his family.

Our faithful T-21B has been replaced by a new K-13 bought with the aid of a Sports Council grant. Our YS-53 Sovereign is up for sale, but we have the use of Nottingham University Gliding Club's T-21. We hope to replace our Oly 2B with a K-8. The club fleet is topped off by a K-6CR (loaned to us by Roger Alton) which this season has several Silver C legs to its credit and a climb through cloud to over 7000ft by Chas Cowley - the best height gain from the site this year.

D.R.P.

BURTON & DERBY

Winter came with the news that the airfield was again on the market and there was a prospective buyer. We were asked to cease operations, pending completion of the sale in February when it was revealed that the new owners were involved in road construction and intended removing the runways for hardcore. This they are now doing which signifies the end of Church Broughton airfield as a gliding site. During the 12 years at the airfield we were frequently chosen as a landing point for Silver distance flights and were pleased to welcome pilots.

However, all is not lost. Mainly, due to the efforts of George Edge and Ray Steward, we have the use of one runway at Ashbourne airfield, some eight miles north of Church Broughton - at least for 1977. The site is close to a residential area and use is conditional on winch launching only - for noise reasons. We regret we must discourage powered aircraft from visiting us.



Sheila Bowdler photographed after going solo on her 16th birthday.

During our period of being grounded, one of our training aircraft was given accommodation at Buckminster and a number of members managed to keep flying throughout the winter. Our sincere thanks to Buckminster for recognising our plight and making us so welcome.

The 1976 season ended with Don Towson completing a 300km triangle after a number of attempts.

Ashbourne airfield is on a plateau and can produce interesting turbulence in certain wind conditions. The weather was kind on the evening of May 10 when members rigged the K-13 so that Sheila Bowdler could go solo on her 16th birthday. Congratulations Sheila.

After five years as CFI, Robin Skinner has resigned and Ray Steward has taken over. Our thanks to Robin for the discipline imposed during his period of office and we look forward to continued and successful operations at Ashbourne under Ray's watchful eye.

P.A.W.

CAMBRIDGE UNIVERSITY

The deeply disturbed and unhelpful weather continues. For example on one of the better days, six people left Cambridge on tasks of 300km or over on May 15 and everyone landed out, even the legendary Sigfrid Neumann - most unusual! Height is another matter and on June 8 Val Rendle gained his Gold height.

Our AGM was on May 20. After 12 years' hard work our Chairman, Anthony Edwards, decided enough was enough and stepped down. Bryce Bryce-Smith was elected to that position and stays on as chief tug pilot - we hope he has enough time left to glide!

S.N.L.

COTSWOLD

Our spring task week was ruined by four days' solid rain. However, earlier in the season Tim MacFadyen (SHK) flew a 400km out-and-return to Lincoln and Larry Bleaken (Kestrel 19) has flown three 300km triangles.

The happiest man of the season must be senior citizen Howard Blench who has recently gone solo. Between the rain of the task week, Dave Dimmer and Fred Monks flew Silver distances while Janet Carter achieved her second Bronze leg on her first flight in her husband's Pilatus.

P.G.

DERBYSHIRE & LANCASHIRE

Our first task week was something of a washout but the courses have started well with many flying hours and we are well booked, with few exceptions, throughout the season. Congratulations to David Jefferson, Alan Worral and David Pedder on gaining their A and B Certificates.

Sadly we have to report the death of Ralph Burton Cobb who was an active flying member at Camphill in pre-war days. Then, 40 years ago, when club talk hummed of variometers, Burt Cobb, a trained watchmaker, and Louis Slater worked together to perfect the first Cobb Slater vario, initially a tiny instrument of extraordinary accuracy. Even now many pilots prefer to soar accompanied by an instrument developed from Burt Cobb's genius and skill.

C.D.R.

DEVON & SOMERSET

At the time of writing, we are all sitting gloomily on the ground, contemplating the weather which has produced only one flying day in three at the start of Competition Enterprise.

On the home front, George Matthews and Barry Moroney both claimed Silver height on the same day in an Astir and Std Libelle respectively. Steve Frank took his Dart 17R to 10400ft, just missing his Gold height at the end of May and Mike Hamilton, Derry Reaney and Danny Bishop have soloed. Ian King has gone off on his own for the first time at North Hill.

We were pleased to see Reg Welch back in the air after such a long time and also John Burrow, who seems to have made a good recovery after wrapping himself and his motorbike around a cow a month or so ago.

M.G.P.

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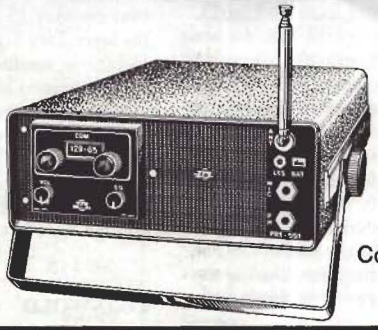
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DORSET

We have now sold one of the Swallows and replaced it with a K-8, which when fully instrumented for cloud and cross-country flying ought to be a worthy intermediate for those pilots requiring more hours for the Skylark 4.

A bent propellor on our rare Auster XZ, unfortunately happened at a time when Auster AJ was suffering an engine overhaul, but a new propellor was rushed to us from the USA and she was in the air again in time for the task week. The intervening period gave us good opportunity to improve our "prototype" winch operations.

Congratulations to P. Domoney, R. Ough and D. Loraine on their Silver Cs.

A windy washout describes the June task week which gave us only one good day, won by David after declaring Silver distance to Lasham. Morris came second, by landing short and winning a leg-biting terrier! The two social evenings during the week were a great success in providing much needed cheer. We now look forward to our next task week starting August 28, as rumour has it that the new Astir and PIK 20 may compete?

B.Mc.

DUNKESWELL

During bad weather we have been taking advantage of the briefing room to learn from Bill Scull's slides and lectures on Safety and the Theory of Flight and there have also been various discos and dances to keep us busy.

Mid-April saw the delivery and first flight of Brian Johnson's Std Libelle and Ian Mitchell soloed the following weekend. Peter Craggs celebrated May Day with a Bronze leg and Pat Murphy went solo during our course in May. Congratulations to Pam and Frank Jewell who met on a course last year and were married in May, and to Alfie and Lynn Trott on the birth of their daughter.

A.C.P.

EAST SUSSEX

Not to be outdone by boy scouts and the under-fives playgroup in our local village of Ringmer, East Sussex Club exhibited an appropriately adorned glider at the recent Jubilee carnival. Members were available to discuss the club's facilities with the public, and a good deal of interest was shown by locals – younger visitors demonstrating their enthusiasm for the plane with an assortment of grubby finger marks. Going farther afield, we have recently initiated a larger scale publicity campaign to gain new members; so far the response is looking very promising.

Our weekend gliding schedule was temporarily hampered early in June when the winch packed up, but the South Down Club kindly came to our rescue with the loan of their machine, so that not too many hours were lost.

The club has welcomed three new syndicate gliders, which are now based at our site. One of these is the first resident "glass" ship, bringing our total fleet to eight gliders.

D.E.C.

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ENSTONE

Our open two-seater has been replaced with a smart closed cockpit version and this, together with our K-7, works hard to complete our busy training programme. We now support ten privately-owned gliders and have many pilots competing in this year's Regionals.

M.W.

ESSEX

Over the winter months we enjoyed a pleasant visit from the Kent Club who based several aircraft at North Weald because of the mud at Challock.

Our Easter Competition was one of the most successful with three out of four contest days and some quite ambitious tasks. The Easter trophy for the "hot ships" went to the SHK (336) syndicate and the trophy for the "cool ships" was awarded to the Skylark (178) syndicate. The latter trophy, a superb bronze pitot head mounted on a block, was presented to the club by the 178 syndicate before the competition! The Met was by Mike Throssell and the task setting and scoring by John Buckles.

Mike Audritt is soon to get his PIK 20, Mike Jefferyes his Astir, the Pirat is going to a new syndicate and Tony Morell has moved from the K-6E to a Diamant 18 syndicate. Two gliders will be at the Western Regionals with Mike Jefferyes and Bill, Sheila and Guy Corbett (Pirat) competing for the first time.

Our courses got off to a good start with George Withrington in charge. Tony Vincent and Mike Audritt have both run flying weeks this year. Derek Adler, Graham Hanson and John Searl have gone solo.

Our first open day was on June 12. Our K-13 gave a lot of passenger flights and we hope to gain some new members. Thanks to all who helped.

J.B. and K.L.B.

ESSEX & SUFFOLK

There haven't been many good soaring days but our training programme has continued and we have had recent solos from Alan Kitchen, Richard Harris and Roy Jamieson.

Syndicates that went in search of better conditions haven't been in luck either. Mike Bailey and Frank Bodiam (K-6E) had one day's flying at Sutton Bank and Pete Wilby and Colin Smith (Pirat) had two days' flying at the Tibenham task week – and managed a first and second place.

The only bright spot of the Jubilee long weekend was the marvellous impromptu barbecue prepared by Sylvia Wilby.

Stop press. Our Chairman, Eric Richards (Std Cirrus), did manage to reach Stradishall and inspected the runways at ground level – distance achieved 30km!

C.C.S.

HIGHLAND

The air above Dallachy is full of surprises: we have already had 18 soaring days on our weekends only, mainly winch launching, sea breeze site and, whilst cloudbase is normally around 3000ft-4000ft, Neil Collier in the K-6CR found a Jubilee holiday thermal that took him to a 7600ft cloudbase.

The good conditions have enabled Mike Foreman and Martin Knight to complete their Bronze Cs, and given Alasdair Macphail, Gerry Robson and Mike Rodda their Bronze half hours.

Several Silver heights have had to go unclaimed because barographs were forgotten, or not working properly, and there have been a record number of failed Silver distances: perhaps we should learn to soar before we try to travel!

The Aberdeen University GC were with us for the disappointing Easter week, which was only redeemed towards the end by a spell of strong northerly winds which set the Ben Aigan face working, giving Martin Knight and Mike Foreman their five hours.

We have acquired the parts for a 90ft x 30ft hangar and are busy erecting it under the guidance of Bill Hill, and with the help of the local Job Creation gang. We hope to have it in use within a few weeks.

Our radio fund, ably tended by Martin Knight, grows apace, and we have already acquired a ground set. At our AGM in March, CFI, Jeff Howlett, presented the club with a new trophy, to be awarded to the most deserving pilot of the year. The first holder is Mike Foreman.

With regret, we say farewell to Bill Meyer, who, together with Jeff Howlett, managed to put the HGC on the map by winning last year's Portmoak Regionals in the club K-6CR. We wish him success in this year's competitions.

R.E.T.

INKPEN

After a very quiet period during the winter months things are again happening. Following negotiations with Lasham GS we now can offer a full weekly membership covering weekend operation from Thruxton with our own tug, plus full weekday only membership at Lasham utilising all the excellent facilities they have to offer. This means that we get the best of two worlds and we are most grateful to Lasham for their co-operation.

Planning permission for resumption of gliding on a winch launch basis from our old site has now been obtained and the possibility of recommencing operations is being investigated in depth. There is a strong feeling in the club that no opportunity should be passed by to preserve the site for gliding.

In one of the few good wave soaring days this year in Scotland our secretary, Max Fendt, managed a 13000ft Gold gain of height from Aboyne on April 4. Well done, Max.

Our training programme has been rather delayed this season by an unexpectedly long C of A on the Blanik due to difficulty of obtaining spares. However, we hope to have it back shortly and will welcome new members on either full week or weekend only basis. Interested persons should contact Isobel Whittingham at Linkenholt 228.

R.G.W.

KENT

The winter mud finally dried out and we started flying again at the beginning of March in time for the course season, which is very well booked. We now have two tugs and a new twin-drum winch which looks to be a great success, thanks to the hard work by Glyn Richards and Ron Cousins.

Congratulations to Tony Moulang on Diamond height and Ian Abel, Gold height, gained on a trip to Portmoak with their new Kestrel; also to Tom Bass, Adrian Walton and John Vowles on duration and to Tony Clark on achieving Silver distance on a very poor day.

The club celebrated its 21st birthday in May which was an excuse for an excellent party.

C.B.

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LINCOLNSHIRE

The early part of the season has produced some good soaring. Several flights over six hours have been made and G. A. Bolton, J. Elliot, J. N. Fries, W. Fries and P. Storey have completed their Silver C.

The T-21 has been sold and we have ordered a second Bocian. The EoN Baby is being bought by about ten members in order to keep it at Bardney. We are waiting to sell our T-31 in which Mike Royce has a share. If anyone knows his whereabouts, please ask him to phone Jack Nicol on Lincoln 50604.

The Weihe, badly damaged in the fire at Bardney, has been bought and repaired by a three-man syndicate and should be flying when this appears. That will be two of the five British Weihes based at Bardney.

G.A.B.

MIDLAND

First, our best wishes to CFI, Ernie Ainscough, taken ill after Easter, for a speedy recovery and return. The return is already partial - he has looked in and kept a paternal, if ground-bound, eye on our operations.

Sometimes "lapsed" members rejoin after a year or two's absence, but recently Charles Wingfield returned after a lay-off of no less than 27yrs, and Richard Wheatley after a break of 17yrs. Both are thoroughly relishing their flying again.

The club fleet was strengthened in June with the arrival of a Dart 17R, and the winch operation was reinforced by the introduction of the new retrieve winch built during the winter by Jack Minshall. This gives us two retrieves as well as two main winches.

We joined in the Church Stretton Jubilee programme by running an open day on June 4. Len Dent won the sponsored spot landing competition which raised funds for local charities.

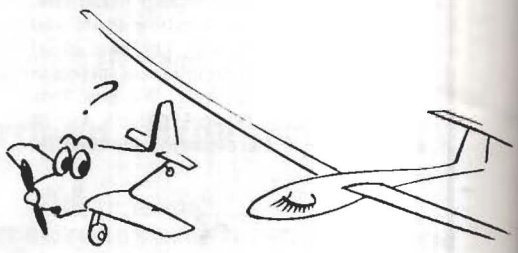
June 8 was good in these parts and eight cross-countries were flown. This excellent day was marred in the evening by the extremely unfortunate accident to Dave Schofield in his Super Cub while reconnoitering another member's out-landing with a view to a possible retrieve. We wish him, too, a speedy and complete recovery.

W.J.T.

NORFOLK

Once again we managed to arrange a task week during the "monsoon-season", but we intend to try again in September. The expedition to Portmoak was much more successful and gave some of the younger members a chance to obtain Gold heights and durations.

Two new syndicate gliders have arrived on the scene, a K-8 (oh look, it's square!), and a two-seater, IS-28.



A couple of flying weekends have been arranged for the ladies of the BWPA, when we hope to introduce some of their power pilots to real flying.

C.E.H.

NORTHUMBRIA

The summer season began with some good soaring flights although the best height gains were in wave. The club has recently been involved in an exhibition organised by the City of Newcastle-upon-Tyne Leisure Department and hopefully we interested the public in gliding as a worthwhile activity. We are grateful for members' help, particularly to the Vasama syndicate whose glider formed the focal point of our display.

Our summer courses are fully booked and thanks are due to the winch drivers and instructors. We are still waiting hopefully for the public fund grants which will enable us to build our much needed clubhouse.

R.R.H.

OUSE

Mark Shuttleworth flew the club Skylark 2B to Bardney GC for Silver distance and Tim Farmer has his Bronze C. We have three more instructors, Geoff Harris, Barry Lumb and John Reed, and Peter Ramsden is now fully categorised.

A few more members are entering the Northern Regionals this year and we wish them good luck.

J.G.

OXFORD

Our biggest hazard recently has been long grass on the airfield. In the early spring the grass cutting contractors injected an ammonia fertiliser into the turf, and this has caused the grass to grow at an astounding rate. Already well over two feet high in places, it is an obvious danger as

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far as ground looping is concerned. (See also Bicester's report.)

However, the problem became still more serious when we learned that the contractors were not planning to cut the grass until the end of July. If this is the case, we are bound to suffer a substantial loss of revenue, and at present there seems little that we can do.

Mike and Jane Randle have both flown Kestrel 79 in competitions this year. Jane was placed fourth at the Inter-Services at Halton, and Mike finished ninth in the Nationals.

Ray Huntley completed his Silver badge with a five hour thermal flight and Terry Green flew to Twinwood Farm for his distance leg. Our midsummer barbecue was on June 25.

P.H.

RATTLESDEN

We flew (in between the bouts of rain) all four days of the holiday. Congratulations to Kay Lee who went solo and became our second woman pilot and best wishes to her husband, Mike, who took his Hornet to Dunkeswell for a competition. Congratulations also to Roger Davis and Terry Brooker on successfully completing their instructors' course in May. Terry is also a BGA inspector.

The K-2b is now flying and we christened it with a party in the clubhouse on Jubilee Saturday.

C.L.

SCOTTISH GLIDING UNION

Those who believe Portmoak wave only comes in spring and autumn will be interested to hear that George Peddie achieved a 300km triangle in wave in June. We look forward to more of the same for the Regionals.

The open day at the end of May was a resounding success, both in terms of the number of visitors and the smoothness of operations. Excellent planning and a lot of hard work did the trick.

Our Lasham expedition has returned with talks of a tremendous week. While there could have been more flying days, the hospitality and help made a great impact and much was learned.

R.H.

SOUTHDOWN

Badge claims for Silver C legs are too numerous to mention. During a visit to Portmoak, Peter Wildbur claimed a Gold distance and Diamond goal, while Derek Eastell rose to Diamond heights, almost equalled by his son Mark who gained a Gold height.

The first home-based Gold of the season is Brian Bateson's Gold distance and Diamond goal. Surprisingly, despite relatively poor weather, our cross-country kilometres are higher than at this time last year.

The Jubilee was celebrated by our first open day for five years and although rained off by 14.00hrs, must be a forerunner of similar events in future as the public response was quite surprising.

B.A.B.

SOUTH YORKS & NOTTS

Our unstinting circuit bashing during the winter months has paid off handsomely, leaving but a handful of pre-solo pilots remaining. The seemingly unending flying list for the two-seat trainers therefore looks strangely scant, allowing the instructors to concentrate more on advanced flying, cross-country training, etc.

The annual visit to Portmoak reaped 11 Bronze and four Silver legs, plus many solo aerotow and field selection endorsements. During the visit, Swallow 216 was purchased for our club and a private syndicate opened negotiations on Swallow 469.

M.B.

SURREY & HANTS

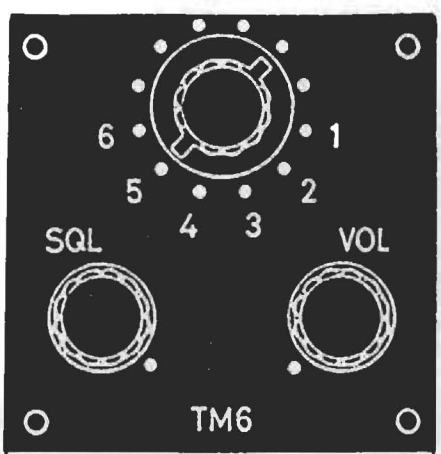
Regrettably 1977 has seen Lasham return to its more familiar self with 51°N weather after two years south of 20°N. The last club notes were written and posted on the morning of April 15 and a remark was made that 500km looked possible. It was and John Young claimed the first Diamond distance of 1977, Chris Lovell going round with him for company. May 14 is the only other day to have produced worthwhile cross-country weather when two 600km triangles were completed, both regrettably undeclared. Chris Lovell took the club Kestrel to Torbay and Northampton and Chris Garton (Nimbus) went the other way round a similar route.

Robin Barnes, Bev Lovell and Hazel Challinar have their Silver distances. During the Jubilee week Robin Jackson and Dave Elkin went to sample Scotland in summer, Robin reaching 16000ft for Gold height and Dave flying his elusive five hours to complete Silver C.

The accident to a club K-13 in the turbulence wake of a Boeing 727 (see S&G, June, p 128) caused a lot of problems at the peak training period. A T-53 was hired and Surrey & Hants lent a K-8 to Imperial college as the College fleet bore the brunt of the damage leaving only their Skylark 4 undamaged. The K-7 in the incident is now repaired and flying again.

A contingent of Portmoak members came for Jubilee week but a totally foul spell sent them away very soggy. They did manage a few thermal flights though and promise to return next year twice as keen and double in numbers. Another visitor from Portmoak was the wave and among short climbs was a splendid 14000ft over Basingstoke by Alan Purnell – he relates brakes iced open on the descent through cloud.

C.L.



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ULSTER

Our first expedition to our potential new field site on the north coast beside the 1200ft high Binevenagh ridge turned out to be a success, albeit a backhanded one. In the cloudless high-pressure weather prevailing that weekend, we were able to ensure that operation out of the field is perfectly feasible – even with no wind at all. We hope to return shortly when the ridge is working.

Club members will shortly be sharing two separate weeks of competition with the Dublin GC. Meanwhile, the soaring season got under way on June 1 when Jim Weston flew his SHK 320km from Belfast to County Cork for Gold distance. With the arrival of a PIK 20 this autumn, and the possibility of a club-operated Twin Astir, we look forward to much more cross-country flying next year.

A.S.

WEST WALES

We had our first cross-country week for several years at Withybush during April. It was tremendous fun with all pilots now full of competitive spirit. The week started well with Steve Spence and Glyn Hughes going solo, Steve gaining two Bronze legs and Glyn his first. Bronze legs have also been achieved by Gary Phillips, Keith Evans, John Hudson (who went solo on his 16th birthday), Graham Moss (who holds the club record for local soaring this season), John Hull and Alwyn Jenkins.

Clifford Davies (K-8) completed his Silver C and Tony Green (K-7) gained Silver height.

Congratulations to our new instructors, Clifford Davies, Tony Green and Harry Piper, and our thanks to Wally George and Bernie Johns for working so hard and driving so far (130 miles round trip) to enable the club to carry on during the years they were the only regular instructors.

Work on our second winch progresses, thanks to Brian Baker's endeavours, and we hope to have it operating soon.

I.W.G.

WOLDS

The soaring season has opened well with notable flights by Pete Norrison and Colin Milner (Silver distances), Bill Young (Silver height and near distance) and three creditable distance attempts by Moni Chana, Arthur James and Tony Acey – all winch launched from a flat site.

We await the arrival of the new tug with the impatience of young parents; on a good thermic day the loudest noise at Pocklington is the gnashing of teeth.

Plans for the summer include an extension of midweek club flying, flying weeks and a task week. It is encouraging to see the number of newcomers to the sport, often as a result of air experience evening flying.

After much effort by a few members the conversion of the Leeds Corporation bus to a mobile control tower (top deck) with radio and

signalling lights and canteen (lower deck) has been completed. Perhaps it is too comfortable – ground handling crews are becoming more difficult to winkle out.

G.H.H.

WOODSPRING

Our trophies were presented at the AGM and annual dinner. The first time award of the Brian Humphrey's memorial trophy went to our CFI, Pete Turner; Chairman's trophy to Graham Connolly; President's trophy to Roy Gallup and the M. Griffiths' bowl to David Driver. The P. Griffiths' trophy was shared by "Mac" McCullom and Ray Snelling for their many contributions to keeping aircraft and equipment serviceable.

Chairman for this year is John Ward and Caroline Barham is our Secretary. We are especially pleased that that doyen of ATC and civilian gliding, Arthur Robinson, is Vice-President. Arthur clocked up his 10000 launch about a year ago without telling us until it was too late to celebrate. Apart from his gliding experience his great skill with wood has been invaluable on glider repairs.

We now have six new instructors and positions are now reversed in this, our third year, with instructors now often looking for pupils. We could use a few more *ab-initios.*

We have been rushing to get our Bocian fully serviceable in time for Competition Enterprise, in which it is a club entry. This is an annual opportunity for our instructors to do their "own thing" and a way of being a thank you for their work throughout the year. Supporting ground crews will be taking some syndicate machines to North Hill in the hope that there will be a few thermals left after competitors have launched.

Our recently reported "near miss" with a BAC111 was essentially a non-event. A 111 did change its heading to clear air space occupied by our gliders. This was quite erroneously reported as a near miss by a member of the public. Neither pilot reported a near miss and local Air Traffic Control are satisfied that nothing reportable occurred.

J.W.

YORKSHIRE

With an improvement in the weather, members have become more ambitious and various cross-countries have been tried, usually successfully. Congratulations to Tony Hirst for his five hours, Tim Brown for his Silver and Ewan Spink for his Gold and everyone else who has completed different legs. Ewan has also become an instructor, along with John Hayes and Graham Evison.

In need of a new winch, we have managed to purchase a bus (which had a slight altercation with a bridge) quite cheaply and with a little help from our friends soon hope to have a main winch, with a back-up in case of emergencies.

On June 6 we had a beacon bonfire on the end of the airfield, Sutton Bank being visible from a great distance in all directions. Luckily, the appalling weather cleared in time. I don't know if the Armada would have got this far but we had a good party anyway!

The Ladies' Committee, who catered for the party, have also donated £240 to the club for a tape recorder and slide projector.

G.B.

Service News

BANNERDOWN (RAFGSA)

The wettest Inter-Service Regionals in living memory didn't dampen club spirits too much and Terry Joint and Mick Webb did well in the Sports Class; while back at the home site excellent soaring conditions were experienced by the fortunate few.

The visit by the Kestrel Club in April for an *ab-initio* course was also dominated by poor weather but at least everyone had some flying experience.

Two more changes in the club: Ken Hartley, a faithful member for many years, has been posted to Bicester and Terry Joint takes over as deputy CFI; Di and "Yorky" Kitchener, great members for a long time, have also left and taken away the beautiful Blanik 533.

J.J.H.

BICESTER (RAFGSA Centre)

Several of our members flew or crewed in the Inter-Service Regionals and the Nationals, Andy Gough and Paddy Hogg competing in the latter.

The prize for the best competition story must go to John Cooke in the Inter-Services who was caught in a heavy snow shower and forced to land his Std Libelle in a sheep field near Tewkesbury. He was horrified to find three large, woolly, and very pregnant ewes lying on their backs and squirming as if in agony. As he obviously hadn't hit them, he assumed they were dying of fright. John is a doctor, so he decided to investigate and pulled the first animal over onto its side whereupon it scrambled onto its feet and ran away.

To his surprise and relief, the farmer later thanked him for putting the sheep back on their feet. When they get wet the sheep get itchy backs and roll over to have a scratch. The sheer weight of the waterlogged coats prevents them from getting up again.

We have been gaining first-hand experience of the dangers involved in landing (and taking-off) in standing crops. The combination of the fertiliser injected last winter and the wet spring has produced a lush crop of knee-high grass. The result has been a series of ground loops, fortunately with no damage except to the pilots' morale. To reduce risks until the airfield is cut, we have been making some take-offs from the perimeter track.

George Young, a member of the Centre staff for seven years, has been posted to Brawdy. Our thanks for the hard work he has put in keeping our fleet of Chipmunk tugs airworthy, not to mention working on gliders in his spare moments and tug flying. He leaves the Chipmunks in the capable hands of Ian Bishop and Paddy Hogg.

T.C.H.

CHILTERNS (Weston on the Green)

There have been a few changes due to postings; John Delafield has handed over the chair to Bob Jones and Jock Manson, CFI, is back from Sri Lanka to a new posting at Weston on the Green to join the opposition flying parachutists. So a word of warning: Weston's danger area may be active with parachuting even though the odd glider could be flying by special arrangement. Recent incursions by powered aircraft have been viewed severely by the military.

Jock, Eddie Wright, Al Fox and Alasdair Raffan flew the Cirrus, K-18, K-6E and K-8 in the Inter-Service Regionals, the K-6 kindly loaned by Lindholme. The Aboyne expedition was notable more for hangovers than Gold.

We welcome Mike Mahon and Ian Hewitt from Germany. We also anticipate the arrival of a Swallow for a largely ex-Middle East syndicate. A new caravan site has appeared complete with Cotswold stone-walled flower beds, part of an all-round face-lift.

Tim Wanklin not only went solo but cheekily soared on his second trip. After obtaining a C in 1959, Keith Field made rather slow progress until rejoining us in March, since when a Bronze and a Silver C have been claimed.

K.F.

CRANWELL (RAFGSA)

Our committee has changed a little – we welcome Keith Cocking as the new officer IC and Keith Johnson as Treasurer. Paul Birch takes over the running of our newly rebuilt bar.

Paul Whitehead flew our K-8 in the Inter-Service Regionals and did very well for his first competition. Dick Cole came sixth in his Class in the Nationals – well done. Also congratulations to Keith Johnson and Paul Birch on going solo.

The narrow-drum winch is at last operational and works fine, but unfortunately tends to shake the driver to bits!

E.G.N.

FENLAND (RAFGSA)

Despite poor weather we have managed a few certificates. Congratulations to Carol Whitworth on Gold distance and Diamond goal, Brian Mack on Silver distance and Bev Lawton, Helen Hickling and Andrew Elliot for Silver height. We also have a crop of first solos and Bronze legs.

Three members, Geoff Bawden, Mick Simmonds and Corrie Bubier have successfully completed an instructors' course at Bicester.

A swinging party was held to celebrate the opening of the refurbished bar and to wish Steve Lamas well on his departure to Germany. Our new Astir has arrived and is very much in demand. Hopefully more flying will be done midweek to increase its utilisation. Finally, congratulations to Stu Hoy for coming second in the Inter-Service Regionals.

J.D.B.

FULMAR

We are again plagued by sea breezes. Our K-4 will soon be back on line returning our fleet to four, and with it the second winch after its Tost conversion by Harry Orme.

John Harrison and Al Mellar have gained

their five hours and Roy Hanson has completed his Bronze C. We have our longest day celebration on June 18 with a large fly-in and barbecue.

P.T.

GREYLAG (Benbecula, Outer Hebrides)

We now have seven solo pilots and more than 950 launches have been logged. Our CFI, Tim Baldwin, has had two training flights of 22min and 29min and Bob Sutton gained his first Bronze leg with a 34min flight.

We have converted an old shower/bathroom complex into new club premises which include a hangar, workshop area, office/storeroom and bar. There are now attempts to procure a winch so that we can exploit the ridge soaring potential along the mountainous region on the east coast of these islands.

We recently had a visiting unit from Germany and Pete Spevack, currently flying at Brüggen, said he was surprised and delighted at the facilities and future possibilities at this latest outpost of the RAFGSA.

W.H.M.

HUMBER (RAF Lindholme)

On April 30 we held our tenth anniversary celebrations with an invitation to various gliding clubs for a flying weekend and party on the Saturday night. Dishforth hired us a tug and the Station Commander gave permission for aerotows just for the weekend. We had visiting aircraft from Dishforth, Saltby and Doncaster, and with the weather smiling on us we had a thoroughly enjoyable soaring weekend. The party in the evening was a huge success, and the Scout Association presented the club with a plaque for the assistance we have given them in flying their Scouts. Our thanks also to Val and Brian Lumby for the superb buffet. The group photograph was taken just after a sharp shower on the Sunday.

Since then, Brian Lumby has gained two Bronze legs and Ian Dalrymple two Bronze legs and a Silver height. Jim Steele and John Cooper have gone solo and Daryll Affleck has almost completed her Bronze C in the Pirat owned by her father. Dave Leachman has joined us as a Scout instructor, Bob Travis has recently returned from his instructors' course at Bicester and a syndicate SHK has recently joined us.

It looks as if we may have to cease flying for about four weeks in July, while the RAF practise for the Queen's review at Finningley at the end of July.

K.M.G.

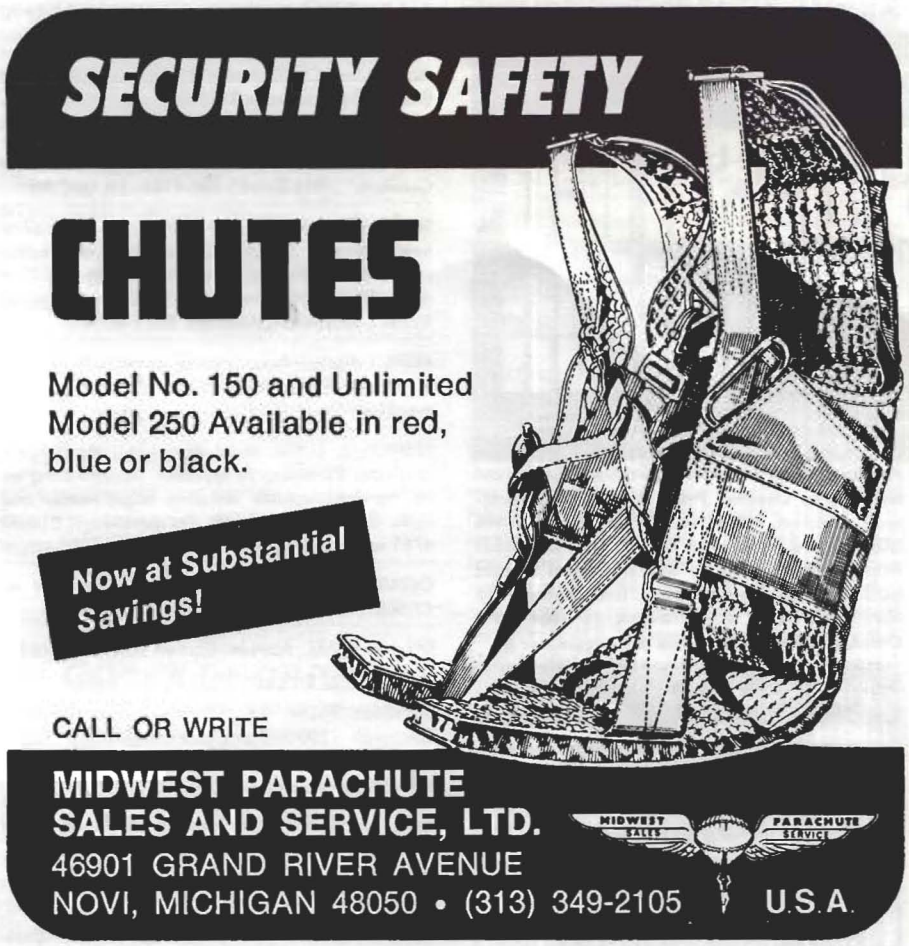
KESTREL (RAF Odiham)

We extend a warm welcome to our new Chairman, Lt Col W. (Wally) Lombard and thank the outgoing chairman, Col. E. (Ted) Shephard, wishing him luck in his new appointment.

We held an *ab-initio* course at Colerne during the last two weeks of April, by courtesy of the Bannerdown GC. Unfortunately the weather was unkind but everyone had a good time.

We were well represented at the Inter-Service Regionals by Mike Pobjoy, John Foey and Pete Richie and by Ted Shephard in the Nationals.

Our first 300km of the season was by Pete Andrews on April 27 with a downwind dash from Colerne to Gt Yarmouth. The retrieve was another story!



A new arrival on the airfield is a very smart Grunau belonging to Harry Chapple. This brings tears of nostalgia to the eyes of the old-timers and disbelief from the youngsters at its STOL characteristics.

P.W.A.

PHOENIX (RAF Brüggen)

Service turbulence again results in more departures. Our Chairman, Gordon Massey, leaves for Biggin Hill, and his enthusiastic services will be sadly missed. His wife, Yvonne, and son, Colin, have both also been very able club supporters. Tony Killingray, assistant aircraft member and knowledgeable adviser on almost any aspect of glider servicing and repair, and his wife Kay (who now has Silver distance), our Field Treasurer and S&G agent, depart for Coningsby – taking with them their superbly finished K-6CR.

Recent solos included those by 16-year-old Jenny Wilcox, and Steve Bunting; Andy Deighton has two Bronze legs; and on an *ab-initio* outing to Venlo Paul Hicks went solo and Roy Wardle managed a Silver distance.

The last months have been dominated by the RAF Germany Gliding Association Competitions at Detmold, where our score of badges was: two Silvers completed, six Golds completed and seven Diamond legs; congratulations to Pete Spivak, Roy Wardle (8hrs 9min for 260km in the K-8), "Porky" Woods, Liz Keily, Dick Hunt, Colin Jacques, Roy Thompson, Barry Elliot and Gordon Forsyth. Congratulations, too, to our CFI, Kev Keily, in the Blanik, on winning the RAFGSA two-seater trophy and the last day by completing the 308km task at 80km/h, beating the GRP machines.

A special thank you to Phoenix instructor Ben Bennett, Competition Director, for his extremely hard work and efficient organisation.

Congratulations to Michele and Bill Tootell, two of our instructors, whose daughter was born on a 300km day!

M.T.

WREKIN (RAF Cosford)

Dave Wood has left us on posting to Germany. He has put in a tremendous amount of work as Secretary for over two years, as deputy CFI for a year, and latterly in running the bus until the arrival of Rosemary Leadbeater. Mike Boyden goes to Brize Norton in July, after a long and significant contribution as aircraft member, pilot extraordinary and instructor. Dave Darlow and Geoff Cowling have also left us, after exceptional support on the maintenance side.

On the flying scene we have five A and Bs, five Bronze legs, two Silver heights, and our Chairman, Roger Cox, achieved his duration. In the Inter-Service Regionals, Mike Boyden came first in the Club Class, Stu MacLean third in the Sport Class and Dave Wood eleventh in the Open Class.

The new trailer for the K-18 is nearly finished, thanks especially to Martin Platt and Bob Leadbeater, and a good start has been made on the trailer for our new Astir.

I.D.M.

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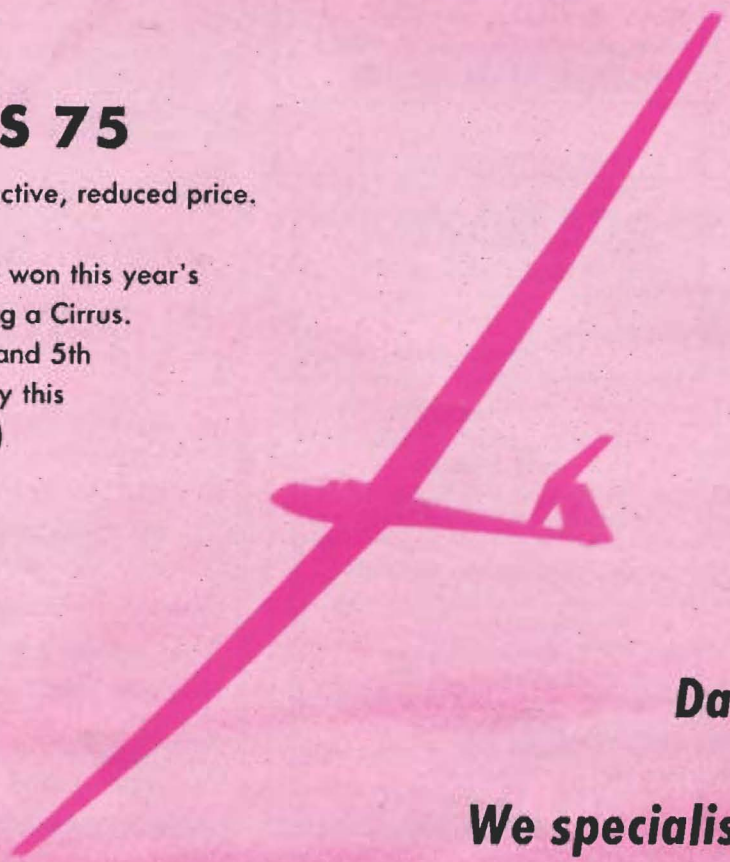
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