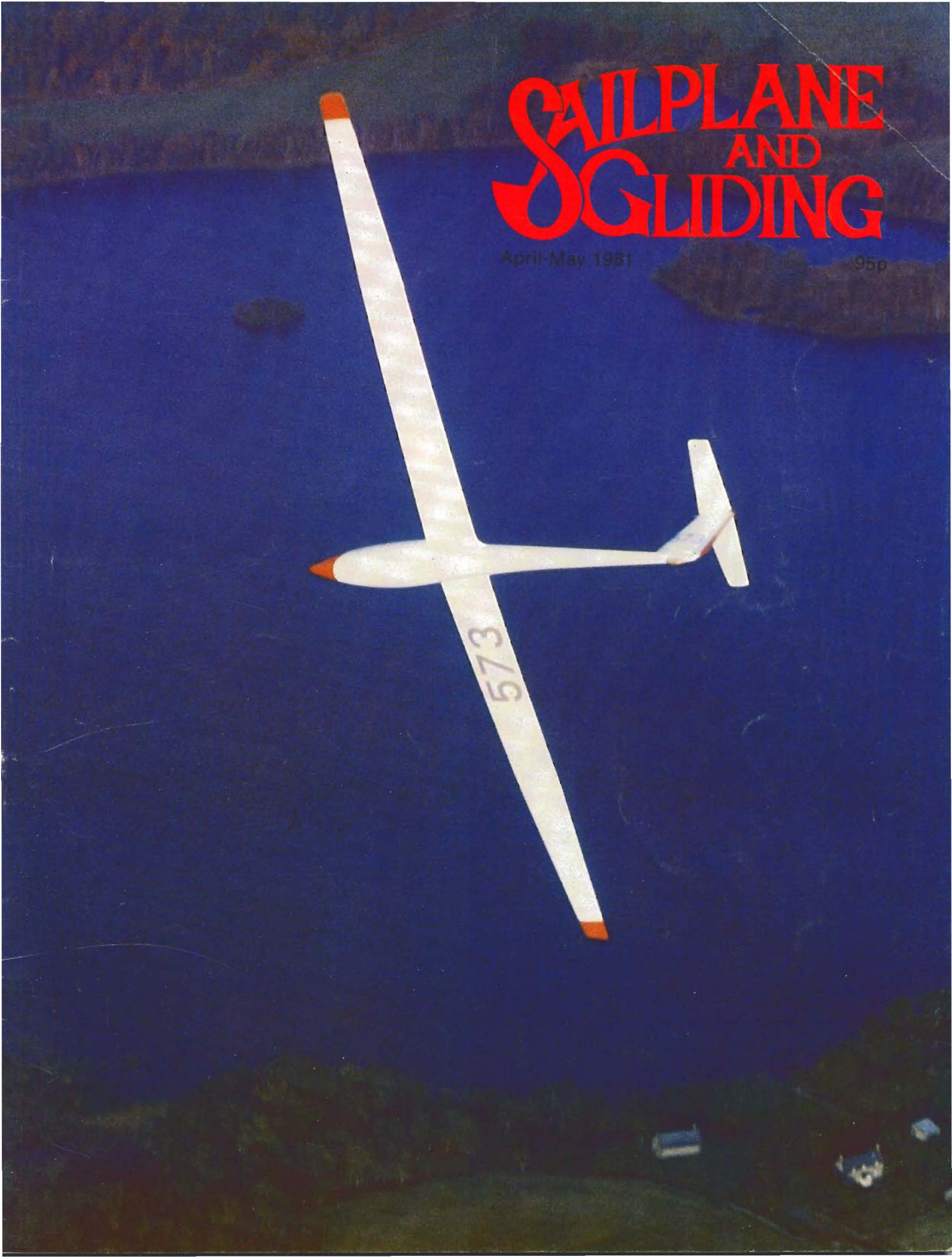
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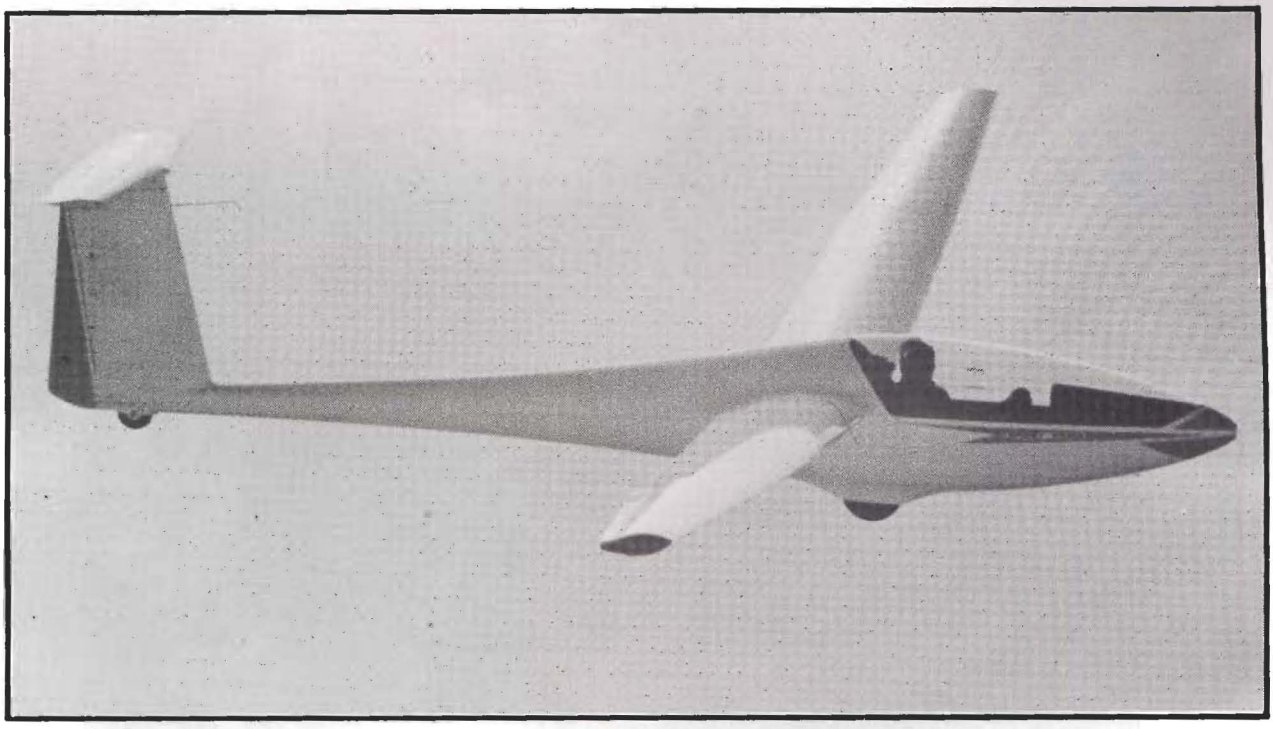
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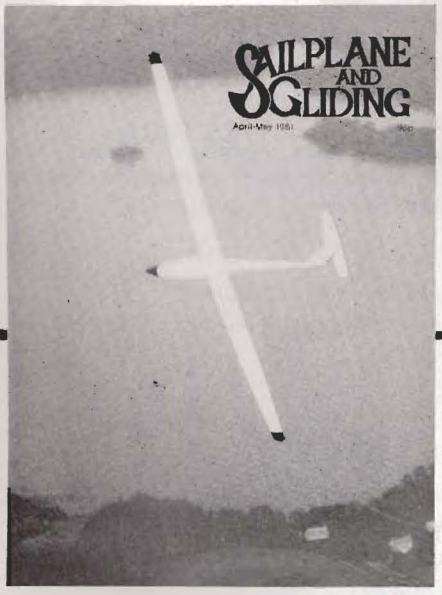
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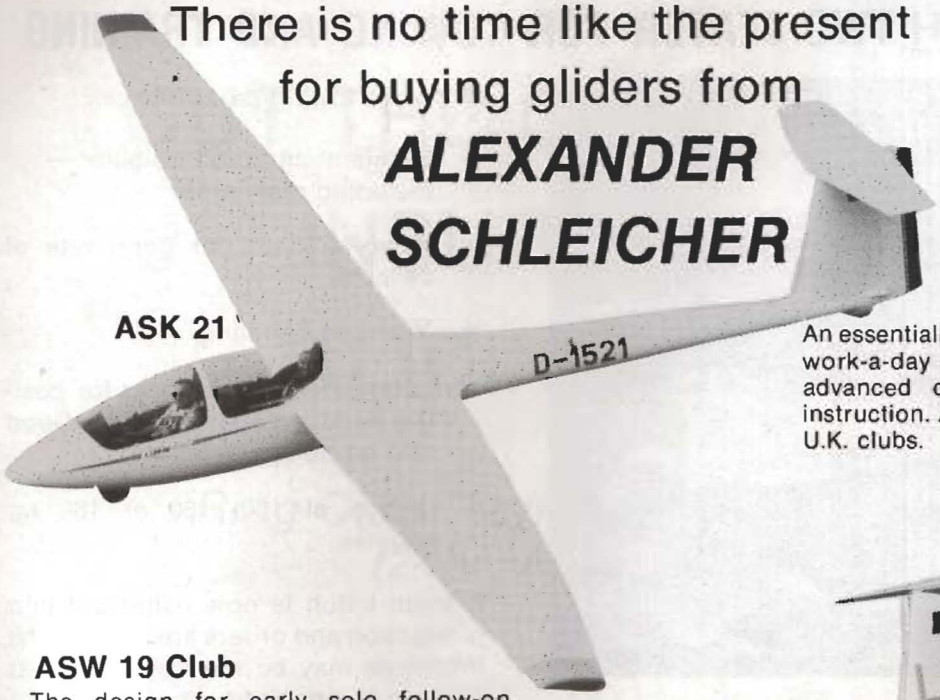
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CHAIRMAN'S REPORT, 1980

TOM ZEALLEY

The BGA Golden Jubilee Year celebrations were brought to a fitting climax on the occasion of the special annual dinner in March when that most charming and brilliant championship pilot Helmut Reichman, from Germany, was our guest of honour. That weekend also saw the conclusion of a vigorous and successful reign by Roger Barrett, the previous BGA Chairman; at the AGM Roger was duly elevated to Vice-President of the Association.

Perhaps it is the current depressed state of Britain's general economic position which causes one to look back over the past soaring season and think that it was awful. However, the flying statistics do not support me in this view. There were significant increases in both launches and flying hours compared with the previous year. Most notable of all, however, was the further improvement in the "quality" of our gliding signalled by Roger Barrett last year. There was an increase of no less than 30% in cross-country miles flown. John Jeffries and the National Coaches have not laboured in vain!

High Accident Rate

However, one aspect of my gloomy retrospect is indeed borne out by the facts. I regret to have to report that the movement as a whole suffered no less than seven fatalities during the year; five in civilian gliders, one in an RAFGSA glider and one in a glider-towing tug. Accidents to gliders were generally at a high level and there is now major concern amongst insurance underwriters about the high level of claims which are now barely half covered by insurance premiums. Clearly, we cannot expect the insurance world to continue to bear this burden and the consequences for the gliding movement must be unhappy. The BGA have established a working party with representatives from Lloyds underwriters to discuss this problem.

Turning from the gloom, however, I can record two most successful National Championship competitions. The new Championship structure is generally agreed to have been an improvement on the old and the support of Allied Breweries, with their Arctic Lite sponsorship, made a major contribution to their success. Of particular note, the Open and Standard Class Championships at Lasham achieved eight contest days — the best for many years.

The year also saw great activity on the part of the British Team Squad in preparation for the World Championships in Germany in 1981. Mike Carlton, the Team Manager, was particularly active and made a great success of his new innovation — Competition Kitty which toured the gliding clubs during the summer bringing British Team gliding more closely to the notice of all members of the movement. At the end of the season the four British pilots to fly at Paderborn were selected by the usual voting procedure from the 16 member squad. The combination of two "old hands" and two newcomers to World Championships gives us a strong and balanced team.

Still on the subject of World Championships, the BGA representative, Jan Strachan, at the CIVV meeting in Paris in the spring made a further bid to have Britain accepted as the host for a future World Championship. This time it was a proposal to stage the Championships at Cranfield in 1983 and considerable work had been put in by a small team to present a fully documented proposal with all appropriate supporting data. Regrettably the CIVV turned down our proposal in favour of a financially subsidised offer from Argentina where the weather's reputation is better than in the UK.

Another bright spot in the year was the establishment of a number of new records, including height and absolute altitude records by David Benton who reached 11 031m asl flying from Portmoak. Other notable achievements during the year were the award of the FAI Tissandier Diploma to Mike Garrod for his work on the BGA National Ladder and the RAeC Bronze Medal to John Jeffries for his pioneering work on cross-country training using the lead and follow method.

On the technical front, the year saw the initiation by the Technical Committee of trials with a light aircraft fuelled with motor fuel in place of the expensive and increasingly difficult to come by aviation spirit. There are hopes that these trials, carried out in a scientific and business-like manner, will provide the basis for persuading the CAA to authorise the use of Mogas in all glider tugs. The other notable event emanating from the Technical Committee was the establishment of a glider design competition which has created extensive interest and encouraged a surprisingly large number of designers to put forward preliminary designs from which a more limited number have been chosen to go forward to produce fully detailed designs for their gliders.

Increasingly Important Trends

It is perhaps a sign of an important trend within the British gliding movement that each of our professional flying staff has made noteworthy impact on the high performance flying scene in addition to their normal basic training activities. Bill Scull was a most successful Championship Director at the Lasham Nationals, while Brian Spreckley became the winner of the 15 Metre Nationals. John Williamson — already a well established Championship pilot, took over from George Lee the newly emerging Junior Squad Training Scheme, laying the seeds, we hope, of future British World Champions.

After commenting on the usual range of gliding events both regular and irregular I wish to draw attention to certain trends and issues which I believe are becoming of increasing importance. During the year those two basic commodities, airspace and ground space without which our sport could not survive, have once again been under continuing threat. As in other human situations, these commodities may not be fully appreciated until they are lost. The Cotswold Club after a prolonged struggle have been able to secure their position at Aston Down while the Dorset Club have unfortunately been turned off their airfield at Tarrant Rushton. Land is very expensive and even with sufficient money available, suitable airfields cannot always be found. The gliding movement must devote continuing positive effort to try and achieve greater security for the considerable number of our clubs which operate on land over which their leasehold is of short duration.

The airspace problem is different. Here we are usually on the defensive, struggling to retain our ever-diminishing freedoms and it is necessary to keep up continuous contact with the appropriate people in the National Air Traffic Services Section of the CAA. With the considerable pressure that these people are under from commercial aviation interests, it is essential that the BGA provides corresponding counter pressures. What is needed is sufficient numbers of volunteers from clubs in various parts of the country who are willing to learn the necessary complexities and jargon of air traffic control and to spend time reading the appropriate papers and proposals and attending meetings to try and ensure that our case does not go by default.

In respect of both land space and airspace, the BGA resour-

ces are strictly limited when compared with the size of the problem. As in most gliding activities the members of the movement themselves must do their bit if they are to continue to enjoy their gliding.

The final issue to which I wish to draw attention is that of our brother sport — hang gliding. It would be dishonest to say that our relationships with this movement have not deteriorated during the year. There has been conflict at virtually all the well-established gliding hill sites and although these may not represent a majority of our sport, they do include some of the larger and older-established clubs. Although hang gliding has been established in Britain for a number of years now, a large number of the participants are relatively new to the use of airspace, and in their enthusiasm resent the opposition which they encounter from the older sport — ourselves. Inevitably, ridge

A Collision Risk

soaring involves high density flying and unless strict discipline and conformity over flight patterns is observed there will inevitably be a collision risk. Unfortunately, the pilots of hang gliders, whose aircraft have substantially different flying characteristics from our own, do not assess the collision risk as highly as we do. Even where the existence of some risk is accepted, hang glider pilots seem unwilling to accept that a flying organisation — whether it be London Airport or the Mynd, which has invested heavily in real estate, has a reasonable right and expectation to some priority of use in the adjacent airspace. Unfortunately, the legal situation here has been greatly confused by the CAA in their last amendment to the Air Navigation Order Rule 34 regarding the penetration of aerodrome traffic zones. In the various disputes which have arisen at the gliding hill sites, the National Air Traffic Service have been concerned, above all, to sit on the fence and refrain from clarifying the legal position. Numerous meetings and discussions have taken place at all levels both national and local in an attempt to try to achieve satisfactory arrangements between conventional gliding and hang gliding, but we still have some considerable way to go.

In conclusion, a few words on people. The year has seen some new faces on the Executive Committee — notably Ben Watson of Lasham and Dickie Feakes of the RAFGSA. Meanwhile, Lionel Alexander (Cambridge) and Bernard Barry (London) have both declared their intention to retire from the Executive Committee at the end of the current year. With one brief period of rest, Lionel has served on the BGA Executive Committee and its predecessor Council for a period of twenty years, and his contributions especially where legal issues are involved have been invaluable.

May I also record my thanks to the whole body of BGA officers, whether volunteers or otherwise, for their continuing service to the movement during the past year.

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GLIDING AND UK AIRSPACE 1981

MIKE EMMETT, Chairman of the BGA Airspace Committee

This article is intended to clear the current airspace maze as it affects glider pilots. The information relates to the UK mainland only and does not necessarily apply to powered aircraft.

Aerodrome Traffic Zone (ATZ)
All airfields, including gliding sites, have an ATZ which comprises the airspace extending from the surface to a height of 2000ft above the level of the airfield and within a distance of 1½nm of its boundaries, except any part of that airspace within the ATZ of another airfield notified as being the controlling airspace.

It follows that large airfields have large ATZs and *vice versa*. An aircraft may not take-off, fly or land within an ATZ without permission if the airfield is operated by the Government, the Armed Forces, the CAA or if it is licensed by the CAA, or has an ATC unit or Aeronautical Flight Information unit. At airfields in none of these categories (which includes many gliding sites, regardless of how busy they are) it is legal for an itinerant aircraft to penetrate the ATZ, providing the pilot either conforms to the traffic pattern or keeps clear of the circuit airspace, and observes the normal rules of good airmanship to avoid collisions.

Some airfields are designated PPR (Prior Permission Required). This usually means a telephone call, but full details are set out in the AGA section of the **UK Air Pilot.** All military airfields are effectively PPR and should be avoided. It is obviously unwise to linger near the extended centre line of a busy runway even when outside the ATZ.

Military Aerodrome Traffic Zone (MATZ)
A standard MATZ comprises the airspace within 5nm radius of the centre of the airfield extending from the surface to 3000ft above the surface. In addition there is a stub projecting from the above airspace 5nm long and 4nm wide extending from 1000ft to 3000ft above the surface, aligned with the approach to the main runway.

In some MATZs the stub may be absent or reduced in size. There are MATZs of different sizes and also some with stubs on both sides of the basic cylinder. The rules applicable to the penetration of a MATZ are not compulsory for civil aircraft, but inside every MATZ there is an ATZ: refer to the previous section.

Areas of Intense Aerial Activity (AIAA)
The RAC section of the **UK Air Pilot** defines an AIAA as "An airspace which is not otherwise protected by regulated airspace, within which the intensity of civil or military flying or a combination of the two is exceptionally high; or an airspace within which aircraft singly or in combination with others regularly participate in unusual manoeuvres."

Twenty-one such areas are currently listed, but curiously only Honington military control zone is shown on the 1:500 000 topographical charts used by most glider pilots. Gliders may penetrate these areas, but in view of the nature of the hazard, a sharp lookout is advisable. A chart is available which shows all AIAAs and the military low flying system: refer also to the **UK Air Pilot** (RAC Section), pgs5-7-1/5.

Upper Heyford Radar Advisory Service Zone (RASZ)
Although not listed as an AIAA, the Upper Heyford RASZ should be included here. Again the procedures are not mandatory for civil aircraft, but the **UK Air Pilot** contains the following advice: "Since it will obviously be in the interests of flight safety for Upper Heyford ATC to have knowledge of all aircraft flying in the RASZ, pilots of gliders and non-radio equipped aircraft intending to operate within the zone are advised when possible to telephone ATC (Upper Heyford 2331, Ex 4217/4843) before take-off and in order to make known their intentions. Flights made in accordance with standing arrangements are excluded from this procedure."

Military Low Flying System
Low flying by high performance military aircraft now takes place in most parts of the UK at any height up to 2000ft agl, with the greatest concentration between 250ft and 500ft. All gliding sites are notified to the military authorities and all club CFIs should by now have a supply of forms with which to report any dangerous infringement of their ATZ to the Ministry of Defence.

Prohibited Areas
There are atomic energy establishments in Gt Britain at

Winfrith	Capenhurst
Aldermaston	Calder/Windscale

Harwell, Springfield and Dounreay are classed as Restricted in order to allow aircraft to land at adjacent major airfields, but for gliding purposes they should also be considered prohibited. They all have a radius of 2nm and extend to between 2000ft and 2500ft amsl. It is most inadvisable to place oneself in the position of having to land within a prohibited area. Temporary prohibited areas may be established anywhere from time to time. Information about these is published in NOTAMs.

Danger Areas
The UK is littered with danger areas of many types, shapes and sizes. They are active permanently, or between certain hours of the day, or as notified by NOTAM. Full details will be found in the **UK Air Pilot** (RAC section) pgs5-2-1 to 5-2-21. The chart of UK airspace restrictions is also useful.

Glider pilots should regard all active danger areas as prohibited areas for the following reasons:

The **UK Air Pilot** lists only the type of activity most likely to be encountered, but in practice various hazards may be present in one area simultaneously.

Many danger areas contain areas over which flight is prohibited at times within the period of activity of the danger area, by reason of byelaws made under the Military Lands Act 1892 and associated legislation.

Violations of active danger areas by civil aircraft are causing concern to the authorities: Aeronautical Information Circular 69/1980 explains that the act will be used to apply airspace restrictions to all military danger areas where possible. It is also

worth noting that the **UK Air Pilot** does not list danger areas with upper limits 500ft or less above the local surface, to which prohibiting byelaws may also apply.

Other Hazardous Areas

Other types of hazard are:

Free fall parachute sites. The airspace is contained in a circle of 1½nm radius from the centre of the drop zone up to a maximum of Flight Level 120 (approximately 12 000ft). It may not be apparent to a glider pilot, observing the drop zone in flight, whether or not there is parachuting in progress; parachutists normally free-fall down to 2000ft agl and are extremely difficult to see. A collision between a parachutist in free-fall and a glider would have serious consequences, as was demonstrated recently in the USA. AIC 76/1980 makes this point in relation to parachute training at Weston-on-the-Green, near Bicester. Details are in the **UK Air Pilot** (RAC Section), pgs5-8-1/2.

High Intensity Radio Transmission Areas. Within these areas are powerful radio emissions which may cause interference with glider radios and possibly audio variometers. One such area is so powerful that prolonged exposure could be injurious to health. Details are in the **UK Air Pilot** (RAC section), pgs5-6-1/2.

Restricted Area — RAF Kemble

Introduced to protect the Red Arrows aerobatic team during training, the area is a circle of 5nm radius extending to 6000ft agl and active during the notified hours of Kemble Airfield, *ie* 0830-1600 local time Monday to Friday or when promulgated by NOTAM. Gliders may not enter this airspace without prior permission, obtained either by contacting the ATC unit at Kemble by radio on 122.2MHz or by telephone on Kemble 261.

Provided the area is not being used by the Red Arrows during that period, pilots will be given clearance to transit, although there may be other flying in progress. All pilots must take the usual precautions while in the vicinity. Glider pilots should give as much notice as possible of their intended crossing, in case team training would preclude a crossing. The area will not normally be active at weekends unless NOTAMed. The RAC Section of the **UK Air Pilot** and AIC 6/1978 have full details.

Controlled Airspace

Controlled airspace sometimes occupies the same bit of sky as Specials Rules airspace (peculiar to the UK) and can lead to confusion. Controlled airspace is either notified for Rule 21 of the Rules of the Air and Air Traffic Control Regulations or it is not. Rule 21 makes airspace subject to permanent Instrument Flight Rules regardless of weather conditions. This involves the filing of flight plans, pilots holding instrument ratings, carriage of certain radio equipment etc. If it is not notified for Rule 21 it means that VMC flights are not subject to these requirements and therefore gliders flying in VMC are permitted.

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Visual Meteorological Conditions (VMC)

To comply with VMC, either above 3000ft outside Controlled airspace or inside Controlled or Special Rules airspace, a pilot must remain at least 1000ft vertically and at least 1nm horizontally from cloud in a flight visibility of at least 5nm, as interpreted by the pilot. Outside Controlled airspace at or below 3000ft, with an indicated airspeed of 140kt or less, a pilot must remain clear of cloud, in sight of the surface and in a flight visibility of at least 1nm.

Bearing in mind that modern military and civil jet aircraft travel at very high speeds and are capable of high rates of climb and descent, and notwithstanding the minimum criteria stated above, it would be prudent to exercise the greatest care when flying in areas where such traffic is known to exist.

Airways

Airways are Rule 21, but an exception is made for gliders. The relevant paragraph in the **UK Air Pilot** (RAC Section) pgs3-5-3 states: "Gliders may cross an airway, except a Purple airway (see below), in VMC by day without compliance with any of the requirements..." It would obviously be wise to effect an airway crossing in the most expeditious manner possible.

Purple airspace is established from time to time, to protect Royal flights in fixed wing aircraft, within which ATC apply special procedures. Full details are promulgated by special (RF) NOTAM and it is important that gliding clubs receive this information because gliders are not permitted to fly in Purple airspace. The committee will take steps to ensure that these NOTAMs are sent to clubs.

Some control areas may be treated as if they were airways: Daventry, Worthing and West Scottish.

Control Zones/Areas and Special Rules Zones/Areas

Abbreviated to CTR/CTA and SRZ/SRA. TMA is an abbreviation for Terminal Control Area. The rules are complex, but the simplified tables which follow should suffice.

1. Areas in which gliders may fly provided they maintain VMC.

Cross Channel SRA	Stansted SRZ/SRA (But see table 2)
Bournemouth/Southampton SRA/SRZ	Leeds/Bradford SRA/SRZ
Lyneham SRA/SRZ	East Midlands SRA/SRZ
Halifax CTA	Aberdeen SRA/SRZ
Southend SRA/SRZ	Newcastle SRA/SRZ
Scottish TMA/SRA/CTR	Manchester TMA

2. Areas in which gliders may not fly, regardless of the weather.

Heathrow CTR/TMA	Prestwick SRZ
Gatwick CTR/SRZ/SRA	Manston SRZ
Birmingham CTR/SRZ/SRA	Lydd SRZ
Cardiff CTR/SRZ/SRA	Glasgow SRZ
Blackpool SRZ	Liverpool SRZ

Manchester CTR (except for a small portion up to 1250ft agl)
Stansted SRA, only the portion between Stansted and Luton between 3500ft amsl and FL 65.
Luton SRZ/SRA
Brize Norton SRZ — But see table 3 for exceptions.
Edinburgh SRZ

3. Areas in which gliders may fly provided certain rules are followed.

Luton SRA. Part of this may be used for taking-off or landing at Dunstable (London GC) Airfield. These rules are complicated and should be studied before flying into the area: refer to the **UK Air Pilot** (RAC Section), pgs3-3-13-1.

Brize Norton SRZ

Gliders may penetrate the SRZ at weekends in VMC provided that:
a) Transits are made for cross-country record attempts on triangular routes which cannot be arranged to avoid the SRZ.
b) On the day of the proposed flight the pilot must contact the ATC watch supervisor on Carterton 842551 and pass an approximate zone boundary ETA. At this time, but not later, ATC may refuse permission for operational or safety reasons.
c) The pilot must call Brize Norton on 130.4MHz before penetration. In the absence of any reply the pilot may continue, assuming responsibility for lookout and separation within the ATZ, while listening out on 130.4MHz.

Edinburgh SRZ/SRA

Transits are available to gliders contacting Edinburgh on 130.4MHz. It will be necessary to activate the frequency by telephone before departing.

Airspace Above Flight Level 245

The entire country is controlled above FL245 but none of the rules are applicable to gliders.

The Airmiss System

Glider pilots are accustomed to flying in close proximity to other gliders and perhaps do not realise that it can be quite alarming for the pilot of a powered aircraft to suddenly encounter a glider at close quarters. The reluctance of most glider pilots to report airmisses is generally not shared by the powered fraternity: this usually results in extra work for the Airspace Committee! The airmiss system is a good one and glider pilots should take advantage of it whenever necessary. Full details are in the **UK Air Pilot** (RAC Section), but generally speaking the procedure can be activated by a telephone call to the nearest airfield with an ATC service on the day of the incident.

Further Reading

The airspace situation is complicated and changing all the time. The following list of publications will enable those with the necessary stamina to maintain a thorough and up-to-date knowledge of UK Airspace: **Laws and Rules for Glider Pilots (BGA); UK Air Pilot** (RAC Section); NOTAMs; General Aviation Flight Guide; Air Navigation Order 1976, Air Navigation Regulations 1976, Rules of the Air and Air Traffic and Control Regulations 1976 which are available as CAP 393 from the CAA, Greville House, 35 Gratton Road, Cheltenham, Glos; Aeronautical Information Circulars, available from the Aeronautical Information Service (AIS 2C), Tolcarne Drive, Pinner, Middx, HA5 2DU; Chart of UK Airspace Restrictions and Chart of UK AIAAs and Military Low Flying System which are both free from the Supt, MoD (PE) Central Stores Dept, Aston Down, Stroud, Glos, GL6 8HT.

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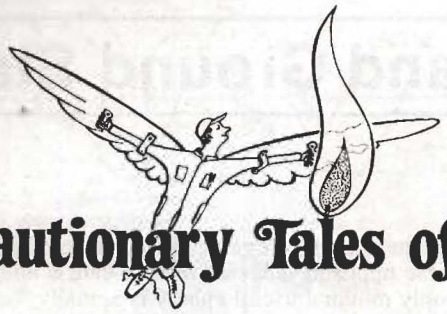
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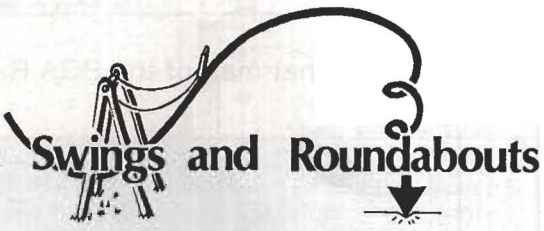
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The Cautionary Tales of Joe 2. Swings and Roundabouts



BY MENTOR

Following Joe's misadventure in the tree tops his CFI got to thinking about circuits, and alertness, and decision-making and things. Eventually nice quiet circuits became the exception for the *ab-initios* and all the pupils were being deliberately made to organise respectable circuit patterns (or at least the bit that counts most!) from the various inauspicious beginnings that were set up by their instructors, Joe thrived on this new training and by the time his K-8 was rebuilt his eye was distinctly brighter and his tail had regained a certain bushiness! Now the winter was past, the March winds blew and the heady thermals of April were just around the corner.

Situation

K-8. Rebuilt; weighed; test-flown and handed back to owner some four months after accident.

Pilot. Confident but cautious; 140lb in his birthday suit; current on K-13 dual and solo.

Winch. Eleven litres of diesel, ex-London bus; fresh from winter overhaul; potent.

Winch driver. Newish; keen to give brisk, "good value" launches.

Wind. Fifteen knots down the strip, gusting 25.

Joe does his checks.

"Checks, quick now, cable's coming! Controls — full and free, correct sense — nice to be back at your own controls again! Ballast — none fitted, check placard — that's funny, it's in kilogrammes — must have gone metric while she was away — what's 70kg? — twice that is 140 and that's my weight — good. Instruments intact and zeroed — wind the altimeter up to zero — come on, altimeter, you're needing a lot of twiddling — that's it, zero. Sorry straps, forgot you — straps tight. Trim — well forward for the launch. Canopy — secure. Brakes — closed *and* locked. Cable on please! Clear above and behind? UP SLACK!"

As the cable slowly tightened Joe quickly reviewed his emergency procedure for cable break. Over 300ft he would turn *left*, away from the runway. And that thought was the final link in a chain that set poor Joe up for the most frightening fifteen seconds of his gliding carreer so far!

"ALL OUT!"

A thistle-down K-8, slightly underloaded at that, is no burden at all to an eleven litre London bus! Joe was whisked off the ground in a trice and at once the nose went into the sky as the cable tugged fiercely at the belly hook. Even with the stick on the forward stop Joe couldn't keep the nose down and the K-8 shot up through the wind gradient like a frightened champagne cork!

Bang! Cable break!

"*Ease* forward, don't overdo it now — regain normal attitude! Height? Just over 300ft — drill? turn left, remember. Turn *left*! Oh, so slow to respond — get her *round*! Ground whizzing by now — must have let the nose go down a bit much — slow down, now, slow *down*. Funny, ailerons soggy — turn left into wind — kick her round — wing dropping? Help, can't be spinning, surely — oh *no*! Airspeed, quick! Stick forward — level the wings — ground rushing up — no airspeed — have to flare now — stick *back* !!"

THUMP!

Had Cause to Ponder

The K-8 is a tough little bird — has to be! — and she and Joe came to no harm, thank goodness. But Joe had cause to ponder as the club engineer went over the heavy landing inspection.

1) Cockpit loading. 70kg is *not* 140lb, it's 155. The conversion factor is 2.2. So Joe with his lightweight parachute was barely on the minimum weight, and that tends to mean twitchiness in pitch!

2) Eager winch drivers are all very fine but they *must* appreciate the potential hazard of the power/weight ratios at their disposal.

3) Old altimeters that have been in prangs may mis-read. Joe's 300ft was only 200ft in fact, due to a sticky action when he re-zeroed it. He would have found this out if he had lightly tapped the panel to ease the residual error in the instrument.

4) Trim forward for launch? Not necessarily so. Trim fully forward on a tabbed elevator means trim tab fully *up*, which means *less* overall elevator effectiveness in keeping the nose down during a gusty launch.

5) Pre-planned emergency procedure is fine, but it *must* be subject to assessment of actual height and conditions of the moment. Joe had "programmed" himself to turn left, subject only to indicated height.

6) Downwind leg, low down, windy day! Strong illusion of high airspeed as ground rushes by.

7) And finally that wind gradient! What you gain on the swings...!!

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VHF Aerials for Gliders and Ground Stations

COLIN DEWS, Chairman of the BGA Radio Committee

In the last article we considered the transmitter/receiver equipment and examined the functions of some of the more important circuits. This article explains some aerial fundamentals including the relationship between aerial dimensions and operating frequency and the importance of installing the correct feeder cable between the transmitter and the aerial. A few types of VHF aerial suitable for use in gliders and ground stations are also described. I shall start at the beginning with some aerial fundamentals. First, an aerial which has been designed to transmit signals on a given frequency will also receive signals efficiently on that frequency. We therefore need only consider the "transmit" conditions of our aerial.

The Theoretical Aerial. It can be shown that for a given frequency the most effective radiation from the aerial will occur when the strongest electromagnetic field is created by the aerial. It can also be shown that the electromagnetic field of the aerial is greatest when the radio frequency current flowing in the aerial is greatest and for this current to be maximum a special relationship between the length of the aerial and the frequency of the current must exist. The term used to describe this condition is *Electrical Resonance*.

Resonance. To explain this phenomena we can use a mechanical analogy. Consider a tube with a barrier at one end and a plunger at the other. If we introduce an elastic ball into the tube and roll it from the plunger end it will strike the barrier, bounce and roll back to the plunger where it will bounce again. This process will continue until the energy originally imparted in the ball has been dissipated. If, however, we arranged to give the plunger a push each time the ball struck the plunger, the back and forth motion of the ball could be kept up indefinitely. The "pushes", however, from the plunger must be timed exactly to be in phase with the arrival of the ball, and to provide this condition the *frequency* of the "pushes" needs to be adjusted to:

1) The *length* of the tube between the barrier and the plunger.
2) The *speed* of the elastic ball.

Now let us consider the situation where two of the variables are fixed — the frequency of the "pushes" and the speed of the ball — we must adjust the *length of the tube* to get the timing right. We have a very similar situation when we resonate an aerial.

To more easily appreciate the radio equivalent to the mechanical analogy for resonance we could set up a demonstration to show the distribution of radio frequency current and voltage in an aerial. If we suitably connected a *long* wire to our transmitter aerial output circuit and keyed the transmitter we could show that the wire had become energised with two "standing wave" patterns — one of current and the other of voltage (Fig 1).

We would notice that both patterns were sine curves and that the voltage curve was 90° out of phase with the current curve. For the moment we need to consider only the current distribution curve and particularly examine what is happening in the length of wire ABC. This portion represents *one complete cycle of radio frequency current* distributed over *one wavelength*. We can observe that the current direction (and hence the electromagnetic field) is flowing from A to B during the first ½ cycle and then it reverses and flows from C to B during the second ½ cycle. The electromagnetic fields created by these opposing currents tend to cancel and the net effect is that only minimal useful energy is actually radiated.

If we cut the wire at point B, leaving length AB connected to the transmitter, we would have satisfied at least theoretically, the necessary conditions for an effective aerial, *ie* maximum current for maximum electromagnetic field, and the result would be a resonant ½ wave aerial. However, such an aerial would require a special circuit to match it to the transmitter and it may prove to be inconveniently long for installing in our glider.

Aerial Length/Frequency Relationship. In free space a radio wave travels a distance of one wavelength at the speed of light (300 000 000 meters/second) during the time of one cycle of the transmitter frequency.

$$\text{Distance} = \frac{\text{Speed}}{\text{Time}} \text{ or wavelength} = \frac{V}{F}$$

Therefore to determine the wavelength for a frequency of 130.4 MHz.

$$\text{Wavelength (metres)} = \frac{300\,000\,000 \text{ m/sec}}{130\,400\,000 \text{Hertz}} = 2.3\text{m}$$

Our resonant theoretical ½ wavelength aerial would be 1.15m. However, because of a number of factors, *ie* loading, end effects, aspect ratio of the radiating elements and the fact that the speed of the radio frequency current in the aerial is slightly lower than a radio wave in free space, the physical aerial length would need to be shortened by approximately 4% to obtain resonance.

Some Practical Considerations. So far we have considered a theoretical ½ wavelength aerial energised at one end directly by the transmitter. We should now consider a more useful application of this type of aerial. Essentially there are two requirements to be satisfied. First the *polarisation* of the electromagnetic field we are creating when we transmit is in the same plane as the aerial, the maximum radiation occurring at 90° from the plane of the aerial (Fig 2) and because we require communication with mobile stations which may be pointing in any direction in the horizontal plane, the *aerials* on *both gliders* and *ground stations* should be *vertical*.

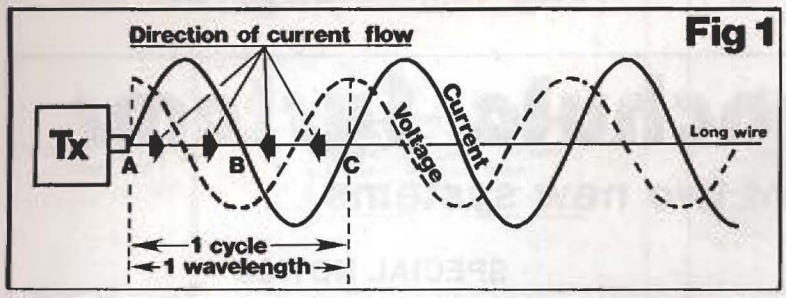
Secondly because it is impractical to install a vertical ½ wavelength aerial directly on the radio case, we need to feed the aerial with radio frequency power from the transmitter and ensure that the cable used to transfer the power does not itself become part of the radiating system by being energised with standing waves etc.

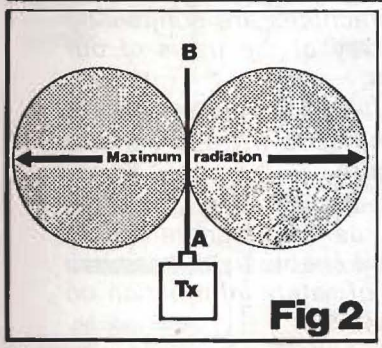
To achieve this second requirement, there must be a good match between all three elements of the radio system:

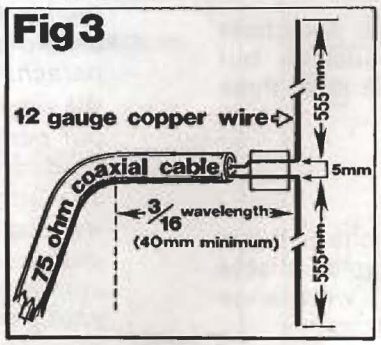
a) The transmitter power amplifier output circuit coupling the transmitter to the feeder cable.
b) The feeder cable.
c) The load presented to the feeder cable by the aerial itself.

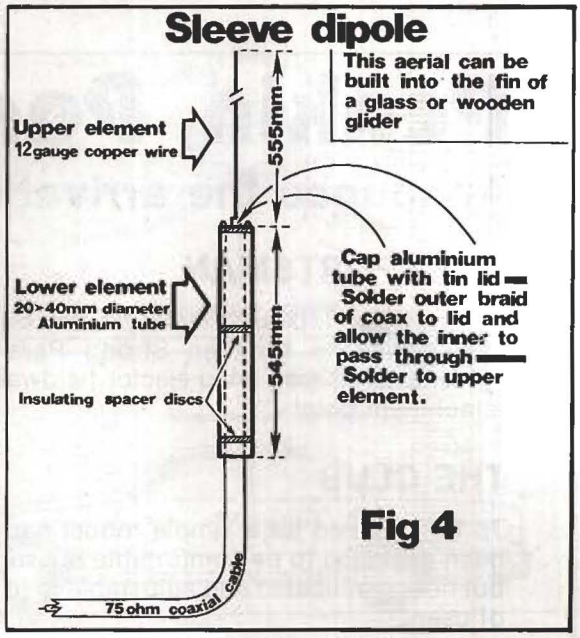
All three elements must possess similar electrical characteristics. The terminology used to define this requirement for the match is that all three elements should have the same characteristic impedance.

VHF Aerials in Common Use. There are two main types of VHF aerial, dipoles and ground plane unipoles.









The Dipole. Although "end fed" ½ wave aerials are used for some ground station installations, it is more convenient to feed a ½ wave aerial at its centre where the current is greatest and the voltage is minimum. Such an aerial is called a ½ wave dipole and when resonant it actually presents a pure resistive load to a feeder cable of approximately 75ohms — (characteristic impedance). A dipole should therefore be connected to the transmitter with 75ohms coaxial cable.

If we use the dipole as described above we may have a problem finding the space to install it in our glider — 1.15m of vertical aerial limits the location in most gliders to the fin, unless we are prepared to accept parts of the aerial projecting through the outer skin of the glider. The installation is further complicated because the feeder cable should be mounted at 90° to the plane of the aerial for a minimum distance of 3/16 of a wavelength (43cm) as shown in Fig 3. This is necessary to reduce the likelihood of the electromagnetic field from the aerial inducing standing waves on the feeder cable which could cause an adverse change to both the radiation pattern and the efficiency of the aerial.

The Sleeve Dipole. Another form of dipole can be constructed by passing the coaxial feeder cable inside the lower element (Fig 4). However, this type of dipole is more difficult to trim for resonance and it is also more prone to induce standing waves on the coaxial feeder cable.

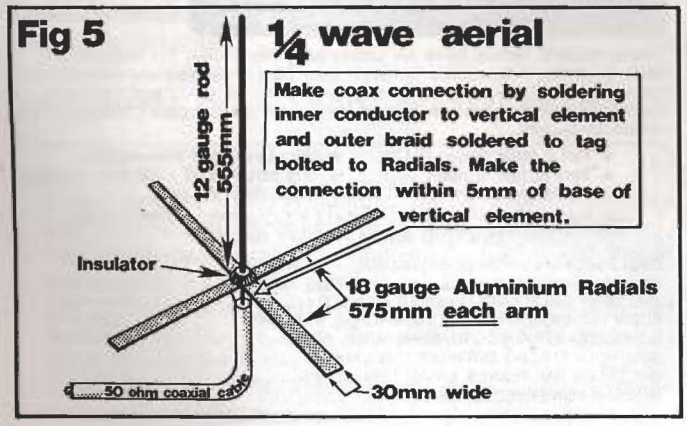
The ¼ Wave Ground Plane Aerial. The simplest alternative is the ¼ wave ground plane aerial. The aerial can be viewed as a sleeve dipole with the lower element flattened out forming a horizontal disc of radius ¼ wavelength. In practice, we need only introduce four horizontal elements to form a ground plane, Fig 4. Apart from its smaller vertical size this aerial has a significant difference from the ½ wave dipole.

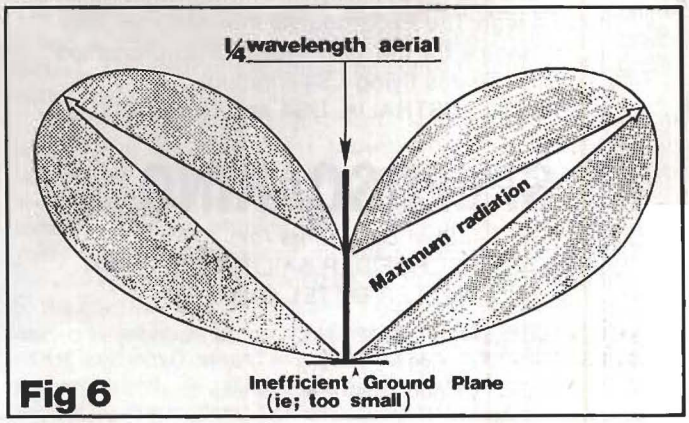
By angling the lower element through 90° we have lowered the radiation resistance (characteristic impedance) to approximately 50ohms. We shall need to use a coaxial feeder cable of similar characteristic impedance (50ohms) and adjust the transmitter power amplifier coupling circuit to match it. The ¼ wavelength aerial is adaptable for use both in the glider and on a motor vehicle. In a glider it will not normally be practical to use four ground plane radials of ¼ wavelength — shortening them will produce two effects:

1). The radiation resistance of the aerial will be altered and it may be necessary to adjust the length of the radiating element to obtain resonance. (In practice endeavour to maintain two of the ground plane radials at the full ¼ wavelength with the other two not shorter than 15cm each).

2). The aerial system will become directional because the ground plane has the effect of pulling the lobe of radiation down parallel with it. Thus, with a vertical aerial, an inefficient ground plane causes the maximum of the lobe of radiation to be tilted upwards (Fig 6).(This effect will be experienced in gliders fitted with ¼ wavelength aerials where the ground plane has been severely restricted in size and it is particularly noticeable when the glider is turning whilst the signals are transmitted or received at great distances.)

The ¼ wavelength aerial can be mounted either upright or inverted, but in the inverted position the aerial tends to be mounted lower in the glider and hence the ground range may be reduced when the glider has landed out and communication with the retrieve vehicle is attempted.





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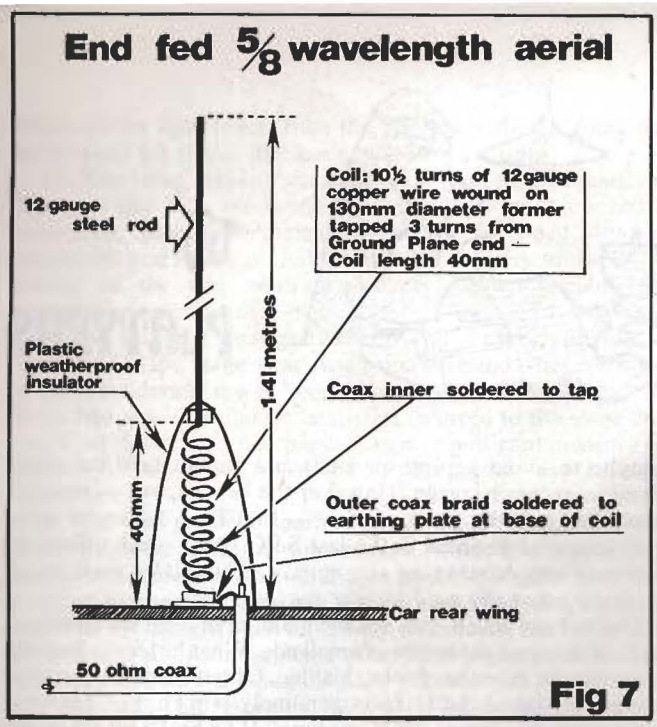
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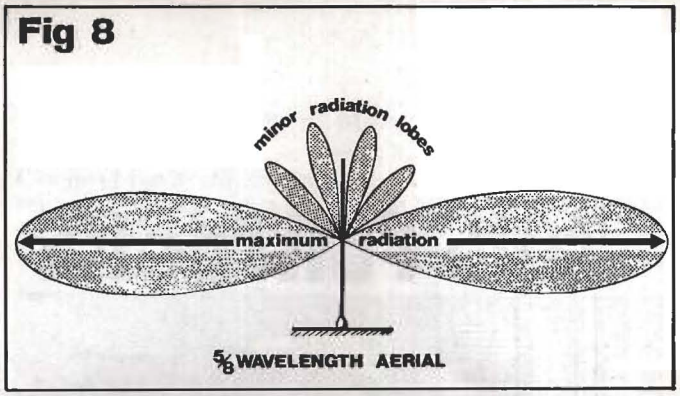
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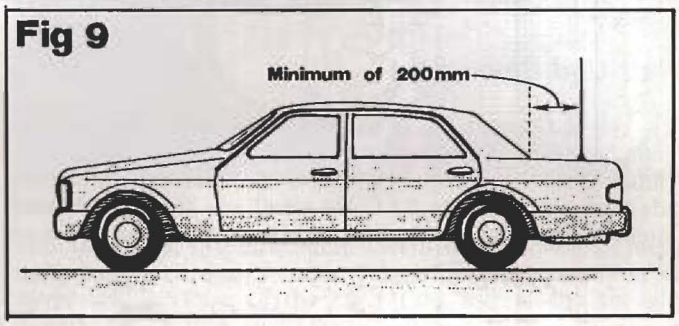
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Ground Station Aerials. Fixed stations operated from club premises should take advantage of a half wavelength dipole mounted on a suitable mast. Caravans and cars may more conveniently use ground plane aerials — a car roof presenting an ideal ground plane. However, aerial performance and aesthetics often seem to be in conflict and many users fit the ¼ wavelength aerial on the rear wing of their cars to avoid cutting holes in the car roof and/or smashing the aerial off on garage roofs. A ¼ wavelength aerial fitted to the wing of a car *will* exhibit *directivity* because the ground plane is not symmetrical about the base of the aerial, and whilst this effect may be unnoticeable for short range working, it will certainly become apparent for glider/car ranges greater than about 15 miles. One way of compensating for this effect and still keeping the aesthetics acceptable is to install an end fed 5/8 wavelength aerial on the wing of the car. These are often referred to as "high gain" aerials. They are high gain only with reference to a ¼ wave ground-plane aerial and although they also will exhibit some directivity, it is not so noticeable as with the standard ¼ wavelength aerial mounted in a similar position.

End Fed 5/8 Wavelength Ground Plane Aerial. This aerial has an electrical length of ¾ wavelength and can therefore be tuned to resonance. A matching transformer is required to accomplish the transfer of radio frequency power from the coaxial cable (50ohms impedance) to the radiating element (approximately 170ohms impedance) (Fig 7). This matching transformer also acts as a loading coil at the base of the aerial effectively shortening the physical length of the aerial to 5/8 wavelength. The radiation pattern from this type of aerial is shown in Fig 8. The main lobe is almost completely horizontal enabling maximum range to be obtained.

GENERAL RULES ON AERIAL INSTALLATION

Gliders.

1) Ensure that the aerial is mounted as far away as possible from vertical metallic objects (push rods, airframe etc).
2) Use 75ohm coaxial cable for homemade dipoles and 50ohm coaxial cable for ground plane aerials.
3) Lay the coaxial cable by the most direct route from the radio to the aerial. Do not allow any coils (complete turns) to develop in the cable (see 6 below).
4) Ensure that all coaxial cable connections are correctly made (soldered).
5) Do not run the coaxial cable next to the microphone cable because small radio frequency voltages induced on the coaxial cable by an imperfect aerial match can cause speech distortion (and even howl on the transmissions).
6) It is very important to ensure that the actual length of the coaxial cable between the radio equipment and the connection to the aerial is *not* an exact multiple of quarter wavelengths (*ie* 38.525cm*) or you may resonate both the aerial and the coaxial feeder and produce an undesirable aerial system.
   * A coaxial cable with solid dielectric effectively shortens the wavelength of radio frequency currents flowing within it by a factor of 0.67.
7) The dimensions for the aerial sizes as shown in the diagrams are approximate, factors affecting the aerial length are:
   a. The efficiency of the ground plane.
   b. The diameter length ratio of the aerial radiating elements.
   c. The method of connecting the coaxial cable to the aerial.
   d. The proximity of metallic objects to the aerial radiating elements.
   e. The conductive properties of the airframe structure near the aerial.

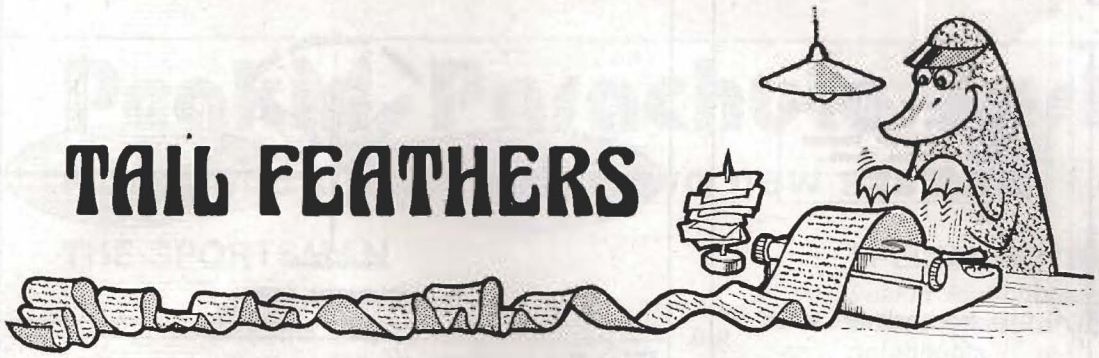
Cars.

8) Use a ground plane aerial for car installations (either 5/8 or 1/4 wavelength). Ideally mount it on the centre of the roof. Good magnetic based aerials of both types are available at a reasonable cost. If you install the aerial permanently on the front or rear wing of your car endeavour to mount it 20cm or more from the car roof pillars (Fig 9).

The only sure way to resonate an aerial is to use an instrument called a reflectometer (a directional radio frequency power meter). This instrument should be coupled between the transmitter and the coaxial cable.

When making aerial adjustments start with the aerial 2cm longer than the dimensions shown on the diagram, key the transmitter and note the radio frequency power passing between the transmitter and the aerial as indicated on the reflectometer. This instrument allows measurement of the power going forward to the aerial and the power being reflected from the aerial due to a miss-match (*ie* the aerial impedance not equal to the coaxial cable impedance). Trim the aerial length half a cm at a time until a minimum of power is reflected. The transmitter aerial coupling circuit may require adjustment for optimum power output. A ratio of *power forward* to *power reflected* should be better than 20:1 for a good match.

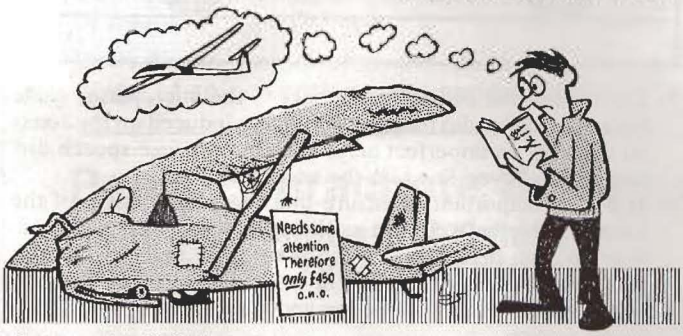
TAIL FEATHERS



by PLATYPUS

Hals Und Bein . . .

The astonishing success of *Exchange and Mart* which, as you know, consists of nothing but advertisements with no editorial cluttering up the pages, is a tribute to the fascination that small ads have for us all. In S&G the small ads always command attention even if one is not thinking of buying or selling. Like an



Chance of a lifetime

investor poring over the Stock Market reports one watches the value of one's glider move up and down — mainly down at present, I'm afraid. Writing small ads to sell big gliders is a skill which some people have and some have not. John Delafield is almost professional in this regard and should be hired to write other people's glider ads for two per cent of the gross. What? Oh all right, John, five per cent. It would still be worth it. People like John D make the glider seem like something from outer space, quite utterly special that you can't afford to pass up the chance of a lifetime. His work on the gliders is very good, but the copy is even better.

Some sellers fear that the mere fact that one is trying to sell a glider means there must be something wrong with it. They strive to reassure the potential buyer by citing some *force majeure* as an excuse. Marriage is frequently pleaded; alternatively we learn that the seller is emigrating to Australia



What happened at Kitzbühl?

(maybe to avoid getting married) and cannot take the glider along as excess baggage. However the best excuse — or worst depending on your point of view — that I have seen for some time appeared in an ad in the last S&G (p46) which offered to *undercut any Nimbus on the market. This glider must go. A broken leg has put paid to next season's flying.*

There, I am afraid, you see the hand, or at least the bandaged foot, of the amateur writer of small ads. What he leaves horribly uncertain is *how* he broke his leg (about which of course everyone here at S&G feels genuinely sorry). For heaven's sake where was the glider at the time? If he broke his leg skiing then for a few pennies more he could have made that clear. It might seem irrelevant and extravagant to go on at great length about what happened at Kitzbühl, but it might have reassured many people who would otherwise still hang on to their chequebooks. However we wonder about that rather vindictive note *this glider must go. And never darken my doorstep again,* he might have added. Does he blame the glider for his broken leg? Perhaps it fell on him while rigging, thinks the potential buyer. If he was underneath probably the glider is undamaged, thinks the potential buyer, and cheers up perceptibly. Perhaps, though, he kicked it in a rage after stopping five feet short of the



Excitement must have been electric

finishing line. The mind runs riot. Hypotheses burgeon. Oh dear, oh dear.

The first golden rule of hardsell copywriting is don't mention broken legs and gliders in the same paragraph. The second rule is don't be afraid of long and fulsome praise for the product. The third is eliminate the negative and accentuate the positive: don't say why you must sell, tell them why they've just got to buy.

As Dr Johnson said "Promise, large promise is the soul of an advertisement." Broken leg, my foot.

Lies, Damn Lies and Cross-country Mileage

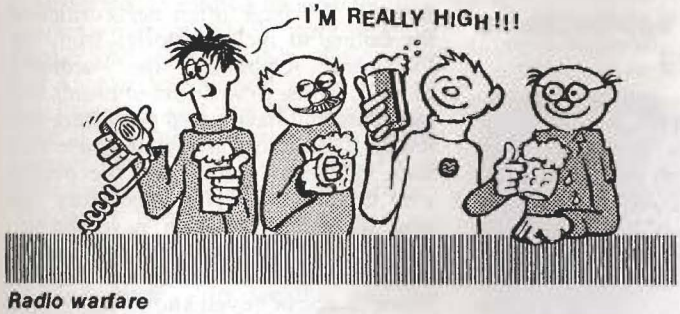
Naturally the first thing you did on picking up the last S&G was to read through the 1980 Annual Statistics (p30) of the gliding clubs. Well, maybe you read Platypus first, then the

small ads for light relief, then the Annual Statistics for a real meaty feast for those little grey cells to chew on.

The first thing that is clear about that riveting gallimaufry of figures is that they are in many cases not so much cooked as marinated, parboiled, blanched, sautéd, fricaséed, braised, casseroled and finally potted in aspic for delivery to the BGA, having on the way contracted every known bacillus that numerical data can suffer from.

In one case the manager and CFI of a club both sent in statistics for the same year (each unaware that the other was nobly shouldering the tedious burden) and the only way the BGA had any idea that the statistics referred to the same club was from the headed notepaper. On no significant measure (or *meaningful parameter* to use the current jargon) was there any resemblance.

In 1980 the greatest soaring centre of all shows a cross-country mileage, or rather kilometrage, which is of a pleasingly aesthetic roundness. So round it is positively spherical. Two hundred thousand kilometres; neither one kilometre more nor less. The excitement must have been electric as, late in October no doubt, Wally Kahn or some other stalwart crept in over the fence to clock up the exact distance necessary to hit the magic five noughts. The returning pilot must have had an exciting moment or two as he threaded his way through the shower of



Radio warfare

hats that the crowd flung hysterically into the air to celebrate that historic moment.

But what of Booker, home of the racing 15s? Yes indeed, Thames Valley are listed, and have an important message for us: "*As Wycombe*" it reads. Impatiently we scan even further down the list to Wycombe (Airways) *No Statistics received.* Oh.

The London Gliding Club, as ever, steers a neat middle course between giving dubious figures and giving no figures at all. They did a vast number of hours, over 15 000, but not one glider left the site. Cross-country kilometres: nil, zero, zilch, nought, nary a one. All those noises you imagine you hear on the radio from John Jeffries as he ferries his helpless ducklings in primitive steel tube, wood and fabric gliders from Wales to Yorkshire to Norfolk and back — it's all radio warfare and propaganda. The figures cannot lie. They never left the circuit once.

If I were a statistical CFI I would ground some of these jokers straight off. The trouble is, they hate gathering statistics and would love to be free of it. It's not much good threatening to ground someone when they're on a treadmill. But cross-country mileage figures are important, particularly in our struggle to get and keep airspace. Is it all that hard to get figures? Most pilots like people to know what they've done, and write their figures up in the cross-country book in the bar or enter them for the National Ladder, so the figures should be readily available.

"*Thanks for the lecture Platypus; now do you mind if I look at your logbook for 1980?*"

"*Oh well, er, yes, JJ Sir, I haven't exactly got around to filling it in just yet (blush, stammer, grovel, crawl, prevaricate) er, what'll you have to drink?*"

That splendid body of Men

I've just been asked, by someone who should know better, to become tasksetter for a little comp this season. Naturally I accepted. But how did they guess that I had sadistic tendencies? (Maybe they just read your column. ED.) I have always



Leaden grey

said, of course, that tasksetters were a splendid body of men, sadly maligned, misunderstood and underappreciated. (You've never said anything of the kind! ED.) I've always thought it, particularly since That Day.

It was in a Nationals not long ago; a triangle not much short of 300km had been set and no sooner had the taskboard gone up than the blue skies turned leaden grey, with a solid base of 1800ft, and stayed that way for several hours. In no time at all a shopstewards' committee claiming to represent all fully-paid-up contestants was convened and was in continuous session all morning and right through the lunch hour. Fraternal delegates drafted manifestoes. Bunched fists were silhouetted against the unrelenting heavens as little knots of malcontents pledged solidarity against The Management. Chief amongst these agitators was someone I will only describe as the Grand Old Moan of British Gliding (watch it, the libel kitty's running low. ED.) who suggested — nay, demanded — that we should all sit on the ground and refuse to take-off till The Management made a better offer such as 1) Smaller Task or 2) Immediate Scrub and General Retirement to the Bar — the latter Composite Resolution carrying the block vote by a landslide.

Management, however, was not merely stubborn, it was diabolically intransigent. Near-mutinous pilots were straitjacketed whingeing into their cockpits and towed bellyaching into the grey flatness that still stretched from horizon to horizon. There seemed no option but to glide it out from release and maybe flop down ten miles or so down track. Mutter, gripe, whine etc etc. At around eight miles from base, however, the universal grousing quietened down as varios began to speak up — a much happier noise. To cut a long story short, it was a pretty good day by British standards.

Natural modesty prevents me from saying who got back first and took the Daily Prize. All I will say is that since then tasksetters have been pretty OK by me and can do no wrong. You have been warned.



Natural modesty

S&G checked the facts about the Nimbus and the broken leg. The leg was indeed broken skiing and the glider is quite OK.

GIVING UP GRACEFULLY

An extract from an article by MARTIN SIMONS who looks back over his ten-year stint as Editor of *Australian Gliding* before handing over to Allan Ash

Probably everyone has heard the story of the patient in a mental hospital who was banging his head against the wall and who, when asked why he did it, said it was because it felt so nice when he stopped. That's how I feel right now. There will be some regrets later, but they haven't registered yet

There are many rewards for the editor of a magazine like *Australian Gliding*. There is always some satisfaction in seeing the magazine completed, printed and new, after one has been working on it for six or eight weeks past. This feeling is usually offset to some extent by the discovery of errors or misjudgments that seem almost inevitable whatever one's efforts may have been to eliminate them. It is even more pleasing to hear the magazine being quoted in the club bar, or to see it being read. It is flattering, too, to discover, as occasionally does happen, an article reprinted in some other magazine, with acknowledgements to AG.

The title "editor" is a great icebreaker too. One can, for example, go boldly up to anyone and seek information for the sake of one's readers. The shyness or diffidence that normally tends to restrain the less-expert or inexperienced pilot from tackling the great Champion, simply has to be set aside. As myself, I doubt if I should ever have dared to speak directly to such men as George Moffat, Jan Wroblewski and Helmut Reichmann or a score of others whose names are no less well-known and for whom one still feels a good deal of awe. As Editor of AG, I have approached them all and never once have I been brushed off or turned away without a worthwhile story to write afterwards. I can reckon many people as friends now, friends I should never have made but for the magazine.

Gliding people approachable and worth having

In retrospect, however, I doubt if the courage-boosting title was ever truly necessary. Nearly everyone one meets in the gliding world, turns out to be inherently friendly, approachable and worth knowing. Those who achieve great success in the sport do not lose these qualities. Now that I can use the protective PRESS camouflage no longer, I shall not hesitate to quiz the next twenty Champions as I have interrogated the last dozen or so. I don't believe they will respond any differently for I have found almost all of them very willing to talk, to teach and to advise.

Being editor of a magazine brings many other compensations. One does become, on the whole, fairly well informed about what is going on in the gliding movement. The grapevine, however, is not what it was. When the gliding movement was smaller, the magazine editor could expect to hear within hours of almost everything. Nowadays this is not happening to anything like the same extent.

The readers have to write their own magazine and it will include mainly what they want it to include. Much good material does come in, but more is needed. We have often been criticised for failing to include stories from the "ordinary" clubs and the "ordinary pilots", failing to write about events and incidents that have taken place here and there. It is almost always the case that such criticisms come from the people who could have written the story but who, for whatever reason, never did so.

Nor is it possible for the editor, single-handed, to "chase up" stories when he doesn't even know that there is a story worth chasing. If a story does arrive, it is relatively easy to tidy up the grammar or the style, so no one should hesitate to contribute on the grounds of a supposed inability to write. Just tell a plain tale plainly.

(We couldn't agree more with these sentiments and wish more of our readers would contribute to S&G. ED)

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THE BRITISH TEAM TRAINING SCHEME — Progress and Future

JOHN WILLIAMSON, National Coach

Early in 1979 George Lee introduced to the gliding public the Training Scheme for ambitious young pilots who felt they might earn a place one day in the British Team. (See S & G, February 1979, p5.) Soon after that George was posted to Germany and asked me to take over the job of arranging the training. I would like to summarise what has happened since then, and to prompt eligible young pilots to make their bid this season for a place in 1982.

The Potential There

Last year 15 pilots attended the five courses, four of which were held at Booker and one at Lasham, during July and August. Anyone who cares to recall the 1980 July will not be surprised to learn that weather marred three of the courses but at least the potential was there even if the flying was a bit sparse. The other two courses, held concurrently with but separate from the Booker Regionals and Lasham Nationals, enjoyed much better weather and the considerable boost of involvement in and around a major contest. The latter factor has prompted the decision to hold *three* of the 1981 courses alongside contests at, respectively, Greenham Common, Booker and Lasham.

The 1980 results included a 500km and two 300km triangles and high placings by young pilots flying competitively (but *hors concours*) against opposition from the very top of the tree. It was all very enjoyable and valuable for the participants, and **not very expensive**! The cherry in this particular cake is the financial involvement and support of the Sports Council who are providing a substantial subsidy to meet a goodly proportion of the basic expenses.

The bones of the scheme are as George outlined them in 1979 but the substance has changed a little. It has been found possible to start a four year "cycle" every year, and to accelerate two of last year's pilots straight into a sponsored Nationals entry. So in 1981, for the first time, we have all four "years" of a complete cycle:

1) Young club pilots competing by the results of their own flying for a place on the 1982 basic courses.
2) Fifteen pilots selected from last year's club flying to attend the five three-man courses
3) Five pilots promoted into a sponsored Regionals entry, with advisory coaching as required.
4) Two pilots, sponsored but uncoached, in the Nationals.

Pilots for 2,3&4 above were selected in the autumn. New aspirants to the scheme should make note of what they need to do in 1981 to win a place next year. To reiterate George Lee's criteria:

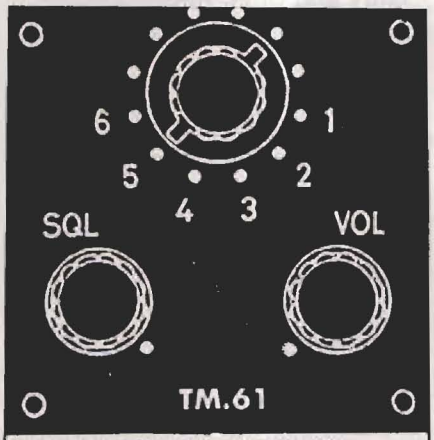
A) Progression from Bronze to Silver badges should have been achieved within a 12 month period. Circumstances do vary, however, and individual cases will be considered if it took somewhat longer.

B) The completion of two triangles of at least 100km within the two years before the application. The two flights must be supported by proper documentary evidence from an Official Observer. The selection committee will review all flights in relation to the glider type and the weather experienced.

C) Ideally pilots will be 25 years or under at entry to the scheme, but consideration will be given to those up to 30 years of age.

The criteria are designed to reflect a candidate's determination, competitiveness and ability to organise himself — qualities required of a contest pilot who aspires to the top places. Application forms are available from the BGA.

By the way. Who will be the first *girl* in the scheme?



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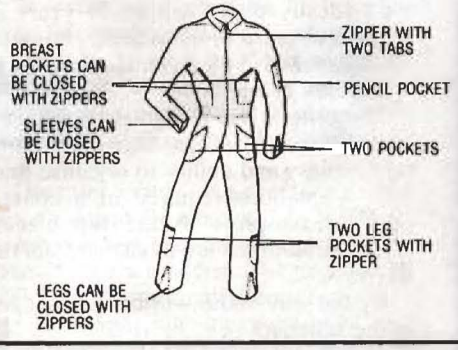
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HOW NOT TO GET GOLD HEIGHT

MIKE BOND was drinking coffee at Dishforth when a weak wave system was reported to be forming over Ripon. With a pilot soon at 11 000ft the hangar was emptied and Mike considered himself lucky to be offered the club K-6 while his friend Steve flew his own Skylark 2.

I frantically picked the brains of the more experienced wave pilots, but had to be content with the advice "Wait until the tug pilot waves you off". Soon I was airborne and the wave systems were abundant and well defined. Steve had been towed to the south west and to my dismay my tug pilot was heading toward the north west. At 3500ft my fears were allayed as the vario needle wound up to display 6kt, and the tow became deadly smooth. A green gloved hand appeared out of the Chipmunk cockpit and pointed to the north. My tug pilot knew his stuff and I released. Four knots steady caused me to dive and make a low point on the barograph indicating 3200ft on the altimeter.

I worked the tertiary bar to 6000ft and rapidly rounded the secondary which took me to 9000ft. I pressed on to the primary — an enormous white cigar a thousand or so feet deep and some two miles long. Placing the K-6 forward of the cloud and facing due west I eased the control column back and cruised at 38kt, keeping a hundred or so yards away from the leading edge.

At 11 000ft the wind must have decreased momentarily, for one moment I was flying in clear blue air — the next plunged into snow whiteness as the cloud catapulted forward engulfing me. Cursing my lack of concentration I flicked on the turn and slip indicator. Panic. The batteries were either flat or non-existent. I was aware of the most disconcerting feeling of being upside down and although the ASI needle displayed 42kt the needle was quivering, indicative of a spin — but to which way? Thoroughly confused I whipped open the airbrakes and sat the spin out until I emerged from the base of the cloud feeling rather sheepish. Pressing on to the leading edge of the cloud again I rapidly began to climb — this time with a little more concentration. At 12 000ft the lift began to fade and by 12 500ft was reduced to nil sink.

I scoured the skies around the lenticular but to no avail. It appeared that I was doomed to fail by less than 800ft. I elected to try the system to the south in a last ditch effort to attain Gold height, for I had now been airborne for an hour and felt that I ought to give someone else a chance.

Airfield Lost and No Maps

Traversing the systems at 80kt proved expensive to the tune of 4000ft, and to my dismay I rapidly realised that the latter system was the better of the two. Turning east, and thoroughly defeated I scoured the terrain in search of the airfield. It was not to be found for in my excitement I had neglected to make notes of my position. Was that Ripon to the north, or could it be Harrogate? More dismay as my groping fingers confirmed the fact that there were no maps on board. There was still 6000ft between me and a red face and I continued due east until I thankfully reached the A1. Looking to the north I located the airfield and set course for home.

To my surprise Steve was there to greet me with an enormous grin on his fat face and I knew instantly that congratulations would be in order. "How high did you get?" he inquired "Shut up" I retorted, and agreed to the cup of coffee he offered. He had been to 14 500ft, well over Gold height — and his barograph trace showed that he had done it twice! As I numbly listened to his account of "how I done it" the rain spots began to appear on the bus windows. Within minutes a downpour was in progress and everyone got soaked retrieving the twenty or so gliders landing simultaneously; the day was finished.

At the time I was convinced that there was no way of obtaining Gold height, but as we sped home it occurred to me that there was a way. I knew the system was working to 12 500ft and had I had the presence of mind to descend to 2500ft and begin again Gold would have been well and truly in the bag. Of course there is one flaw in this theory; descending so low could have made the climb back impossible due to my not being able to contact the wave again. However, as it turned out I failed to achieve Gold height and had nothing to lose.

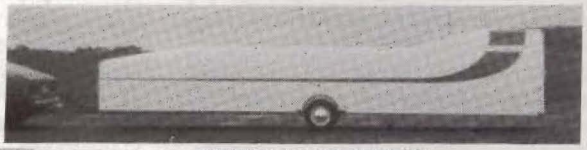
The chances of another such flight are rare and I curse my lack of enterprise when the occasion arose. Still, it is always easier to criticise in retrospect I suppose and whether I attained Gold or not, the pleasure of that flight will remain with me for a long time. After all isn't that what gliding is all about?

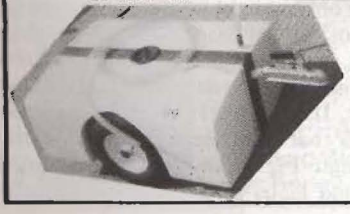
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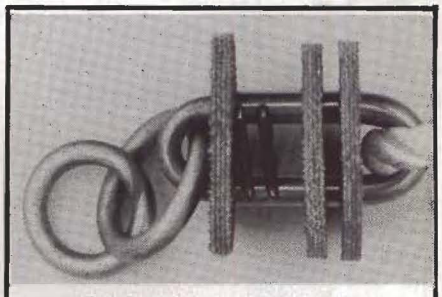


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DIAMOND DAYS – an empirical approach to their prediction

JULIAN WEST *

In any year there are only a few days on which it is possible to achieve a Diamond distance or a Diamond height. Even the easier Diamond goal is usually only accomplished on a Diamond distance day. Clearly any pilot who aspires to win all three Diamonds would have a distinct advantage if these days could be predicted in a relatively simple manner.

An analysis of the Met Office daily weather reports relating to such days over the last five years, together with those relating to current records, reveals that the majority of them have a distinctive pattern — one for the distance and one for the height. All that is necessary after realising this is to wait patiently for the appropriate pattern to occur and then hopefully the flight will be a mere formality. If one is not successful at first then it is possible to fly, fly and fly again, gaining valuable experience each time.



Julian is a patent examiner and flies a syndicate Mosquito from Lasham.

The Distance

Two thirds of Diamond distance days follow a single classic pattern. The day before there is a generally northerly (NW, N or NE) flow or air across the country which is preceded by a cold front. On the day itself a ridge or anticyclone covers the flight area and the wind is relatively light. The pressure usually lies in the range between 1020 and 1028mb. Often the wind on the day has a northerly component, but if it is light (<10kt) it can be from *any* direction. All this can be seen at a glance from the forecast chart for the day and from the actual chart for the preceding day.

Examples of this are given in Fig 1 and 2 which show pairs of mid-day charts relating to two 500km days at Lasham in 1980. The northerly flow of the preceding day is indicated by the bold arrows which also represent the "previous air trajectory" referred to in Tom Bradbury's excellent article, "A good soaring guide", S&G August 1978, p155.

As would be expected 500km days occur at the optimum weather conditions discussed in that article. If the points system he suggests is used, then the classic 500km days normally score the maximum of ten.

One advantage of using weather charts is that problems like fronts can be anticipated and the task tailored to take them into account. All the 750km days that I am aware of were the classic type described above. The really good days often come after several days of unsoarable weather and only rarely are they followed by another good day.

What about the other one-third of 500km days? Well these are not so obvious and generally the northerly airflow of the previous day is less marked and is not preceded by a cold front. They also include relatively rare phenomena such as instability *ahead* of a cold front. It pays to have an open mind about this possibility. On the days I have described all flights were of the closed circuit type. For downwind straight goal flights the preceding day may be suitable.

The Height

Almost all Diamond height days follow a single classic pattern. Good wave occurs in a broad transition region between high and low pressure systems downwind of a straight line joining their centres. The wind usually has a westerly component and good wave only rarely occurs when the wind had an easterly component, and then it is a south-easterly.

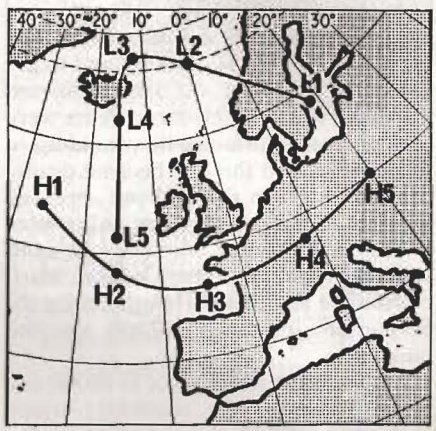


Fig 3

In Fig 3 the ranges of possible positions for the centres of the lows and highs are broadly indicated by the lines L and H respectively. Points on these lines having the same subscript are associated. In practice the centres only need to lie within 150 miles or so of these lines to give Diamond wave.

In the majority of cases H_2L_2, H_3L_3, H_4L_4 the low is centred near the Arctic Circle well to the north of Scotland and the high is centred to the south of England. However their positions can be anywhere between the two extremes L_1H_1, L_5H_5 shown which produce winds having only a slight westerly component. The position of H_5 is less critical than that of the other points and it can lie 600 miles north or south of the position shown. It is when H_5 is centred in Scandinavia that south-easterly wave occurs. Although Fig 3 shows the associated lows and highs progressing sequentially

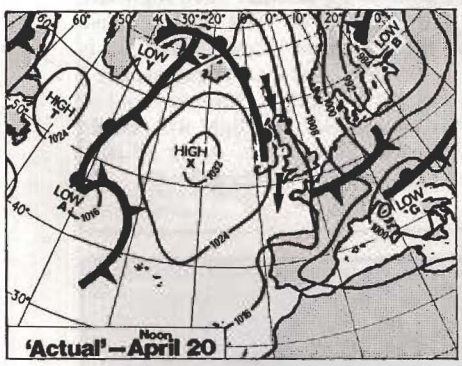
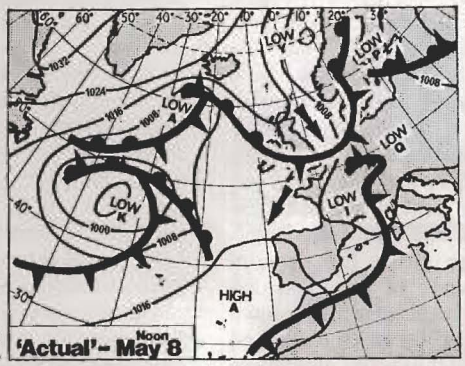




Fig 1 ←

Fig 2 →





along the curves, other combinations such as H2L3, H4L3, H3L4 etc are equally valid.

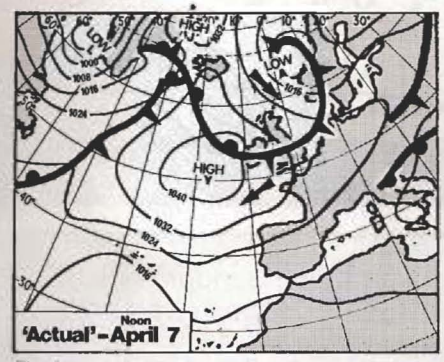


Fig 4

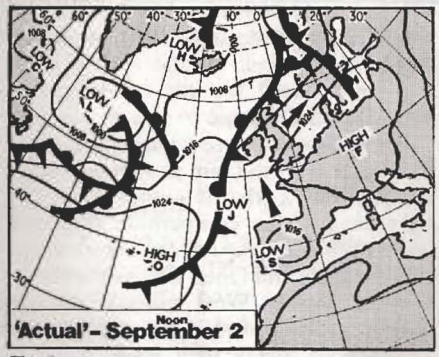


Fig 5

It should be noted that the curves show the positions and not the trajectories of the lows and highs. If the trajectories do follow these curves then a series of Diamond wave days can occur. This contrasts with distance days which almost invariably occur as a one-off. Wave can occur in both warm and cold sectors. Examples of classic wave weather patterns are given in Figs 4 and 5 which show the actual mid-day charts relating to two Diamond height days in 1980.

Referring again to Fig 1 it can be seen that April 20 also should have been suitable for Diamond wave and so it was. It ought to be possible to park a glider at one's favourite wave site, wait for suitable weather patterns to be forecast and then turn up on the days when the wave is working well. On days when wave is particularly extensive it may even be possible to make a Diamond distance flight.

Air Masses

A partial explanation of the above may be found in the concept of air mass. The weather is determined, *inter alia*, by the type of air mass present. Now air masses are characterised by their origins. Those which originate from sea areas are called Maritime (m) and those from land areas are called Continental (c). These two types are further subdivided according to whether they originate from southerly, Tropical (t), latitudes or northerly, Polar (p), latitudes. Thus there are essentially four types of air mass that affect the British Isles, Continental Polar (cP), Continental Tropical (cT), Maritime Tropical (mT) and Maritime Polar (mP) and these usually approach Britain from the NE, SE, SW and NW respectively.

Polar air (mP, cP) is most suitable for the production of thermals and Maritime air (mT, mP) is most suitable for the production of wave. This explains why the best thermal conditions occur when there is a generally northerly air flow and wave occurs when there is a generally westerly air flow. North-westerlies (mP air) are suitable for both thermals and wave, and can lead to an association between Diamond distance and height days, as occurs in Fig 1. How then can south-easterly wave occur? In this case Continental (cP) air becomes modified during its passage over the North Sea thereby acquiring the necessary Maritime (mP) characteristics.

The trajectories of the principal air masses affecting the British Isles are shown in Fig 6. Here the P and cP air masses that come direct from the icefields of the North Pole have been called Arctic (A). This mA and cA air is very cold and can give rise to exceptionally good thermals.



Fig 6

Weather Chart Sources

One advantage of using the empirical approach outlined is that it is possible to tell when a favourable situation is developing from the weather maps published in the quality newspapers. Only one, the *Daily Telegraph*, publishes the previous day's chart along with the forecast for the day. So this is the best one to get for distance attempts. However *The Times* and *The Guardian* publish forecast charts covering a larger area and these are best for height attempts. The London and Glasgow Weather Centres and facsimile chart recorders can give 24, 48, 72, 96 and 120 hour forecast charts, but their accuracy decreases markedly as the range increases. As forecast charts are no longer shown regularly on BBC TV their weather reports are not as useful as they used to be.

Summary

The majority of Diamond distance and Diamond height days are predictable from readily obtainable weather charts because of the classic patterns which they exhibit. These patterns occur only a few times a year. Of course not all days having one of these classic patterns are necessarily up to Diamond standard, but it should be worth the cost of an aerotow to check them out.



OXYGEN EQUIPMENT

The Air Apparatus & Valve A.I.R. 24 series oxygen equipment for gliders, comprising a control head and 680-litre oxygen cylinder, is now available for self installation. With all the in-flight oxygen controls situated in the one position, this control head has been developed from the Company's highly successful Domiciliary oxygen unit to Drug Tariff Specification 01B.

The 680-litre cylinder is of British manufacture in aluminium to H.O.A.L. 4 specification and is supplied valved and charged to 2000 p.s.i.

The company also supplies portable oxygen equipment based on 230- and 680-litre cylinders, and face masks complete with valves and economiser bags.

In the unlikely event of servicing being required, the company operates a 24-hour turn-'round postal system.

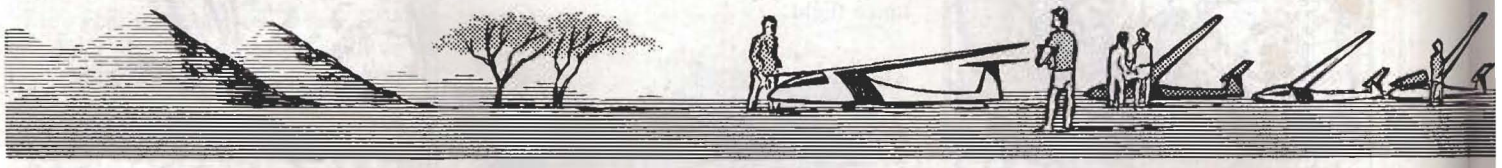
The company now offer an alternative aluminium cylinder of 680-litre capacity.



AIR APPARATUS & VALVE LTD
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South African Nationals 1981

by BRIAN SPRECKLEY



BRIAN, second in the 15 Metre Class flying a modified Ventus, describes what it was like competing in these Nationals, at Vryburg from December 16-31.

In Britain we are used to nine-day competitions, consider ourselves lucky if we get six contest days and very lucky if they include two or three race days. We are expert in the art of hanging around waiting for the weather to do something or stop doing something, depending on the circumstances. The trick is to maintain one's edge throughout the long periods with no flying, or to fly normally when launched after a five-hour wait in which you felt sure they would scrub. If you are tired of, or frustrated by, these sort of contests, or you are preparing for a 14-day World Championships, then you must take your Christmas in Vryburg and participate in what must be one of the finest gliding contests in the world.

Fourteen Contest Days

At the first briefing the organisers said "There will be 14 competition days with Christmas Day as a rest day." We had 14 contest days and the only day not suitable was Christmas Day. It was the third year that this has happened. There were a significant number of outlandings on only two days, the first being Day 2 when the wind increased beyond the forecast speed and turned what was already a difficult blue day into an impossible one. The result was only one finished the 512km triangle in the Open Class with most pilots landing on the last leg.

The second mass landout was on Day 10 when a line of storms sat across the last leg creating a 40 mile dead area. Most of the pilots arriving early enough were able to penetrate the line and land within 20 miles of Vryburg, but the late arrivals had to descend from 11-12 000ft to land as the storms developed into an inpenetrable barrier. The times of landing would have indicated speeds of 130km/h plus had it not been for the dead areas behind the storms.

The Race Days

The other 12 competitions days produced some fantastic flying. A total of 5881km were set with the speeds achieved ranging from 130km/h in the Standard Class to 146km/h in the 15 Metre Class and a staggering 152km/h in the Open Class.

The average speed of the day winners in the 15 Metre Class was 119.3km/h. My personal average over 12 tasks was 111.73km/h which is much faster than any single flight I've ever made in the UK. The worst days were rather like very good English days with a slightly higher cloudbase; on those "poor days" speeds were down around the 100km/h mark. Typically cloudbase would rise to 10 000 or 11 000ft asl (Vryburg is 4000ft asl) with thermals narrow and broken, the better ones giving an average climb of 4kt with the occasional thermal averaging 6kt. The wind was mostly 20-25kt at flying altitudes. One minute you would be in blue thermals, the next trying to skirt an enormous cu-nim. The cu-nims posed a special problem as they were associated with massive areas of strong lift and sink. Needless to say the sink was always the easiest to find. The tops of the cu-nim, blown off by the strong upperwinds, formed patches of cirrus which could extend for 50 to 100 miles downwind and be 20 or more miles wide. To compound these problems the rain and hail was horrific, the lightning spectacular and the whole conglomeration travelled in any direction that took its fancy.

No Inversion

These poor days were mostly caused by a moist airmass linked with lower pressure in the upper levels, thus no lid or inversion, and these problems were often compounded by wet ground from the previous day's storms. The air temperatures necessary to create well formed thermals were very critical and in the areas where the ground was wet the sun's energy was soaked up in evaporation, making a very noticeable difference to the thermals — something we rarely need to worry about in the UK as the ground is nearly always wet. Flying on these days was extremely interesting and one could experience a whole range of soaring conditions in one flight.

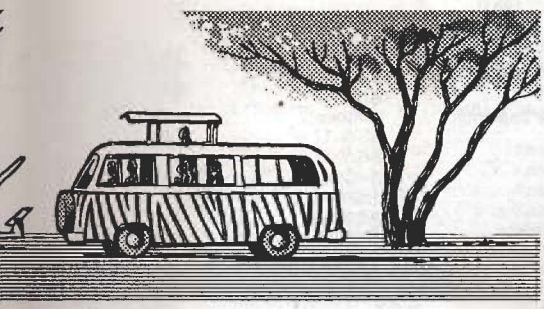
The Good Days

We only saw three really good days; the locals refer to them as **Ammervetter* (at least that's what it sounds like). The best days of the competition they said were *Kleine Ammervetter*. The first saw the 15 Metre and Open Class on a 350km O/R to Barkly West railway junction with a forecast of two octas cumulus at 12 000ft asl and a light wind. Laurens Goudriaan advised me that it was a 2½hr flight and the best start time should be between 1300 and 1400hrs with the emphasis on a good start. After a climb averaging 4m/sec to 14 000ft at 1330hrs, I decided it must be time to go. I was most fortunate to start in the company of three Open ships including Klaas Goudriaan (ASW-17) and Mike Carlton (ASW-17), who was flying exceptionally well and leading the Open Class.

As the weather was still blue I was glad of the company and received my first lesson in how to fly in good blue conditions. The technique was to fly straight down the track at 100 to 110kt until you hit a thermal giving an average of 4m/sec or more. As soon as the lift dropped off, usually between 12-14 000ft, you flew at 100km straight down track until you hit another one. The thermals having narrow cores required quick centring and a high degree of concentration in the climb, otherwise you fell out of the bottom of the thermal and were left behind. The sight of four or five white gliders dolphining along at 12 000ft in gin clear skies, with the African bush as a backdrop, was quite intoxicating and amongst the most spectacular I have ever seen in gliding.

Clouds appeared just before the turn and the gaggle split as each pilot chose slightly different routes. The next glider

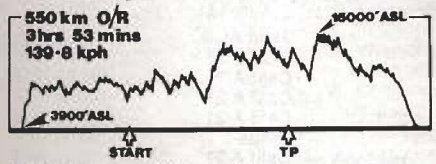
**Hammerwetter*



I saw was Graham Anderson's Kestrel on the return home a few miles north of the Vaal river and it appeared to be spiralling upwards. I joined Graham's thermal and we climbed with the varios stuck on their stops to 15 000ft. This climb took me home with a final glide of 40 miles at 130kt. My time was 2.28min for 344km, a speed of 140.8km/h, so Laurens was right. At first I couldn't believe it. It felt wrong to have gone so fast but even more was in store for the next day.

Excellent Start

Day 8, a 550km O/R to Belmont, a well trodden route. The forecast was the same as yesterday but with good clouds and Laurens suggested a start time of around 1300hrs. The leg out was excellent with two-thirds of the route showing cumulus. On the return leg thermals averaged 4m/sec to 14 000ft asl and at about 20km from the turn I climbed to 16 000ft in a steady 5m/sec. Picking up a number of small streets I flew for 150km, cruising between pull ups at 110kt, and found myself still at 15 000ft. Unfortunately a dying storm lay on track and I lost a little time making a detour. As I finished the flight the stop watch showed 3hrs 56min for 550km. I thought the speed of 139.7km/h was fantastic but it was only worth a mediocre third place with Laurens Goudriaan at 146.5km/h and Bobby Clifford at 145.7km/h making incredible speeds in their ASW-20s.



Brian's barograph trace on Day 8

The show this day was stolen by Mike Carlton with a superb speed of 152.8km/h, a British National record and Mike's second of the week. We were unfortunately to see only one other fantastic day — the last contest day. Although the thermals were averaging 5m/sec with a cloudbase of 18 000ft, speeds were not as high as on the other two days due to a very strong wind. The 15 Metre Class winner achieved 129.6km/h and the Open Class 142.9km/h. It was however the fastest day in the Standard Class with Maurice Otto (Std Cirrus) winning at 132.9km/h around a 306km triangle.

Lessons Learnt

Flying in these conditions is quite different from anything one may normally experience in Europe and I am indebted to Bernard Fitchett for priming me with some good advice before we started.

During my first flight I thought the prospects of a successful outlanding looked a little bleak but one soon got used to landing areas sometimes being ten miles apart. It was fortunate for me that we didn't fly over moon country until the last day, because for 150km there were very few places one could even have a respectable crash. Normally tasks are only flown over these areas when the cloudbase is over 14 000ft. My first major problem was the visibility — it is so good and there are so few features, distances become very deceptive. The result of being able to see Vryburg from 50 miles away on the first day was a long final glide and even with two top-ups I had a heart rate of 140 for the last mile or two. There is absolutely nowhere to land for at least the last five miles. The superb visibility contributed to the problem of cloud reading which was a major difficulty in the early days. With cloudbases so high and visibility so good, it was very easy to strike off for a good cloud, leaving your thermal at 10 000ft to find it had either started to decay by the time you got there or you were too low for it to be of any use.

One soon got into the habit of ignoring good clouds unless they were nearly overhead and you were high, otherwise they were always too far away to be of much use. One was supposed to use dust devils as good thermal indicators but I soon learnt why they called them devils. If you got low the only ones visible were always too far away and if you were able to run to one it invariably disappeared as you got closer. However it was a dust devil that gave me my best climb through a steady 5m/sec for 9000ft with the cloud forming about half way through the climb.

Rough Lift

The thermals themselves were rather irregular and it was quite common to join below other gliders who were climbing well only to find very rough and broken lift. Navigating was not a problem after the first few days as most tasks were set along roads and railway lines; as there are so few other features it was purely a task of assessing your distance from the next town, river etc. On the 13th contest day the task was a 300km triangle using railway stations and from 10 000ft above Vryburg I could see both the turning points.

As practice for the World Championships the contest was invaluable. The experience of flying in such superb conditions in itself would have made the trip worthwhile, but the real value was flying for 14 contest days. The problems of stamina and pacing oneself both mentally and physically is something we cannot simulate in British competitions.

The Locals

A more hospitable group of people one couldn't wish to fly with. When Mike broke the fuselage of his ASW-17 in two, it was repaired overnight by other pilots and crews led by Jan Coetzee. They worked all night, enabling him to continue in the competition and go on to win the Open Class.

On behalf of Mike, Bernie and myself I would like to thank all those in South Africa who made our stay so memorable. It was a truly international competition with competitors from Germany, France, Switzerland, Belgium, Zimbabwe as well as Britain. The atmosphere was relaxed and friendly with the social functions providing well earned entertainment. I am indebted to Tim Biggs for lots of help, advice and the loan of his superb Ventus B. It went beautifully and I hope to write about it in a future issue.

Mike Carlton First

The British contingent put up a good showing with Mike Carlton winning after ten days sweating it out in first place with the second position changing regularly and always close on his heels. It was an excellent performance and will make the British Team look to their laurels with a Manager who can fly like that. Bernie was close behind me in the 15 Metre Class, coming fourth, both of us having one slow day which costs you a lot of points with the South African scoring system. Peter Marshall and Peter Wilde (Boris) ran the towing and scoring and acted as clergy in the Christmas passion play that Mike produced on Christmas Eve, complete with carols, sermon and traditional blessings.

It was an altogether fantastic competition. I would recommend flying in South Africa to all frustrated glider pilots who would like a week or two of real gliding.

Final results: Open Class, 1 Mike Carlton (ASW-17) 12 542pts; 2 Klaas Goudriaan (ASW-17) 12 294pts; 3 Brian Van Niekerk (ASW-17) 11 968pts. 15 Metre Class, 1 Laurens Goudriaan (ASW-20) 12 820pts; 2 Brian Spreckley (Ventus) 12 336pts; 3 Bobby Clifford (ASW-20) 12 200pts; 4 Bernard Fitchett (Vega) 11 886pts. Standard Class, 1 Maurice Otto (Std Cirrus) 11 155pts; 2 Francios de Klark (Astir) 8481pts; 3 Peter Ashman (Elfe) 7928pts.

INTERNATIONAL GLIDING RECORDS (Correct as at 2.3.1981)

SINGLE-SEATERS

Height Gain	12 894m	P. F. Bikle, USA	SGS 1-23E	25.2.1961
Absolute Altitude	14 102m	P. F. Bikle, USA	SGS 1-23E	25.2.1961
Straight Distance	1460.8km	H-W. Grosse, W. Germany	ASW-12	25.4.1972
Goal Distance	1254.26km	B. L. Drake, D. N. Speight, S. H. Georgeson, New Zealand	Nimbus 2	14.1.1978
Goal & Return Distance	1634.7km	K. H. Striedieck, USA	ASW-17	9.5.1977
Triangular Distance*	1306km	H-W. Grosse, W. Germany (in Australia)	ASW-17	4.1.1981
100km Triangle	165.35km/h	K. Briegleb, USA	Kestrel 17	18.7.1974
300km Triangle*	158km/h	H-W. Grosse, W. Germany (in Australia)	ASW-17	24.12.1980
500km Triangle	151.28km/h	G. Eckle, W. Germany (in South Africa)	ASW-17	10.12.1979
750km Triangle	141.13km/h	G. Eckle, W. Germany (in South Africa)	Nimbus 2	7.1.1978
1000km Triangle	145.32km/h	H-W. Grosse, W. Germany (in Australia)	ASW-17	3.1.1979
1250km Triangle*	133.24km/h	H-W. Grosse, W. Germany (in Australia)	ASW-17	9.12.1980

MULTI-SEATERS

Height Gain	11 680m	S. Josefczak and J. Tarczon, Poland	Bocian	5.11.1966
Absolute Altitude	13 489m	L. Edgar and H. Klieforth, USA	Pratt Read	19.3.1952
Straight Distance	970.4km	I. Renner and H. Geissler, Australia	Calif A-21	27.1.1975
Goal Distance	864.86km	Isabella Gorokhova and Z. Koslova, USSR	Blanik	3.6.1967
Goal & Return Distance	970.95km	H-W. Grosse and H. Kohlmeyer, W. Germany (in Australia)	SB-10	7.1.1980
Triangular Distance	1112.62km	H-W. Grosse and H. Kohlmeyer, W. Germany (in Australia)	SB-10	28.12.1979
100km Triangle	147.19km/h	E. Mouat-Biggs and S. Murray, South Africa	Janus	21.11.1977
300km Triangle	140.48km/h	E. Müller and O. Schäffner, W. Germany (in Australia)	Janus	30.11.1979
500km Triangle	140.06km/h	E. Mouat-Biggs and S. Murray, South Africa	Janus	17.11.1977
750km Triangle	131.84km/h	H-W. Grosse and H. Kohlmeyer, W. Germany (in Australia)	SB-10	14.1.1980
1000kmTriangle	129.54km/h	H-W. Grosse and H. Kohlmeyer, W. Germany (in Australia)	SB-10	21.12.1979

SINGLE-SEATERS (WOMEN)

Height Gain	9119m	Anne Burns, Gt Britain (in South Africa)	Skylark 3B	13.1.1961
Absolute Altitude	12 637m	Sabrina Jackintell, USA	Astir CS	14.2.1979
Straight Distance	949.7km	Karla Karel, Gt Britain (in Australia)	LS-3	20.1.1980
Goal Distance	731.6km	Tamara Zaiganova, USSR	A-15	29.7.1966
Goal & Return Distance	1025.02km	Cornelia Yoder, USA	ASW-19	5.4.1980
Triangular Distance	814.01km	Karla Karel, Gt Britain (in Australia)	LS-3	9.1.1980
100km Triangle	139.45km/h	Susan Martin, Australia	LS-3	2.2.1979
300km Triangle	125.87km/h	Karla Karel, Gt Britain (in Australia)	LS-3	12.2.1980
500km Triangle	133.14km/h	Susan Martin, Australia	LS-3	29.1.1979
750km Triangle	95.42km/h	Karla Karel, Gt Britain (in Australia)	LS-3	24.1.1979

MULTI-SEATERS (WOMEN)

Height Gain	8430m	Adela Dankowska and M. Mateliska, Poland	Bocian	17.10.1967
Absolute Altitude	10 809m	Mary Nurr and H. Duncan, USA	SGS 2-32	5.3.1975
Straight Distance	864.85km	Tatiana Pavlova and L. Filomechkina, USSR	Blanik	3.6.1967
Goal Distance	864.86km	Isabella Gorokhova and Z. Koslova, USSR	Blanik	3.6.1967
Goal & Return Distance	617.43km	Pelagia Majewska and V. Malcher, Poland	Halny	14.5.1980
100km Triangle	126.28km/h	Adela Dankowska and E. Grzelak, Poland	Halny	1.8.1978
300km Triangle	97.74km/h	Adeli Orsi and F. Bellengeri, Italy	Calif A-21	18.8.1974
500km Triangle*	93.7km/h	Adela Dankowska and S. Piatek, Poland	Halny	4.5.1980

BRITISH NATIONAL RECORDS (Correct as at 2.3.1981)

SINGLE-SEATERS

Height Gain	10 065m	D. Benton	Nimbus 2	18.4.1980
Absolute Altitude	11 500m	H. C. N. Goodhart (in USA)	SGS 1-23	12.5.1955
Straight Distance	949.47km	Karla Karel (in Australia)	LS-3	20.1.1980
Goal Distance	579.36km	H. C. N. Goodhart	Skylark 3	10.5.1959
Goal & Return Distance	801.3km	C. Garton	Kestrel 19	22.7.1976
Triangular Distance	814.01km	Karla Karel (in Australia)	LS-3	9.1.1980
300km Goal and Return	141.3km/h	E. Pearson (in Rhodesia)	Nimbus 2	25.10.1975
500km Goal and Return*	152.8km/h	M. R. Carlton (in South Africa)	ASW-17	?.12.1980
100km Triangle	143.3km/h	E. P. Hodge (in Rhodesia)	Std Cirrus	30.10.1976
300km Triangle	146.8km/h	E. Pearson (in South Africa)	Nimbus 2	30.11.1976
500km Triangle*	142.6km/h	M. R. Carlton (in South Africa)	ASW-17	?.12.1980
750km Triangle	109.8km/h	M. R. Carlton (in South Africa)	Kestrel 19	5.1.1975

MULTI-SEATERS (**Also Multi-Seaters, Women, Record)

Height Gain*	8386m	T. J. Wills and B. Iggulden (in New Zealand)	Twin Astir	13.1.1980
Absolute Height**	9519m	Anne Burns and J. Oesch, USA (in USA)	SGS 2-32	5.1.1967
Straight Distance	471.9km	M. R. Carlton and M. French (in South Africa)	Calif A-21	18.12.1979
Goal Distance	472.43km	M. R. Carlton and M. French (in South Africa)	Calif A-21	18.12.1979
Goal & Return Distance	692.02km	M. R. Carlton and C. Greaves (in South Africa)	Calif A-21	23.12.1978
Triangular Distance	762.72km	C. M. Greaves and C. Simpson (in South Africa)	Janus	28.12.1977
300km Goal and Return	105.44km/h	M. R. Carlton and C. Greaves (in South Africa)	Calif A-21	19.12.1978
500km Goal and Return*	113.08km/h	M. R. Carlton and C. Greaves (in South Africa)	Calif A-21	23.12.1978*
100km Triangle	137.22km/h	M. R. Carlton and Leonie Lawson (in South Africa)	Calif A-21	27.12.1978
300km Triangle	112.59km/h	M. R. Carlton and C. Greaves (in South Africa)	Calif A-21	17.12.1979
500km Triangle*	108km/h	M. R. Carlton and C. Greaves (in South Africa)	Calif A-21	21.12.1978
750km Triangle	104.01km/h	C. M. Greaves and C. Simpson (in South Africa)	Janus	28.12.1977

SINGLE-SEATERS (WOMEN)

Height Gain	9120m	Anne Burns (in South Africa)	Skylark 3B	13.1.1961
Absolute Altitude	10 550m	Anne Burns (in South Africa)	Skylark 3B	13.1.1961
Straight Distance	949.7km	Karla Karel (in Australia)	LS-3	20.1.1980
Goal Distance	528km	Ann Welch (in Poland)	Jaskolka	20.6.1961
Goal & Return Distance	545km	Anne Burns (in South Africa)	Std Austria	6.1.1966
Triangular Distance	814.01km	Karla Karel (in Australia)	LS-3	9.1.1980
300km Goal and Return	107.5km/h	Karla Karel (in South Africa)	ASW-15B	1.1.1975
500km Goal and Return	102.6km/h	Karla Karel (in Rhodesia)	ASW-15B	16.10.1975
100km Triangle	110.8km/h	Karla Karel (in Rhodesia)	ASW-15B	2.11.1975
300km Triangle	125.87km/h	Karla Karel (in Australia)	LS-3	12.2.1980
500km Triangle	120.69km/h	Karla Karel (in Australia)	LS-3	20.2.1980
750km Triangle	95.42km/h	Karla Karel (in Australia)	LS-3	24.1.1979

UNITED KINGDOM RECORDS (Correct as at 2.3.1981)

SINGLE-SEATERS

Height Gain	10 065m	D. Benton	Nimbus 2	18.4.1980
Absolute Altitude	11 031m	D. Benton	Nimbus 2	18.4.1980
Straight Distance	718km	T. J. Wills	Std Libelle	1.8.1976
Goal Distance	579.36km	H. C. N. Goodhart	Skylark 3	10.5.1959
Goal & Return Distance	801.3km	C. Garton	Kestrel 19	22.7.1976
Triangular Distance	606km	C. Garton	Kestrel 19	10.6.1976
300km Goal & Return	106.4km/h	D. G. Lee	Kestrel 19	17.8.1975
500km Goal & Return	89.7km/h	C. Garton	Kestrel 19	22.7.1976
100km Triangle	114.2km/h	R. Jones	Nimbus 2	30.4.1974
200km Triangle	97km/h	R. Jones	Nimbus 2	30.6.1975
300km Triangle	105.45km/h	R. Jones	Nimbus 2	29.5.1974
400km Triangle	90km/h	D. G. Lee	Kestrel 19	19.5.1974
500km Triangle	106.9km/h	R. Jones	Nimbus 2	31.5.1975
600km Triangle	88.8km/h	C. Garton	Kestrel 19	10.6.1976
100km Goal	128.4km/h	K. A. Harrison	SHK	13.4.1969
200km Goal	114.3km/h	I. W. Strachan	Skylark 4	2.6.1963
300km Goal	132.8km/h	A. H. Warminger	Kestrel 19	24.4.1976
400km Goal	73.8km/h	T. J. Wills	Std Libelle	7.6.1976
500km Goal	90.7km/h	H. C. N. Goodhart	Skylark 3	10.5.1959

SINGLE-SEATERS (WOMEN)

Height Gain	7833m	Alison Jordan	Astir CS	8.10.1978
Absolute Altitude	8701m	Alison Jordan	Astir CS	8.10.1978
Straight Distance	454km	Anne Burns	Skylark 3B	10.5.1959
Goal Distance	309km	Anne Burns	Skylark 3B	12.4.1958
Goal & Return Distance	303km	Angela Smith	K-6E	14.8.1970
300km Goal & Return	60km/h	Anne Burns	Nimbus 2	25.7.1975
100km Triangle	80km/h	Anne Burns	Cirrus	14.6.1970
200km Triangle	69.3km/h	Anne Burns	Std Austria	22.8.1964
300km Triangle	76.8km/h	Jane Randle	Kestrel 19	18.8.1976
400km Triangle	60.6km/h	Anne Burns	SHK	5.8.1967
500km Triangle	76.1km/h	Anne Burns	Nimbus 2	31.5.1975
100km Goal	83km/h	Rika Harwood	Olympia 2B	27.5.1957
200km Goal	85.5km/h	Anne Burns	Olympia 419	2.6.1963
300km Goal	63.9km/h	Anne Burns	Skylark 3B	12.4.1958

MULTI-SEATERS

Height Gain	6740m	J. R. Monteith (USA) and M. Mahon	Capstan	2.11.1972
Absolute Altitude	7650m	J. R. Monteith (USA) and M. Mahon	Capstan	2.11.1972
Straight Distance	421.5km	J. S. Fielden and Valerie Fielden	Bergfalke 3	14.8.1970
Goal Distance	421.5km	J. S. Fielden and Valerie Fielden	Bergfalke 3	14.8.1970
Goal & Return Distance	407.3km	J. S. Williamson and C. Buchanan	Twin Astir	24.8.1980
300km Goal & Return	81.9km/h	J. R. Jeffries and N. Foster	Calif A-21	17.8.1975
100km Triangle	83.5km/h	J. R. Jeffries and G. Love	Calif A-21	22.4.1974
200km Triangle	72.8km/h	J. R. Jeffries and A. Kirtly	Calif A-21	5.8.1974
300km Triangle	85.87km/h	B. Fitchett and A. Miller	Janus	9.5.1979
400km Triangle	68.4km/h	J. R. Jeffries and G. Love	Calif A-21	7.5.1974
500km Triangle	88.4km/h	J. R. Jeffries and Gillian Case	Calif A-21	31.5.1975
100km Goal	96.5km/h	D. B. James and K. O'Riley	Gull 2	27.5.1957
200km Goal	77.8km/h	B. J. Willson and H. Daniels	Blanik	11.7.1970
300km Goal	69.2km/h	W. A. H. Kahn and J. Williamson	Eagle	12.4.1958

RESTRICTED CLASS

Straight Distance	718km	T. J. Wills	Std Libelle	1.8.1976
100km Triangle	109.7km/h	D. S. Watt	Std Jantar	16.8.1976
200km Triangle	96.2km/h	A. J. Stone	Std Cirrus	16.8.1976
400km Triangle	91.7km/h	S. J. Redman	Std Cirrus	31.5.1975
300km Goal	131.1km/h	T. J. Wills	Std Libelle	24.4.1976
400km Goal	73.8km/h	T. J. Wills	Std Libelle	7.6.1976

15m CLASS

200km Triangle	93.49km/h	B. T. Spreckley	ASW-20	14.7.1979
300km Triangle	99.46km/h	D. S. Watt	ASW-20FL	19.5.1980

UK 750km DIPLOMA

1. Goal and Return	801.3km	C. Garton	Kestrel 19	22.7.1976

MOTOR GLIDERS (+British National Record Only)

SINGLE-SEATERS

100km Triangle	57.3km/h	I. W. Strachan	SF-27M	13.6.1971
200km Triangle	48.2km/h	I. W. Strachan	SF-27M	23.8.1976
500km Triangle+	71.75km/h	B. J. Willson (in Finland)	PIK-20E	22.5.1980
100km Goal	85.7km/h	I. W. Strachan	SF-27M	16.7.1971

MULTI-SEATER (** Also British National Record)

100km Triangle**	35.6km/h	P. T. Ross and H. Daniels	SF-28A	27.6.1976
100km Goal	76.2km/h	P. T. Ross and K. Winfield	SF-28A	22.8.1976
200km Goal	66.3km/h	P. T. Ross and P. Fletcher	SF-28A	18.7.1976

INTERNATIONAL MOTOR GLIDERS (Correct as at 2.3.1981)

SINGLE-SEATERS

Height Gain	8923m	G. Cichon, W. Germany	Nimbus 2M	27.5.1979
Absolute Altitude	10 408m	G. Cichon, W. Germany	Nimbus 2M	27.5.1979
Goal & Return Distance*	1010km	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	7.1.1981
Triangular Distance	1013.21km	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	31.12.1979
100km Triangle	152.16km/h	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	29.12.1977
300km Triangle	131.75km/h	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	27.12.1977
500km Triangle*	128km/h	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	24.12.1980
750km Triangle	120.21km/h	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	29.12.1978
1000km Triangle	109.94km/h	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	31.12.1979

MULTI-SEATERS

Height Gain	4523m	F. Jung and G. Marzinzik, W. Germany (in France)	ASK-16	26.3.1978
Straight Distance*	950km	W. Binder and K. Heimann, W. Germany	Janus M	15.5.1980
Goal Distance	646.42km	G. Jacobs and G. Hüttel, W. Germany	SF-25E	28.4.1976
Goal & Return Distance	551km	W. Collee and K. Pummer, W. Germany (in South Africa)	Janus M	10.12.1979
Triangular Distance	756km	W. Collee and K. Pummer, W. Germany (in South Africa)	Janus M	31.12.1979
100km Triangle	128km/h	W. Collee and E. Doerr, W. Germany (in South Africa)	Janus M	15.1.1980
300km Triangle*	133km/h	O. Wegscheider and Mr. Ascher, W. Germany (in South Africa)	Janus M	12.12.1980
500km Triangle*	111km/h	O. Wegscheider and K. Zuleck, W. Germany (in South Africa)	Janus M	5.12.1980
750km Triangle	98.97km/h	W. Collee and K. Pummer, W. Germany (in South Africa)	Janus M	31.12.1979

1000km FLIGHTS

(See April-May, 1980, p77, for previous list)

48 Goal & Return	1000.86km	Doris F. Grove, USA	ASW-19	11.3.1980
49 Goal & Return	1025.02km	Cornelia Yoder, USA	ASW-19	5.4.1980
50 Triangle	1016km	I. Renner, Australia	Nimbus 2	13.11.1980
51 Triangle	1015km	P. Mander, Australia	ASW-20	7.12.1980
52 Triangle	1271.98km	H-W. Grosse, W. Germany (in Australia)	ASW-17	9.12.1980
53 Triangle	1020km	I. Renner, Australia	Nimbus 2	10.12.1980
54 Triangle	1306km	H-W. Grosse, W. Germany (in Australia)	ASW-17	4.1.1981
55 Goal & Return	1010km	F. Rueb, W. Germany (in South Africa)	Nimbus 2M	7.1.1981

*Flights subject to Homologation

New records have to exceed the old ones by: Distance 10km. Heights 3%. Closed circuit speeds 2km/h. Goal speeds 5km/h.
For records, no side of a triangle may have a length less than 28% of the total distance of the course, except that for triangles of 750km or more for International and British National Records, or of 500km or more for UK Local Records, no side may have a length less than 25% or greater than 45% of the total distance.
Conversion Factors: Multiply km or km/h by 0.621 to get statute miles or mph. Multiply km by 0.54 to get nautical miles or kts. Multiply metres by 3.28 to get feet.

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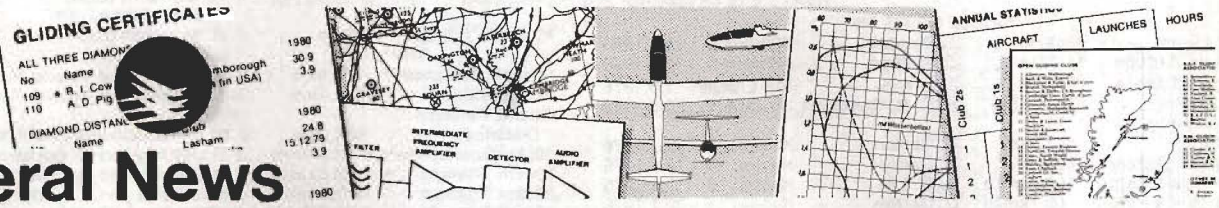
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BGA and General News



GLIDER RADIO — NEW CHANNEL

The CAA has assigned an additional channel for glider/glider and glider/ground communications. The frequency is 130.123MHz and is subject to the following conditions:

1) Messages will be restricted solely to those concerning gliding operations.
2) For gliders — administration of the use of the frequency will rest with the BGA.
3) The CAA may, if necessary, change *any* assigned frequency.
4) The CAA may, if necessary, assign the frequency for other sporting activities.

The CAA is arranging with the Home Office for the frequency to be added to the schedule for all new licences (glider/ground station) and also to amend the schedules on existing licences.

Because of the high level of administrative effort required to amend the schedules on all existing licences for glider ground stations, NATS in liaison with the Home Office have agreed that the BGA should notify all glider ground station licence holders of the additional frequency assignment *via* S&G. Licence holders are advised that the additional frequency may be used as determined by the BGA pending the addition of the frequency to licence schedules.

In a future article we shall consider how we can make the best use of our assigned frequencies which are: 130.4, 130.125 and 130.1MHz for glider/glider/ground and 129.9MHz for ground recovery only.

The main gliding operations we need to accommodate in broad terms and in no particular order of merit are: cross-country flying, cloud flying, competitions, local flying, training and possibly a "chat" channel.

C. Dews,
Chairman, BGA Radio Committee.

BRITISH TEAM SELECTION

The principle of **voting** has been retained for the **selection** of the **British Team** for the 1983 World Championships; details to be announced in early 1982. A recent "opinion poll" amongst the top 120 or so pilots on the 1981 Qualifying Lists indicated majority support for this method in preference to a mathmatical approach based exclusively on competition results.

Ted Lysakowski,
Chairman, BGA Competitions Committee.

WORLD CHAMPIONSHIP ENTRIES

Entries from 31 Nations (103 pilots) have been received by the organisers. As the Australian entry has not yet been finalised only the 99 firm entries are shown in the breakdown of the Classes.

Open Class, 22 pilots. 15m Class, 43 pilots. Standard Class, 34 pilots.

BGA DIPLOMA WINNERS

Our congratulations to the two BGA Diploma winners who have given long service to gliding.

Bill Barnard retired from the RAF as a Wg Cdr in 1956, joined the Army Gliding Association in 1966 and became Secretary of the Kestrel GC. This was followed by 11yrs as their Treasurer and his hard work, total dedication to and shrewd management of the finances made it possible for servicemen to fly at a reasonable cost. Now over seventy, Bill still flies and takes an active interest in the club.

George Constable has retired as CFI of the Southdown GC after 23yrs, though is continuing as Flying Director. He joined Southdown, who celebrate their 50th anniversary this year, in the 1940s, was the Ground Engineer in the 1950s and has greatly contributed to the club's progress and expansion. He has a knack of giving confidence and support where most needed.

BGA TELEPHONE NUMBER CHANGED

From **now** the BGA telephone number has been changed to Leicester 531051.

IN THE MONEY

The £1500 prize offered in the Arctic Lite Competition 1980 to the pilot flying the furthest distance in a straight line in the UK has been won by Chris Garton (Nimbus 2) for a flight on September 7 of 395.1km from Lasham to High Heselden, Cleveland.

Brian Spreckley (ASW-20) secured the £1000 prize for the furthest O/R flown within the UK with a 523km flight from Lasham to Doncaster on August 25 while Chris Rollings (PIK 20D) claimed the £500 offered for the fastest handicapped 300km triangle when he flew 306.13km, Booker, Salisbury, Stratford-on-Avon, at 92.28km/h.

THE TEAM KITTY

The response from the British gliding movement to the Kitty appeal has been good. Most clubs have sold the T-shirts and other promotional items and I hope that all

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British Soaring Yearbook
(Edited by G. W. Camp)

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List of Clubs. Complete Register of Sailplanes and Owners. 1981 Diary. National and World Records. Leading Competition Results. Airspace Limits. Weather Forecast Offices. BGA services. 'Who's Who' in British Gliding. Useful addresses and adverts.

As well as using the Yearbook for constant reference throughout 1981, keep a copy on your bookshelf for nostalgic reading in the years to come. The Yearbook will also prove interesting to many pilots overseas.

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the remaining items will be sold by May.

Several clubs have raised money for the Kitty by Kitty boxes, bar bottles and dinners and we are very grateful for their efforts. I have also received a few generous donations from individuals and their help is much appreciated.

The cost of sending a well equipped team is high and in view of the fact that the next World Championships are to be held in Argentina in 18 months time we need to continue to raise funds.

There are a great many active glider pilots who have not yet given anything to the Kitty Fund. If this includes you then please send a donation to me.

I would be grateful if club secretaries would send the contents of Kitty boxes to me in early May.

As a final inducement I am offering a magnum of champagne as the prize in a £1 draw. Please write your name and address on a small piece of paper and send it to me attached to a £1 note. The draw will take place at the Open Class National Championships.

Michael Pope, *British Team Treasurer, 123 Woodsford Sq, Addison Rd, London W14 8DT.*

ARCTIC LITE CHAMPIONSHIP 1981 — Dunstable, May 2-4

(Yes, we know it was going to be at Lasham, but the super fantastic news is that **Dunstable** want to have us instead.)

Come along and see George Lee, Brian Spreckley, Andrew Davis and Bernard Fitchett making asses of themselves (and monkeys of everybody else?) at this fun gliding weekend.

OPEN/STANDARD CLASS NATIONALS

The Open/Standard Class Nationals are organised this year by the Services Gliding Associations at RAF Greenham Common, nr Newbury, from May 16-25.

Although no aircraft are permanently based at Greenham Common, it is an active military establishment used by the US Air Force. One of the conditions imposed on the use of the airfield for the Nationals is that it will not be open to the general public. Access, which will be controlled throughout the competition, will only be permitted through the North gate. Special arrangements are being made for competitors, crews and helpers.

However, although the airfield will be closed to the public, we would like to make it clear that this does not extend to members of the gliding fraternity.

You are very welcome to come to the Nationals but ensure that you bring with you some form of gliding identification such as a gliding licence, logbook or club membership card to identify you as a *bona fide* gliding enthusiast.

Our apologies for the inconvenience but we think it is a small price to pay for the use of this super site.

Dickie Feakes and Al Farmer,
Competition Director's Staff

"SAFE" (FATIGUE) LIFE OF GLIDERS

The BGA Technical Committee endorsed at their December meeting the following proposal made by R. B. Stratton, their Chief Technical Officer:

"That unless a specific life-limitation is imposed upon a specific type of glider by an airworthiness directive issued by those responsible for the Type Certification of the type then the BGA Technical Committee would not seek to impose safe-life limitations. In other words, structural integrity would be judged by inspection."

At the present time, the only type of glider upon which a life limitation is imposed is the Blanik. The validity of that recommendation is currently being challenged by an exercise in structural dynamics at the Cranfield Institute of Technology.

BRIAN ON TV

Brian Spreckley, British Team member, was recently interviewed for Southern TV's children programme "Run Around", sitting in Dave Watt's ASW-20FL. As a result Southern TV donated £150 to the British Team Fund. Photo: Mike Evans who with George Metcalfe (both from Lasham) helped with the rigging and derigging.



FORTY YEARS ATC GLIDING

Claiming to be the world's largest glider training organisation, the Air Training Corps celebrated on February 5 the 40th anniversary of its formation. It was formed on February 5, 1941, by taking over the Air Defence Cadets, who in turn were started by the Air League of the British Empire in 1938 and sent boys for glider training to civilian gliding clubs.

Altogether 700 were to be sent in 1939, being 10% from each squadron, cut down to 600 by the war. The number taken by each club (in brackets the % of them who earned gliding certificates) were: London 200 (40), Yorkshire 90 (42), Oxford 60 (37), Cambridge 27 (48), Newcastle 60 (30), Midland 50 (42), Southdown 40 (35), Derbyshire and Lancs 60 (12, due to bad weather, high winds and cloud on hill).

The ATC now runs 27 gliding schools, officers and adult staff number 6000, and cadets, who can join at 15-18, number 35 400. Also 22 girl units are being "tried concurrently" according to the Air Ministry's handout.

A.E.S.

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1980
111	M. A. Clarke	Bannerdown (in USA)	11.11
112	J. H. Odell	Bannerdown (in USA)	13.10

DIAMOND DISTANCE

No.	Name	Club	1980
1/169	M. Boyden	Anglia (in France)	6.9
1/170	B. J. Willson	Räyskälä, Finland	22.5
1/171	M. A. Clarke	Bannerdown (in USA)	11.11
1/172	J. H. Odell	Bannerdown (in USA)	13.10

DIAMOND GOAL

No.	Name	Club	1980
2/1004	B. Emms	Inkpen	24.8
2/1005	J. F. Mills	USA	2.8
2/1006	P. Guthrie	Imperial College	25.8

DIAMOND HEIGHT

No.	Name	Club	1980
3/479	M. Bond	Clevelands	6.9
3/480	B. Scougall	SGU	3.12
3/481	E. Hamill	Doncaster	30.12
3/482	M. J. Dean	Bicester	29.12
3/483	J. R. Bisset	Deeside	8.1.81
3/484	R. C. Wilson	Deeside	8.1.81
3/485	R. J. Brass	Deeside	8.1.81

GOLD C COMPLETE

No.	Name	Club	1980
792	E. Hamill	Doncaster	30.12

GOLD C DISTANCE

Name	Club	1980
B. Emms	Inkpen	24.8
P. Guthrie	Imperial College	25.8
S. Lloyd	Imperial College	24.8

GOLD C HEIGHT

Name	Club	1980
D. A. Bullock	642GS	13.11
Janet Allan	Deeside	4.10
K. R. J. Reeves	Fenland	29.10
M. Foreman	Clevelands	23.11
B. W. Price	Clevelands	22.11
A. Green	SGU	2.12
G. A. Barber	Cranwell	30.12
A. R. Reeves	Imperial College	1.1.81
P. Whitt	Avro	6.9
K. A. G. Buchan	SGU	3.12
E. Hamill	Doncaster	30.12
P. S. Worth	Cranwell	30.12
K. F. Moorhouse	Inkpen	8.10
J. M. Alexander	Bicester	30.12
J. C. R. Rogers	Cranwell	30.12
M. Judkins	Imperial College	1.1.81
A. Penrose	642GS	13.11

SILVER C

No.	Name	Club	1980
5813	A. M. Coxon	Sebring (USA)	30.4
5814	Ria Ward	Southdown	29.11
5815	J. L. A. Ward	Southdown	9.11
5816	J. L. Riley	SGU	3.12
5817	D. M. Cornelius	London	29.10
5818	S. Lloyd	Imperial College	21.8
5819	S. J. Whittaker	Sebring (USA)	3.12
5820	G. Lungley	Yorkshire	1.12

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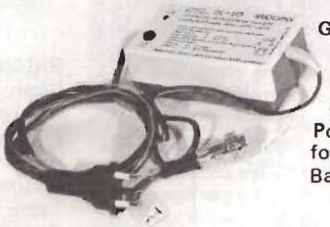


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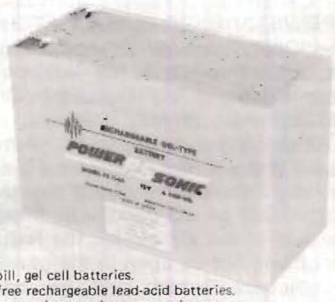


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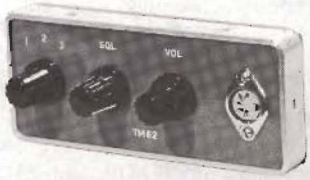
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FOCUS ON 1980

The British Gliding Association's AGM was held at the Palace Hotel, Buxton on March 7 during the BGA Weekend which will be reported on in the next issue. Meanwhile here are brief extracts from some of the Annual Reports.

Mike Emmett, Chairman of the **Airspace Committee,** reported that ATZ infringements and consequent airmisses involving fast low-flying military aircraft continue, in spite of meticulous complaints by clubs to the MoD. Help has been given in a small way to Swindon GC, in respect of USAF operations at Fairford, and Rattlesden GC who want to aerotow.

Several matters raised by CAA represent a very serious actual or potential threat to gliding. The Authority is reviewing the exemption for gliders to cross airways in VMC, particularly in relation to the Daventry CTA. Currently the CAA wish to exclude gliders from the Daventry CTA and to allow airway crossing (at right angles to the centre line and without circling) in specific locations only, and up to specified maximum altitudes.

Three major wave flying sites are also threatened: Camphill by the introduction of an airway (B4) over the airfield and Portmoak and Aboyne by the proposed change to full airway status of the present advisory routes.

In addition, the Chairman added, the following are still not resolved to our satisfaction: the effect of the new Rule 34 on gliding club ATZs; the under-utilisation and over-restriction of the Kemble and Brize Norton airspace; our request for modification of some airway stubs around the London TMA and alteration of the TMA boundary adjacent to Booker. We also await details of proposals to extend the London TMA to the south-west and to revise the structure of the Military Air Traffic Zones.

Competition and Badges Committee Chairman, Ted Lysakowski, said that the new Nationals' structure proved a major success, increasing standards and competitiveness.

Keith Mansell, Chairman of the **Development Committee,** commented that while the Philip Wills Fund and the Philip Wills Memorial Fund were now merged, the combined Fund was unlikely to meet the many demands expected from clubs seeking development assistance.

Vic Carr, Chairman of the **Instructors' Committee,** reported on the increase in advanced training by the National Coaches — 75 pilots attended 15 instructor courses and 48 went on the advanced soaring courses.

The **Safety Panel** Chairman, Arthur Doughty, recorded that 1980 was even worse than 1979 with 177 accident/incident reports. The accident rate was 0.49/1000, compared with 0.48/1000 launches in 1979, with an aircraft casualty rate of about 13% of the glider fleet. Personal injury accidents increased to 31 with 33 casualties; five fatal, five serious and 23 minor. The number of accidents involving pilots with less than 100hrs fell again this year to 53 but accidents where the pilot had over 1000hrs rose by 100% from six to 12.

Field landing accidents rose 31.25% from 32 in 1979 to 42 last year and it is the continued rise in this particular accident group that gives cause for great concern. There has been a 500% increase in field landing accidents between 1977 (7) and 1980 and in 19 of the 42 accidents in 1980 the damage was reported as substantial or a write-off.

Alan Yates, Chairman of the **Technical Committee,** considered that the current motor-fuel-in-aircraft investigation is probably the most ambitious and potentially the most cost-effective exercise ever initiated by the BGA. The preliminary results are encouraging and received worldwide publicity.

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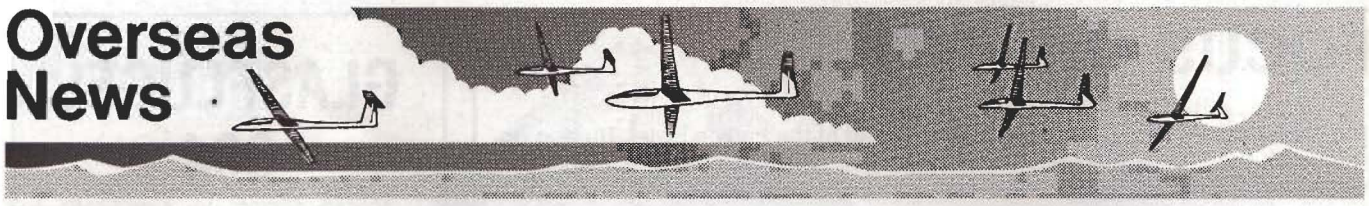
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Overseas News



MORE 1000KM FLIGHTS
The first 1000km triangle for 1981 has already been recorded! Not content with his 1271.98km triangle flown on December 9, Hans-Werner Grosse, Germany, declared a 1306km triangle which he flew successfully on January 4 from Alice Springs and thus claims yet another triangular distance world record, not this time improving on the speed of 133km/h he had already claimed for the previous flight.

Also Ingo Renner has flown 1016 and 1020km triangles on November 13 and December 10, 1980, both starting from Waikerie.

On December 7, Paul Mander, in an ASW-20 laid claim to the first 15m Class aircraft to complete a 1015km triangle at 105.91km/h. He started from Narromine.

All Classes are now represented on the 1000km list.

AUSTRALIAN NATIONALS
Eight very difficult contests was the result of the Nationals held at Waikerie at the turn of the year.

With 13 Open, 35 15m and 33 entrants in the Standard Class it was the largest Nationals yet held. As usual foreign pilots, of which there were five, were allowed to enter.

For the first time in Australia, and probably the first time in any Nationals, the Open Class resulted in a tie for first place with Tony Tabart and Malcolm Jinks sharing 7647pts apiece, followed by Jim Couts with 7495pts, all three flying a Nimbus 2.

Mike Borgelt, John Buchanan and Bob Martin took the first three places in the 15m Class with 7294, 7244 and 7177pts flying a Mini Nimbus, LS-3 and Ventus respectively.

In the Standard Class 21 year-old Shane McCaffrey in a Hornet took the honours with 7439pts, followed by John Rowe, Std Jantar, 7355, and Terry Cubley, Std Cirrus, 7264pts. *R.H.*

DREAM COME TRUE
Some years ago the late Dr August Raspet of Mississippi State College, who had brilliant and original ideas on sailplane design, suggested that so much sunlight fell on a sailplane's wings that, if converted into power, it could add considerably to the aircraft's lift.

Now Paul MacCready, famous as a sailplane pilot and then as winner of the Kremer Prize for man-powered flight, has designed the "Solar Challenger", illustrated apparently in flight by *The Observer* of February 8, which states that it "flies high over the Mojave Desert", and that on its first flight it covered 15 miles in 1½hrs and reached 3400ft, piloted by primary school teacher Janice Brown, aged 32, who weighs 6 stone 11lb. Power comes exclusively from 16000 solar cells distributed over the wing and large horizontal tailplane, which actuate a small electric motor giving about 3½hp.

The inventor admits that a petrol driven motor of the same power would weigh only a quarter as much as the solar cells plus electric motor, but "I would enjoy using the quiet Solar Challenger to be with soaring hawks or migrating ducks or to tour low over a lake shore."

A.E.S.

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

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When you read S&G these days it's all controversy — isn't it? Platypus and J.R., did Kronfeld hide a vario up his trouser leg, hang gliders v. gliders v. parachutists etc. Frankly, I think it's just a load of old bull (and so does Chris Rollings!)

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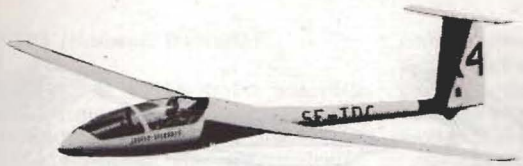
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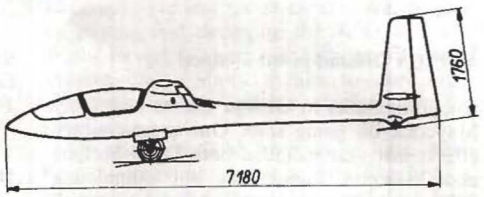
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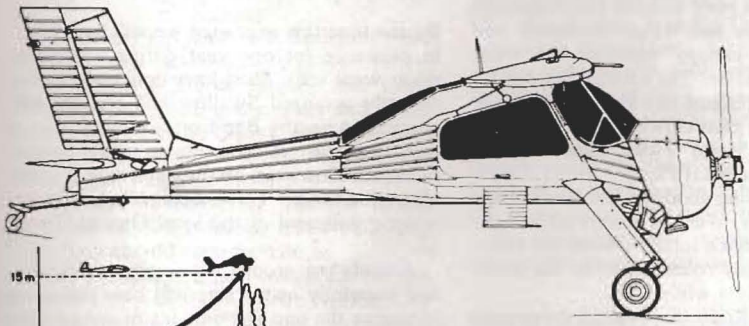
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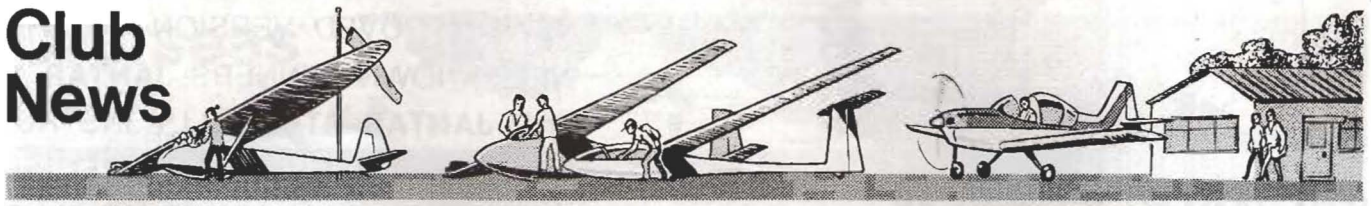
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Club News



Copy and photographs for the June-July issue of S&G should be sent to the Editor, 281 Queen Edith's Way, Cambridge CB1 4NH, tel 47725 to arrive not later than April 14 and for the August-September issue to arrive not later than June 16.

February 11, 1981

GILLIAN BRYCE-SMITH

AQUILA (Hinton-in-the-Hedges)

Congratulations to George Clarke and Tony Maycock on going solo. Our cross-country efforts last year included both Dave McQue and Malcolm Lassan all but completing 300km triangles. A successful expedition to the Long Mynd in September included John Baines and Lance Parry getting their five hours.

Amongst new members we are pleased to welcome the Eagle syndicate and we now have a Motor Falke syndicate.

K.S.F.

BATH & WILTS (Keevil Airfield)

This winter has been our most successful with more hours of ridge and wave flying during December and January than ever before. We had a north or north-westerly wind almost every weekend, making our adjacent ridge (the edge of Salisbury Plain) work over a distance of ten miles. It also gave us some interesting wave flying with several flights to more than 8000ft, culminating with our Chairman, Mervyn Pocock, still climbing at 15 000ft but unfortunately with no oxygen. Kate Hargreaves gained her five hours on one of the ridge days.

A party spent an enjoyable week at the Long Mynd in October when Edward Thompson got his five hours. At the same time another party were at Aboyne where Roger Slade gained Gold height and Steve Parker managed some cross-country wave flying.

R.L.

BORDERS (Milfield)

The mild early winter gave a reasonable amount of flying, mainly hill soaring, but with only rare appearances of our usually good wave. However Jim Shepherd found wave for a 6000ft climb for Silver height.

The Portacabins have been connected to the generator and two "Portaloos" have been installed.

Our annual dinner-dance was well attended and Bill Tweedy, who has sacrificed many a good day to repair club aircraft, was congratulated on his long overdue distance flight to complete his Silver C. "Lead Cs" were awarded for those special feats such as final glides from the top of the launch point to the bottom of the local hills or landing out with attractive lady passengers.

Two new trophies were presented this year. Our Chairman, Alan Urwin, donated a cup for the best height gain and Bob Coulson gave a beautiful trophy of a silver glider for the club ladder competition — they were both won by Peter Johnson.

A.J.B.

BUCKMINSTER (Saltby Airfield)

A few stalwarts have been repairing the ravages of last season on the club fleet. The K-6 fuselage has been scraped and resprayed and the K-8 has had wings recovered and resprayed, the canopy repaired and been generally spruced up. The Citabria has had its major overhaul (engine and airframe). We are hoping to have a glass club machine to replace the K-6. The Motor Falke syndicate are working for their MGPPLs.

We regret saying goodbye and *bon-voyage* to Mike (Wobbly) Webster who is off to Australia. He has been a totally committed member fulfilling many roles including tug pilot, instructor and for a while CFI.

We wish our Brian (Spreckley) every success in the World Champs. He did well coming second in the South African Nationals 15 Metre Class.

T.C.M.



Ron Lynch, Bath & Wilts GC's CFI, talking to their Chairman, Mervyn Pocock, in the DG-100.

CAMBRIDGE UNIVERSITY (Cambridge and Duxford)

Our Super Cub was flipped over by a freak gust at Duxford and will be out of action for some time. Even so our launch rates have been outstanding since our winch retrieve tractor was replaced by a diesel van. The combination of speed and comfort has meant really fast turn rounds and no shortage of willing drivers in winter!

Our recent K-8 acquisition is already very popular. Richard Walker is again organising our task week from May 23 and all comers are welcome. Contact Richard on Honington 360.

P.E.B.

CONNELL (Connell Airfield)

By the time this is printed we will have been in existence for one year during which ten pilots went solo. Most have converted to the recently acquired Swallow and enjoyed hill soaring on nearby Ben Lora.

A 21yr lease is being drawn up for hangar facilities. However, on the debit side, a grant allocation for our T-21 is being blocked by the non-commitment of the local District Council.

Already two groups are visiting us this year and hopefully instructors will keep dropping in to give the one and only instructor a break for lunch — Sunday mornings usually start at 0600hrs!

R.R.

COTSWOLD (Aston Down)

After leaving Aston Down in November we are now pleased to say that we have returned as the owners. At the time of writing there are still a few loose ends to tidy up but we hope that these will be sorted out very soon. Thus we join the fortunate few to own their site. Does this make us the only club with our own runway?

We have now lost the problems that afflicted us operating from a closed Ministry site and we would be delighted to welcome visitors. However if you are coming by air, please remember that we are within the Kemble Control Zone and so the restrictions applying to this must be observed. Unfortunately covenants attached to the sale also ban power flying and so tug aircraft are also barred.

Our annual dance was a great success. Yvonne Scull (who together with Bill were amongst our guests) dished out the gongs for us. Larry Bleaken won his own Height Gain trophy for a climb of 21 500ft at Portmoak in the Nimbus, thus completing his Diamonds; Tim Macfadyen won the Ladder trophy yet again after his first season with his ASW-20; Dave Breeze flew 400km on a grotty day in his SHK to win the Harry Daniels trophy for the most meritorious cross-country and Chris Clark took the pre-Silver cup for a 140km triangle whilst on a duration in a K-6CR.

J.D.H.

COVENTRY (Husbands Bosworth)

Our annual dinner last December was very successful. A moment of remembrance for Norman Marriott hushed our usually noisy gathering. Norman, who died very suddenly, had been our Ladder Steward for many years and served us well.

The principal prize winners for flying achievements were Alan Fretwell, Doreen Marshall, Lou Frank, Mike Costin, Peter Osbourne and Roger Goodman.

Winching proceeds apace alongside aerotowing, ensuring a high launch rate and inducing many who would not speculate on an aerotow in winter to become airborne.

Reg Ludgate and Les Johnson have been appointed as our new assistant CFIs.

B.R.

CRANWELL (RAFGSA)

There were many good flights during our New Year visit to Dishforth with Gold heights for John Rogers, Patrick Worth and George Barber.

Val Ramsey has gone solo, Malcolm Ward re-soloed after seven years, Dave Almey, Robin Simpson, Derek Beaney and Chris Terry have qualified as tug pilots and Geoff Bolton, Dave Lewis, Chris Terry and Dave Almey have converted to the motor glider which is really earning its keep.

The Eagle is recovering from its recent ordeal and the K-8 is having a new skin. The Twin Astir should soon be with us.

Mike Topham is a new instructor but we have lost Derek Beaney to Brize Norton. Our congratulations to our Chairman on regaining his PPL.

The Welland GC have been flying with us recently while they look for a new home. Our new crew bus is on line and gives more space and facilities.

G.A.B.

DEESIDE (Aboyne Airfield)

The year has started very well with wave on 12 days in January. This we hope augurs well for the spring visitor season. Already three Diamond heights have been claimed by Ian Brass, Roy Wilson and John Bisset. Brian Wise, a new arrival with his Libelle, has claimed a Gold height.

Our disco in January was made memorable by Peter Whitehead's arrival in the family IS-28 at an astonishingly low height, cross-country from Portmoak *via* some very low ridges. Not so much hill soaring as hill hugging! His return flight will also be remembered for some time, as it ended in an impressively small field well up into Glen Muick.

We regret to report the death of Tony Larkin, who was killed in a helicopter accident during December during a Far East detachment. His cheery face will be much missed around the field and his escapades and jokes long remembered.

J.R.B.

DEVON & SOMERSET (North Hill)

When we have been able to fly our *ab-initios* have been the main beneficiaries, but some days have brought interesting ridge and wave soaring. In mid-January, Simon Minson (Skylark 4) and Peter Clements (Dart 15) worked northerly wave over Wellington to 5500ft.

Congratulations to Duncan Babbington on completing his Bronze C. The New Year has brought syndicate changes; in particular, the Oly 463, Skylark 4 and a Dart 15 will have new pilots this season.

Our clubhouse is now brighter, thanks to the hard work of Jill Groves, Barry Salter, Chris Slade and others; Sandy Harrup has organised and done most of the painting of our launch point "Bubble", and Tony Thomas has kept the workshop in order, in spite of all the repair and C of A work there.

We are holding five summer courses with task weeks starting on June 1 and August 17.

I.D.K.

DERBY & LANCS (Camphill)

We have flown every weekend this year with the ridge really earning its keep. Several spectacular wave days and strong wind launches to over 2000ft have kindled a lot of enthusiasm for so early in the year.

Ian Thompson and Jamie Thompson (no relation) completed their Bronze Cs. Our venerable (their word) K-13 syndicate are proudly flying their new K-21, a Sport Vega joins the club in May and a brace of Fauvettes is over wintering with us.

"Brothers in Law" paid us a drinking visit with their home movies. This made a good evening — an object lesson in how not to take yourself too seriously.

S.G.

DONCASTER (Doncaster Airfield)

We are still at Doncaster and although our long term future at the airfield looks black, at least we look like having a breathing space of a few years in which to try and establish a new site.

The year started well with Bob Peaseland, Martin Ellis, Chris Bagnall and Gabriel Byrne all going solo on the same day and Keith Dudley bagged the first thermal of the year (January 24). Eric Hamill took his Libelle to the Clevelands GC at Christmas and picked up his Diamond height.

The latest bus winch, which includes many new features, was a great success on its first outing in January.

Nev Spencer is getting prepared for this year's Northern League. To help with our quest for victory a series of lectures will start in February. The opening subjects are wave soaring and meteorology by Jack Sharples and John Stirk respectively.

A task week is planned, taking in the Spring bank holiday.

E.T.R.

DORSET (Henstridge Airfield)

We have settled into our temporary home at Henstridge airfield near Stalbridge and had some good winter flying. We no longer have the luxury of our own private airfield, hangar, clubhouse etc and are relearning the delights of rigging and derigging the K-13 and K-8 whilst having to share our circuits with powered aircraft. Many thanks to our Vice-Chairman for the caravan which is now the clubhouse.

On the new field front there have been some interesting developments which look promising for the future. Meanwhile we look set for an interesting soaring season exploring north Dorset for the second time in the club's history.

J.R.C.

EAST SUSSEX (Ringmer)

There is an awakening spirit of adventure in the club with pilots of gliders less well endowed in L/D joining the glass ships on the ridge at Firle Beacon, some distance from our site. There has been a lot of ridge activity for those willing to commit themselves to an outlanding in return for the joy of winter soaring. Congratulations to Joe Batchelor on his five hours spent on Firle ridge and to Tony Kerwin-Nye on going solo.

Daphne Beirne has resigned as Secretary after many years and we thank her for her contribution to the club. The AGM will be on March 29.

V.N.

ESSEX & SUFFOLK (Hadleigh)

We have finally received the result of the public inquiry. A three year planning permission has been granted with conditions, the most damaging being the limiting of Sunday flying to six hours, starting at noon, with a maximum of five aerotows per hour. This poses problems to which solutions are being found.

The end of soaring season disco was most enjoyable. Our congratulations to Noreen Friend, our first solo pilot of 1981.

J.A.S. and V.H.

HEREFORDSHIRE (Shobdon Airfield)

On December 9 Anthony Maitland (Mini Nimbus) and Mike Costin (Nimbus 2) went to 14 000ft and on December 20 the Partridge, Harlow and Wulff Glasflügel 304 flew. Comments from all three: "Nicest I've ever flown — so stable" (Rhoda); "What a trim!" (Roger); "Really viceless" (Peter).

Richard Marsden has bought a Kestrel to form a syndicate and Graham Mason has bought into the K-6CR syndicate. He only started flying in 1980 and has just completed his Bronze C.

On December 28 Anthony Maitland was at 14 000ft again and the next day discovered wave while joining the airways at Brecon in an Aztec. He radioed back to Shobdon and

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Ken Martin (Libelle), Peter Wulff (304), Don Touson (PIK), Denis Johnson (Libelle) and Reg Mayo (Diamant) all contacted but only Peter and Ken got home. The best height was 16 000ft plus. Dennis landed in deep mud with his car keys in his pocket.

January 24 was a thermal spring day with flights of over an hour. January 25 saw wave to 8000ft with Richard Marsden top of the stack. February 1 brought gentle wave to 5000ft with Rhoda, grinning like a cat, top of the stack in the 304.

R.P.

INKPEN (Thruxton Airfield)

Members have been refurbishing the club fleet. Brian Emms has supervised the sprucing up of the Oly as well as practically rebuilding his own trailer whilst Peter Edgson has spent much time and effort on the club trainer. Ray Hunt has been making a training film which should be a help to *ab-initios*.

From April 7 we will be flying every day and welcome visitors, whether it be for an aerotow home or a week's gliding holiday. Course bookings are already up on last year.

Our new IS-28 has been delivered and will be used for advanced training.

P.P.

LONDON (Dunstable)

Jeff Butt flew the much-modified Eagle before Christmas, thereby enriching himself by the proceeds of wagers with numerous non-believers. This has inspired others to constructive effort notably on the Kirby Kite and Minimoa, while undercarriage warnings have been hastily installed in a Libelle and ASW-15.

Flying got off to a good start for 1981 with a good turn out on January 1 and bungying on the 2nd which involved landings on top of varying degrees of interest. The first recorded cross-country of the year was by JJ and Tony Beese and the great distance achieved is indicated by the number of camels encountered on landing.

The annual dinner-dance will be held in the clubhouse.

F.K.R.

MARCHINGTON (Marchington)

The annual dinner-dance was well attended and a great success thanks to the dedicated organisers. The site development continues, the next projects being to build a hangar and to clear more of the scrub.

We have been here for over a year and Nigel Rendar is the first member to go solo who joined at Marchington. We fly every Wednesday, Saturday and Sunday and visitors will be most welcome.

S.D.B.

MIDLAND (Long Mynd)

Lenticulars appeared to herald in the New Year and we have enjoyed several wave days with Silver and Gold heights achieved.

It has been good to meet visitors from many other clubs over the winter and to share our soaring activities.

Congratulations to our first soloists of 1981 — Mark Henley, Chris Staniszewski, Judith Wrightson and Mark James.

A Committee decision to try to increase our flying revenue by decreasing the hourly rates for single-seater aircraft (and hence increasing their utilisation) seems to be proving successful.

Tony and Jill laid on an excellent Christmas lunch and there was great revelry at the New Year.

Our task week will be August 22-31 with Chris Day as Contest Director. Further details from Jancis Scarborough at the Midland GC.

J.S.

NORFOLK (Tibenham)

Members are doing a major overhaul on our second K-13 in our workshops under the supervision of Joe Podolski and Eric Titman, and Ron Brown has organised working parties to get various tasks done.



Ron has built a super-efficient wood burning heater for the clubhouse which prefers logs to glider wreckage. We had an expedition to Robin Coombe's farm to cut wood for this beast and its big brother which heats the workshop.

M.J.R.L.

NORTHUMBRIA (Currock Hill)

Wave on January 31 and February 1 provided the first real soaring flights of the year. The Saturday wave was unusual for us, stemming from north-westerlies. It was weak but reliable, giving several two hour flights with a maximum height of 2500ft. It was mostly a rotor phenomenon, similar to that described by Henry Pantin in the last issue, p6.

The Sunday wave was more effective and Andy Townsend (ASW) made 9000ft and Charlie Douglas 5000ft in the club K-7. All the flights were made from the winch as the tug is in for servicing and a new engine.

We are going on an Easter expedition to the Borders GC at Milfield and there are plans to increase the club fleet with either a Dart or K-6.

We are hoping to run ten courses this summer and with the new clubhouse we can now offer accommodation, so drop us a line if you fancy a course in sight of Hadrian's Wall.

One feature of the clubhouse causing much comment is the 1in Ordnance Survey wall which extends from Berwick at the ceiling to Spurn Head in the stairwell.

J.W.

OUSE (Rufforth Airfield)

By the time this report is published our airfield should have gone to public auction and if all goes well we will own Rufforth.

The emphasis during winter has been on training flights. Wave is an infrequent visitor but members contacted it on two days at the end of January.

S.R.L.

PETERBOROUGH & SPALDING (Crowland Airfield)

We lost one of our tugs recently but have gained another glider — Mike Stillingfleet's Prefect.

Several members plan to fly in Regionals and task weeks and we will be represented in Competition Enterprise for the first time. We are finalising details with three other clubs for an Inter-Club League as suggested by Brian Spreckley in the December issue, p276.

Sustained and vigorous effort by several members has improved the access and clubhouse facilities. Our hangar is in a terrible state and will be the next project after the C of A work.

Our dinner-dance was substantially oversubscribed. John Williamson, National Coach, presented the awards and gave an enjoyable speech.

M.C.

RATTLESDEN (Rattlesden Airfield)

Despite the poor weather our launch rate is up on this period last year and our thanks to CFI, Colin Hitchman, and Mike Moyes for their splendid efforts. Mike has given a series of lectures and as a result five members have passed their Bronze C papers.

Our AGM saw Committee changes and we thank Brian Griffiths, Mick Irish, Colin Poole, Roger Davis and Pat Smith for their fine efforts over the year. Our first dinner-dance was a tremendous success with Joe Podolski as guest of honour.

The K-7 is undergoing major renovation work for its C of A. Congratulations to Dave Smith on going solo.

M.W.

SCOTTISH GLIDING UNION (Portmoak)

Thanks to the relatively mild winter, flying activity has been pretty steady over the last two months. Some quite decent flights have been made, the best in the cross-country book being a 215km triangle. Our Chairman has done even better though, with a 300km triangle while in Australia.

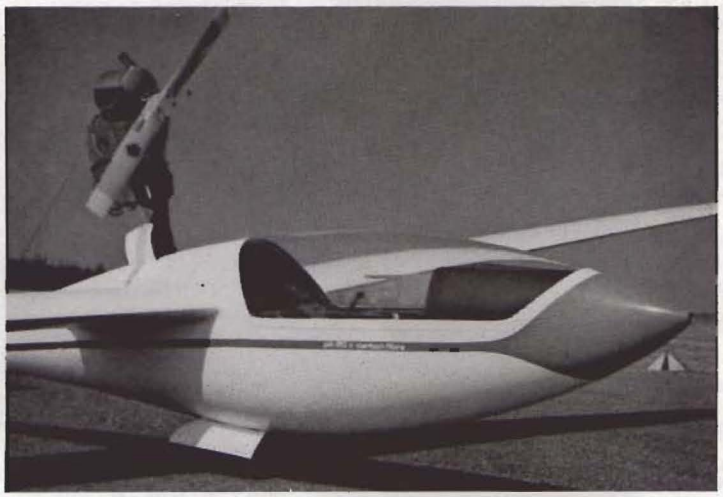
The club two-seater fleet is looking healthy — in addition to the immortal T-21s, we have two K-13s and the Bocian operational again.

The system tests of the retrieve winch system mentioned in earlier reports showed the need for some design changes for the production versions. While this is underway, the rebuilding of a cable-laying winch is being contracted out to a professional organisation and will be in use by mid-March. We hear, however, that a certain member has laid his hands on a Link trainer. Maybe we won't need winches.

R.H.

SOUTHDOWN (Storrington)

After a generally poor summer we are surprised to have achieved our highest ever cross-country kilometre total, although approx 2500km were flown in the last weeks



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of 1980 when good north winds meant that a number of fast 140km flights were flown along the length of the South Downs. These conditions brought an influx of visitors from Lasham — obviously eager for an exhilarating winter experience.

We congratulate Malcolm French on his first solo, Dave Hatfield on his Bronze and Jane Turner on becoming our first ever female to be a passenger carrying pilot.

We now have a Sport Vega on site — this beautiful aircraft receiving the attention normally reserved for a new born baby.

Our recently retired CFI, George Constable, has been awarded the BGA Diploma in recognition of his many years outstanding services to gliding.

The annual club AGM will be on April 4.

B.A.B.

SOUTH WALES (Usk)

The rains abated this winter sufficient for the field to remain flyable so that we could use the abundant wave. Ian Kennedy gained Gold height and on New Year's day the club two-seaters went to 12 000ft.

Congratulations to Will Sage on going solo. John Phillips, Ken Council, John Barry and Eric Fitzgerald have bought a Libelle and the club's Pirat is being repaired after a tiff.

The annual dinner in February was a great success. The club is indebted to all its instructors, Keith Richards and Ian Kennedy, who are running five public courses this summer and we look forward to the task week organised by Earl Duffin.

P.A.C.

STRATHCLYDE (Strathaven)

A 20 year extension has been granted to our lease so, finances permitting, improvements can be made to our hangarage. Our K-7 is having an extended stay in Yorkshire for major surgery.

A few members have formed a syndicate to build an EVANS VP2 powered aircraft which should take to the air in 1982, though unfortunately it isn't capable of tugging.

Our pre-season dinner-dance in January was very enjoyable and well attended.

P.A.

STRUBBY (Strubby Airfield)

We had little winter flying but Ray Bourner, Arthur Holmes and Paddy Stapleton completed their Bronze Cs by the end of 1980.

At our successful dinner-dance in December John Turney was presented with the Phil pot for the best cross-country by a non-Silver C pilot (a flight to Kirton Lindsey in the club Skylark 3) and Alan Ely received the Founder's cup for the best achievement (he completed his Silver C and gained an assistant instructor rating).

We are planning a film evening with our AGM in April.

As we are now restricted to the main E-W runway would visiting pilots (who are always welcome) please note that with the Heliport operating from the NW corner of the field we normally fly our circuits to the south side of the airfield.

P.B.

SWINDON (South Marston)

There are times when we have more instructors than pupils on the airfield, no doubt due to the combined effect of the weather and the recession. Another factor is that the bar is closed and being rebuilt by Steve Foggin, John Baxter and others.

At the AGM in December Pete Higgs was re-elected Chairman and there was a debate on the club fleet with the decision to defer a decision to next year (as we did last year!). Our annual dinner-dance is in February.

J.M.B.

TRENT VALLEY (Kirton Lindsey)

Our planned hangar extension for trailer storage has almost reached fruition and a proposed power line across the north-east approach has been re-routed after negotiations with the Electricity Board.

Several gliders have found new owners over the winter and others have been given smart new paint schemes. New arrivals include a Swallow, Pirat and Kestrel 19, bringing the total to 21.

Andrew Cullum went solo on his 16th birthday and John Gogan a day after his, while "Dixie" Dean and John Williams gained Diamond heights at Portmoak.

The year has started well with the first thermals on January 25.

J.R.S.

ULSTER (Bellarena, Co Derry)

Our Twin Astir spent part of January suspended from the roof of the King's Hall in Belfast, above the Hobbies and Holidays exhibition. Getting it there initially defeated the Royal Engineers but the problems were speedily solved next day by the (civilian) Mourne Mountain Rescue Team who had it swinging neatly in a brace of shakes. We are now hoping that the effort, together with extensive brochure-mongering, will pay off with a measurable influx of new blood — and subs.

Some good soaring in the early weeks of the year was coupled with difficult conditions on a semi-flooded field. The waterlogging encouraged weekend forays to the Dublin GC where the invariable enjoyment of the company has recently been enhanced by the shift of the pound against the punt which, with the exceptionally low price of Avgas in the Republic, makes flying pleasantly cheap for sterling visitors.

At the Dublin GC's dinner on January 30 the IGA announced its intention of awarding a tankard to any pilot flying the 217km, in either direction, between our field at Bellarena and the DGC's site at Gowran Grange. Not so much a milk run, perhaps, as the Guinness run, once the shuttling starts.

With two private K-6s on the field, and a third being rebuilt, Jerome Connolly and Charles Hill are adding a fourth, which they are collecting from Bavaria at Easter.

In its wisdom the Air Council has taken the "Brits Out" movement seriously and is withdrawing Des Gilmour to RAF Brize Norton in March. We shall miss him and it will be a quiet life — if not for Oxfordshire.

R.R.R.

VINTAGE NEWS

During 1980 we welcomed the Rhönsperber which Rodi Morgan and Fred Stickland have been restoring for the past seven years and another Kranich 2B-1 after a long restoration by Paul Williams. From Switzerland has come a Spyr 5 two-seater, immaculately restored by the Roth brothers. All three aircraft have been restored to prewar condition with transparent fabric.

From Germany has come a fine Goevier 2 and from Holland a Goevier 3 and a Slingsby Prefect, beautifully restored by Jan Vermeer. In America, Jan Scott has restored a Pratt & Read in authentic Navy colours. This is the only side-by-side two-seater to have ever been built in the USA. It was designed with three other high performance two-seaters to train America's troop carrying glider pilots during the war.

Our members are building six replicas, a Gull 3 by Mike Garnett; a JS Weihe by Doug Jones; a King Kite by David Jones; a Slingsby Falcon 1 by John Sproule and Ken Fripp's firm; while in Germany, Klaus Heyn is building a Rhönadler and in Hungary a team led by Imre Mitte is building a Vöcsök intermediate glider.

Restoration projects in Britain this year include a Kite 1 by Michael Maufe; a Scud 3 by Leslie Collins; an airbraked Kranich 2 by Mike Russell and a Grunau Baby 2B-2 by Geoff Moore. At the London Gliding Club work has started to restore the Minimoa, BGA 1639.

In Switzerland restoration of the 1936 Moswey 2 prototype has started. This was the first of the gull winged Mosweys and has a 13.8m span. It was flown by Heiner Müller in the 1937 Wasserkuppe International Contest.

Long distance cross-country flights last year included a 302km by Tony Smallwood (Gull 1) during competition Enterprise and an almost 300km cross-country by Karl Suter (Spalinger S-16) from Switzerland to near Innsbruck, Austria.

Only one of our 1980 Rallies, the International Rendez-Vous at Lasham, had good weather. Congratulations to Colin Street, Rodi Morgan and Lasham on organising a particularly successful event.

This year has started badly with Rodi Morgan having a bad accident while taking-off in an RF 4 at Shoreham but the latest news is that he is recovering and we send him our best wishes for a speedy return to health.

The Ninth International Vintage Rally will be at Burg Feuerstein Airport, Nr Nürnberg, from July 25 to August 2, with some of our members meeting during the previous week for a Rendez-Vous Rally at the Malden GC, nr Nijmegen, Holland.

C.W.

WOODSPRING (Weston-Super-Mare)

Our thanks to Stan Jennings for organising our Christmas party and to Angelos Yorkas for the use of his Grand Central Hotel at Weston-Super-Mare — a great time was had by all.

The Hutton ridge continued to do its stuff throughout November and December with Harry Chaterly completing his Bronze C and Stan McCaffrey his two half-hours. Bob Shef-



Barry Hogarth, CFI, working on his Club Libelle in Woodspring's winter hangar! Photo: A. J. Hume.

field was very unlucky not to complete his five hours.

John Horrill's Jantar trailer was completely destroyed in the gale force winds on January 3. Fortunately the aircraft, together with the CFI's Club Libelle and the syndicate 463, was in the ballroom of Angelos's hotel being prepared for its C of A. Not for some pilots the rigours of a drafty old hangar.

A.J.H.

WYCOMBE AIR PARK (Booker)

It has been a quiet winter at Booker with poor weather and (presumably) the recession combining to produce some days when instructors have outnumbered pupils on the airfield!

Plans for 1981 include two-day courses as well as the usual five-day and evening ones.

LASHAM REGIONALS

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The two-day courses can be arranged at weekends, if required, and this will be made possible by the new system of duty instructor rostering starting in February. There have been several films shown recently and we were represented at the Skiing Exhibition in London.

We were saddened by Vic Bailey's death in a car accident before Christmas. He has been in gliding since Dagling days and will be remembered for his very skilful engineering and happy, energetic approach to club work.

A group of aspiring solo pilots recently went to South Africa to do great gliding deeds and came back muttering darkly about the weather. It seems that the UK isn't the only place where it rains all the time!

E.W.

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SERVICE NEWS

BICESTER (RAFGSA Centre)

At our AGM in December it was reported that it had been another generally successful year although launches and hours were less than in 1979. We welcome back Air Cdr Max Bacon as Chairman and thank Grp Cpt Peter Saundby for his efforts and enthusiasm during his year in the post.

Malcolm Medland was presented with the Delafield trophy for the best 100km flight and George Young received the Daniels trophy as the member doing the most on the support side. The Best Novice award went to Colin Barnfather. Sally Cant was thanked for her excellent catering efforts. The AGM was followed by dinner and dancing.

The mild winter has given us a good tally of launches. Andy Gough continued the tradition by having the first flight of the year on New Year's day.

The first 1981 Joint Service gliding course at the beginning of February was very successful and the assistance given by GSA instructors from other clubs much appreciated.

J.W.

CULDROSE NAVAL (Culdrose Airfield)

We had a busy winter. Due to Service needs we moved lock, stock and barrel to the other side of the airfield. The clubhouse must be unique being underground and bombproof!

We replaced the engine in G-BCGC, our civilian Chipmunk, the money being raised from various non-public funds. Thanks mainly to ex CFI, Paul Williams, who has now left the Service, Golf Charlie will once again join the Service Chipmunk.

Jock Pilch has taken over from Paul as CFI, Pete Ferris is the new Treasurer with Rod Davies as Secretary.

Our first soaring day of 1981 was on January 25 when all three gliders soared a

YORKSHIRE (Sutton Bank)

The list is open for the Northern Regionals, brought forward one week to July 25-August 2 and restricted to 40 entrants. Our holiday courses are filling up and we are again going to have extra ones in October with half instead of full board.

The BGA Twin Astir was with us for the winter and much used. Last year seven members gained Silver Cs and this season has started well with wave. Adrian Hatton shot to the top of the club ladder with a wave flight to more than 14 000ft from the winch.

W.R.B. and J.R.

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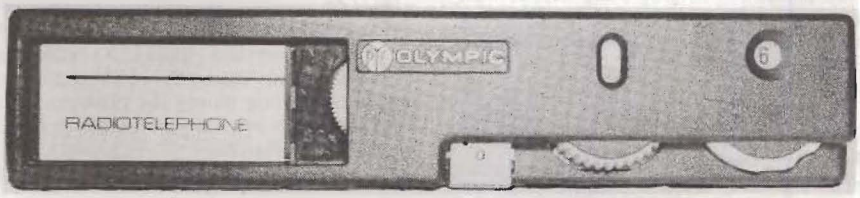
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cloud street over the coast. The Pirat was airborne longest with 51min off the wire.

Any visitors wishing to sample Cornish soaring are welcome but it would help if they contacted in advance the deputy CFI, G. Kosak, on Helston 4121 ex7196 during working hours.

H.M.D.

FOUR COUNTIES (RAF Syerston)

John Marriott gained his Diamond height at Dishforth over Christmas with Pip Barley just falling short. Nick Lewinton and Trev Jackson have their Bronze Cs and Mick Poole has gone solo.

The bus winch is now with us and will be a great asset in the summer. The Twin Astir is going soon but the Janus we are getting will more than make up for it. We hope the healthy number of students will continue through the year.

G.P.S.

FULMAR (RAF Kinloss)

Our annual expedition to Aboyne was uncharacteristically spoilt by inclement weather although Al Thompson did gain a Gold height. Back at base Jenni Duignan, Mike Newlands and Barry Fryett went solo.

Chris Jobling and John Morrice left in December with our good wishes. Tony Garrod made a good attempt at Bronze C while at Bicester.

Wally Grout was deservedly awarded the Man of the Year trophy at the AGM in December.

A.F.D.

HUMBER (RAF Lindholme)

We had a record 1980 for hours and launches and our Astir flew more hours in September and October than any other aircraft in the GSA. We have even had some soaring this year. On Saturday, January 24, Keith Mitchell managed 45min in the Astir and we achieved 93 launches.

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General information from The Secretary, 55 Moorfield Road, Duxford

Course details from R. Haddon, 54 Brampton Road, Cambridge

We are pleased to report that Tony Smith is out of hospital after his accident in October and making good progress.

Our annual dinner-dance was a great success. There were several committee changes at the AGM. Our thanks to Ray Ravenscroft, retiring Treasurer, for his work and we welcome Pete Kemp to that post. Paul Jenkins is back after an absence of six years and is our new deputy Chairman. Geoff Phillips has joined us from Germany and was elected MT member.

We are recovering our K-8 for the coming season.

K.M.G.

PEGASUS (RAF Gütersloh)

We said goodbye to Gary Lloyd, Bill Gordon and Bob Rae, our CFI, and welcome G. Ridgeway, P. McLean and L. Crane.

Poor weather has meant little flying during the last two months. Our K-8 is on its major, leaving us with two K-7s.

The RAFGGA AGM was at RAF Brüggen in January when we collected the NATO Challenge cup for the most improved club in the Association. While at Brüggen Bryan Parkhouse completed his Bronze C.

B.P.

WREKIN (RAF Cosford)

Our new flagship, the K-21, has arrived and been put to much use. John Smith and Andy Thompson have gone solo. We have a joint expedition with Fulmar to Portmoak in March.

Our congratulations to Mick Davis on gaining his PPL and my apologies to Barry Elliott and Helmut Smith for not mentioning in the last issue that they both were presented with trophies at the AGM.

J.L.R.

WYVERN (RAF Upavon)

During our mini expedition to Aboyne, Gerry Sturgess achieved Diamond height in a borrowed K-6E and Dave Lorraine Gold height with Brian Hemstock missing his Gold height by about 300ft.

Phil Wood changed syndicates from an Oly 2B to a K-6E. He recently completed his Silver C with five hours over Sutton Bank and in preparation for an instructors' course is now passenger flying.

Steve Moss just missed Silver distance and made his first field landing. "Stormy" Fairweather has completed Bronze C and Andy Harkins and Ian Benzie have a Mini Nimbus.

J.R.H.

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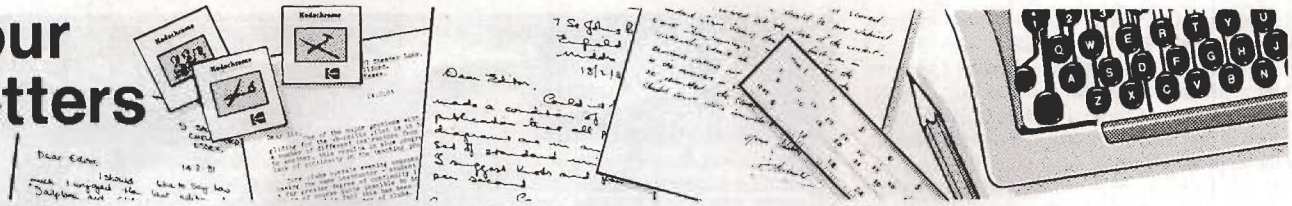
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DEREK DAVIS, Lasham Gliding Society, Lasham Airfield, Nr. Alton, Hants.
Tel: Herriard (025 683) 322

Your Letters



BROKEN TRIM SPRING

Dear Editor,

I noticed in the BGA Accident Summary in the October issue, p240, a W/O and injury accident involving an LS-1, the possible cause being one of the trim springs slipping off. This account implies that the risk applies only to the LS-1. But I have recently reported the breaking of one of the trim springs in flight in a more common type of glider, such as any of us might be flying.

The break occurred at a sharp bend of the spring at a wrap-around. Many gliders use a similar system of two opposing springs permanently in tension, parallel to elevator control line motion, where the difference in tension is the applied trim force.

Many gliders use artificial feel (appropriate to high speed safety) obtained by additional stiffness or tension of these springs. No doubt the method has the advantage of convenience for designers. The effect if one trim spring breaks is to apply a force which might be several times the maximum designed trim force to the elevator.

The resulting motion of the glider at medium speed (as happened to me) can be described as vigorous. At high speed I expect any glider would break.

Could the BGA possibly consider making a recommendation to designers that the trim spring (and the artificial feel spring) should be essential at right angles to elevator control motion, so that if a spring breaks the glider remains near neutral trim? Even this would be disconcerting enough for most of us.

ARTHUR PICKLES, **Farnborough, Hants.**

R. B. Stratton, BGA Chief Technical Officer, comments: The airworthiness track-record of glider trim systems is exceptionally good and therefore it is reasonable to suppose that periodic inspection of such systems can be relied upon to maintain such standards without modification.

SCORING SYSTEM NOT COMPLEX

Dear Editor,

Mike Fairman (see "Competition and Field Landings", August 1980 issue, p203) and your readers may be interested to learn that the place scoring system which he favours received wider exposure than Dunstable Regionals. It had been formally adopted by the BGA and used in the British Nationals and Regionals for full three seasons. Introduced in 1971 for its apparent simplicity it produced many iniquities and died a natural death in the autumn of 1973. Back copies of S&G have some illuminating correspondence on the topic!

The present system, based on one of the recommended CIVV models but with some UK mods, is in use because it works and works well. It is not true to say that it is complex: some formulae are necessary but an inexpensive pocket calculator is sufficient to produce rapid scores.

However the Committee (made up of live and caring individuals!) welcomes suggestions on scoring systems or on any other aspects of competition flying and all suitably prepared proposals (addressed to me, c/o BGA) will receive more than a fair hearing!

TED LYSAKOWSKI, **Chairman, BGA Competitions Committee.**

NATIONAL LADDER ENRICHED

Dear Editor,

The National Ladder is open to all and it is my feeling that its whole concept is enriched by having the very best standard against which to measure oneself. I would also strongly urge anyone who wants to attain the sort of standard Brian demonstrated in winning the 1980 ladder not to be contaminated by the sickly and almost paranoid ramblings of Roger Harlow in the last issue (p40).

Brian won because he had a glider, enthusiasm and above all the right state of mind

DAVE WATT, **Maidenhead, Berks.**

DOWN WITH 15 METRES

Dear Editor,

Platypus is right! (Last issue, p24.) 15 Metres are a disaster and two 15 Metre Classes in World Champs a universal catastrophe (a third 15 Metre Class — the Club — is waiting in the wings). The adoption of the 15 Metre (Racing) Class did nothing to advance the sport until 'enterprising manufacturers took it out of its Class by developing quick-change tips. We now have the farcical situation that in competitions you may increase your wing loading by pouring in water, but you are not allowed to achieve the same effect by dispensing with your tips!

I have received recently a letter from the BGA confirming their decision to insist upon FAI Class definitions for entry into British Nationals, thereby inflaming me to stoke this controversy. Having commented previously (see August 1978 issue, p190) upon the BGA's reluctance to put forward a reasoned case when instituting changes to Nationals rules, I must now conclude that what we are getting is not a change but a complete reversal of policy. Until this became evident the BGA seemed to be evolving a competition structure that favoured:

1) Proliferation of Classes to cater for the expanding range of glider performance.

2) Refinement of handicapping to reduce further the influence of the machine within these Classes.

3) "One design" competitions.

4) The retention of only one Class wherein entries were unrestricted so that the Champion in the Class reflected a "man plus machine" result, whereas the purpose of 1), 2) and 3) was to aim for a "best pilot wins" verdict.

The reversal of this policy has been implemented over the past three years by edicts that have:

1) Abolished the "Sport" Class.

2) Abolished handicapping.

3) Instituted FAI definitions of Classes that not only effectively preclude from Nationals many popular types of older glider, but ignores the growing gaps in performance between Open Class gliders.

For what purpose, may we ask, has this somersault been executed? I can imagine only that this is an attempt to mould our Nationals to serve World Championship ambitions, whereas the Class definition by "speed index", which the BGA has condescendingly bestowed upon Regionals, would be more suited to our Nationals needs. If other Regionals organisers react in the way that Lasham has (see advertisement in the last issue, p33) there will undoubtedly be a demand for a Nationals with Classes defined in this manner and it surprises me that the BGA is unable to foresee such a development. Maybe not everyone will agree with the demarcations drawn by Lasham, but this system is less likely to inhibit the production of the cost-effective gliders that Platypus advocates, than the existing FAI nonsense.

The value of our National Championships in demonstrating advances that can be emulated in our clubs should be beyond question. I fear that if the BGA slavishly follows the current FAI trends, this value will become increasingly obscure.

CHARLES ELLIS, **Ilford, Essex.**

Ted Lysakowski, Chairman, BGA Competitions Committee, comments: Many would agree with Charles that the 15m limit was arbitrary 25yrs ago when devised for the Standard Class and even more so for a new Class introduced in the mid-70s. *But* that is spilt milk. The 15 Metre Class is here: pilots have voted it in with their feet and pennies, haven't they? And if it is tipped to develop into a 17 Metre Class so much the better — that would be a triumph of common sense over rules and science! The current Nationals structure reflects the views of a

sizeable majority of those who take interest. Competition minded pilots tend to fly competition gliders. Lasham, RAFGSA and others have been splitting Regionals by speed index for at least five years and this worked very well, but produced no pressures to re-introduce the handicapped multi-tier Nationals which produced their own anomalies. But it is a changing world and if there is demand for a new structure, let us hear it either through these columns or the BGA office. So far Charles is in the minority of one.

PLATYPUS AND ARM-CHAIR PILOT

Dear Editor,

Platypus — I'll take your money! Your locked-flap 16½m ASW-20L *ought* to be better than the flapped 15m ASW-20 over the speed range appropriate to its fixed setting, one hopes, but above or below these speeds it will be worse. Its wing section is designed to be used with correctly set flaps, and without this there is a very considerable drag penalty, or increase in stall speed, or both, at the wrong settings. There are good "wide band" unflapped sections but they cannot match a good flapped one. I think you would find that a very good unflapped 17 or 18m might just about match a top flapped 15m — possibly even a bigger span to beat one with the latest sections.

Arm-Chair Pilot — can you explain the fashion to say that your speed ring or director should be set to the expected value of your next climb? I see nothing in the derivation which says that you cannot climb and then cruise at a speed set by what you have just achieved. At least three vario advertisements now say this and so does an article in a recent *Soaring*.

JOHN GIBSON, **Lytham St Annes, Lancs.**

The Arm-Chair Pilot writes: The decision about how fast to fly during a glide is made as you *leave* a thermal, so why should how long you took to get to that point influence the decision? You might even have got there by aerotow! If you cannot convince yourself that the past is irrelevant, you will just have to read the detailed arguments, starting with the original "Arm-Chair Pilot" in S & G, October 1964, p364. Helmut Reichmann's book *Cross-Country Soaring* contains the best recent account.

COMMENT ON S&G CRITICISM

Dear Editor,

Val Carter's complaint in the last issue, p41, that S&G contains no articles for beginners has been heard before, though only very occasionally, in the history of the magazine. The trouble is that elementary articles in the plural lack the variety of the advanced ones, and a whole series of them would involve saying the same thing over and over again — who wants to be told more than once that if you push the left pedal the glider turns to the left? Nevertheless there is one piece of advice which seems to need constant repetition; how to avoid a spin, how to recognise it when it starts, and how to stop it.

A. E. SLATER, **Cambridge.**

FORTHCOMING EVENTS

APRIL 2-MAY 3: Swiss Nationals, Birrfeld.
MAY 2-4: Arctic Lite Gliding Championship, Dunstable.
MAY 5-14: Inter-Services Regionals, Greenham Common.
MAY 16-25: Nationals, Open/Standard Class, Greenham Common.
MAY 24-JUNE 7: 17th World Gliding Championships, Paderborn-Haxterberg, W. Germany. (Practice week May 16-23.) (Also including OSTIV Congress and International Youth Camp.)
MAY 24-JUNE 7: International 15m and Standard Class Contest, Eskilstuna, Sweden.
MAY 30-JUNE 7: East Midland Regionals, Buckminster GC, Saltby.
JUNE 13-21: Western Regionals, Bristol & Gloucestershire GC, Nympsfield.
JUNE 14-28: Dutch Nationals, 15m Class, Terlet.
JUNE 14-JULY 5: 4th Trans-European Rally, Angers, France.
JUNE 16-25: USA Nationals, Open Class, Ionia County Airport, Michigan.
JUNE 27-JULY 5: Competition Enterprise, Herefordshire GC, Shobdon.
JUNE 28-JULY 5: Inter-University Task Week, Duxford.
JUNE 30-JULY 9: USA Nationals, 15m Class, Douglas Airport, Minden, Nevada.
JULY 6-18: Dutch Nationals, Standard Class, Malden, Nijmegen.
JULY 6-18: European Motor Glider Contest, Burg Feuerstein, W. Germany.
JULY 11-19: Husbands Bosworth Regionals, Coventry GC, Husbands Bosworth.
JULY 14-23: USA Nationals, Standard Class, Hobbs Airport, New Mexico.
JULY 25-AUGUST 2: Lasham Regionals, Lasham GC, Lasham.
JULY 25-AUGUST 2: Northern Regionals, Yorkshire GC, Sutton Bank.
JULY 25-AUGUST 2: 9th International Vintage Rally, Burg Feuerstein, W. Germany.
AUGUST 3-15: 6th Europa-Cup Two-Seater Contest, Poitiers-Biard, France.
AUGUST 8-16: Booker Regionals, Wycombe Gliding School, Booker.
AUGUST 8-16: Enstone Regionals, Enstone Eagles GC, Enstone.
AUGUST 22-31: Nationals, 15m Class, London GC, Dunstable.

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ODE TO ANGUS

(see last issue, p17)

There once lived a big bull called Angus,
Who was Honest and Noble and True —
Who knew nothing of sailplanes or gliders
Of thermals cloudy or blue.

He lazed drowsy days in his pasture —
A field which was long, smooth and flat
A life which was pleasant but lonely
(Though Rollings would now see to that)!

He didn't ask much from his owner
Just to visit the cows once a year
The prospect of this kept him happy —
Till that day when his future was queered.

Now Angus was somewhat dumbfounded
To see such a monster arrive —
He stomped over and looked a bit closer
"Och Aye! Is it really alive?"

It appeared to be Manna from Heaven
A change from a diet of grass?
He nibbled a bit of the wingtip —
(Found dope to be nicer than glass).

But then poor old Angus heard voices —
And the words made him shudder with fear
To be taken as steak for fund raising?
To be eaten — still raw — by next year?

So came the demise of poor Angus
Who'd never done anyone harm —
His misfortune was living in Scotland
Wrong County, wrong time AND WRONG FARM!

So Chris, as you chew on each morsel
As you swallow poor Angus (still raw)
Spare a thought for that bull now in heaven
Lest he's tempted to even the score!

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BOOK REVIEWS

1981 British Soaring Yearbook compiled by Gordon Camp. Published by Gordonair Ltd at £2.25. Available from the BGA at £2.45 including p&p.

Well done Gordon Camp. For a few years now a number of people (including me) have been bemoaning the lack of a gliding yearbook and vaguely thinking of doing something about it. Now Gordonair has filled the gap and let's hope the sales of the **1981 British Soaring Yearbook** are sufficient to make it the first of a long line.

The **1981 BSY** has a foreword by Bill Scull, lots of information that could only have come from Barry Rolfe and, to quote the introduction, "the blessing of the BGA" (a way of saying all possible assistance short of money). A glance at the contents shows it would have been well nigh impossible to publish such a yearbook without the BGA's help. It's a glider spotter's bible: every glider currently registered with the BGA is listed with owner and usual flying base. From which you can glean: that the coveted AAA registration letters have been issued to a Scud 2 (well done BGA!); that there are still some Jaskolkas flying (haven't seen one for years); just how many ASW-20s, Mini Nimbuses, PIKs, Vegas etc have actually been sold in the UK (some surprises here) — as well as discovering precisely who else in the country had the good sense to buy the same type of ship as you.

The other section I dipped into straight away was "Who's who in British Gliding". Around 50 brief biographies of all the names you know. Fascinating to see the gentlemen who are shy about quoting their date of birth! And of course there are all the lists you would expect to find: current record holders, all the gliding clubs and weather forecast offices (with phone numbers), who has got three Diamonds and who the new 750km diploma, leading finishers in recent Nationals and World Championships, and a useful résumé of 1981 airspace regulations as they affect gliding. Some 14 pages are taken up with a diary which I cannot see many pilots using; the first few months are already past us and I certainly will not be keeping my copy in the trailer to use as a DI record as is suggested.

More than thirty advertisers have supported this first **BSY** and it's useful to have details of so many suppliers in one place. Perhaps in future editions this could be taken further with suppliers and service providers listed editorially by category? Another addition I would like to see is a summary of the regulations that affect British pilots wanting to fly overseas.

And could we also have some independent comment on the state of the art as each new year starts? The kind of thing those on the inside track talk about endlessly: Dick Johnson's latest flight test reports, what's coming from the glider manufacturers, how much people are actually paying for their insurance, the latest instruments and just how good they are, etc. Meantime we must thank Gordon Camp for producing an accurate reference book that all gliding enthusiasts will find useful.

ROGER BARRETT

Be a Better Pilot by Alan Bramson. Published by Martin Dunitz at £7.95. Available from the BGA at £8.50 including p&p.

The author's books are widely read and for those who know his work it will be difficult to resist the title of his latest work. The book runs to 239 pages and is pleasingly presented with clear two-colour diagrams. Its 12 chapters, with the exception of one on twins and the other on seaplanes, are wholly relevant to any pilot and deal with preparation for flight, operating from strips and private fields, instrument flying, crosswinds, weather induced accidents, engine failure, handling faults and engine handling.

The book is really about being a better airman and, to my mind, makes eminently suitable reading for any pilot but pilots under training or flying unsupervised should not be without a copy. Mr Bramson has a way of conveying that "it could happen to me" and since most pilots think otherwise clearly it is a book all pilots should read. The style of writing is sometimes humorous, occasionally cynical, but this only serves to emphasise some of the fundamental points he (the author) makes so well.

W. G. SCULL

FIRST 1981 CROSS-COUNTRY?

Ivor Shattock flew a Pirat 30km from Talgarth to Usk on Jan 10 and asks whether this is a record for the first "deliberate" cross-country this year.





classified section

Advertisements, with remittance, should be sent to Cheiron Press Ltd, 7 Amersham Hill, High Wycombe, Bucks. Tel 0494 442423. Rate 25p a word. Minimum £5.00. Box numbers £2.00 extra. Replies to box numbers should be sent to the same address. the closing date for classified advertisements for the June/July issue is May 7, a.m.

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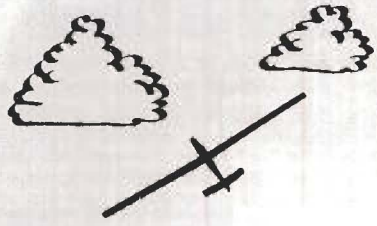
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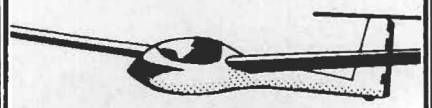
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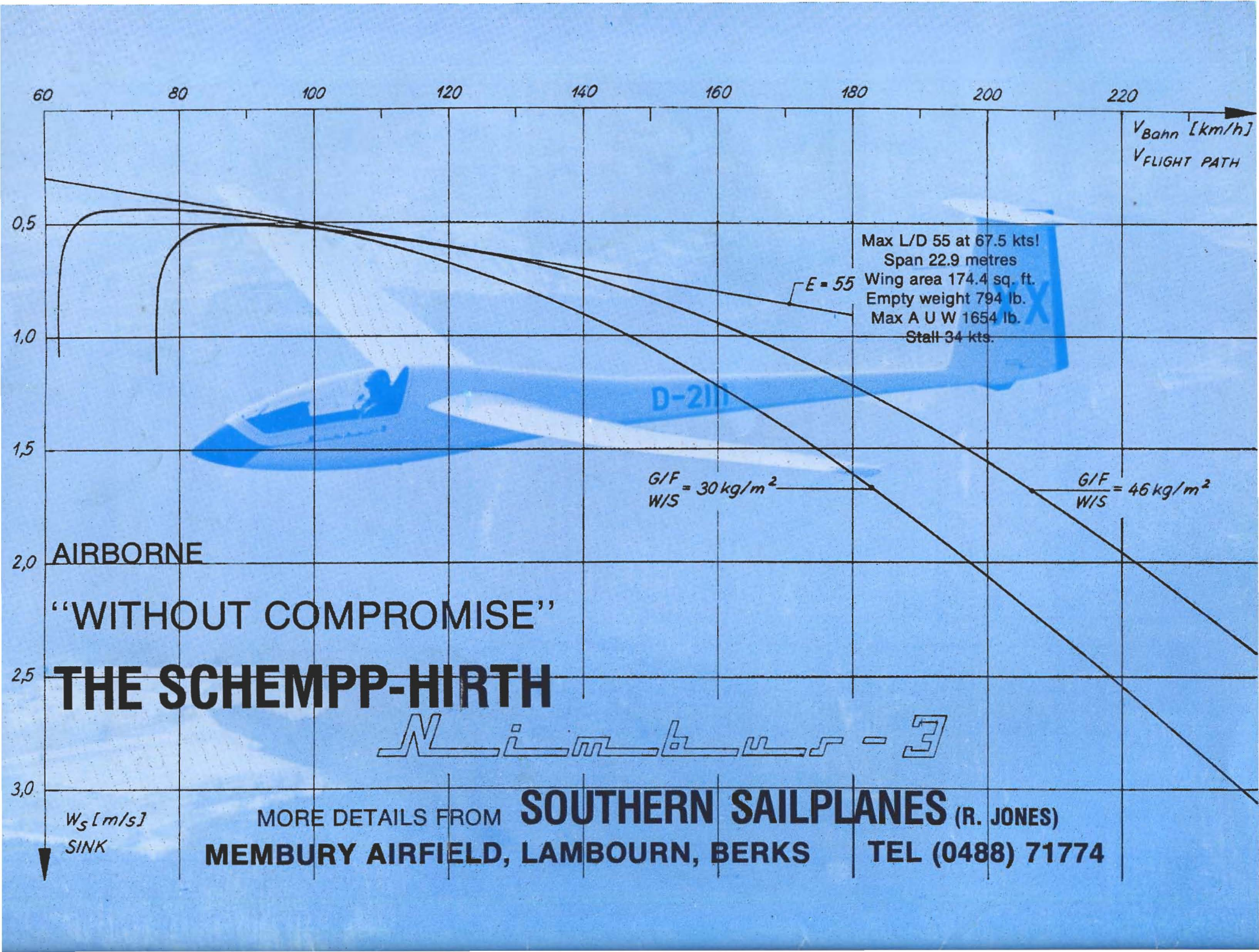
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