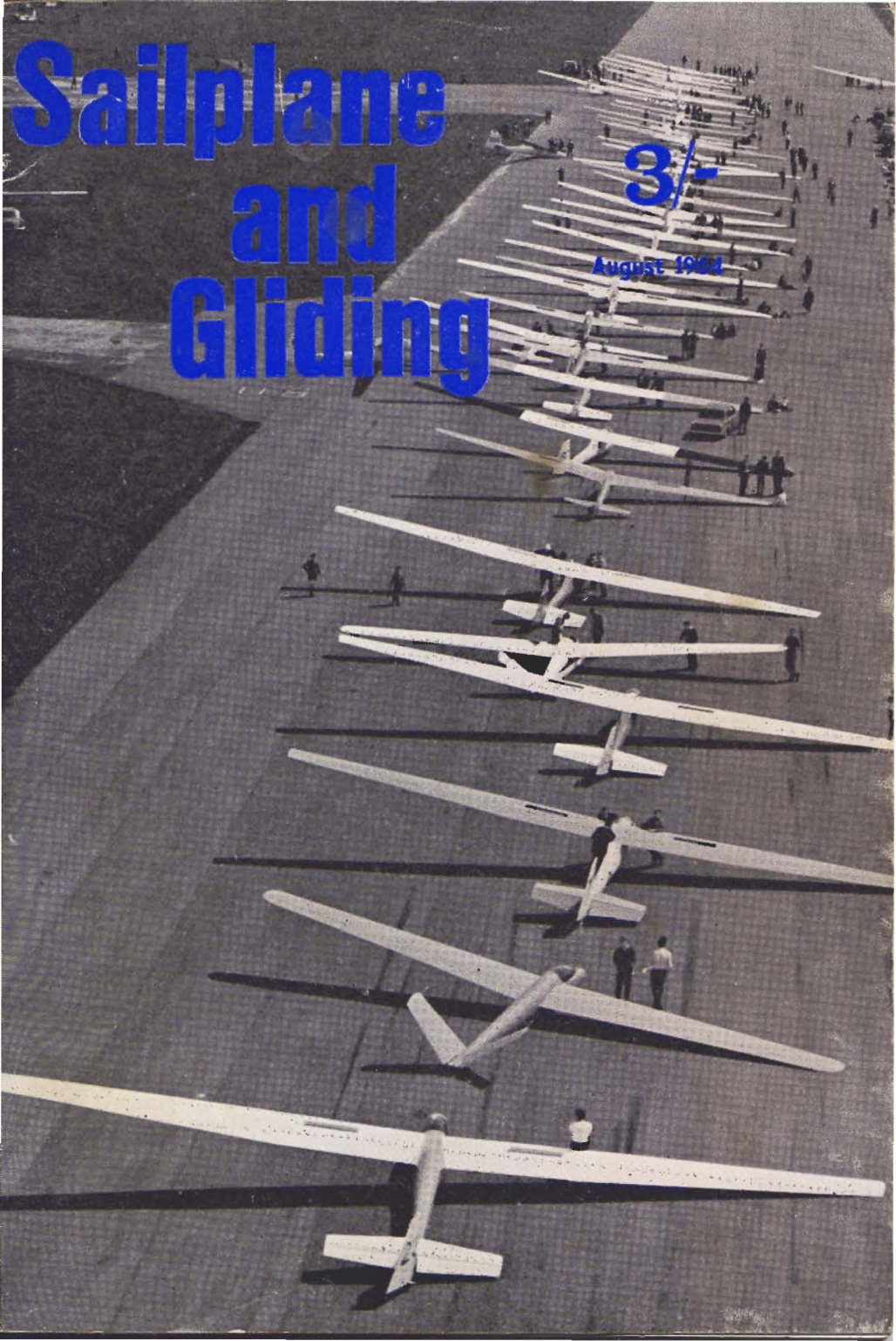
Sailplane and Gliding

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August 1964





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SAILPLANE AND GLIDING

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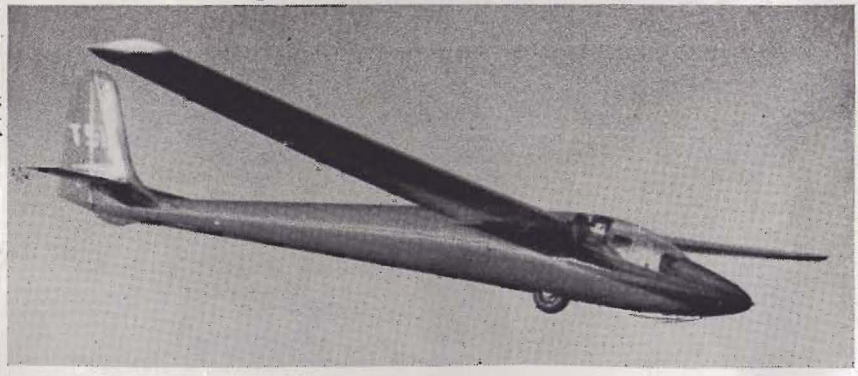
The SKYLARK 4

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PIONEERS OF BRITISH GLIDING

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SEPT. 19th
GIVE FOR THOSE WHO GAVE

LORD BRABAZON OF TARA

ON Sunday, 17th May, an era came to an end: our President, Lieutenant Colonel the Right Hon. John Theodore Cuthbert Moore-Brabazon, P.C., G.B.E., M.C., first Lord Brabazon of Tara in the County of Kent in the Peerage of the United Kingdom. died after a short illness, at the age of 80.

TO say that "Brab" was 80 is to mislead, for he was younger in heart than most of us to the end. He went down the Cresta Run in a bobsleigh on his 70th birthday, and drove a Mercédès at 115 m.p.h. last year.



He was a gentleman of the great order: brilliant, kind, witty, clever, industrious and tirelessly interested in life and living. He was a wonderful public speaker, endlessly entertaining in drawing on his store of adventure and experience.

Gliding attracted exactly the sort of people and qualities which he liked, and since becoming our President he has always been available to use his influence on our behalf. Amongst his multitudinous engagements, he could always find time to come to our Annual Dinner or give the prizes after our National Championships.

I was honoured by an invitation to an official Government lunch given him in February on his 80th birthday, and his speech on that occasion brought tears to the eyes of some of us, for it was a paean of thanks that he had been born at this of all times, when the world offered so much adventure to those worthy and willing to take it.

"Brab" was one of the reasons why most of us don't emigrate. May our country produce more like him, for the need is desperate.

P. A. W.

1965 World Championships News

THIRTY countries have indicated their intention to enter.

The actual number who will come, and the actual size of the total entry, will not be known until 30th September next, by which date final entry forms (which have now been posted) must be to hand with a £100 non-returnable deposit.

Efforts are still being made to reduce the £250 entry fee, but so far without success.

Hiring Gliders

Gliders for hire to visiting pilots will be available on the following terms:

1. Open and Standard Class gliders will be available for visiting teams who cannot bring their own equipment.

2. The hire charge, which will include glider, parachute, barograph, trailer, car and insurance cover, is:

(a) One glider per National Aero Club £75

(b) Second and subsequent gliders £125.

3. The equipment is being made available by clubs and private owners, and most owners ask that *one* member of the pilot's crew should be provided by them.

4. As owners will be involved in some expense in preparing their equipment for the championships, we would ask for payment at the time of booking, or at least by 31st March, 1965.

5. Gliders will be booked on receipt of remittance, and the first allotment made in October, priority being given to the first glider for each National Aero Club remitting by 30th September, 1964. Subsequent allotments of gliders will be made as later remittances are received.

6. It will not be possible to supply particular glider types on demand.

General Information

Preliminary information circularised is as follows:

1. The Championships will take place at the R.A.F. training airfield, 7 kms. S.E. from Cirencester. It is grass with no runways. The longest run is about 1,000 metres, and the approaches are good. The latitude is 51° 41′ N. and the longitude is 01° 53′ W. Height A.S.L. 360 ft. The surrounding country is open with good fields. It is gently undulating with low hills. The distance from London is 140 kms.

2. Accommodation will be in dormitories of 40 beds, in permanent brick buildings on the airfield. These are light and airy with good washing facilities. There is accommodation for women team members in another building nearby.

3. Meals will be provided in the R.A.F. canteens on the airfield. There will also be refreshments available in the central operations area.

4. There will be a club with television, bar, also a cinema, Post Office and money exchange facilities on the airfield.

5. There will be an information office on the airfield to help competitors with queries on many subjects including entertainments, car repairs, or business arrangements.

6. Launches will be by R.A.F. Chipmunk aircraft to 2,000 ft.

7. Arrangements for barograph control and battery charging will be provided. (The electrical supply is 240 V. AC 50 cycles.)

8. If oxygen bottles will require refilling, the maximum pressure must be painted on the bottles in pounds per square inch or kgs. per square centimetre. A spare charging adaptor should be brought.

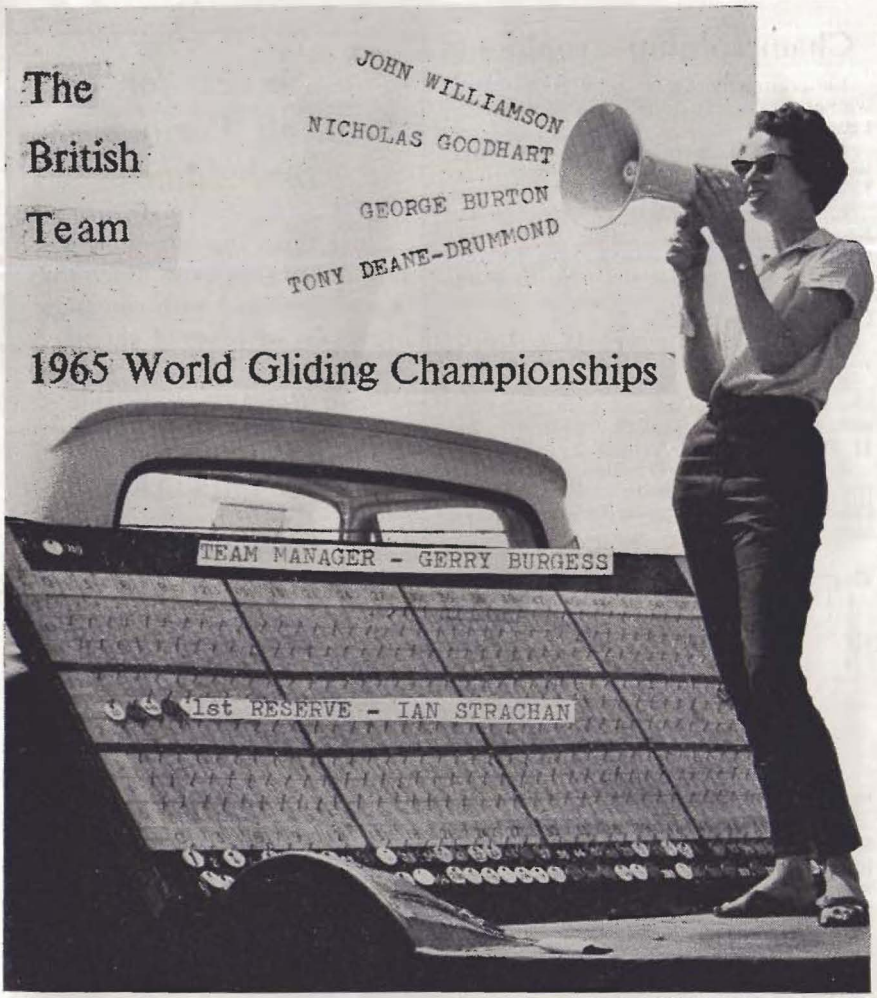
9. There will be glider repair services, and a large workshop space where competitors can do their own work.

10. Gliders will normally be housed in their trailers, but there are two large hangars where they can be left rigged at owner's risk.

11. Team Captains should bring a gramophone disc of their National Anthem, also a National flag about 2 metres long.

12. The next communication will include the rules and regulations, and maps.

The B.G.A. is electing all members of visiting teams as Associate Members during their stay in the U.K.



Flying Officer J. S. WILLIAMSON : Aged 35, is married with one son. His Swedish-born wife is also a Silver C pilot.

Captain H. C. N. GOODHART, R.N.: Aged 44, is married to an American. Inventor of the mirror deck-landing sight.

G. E. BURTON : Phycisist. Aged 33, married with two step-children. Expert on glider instrumentation.

Brigadier A. J. DEANE-DRUMMOND : Aged 46, is married with four daughters. He is the author of the book "Return Ticket".

1st Reserve — Flight Lieutenant I. W. STRACHAN : Aged 26, married. He is Captain of a flight refuelling "Valiant".

2nd Reserve — A. J. STONE : Airline Pilot. Aged 31, married with one daughter.

Team Manager — P. G. BURGESS : Civil Engineer. Aged 37, married with one son. Was reserve pilot in Argentina in 1963.

Championship Trophies

LONDONDERRY CUP.—John S. Fielden, winner of Individual Championship, League 1.

FURLONG TROPHY.—A. W. Doughty, winner of Individual Championship, League 2.

L. DU GARDE PEACH TROPHY.—D. C. Kerridge and A. D. Purnell, winners of the Team Championship, League 1.

FIRTH VICKERS TROPHY.—M. S. Hunt and M. J. Smith, winners of Team Championship, League 2.

PAN AMERICAN TROPHY.—D. F. Innes, winner of Standard Class Championship.

KEMSLEY CUP.—Surrey Gliding Club, entrant of highest placed club glider in either League: Skylark 4 flown by D. P. L. Scallon in League 2.

EoN CUP.—J. S. Fielden, entrant of the highest-scoring British-built glider of the type most strongly represented: Skylark 3.

Daily Winners

Day	*League* 1	*League* 2
1	I. W. Strachan	V. C. Carr
2	R. A. E. Dunn	R. A. Sandford
3	J. S. Fielden	P. D. Kevan
4	D. B. James	—

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Practice Week For The Nationals

THIS year, as usual, just prior to the Nationals, the R.A.F. Gliding and Soaring Association and the Army Gliding Association held a combined practice week at Lasham. The aim of this week is not the intensive flying of daily tasks, but to ensure that the administration and organisation of the Service camp is running smoothly before the Nationals start, that each competitor is properly equipped and has a full and tried crew, and to give some reasonable competitive soaring practice to pilots, some of whom had had no soaring practice at all this year.

The weather was not too good for the first few days, but improved rapidly as the annual "Nationals anticyclone" moved into place. Two speed tasks were flown on the two days immediately prior to the opening of the Nationals. These were probably better soaring days than any during the period of the Nationals and gave valuable practice to those pilots who needed it.

Thursday, 14th May

Ian Strachan set a triangle: Lasham-the White Horse at Yatesbury-Culham Airfield-Lasham, and collected 1,000 points, obviously trying! Only four of the twenty Service competitors fell short of the finishing line, and retrieve crews, most of whom had stayed at Lasham, had an easy time.

Friday, 15th May

Out-and-Return to Henstridge Airfield (west of Shaftesbury). Start and finish line timing was by stop-watch to the nearest second, which was just as well, as Ian Strachan pipped Pete Dawson by just 5 seconds. Both were awarded 1,000 points.

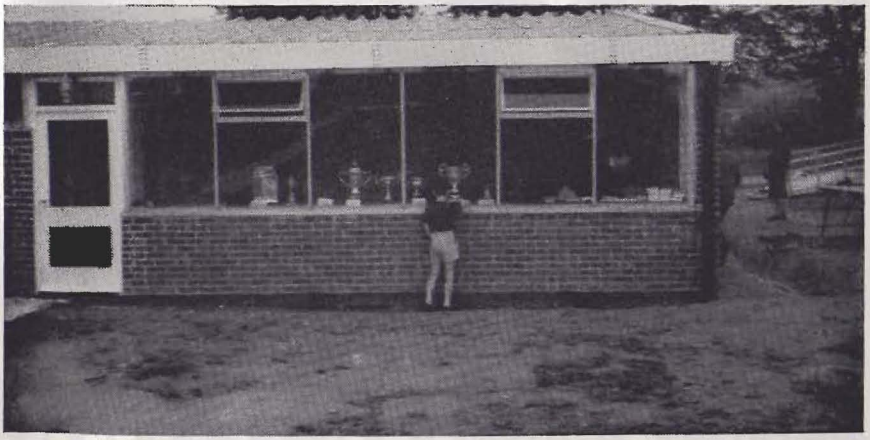
Details of the results are given in the accompanying tables.

K. R. S.

R.A.F. G.S.A. PRACTICE WEEK

Final Posn.	Pilot or Pilots	Comp. No.	Sailplane	May 14th mph	May 14th Pts.	May 14th posn.	May 15th mph	May 15th Pts.	May 15th posn.	Total pts.
1.	I. Strachan	233	Skylark 4	36.1	1000	1	34.4	1000	1=	2000
2.	P. Dawson	16	Skylark 4	31.5	830	4	34.4	1000	1=	1830
3.	A. Deane-Drummond	58	Dart	29.8	775	8	33.6	968	3	1743
4.	R. Dunn	258	Skylark 4	31.4	827	5	28.8	790	7	1617
5.	J. Delafield	334	Dart	29.9	778	7	30.0	830	6	1608
6.	D. Spottiswood	75	Olympia 419	30.5	798	6	27.8	756	9	1554
7.	G. Coatesworth	90	Olympia 403	20.3	521	16	33.5	962	4	1483
8.	N. Kearon	86	Olympia 419	28.1	723	10	26.3	708	12	1437
9.	J. Croshaw	73	Skylark 3	26.8	685	11	27.0	731	9	1416
10.	E. Meddings & K. Fitzroy	118	Ka-6	23.6	598	13	27.3	740	10	1338
11.	D. Innes	175	Ka-6CR	21.6	550	15	28.3	773	8	1323
12.	J. Williamson	335	Dart	—	291	17	31.8	896	5	1187
13.	E. Stark	72	Olympia 419	32.4	862	2	—	218	16	1080
14.	P. Hanneman	24	Olympia 460	26.4	673	12	—	297	15	970
15.	P. Kevan & W. Pickles	249	Olympia 463	29.2	756	9	—	196	17	952
16.	A. Gough	205	Olympia 419	32.2	858	3	—	—	—	858
17.	D. Austin & A. Loveland	131	Olympia 460	23.5	595	14	—	176	18	771
18.	J. Welsh & B. Goldney	348	Olympia 463	—	89	18=	24.0	640	13	729
19.	J. Evans	52	Skylark 3F	—	89	18=	22.3	594	14	683
20.	A. Somerville & C. Dorman	12	Olympia 460	—	89	18=	—	89	19	178
	Civilian Pilots									
2.	G. Burton	367	Dart	35.4	970	2	32.8	936	6	1906
3.	B. James	160	Skylark 3	34.4	936	4	33.4	958	5	1894
6.	W. Kahn	4	Skylark 3B	35.3	968	3	27.2	736	16	1704
7.	P. Wills	1	Skylark 4	29.8	775	11	30.9	865	8	1640
—	D. Carrow	20	Skylark 3B	—	—	—	30.5	849	9	849
—	M. Bird	214	Skylark 3	—	—	—	28.9	793	11	793
—	A. Warminger	44	Olympia 419	29.3	760	12	—	—	—	760
—	Rika Harwood	65	Skylark 3B	—	—	—	26.9	727	18	727
—	D. Kerridge	147	Skylark 3F	—	—	—	24.2	645	20	645
—	C. Richardson	161	Skylark 3F	—	—	—	23.5	626	21	626

These civilian pilots were timed across the start and finish lines but not necessarily round all turning-points. The positions shown are those they would have had if the Civilian and Service pilots had been combined in one list.



Will he ever win one of these Championship Trophies?



CC 76

never go without a CAPSTAN

THE NATIONAL GLIDING CHAMPIONSHIPS

Lasham, May 16th to 24th, 1964

NOTE.—*We are indebted to Mr. C. E. Wallington, who, with Mr. Russell Johnson, gave the meteorological briefings at the Championships, for the daily weather charts and the accompanying notes on each day's weather, which are printed in italics. (The charts are for mid-day on the dates shown.)*

FINAL positions in League 1 at this year's National Championships brought considerable surprise to those who were unaware of what the winner, John Fielden, had been up to during the past year or two at his remote club in far-off Devon. But after he had described his techniques to the Kronfeld Club later, the audience loudly applauded one of their number who expressed the opinion that his win was well deserved.

It appears that he has been in the habit of leaving work between 4 and 5 p.m., getting airborne between 5 and 6, and either soaring in the weakening thermals or catching the sea-breeze front and soaring along it till dark—if it lasts as long. These were just the techniques needed for this year's poor weather, both for the weak thermals on the first two contest days, and for the sea breeze coming in from the Lincolnshire and Yorkshire coasts on the last two.

The fact that three former British Champions were among the lowest 10 on the first day, though they worked up to higher positions later, can also be attributed basically to poor weather, for reasons which are evident from their articles in this issue. Another reason, we would suggest, is that there is a theoretical maximum performance for any particular task in given weather conditions, and as more and more pilots approach this maximum, it becomes less possible for an individual pilot, however highly skilled, to maintain an outstanding position.

How last year's champion, Peter Scott, would have performed is anyone's guess, as he withdrew his entry because of his commitment to sea instead of air sailing.

The accompanying table shows how

PLACINGS IN FOUR CHAMPIONSHIPS

Rating Position	*Pilot*	*League and Placing* 1964	1963	1962	1961
25	J. S. Fielden	1/1	1/25	1/18	2/2*
22	R. A. E. Dunn	1/2	1/13	1/17	1/39
18	J. D. Spottiswood	1/3	1/5	2/11	2/24*
30	D. D. Carrow	1/4	1/27	1/27	1/27
22	A. W. Gough	1/5	1/10	1/16	1/31
39	D. F. Innes	1/6	2/2	2/7*	—
9	D. B. James	1/7	1/22	1/15	1/12
14	I. W. Strachan	1/8	1/6	2/1	2/31*
41	P. Dawson	1/9	2/11	2/20*	2/24*
24	A. H. Warminger	1/10	1/9	1/30	1/43
5	A. J. Stone	1/11	1/4	1/10	1/7
29	N. W. Kearon	1/12	1/12	1/32	1/30
28	J. D. Jones	1/13	1/20	1/23	1/15
19	C. W. Bentson	1/14	1/28	1/24	1/13
62	A. D. Purnell	1/15	2/8*	2/17*	2/1*
13	R. A. Mann	1/16	1/30	1/22	1/14

* In partnership with one or more other pilot(s)

this year's leading 16 competitors have progressed in the last four successive Championships.

This year, on Contest days only, League 1 flew 16,040 miles in 780 hours from 176 launches, and League 2 flew 7,717 miles in 500 hours from 139 launches. There were also 175 launches on no-contest days. Aggregate figures for 3 years:

	1964	1963	1962
Miles	23,757*	39,290	58,971
Hours	1,280*	1,551	2,381
Launches	490	686	657

* On Contest days

Was this year's weather the worst ever? Probably not: there have been at least two worse occasions. In 1949, at Camphill, there were three competition days and the furthest distance of the meeting was 84 miles by Philip Wills. Then during the World Championships in 1954, also at Camphill, each Class had only four contest days in a fortnight, and though the longest distance was 106 miles by Rajn and Komac in the Yugoslav two-seater, they did it in waves, not thermals.

Saturday, 16th May

Nicholas Goodhart, opening this year's National Championships, pointed out that they were only the 9th, because up to 1950 these meetings were called "Contests". He congratulated the Lasham management on getting their splendid new clubhouse built, and Wally Kahn on raising the £20,000 needed to build it. Architecturally, he would like it to have included a "vertical feature" which, he said, would have to be "not so strong as a glider". Capt. Goodhart then, not unexpectedly, warned the assembled company about recent changes in the Airways; and finally, remembering a certain 400th anniversary, hoped the weather would be As You Like It, with no Tempest, and without further Ado About Nothing, declared the Championships open.

Giorgio and Adele Orsi, from Italy, who were flying *hors concours*, and Edward Makula, the World Champion, who would learn about England as a crew member of the Polish A.F.A. team, were welcomed by Ann Welch, who then set the tasks:—



SATURDAY, 16th MAY.—*With an anticyclone centred over E. Anglia winds over S.E. England were light, but dry thermals were limited in depth by an inversion at about 3,500 ft. above M.S.L. Thin cirrus cloud weakened the sunshine slightly, so thermals were seldom strong. Slight haze covered the course, but it was not thick enough to make navigation difficult. The southern edge of the cirrus cloud is shown on the map by the broken and hatched line. Towards the end of the afternoon cool air from the south coast reached Lasham and covered the last part of the course.*

LEAGUE 1: race round a 99.6-mile Triangle with turning-points at Upavon and Shillingford Bridge Hotel.

LEAGUE 2: race round a 72-mile Triangle with turning-points at Welford and Shillingford Bridge.

Thus League 2 shared half the second leg and all the third leg with League 1. The Hotel, it was explained, might be identified by the sight of bikini-clad figures on the lawn, but pilots must give their attention to the other side of the river, where the turning-point markers would be. The two Leagues were to have alternate launches.

Colin Richardson, of League 2, was first to leave the ground at 11.58, followed by Mike Bird, of League 1, at noon. League 2 had the shorter journey and 19 of them got round the course; they also produced the fastest speed — 29.6 m.p.h. by Vic Carr, and the slowest — 13.7 m.p.h. by Stuart Waller, who made the first two legs in two hours,

but took three hours over the third.

Eight of League 1 finished the course, Ian Strachan doing best with 26.7 m.p.h., in spite of getting stuck for a time over Tidworth army camp below the top of the adjoining hill, before reaching Upavon.

Thick haze was a nuisance to many, but not to John Fielden, as it enabled him to get away from the "gaggles" without being followed. Chris Hurst got high enough, at 4,100 ft. a.s.l., to see a brown haze horizon; but few people approached Wallington's forecast thermal ceiling of 4,500 ft., and Arthur Doughty spent most of the time below release height.



Briefing by Derrick Goddard.

On the whole, League 1 found their first leg to Upavon easier than League 2's first leg to Welford. But all found the last leg difficult, especially along the Thames valley, and many came down around Wallingford, south of the last turning-point. Some avoided the Thames by going "inland" over the Berkshire Downs; but Waller, who did so, found the only reliable thermal sources to be buildings, and hill-tops didn't work unless there was a cluster of buildings on them. On the other hand, Charles Ellis was of the opinion that it depended on the distribution of the cirrus patches far overhead. He could not actually discern their shadows, but where the shadows ought to have been, sailplanes could be seen on the ground. On the other hand, the air brewed up where the sun shone through a "tongue" of blue sky.

Fielden got back to Lasham nearly an hour after everyone else, at 18.40, by using evening thermals from woods and coppices.

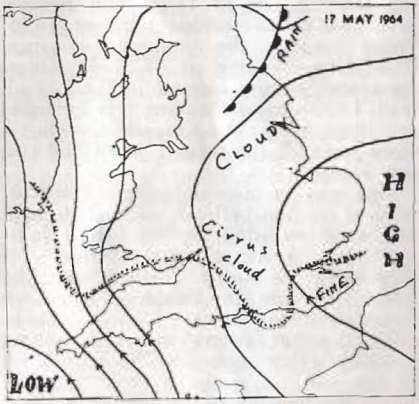
League 1: Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Strachan	Skl 4	26.7	1000
Dawson	Skl. 4	24.2	964
Jones	Skl. 3F	24.0	961
Gough	Oly. 419	23.9	960
Dunn	Skl. 4	22.4	940
A. Burns	Ka-6CR	22.2	939
Spottiswood	Oly. 419	21.6	931
Fielden	Skl. 3	20.1	914

League 2: Leading Speeds

Pilot	*Sailplane*	*m.p.h.*	*Pts.*
Carr	Skl. 4	29.6	1000
C. Riddell	Skl. 3F	23.0	813
Croshaw	Skl. 3	22.2	792
Minton	Skl. 4	21.9	786
Scallon	Skl. 4	21.9	786
Austin	Oly. 460	21.7	780

Sunday, 17th May



SUNDAY, 17th MAY.—*The weather situation had scarcely changed during the past 24 hours. Thermals were again limited in depth, but this time to about 2,500 ft. above M.S.L. — although an occasional thermal burst out of the haze top to about 3,500 ft. The broken cirrus cloud had retreated northwards a little, but still covered the course. Cool S.E.'ly winds from the sea again reached Lasham in the late afternoon and spread over the last few miles of the course.*

LEAGUE 1: Out-and-Return South Cerney, 103.6 miles in all.

LEAGUE 2: Out-and-Return South Marston, 82.8 miles.

Thus League 2 followed the same track as League 1 for four-fifths of the way. With the thermal ceiling expected to rise from 2,000 ft. at 10 a.m. to 4,000 ft. eventually, no one is believed to have exceeded 3,500 ft. a.s.l., so nearly everyone was crowded into the 2,000-3,500 ft. height band most of the time, though Fielden avoided the crush by keeping well to the east. Mackworth-Young selected 11.06 for the first launch, and thereafter all starting-times were filled on the board for the next two hours at 40 per hour. Pilots heeded the Chief Marshal's complaint at briefing that some people had been taking five minutes over hooking-on followed by "love and kisses".

Nobody completed the course in either League, mainly because the thermals on the return leg were weakening beyond the strength needed to combat the increasing contrary wind.

In LEAGUE 1 Dimock was first to cross the starting line at 11.46, and Fielden first round the turning-point at 14.25. Dunn made the longest distance, 92.5 miles, landing at 17.28 at Kingsclere and putting himself in the overall lead. Last reported landing was by Innes at 18.00 also at Kingsclere. Thirty-three rounded the turning point and two just reached it.

One way of circumventing the mathematical relation between thermal strength and contrary wind on the return journey was to use thermal "streets", if they could be found. Fielden used one which led him to Swindon, and Dan Smith, catching sight of three gaggles close together strung in a line along a valley which seemed to be hotting up in the sun, suspected a street so flew along the line, and sure enough a street was there and carried him well up wind, leaving all his circling competitors behind.

League 1: Leading Scores

Pilot	*Miles*	*Points*
Dunn	92.5	1000
Carrow	91.4	985
Spottiswood	90.0	966
Warminger	89.8	964
Bentson, Innes, Kahn and D. Smith ...	89.4	958

Leading Totals, 2 Days

Dunn	1940	Warminger	1695
Strachan	1920	Innes	1661
Spottiswood	1897	Carrow	1650
Jones	1757	D. Smith	1648
Gough	1750	Kahn	1623

In LEAGUE 2, Sandford was first across the start line at 11.39 and eventually won the day with the benefit of his Olympia 2's handicap, going 68.6 miles. Collins, in his Skylark 4, made longest distance with 70.9 miles. Sutcliffe was first round the turning-point at 14.40. Last landing was by Richardson at 17.55, near Kingsclere. Thirty-two rounded the turning-point and 3 others reached it. Chris Riddell took top place overall.

League 2: Leading Scores

Sandford	1000	Collins	869
Paul	917	R. Harwood	865

Coatesworth, Richardson and C. Riddell, 863. Doughty and M. Riddell, 843.

Leading Totals, 2 Days

C. Riddell	1676	Jerzycki	1576
Paul	1646	Rutherford	1572
Collins	1627	Doughty	1563
Loveland	1620	Snodgrass	1547
Scallon	1619	Dorman	1498

Monday, 18th May



MONDAY, 18th MAY.—*A trough of low pressure with thundery rain moved steadily eastwards across the country. The westerly airstream which followed during the early afternoon brought cumulus and good thermals, but winds*

were to 30 knots and more above 1,500 ft., and apart from a half-hour spell when cloud streets were present it was not easy to make headway into wind.

Philip Wills referred to the death of Lord Brabazon, and asked all to stand.

Due to weather, briefing was postponed till noon, when League 2 might be given a task; but when noon arrived, Ann Welch could only announce: "No task — no weather".

The R.A.F. arranged to provide two crews at a time, of four each, to control the Bank Holiday crowds: four to keep them off the grass and four to marshal their cars. Bill Bedford entertained them with an aerobatic display in a Hurricane.

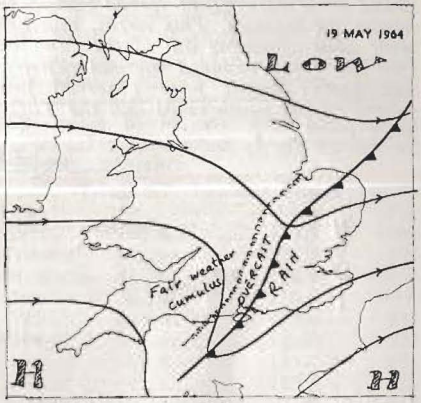
A story was going round that a lighthouse keeper in the far south-west had reported a wrong barometer reading and misled the Met. Office into believing that a front over Ireland extended further south than it did, and that our weather would be worse than it was.

A bottle party was announced to take place "in, round, under and over" the double caravan belonging to Sqn. Ldr. Donald Spottiswood, who was informed of the event a few minutes before it began. It grew and grew as a bonfire continued to send up thermals far into the night.



Bill Bedford (left) talks to Wally Kahn.

Tuesday, 19th May



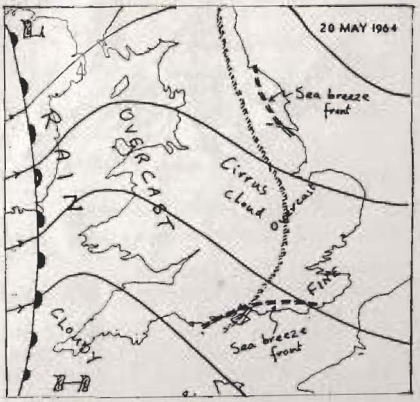
TUESDAY, 19th MAY.—*A cold front moved slowly across the country from the west. About 30 miles behind the front, low stratus and rain gave way to well broken cumulus which extended up to about 9,000 ft.*

LEAGUE 1: Distance along a line which shuttles between Halfpenny Green (Wolverhampton) and Lasham; i.e. "when you get there, come back here, and when you get here, go back there."

LEAGUE 2: Shillingford Bridge Hotel and Free Distance thereafter.

At a later briefing the tasks were cancelled, but League 1 could do unofficial marked flights, and Brennig James got as far as Honeybourne, 72 miles.

Wednesday, 20th May



WEDNESDAY, 20th MAY.—*Cirrus cloud ahead of a warm front spread eastwards across the country. This cirrus, together with some spreading out of the cumulus that did form, reduced thermal activity. Sea breeze fronts were observed just inland of the south coast and the Yorkshire coast.*



LEAGUE 1: Free Distance.

LEAGUE 2: Free Distance after League 1 had been launched.

The task was chosen because of the prospect of bad weather on the morrow.

Though all went north at first, after passing the Chilterns most of League 1 continued north but all of League 2 made for East Anglia. An exception was Gerry Burgess who, after twice returning from short flights, had only enough time left to make a downwind dash for Kent.

The most notable feature of the day was a wide belt of overcast sky consisting of stratocumulus with cumulo-nimbus hidden inside. It seems to have been about 30 miles wide, running W. to E., and edging gradually southwards, for Warminger, who left Lasham at 11.30, encountered it north of Northampton, while most people ran against it at

Northampton or Bedford, and Doughty, two hours behind Warminger, was being pushed still further south by it to Henlow.

This belt of clamp was of limited length, for Camp tried to outflank it at the western end, and Bird thought he could have done so by keeping further west of Oxford, while Doughty and Williamson both went S.E. to outflank its eastern end. The latter, and also Rutherford, saw its elongated cu-nim stretching N.E. from Northampton and Bedford respectively. Many pilots crossed it by finding one of the cu-nims inside and climbing to about 9,000 ft., though Carrow and Shepard found enough lift to cross it below cloud base.

But the highest climb of all, 12,500 ft., was made by Paddy Kearon in an isolated cumulus east of Cardington (which is south of Bedford); though he got iced up, he says it was not a cu-nim.

David Carrow, who landed at North Coates as early as 17.30, was believed for nearly two hours to have made the longest distance, 167.3 miles, until news came of the latest landings of all: Roger Mann at 19.05 after 170 miles, and finally John Fielden at 19.35, reaching the south bank of the Humber, 176.9 miles from Lasham, after a most astonishing hour-and-a-half winding across Lincolnshire between 800 and 1,200 ft. in the sea-breeze front.

League 1: Longest Distances

Pilot	*Landing*	*Miles*
Fielden	Humber	176.9
Mann	Cleethorpes	170.0
Carrow	N. Coates	167.3
Garrod	Sea Palling	157.7
Kearon	Accle	150.7
Fairman	Stafford	124.2
D. Smith	Uttoxeter	123.2
D-Drummond	Ch. Broughton	122.1
Dawson	Wisbech	118.1
Dunn	Wisbech	113.2
Stark	March	110.0

Leading Totals, 3 Days

Fielden	2612	Innes	2221
Carrow	2590	Bentson	2189
Dunn	2534	Kearon	2180
Spottiswood	2432	Warminger	2122
D. Smith	2306	Stone	2041
Strachan	2291	Dawson	2028
Gough	2271	Kahn	2022
Jones	2224	Bird	2003

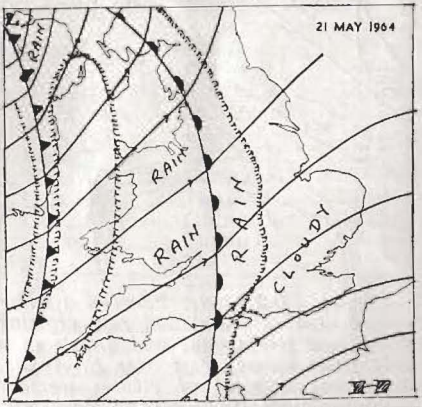
In League 2, leading scores for the day were Peter Kevan with an Olympia 460, who made the longest distance, 133.5 miles to Wymondham; Roy Procter and passenger to Snetterton airfield; and Mike Smith to Woodbridge. Guisti, in Orsi's entry, made third best distance, 126 miles to Woodbridge, and would have taken 4th place if flying as an official competitor.

League 2: Leading Scores

Pilot	*Sailplane*	*Miles*	*Pts.*
Kevan	Oly. 460	133.5	1000
Procter	Bocian	122.5	994
M. Smith	Skl. 4	128.4	956
Guisti	Skl. 4	126.5	939)
Welsh	Oly. 460	125.8	933
Doughty	Skl. 3F	125.0	925
Jerzycki	Skl. 4	117.0	855
Scallon	Skl. 4	113.5	824
Mettam	Skl. 3B	112.6	816
Corrick	Austria	111.1	803
Croshaw	Skl. 3	110.6	798
Collins	Skl. 4	110.2	795

As this was League 2's last Contest Day, the overall positions are as given in the table of Final Results.

Thursday, 21st May



THURSDAY, 21st MAY.—*A warm and cold front moved across the country during the day.*

LEAGUE 2: Distance along a line through Sutton Bank.

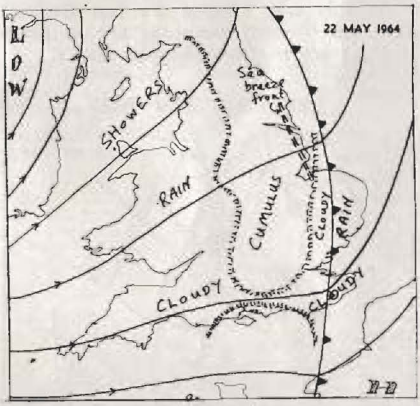
LEAGUE 1 was given the same task at a later briefing, to be launched after League 2, but it was cancelled.

LEAGUE 2 set off under a complete low

overcast with darker patches here and there. Half of them landed out, but only six exceeded "2X" (30 miles), and eight were needed to make it a Contest. Of the six, two were too far off the line to score, anyway. Mike Smith distinguished himself by going 67 miles, nearly to Northampton, far ahead of the next best, Loveland, with 39 miles to Thame. Moreover, Mike stayed airborne till 15.20, whereas everyone else had landed by 13.50. He was given a special award at the prizegiving for this feat. How did he do it? Did he run into better weather? On the contrary, it became worse, if anything. He just managed to go on finding enough lift to keep up, that's all.

In the evening Edward Makula gave a talk and showed a film of the last World Championships.

Friday, 22nd May



FRIDAY, 22nd MAY.—*Between a widespread area of cloud and rain crossing Wales and low stratus and drizzle in a cold front moving east over E. Anglia, there was a band of clearer weather extending from Hampshire to Yorkshire. The clearance at Lasham was fairly sharp, and lasted long enough for pilots to set off for the better thermal conditions in the north. Cumulus cloud extending to about 10,000 ft. contained moderate to good thermals until late in the evening. A sea breeze front over Lincolnshire and Yorkshire was marked by the edge of thick haze in the sea air.*

A strip of England from south to north lay between two depressions, and although the first one cleared Oxford at 9 a.m., it was 1.10 p.m. before blue sky reached the zenith at Lasham, and by 3.30 the sky there was overcast once more. Briefing was postponed until at noon the obvious task was set:

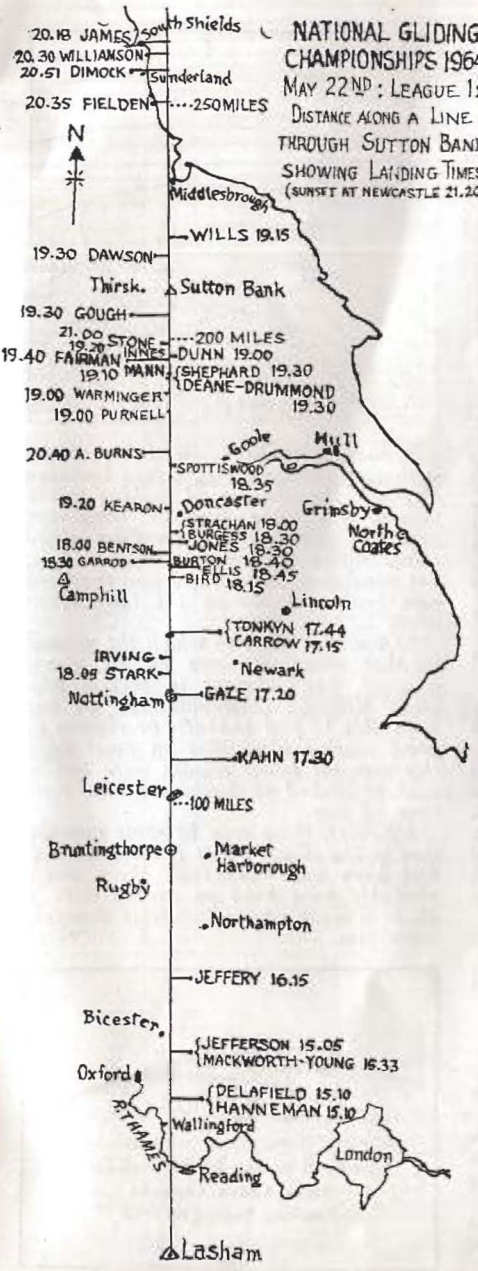
LEAGUE 1: Distance along a line through Sutton Bank (the Yorkshire Club's site, almost due north).

Launches began at 1 p.m. with Brennig James, who kept going for 7 hr. 18 min. to make the longest distance of the day, 265.2 miles to South Shields landing 6.4 miles off course because at that point the line through and beyond Sutton Bank is out to sea. It was at last a day for the Dart, and John Williamson, earning 998 points to James's 1,000, made a faster time, starting about 2 p.m. and landing three miles shorter but 2.4 miles nearer the line at 8.30 p.m. Humphry Dimock, going nearly as far, landed further inland, 8.7 miles from the line, at 8.51 p.m., and other landings after 8 were John Fielden at 8.35, Anne Burns at 8.40, and "Rocky" Stone, 9 p.m. at Linton-on-Ouse, the 8th longest flight. There were altogether 18 landings after 7 p.m. (all times B.S.T.).

Most of those who reached the Newcastle-on-Tyne region have written separate accounts, and also Philip Wills, who landed at the Newcastle Club site further south.



Greatly improved washing facilities in the new Clubhouse.



As competitors went north, they found the weather improving over Oxfordshire, and soon encountered thick cumulus. Still further north, many people got to 9,000 feet in these clouds; Fielden reached 10,000 feet and Wills 11,000 feet. The general experience was that lift below them was weak but became strong as soon as one went inside. This suggests that they were largely self-stoking, and may explain why they continued active so far into the evening, though Dimock got into one as late as 8.30 p.m. by climbing in smoke from a factory chimney, in spite of patches of ground fog still lower down.

The line of big Cu across Yorkshire suggested a sea breeze front to Fielden, and James found their bases 2,000 feet lower than elsewhere; but there was another parallel line of smaller cumulus nearer the coast.

Landings on the map show a surprisingly even scatter, and the only "bunch" was of half a dozen machines around York. However, there were bad patches: Kearon, who started late, found one in the Rugby-Daventry area, and Carrow met a flat patch north of Nottingham.

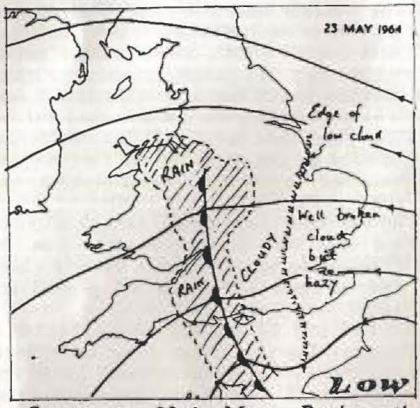
League 1: Longest Distances

Pilot	*Landing Place*	*Miles Proj. & Off-set*
B. James	S. Shields	265.2—6.4
Williamson	Sunderland	262.2—4.0
Dimock	Usworth	258.2—8.7
Fielden	Seaham H.	251.5—2.8
Wills	Carlton M.	221.9—3.5
Dawson	Thirsk	218.4—3.4
Gough	Dishforth	205.3—8.3
Stone	Linton O.	198.7—1.9
Innes	York	195.7—0.4
Dunn	York	196.2—0.9
Mann	Rufforth	192.6—0.0
D-Drummond	Rufforth	191.6—0.4
Shephard	Rufforth	191.6—0.4
Warminger	York	188.6—0.2
Fairman	Knaresbro'	195.5—8.7

This being the last Contest Day, overall positions are as shown in the table of final results.

Between briefings in the morning, Derek Piggott gave a talk on his Powered Trainer project (described on another page), and answered many questions. It is noteworthy that nobody objected to the scheme on principle.

Saturday, 23rd May



SATURDAY, 23rd MAY.—*During the past 24 hours a depression had moved quickly from Ireland to France. An easterly airstream across England brought back the rain belt which had already crossed the country from the west. Drier air from the east reached Lasham but thick smoke haze from London restricted the sunshine. Temperature rose to 67° F, but 68° F was needed to trigger off deep convection.*

LEAGUE 1: Out-and-Return via Blenheim Palace, 8 miles N. of Oxford; 94 miles in all.

LEAGUE 2: Distance along an endless line with turning-points at Broadway Tower, South Cerney and Lasham (i.e. round and round the course repeatedly).

Last time Broadway Tower was used as a turning-point, Ann said, observers were charged 6d. each time they went up it to look for gliders.

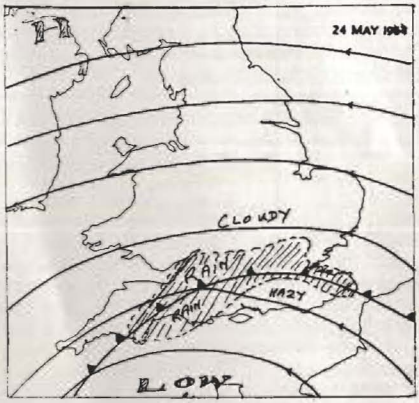
LEAGUE 2 were launched first and nine of their pilots landed out. The weather was too poor for the rest, and League 1 did not get a Contest Day either.

Sunday, 24th May

LEAGUE 2: Distance round a Triangle via Thruxton-Welford-Lasham.

LEAGUE 1 were promised a possible task at noon, but by that time the weather looked hopeless, so Prizegiving was fixed for 3 p.m.

Sir Roy Dobson, Chairman of the Hawker Siddeley Group, presented the prizes.



SUNDAY, 24th MAY.—*With an almost stationary rain belt lying across Southern England, the chances of making this a contest day were slim. A temporary break in the low and medium cloud raised hopes sufficient to plan a task, but conditions deteriorated and thundery rain broke out during the later afternoon.*

So ended a week in which the general weather situations were by no means unusual, but, whereas in several previous National Championships we had been able to find channels or regions of good soaring conditions on most days, this year the better regions were seldom over or linked to Lasham at the right time of day.

However, there may be some consolation in the thought that if the Nationals had been one week later there would probably have been no contest days at all in a week of medium-level thundery conditions.

SPEEDWELL SAILPLANES
Speedwell Works, Bosden Hall Farm,
Hazel Grove, Cheshire
Telephone: Stepping Hill 5742

NATIONAL CHAMPIONSHIP RESULTS

LEAGUE 1

Final place Open	Standard	Pilot or pilots	Contest Day and Date 1 16th	2 17th	3 20th	4 22nd	Total Points	Comp. No.	Sailplane	Entrant or Owner
1.		J. S. Fielden	914	698	1000	959	3571	200	Skylark 3	Private Owner
2.		R. A. E. Dunn	940	1000	594	734	3268	258	Skylark 4	R.A.F.
3.		J. D. Spottiswood	931	966	535	635	3067	75	Olympia 419	R.A.F.
4.		D. D. Carrow	665	985	940	445	3035	20	Skylark 3B	Private Owner
5.		A. G. Gough	960	790	521	742	3013	205	Olympia 419	R.A.F.
6.	1.	D. S. Innes	703	958	560	735	2956	175	Ka-6CR	R.A.F.
7.		D. B. James	608	761	510	1000	2879	160	Skylark 3	Surrey G.C.
8.		I. W. Strachan	1000	920	371	572	2863	233	Skylark 4	R.A.F.
9.		P. E. Dawson	964	439	625	816	2844	16	Skylark 4	R.A.F.
10.		A. H. Warminger	731	964	427	705	2827	44	Olympia 419	Private Owner
11.		A. J. Stone	748	721	564	740	2781	411	Skylark 4	Private Owner
12.		N. W. Kearon	615	731	834	598	2778	86	Olympia 419	R.A.F.
13.		J. D. Jones	961	796	478	553	2777	180	Skylark 3F	Private Owner
14.		C. W. Bentson	659	958	572	546	2735	361	Skylark 4	Private Owner
15.		D. C. Kerridge and A. D. Purnell	671	731	504	686	2592	147	Skylark 3F	Surrey G.C.
16.		R. A. Mann	207	698	956	723	2584	36	Skylark 4	Private Owner
17.	2.	J. S. Williamson	330	684	535	998	2547	335	Dart	R.A.F.
18.		M. C. Fairman	731	439	665	699	2534	177	Skylark 3	Private Owner
19.		M. Bird	704	795	504	525	2528	214	Skylark 3	M. Robson & Partners
20.	3.	Anne Burns	939	498	456	627	2520	211	Ka-6CR	A. J. Watson & Partners
21.		H. R. Dimock	615	297	539	963	2414	228	Skylark 4	Private Owner
22.	4.	G. E. Burton	703	646	499	548	2396	367	Dart	Private Owner
23.		P. A. Wills	418	633	497	831	2379	1	Skylark 4	Private Owner
24.		W. A. H. Kahn	665	958	399	316	2338	4	Skylark 3B	Private Owner
25.		C. A. P. Ellis	703	698	387	519	2307	9	Skylark 3	London G.C.
26.		D. A. Smith	690	958	658	0	2306	42	Skylark 3B	Private Owner
27.		E. G. Shephard and F. W. L. Shepard	698	391	495	717	2301	190	Skylark 3F	Army G.A.
28.		F. G. Irving	698	698	358	457	2211	266	Skylark 4	Private Owner
29.		J. B. Jefferson	696	731	522	91	2040	155	Skylark 3F	Private Owner
30.	5.	M. P. Garrod	111	519	878	519	2027	460	Olympia 460	H. C. G. Buckingham
31.		P. G. Burgess	656	668	40	572	1936	139	Skylark 3G	Private Owner
32.		E. Stark	505	390	574	438	1908	72	Olympia 419	Army G.A.
33.		W. N. Tonkyn	377	731	298	487	1893	296	Skylark 4	Imperial College G.C.
34.	6.	A. J. Deane-Drummond	0	498	651	717	1866	58	Dart	Army G.A.
35.	7.	P. Hanneman	698	705	201	36	1640	24	Olympia 460	R.A.F.
36.		G. W. Mackworth-Young	76	944	522	91	1633	13	Skylark 3G	Private Owner
37.		B. J. Davy	535	195	564	0	1294	96	Eagle	Imperial College G.C.
38.	8.	J. Delafield	91	498	499	36	1124	334	Dart	R.A.F.
39.	9.	C. P. A. Jeffrey	64	494	364	159	1081	193	M-100s	A. MacDonald & Partner
40.	10.	F. A. O. Gaze	0	0	537	408	945	210	Std. Austria	Private Owner

LEAGUE 2

Final place	Pilot or pilots	Contest Day and Date 1 16th	2 17th	3 20th	Total Points	Comp. No.	Sailplane	Entrant or Owner
1.	A. W. Doughty	720	843	925	2488	91	Skylark 3F	Private Owner
2.	D. P. L. Scallon	786	833	824	2443	328	Skylark 4	Surrey G.C.
3.	E. Jerzycki	743	833	855	2431	303	Skylark 4	Polish A.F.A. G.C.
4.	G. T. Collins	758	869	795	2422	171	Skylark 4	Private Owner
5.	R. Rutherford	739	833	720	2292	41	Skylark 4	Private Owner
6.	D. C. Snodgrass	709	838	742	2289	189	Skylark 4	Private Owner
7.	I. Paul	729	917	621	2267	2	Skylark 2	Private Owner
8.	P. Minton	786	710	767	2263	239	Skylark 4	D. Crabb and Partners
9.	V. C. Carr	1000	487	749	2236	108	Skylark 4	Private Owner
10.	M. J. Smith and M. S. Hunt	768	410	956	2134	240	Skylark 4	Private Owners
11.	H. S. Mettam and Rika Harwood	449	865	816	2130	65	Skylark 3B	Private Owners
12.	J. G. Croshaw	792	480	798	2070	73	Skylark 3	R.A.F.
13.	D. M. R. Riddell	505	843	695	2043	173	Skylark 3F	Private Owner
14.	J. H. Welsh and P. Goldney	273	828	933	2034	348	Olympia 460	Army G.A.
15.	C. R. Hurst and J. L. Smoker	765	542	622	1929	169	Skylark 4	Private Owner
16.	R. A. Sandford	480	1000	448	1928	242	Olympia 2	Private Owner
17.	H. U. Midwood	726	720	458	1904	301	Olympia 460	Peak Sailplanes
18.	P. D. Kevan and J. Pickles	404	493	1000	1897	249	Olympia 460	R.A.F.
19.	C. G. Richardson	404	863	594	1861	161	Skylark 3F	Private Owner
20.	S. M. Morison and R. C. Pick	249	820	740	1809	98	Skylark 4	Private Owner
21.	A. Somerville and C. G. Dorman	665	833	309	1807	12	Olympia 460	Army G.A.
22.	G. Coatesworth	313	863	630	1806	90	Olympia 403	R.A.F.
23.	J. C. Riddell	813	863	117	1793	95	Skylark 3F	Private Owner
24.	R. T. Willbje	461	789	480	1730	68	Skylark 3B	Private Owner
25.	D. C. Austin and A. S. Loveland	780	840	98	1718	131	Olympia 463	R.A.F.
26.	R. G. Procter and D. J. Crabb	559	132	994	1685	196	Bocian	M. R. Fountain
27.	D. W. Corrick and K. R. Aldridge	289	494	803	1586	57	Std. Austria	Private Owners
28.	A. O. Sutcliffe	745	705	124	1574	270	Ka-6CR	Private Owner
29.	R. S. Waller and C. J. Pennycuick	627	225	705	1557	125	Ka-6CR	Private Owners
30.	G. S. Neumann	254	542	720	1516	317	Skylark 3F	Private Owner
31.	R. D. Dickson	130	530	792	1452	34	Gull 4	Private Owner
32.	J. A. Findon and R. I. Tarver	420	410	545	1375	48	Olympia 460	Private Owner
33.	T. S. Zealley	217	442	656	1315	22	Ka-6	Private Owner
34.	P. W. James	53	657	536	1246	327	Skylark 4	Surrey G.C.
35.	G. Camp	524	608	112	1244	64	Sky	London G.C.

36.	J. A. Evans	271	636	306	1213	52	Skylark 3F	Army G.A.
37.	C. D. Duthy-James and H. N. Gregg	736	239	96	1071	70	Skylark 3B	Private Owners
38.	K. C. Fitzroy and E. J. Meddings	274	410	187	871	118	Ka-6	R.A.F.
39.	K. R. Brown and G. F. Fisher	310	265	0	566	33	Skylark 2C	Private Owner
40.	R. C. Stafford Allen	—	181	337	518	333	Capstan	Private Owner
Hors Concours								
33+	G. Orsi A. Orsi W. Guisti	245	83	939	1267	110	Skylark 4	Private Owners
40+	J. C. Everitt L. Welch	1	123	337	461	6	Capstan	B.G.A.



With the Procters gliding is a family sport. (Photo by Charles Brown)

'SAY YES OR NO' 'NEGATIVE'



By KAN KAN
alias Wally Kahn

THE Comps. are over, the pundits have written their articles on how they won/lost. The bar is filled with talk of left and right handed polars, micro balloons, and who should be in the team. To an ordinary pilot who had unsuccessful fun, what remains?

Memories of gliding's answer to Britain's National pastime of queueing — gaggling. That famous, never-to-be-forgotten hour spent between 1,600 and 2,000 feet over Alton with the whole of Leagues 1 and 2. As we sat waiting for Wally Wallington's mythical "3,000 feet by 12 noon" I developed cramp due to tight shoes. I pulled out of the gaggle, found myself a nice clean piece of gently sinking air, put the Skylark into a turn and proceeded to massage my legs. 30 seconds later I had bought myself a gaggle as five gliders were happily sinking with me.

Radio — that marvel of man's mind. A very large number of pilots used it — seemingly for the first time. What other nation would dream up call signs like "Piggy to Market", "Z Car to Flagship", "Red Flash to Green Beatle"? I



. . . "Z car to Flagship"

acquired a splendid crew member — a New Zealand pundit called Peter Heginbotham. On the first day Peter was horrified to find that among other misdemeanours I talked in "clear". He promptly handed me a code using New Zealand bird names for towns and letters of the alphabet for heights a.s.l. You feel a proper Charlie telling your crew that you are at Oystercatcher Z when you and the whole of League One are over Newbury at 2,000 ft. Cracking codes became a very popular game — I'll swap Philip's for the one used by David Carrow or a 129.9 crystal!

The R.A.F. have, quite rightly, had a very great influence on our Nationals. Three years ago the word "re-light" came into general use, meaning that you had bogged it, landed back on the airfield and wanted another launch — fast. This year "Negative" instead of "No" was adopted by at least one well-known wife/husband team. After her third call of "I am crossing the start line now — pause — was I observed?", he seemingly read out chapter six of Fanny Hill and added "you were not observed across



. . . not observed

the start line". She: "Answer Yes or No". He: "Negative". She: "Yes or No". He (sadly): "No".

Eavesdropping is fun, too — I lost a thermal through laughing when one pilot called his crew with this message. "You know that plastic bag you gave me — it leaks."

Radio has one major side-effect which must be avoided. In the good old days, you landed in your field miles from home and were immediately surrounded by hordes of admiring children. You quickly became their hero (have you noticed how pretty the little girls are when they look at you with wide open eyes?). You explain, using your map, that you have flown 100 miles without

an engine and all that jazz. Boy, what a moment of glory. Then comes this year — Beep Beep, 9,000 feet over Sutton Bank". "What's that, mister?". You explain that another pilot is 100 miles further on and will probably make Newcastle. After that you might as well curl up under the wing with a good book for all the interest you'll create — they are all ears glued to the radio.

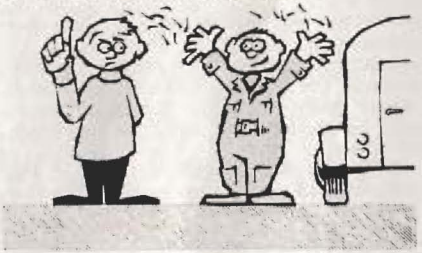
Incidentally Humphry Beep Beep Dimock's line of "when I saw the street lights go on in South Shields, I thought it was time to land" must not be allowed



. . . saw the street lights

to go unrecorded. For that matter Brennig James produced a few . . . "I landed on the beach knowing that the crowds coming to see me would stop anyone else stretching their glide". Or his crew on arriving at the hotel in South Shields where he had gone to bed, were told by the manager that Dr. James had put a "Do not disturb" notice on his door and would they please come back later.

Radio does really separate the men from the boys. Men always know where they are and say so. The boys use a different technique. Firm voice (first time): "I'm just getting a fix, call you later". Weaker voice: "I don't know just now, scraping hard"; then meekly: "Keep going north, you can't be far behind" (this really means — drive like hell, you might see me, then tell me where you are). One famous scrambled egg pilot turned the tables very neatly on his crew by asking them what the surface wind was. The sight of a huge car and trailer combination stopping every so often, bodies leaping out, jumping fences and throwing grass into the air was a sight for sore eyes.



. . . throwing grass

But the really vital lesson to be learnt from this year's comps. is very simple. Our new National Champion is reputed to have done 1,000 hours in his Skylark in the last five years, 290 of which last year. For my money he deserved to win.

Maximum Speeds for Crossing Start and Finish Lines

IN contest races, it is becoming customary to cross start lines, and sometimes finishing lines, at high speeds. If this is overdone, structural damage or even failure may occur as a result of turbulence. Pilots are familiar with never-exceed and rough-air speed limitations, but may not be aware that in normal thermal conditions, as opposed to those coming under the heading of "rough air" (e.g. storm clouds), it is essential to keep the airspeed to a figure rather lower than the never-exceed limit if a reasonable level of safety is to be achieved. It is important to realise that, owing to the largely random nature of turbulence, there is always *some* risk of the glider encountering a gust which will cause damage or failure if the rough-air speed is exceeded. To estimate suitable maximum operating speeds in such conditions, the Technical Committee has carried out an investigation based on statistical gust data. The investigation showed that the risk may be reduced to an acceptable level if the speed is limited to a value 15 knots less than the placarded never-exceed speed,

and this is the figure recommended.

The considerations relating to the various speeds are as follows:—

1. The never-exceed speed is a speed which may be attained deliberately under flat calm conditions.

2. The rough-air speed is a speed which should never be exceeded under very rough conditions. At speeds below the rough-air speed, the glider will stall before damage occurs, if it encounters a very strong gust.

3. In normal thermal conditions, the speed should not be allowed to exceed a value 15 knots below the never-exceed speed. In particular, this speed should not be exceeded when crossing start and finish lines in races (15 knots=18 m.p.h. = 28 k.p.h.).

4. The previous paragraph does not absolve the pilot from the exercise of common prudence. The greater the turbulence, the slower he should fly, and if in any doubt about the degree of roughness, he should slow down to the rough-air speed.

5. The risk involved in flying at the never-exceed speed in normal thermal conditions is quite significant. If all competitors crossed start and finish lines at this speed, it is probable that one or two machines would suffer damage almost every National Championship. Such damage might not be apparent at the time.

6. Whilst the organisers of competitions will obviously find it difficult to ensure compliance with the above recommendation, they should expect all competitors to abide by it in the interest of safety. At their discretion, the Stewards may take action against pilots who appear to be ignoring it.

Remember: flying at the never-exceed speed in thermal conditions is not safe enough.

Issued by the British Gliding Association.

The above notice was distributed to competitors in the May, 1964, National Gliding Championships. It is based on calculations relating to gliders designed to British Civil Aircraft Requirements, Section E, issue 2, 1960, operating under average British conditions.

A Guide to Cloud Flying—Amended

by FLIGHT LIEUT. M. W. JOHNSON

Aden Services Gliding Club

I mean no disrespect to Dr. D. Brennig James when I say that, although well written, his article in the June issue could be misleading. Perhaps in some cases the reader can infer what is not intended; perhaps it is the heat; perhaps the excessive amount of time available in which to criticise. Whatever the cause, the article has led pilots here to believe one or two things that could be detrimental to their flying. I hope, in the next few paragraphs, to illuminate, if not correct, one or two of these misleading pointers.

(a) BY INFERENCE. Let us, as much as we can, take points in the order that they appear, and deal first with those that cause the reader to deduce incorrect facts. Skipping the first page (full of good "gen") and starting on the second half of the next: our concern lies in the part beginning, "If you do much cloud flying . . ." and ending, ". . . the result could be . . . fatal." "This, incidentally, sums up our appreciation of the knowledge contained therein, but "it is better to have tried and lost . . ."

"In a spin . . . the Turn and Slip needles *will* point different ways." A small point. Shall we change it to a more correct "may"?

". . . spin, either from a stall or more likely from turning too steeply." Here it must be pointed out that no aircraft will spin before it has stalled in some way. If anything at all results from too steep a turn, it will be *roll;* possibly fast enough to be recognised as *autorotation;* certainly not as a spin. The difference is important as it affects

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the recovery. When in a spin that has developed, *full* Standard Recovery action is necessary, while from a turn only relaxation of the back-pressure is required. Rudder can be forgotten unless it was being "held" on, in which case it should be released.

Our aircraft is now in a shallow Spiral Dive, the recovery from which should be simple. If your pen is raised indignantly, please note how carefully I avoided saying that a spin could *not* develop. Eventually, of course, this is possible, especially if the rolling is handled late or badly.

". . . airspeed reads low, *mainly* because there is large position (pressure) error due to yaw and stall." This puts the cart before the horse. I think that most pilots will agree: if speed reduces to the point of stall it has precious little further to go; suspicion should have been present earlier (if Dr. James is interested, we have a really workable system of assassination by proxy out here).

(b) OMISSION. Here we tackle only those omissions that we feel are worthy of mention, willingly laying ourselves open to criticism in the hope that, by "stirring" a little, we may be instructive. A noted member of the Clergy once said, "Disturb but do not destroy."

If taking spin recovery action, or writing about it (presumably for the benefit of others), it cannot be wise to leave out the most vital points. Do notice the direction of turn, as indicated by the *turn needle*, before applying opposite rudder. You cannot rely on your senses in cloud at any time, especially not when spinning.

Most dangerous is the omission of the Instructor's catch phrase, "Spin-stops, centralize" (I feel it likely, Brennig, that your aircraft screams with pain as its fuselage twists). Here, of course, one must watch that turn-needle like a hawk, while holding anti-spin control. As soon as it "flicks" across the dial, *centralise stick and rudder*. This will prevent you from entering a spin in the reverse direction, and leave the aircraft less "nose-down" than it would be otherwise. It is true that the speed may be high but attitude will be the cause: use airbrakes.

If we have not succeeded in causing discussion yet, this next point must do the job for us. Please keep in mind the fact that it works (and there are chaps willing to demonstrate this). Our starting point is "Spin-stops". To recover in the clear is easy, and at this point there is no difference in technique between a spin and a spiral dive. In cloud we must use a technique that compensates for the total loss of visual reference and which conquers (as much as is individually possible) the problems brought on by dis-orientation and "loss of faith" (which, you must admit, is a nice way of putting it).

The technique can be mastered as follows: first we get an understanding of our condition of flight by frequent practice out of cloud; then we follow this routine we have learned, in cloud, choosing a nice clear one, while remembering the Instrument Flight Rules. In the clear we discover that at "Spin-stops" there is invariably about 45° of Bank and 45° of Pitch (nose-down) — try it. The exact figure does not matter; we are beginning to understand how the aircraft "hangs" in the sky. Also in the clear we learn how long a certain aileron deflection takes to level the wings, and a similar deflection to raise the nose.



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Armed with this knowledge we now attack the nearest and smoothest piece of cloud for the acid test :—

(i) In a spin with *full* pro-spin control applied—we recover, using the Standard Recovery.

(ii) "Spin-stops" . . . imagine that attitude.

(iii) Remove all back-pressure ("*g*") — it should not be there at this stage anyway.

(iv) Note the turn-needle, then level the wings, bearing in mind the time it took in the clear. There is a delay before the needle moves, so be careful about your timing. When the needle *starts* to move you should be taking *off* aileron. When the needle makes the half-way point, enough opposite aileron should be on to cancel the rolling moment (you have practised in the clear), but the needle is to be used as a general guide.

(v) With the wings approximately level (do not waste time), pull to the horizon. Do this gently and ignore the turn-needle while doing so. The pitch instruments "reverse" at the horizon (as one might expect), but again one should be ready to anticipate this. I use the Altimeter under these conditions, as it is easier to see the needle slowing, then preparing to reverse. Others have equally good ideas but, if you use the Airspeed Indicator as your guide, remember that it can stabilize at a different point on the horizon according to local air currents, icing and airbrakes (the Altimeter is less affected, for our particular usage).

Remember the caprices of air currents; do not expect too much from our rule of thumb. It is no substitute for continuously monitoring the instruments. But it will get you nearer straight and level and keep you in command of your aircraft.

If you doubt this but do not try it, be aware that my Seconds have been named and transport to Aden is available.

If you lose control, even temporarily, be ready with airbrakes. It may be too late when you notice excessively high speed.

The wisdom in not opening a parachute, that may take you upwards to the ice-bound realm of A. N. Oxia, cannot be doubted. But, pilot, be aware of the cloud-base height from which you jumped — or it may be safer to risk that narrow core of high lift!

(c) Thoughts. Here, on the insistence of some, a few mere thoughts are bandied about.

It helps to check oxygen 200 ft. below cloud, when turning on the instruments. It is quite a laugh trying to maintain instrument flight, while reaching into that inaccessible place "they" put the bits. Almost as bad as performing that "other" task in cloud.

Night fliers and night drivers have a habit that prevents them from suffering from temporary blindness, when confronted by bright light. A glider pilot may find this useful in heavy cumulus, where the approach of lightning is often "whispered" in advance. It is to close one eye, thus saving it for use while the other restores itself.

A final thought before closure, under the heading of "You pays your money . . .". Many pilots agree that, faced with loss of instruments, extreme turbulence, hail, excessive icing, anoxia or one of the many other unpleasant things available in storm clouds, the only safe course is to spin down through the updraughts up which they came. Provided, of course, that there is a reasonable chance of being alone in this venture. There are good reasons: flying out of cloud, if a big one, may result in structural damage (wind shear between building and collapsing cells, hail, turbulence, etc.), or flying to an area of low cloud base; remaining in takes one down to a recently known set of conditions, while keeping in one of the less developed cells. Perhaps someone who has studied this problem in greater detail would care to enlighten us? A certain chap at R.A.F. Upavon, for instance? On the few occasions that I have faced myself with this problem, I have decided in accordance with the circumstances and my height at the time. There must surely be a golden rule somewhere, apart from the obvious "when in doubt, stay out".

If you disagree with our thoughts, please write in detail. We have lots of time for reading and ample humour (which is perhaps the most vital commodity out here). Please do not expect a typed reply though, as a certain finger will not be placed near a typewriter for many moons to come.

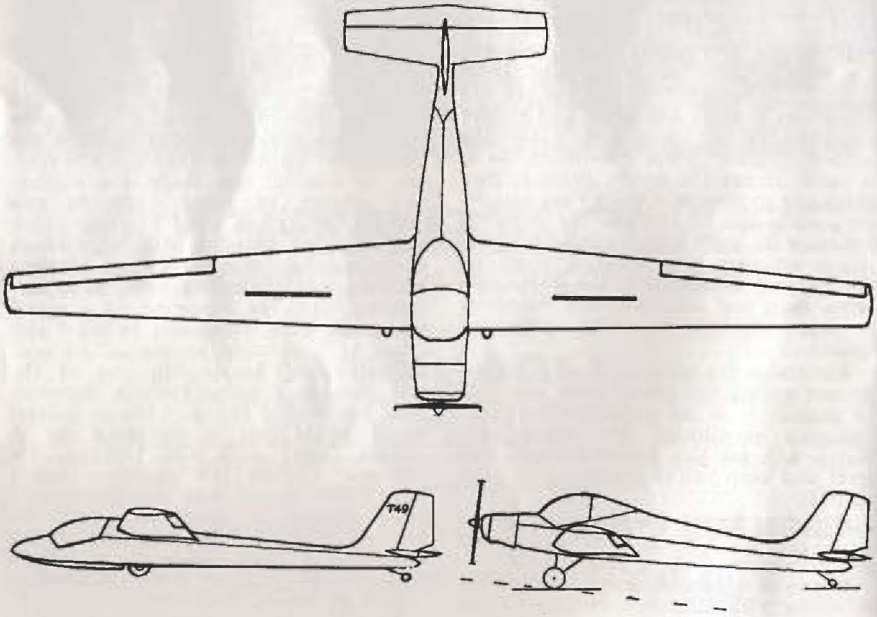
A Powered Trainer for Glider Pilots

by A. D. PIGGOTT

DEREK PIGGOTT has been the Chief Flying Instructor of the Lasham Gliding Centre for more than ten years. He is one of the most experienced gliding instructors in this country and has made about 25,000 launches on gliders, and has 2,000 hours' flying on all kinds of powered aircraft.

After all these years of hard work on the gliding field he realises that it would be difficult for him to see another ten years go by with little improvement in training methods. He believes that the growth of the Gliding Movement will be severely restricted until the training of pilots can be done much more efficiently and until more launches can be made available for an expansion of solo flying.

After considering and experimenting with many methods of launching, he is convinced that these special powered trainers offer a real solution to the problems of efficient glider pilot training.



SPECIFICATION: Normal Category (non-aerobatic).
Engine: Rolls-Royce C-90 Continental with self-starter.
Empty weight: 1,100 lb.
Maximum a.u.w.: 1,560 lb.
Stalling speed: 34 knots.
Rate of climb: over 1,000 ft./min.
Gliding angle: (engine stopped) 1:18 at 45 knots.
Fuel consumption cruising: 2 gallons per hour.
Basic airframe: modified Slingsby T-49.

THE ADVANTAGES

1. For Beginners

The majority of the training could be done quickly on this aircraft at little or no additional cost to the pupil. It would not depend on winches or towing aircraft for a launch or on a group of helpers for ground handling. Hours of unnecessary waiting and frustration could be saved by booking training in advance and much more flying would be possible than with a glider.

Circuit planning and landings could be taught by keeping the engine running to reproduce the normal sinking speed of a modern glider and by using the air brakes to control the approach.

2. For Soaring Pilots

More launches would become available for solo flying and soaring. Advanced training could include cross-country soaring and field landing experience without risk of a long and tedious retrieve by road.

3. For Gliding Clubs

With intensive use, the powered trainer would be much more profitable than a modern glider.

Some of the basic training could be done away from the soaring site and this would relieve the congestion and allow more solo flying.

Beginners whose time means more to them than money would complete their training more quickly and become useful Club members.

Better facilities for training would raise the standard of the average club pilot and this would reduce the risk of expensive accidents.

4. For Light Aeroplane Clubs

This powered trainer offers a new interest for the flying enthusiast who cannot afford the time to glide seriously or who lives too far from a gliding site.

By stopping the engine in flight, they could enjoy the pleasures of soaring with a friend and at the same time reduce the cost of their flying.

Three people could remove the wings in a few minutes to enable the machine to be stored in a corner of the hangar.

WHY NOT A LIGHT AIRCRAFT?

Unfortunately the aileron and rudder co-ordination and the circuit planning needed in a modern glider are very different from normal light aircraft, so that although power experience is some help, it can never take the place of most of the glider training. This powered trainer is designed to handle like a glider and the good all-round visibility would allow it to be operated safely amongst gliders on a busy gliding site.

WHY A PRIVATE VENTURE?

At present the leading glider and light aircraft manufacturers cannot afford the time or the expense of developing this type of aircraft while the market for it is uncertain.

As a private venture much of the design and testing can be done at a very low cost and the inevitable delays which occur with a new aircraft will not involve expensive overheads and increase the cost of production at a later date.

A company or group will be formed to finance the first aircraft, and it is hoped to operate one or more aircraft on a profitable basis in order to repay the initial investors.

The major components will be bought from Slingsby Sailplanes Ltd., and the modifications necessary will be carried out by a qualified inspector to A.R.B. requirements.

At present almost £2,000 has been offered and a further £3,000 is required before starting construction.

Encouragement has been given by Mr. F. N. Slingsby and Messrs. Rolls-Royce, and other authorities have confirmed that there are no major technical problems to be solved.

The design is well advanced and is only held up for further capital. If you would like to help financially, or send a donation, please send it to the Shaw Slingsby Trust, Epworth House, 25 City Road, London, E.C.1, specifiying that it is for the Powered Training Glider Scheme.

The Lasham Gliding Society is not financially involved in this scheme, but has passed a resolution expressing full approval of the project.



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On Winning League One

by JOHN FIELDEN

ON Prize-giving Day, Doc. Slater and Rika grabbed me and locked me in Doc's caravan to do a write-up on the Competitions. I scribbled hopefully for several hours with many interruptions and Doc. Slater even typed it out, but a thermal by thermal description seemed to be very boring, so that, now the excitement has died down, a more reasonable article may be possible.

When I entered the Nationals this year there were several lessons which I hoped to put into practice, learned the hard way at previous Nationals. The first came from Aston Down and that was simply that you can't follow anyone without losing out. The second is closely related — a gaggle is always slower than a lone glider for two reasons — you cannot climb so fast and, human nature being what it is, there is an awful tendency to follow-my-leader which keeps the gaggle together. There are rare exceptions to this rule, when thermals are dry, high and widely spaced, when a group has a better chance than a solo machine, but these are rare conditions in England. The third was to exploit my special knowledge of and practice in sea-breeze fronts, in spite of being badly let down by one on the first day at Lasham last year. On that occasion I used a sea-breeze front from just south of New Alresford to south of Sherborne and then back to south of Salisbury, but over-confidence had set in and I didn't bother to zig-zag to regain a decent height when rejoining the front after rounding the turning-point at Sherborne. As a result, the first nasty patch in the front downed me south of Salisbury. The lesson was taken and the front wasn't blamed for its own little twists.

This year, on the first two days in dry, low thermals I followed my first two rules with almost ceaseless abandon, even keeping off track to avoid the mass of gliders. Only when making my tardy way from Shillingford to Pangbourne on the first day did I stay with a gaggle and then only because I couldn't get away from them. Eventually I realized that we had no chance of getting back to Lasham as a group so I glided out against the wind to a small village east of Aldermaston airfield in amongst some woods. This seems to work quite often late in the evening, and it worked that day. As I got lower and lower, the rest of the gaggle stopped to circle in weak lift and I pressed on with fingers crossed to this village — it worked, giving me 300 ft./min. achieved to 3,100 ft. above Lasham. I stopped circling when the lift got down to 150 ft./min. because in a 10-12 knot headwind I reckoned I was losing. A glide out at 55 knots brought me to 800 ft. over the A30 east of Basingstoke — at least 300-400 ft. short of what I needed to get back. The chalk pit gave no worthwhile lift, and in any case the day seemed dead, so I used the woods. All the books say that woods give weakly rising air in the evening and this is certainly borne out by my experience over a wood just north of the airfield at Dunkeswell. I therefore followed the downwind edges of all the wooded areas to Herriard Mansion and only lost 300 ft. in the process. From there a proper finish was possible nearly an hour after the previous glider to land. No one else made it, so I reckoned my rules must have paid off.



Watchers at the finishing line.

The next day — out-and-return to South Cerney — was similar except that thermals seemed lower and weaker,



John Fielden (right) talking to Ken Owen, of "Flight", and Peter Heginbotham.

so I kept a long way east of track and got to South Cerney without any trouble at all and only saw two other gliders *en route*. The return trip was different — the thermals were not strong enough to make headway against the wind, so although I was first round the turning-point, within half-an-hour there were about 20 other gliders with me. After a very uncomfortable further half-hour with them I found a thermal street which took me ahead again to Swindon. There I turned to the north-west edge of the town and found 400 ft./min. of sink, and was very pleased indeed to rejoin the gaggle now firmly at the bottom — there really wasn't room for anyone below me. Luckily it was a good thermal, and although I couldn't get away from the mass of gliders of both Leagues, at least I was still flying. Very slowly we progressed south to just north-east of Aldbourne. The field had now thinned a bit and there were no gliders to the south-west, so I left David Carrow and Wally Kahn who had been with me since South Cerney and turned right. Almost at once I found 400 ft./min. sink and never really got out of it until arrested by a field. It was particularly annoying to hear on the radio and see that the others who kept on track were in another thermal street which took them to Kingsclere. In spite of that reverse, I am quite convinced that the tactics were right, though the execution was obviously wrong on that occasion.

The weather remained unfriendly until Wednesday, 20th May, when both Leagues were set free distance. The Skylark 3 I fly is Nick Goodhart's old machine, which is loaded up to its near limit weight with a large mass-balance on the elevators, 40 lb. of accumulators, radio, and a comprehensive instrument panel. Mounted in the panel is a pair of 6-volt Lantern Cells which are only used if the accumulator runs down by switching over a master switch on the panel. Last year's dry battery was still installed, and as it looked like a cloud-flying day I asked John Hancock, my valiant crew chief, to go on safari for a new pair of dry batteries . . . "just in case". These were installed just before take-off, when all the electrics were checked O.K.

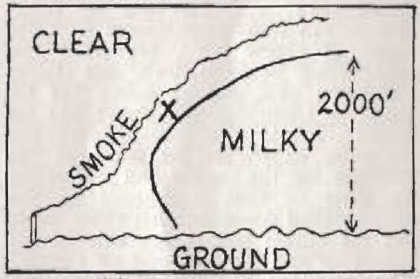
As soon as I got going with cloud base only 2,500 ft. a.s.l. I switched on the T & S and horizon (a Bendix J8 with transistor inverter) and all was well. There were so many gliders about that I daren't go into cloud although the lift seemed good, so I headed upwind almost to Micheldever before going into a good one which took me to 7,000 ft. Half-way up the cloud, the "OFF" flag came down on both T & S and Horizon and the battery test showed ZERO from the accumulator. After landing, it was found that the accumulator lead had become detached in the panel plug. I switched to the new stand-by batteries and was very grateful for the complete independence of my stand-by system,

though it meant doing the rest of the flight on T & S only. Radio and Crossfell also transfer to the dry batteries.

After that fumble it was easy going to the "Upper Heyford" region, each climb taking me higher and higher until I was sitting pretty at 10,000 ft. over "Upper Heyford". I then glided out to 5,000 ft. just north of Chipping Worden and then turned due east to cross under the airway, arriving near Northampton at about 3,000 ft. From this point onwards I never made it into cloud properly and fumbled along using every bit of lift, however weak. One climb from 1,500 ft. to 3,000 ft. a.s.l. took 1 hr. 10 mins. on the barograph. The sky looked quite impossible: complete cover of dead clouds. After each "climb" I headed for the brightest-looking area in a generally northerly direction and usually there was some weak lift to be found.

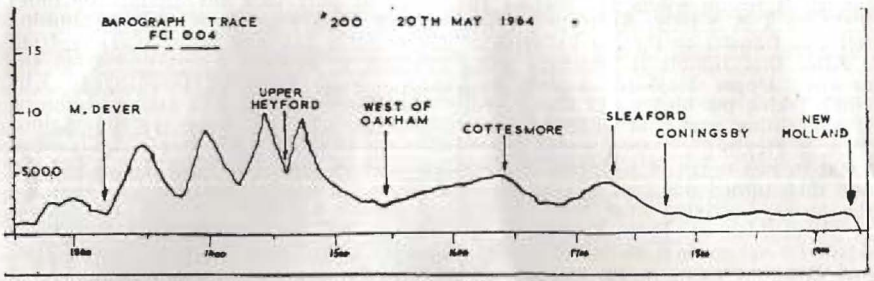
At Cranwell the sky cleared and to the east I could see the smoke blowing from the east somewhere near Coningsby, whereas below me Jet Provosts and windsocks indicated a westerly wind. Wally Wallington had forecast a sea-breeze front, so I turned east and at 800 ft. contacted a very easy to follow sea-breeze front marked by a hazy, milky air mass to the east and quite clear to the west. It wasn't a straight edge; two hours of flying without circling at say 45 m.p.h. should have taken me 90 miles, but, in fact, due to meanderings, it only took me another 60 miles away from Lasham. The most amusing bits were the two westerly runs from Louth to Market Rasen and from the cross road south of Grimsby to Kirmington (where I was stationed during the war). Each westerly run gained height to about 1,200 ft. and everywhere else I would lose out until 800 ft. appeared, when it stabilised. Even when I missed the wobbles and lost height below 800 ft., as soon as I found the milky edge again the climb would start until 800 ft. appeared. The height of the layer of sea air was no more than 2,000 ft., and I seemed to be soaring just above the most advanced part of the front (see diagram).





From Kirmington to New Holland the edge was straight and very clearly marked by smoke from Grimsby. North of the Humber, Hull was obliterated over its eastern half by the trapped smoke, whereas the western half was quite clear with smoke from one large chimney which was following the line marked on the diagram, which explained everything. I was at the University of Hull before the war and I couldn't think of any possibility of a landing area before Cottingham Road playing fields, which were about 7 miles from New Holland, and although I ventured out over the river for about a mile or so and remained at 800 ft., courage failed and I turned round and landed at New Holland. The landing solved another problem which had been exercising me since Louth. What happens under the tongue of sea air? The answer is that it is rough — rough enough to give a negative *g* at 55 knots on the approach. Obviously there must be quite a lot of rolling air trapped underneath the tongue.

The landing also gave me my best



field-landing story. I was met by a real Lincolnshire farmer, aged 65 or so, who said in broad Lincolnshire: "You landed in a reet field — another aeroplane landed here in t' fust war — didn't stop — ran into them houses — killed hissel' of course . . . My sister was near killed here as well. Me father was going over and he didn't like the water — I suppose you didn't like the water?" I said that no I didn't like the water either, and he went on: "So he threw out the anchor and just missed my sister — then it dragged up yon hedge, pulled down Jack Hawkins' beans and the basket landed this side of yon houses — and the envelope on t'uther."

It transpired that his father ballooned as a hobby, up to about 1905 or 1906.

On Friday the morning dawned as the most unlikely gliding day — low cloud and drizzle. At 12 o'clock Wally Wallington said there was some "weather" arriving at 1 o'clock. I launched at 8 mins. past, and up to "Minton in the Hedges" the day was a repeat of Wednesday, some climbs being 700 ft./min. in clear air to 9,000 ft. Once more I dived under the airway, this time further north, and found another sort of clamp to the east of the airway. There was a lot of medium cloud and a very large cumulus sitting over Leicester, surrounded by a circle of small ones. I used the small ones to regain cloud base and saw George Burton in a similar situation, but I then made my way slowly round the cloud, using only the small cumulus up to cloud base, finishing up at 4,000 ft. a.s.l. to the east of Leicester.

I set off due east, and near by, over Stamford, there was another large cumulus of the sea-breezish sort with no escorting small cumulus. Under it there were no thermals — only gently rising air, and again I spent 40 minutes going from 1,500 ft. to 4,000 ft. by cruising up and down the cloud — a distance of 3 or 4 miles E-W in an average of 60 ft./min. up. At cloud base the lift improved rapidly and soon reached 1,000 ft./min. — nearly as smooth as the 60 ft./min. underneath. At 10,000 ft. it became rough and stopped climbing, so I headed north and came out of cloud.

The exit was extremely rough. Before coming out of cloud, I had a packet of glucose tablets. After coming out, they were scattered all over the cockpit, with the sugary powder stuck all over the inside of the canopy. This was in the form of a sticky mass, due to the condensation inside. I was grateful for the non-topple qualities of the Bendix J8. At one stage the dive bullseye was rotating happily in front of me with the A.S.I. showing NIL and Turn showing NIL too. For some time I wasn't sure whether it was the sugar, ice or just cloud, because the ground remained firmly invisible. However, the clear-vision panel view was just the same — white everywhere, although not actually in cloud. The only thing which I could see was the line of rolling cumulus tops a mile or two to the east. At 4,000 ft. I turned towards these and repeated the same performance as before, except that this time I got hit on the head by my plastic water-bottle which then fell behind the parachute, clearly out of use for the rest of the flight.

This whole sequence was repeated four times, and although the ground had now been out of sight for two hours, since I was sure it was a sea-breeze effect, I was fairly sure that I was just inside England somewhere. The airway was now the worry. Base being FL 65, it would be too easy to go into

it, so I turned west and at 3,000 ft. came out of the murk just east of Doncaster with a peculiar cumulus amongst the stratus to the west. I set my altimeter to 1013 and eventually climbed into the cloud, stopping at 6,000 ft. indicated, and setting course N.E. to get back to my front. I found it again at 4,000 ft., and after three more repeats of the earlier performances came out of the murk just S.E. of Middlesbrough at 3,000 ft.

To my right, almost over the coast, was a beautiful 10,000-ft. cumulus, and at last the sun was shining on its side. I turned under it and once more found 50-100 ft./min. everywhere under it, but after two beats of 2 or 3 miles east-west I noticed that about half the ground underneath was covered with either low stratus or fog. The thought of gliding it out over the border of Scotland with 8/8 fog put me off considerably, and I went straight ahead to glide out to Seaham Harbour. Anyway, it was twenty-five to nine and getting dark even in those northern latitudes. Easington Colliery — one of our Million Tonners/year — was a few miles south and the miners and about 200 children soon surrounded "200".

The Schoolmaster took charge while I went to telephone at a farm on the cliff edge, where the farmer's wife fed me up like a hero of some sort. When I got back I was told that a glider had gone over — "very high up — a lot bigger than yours — square wing-tips — and there was something funny about the tail". It turned out later to be John Williamson in the Dart — what a description! Anyway he, Humphry Dimock and Brennig James had all landed a few miles further up the coast. Didn't I kick myself for not taking that last cloud — Diamond Distance, as well, thrown away! As it turned out, the fog thickened and anyway "Met." said it was already 8/8 further north when I enquired next day — so perhaps it was "All for the Best".

I was very glad we didn't fly next day, because even though my crew were unbeatable, a 9 a.m. return to Lasham after a night on the road was not conducive to good flying.

I would like to close with my own impression of the T-51 Dart which made its *début* at these Competitions. On the first two days there was a Dart within my sight each time I set off on my final glide, and this in the worst possible circumstances — unpractised pilots in a very new machine for British conditions — and the most marginal and difficult of British conditions. On the final day a Dart flew over my head on final glide, and my own view that this is the right way to design a glider was finally confirmed.

R.A.F. Germany Regional Competitions

Butzweilerhof, 16th-24th May, 1964

Final Results

Final Place	*Pilot(s)*	*Contest Day* 1	2	3	4	5	6	7	8	*Total Pts.*	*Comp. No.*	*Glider*
1.	Fl. Lt. P. Lane	1000	847	883	952	987	1000	936	1000	7603	702	M.D. 1
2.	Capt. Wheeler and Lt. L. S. Hood	201	1000	1000	1000	961	875	909	725	6671	507	Ka-6
3.	Sgt. S. Warwick-Fleming	617	0	0	600	1000	505	999	290	4011	529	Ka-6
4.	J. Mackenzie	515	367	605	447	940	660	—	0	3499	514	Skylark 3F
5.	J/T A. Phipps	557	31	0	190	657	366	899	246	2946	530	Olympia 463
6.	Cpl. J. Bennett	265	86	512	286	221	234	925	0	2529	519	Olympia 2B
7.	J/T Ross	0	245	0	400	828	446	328	246	2493	505	Ka-2
8.	Cpl. Orme	0	306	767	62	0	4	1000	0	2139	531	B-Spatz
9.	Fl. Lt. A. St. P'e-e & Fl. Off. L. Tanner	265	198	256	128	0	304	—	—	1151	521	Rheinland
10.	SAC S. Tee	0	0	0	138	0	301	679	0	1118	26	S.F. 26

TASKS
Day 1 300-km. Race
Day 2 Free distance
Day 3 87-km. Race to Laarbruch
Day 4 Pilot selected goal
Day 5 82-km. Race to Koblenz
Day 6 Distance along a set line
Day 7 87-km. Race to Laarbruch
Day 8 110-km. triangle



Fig. 2 Surface burns.

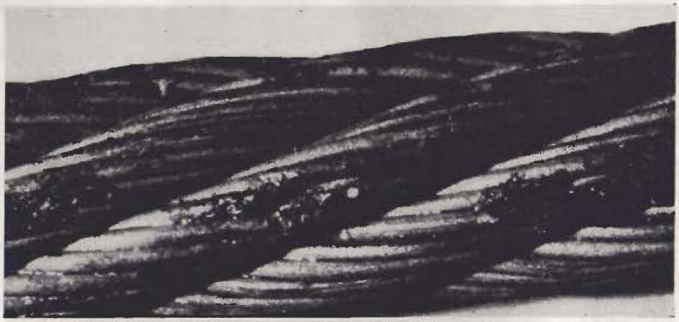


Fig. 3 More surface burns.

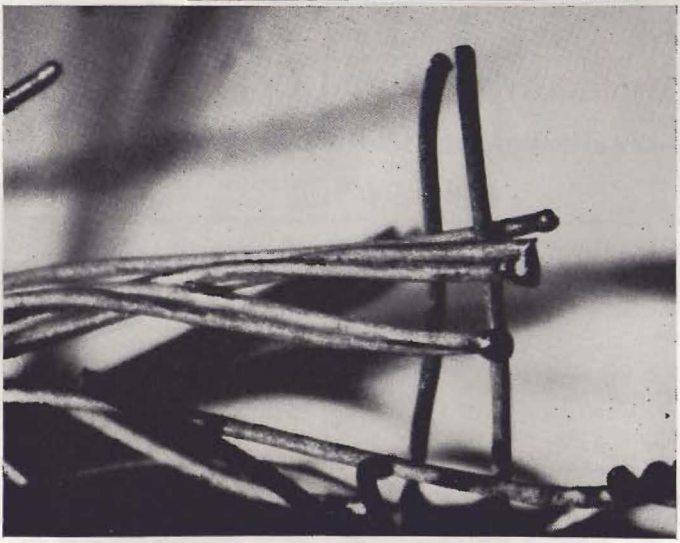


Fig. 4 Broken wires ending with fused beads.

Control Cables in Electrical Storms

A Skylark 3B was flown in a storm cloud and sustained a severe lightning strike. It was returned to the manufacturers for repair, and in the course of the repair all the control cables were removed, inspected, proof-loaded and renewed as necessary.

At the next C. of A. renewal, the cables were again withdrawn and inspected, and were found to be entirely serviceable. During the following season, it was flown near, but not in, an electrical storm. The pilot did not observe any electrical manifestations and the glider was flown in the usual way for the rest of the season. During the second C. of A. overhaul after the lightning strike, the cables were withdrawn and an aileron cable was found to be visibly frayed (Fig. 1). Broken wires were protruding from the cable, and close observation showed them to terminate in little fused beads (Fig. 4).

The condition of the cable was such that the damage must have occurred since the previous overhaul; had it been present then, it would certainly have been observed, and in any case the cables had been independently checked by the manufacturer somewhat earlier. One concludes that the damage must have occurred as a consequence of flying near an electrical storm even though no obvious discharges were observed.

The cable was submitted to the Chemistry, Physics and Metallurgy Department, Royal Aircraft Establishment, Farnborough, who examined it closely. We are indebted to them for some most helpful observations, of which the following are extracts, and for the photographs.

"Although there was no report of an electrical discharge in the aircraft during the flight mentioned, the evidence of this examination indicates that a considerable current flow must have occurred to cause the type of damage found. The structural changes in the wire and the fusion between individual strands indicate that some wires became molten. While fusion of strands might cause several minor breaks in the cable, the cracks produced in the heat-affected layers . . . are also important. The local heating of the wire followed by rapid cooling, even in the absence of melting, is capable of producing a glass-hard martensitic structure which probably would contain many cracks. Even if this

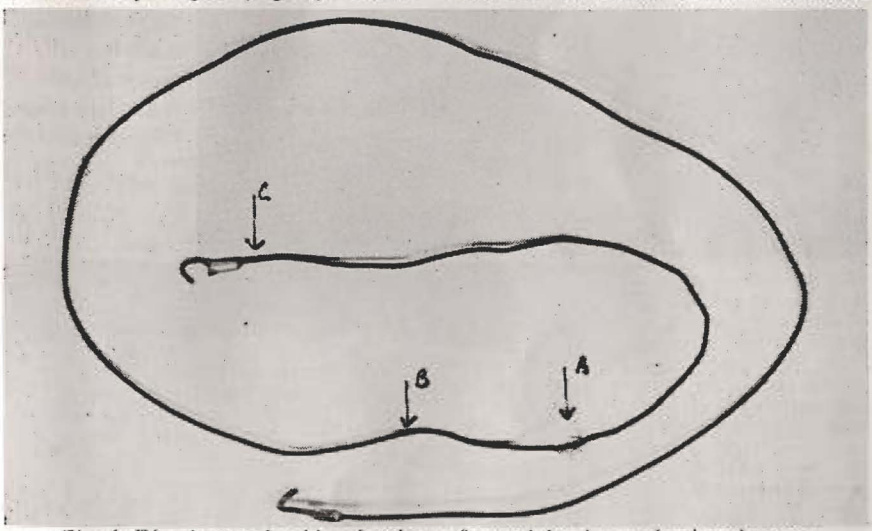


Fig. 1. The damaged cable, showing regions of fraying and other damage.

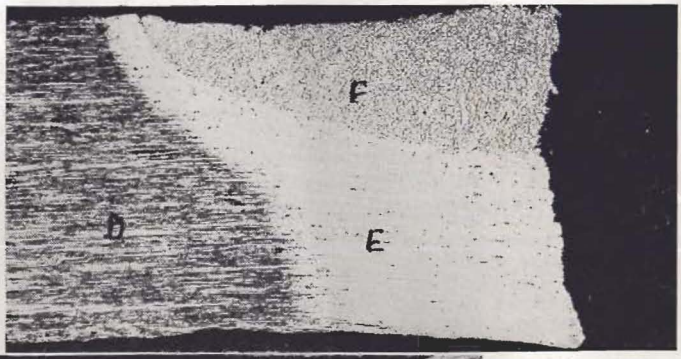


Fig. 5
Section through fractured wire: D, original structure; E, martensitic structure; F, cast structure.

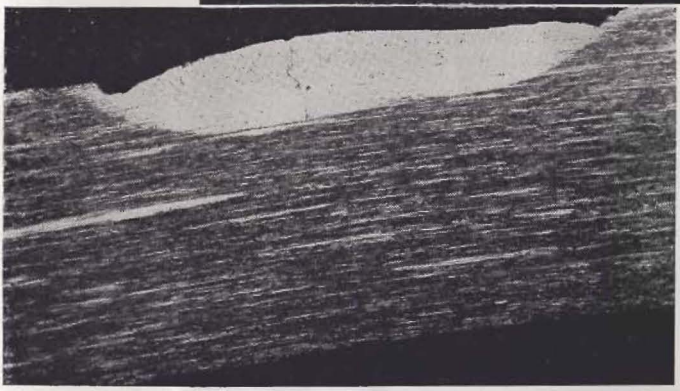


Fig. 6
Section showing crack in a region of local fusing which has become glass-hard

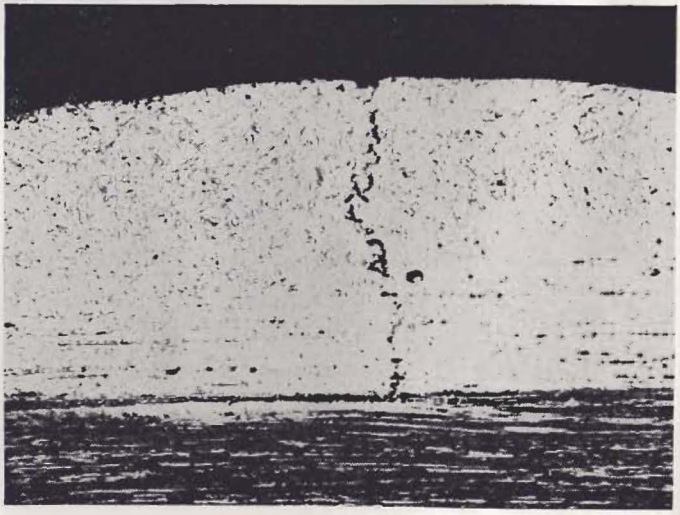


Fig. 7
The same at higher magnification, showing crack.

layer were not cracked, its extreme brittleness and the high level of residual stresses in it would increase the probability of subsequent fatigue failure. Another risk is that melting of the zinc coating might result in penetration of molten zinc around the grain boundaries of the individual wires, so greatly reducing the strength of the cable. While no evidence of this has been observed in the present case it is likely to occur in any cable in an aircraft that has suffered heating of this type.

"CONCLUSIONS

"(1) The initial cause of failure in this cable was damage suffered by a heavy current flow during a storm cloud flight.

"(2) Final failure most probably resulted from the propagation of cracks by normal operating stresses, or possibly by fatigue stress.

"(3) It is recommended that after any storm cloud flight, cables should be thoroughly inspected, and discarded at any sign of burning on the surface."

The Technical Committee endorse the final recommendation, and would point out that the moral of this investigation is that a cable inspection should take place after any flight in or near an electrical storm, even if no obvious lightning strike on to the glider has occurred.

We are indebted to Mr. K. J. Fripp, of Southdown Aero Services, for bringing this matter to the notice of R.A.E.

F. G. IRVING, *Chairman,*
B.G.A. Technical Committee

19,000 Feet in the Blanik

by SQN.-LDR. R. P. SAUNDBY

This flight set up the United Kingdom two-seater records for height gain and — for the first time — absolute altitude.

ON the afternoon of Sunday, 7th June, after some two hours of flying the tug aircraft, I took over the Blanik. The first two flights were air experience rides and the small cumulus only gave lift up to 1,200 ft. During these two flights I observed a line of cumulo-nimbus clouds approaching from the west. On the third flight the pupil was a Junior Technician Roberts from R.A.F. Halton. He is a pre-solo pupil, and he was expecting a dual aero-tow and the experience of flying a higher-performance glider!

He was in the front seat. While I noticed that the cumulo-nimbus was getting very close, it was active with flashes of lightning from behind the rain curtain. The tug dropped the Olympia in strong lift and came back for us; while it was on its way back I hurriedly borrowed a map from Ron Newall and checked the instruments. I had myself recently fitted the Blanik with artificial horizon and turn-and-slips in both cockpits, but the aircraft is not fitted with an oxygen system.

We took off behind the tug, retracting the undercarriage and switching on the instruments as soon as we became airborne. The tug climbed rapidly under a big shelf of black cloud projecting forwards in front of the rain curtain. At 1,300 ft. the tug leapt upwards, waggling his wings, and we pulled off, turning left; the variometers went on to their top stops and we went into cloud. I was initially flying the Blanik at 45 kts. because of the turbulence. At 4,000 ft. the lift reduced and we flew into rain, so I rolled out on a south-east heading and after a few moments we flew back into the strong lift.

This was a pattern of events which repeated itself several times during the climb. In the lower levels the rain was associated with reduced lift or sink. Above six or seven thousand feet hail was often associated with areas of strong lift. The areas of very strong lift were very strong indeed, giving peak rates of climb of at least four thousand feet per minute. These areas of strong lift were very small; it was essential to keep the speed below 40 kts. and to use flap in order to stay inside the strong cores. The problem was that if one lost the strong, smooth core one flew into turbulence and suddenly lost 20 knots of airspeed without any change in pitch attitude.

We passed the freezing level at





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9,000 ft., and above this height I did not use the flaps because I was afraid that they would ice in the extended position and their speed limit is only 60 kts. The instruments worked well, and I would consider the artificial horizon essential for a cumulo-nimbus climb. I hold an R.A.F. instrument rating and can fly on partial panel, but there were changes of up to 20 kts. in the airspeed without changes in pitch attitude; if one was attempting to control pitch attitude by reference to the airspeed one would inevitably over-control the aircraft. Flying on the horizon, our speed never went over 50 kts. when circling, and although we came down to the stall once or twice we never lost control. The aircraft was fitted with an accelerometer and the maximum acceleration recorded was only 2.5 *g*. I have been in much smaller and rougher clouds, but I am sure the secret in not overstressing the aircraft is to keep the speed down.

We climbed through 15,000 ft. in strong lift; the cloud in this strong lift was lighter, and I suspect we were near the front of the cloud. All the way up when in lift there had been frequent flashes of lightning, but we noticed no electrical effects inside the aircraft. The Blanik is an all-metal aircraft and all parts are carefully bonded, so one should be completely safe. So much hail had come in through the front ventilator that we had had to close it. Small hail had bounced all over the front passenger and covered the area between us; the canopy was covered with thick ice on the inside. The aircraft also had a good layer of airframe icing and elevator trim was immovable. All the other flying controls and instruments were still working.

Above 15,000 ft. I began to worry about oxygen lack. My passenger was still talking continuously except when the noise of the hail made conversation impossible. Part of my normal job is showing trainee pilots the effects of hypoxia, and I spend a great deal of time in decompression chambers. This has probably given me a small degree of acclimatisation and also a great familiarity with my own personal symptoms of anoxia, and so I continued the climb. Above 15,000 ft. the standard of my flying began to deteriorate, and at 19,400 ft. on the altimeter it had

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deteriorated below acceptable levels.

I turned west and left three metres a second of lift. I handed over control to J/T Roberts, and because of the frozen trim he had to hold a considerable forward stick pressure to maintain 60 kts. We kept the airbrakes out and descended rapidly in cloud to 15,000 ft. and both felt better. The airbrakes showed no tendency to ice up, either in the retracted or extended position. I would repeat to others the advice I gave in an article on oxygen I wrote for SAILPLANE AND GLIDING, that climbing above 15,000 ft. should not be attempted without oxygen; I am better placed than most pilots in that I normally work with decompression chambers and was able to monitor my own deterioration.

We broke cloud at about 15,000 ft. and, scratching holes in the canopy ice, found ourselves in a gap between cumulo-nimbi and with 8/8 cloud a long way below us. We were very cold and the cockpit was like the inside of a deep freeze. By this time I knew I must be very close to Amber One and just upwind of the London Control Zone, and so we descended rapidly in VMC, pausing at 7,000 ft. to let the ice melt off. As the ice melted off a piece of slush must have filled the pot pitot because the airspeed indicator failed. Now we could see out of the canopy, Roberts saw a hole in the lower cloud and we descended through it, clearing cloud at three thousand feet. We identified our position as near Thame, and because of the strong north-west wind we could not make Bicester, so we turned and landed at Thame aerodrome where we were greeted by the local gliding club. One of their course members kindly drove me down to the village where I phoned Bicester. We then emptied the water out of the pitot system while Andy Gough came over in the Auster to tow us back to Bicester.

The gain of height was about 18,000 ft.; this is about the maximum that could be done without oxygen, and I was fortunate in having an imperturbable and enthusiastic passenger in the front cockpit. All the way up I was full of admiration for Derek Piggott's previous climb in an open T-21. I think this flight beats the present U.K. record but it is a long way below the single-seater record. With modern two-seaters there is no reason why the two-seater record should not be as high, or even higher, than the single-seater record.



Courtesy "Sunday Citizen".

Flying the Dart

by TONY DEANE-DRUMMOND

THE Dart is a great little glider and I am sure that many of its excellent features will be copied by other manufacturers when they get round to it. It looks good on the ground and it handles very sweetly in the air. When this is combined with remarkably easy rigging and comparatively small fuselage cross-section area (which is combined with a very comfortable seating position for the pilot), it becomes a very interesting ship indeed.

Comparative testing before the Championships was carried out against an Olympia 419. At 70 knots it was about 7% better, whilst at 43 knots it was stated to be virtually the same — although I, myself, am not too convinced on the latter figure. In normal thermal soaring it is not practical to fly much slower than 42-43 knots, which is about 6-7 knots above the stall, and about 5 knots faster than old-fashioned gliders like the Skylarks and 419's. At 42-43 knots its sinking speed appears to be a little higher than old type gliders, but this is insignificant if thermals give climbs better than about 2 knots.

Most unfortunately for its reputation on the first two days of the Championships, thermals were both small and very weak. To reach the launch height of 2,000 feet was quite an event and, generally speaking, nine thermals out of ten produced climbs of about ½ knot or less. My first day was disastrous and exasperating, scoring no points after two short flights of about 15 miles each and never getting higher than 1,500 feet above Lasham. The next day was a little better, although John Delafield and myself both landed near Swindon after rounding the turning-point.

The third competition day was an interesting one and rather typically English. It was good in parts with lots of scope for initiative. The task was free distance with a 10-15 knot westerly wind. The Met. briefing suggested that large areas of stratus or overbuilt spread-out cumulus might hamper pilots, and so it turned out. I briefed my crew that I would attempt a due northerly track, but would leave a final decision to when I was between Bicester and Dunstable. Straightforward thermal soaring applied for the first 55 (nautical) miles, and, helped by a cloud to 8,000 feet over Aldermaston, enabled the Dart to take only 1 hour 10 minutes to a point N.E. of Banbury. In front to the north there appeared to be 8/8 stratus as far as I could see, lying N.W.-S.E. and at least 20-30 miles wide. A glimmer of hope could be seen N.W. towards Stratford and another almost down wind towards Aylesbury. I chose up wind to Stratford, where good conditions enabled quite easy soaring to the west of Birmingham Control Zone. From Wolverhampton good conditions appeared to be developing to the north-east, but a series of dissolving clouds brought me to a landing near Derby, too low to catch a good cloud with an excellent-looking sky to the north. Another 300 feet . . .

The last competition day was fascinating. It was quite a privilege to be soaring in a glider on such an occasion. The task of distance along a line to the north was announced at 11 a.m., with rain

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Tony Deane-Drummond is welcomed at Rufforth by the Ouse Gliding Club. (Photo by Keith Massey, Yorkshire Evening Press)

pelting down on the briefing tent roof. On the previous day the best pilot in League 2 had managed about 70 miles and I don't think any of us expected to go much further. Order of take-off was roughly in order of selection, and I was last to leave the ground at about 2.15 into a rapidly improving sky. Pilots were setting off north as soon as they released, and so I had about 40 minutes to catch up on the leaders.

Thermals of up to 3 knots could be found, but a rather low cloud base at first made the use of weak ones also necessary and so cut down the cross-country speed. Under these conditions the Dart appeared to be marginally faster than the other 18-metre gliders. There were a lot of over-large and good-looking clouds going up to 10,000 or so around, but it was difficult to find which part of the grey mass underneath was working. It was not until I was over Loughborough that I connected with a 1-knot thermal at cloud base that gradually built up to over 10 knots at 8,000 feet in very rough and heavy icing conditions.

At just over 10,500 feet I steered north again. The time was 5.45 and I thought this would lead me to a landing somewhere in the Doncaster area about 6.45 — late enough to feel the best had been made of the day. Sure enough the Doncaster by-pass came into view at about 1,500 feet, the sky was still overcast and almost automatically I steered under some ragged-looking teased-out grey blobs. A little lift under the port wing made me turn that way to find a steady, easy 2-knot thermal which took me to cloud base at 4,000 feet at 7 p.m. This was astonishing, and full of hope I went north again. It looked slightly better to the north-east, but I just could not reach a still active one over York and landed at Rufforth Airfield at 7.30, a minute or two after Ted Shephard in the Army Skylark 3. The Ouse Gliding Club did the honours and my crew, bless them, arrived two hours later.

The Dart's cross-country speed — and this is what matters — is slower than the present 18-m. gliders when thermals are less than about 1-1½ knots. From 1½-3 knots it is on a par or a bit better. Above 3 knots it walks away from the field, who all look very slow and pedestrian on such occasions. I am quite sure that the Dart will improve all U.K. closed-circuit records on suitable days. But don't expect it to beat the 419s when "local-soaring in straight lines", as on the first two competition days this year.

Dutch National Championships

by J. VAN ECK

AS usual our Nationals were held at Terlet, the National Gliding Centre. Due to a very persistent area of high pressure, this was the warmest May since 1947, and during the contest period every day but one was soarable. Of the 13 possible days after the opening ceremony on 16th May, tasks were flown on 10 days.

Just as the number of contest days was a record, so was the spirit. The Organization, in the capable hands of Menno Manting, ran very smoothly and the Stewards remained unemployed throughout the meeting.

The 30 competitors were launched by winch, and with eight cables available on two independent strips, launching was very quick and everybody could be airborne in just over half an hour.

MAY 17TH.—110-km. Triangle. The weather was hazy and the cloud base very low (700 m.); the task proved to be difficult (cloud flying is forbidden in Holland) and only Arie Breunissen completed it.

MAY 18TH.—109-km. Out-and-Return was set but there was no contest.

MAY 19TH.—300-km.Triangle was set in a decreasing westerly wind. Showers were forming on the second leg, which was also into the wind, and only four competitors rounded the second turning-point. Van Bree and Melzen landed after 279 kms. This flight gave van Bree the lead which he kept for the rest of the contest.

MAY 20TH.—128-km. Goal Race. Sixteen pilots reached the goal in a moderate cross-wind with well-developed cumulus. F. Seyffert came first with 70.6 km.p.h., Breunissen 2nd at 64 km.p.h., van Bree 3rd, 63.5 km.p.h.

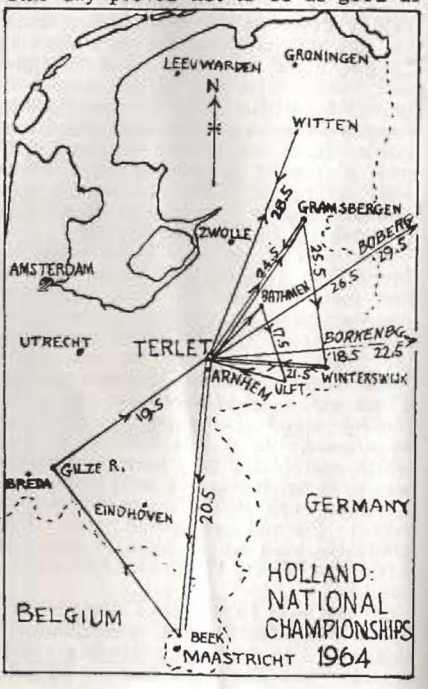
MAY 21ST.—109-km. Out-and-Return. Although eighteen pilots got round the turning-point, only van Bree and Ordelman finished the task. On this day van Geuns saw one of his fellow competitors make a bad landing and not get out of the cockpit afterwards. He immediately opened his brakes and landed in the same field in order to give help. This was an example of the terrific sportsmanship which prevailed.

MAY 22ND.—98.5-km. Race to the German Gliding School at Borkenberge. Thermals were good, although pilots had to put up with a pretty strong headwind. Fourteen pilots reached the goal with the brothers Arie and Rijk Breunissen sharing first place with a speed of 44.8 km.p.h. May 23rd was a rest day.

MAY 24TH.—159-km. Out-and-Return. The outward leg was against an easterly wind which was strong at first, decreasing later. Thermals were very good with a high cloud base. Twenty pilots finished the task. Best speed was by Ordelman, 59.6 km.p.h., followed by Dekkers, 54.4, and van Bree, 51.4.

MAY 25TH.—204-km. Triangle. Nobody completed the task. Longest distance was 115 km. by R. Breunissen.

MAY 26TH.—Distance along a Set Line. This day proved not to be as good as





Ten best in Holland. Top row: Réparon, van Bree, A. Breunissen. Middle row: Bernsen, v. d. Salm, Ordelman, Selen. Front row: v. Melzen, R. Breunissen, Seyffert.

promised. Vermeer went furthest with 70 km. May 27th was a rest day.

MAY 28TH.—217-km. Out-and-Return. Fifteen pilots completed this task, which was flown in a light cross-wind with good thermals. Réparon came 1st at 55 km.p.h.

MAY 29TH.—Free Distance. Pressed by all the competitors Menno Manting gave this popular task. As mist was forecast over the southern part of Holland and Belgium, nearly everybody set course towards Germany against a light wind. Van Bree, who would have won the contest in any case even if he had not flown on this day, proved himself again by going 246.5 km. (995 points), the furthest being 248 kms. flown by van Melzen.

During these 10 flying days 480 launches were carried out, 1,085 hours flown, and the total distance covered was 29,536 km. Below is a list of final results for the first 10 pilots. The first 5 will be trained further for the rest of the season. Out of them 2 will be chosen for the 1965 World Gliding Championships.

Leading Results

Pilot	*Sailplane*	*Points*
E. v. Bree	Ka-6	9212
D. Réparon	Ka-6	8142
A. Breunissen	Ka-6	7916
G. Ordelman	Sagitta	7619
J. v. Melzen	Ka-8	7611
J. Selen	Ka-6	7312
F. Seyffert	Ka-6	7236
R. Breunissen	Ka-6	6995
J. Fernsen	Sagitta	6880
H. v. d. Salm	Skylark 3	6538

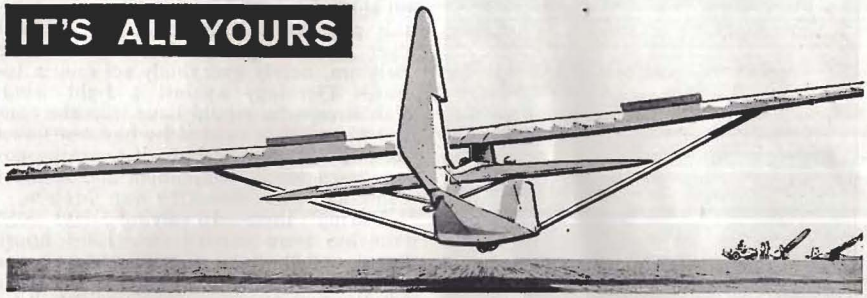
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OVERSEAS AGENTS

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AEROBATICS

THE following circular has been sent to all clubs:—

The British Gliding Association makes new regulations with reluctance, as it feels that Clubs are responsible bodies, and understand local conditions best. However, from time to time it becomes necessary to introduce a regulation for general guidance and safety.

The recent accidents to relatively inexperienced pilots while doing aerobatics have shown a need for such a regulation.

The Council has decided therefore that the following will come into force on 1st October, 1964, when it will become part of the B.G.A. Operational Regulations which all members agree to obey.

I.9. Training in aerobatics must be given on a dual-control two-seater by an instructor experienced in aerobatics. The two-seater, and the first single-seater on which the pupil carries out aerobatics, must be fitted with a serviceable accelerometer.

From the present time until 30th September, it is hoped that Clubs will seriously consider stopping aerobatic training, and aerobatics by less experienced pilots, until they can comply with the terms of the new regulation.

It is hoped also that pilots who already do aerobatics will check themselves against accelerometer readings.

Although it is not intended at present to make further regulations on aerobatics, the Council asks that C.F.I.s should consider the following Recommendations:

1. Any pilot pulling more than 3½g in the air should report this, and the aircraft should not be flown again until it has been inspected, and a log-book entry made and signed by an approved inspector. It should be realised that one pilot might incur damage which could result in structural failure to another.
2. C.F.I.s should lay down minimum heights for aerobatics at their Club, and no aerobatics should be done below this height without special permission. As a general guide, aerobatics by other than very experienced aerobatic pilots should be completed by 2,500 ft. above the ground.

Pilots and Clubs are asked to transfer this information to copies of Laws and Rules in their possession. Printed slips will be put into new copies.

Further detail information on aerobatics can be found in the new edition of Flying Training in Gliders.

ANN WELCH.

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Trouble on tow in Russia

A Soviet meteorological book, published in 1963 for Aeroflot crews, includes a description of turbulence encountered by two tug-and-glider trains in Stavropol region on 21st November, 1959.

At 10.00 hrs. two YAK-12 aircraft towing gliders took off for Stavropol. While approaching Stavropol and about 20-25 km. from the town at 700-900 m. above ground they met heavy turbulence. The aircraft were thrown from side to side and up and down at speeds of 9-12 m./sec. One of the gliders broke loose, and the other, having been thrown upwards several times, lifting the towing YAK's tail so that the aircraft was in a nose-down attitude, forced its pilot to release. In this case the aircraft had run into the turbulent air downwind from a hill by Stavropol.

NOTE.—An atlas shows two Stavropols: one 40 miles N.W. of Kuybyshev and the other half-way between the Black Sea and the Caspian.

WORLD RECORD HOMOLOGATED

THE F.A.I. has recognised the following World Multi-Seater Gliding Record for Speed round a 500-km. Triangular Course:

Helmut Sorg and Heinz Sorg (West Germany), flying a Ka-7 sailplane. Speed, 83.74 k.p.h. (52.033 m.p.h.). Course: Kimberley — Brantfort — Philippolis — Kimberley (South Africa), 7th January, 1964.

BOOSTING THE SEA BREEZE

A plan for producing rain by blanketing arid areas with asphalt was announced in America recently by Dr. James F. Black, of Esso Research and Engineering Co., U.S.A. He told an international meteorological meeting about a technique for making rain by coating coastal areas with thin layers of asphalt.

The asphalt boosts the soil temperature, and the soil, in turn, heats the air above the coating. Hot air rises, bringing in moist air from the sea and lifting it into the sky to be condensed into clouds and rain.

BRITISH GLIDING ASSOCIATION

CHIEF TECHNICAL OFFICER

The increasing number of Clubs and B.G.A. certificated gliders makes it necessary to appoint a full-time Chief Technical Officer. It is envisaged that his duties will comprise:—

(a) Visits to Clubs and Repair Organisations to help with technical problems and to examine applicants for inspection approval.

(b) Helping each year in the running of a small number of courses for inspectors.

(c) Assisting in the office work associated with Certificates of Airworthiness and associated queries.

He will be responsible to the Council of the B.G.A. through the Chairman of the Technical Committee.

Applications are invited for this post.

Qualifications should include:— Considerable experience of repair, maintenance, and inspection of modern gliders; good technical knowledge; ability to demonstrate and lecture on repair techniques, to write reports and deal with paperwork. A considerable amount of travelling and weekend work will be involved.

The salary will be within the range of £1,300-£1,500 p.a. according to qualifications, plus expenses. Applications, which will be treated in confidence, should be submitted to the Secretary of the B.G.A. by 19th August.

BRITISH GLIDING ASSOCIATION
75 Victoria Street,
London, S.W.1.

The 1964 Nationals

by PHILIP WILLS

MOST people who took part in the 1954 World Championships at Camphill remember the ghastly weather with horror. But in retrospect those Championships resulted in changes to the F.A.I. Rules and Marking System which have greatly improved them, and all subsequent Championships have been greatly benefited.

Ten years later we have had a similar experience for our 1964 Nationals. although nothing like so bad; and I think in the long term we may extract similar progress: we must certainly try.

At the start, the most striking change was the increasing use of radio. Fifty out of eighty entrants were so equipped, and at last really suitable sets of British make are becoming available. This has confirmed a belief I have long expressed in official quarters: glider pilots don't have to be *driven* by law to install radio; as soon as adequate sets are available at a price we can afford, they will fit it of their own accord. The increased fun one gets with really fool-proof radio is immense, and the time saved on the retrieve significant.

Next came the, to my mind, rapid increase in our general standard of pilotage. Let us make no bones about it, we had stinkingly difficult weather. On one blue thermal day, no one completed the course: there were 82 out-landings, mostly in fields. I hope and believe we made no farmers angry; but the final damage report of the whole contest was one rudder chewed by a cow in the owner's absence at the telephone.

The extraordinary afternoon of May 22nd presented League 1 with the most difficult of all pilot techniques. After three postponements of briefing, Wally the Met. gave us a dubious possibility of three hours' cross-wind flying to the north, and Ann set us a flight along a line through Sutton Bank. Taking off at 13.10 hrs. I thought I had done well when I landed six hours later at the foot of the Newcastle Club's site 230 miles to the north — until we got back to Control at Lasham at 5.30 a.m. the next morning and saw four pins stuck around Newcastle, 265 miles away.

Most of the second half of this flight was carried out with only occasional glimpses of the ground beneath, between heights of 4,000 and 11,000 ft. It involved approaching a chaotic mass of cloud from one side, glimpsing a cloud-turret ahead and far above, and steering an accurate course blind, in fairly rough air, on a Cook compass, a turn-and-bank, and, for those who had it, an artificial horizon. One was aiming at an invisible upcurrent ahead in the heart of the cloud, perhaps not more than a quarter of a mile in diameter. An error of a degree or two on course might mean missing it.

On striking it, one had to centre in it, climb as high as possible, sometimes assuming ice on the way, then set off again on course. Anything up to twenty minutes later, still blind, one might strike another area of lift, centre in it, and repeat the performance. And one had to keep on track.

I think something like half our League One pilots coped with these conditions: I don't believe a higher proportion would be found in World Championships.

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A birthday cake for Philip Wills.

At Prizegiving I made a joking remark about the new names appearing at the top of the results: I hope no one misunderstood me. To achieve top rank in 1964 involved outstanding tenacity and the ability to seize unforeseen opportunities. John Fielden's victory was a triumph.

It also clearly helped to have 18 metres, as the results of both Leagues show. For I don't think anyone really believes that the top names of the past few years who came out towards the bottom would have done so in more normal weather or if we had had more contest days, and as for the Dart, if Fate had been specially asked to dream up weather precisely calculated to plant fast fifteen-metres on the ground as quickly as possible, the conditions we had would have been her answer.

An audible sigh of relief went up when the Friday afternoon, bringing us the only weather approximating to that for which she had been designed, John Williamson took off last in his Dart and, making the fastest time of the day, landed up within a mile or two of Brennig James — who had taken off in his Skylark 3 first — taking 52 minutes less for the flight. I hope everyone will keep this result in focus.

The 1964 Nationals have shown that in light thermal conditions a high wing-loading on 15 metres, flown by pilots of a few hours' experience on that type, will not do as well as normal 18-metre ships flown by pilots who have been flying them for years.

Anyone who is taken by surprise at this outcome has been believing in a suspension of the laws of Nature.

They have also been ignoring history, the last demonstration of this truth being Dick Johnson's victory in the 1963 U.S. Nationals flying his Skylark 4 against the massed Sisu's of America.

The two most important lessons we should learn from Lasham, 1964, are in my view:

(1) We must strain every nerve to run *two weeks'* Nationals in future. The amount of work and expense involved to organisers and teams alike is enormous, and to disband the whole thing after only a week is immensely wasteful. The increase in experience and the improved reliability of results obtained, if only we can achieve this, will be immensely valuable to the whole future of British gliding.

(2) The difference between gliding and golf is that in the former one is only allowed to use one club. If each pilot was allowed the equivalent of a mashie for good days and a niblick for bad ones, he could achieve much better results.

But, things being as they are, it seems to me that we would be wise in 1965 to enter one aircraft calculated to do well if we get good weather, and a second if we get the reverse. The latest 460 is said to be an outstanding ship, so one 460 and one Dart in 1965 should give our Standard Class entry the best possible chance. It would be nice if we could find a fast 18-metre for the Open Class, so that we could do the same there.

LAMENT

As I was flying through the air,
I found some lift that wasn't there.
It wasn't there again today—
That's twice I've had to land away.

J. M. P.

Civil Air Traffic Censuses

by NICHOLAS GOODHART

THE four civil air traffic censuses that have so far been carried out contain sufficient information to enable at least a beginning to be made in analysing the real air traffic situation. This article is aimed at bringing out the information relevant to gliding.

Before dealing with the figures, there is one most important aspect, and that is the fact that the censuses depend on the voluntary co-operation of civil aircraft and glider owners. In each census so far glider owners have co-operated nobly by returning over 90% of the census cards sent out. This is a much better record than other civil aircraft. From the point of view of both Philip Wills and myself this splendid co-operation has been invaluable in all our discussions with the Ministry of Aviation; so, even though it's a bore, please keep it up. There is probably nothing that, in the long run, will do more to help keep adequate freedom in the air for gliders.

The most interesting figures in the census reports are those showing the amount of "controlled" traffic. Controlled is in inverted commas because it is not used in the strict ATC sense but here means all civil traffic in Airways, Terminal Control Areas, Control Zones, Upper Air Routes, Advisory Routes, and the Scottish Advisory Area (if receiving Advisory service). Fig. 1 shows the levels of this traffic averaged over various periods.

From the gliding point of view only the daytime levels are of interest and particularly those at weekends. We are also mostly interested in the summer levels. The graphs show that on a summer weekend there are about 27 "controlled" aircraft over the whole of U.K. (land only; aircraft over the sea have been excluded); it also appears that the figure is not increasing appreciably. On the other hand there does appear to be a significant increase in the level of week-day and also night flying; the Ministry estimate that overall increase at 8% per annum. Of course, any conclusions on rate of increase cannot but be very tentative at this early stage with so few points to go on.

Fig. 2 shows the distribution of the "controlled" traffic by height. The interesting point here is that the percentage below 10,000 ft. is showing a fairly steady looking decrease from 48.3% in July, 1962, to 42.5% in July, 1963. This trend, which is only to be expected due to the decreasing number of piston-engined commercial aircraft, is very advantageous to gliding, since nearly all gliding is done below 10,000 ft.

We may be able to show that the need for low-level controlled airspace is actually decreasing despite any overall increase in total traffic, but this cannot be concluded direct from the figures since Fig. 2 refers to traffic in all U.K. airspace, i.e. including those over the sea, whereas Fig. 1 excluded those over the sea. It is fairly obvious that if Fig. 2 covered only aircraft over U.K. a higher proportion would be climbing or descending from their cruising levels and thus higher proportions would be at lower levels.

"Uncontrolled" civil air traffic is also of some interest to gliding since this is the traffic which shares the airspace that we mostly use. It also tends to operate in very much the same height bands as we do. Weather affects its operation nearly as much as ours; thus on all counts the conflict is more severe than it would be with "controlled" traffic even if there was no controlled airspace. And yet do you find yourself taking frequent avoiding action? In fact, how many glider pilots have ever had to take avoiding action except from other gliders either near the site or using the same thermal?

Due to the variability of the weather in the four censuses, it is not possible to establish any "uncontrolled" air traffic trends, even tentatively. However, the figures for the July, 1963, census are fairly representative since the weather was reasonable during the period covered. There were on average 107 aircraft airborne during daytime (actually 1130-1930 G.M.T.) throughout the week. Taking the weekend alone, the figure was 182 airborne on average. These figures include gliders which represented 44% of the total daytime

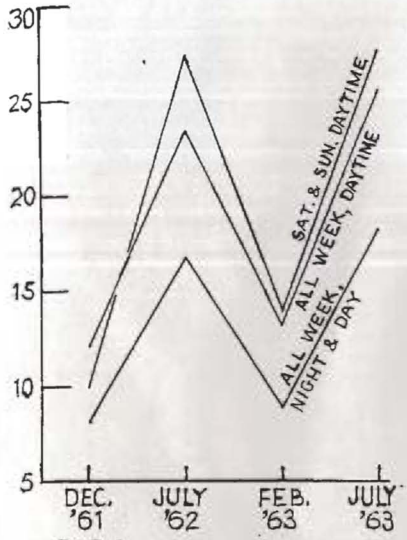


FIG. 1: AVERAGE NUMBER OF "CONTROLLED" AIRCRAFT AIRBORNE OVER U.K. DURING PERIOD SPECIFIED

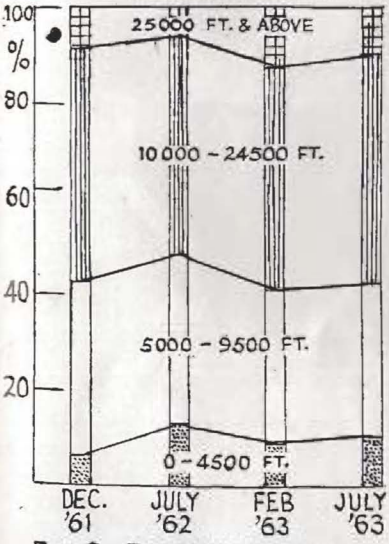


FIG. 2: DISTRIBUTION OF "CONTROLLED" AIRCRAFT BY HEIGHT

"uncontrolled" traffic. At the weekend (which happened to coincide with the Regional Championships) gliding represented nearly 60% of all daytime "uncontrolled" activity.

Insufficient information is given in the census reports to show in any detail the distribution of "controlled" traffic; however, the reports do show that just over 60% lies south of an E.-W. line through Birmingham. I would hazard a guess that this means that near to 50% of all "controlled" traffic is in the complex of controlled airspace formed by the London TMA and the airways south and east of it.

To sum up, a typical picture of civil air traffic over U.K. on the afternoon of a good summer weekend might show:

9 Commercial aircraft in "controlled" airspace in the S.E. corner of England below 10,000 ft.;
8 Commercial aircraft in "controlled" airspace over the rest of U.K. under 10,000 ft.;
10 Commercial aircraft over U.K. over 10,000 ft.;

27 Aircraft in "controlled" airspace.

80 Gliders local-flying at their sites;
20 Gliders on cross-country, probably in the height band 2,000-6,000 ft.
80 Small aircraft nearly all below 5,000 ft. (this category includes the occasional commercial aircraft in F.I.R.'s);

180 Aircraft in "uncontrolled" airspace;

207 Aircraft airborne in total.

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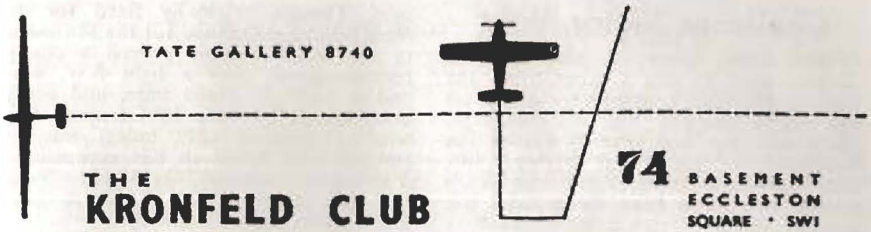
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IN the absence of Colonel Gough, M.P., through sudden illness the renovated club was most successfully opened on the 29th April by Group Captain Douglas Bader, who very kindly stepped into the breach at the last moment.

Sixty-five V.I.P.s from all branches of aviation attended the Opening Cocktail Party which was followed by an equally successful Party for members and their friends. Everyone was full of praise for the décor and comfort of the new lounge and bar which was designed for us by Frank Kinder.

Our big news this issue is that as from the 1st August, for trial period of four months, the club will be open each evening Monday to Friday from 5.30 to 11 p.m., when the bar will be run by Steward Tony Salsman. To make this a worthwhile venture the club will have to be used a lot more than at present, so if you are thinking of a rendezvous place in town, don't forget the "Kronfeld".

For some time the Committee have been applying themselves to increasing the membership of the club and the consequence utilisation of the premises and we are therefore very pleased indeed to welcome the Royal Aero Club Associate members who, from the 1st August, will be able to use the facilities of our club. This is in return for quite a substantial donation to our Appeal Fund. Incidentally, the premises are available for meetings, lectures and parties any evening. Bookings may be made by ringing the Steward in the evening. Rates are very reasonable particularly for genuine aviation interests. Group membership is also available for aviation organisations and clubs who wish to make regular bookings for meetings, etc.

Rosamund Hervey, who has for the past 18 months very ably organised our lectures leaves for foreign parts and her place is being taken by May Marven who will be pleased to receive suggestions for the Diary.

Our Annual Dinner is Friday, 16th October, at the Eccleston Hotel, and will be followed by a party in the club with professional musical entertainment. Inclusive Double tickets, 65s.; or the party only (9 p.m. to 1 a.m.), 10s.

Y. C. B.

Diary of Lectures and Film Shows
Wednesdays, at 8 p.m.

July	29.	Hovercraft Films.
Aug.	5.	Film: "The Crescent Wing".
„	12.	1964 Cannes Air Race by John Blake.
„	19.	"The History of Aeroplane Aerobatics" by Peter Phillips.
„	26.	Light Helicopters, by R. B. Stratton.
Sept.	2.	Light Aviation at Biggin Hill, by Sqn. Ldr. J. M. Maitland.
„	9.	"A Pilot's view of the Battle of Britain" by Group Captain Norman Ryder.
„	16.	Films. "Mars and Beyond" & "Safari Cortina Conquest".
„	23.	The Regional Gliding Competitions.

On opposite page: scenes at the re-opening of the Kronfeld Club. Above: Hugo Trotter, Chairman (left) and Frank Kinder, architect. Below: Douglas Bader cuts the tape. Also seen from l. to r.: Hugo Trotter, Yvonne Bonham, Rosamund Hervey (retiring Lecture Organizer) and May Marven (new Lecture Organizer). Photographs courtesy of "Flight".

Challenge Victor Boin

THIS heavy piece of sculpture was presented by the Chairman of the Belgian Olympic Committee eight years ago for a one-day free distance task. As it was won last year by Gerrit Jan Ordelman, of the Teuge Flying Club, near Apeldoorn, in Holland, this year's contest was flown from Teuge, and five Belgian and 17 Dutch competitors took part. Though originally fixed for 7th May, it was postponed till the 9th owing to the weather. This proved a change for the good, with a light S.W. wind and a 4,000 ft. cloud base, and everybody ended up deep in Germany. The winning distance (249 miles) was the furthest ever flown in this competition.

Previous winners, 1957-62: Weiss (France), Ince (U.K.), Lefebvre (Belgium), Van Bree (Holland).

Leading Scores

Pilot	*Country*	*Sailplane*	*Landing*	*Km.*
M. Baeke	Belgium	Foka	Grömitz	401
H. Stouffs	Belgium	Ka-6	Neustadt	386
E. F. van Bree	Holland	Ka-6	Neustadt	384
G. J. Ordelman	Holland	Sagitta	Eutin	380
J. Bernsen	Holland	Sagitta	Hornsdorf	377
A. G. M. v. Geldorp	Holland	Ka-8	Oldendorf	340



Combined prizegiving ceremony for the Victor Boin Contest and the Dutch Nationals.

CONTEST AT DONCASTER

A SMALL, informal, local competition took place at Doncaster over five days at the beginning of June. Six gliders entered: four Olympia 2B's, a Skylark 1 and an Olympia 460, all from Doncaster except one Olympia from Camphill. The aim was to introduce people who had not entered competitions before to this kind of flying, and in this it certainly succeeded. All of us who took part found the experience most enjoyable, and I think we learned a lot. Such things as judging the right time to go away all began to assume an importance we had only known about theoretically before. The winner was Mike Horner of Doncaster in an Olympia 2B, who made two excellent flights, one to Scarborough and the other to Pateley Bridge.

Our thanks are due to Jack Tarr, who organised the week and who was also Chief Marshal, Task Setter, Met Officer, Competition Secretary and tug pilot.

This was the first competition which the Doncaster Club have organised. Next year they intend to hold another, and judging from the interest aroused this year I have a feeling that a lot more than six gliders will be taking part.

J. G. R.

Long Distance in the Dart

by JOHN WILLIAMSON

AFTER a week of indifferent weather and only three contest days in the Nationals, each in rather difficult conditions, I was depressed on the Friday to hear "Wally" give yet another forecast of marginal scaring. It sounded unlikely to brew up at all, or at best only gently in places. The briefing, delayed until noon by the passing of a weak front, held none of its usual excitement and anticipation for me. I hadn't brought a map and had made plans to get away and visit friends that afternoon. The Dart was not rigged. Imagine, then, the flurry to get organised for a one o'clock take-off.

I still didn't really believe in the weather, and was the first to delay my launch-time to the back of the queue, to two o'clock. Philip Wills shook his head over my decision, someone snapped up the slot I had vacated, and so I was stuck with it, and watched the others stream off into the rapidly clearing sky.



Last to take off on the last Contest Day: John Williamson in the Dart.

During the first hour I took things very gently, using almost every piece of lift, but even so still having to get up twice from below a thousand feet before Didcot. I had learnt at last not to take the chances that I might have in the "419", when I would have rejected weak lift as not worthwhile at any time above 1,500 feet. I had learnt that the Dart, circling at 45-50 knots, simply could not be expected to climb out of holes in the ground in the same way as the slower ships.

Beyond Didcot, running up to Oxford, it was clearly becoming very good, however, and I knew that at last we were seeing the sort of weather for which we had prayed. I was quickly convinced that the thermal I was sharing with several other late-starting stragglers was the last of the poor stuff, and at 3,000 ft. set off at 80 knots in anticipation of suitably strong thermals to come. Sure enough I ran straight into one that gave a steady 6 knots and when my former thermal-mates joined me I was already 1,000 ft. up on them. So it went for the next two hours until at five o'clock the air began to simmer down, at lower levels at least, and it was time to get up high and stay there. Now, of course, each successive cloud died two minutes before I got to it and I found myself below 3,000 feet again and possibly in trouble.

The glider ahead was circling sadly in an un-thermal, and when I saw that it was Brennig James, who had been first off that day, I twigged that perhaps things may be a bit sticky hereabouts. We flew on together, each trying to get where he could see but not be seen by the other, until, at some horribly low altitude, we came to our last chance — a cloud and a power station in the Trent valley north-east of Leicester. The lift was very weak, and soon Brennig in his Skylark 3 began to outclimb me. I fought my pride over this and pretended he wasn't there, for fear that my one-down position would compel me stupidly to fly on in search of better lift. Brennig lifted up to cloudbase, shifted across a bit and was gone. I shifted a bit the other way and followed him in, perhaps 500 feet below.

Once inside, the lift improved to over 10 knots and soon I was at 8,000 ft. with a touch of ice aboard and a very hazy view of the A46 below. From this point it seemed that one could go due north along the set line or follow



The forecast that John Williamson couldn't believe.

a more easterly track along a line of better cumulus over the Trent valley. Since it was already a quarter to six I settled for the bigger clouds and pressed on towards the Humber. A little care about the proper flight level near Scunthorpe and I was soon across the Humber and in even murkier air than before. From 8,000 ft. the ground was simply not visible at all looking up-sun, and only just so to the east. As I left the last cloud in the line I picked up a fix at Market Weighton.

On the radio I had heard several R.A.F. gliders coming to roost near York, having stayed on track, and it looked as if I would soon be joining them, albeit a little further north. There were two last chances, though, that my more easterly position might allow me to use. First, high ground ahead might be throwing up something that the Vale of York, flat and a bit damp, couldn't manage. Second, I was getting close to the sea. Sure enough, a line of quite low cumulus to the east confirmed that the sea breeze was on the march, as it had been three years before when it carried me on for over a hundred miles to complete 500 km.

I angled still further east, keeping an eye on the little clouds on my right, and on the situation ahead where, impossibly far away, a vigorous cumulus was thrusting up through the haze. Finally I decided to keep within range of the sea-breeze front, use it if need be, and see how I progressed towards the big one. By 4,000 ft. I had used one or two very weak puffs of the little front, and was directly opposite the unseen base of the tempting cumulus. I decided to have a go at it, lose no more than 1,500 ft. in the attempt, then turn back if it didn't work and attempt to soar the front towards the north.

At 2,500 ft. I was underneath the thing, exactly balanced at zero. The flight hung by a thread, a thread so easily broken by a wrong turn, a bit of bad handling, or perhaps by a weary pilot who hadn't really expected to do more than a couple of hours scratching that day. Then a little surge on one side, carefully re-centred, and it was 50 ft. per min. There it stayed right up to 4,000 ft. Then, quickly, 1-2-3 knots, into cloud, 4-5-6, finally 8 knots, and at half past seven that evening I was back at 9,500 ft. and knew that at last I had come to terms with my Dart.

From 7,000 ft. I peered through the misty perspex trying to see my way. The semi-cone of vision was only about two miles down-sun, and into that cone came an airfield. Scan the map — it could only be Wombleton. Exactly two weeks before I had driven across that main runway towing a 12-hour-old home-built trailer and a one-hour-old Dart. We had come back to Kirbymoorside in triumph!

Up ahead a pink tinged tower. Plunge in and taste the lift. On to the next and last of them and back up to 8,000 ft. at 8 o'clock and soon we were looking down at Middlesbrough. The glide up the coast was marked by one extraordinary sight. To our left, lit by the reddening sun, was the ghost of a cloud. The industrial North-East had added its insoluble quota to the air feeding the original and now the smoke and dust was heaped up in the exact shape of the cloud from whence every last droplet of water had evaporated.

At 5,000 ft. the ice on the wings had melted but the water remained, and at 3,000 ft. I woke up to the fact that we were sinking faster than we should have been at 46 knots, the usual speed for maximum glide. The air was so smooth that I was able to watch the two variometers rise slightly as I quietly put up the speed, until at 52 knots I guessed that we had the best glide ratio for those watery wings. We flew over Seaham Harbour and Sunderland, and just beyond, to land by the lighthouse that was already giving its red flash every five seconds.

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Don't throw away the winch

by NICHOLAS GOODHART

BY all means ditch the heap of scrap iron you call a winch but don't give up winching if

(a) You have a decent field length (say 1,200 yds. or more) available for winching, and

(b) You want economic gliding, and

(c) You have enough members to deal with winch driving and cable recovery.

The disfavour into which winch launching has currently fallen stems mainly from the fact that clubs are for the most part not prepared to spend the money needed to provide an adequate winch and yet £1,500 or so can be found without a murmur for an aircraft for aero-towing.

Calculations show that a winch with an engine of 130 b.h.p. (delivering 100 h.p. to the cable) can give a 1,600 ft. launch to a 750 lb. glider using 1,500 yds. of cable *in no wind*. In a 12-knot wind about 2,000 ft. can be reached and the maximum engine power required is down to under 100 b.h.p.

These calculations are based on the assumption that the glider attitude will never be steeper than that which produces an equivalent stressing case to a 2.5 *g* pull-out.

To achieve ideal launches in practice it is necessary to have a winch with a cable tension indicating device and preferably fitted with a cable elevation indicator. The winch engine should have fluid drive. It is also necessary that the glider hook should be fitted in such a position as to eliminate the appalling pitching moments which derive from the cable force on so many of our current glider types.

Given gliders with the hook suitably situated and a winch with the necessary equipment we could have a completely new era of winch launching.

Due to proper cable tension control, the incidence of cable breaks would be much reduced and regular safe launches to close to 2,000 ft. at the present winch launch price would be, by any standards, a better proposition than an aero-tow costing at least three times as much.

The other problem of the winch is getting someone to drive it. It's hardly surprising no one wants to at present, since the driver is not usually provided with

(a) any adequate communication with the launch point,

(b) any suitable instrumentation to enable him to do a good job, and

(c) any proper weather protection.

All these problems could be overcome by the expenditure of minute sums compared with operating an aircraft.

So don't throw away the winch; just take a long hard look at why it has fallen into disrepute and do something about it.

Calculating Points for Speed Tasks

by R. D. M. HARPER

HAVING been closely connected with the B.G.A. scoring system for some years, I am moved to make some comments on Boet Dommisse's proposed formula for awarding points for speed tasks (SAILPLANE AND GLIDING, June, 1964, p. 197). To keep this contribution reasonably short and simple, examples and mathematics will be avoided, but readers may be interested in a detailed description in later issues of SAILPLANE AND GLIDING of how points will be awarded for the tasks which may be set at the World Championships.

The sentiments of the first paragraphs of Dommisse's article are unexceptionable in general terms, but differences of opinion arise as soon as we have to decide what *is* a fair and satisfactory set of points to award for a given set of results (in the form of distances and times). In fact there is no competitive sport in which the system of merit points can be any better than an arbitrary but generally-agreed one. For instance, while it would be agreed that one cricket team had amassed so many more runs than its opponent, it could be argued that it did not always deserve at least 10 of the 12 points available.

Obviously the set of results (distances and times) of a speed task will depend on the detailed meteorological conditions in space and time, in relation to the task set, and on the aerodynamic performance of the machines, as well as on the skill, efficiency and planning of the pilots and crews. In Dommisse's system the best man gets 1,000 points, however poor the results generally, but in the B.G.A. system the maximum daily points are devalued when poor results show that meteorological conditions are worse than anticipated, and that the leading pilots for that day may have had a greater degree of luck than usual.

Coming to the suggested speed task points system itself, it can be seen from the formula at the top of the 2nd column on p. 198 that the number of speed and distance points awarded to any glider depend not only on that glider's and the winner's time and distance, but also on the "average time" and "average distance". This means that *all* the verified times and landing places must be ascertained before any points can be calculated, and any subsequent correction to any time or distance value would affect many or all of the points. In the B.G.A. system, a competitor need know only his own and the winner's times (if the task was completed) and distances (if not completed), the percentage of gliders completing the course, and the percentage exceeding the qualifying distance, to be able to calculate the number of points he should receive.

Incidentally, the term "average time" is rather fictitious as defined, and, in the case where only a small proportion of competitors complete the task, would imply an "average speed" of several hundred miles per hour! Also (possibly a printer's error)* the P defined near the bottom of the 1st column on page 198 is not the same thing as the P defined at the top of the 2nd column.

Within the formula for points it can be seen that a competitor's distance points are directly proportional to his scoring distance compared with the winner's distance, and his speed points are directly proportional to his speed compared with the winner's speed (since speeds are inversely proportional to corresponding times over the same course). In the B.G.A. system the award of speed points depends on the square of the ratio of speeds, e.g. a competitor making half the winner's average speed receives only a quarter of his speed points, rather than a half. On a good day this gives an advantage to those who are really treating the task as a race.

Of the several points systems for speed tasks, evolved in the gliding movements of various countries, I believe that the B G.A. one (with certain minor improvements to be considered before the World Championships) is the best — for this country's meteorological conditions, anyway. I doubt whether Boet Dommisse's system would be generally accepted anywhere: all honour to him for his suggestion, nevertheless — he makes us think!

*These formulae were printed as they appeared in the author's MS.—ED.

National Championships, 1964

by ANN WELCH

IT has become customary to try to discover what can be learnt from each of our National Championships, and it is always surprisingly easy to find points for improvement. Sometimes these require a refinement of existing methods, but occasionally a change is wanted because the Championships themselves have altered. When the weather is continuously good there are few difficulties, but poor weather, as we had this time, brings to the fore problems which, although known to exist, are normally unimportant.

Launching of the gliders is an aspect of championships which presents little difficulty when there is a long period of thermal activity, but trying to get two large groups of aircraft away during a short spell of weather can easily increase the luck element between the first to go and the last, if this takes too long.

The two considerations in any method of competition launching are take-off interval, and actual time of start.

At the present moment we can launch at 1 minute intervals, but if the thermals do not get going until the afternoon, 40 minutes between first and last can make an appreciable difference to the chance of completing the task. There is no problem in reducing the interval to 30 seconds by using a grass field (as at South Cerney) instead of a runway, and by employing more tugs, although this is expensive in hire charges and frustrating to the tug pilots who do not then get much flying each. However, if the interval is reduced further, other complications arise, since to be fair all gliders should be dropped in the same zone. The concentration of gliders and tugs in this zone becomes acute when the height interval between them is only some 25 ft., as it would be if gliders arrived at the same place, or in the same thermal, at 15-second intervals.

The time at which any glider starts can be determined either by the organisers, or by the pilot. To leave the choice to the pilot is important, but this is practical only when times can be selected freely throughout the whole flying period. If, however, a second group of gliders is flying from the same point, there must either be a period blocked off for them, or the two groups be given alternate launch intervals. The former is unsatisfactory if lack of thermals delays the start, or weather dictates that both groups have races, thus encouraging the first group to hang back to try to fly in the strongest conditions. Alternate launching is unsatisfactory because the time between first and last take-offs in both groups is doubled.



The daily Time Check after briefing.

Immediately the cry goes up for dictatorship. The organisers should say "Go", and take-offs, in some ballotted order, will begin. This, too, has its snags. The organisers can either decide a time of first take-off at briefing or they can say that all gliders should be lined up at some early time, and then, sniffing the air, decide that the suitable moment for take-off has arrived. Of these alternatives, the announcement of take-off at briefing is unsatisfactory. At least two days in international competitions have been ruined, or made lucky, by selecting too late a time. As the weather turned out, instead of the take-off straddling the proper take-off period, the first to go went into the strongest conditions of the day, and the last off missed them. This difficulty is overcome by the "Deciding the moment has come" method. By standing at the launch point with the met. man, and using a guinea-pig glider as an early thermal warning indicator, particularly with radio between the two, invariably take-off can be started at a good time. But even here there are two slight disadvantages. Firstly, the gliders must be at the launch point, ready, for perhaps 3 hours, if the weather delays. In great heat this is tedious, and can be exhausting. Secondly, initiative is taken from the pilot.

What is the answer? For Nationals, with two big groups, where we can only fly off a limited launch point, with a small number of tugs, I feel that the organisers should be able to say, at briefing each day, whether Pilot Selected Time of Start, or the "Ready, Steady, Go" method, should apply. When the task is primarily distance, pilots want to get away early, and there is every advantage in their being able to select. On short races, however, where it is not possible for both groups to have the best conditions, it is better to take off in a balloted order at a suitable moment.

In World Championships, this problem of the two classes wanting, or hoping to have, the same take-off times can be overcome by having two, virtually independent, launching groups, as was done at Junin. A pilot is then free to select any time, without pressure or exclusion caused by the second group.

Perhaps the most prominent feature of the 1964 Championships was the weather.



Weather snifter at work.

This was not as good as we have come to expect as our right, displaying two tedious features. Both were exaggerated by the location of the Championship site — the predominence of westerly type weather, blowing towards the London Control Zone, and then the N.E. drift which brought the damping London haze stream across the field. It is because Lasham does carry this risk that it was decided very early on that the World Championships should not be held there. That the risk at this time of year is very small is shown by the fact that the previous 5 Championships at Lasham all had continuous excellent weather. Although the weather at Lasham was disappointing, it would not have been much better anywhere else this year, and has resulted in the cry that Nationals should last two weeks, and not only 9 days. When one sees that other countries, who have better weather than us, have two-week championships, it seems only sensible to do the same. Had we done so this year we would have had 8 out of sixteen days, instead of only 3 and 4 days out of 9.

It would also have included some days more suited to the faster ships, and given the Darts and Austria's a chance

to show what they can really do.

The variability of the weather brought out a feature of forecasting which has not been prominent in the settled and rather uniform air mass under which we have previously sat. We had, as usual, our excellent met. men and equipment, and yet the weather continually turned out disconcertingly different from forecast.

Studying the interpretative work in the met. office, it seemed that the failure lay not here, but in the contents of the reports from out stations. One was left strongly with the feeling that possibly a re-appraisal should be made of the basic reporting of weather information, both as regards the items which are reported, and the quality and accuracy of the information. Obviously weather ships or points named by trained met. men can provide information which is indicative of the true state and tendency of the weather, but one was left doubting whether this was perhaps true enough of the reporting points. For met. men to produce a detailed and sophisticated forecast of the weather for any specialised purpose, it is essential for the basic and background information from which it is made to be equally full and accurate. This is particularly the case when the weather system is unstable and erratic.

The call for two-week competitions certainly produced fewer long faces from the helpers who give up their holidays, than it would have a year or so ago. This is because of the movement towards crew participation. This year pilots gave in the name of one of their crew, who could be called on for occasional help. This meant that there was assistance to police week-end crowds, or to increase the numbers of observers, or retrieve telephonists at rush times. The amount of time that each crewman has to give is very small, but the value to a voluntary organisation of available help from a large body of people is immeasurable.

Finally, the results. Although these are calculated to undermine the confidence of anyone who studies form, there is no doubt that the League 1 winner deserves his place. A war-time pilot, John Fielden was out of flying until 5 years ago when gliding started up in his area, and he soon became an instructor. Since then he has not only organised competitions, but climbed steadily up through League 2 and League 1. Flying the Skylark 3 originally owned by Nick Goodhart, he flies with the persistent determination and flair which are necessary Champion ingredients.



In the new Clubhouse : the V.I.P.'s table on Prizegiving Day.

An Italian View of the Nationals

by ADELE ORSI



L. to r.: William Guisti, Adele and Giorgio Orsi, Barbara Franken-Scharge, Ted Jerzycki and Edward Makula. In the cockpit, Josef Dankowski.

Mr. and Mrs. Orsi, who are leading figures at the Varese Gliding Centre in Italy, flew "hors concours" in League 2 at the British National Gliding Championships in their own Skylark 4.

ERIKA HARWOOD asked us to write a few lines about impressions of the Nationals, and here we are, at the end of it all, trying to do our task, just as we tried very hard to do Ann Welch's tasks during the contest.



Launch point.

We were impressed by the skill of your pilots, who astonished everybody by flying long distances, fighting not only against each other, but also against poor weather conditions.

Only the weather was not kind to us; everybody else in Lasham was very nice, most of all Mrs. Ferelyth Wills (our crew), who made us feel in Lasham as if we were at home—a real angel constantly looking after us.

Retrieving was fun; we all enjoyed the English countryside: a typical delightful English tea offered in a charming farmhouse, the famous "fish and chips at Ipswich" which ended with a coffee on the pavement . . Now we can even better understand how good is the Skylark, and why it "must" be so good; we think the Dart would prefer to be flown in Argentina's weather or, if you don't want to go as far as that, in Italian weather. We have appreciated the competitive sense in the two Leagues, the great number of top pilots, the nice gliders, the efficiency of crews, helpers, controls, the perfect organisation altogether.

At the end of this exciting week we can only say thanks to everybody.

[Mrs. Orsi remarked, during the Championships, that in Italy they would never fly in such a low height-band as our pilots seem to be using. Perhaps the reason is the comparative dearth of suitable landing fields in Italy.—ED.]

* * *

"Lasham Dairy"

"WHAT are you doing at the Nationals? Would you look after the Italians, the Orsis?"

"But I don't speak any Italian at all."

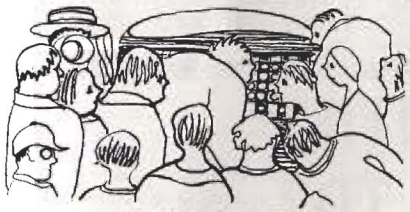
"Oh, they won't really need any help. They speak perfect English and they are so nice it doesn't matter anyway."

And that was how it worked out.

However, to be on the safe side, Bill bought me a phrase book—"might come in handy in a crisis," he said, but the page opened at "Can I get to the station in a Gondola?" What sort of crisis, I wondered!

Our first retrieve was in the practice week. Giorgio, having landed at Thruxton, had found many friendly natives eager to aero-tow him on his way round the Eternal Triangle.

On the road to Axford I exhausted my supply of musical terms with *Rallentando, Andante* and *Lento*, when we met a Combine Harvester on that sharp



Starting board.

corner where the sheep get through the hedge. I found that the word "stop" is international.

Bill's parting advice, as he set off to work the next morning, was: "If you really get stuck, say 'Lasham Dairy'."

The Orsis asked to have a flight in the Capstan while Ken and Mike were fettling the Skylark I-TATA for the Competitions.

We were sent to fetch the second Capstan out of the back of the hangar. Weaving it in and out of the Eagle tips, under the Skylark cockpits and round the winch, in the echoing hangar, presented the sort of crises where my gondola phrase seemed inadequate.

If only someone would hold one wingtip only and leave go of everything else! And I remembered Bill's advice: "Lasham Dairy," I shouted, and at once everybody let go of everything.—Odd language, this Italian.



On aero-tow.

Looking back now, we are comforted to find that, in spite of the frustrating weather, each pilot had at least one day's good flying.

Giorgio struggled round Welford and Shillingford Bridge. I am sure there is no Italian word for "inversion". When we reached him in his field (downwind, downhill, surrounded by a cobweb of telegraph and power wires and a high hedge), he was giving dozens of cheering children the time of their lives. Never have English children been given such a welcome by any glider pilot.

During the practice week Adele attempted an out-and-return to Shaftesbury from Lasham to establish a 200-km. women's record for Italy. It was a difficult day and she very nearly got back, landing at Middle Wallop late in the evening.

It is said that some Continental telephones are troubled with delays. It took Adele only an hour and a half to get through from Middle Wallop to Herriard. However, by the time her call came through, Bill was back from work and able to fetch her with the Auster.



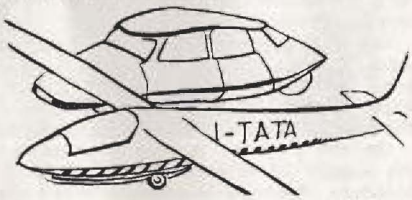
May 20th was the day for Fish and Chips in Ipswich.

It was William Guisti's turn to fly and he hoped to get his 300-km. goal flight by declaring Great Yarmouth via Kettering. Unfortunately he found it impossible to get as far north as Kettering so he gave up hope of his Gold C and flew the free distance to Tunstall, near Bentwater Airfield. His was the third longest (League 2) flight of the day, so we all felt very pleased.

We found the glider in good time, de-rigged it safely into the trailer by the last light of the day. But we couldn't find the pilot or the farmer. William spoke French but no English. Was it possible that he had mislaid the "understanding form" that we had given him to present to the farmer and to ask for help with the telephone, and that he had been swept off to the local police station? But no! All was well. He was at a housing estate some way away where an Italian housewife was giving him a great welcome!

With the depressing weather of the last days of the Nationals we felt more and more guilty. Here was something we could not improve, even for the Orsis.

Whatever memories the Orsis may have of the British Nationals, I shall remember most of all their constant kind appreciation of everything, their enjoyment of the countryside and of all the people they met, the meals they ate and the plans that were made for them, their sympathetic understanding of all the work that went into the organisation of the whole competition fortnight. For our part it was a very real pleasure to share in it, and we look forward to meeting them here again.



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League 2

by ARTHUR DOUGHTY

I won League 2 by a narrow margin of 45 points, and in less minutes after the prizegiving than the number of points I had won by, your editor approached me and said, "Ah — one of the penalties of winning is to write an article for SAILPLANE AND GLIDING." This I find is the more difficult task.

It is said confession is good for the soul, but confessions are only admissible if obtained in accordance with the rules — judges', not contest. Anyway, I have little to confess, except that I was flying an ordinary Skylark 3 weighed down by all the paraphernalia of modern soaring such as oxygen, artificial horizon, radio, batteries and a multiplicity of instruments. Perhaps my ground station call sign, "Peter Pan", had something to do with my success, but at 200 lb. bare weight I would hardly qualify for the flying ballet in the pantomime, even though I got mixed up with a few aerial circuses during the Championships.

The first task for League 2 was a 100-km. triangle, Lasham-Welford-Shillingford Bridge Hotel-Lasham. There was a promise of bikini-clad damsels sunning themselves on the lawns at the second turning-point. I suspect this was a subtle ploy to encourage pilots down to, or below, 1,000 metres when rounding the turning-point, rather than threaten sanctions against those who turned too high. I think most competitors would have willingly foregone the pleasurable scene at the turning-point for the greater security of 1,000 metres.

Launch times were frozen, and when I took off some 35 minutes later than my selected time I soon found myself "gaggling" south-east of the airfield. After sampling the local air for about half-an-hour, I took leave of Lasham and crossed the start line at just over 2,000 feet.

The course was well marked by the inevitable "gaggles" which seem to thrive in conditions of blue thermals and low altitudes. The "gaggling" habit is extremely difficult to break, but until we do, rates of climb will continue to be poor and overall speeds suffer in consequence. I do not claim to be guiltless in this respect, but I found it more profitable at times to break away and find a thermal of my own, if only for a few minutes.



Inspector A. W. Doughty, of the Metropolitan Police. (Courtesy Times Photographic Service, Richmond.)

The first turning-point at Welford has been used many times in previous competitions, and it was found on this occasion without difficulty. The second turning-point was rounded some 35 minutes later at about half the maximum permitted height, but I failed to see any bathing beauties, although the turning-point markers were clearly visible.

The final leg followed the Thames Valley for several miles, and the area around Wallingford gave rise to a little difficulty. In common with several others, I headed west over the high ground of the Berkshire Downs, where things were a little easier. About 10 miles out from Lasham the race noticeably started to speed up, not on account of any improvement in conditions but

rather an attempt to knock a few minutes off the time taken for the race. This proved to be the undoing of several competitors, who landed a few miles short of Lasham. At Basingstoke I calculated I needed 1,900 feet. Remembering how I landed short on two occasions at Aston Down — once in a field adjoining the aerodrome — I took a few hundred feet for luck. I crossed the boundary with my few hundred feet still in hand and found it useful to take me to the League 2 trailer park at the east end of the aerodrome. Perhaps not the stuff true champions are made of; however, it did get me back comfortably.

north-west of Newbury, where, at about 800 feet, I got in on the ground floor of a thermal which eventually took me up to 3,100 feet, the best height of the day by a margin of some 500-600 feet. I set course across the western outskirts of Newbury and calculated that two more thermals to that height would just about get me back to Lasham. However, it was not to be. A few circles south of Greenham Common were followed by a long glide to Kingsclere, where no less than twenty machines from both Leagues landed.

Scoring on this day was worth approximately twenty points per mile and I actually threw a couple of hundred



At briefing on the first Sunday: met. man Russell Johnson, Ann Welch, Ray Longman and Derrick Goddard.

Sunday, 17th May produced similar conditions for an out-and-return race to South Marston Aerodrome. Soon after crossing the start line I found myself down to about 700 feet over the Basingstoke by-pass with an Eagle even lower and a Skylark 3, No. 177, on the ground, and both these machines were being flown by League 1 pilots! After a slow climb I made reasonable progress and got quite used to working in a narrow height band of between 1,500 and 2,500 feet. The outward leg took just over 1 hour 20 minutes and averaged 30.5 m.p.h. The return journey against the wind was much slower, particularly the section between South Marston and Membury.

I left a gaggle south-east of Membury and started a long glide to the feet or more away to go into my selected grass field which contained one machine and was later shared by another. (One field in the district had seven machines in it.) Memo to self; in future work out roughly what the points per mile will be in the event of no one completing a race.

Wednesday, 20th May provided League 2 with its third, and what proved to be final, task — free distance. The met. men forecast westerly winds, 270°, 14 knots at 4,000 feet in the south, increasing to 260°, 18 knots in the north. For those who were prepared to go crosswind to the north there was a promise of waves in the lee of the Pennines. In theory, this should allow one to increase distance by staying in the air until well into the evening. On the other hand,

first launch for League 2 was scheduled for 13.30 and I was well down the ballot for launch times. The first time available to me was 14.18 and a start as late as this called for some flight planning.

Northwards, about 120 miles and four hours flying time away would place me just in the lee of the Pennines. Northeastwards, the Norfolk coast between Cromer and Great Yarmouth is about 160 miles from Lasham. Bearing in mind that one has to go north to start with to clear London Control, the tailwind component would then bring the coast within fairly easy reach. The thought of paddling in the sea in the late afternoon, although pleasant, was marred by the thought of others pressing on northwards in waves (literally and figuratively) in the dazzling brilliance of the setting sun. The scales were tipped in favour of the northern route, more so when launch times were advanced by over an hour.

A fumble north of Basingstoke slowed me down, but from then on for the next hour or so conditions were at their best for the whole competition period and no "gaggles". Good thermals gave about 500 f.p.m., Booker passed by underneath in just an hour and 1 hour 20 minutes saw me in home territory at Cheddington. But ahead, stretching as far as I could see in a roughly W.S.W.-E.N.E. direction, was a mass of dark, dead-looking cloud with no sign of a break to either side or beyond. There seemed little point in pressing on northwards into the murk, and I turned east. An investigation of the murk seemed to confirm my suspicions and I decided to keep to the south of it where there was sunshine and small cumulus. I think this was a correct tactical decision, a view reinforced by the decision of my crew, who also turned east when they saw the advancing murk.

As I tried to make a north-easterly track for the greatest distance into East Anglia, the advancing murk pushed me gradually south across Bedfordshire, Hertfordshire and Essex. In the course of my travels I picked up with several other competitors who also appeared to have come to the same decision about the murk. Just west of Wormingford Airfield I was again fortunate in getting in on the ground floor of a thermal, and with mixed feelings saw the Gull IV (Roger Dickson) just fail to contact and land on the airfield. The remainder of the little group which had gathered together in the previous few miles climbed up and headed further east. After passing north of Colchester, the coast at Harwich came into view. A last climb to about 4,300 feet and then north-east into the murk, for a final glide in smooth air to a landing at Butley, 125 miles from Lasham.

This flight put me in the lead by a narrow margin. The next four days passed by with many briefings but no contest. Finally Sunday, 24th May, and the task for that day was scrubbed at the last minute. And so the 1964 championships ended with a thunderstorm and torrential rain after a frustrating spell of weather for all concerned.

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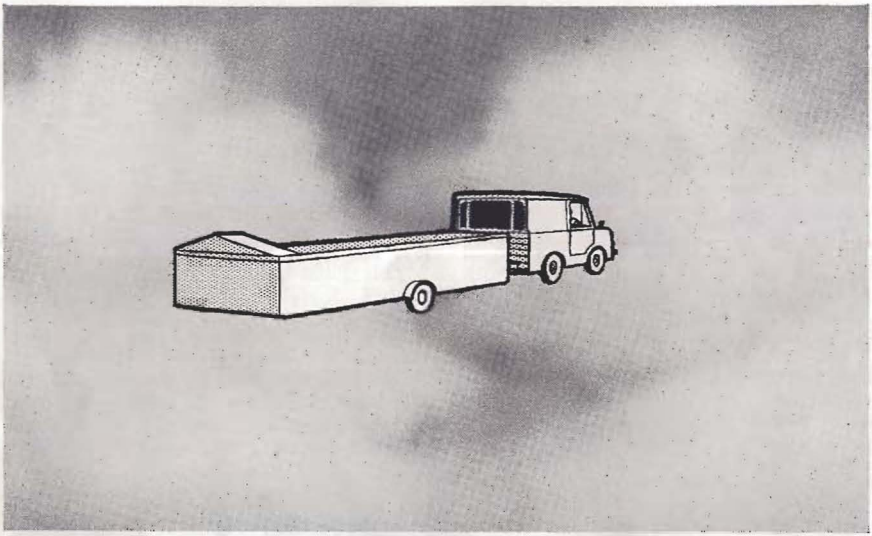
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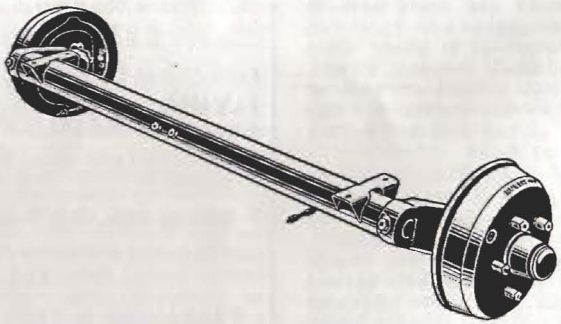
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BOOK REVIEW

The Law of Clubs, by J. F. JOSLING and L. ALEXANDER. Published 1964 by Oyez Publications. Price £3 3s. (Also obtainable from B.G.A. Office at £3 3s., plus 1s. 6d. postage.)

LIONEL ALEXANDER, the co-author of this volume, is best known to readers of SAILPLANE & GLIDING as a very competent glider pilot: he is, however, also a Barrister-at-law of the Inner Temple, and it is evident that an enormous amount of research has preceded the writing of this book. It consists of nearly 200 pages of erudite legal disquisition, plus three Appendices comprising model rules for a members' club, or an unincorporated association, or a proprietary club, while Appendices IV and V extract the "meat" from the Licensing Act, 1961, and the Betting, Gaming and Lotteries Act, 1963. Preceding the Introduction are Tables of Cases, Statutes and Rules, while at the end of the book is a comprehensive Index.

Dipping casually into this volume one's attention is caught by something of interest on almost every page. Did you know that an association of more than 20 persons formed to carry on a business for gain must be registered under the Companies Act, 1948? Chapter 7, on Club Lotteries and Gaming in Clubs, is of especial interest in these days when "one-armed bandits" are stationed in almost every club bar or lounge. It discloses pitfalls for the unwary; for instance, that not more than two machines must be available in any one building.

There is, it appears, no firm answer to the question as to the stage at which a syndicate or private-owner group should be defined as a club; indeed, a club which is not in some way incorporated seems to have no legal existence so long as its activities do not involve contact with persons outside it.

The paper jacket describes this work as "a complete exposition of the general law affecting clubs of all kinds". As such it would be prudent for every gliding club Secretary to possess a copy, for it will provide the answer to every query and be the arbiter in any dispute over the interpretation of the club rules.

J. E. G. H.

CORRESPONDENCE

DOWN WITH THE TREADMILL

Dear Sir,

May I suggest that an "all-for-soaring" policy, which denigrates the humble circuit flight, is likely to *increase* treadmilling?

Excessive soar-mindedness in a club can easily lead to (i) club gliders only flying on about 20 days per year, (ii) a tendency for them then to finish up broken, because their pilots have minimal experience of flying below 1,000 ft. So the committee soon face a financial crisis and the treadmill grinds furiously in a spate of extra courses and recruiting campaigns, aimed at return to solvency. Messrs. Procter and Minton's "flat rate" type of payment clearly makes financial sense, but it can hardly hope to deal with this kind of situation.

It is a sad thought that, while 60 circuits might provide experience helpful if a cable breaks or a field landing is needed, five hours in thermals contributes exactly nothing to prang-resistance. Also, that one gives up gliding (after consuming a large quantity of instructor effort) if one can't get enough launches to become competent.

Enthusiasm for soaring, beer and girls flourishes without need of encouragement. But some propaganda in support of circuit-flights and launch-rates *is* needed if there

is to be any money left for the beer and/or girls.

I shall open next month's SAILPLANE & GLIDING full of hope.

Cambridge. R. L. FORTESCUE.

UNITS FOR POLAR DIAGRAMS

Dear Sir,

Could it be made a condition of publication that all polar diagrams are in an agreed set of standard units? I suggest knots and feet per second. Comparison is going to be a slide rule job if we don't do this before polars become popular. Alternatively knots, km./hour, m.p.h., ft./sec. and metres/sec. could be included on separate scales on the same polar.

It has been suggested to me that a useful yardstick of performance would be "the speed achieved at a gliding angle of 1:20" (i.e. 100 knots would be a goal to be reached). This could be marked on each polar diagram.

Birmingham. JOHN HICKLING.

GLIDING CERTIFICATES

GOLD C HEIGHT LEGS

Name	*Club*	*Date*
D. H. Darbishire	Surrey Gliding Club	27.8.63

SILVER C CERTIFICATES

No.	*Name*	*Club*	1963 & 4
1390	P. W. Hoskin	Surrey	27.7
1391	F. C. Bass	Moonrakers R.A.F.	25.3
1392	A. D. Freeman	Surrey	5.4
1393	D. E. Tomlin	Imperial College	11.4
1394	D. S. Wiggles-worth	Cambridge Univ.	11.4
1395	P. M. H. Tread-away	Essex	8.4
1396	B. C. Daniels	E. Anglian R.A.F.	26.3
1397	H. R. Poxon	White Rose R.A.F.	18.4
1398	Patricia J. Simp-son	Yorkshire	13.4
1399	A. Hyde	Aden Services	16.4
1400	D. W. Tanner	Clevelands	1.5
1401	M. G. Miller	Northamptonshire	14.5
1402	W. E. Malpas	Bristol	16.5
1403	C. D. Lovell	Surrey	14.5
1404	D. J. Candler	London	14.5
1405	T. N. McGee	London	15.5
1406	N. D. Thatcher	Surrey	15.5
1407	A. Davie	London	10.5
1408	P. J. Partridge	Coventry	10.5
1409	J. A. Sangster	B.E.A. Silver Wing	11.4
1410	P. Dainton-White	Swindon	14.5

C CERTIFICATES

Name	*Gliding Club or School*
J. A. Little	Cheviots
D. B. Measures	Cornish
P. W. Hoskins	Surrey
P. G. Wills	632 G.S.
I. M. Mason	Cranwell
P. J. G. Sanders	Cranwell
P. Ramsden	Doncaster
J. C. Field	Surrey
P. R. Horne	Surrey
R. B. McLeod	Bristol
P. D. Curtis	621 G.S.
L. J. Gardner	London
F. Sillick	Surrey
G. McRae	Essex
G. F. Stilgoe	Coventry
G. Palmer	621 G.S.
R. J. Wilson	Essex
R. C. V. Arm-strong	Ulster & Shorts
J. Day	Chilterns
P. Edgeley	Doncaster
W. T. Harvey	Staffordshire
R. G. Lloyd	631 G.S.
H. Maltby	Chilterns
P. Browne	Surrey
D. M. Kelly	Lasham
M. J. W. Har-per	Bristol
B. F. Howell	Laarbruch
R. Gordon	Surrey
R. P. Barnes	Surrey
A. Linee	Dorset
G. F. Jesier-ski	Polish A.F.A.
A. R. Squibbs	West Wales
J. M. Scott	Cambridge University
R. A. Graves	London
C. H. Friend	B.E.A. Silver Wing
N. V. Wilcox	London
R. G. D. Bruce	Midland
R. W. Johnson	Staffordshire
R. Edwards	Clevelands
A. L. Lamb	Four Counties
R. T. Kelly	Imp. College
M. C. Wool-dridge	Imp. College
W. F. Kenney	Essex
M. A. Collins	Midland
D. A. J. Sparks	613 G.S.
P. S. Strugnell	E. Anglian
F. R. Brown	Cornish
C. Donaldson	Aden Services
W. F. McCaffrey	Chilterns
J. L. Cheeseman	Doncaster
A. B. Webb	Cornish
J. E. Watts-Phillips	E.T.P.S.
A. O. Boyle	Southdown

Obituary

J. B. TALBOT WEISS, the son of José Weiss, who designed the glider in which Gordon England made the first British soaring flight in 1909, described his father's work in a notable book, "Gliding and Soaring Flight" (1923); he did so later at the Kronfeld Club and again in SAILPLANE & GLIDING for June, 1959, on the 50th anniversary of the flight.

DR. A. PETER THURSTON, who assisted Sir Hiram Maxim with his work on flying machines between 1903 and 1910, became the first British Doctor of Science in Aeronautics in 1913, and has died at the age of 80, was a member of the Technical Committee of the British Gliding Association for a time around 1933.

D. M. T. MORLAND

Owner of Gliding Certificate No. 8, Denys Morland was the second *ab initio* pupil to get a British A Certificate, which he did on 30th July, 1930, during the London Club's camp on Ivinghoe Beacon. He flew his C on 8th July, 1931, after the Club had moved to Dunstable Downs.

Morland was possessed of superabundant energy, and did much to keep the London Gliding Club alive during its difficult early days. He would explode on arriving at the Club to find people merely standing around talking, and within a few minutes launches would begin. He would often take home portions of broken Dagling and mend them in time for the following week-end. He certainly needed to do so on that famous occasion, 18th January, 1931, when a gale blew up Dunstable Downs and Morland deemed it a suitable day for *ab initios* ready for their A Certificates to have their first launches off the hill-top. Their reaction to the howling wind and turbulence was to push the stick hard forward, and before long one had hit a haystack and another had been blown into the hill, and there was nothing left to fly. After that, any westerly gale used to be called "a Morland".

Morland worked as a bee expert at the Government Experimental Station at Rothamsted, and brought in several recruits from there to the club. With one of them, H. L. Richardson, he built a Wren in his garage at Harpenden; it cost them 2,000 man-hours spread over two years, and £30 for materials. The result, known as the "White Wren", took the air in November, 1935. At the opening meeting of the Camphill site at Easter, 1936, Richardson flew it 33 miles on a cold front, and at that year's Nationals Morland won a Daily Prize for the greatest number of "beats" to and fro along Bradwell Edge—he totted up 50 beats in two hours. They sold it in 1938.

After that, Morland lived near Newbury, and revisited the London Club only once. He had survived the First World War, becoming a Major and winning the Military Cross, but lost his life in a motoring accident on 17th April this year.

A. E. S.

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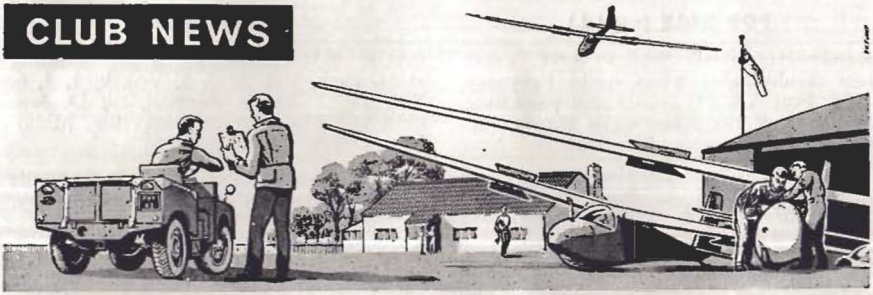
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CLUB NEWS



THE last date for news for inclusion in the October issue is 12th August, and should be sent to me at 14 Little Brownings, London, S.E.23, typed double spaced on foolscap please. And don't forget we are always pleased to receive photographs.

15th June

YVONNE BONHAM, *Club News Eidtor.*

AVRO

THE T-21B has arrived at Woodford, and everyone seems to be delighted with it. There was a big turn-out on the first day it was flown, and our youngest flying member, Peter Berry, qualified for his A and B certificate in the Cadet. Pete is one of the Company apprentices and was just 16 on his first solo.

In February the Woodford wave struck with a vengeance. In a S.E. wind the Skylark contacted lift at 700 feet, and for most of the day the Skylark pilots enjoyed some welcome soaring. Lift of 15 feet a second was recorded at 1,000 feet. Ron Brocklehurst flew for some 15 minutes in the wave and became the first club member to complete his C flight in the Cadet.

The Skylark is visiting a number of soaring sites and the more optimistic of our pilots have been observed huddled round brand new Air Maps. Let us hope that their plans are successful.

J. E.

BATH

SINCE last we appeared in print we have enjoyed some profitable week-ends as well as sharing with fellow clubs the disappointing weather of the early season.

Our first ever A.G.M. saw quite a few changes on the committee. Some of the handful who started the club felt that the time had come to hand over the reins to others who may have some bright ideas to further its smooth running and expansion.

One of those to resign was Fred Warren, our original secretary. It was mainly due to Fred's foresight and hard work that the club exists at all. Our thanks go out to him and we wish Bob Cherry who has taken over "the best of luck!"

Bill Hole, who is an ex-captain of Bristol Bulldogs' speedway team and who keeps us amused for hours on non-flyable days, recounting his experiences complete with actions and sound effects, was voted into the chairman's seat and he is to combine this with the post of transport officer.

Bill has an amazing knack of acquiring vehicles for auto-towing. His latest addition to our growing list consists of two Mk. VII Jags and another V8.

Flying-wise—our list of Grunau pilots grows. Four more members have gained A and B and all the Swallow syndicate members now boast at least a C.

Vince Griffith, who instructs with us and also flies as a member of the Bristol Club, got in his five hours in thermal from Nympsfield.

Gordon Mealing declared Great Yarmouth one rather blustery week-end but decided that conditions were unfavourable after he was airborne so spent just over two hours exploring all the ridges

He had the rather shattering experience of having the Swallow blown almost on to its back by a particularly violent gust off one of the spurs.

R. N. S.

BLACKPOOL and FYLDE

OUR rather long absence from these pages does not mean that we have been in any way inactive, it merely denotes idleness on the part of our screed writer. On the contrary, we have had quite a busy time at our Home Site at Blackpool during the unusually mild winter.

As is our usual practice, we moved all our equipment to Samlesbury Airfield at the end of April and will be flying there until about the middle of October.

It is always a pleasure to report C flights and the members concurred are Malcolm Eaves, our Chief Engineer, and 18-year-old schoolgirl Jane Murdock. Incidentally, Jane's thermal was so strong that, before she had quite realised what was happening, she was rapidly entering an interesting cloud. Had she not obeyed instruction and opened the dive brakes, we might have been recording another Silver C height at Samlesbury.

Terry Hogben has just gone solo in the EoN Baby. Harry Hargreaves, Martin Fish, and Howard Sturrock are now flying the club Olympia 2B.

A camp was held at Bicester in May and attended by Gordon Bleasdale, Ivor Stretch, John Gibson, Ken Cooper and Gil Haslam. The two aircraft taken were the club Olympia and the privately-owned Skylark 3. Needless to say, we are exceedingly grateful to Andy Gough for his generosity.

J. S. A.

BRISTOL

AT the end of April and early May we held a four-day contest which we hoped would get a full regional rating. However, as has been known to happen in the best of contests, we were foiled by the weather, achieving only two contest days.

The entry was fully subscribed and the overall winner after the second flying day's race to Bicester was the Skylark 3 flown by J. Smoker and N. C. Moreland, second was Tony Gaze in his Austria.

The Club was recently presented with a fine cup by its President, Sir Egbert Cadbury, and it has been decided to award this to the winner of the Nympsfield Competitions, which will in future be of a week's duration and held annually.

On the last day of the contest, 3rd



The Bristol Club's Swallow, with (l. to r.) Thelma Barrett, Ann Wales, Rex Garland, Chris Dart, Nancy Duggan and Ken Brown.

May, three pilots who had elected to overfly Bicester and head for Great Yarmouth, for 300 km., reached their goal. They were Geoff McBroom in a Ka-6, Tom Bradbury in a Skylark 4 and Keith Chard in a Skylark 2. Jim Webster fell short at Peterborough.

The conditions at Nympsfield this year have so far been poor, but on 9th May Hugh Arden flew to Bicester for his Silver distance, on 14th May Vince Griffiths did five hours and on 16th May Bill Malpass got his distance by flying to Cosford.

Pete Etheridge is in charge of the courses again this year and has been flogging round in the T-21 or Capstan in between the showers. Pete has also recently taken over as C.F.I. from Alwyn Sutcliffe.

At the A.G.M. earlier in the year, chairman Denis Corrick announced a challenge to the London Gliding Club, in the form of a trophy to be won by flying cross-country to the other club's site. It will then be held until someone flies the other way to win it back. There have been no takers yet!

The 1963 winners of the rest of the Club's silverware were presented with their trophies. The "Evening World" Trophy for the best height reached went (once again) to Tom Bradbury. The Guinness Trophy for the best cross-country in a Club aircraft went to Jim Stuart-Menteth.

The Shaun de Salis Memorial Trophy for the best closed-circuit flight went jointly to Alwyn Sutcliffe and Rodney Barrett (for their flight in the Blanik).

The Cyril Uwins Trophy for the best cross-country flight by a Club member went to Keith Aldridge (for his Lasham-Perranporth diamond goal flight), and the Rex Young Cup for the best progress by a pupil went to Bill Malpass.

A. L. S.

CAMBRIDGE UNIVERSITY

THE outstanding feature of our cross-country flying this spring was that over 70 per cent of the 300 miles logged by the end of May was flown in closed circuits. The most prominent flight was Doug Heyhurst's dash round the 66-mile Slazenger Triangle in the Olympia on 30th May.

Using a sea-breeze front which came right up to Cambridge, Doug managed to get round in 2½ hours and thereby put in a good bid for the Slazengers' Trophy. Earlier in May, David Ware completed his Silver C with a 72 mile stab to the east coast in the same aircraft.

Since last October there has been an astonishing increase in our aero-towing activity. At present almost a quarter of all launches provided at Cambridge is by aero-tow. Between October and the end of May, our hard-working Tiger Moth gave 470 tows.

The Club now has a telephone. It was recently installed in the Clubroom by the airfield, and on the dial it says "Teversham 3344".

For the first time the Club did not enter an aircraft for the National Championships. Cambridge was, nevertheless, represented, since 11 of the competitors were trained by the C.U.G.C.

G. S. N.

CORNISH

WHEN John Everitt visited us with the Capstan in April he mentioned that Silver C distance could be flown by accident, but Harry Hooper made a very deliberate flight to Davidstow for his distance.

To us, Silver C distance is still worth a song and dance. No one has yet done it at the first try, and you can only go east if you wish to keep your feet dry. Harry did his trip the hard way, up-hill from an auto-tow.

There was some interesting soaring over the Easter week-end, but no great distance could be covered to the east, due to a wall of murk which seemed to cover the rest of the country.

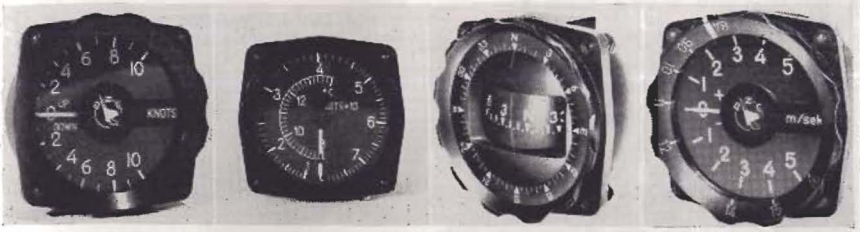
Alan Davie took his Skylark to Silver height on 13th April, but a low cloud-base obliged him to make good use of his instruments. This flight was no accident either, he told us what was going on over R.T.

We have plans to further expand and modernise the Club fleet and frantic fund-raising is the order of the day, though with a brace of private Skylark 4's on the field at Easter, things were looking quite prosperous.

Members showed lively interest in the

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Club's affairs at the A.G.M. Ernie Hayman continues as Chairman and Tony Lapham as C.F.I. Together they intend to get the best flying possible for us out of this summer.

While not forgetting the good showing of our own George Collins in League 2 of the Nationals we give our heartiest congratulations to our neighbour from Dunkeswell, John Fielden on becoming National Champion.

J. E. K.

COVENTRY

THREE teams from the Club, all on private aircraft, were entered in League 2 of the Nationals. Michael Hunt and Mike Smith flew a Skylark 4 into 10th place to win the Firth Vickers Trophy.

Mike Smith really excelled himself in his first Nationals by flying some 60 or so miles on one day, later declared no contest, when virtually no one else managed to soar!

The other two teams were Ivor Tarver and Alwyn Findon, in an Olympia 463; and Doctor Gregg with Chris Duthy-James in the former's Skylark 3B.

The Club Skylark 3 was entered in the Nympsfield competition by Doug Sadeler and Reg Neep. Doug made a 170-mile flight to the east coast and Reg flew back to Baginton on the first week-end.

We have also had some flying from the home base. Jim MacDonald got his Kite 1 just over 50 km. for his Silver distance. John Large did his Silver height whilst taking Lou Glover's Viking to Husbands Bosworth.

Doug Findon in the Club Olympia and Ron Gardner in a private Skylark 2 both landed too short for Silver near Kettering.

The Club Olympia has been used by both Ray Stevens and Eric Sower to get Silver distances with trips to Peterborough. Fred Ruhl has done his Silver distance in the private Skylark 2.

We have not yet, because of various delays, moved to Husbands Bosworth. The plans to hold a summer camp there have been postponed and the final date for leaving Baginton is still subject to change for reasons not relating to gliding.

C. D. D.-J.

DERBYSHIRE AND LANCS.

FOR once we have had no reason to curse the weather or the wind, which has blown regularly from the west. In consequence hours, launches, A's, B's and C's have greatly increased in number compared with similar totals for May last year.

On the Committee scene Stan Armstrong is busy handing over to his successor, Mike Newboult as Treasurer, and Bernard Thomas has handed over to Mick Kaye the C.F.I.-manship.

We owe a great deal to Bernard and Stan for their long years of service to the Club and equally to C. A. Kaye, Winchmaker-in-Chief for many years, who retired from the Committee this year. The standards they have set will not easily be surpassed.

Although ten cross-countries have been flown to date, no one has travelled any immense distance. Harry Midwood reached Sutton Bank on Sunday to lay claim to a tankard, as we had lost one to Rick Prestwich, who flew in from the Mynd. Meanwhile, many of those anxious for a Silver C height or distance, wait patiently for the day.

The organisation for the "Northerns" is now sorted out. By the time these words are in print the contest may well have started. We hope all competitors and crews will have an interesting and satisfying week, enjoying the fun for which Camphill Contests are well known.

D. M. K.

DONCASTER

THE cross-country season has opened with a bang. Our Chairman, Jack Tarr, has done his Gold C distance and gained a Diamond by aero-towing to Ringstone Edge and then flying to Great Yarmouth via Wymswold.

Normally we commence the season here with a landing on the racecourse next door. This tradition was upheld on 3rd May by Pete Grime. As he took 2½ hours to cover 500 yards he is now claiming some sort of record.

The soaring season has brought the Tug into full use. While the T-21, T-31 and Tutor treadmill turns, a procession of aspirants are lugged off to the duty thermal every soarable Sunday.

The 9th May saw our first attempt at task flying, with a goal race to Ingoldmells. All sorts of aircraft shot off in all sorts of directions and although nobody actually got to Ingoldmells it was all good fun and one village pub near Grimsby will never be quite the same again.

The Nationals come our way on 22nd May, when a few competitors landed or were seen in our area. Ian Strachan sampled the "nosh" at the Chairman's café and Paddy Kearon tried the Clubhouse ale.

Congratulations to Peter and Honor Grime on the birth of their daughter.

M. C. U.

DUMFRIES AND DISTRICT

ALTHOUGH there has been less flying during the first half of this year than we would have liked, principally due to wing modifications to the T-31 and Tutor and C. of A. inspections, we have had more interesting flying recently than for a long time.

Tinwald Downs aerodrome has never been much good for thermals as it is surrounded by the rather damp Lochar Moss and is also affected by the sea breeze taking what lift there is away north from us.

Last year, however, on several occasions very weak lift was found in the evening and this was worked by the Tutor as wave, drifting up and down very gently into wind. It was usually ably demonstrated by Charlie Park and was known as Charlie's wave.

This year we have found it several times and know a bit more about it—a good east wind and some tentative "no sink" may be found at 1,000 ft. but later in the evening about 9.30 p.m. it can be up to 3 ft./sec. lift.

On the evening of 24th May Derek Tough was being sent off for his first solo and seemed to have trouble losing height on the approach.

Nothing unusual for a first solo to land half-way down the runway, but it is unusual—here, at any rate—for the second solo to be a soaring flight of 20 minutes and the Tutor, T-31 and Skylark were soon up together until the light faded.

On 31st May we had a visit from a

dozen Girl Guides from Kircudbrightshire, all of them enjoying a flight in the T-31.

To meet the needs of the Club for a better solo machine we have acquired the Prefect from the Syndicate who are currently seeking something more advanced.

We are looking forward to having a Capstan and expect to keep it fully occupied for the week and to benefit from John Everitt's instruction.

Unfortunately we have to end on a less happy note as your correspondent (sitting on a cushion) admits to bending the T-31 which is back to the manufacturers leaving us without a two-seater for the time being—at this time of the year—Sorry, chaps.

G. J. K.

ESSEX

MUCH has happened since I last sent in a report. Ernie Williams, our Deputy C.F.I., has been ill for many weeks in Black Notley Hospital, near Braintree. His many friends in other clubs will however, be pleased to know that he is recovering and that letters and visitors will be welcome.

Pete Treadaway has completed his Silver C with a fine flight in the Club Swallow from Dunstable to Andrewsfield. Gordon McRae scored another success by gaining his first Silver C leg (gain of height).

Ron Collis, acting Deputy C.F.I. during Ernie's illness, ran a most successful flying week, the first two days being devoted to aero-tows (Pete Treadaway as tug pilot). During the week Messrs. P. Perry and S. Monrose made their first solo flights.

On 9th May Gus Fletcher, our energetic fund-raiser, assisted by Jack Barlow, Richie Carman, Geoff Lubin and many others, organised a most successful Whitsun Fayre and Raffle, the high-spot being the generosity of Brian Blessed (alias Fancy Smith of "Z Cars"), who opened the Fayre and worked so hard to boost it along. Later he enjoyed three flights in the T-21 and became an honorary member.

We also saw our first syndicate formed when Messrs. Treadaway & Co. bought the Weihe from the B.E.A. Silver Wing syndicate.

Finally, the move by the Club members in taking over the running of the Club from the Essex Gliding Club Ltd. has proved most successful . . . our bills are paid, the bank manager smiles and we even whisper of another glider in the not too distant future.

J. W. R. U.

GLASGOW AND WEST OF SCOTLAND

HAVING been silent for a few issues, due to there being very little to relate, we are happy to report that things are on the move again.

At a film night a number of members showed a varied selection of films and slides of happenings at our own site at Balgair Moor, Fintry and of gliding at the Mynd where some of the members have been on courses.

Our fifth A.G.M. was held in March. A number of Committee members retired from office and we wish to thank them all for their very excellent service in getting the Club on its feet. We would welcome John Goodwin as the new Secretary and the other new Committee members to the Board of Management.

As usual prior to our commencing flying on 5th April for the year a lot of hard work had to be done. The T-21B was given its C. of A. and the Tutor, Land Rover, tractor, main and retrieve winches checked over, not to mention the road facing carried out.

Any members of other Clubs are most welcome to pay us a visit, if they happen to be in the locality and weather permitting we hope to operate every Sunday so there may be a chance for them to sample some of our ridge soaring, oxygen equipment compulsory!!!

T. J. G.

KENT

THE Club now seems firmly established at Challock, complete with signal square and wind sock. We are now satisfied that the ridge is working properly, and since the start of the season four people have completed their five hours.

Philip Wills paid us a visit and gave us a talk on Friday, 10th April, and on the following Saturday morning he flew

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F. M. K.

LAKES

A LARGE and representative muster assembled at the New Inn, Kendal, on 3rd June for the seventh A.G.M. Members were gratified to hear the confident tone expressed in reports of our Chairman and C.F.I. The Chairman said that important changes of outlook and policy had just begun to show their effect in 1963 and that the improvement had continued steadily in the first five months of 1964.

He appealed to all members to continue their efforts towards higher efficiency and the avoidance of wasted time so that the results for 1964 will prove that the Club's present position is no mere flash in the pan.

The arrival of a BBC camera team one day early in May caused a considerable flutter in the dovecot. Mr. Len Redshaw flying the syndicate Olympia was aero-towed by the Auster, promptly followed by a cameraman flown from a winch launch in the T-21.

The results of all this activity appeared as an interesting little snippet in the "Points North" programme on Wednesday, 3rd June, featuring industrial and social activities in Barrow. The air-to-air shots were remarkably good and reflect credit alike on the cameraman and the pilots concerned.

Our C.F.I., Ron Reid, has been investigating a possible soaring site at Scouts Scar, near Kendal. After remaining airborne for one and three-quarter hours from a bungey launch, he landed conveniently near his own back door at Levens.

Thanks to Ernie Dodd, assisted by Ron Hawkes and Harvey Jackson, the silver Tutor is flying again with C. of A. spoilers and a brand new coat of paint. This represented the biggest overhaul job completed by Club members and does credit to the hard work and enthusiasm of those responsible.

Congratulations to Jill Redshaw on being the first lady member to fly solo from the Lakes Club and to David Millet who made the first serious cross-country attempt this year. Released from an aerotow at Ireleth, he finally landed at Milnthorpe and narrowly missed his Silver C gain of height in the process.

F. G. R.

LONDON

AFTER a couple of years as the Club's Chairman, during which time several significant improvements have taken place, Charles Ellis has passed the job on to Tom Zealley. Another major honorary post within the Club, that of C.F.I., is still ably held by John Hands, but a proportion of the ever-increasing work is now shared by Colin Richardson as Chairman of the Flying Committee; Colin is an R.A.F. pilot and in fact is our only regular member currently serving in the Forces.

So far the season's cross-country flying has been somewhat spasmodic, and all the worthwhile flights seem to have been done in two consecutive mid-week days just before Whitsun. This is largely a reflection on the weather, but it also appears that our cross-country enthusiasts nowadays satisfy their needs (and their pockets) in competitions and content themselves at other times with local soaring.

On Thursday, 14th May, 100 km. triangles were completed by Stuart Beck in the Standard Austria and, rather more leisurely, by Tony Letts in the Weihe. On the same day Patricia Holmes doglegged her way to Lasham to pick up the Collector's Plate. The following day the Standard Austria, this time flown by John Jeffries, all but completed a 150 km. triangle, whilst Denis Candler and Patricia Holmes flew 100 km. out and returns. Terry McGee made a Silver distance flight to Colchester and your correspondent delivered the Sky to Lasham ready for the Nationals on the Friday.

The next item on our programme will be the Dunstable Regionals; several familiar faces are amongst the visiting competitors, and we are looking forward to another exciting, yet friendly, contest.

G. C.

MIDLAND

ONE day in May Ric Prestwich flew his Skylark 4 from the Mynd to Camphill. The flight must have been quite interesting with some really low lows, finally arriving at Camphill below the hilltop.

Charles Green and Geoff Benson have acquired the 463 which previously was operated by the Coventry-Mynd syndicate.

Our course season is in full swing. The new bunkhouses are meeting with the approval of our visitors and the private rooms are proving popular.

We have had visits from the South Wales and Southdown Clubs and, of course, from Cambridge who will be coming again in September.

An extension to our bar is under construction and will be in the form of a Snug, which should provide the right atmosphere.

K. R. M.

NEWCASTLE

FLYING continues in full swing at Carlton, and present indications are that this could be a record year. We are now flying regularly on Wednesday and Friday evenings as well as week-ends, an innovation much appreciated by those members who find it difficult to get away from business or family ties at week-ends.

We have not had a great deal of hill soaring recently, but on one reasonably good day Barrie Brighton flew his five hours in the Kite I and John Ekman was very unlucky to come unstuck after three hours in a Skylark 2.

A week or two later David Lilburn flew by a round about route to our neighbours, Northumbria, for his Silver distance, and on the same day C.F.I. Ian Paul flew his Skylark 2 round a 100 km. triangle in practice for the Nationals. We were all pleased to see Ian back on form and congratulate him on making the best 15 metre performance in League 2.

A members' course started in fine style at Whit week-end with some good local soaring, George Rowden and Dave Stockton both getting their C. Unfortunately the thermal activity did not seem to extend beyond the moors and cross-country attempts by Dick Stoddart and Bill Dyer ended after eight and nine miles respectively.

The following week-end saw the re-appearance of our now familiar east wind wave and the greater part of the fleet were soon soaring, but the eventual formation of orographic cloud over the site caused a somewhat undignified dash back to earth!

A group of members recently enjoyed the hospitality of the S.G.U. on a Capstan course at Portmoak. Treasurer Adam Dodds seized the opportunity to go sight-seeing in the Kite I and completed his Silver C with a distance of 40 miles. Andy Hardie was unfortunate to land short in the Weihe with a distance of 28 miles a day or two later.

B. W. B.

NORTHAMPTONSHIRE

THE period under review has been a somewhat critical one for the Club. The move to Cranfield from Podington took place in early May and with it we lost a number of members. To add to our trouble the T-21 was damaged and put out of action for a time. However, now that we have found our feet at Cranfield we are looking forward to a successful year of flying alongside the College of Aeronautics Club.

Although the weather has not been very kind a few cross-country flights have been made. Derek Wilcox reached Newmarket completing the height and distance legs of his Silver C and Frank Rowell flew to Weston Underwood. Mike Miller completed his Silver C at Dunstable and H. F. King obtained his C just before we left Podington.

R. N. W. K.

NORTHUMBRIA

THE past eight weeks have been fairly eventful and successful in spite of soaring conditions not being as good as we might have hoped and a plague of south winds—our worst direction. The T-31 has been hard at work; with the advent of longer days Wednesday evening flying has been resumed.

To the great delight of their syndicate partners, Rob Gains and Danny Borrits

made a 1,500 miles high-speed overland journey to Germany last month to bring back the Ka-7. Everyone who has flown it has been very impressed by its qualities.

It has already achieved some 130 launches and soared under thermal and wave conditions. The best so far—only limited by the conscience of Danny Borrits and Alan Brown for their partners—being 1 hr. 20 min. All in the syndicate feel the long wait was worth it.

Eleven members spent a pleasant week at the Long Mynd in early April; maybe the more advanced pilots having the better time of it. Our congratulations go to Dick Gledson and Ian Taylor, who took their Swallow to the Mynd later, for each achieving their five hours.

Meanwhile, we welcomed and congratulated the first visitor to land at Hedley: Dave Lilburn of Newcastle Club, who not only completed his Silver C distance from Carlton Moor on 18th April, but did so after making a couple of substantial detours on the way.

The diesel two-drum winch is now in continuous service and has helped to increase the launch rate. Drivers find it considerably easier to handle but there are still a number of improvements and adjustments required before we are entirely satisfied.

D. R. B. W.

OUSE

OUR A.G.M. was held in May and appreciation is due to those retiring Committee members for their efforts since the Club's inauguration. The Officials and Committe elected for the present year are: Malcolm Hall (Chairman), Ron Taylor (Secretary), Dick Boddy (Treasurer), Norman Worthy, Harold Budding and George Cuarkeson, with co-opted members Wilf Coulsey (C.F.I.), Jim Park and John Mawson.

After John Reussner's lecture on "Flight Limitations", any mention of vertical gusts, fast launches and "g" forces are treated with suspicion and respect. Thanks for a wise and most appreciated talk, John.

An entertaining evening was held at the Wine and Cheese Party, when the Prize Draw was made. We were pleased to welcome friends from Sutton Bank on this occasion. Promoter Ron Taylor deserves the credit for the success of this evening and the draw. Apart from secretarial duties, Ron is now incorporating spoiler and spar mods to the Tutor which is in for C. of A. Another Tutor awaits the same treatment.

At last the new Swallow has arrived in sparkling red and white, and pilots checked out to fly it are highly delighted with its handling qualities. Several pilots are showing promise of potential soaring aces. Keith Massey having stayed aloft for 1¼ hours was robbed of a Silver height by an inversion. A high performance two-seater and another diesel winch would now give members the facilities they deserve.

Latest pupils to receive the accolade of the two gulls are John Rogerts (who soloed on his 16th birthday), John Coney, Barry Fletcher and Peter Oglesby (now the Club's youngest solo pilot). Janet Bastick, Derek Moore and Norman Worthy have soared long enough for their C and Dick Boddy is pro-



Some Ouse Gliding Club members who are flying the Club's new Swallow. Left: Keith Massey. Centre: Instructor Les Bellamy briefing Dick Boddy. Right: Mike Grives. (Photos by K. Massey and L. Bellamy.)

moted to passenger carrying. Well done, everyone.

Belated congratulations to Pamela Sample and Alan Park on their engagement.

G. L. B.

SCOTTISH

WE wish to offer our apologies for the cancellation of the Week-end Competitions scheduled for June, but unfortunately support for this event was not as expected. It is hoped that a seven-day event can be arranged in 1965.

The first of the Capstan courses with John Everitt in charge commenced in June and during the week three Silver C distance and two height legs were obtained. J. A. Hardie (RNAS Condor), Skylark 2, landing at Balloch (50 miles); A. J. Dodds (Newcastle G.C.), Kite I, landing at Aberfoyle (39 miles), and W. A. Shanks (S.G.U.), Swallow at Fintry (goal), (36 miles). B. Brighton (Newcastle G.C.) was unlucky but managed 30 miles.

The social calendar has been maintained at the usual level of activity. A "bring and buy" sale organised by Mabel Ritchie realised £30 for Clubhouse funds and later in May, a Treasure Hunt organised by W. McLaren had excellent support with the Treasurer Bill Lawson maintaining his 1963 rating by taking first place.

Our recent C. of A.s have been expedited by the presence of Jack MacGregor of the Glasgow G.C., his help being offered in the absence of our Ground Engineer, Rab Williamson. We wish Rab a speedy recovery and thank Jack for his efforts.

W. A. S.

STAFFORDSHIRE

OWING to commitments elsewhere our C.F.I., Mr. W. C. Hutchinson, has been forced to resign and this office has been taken over by Dr. P. R. Bradwell. The Club are very grateful to "Hutch" for his help during the formative stages and are glad that he is staying on the Committee as Chairman.

On 5th April Walter Harvey stayed up for 17 minutes and thus claims his C. Ray Johnson did 34 minutes on 18th April for his C. This was a very good soaring day indeed, and Hutch attempted Silver C distance reaching Nantwich (19 miles) before landing. On Whit-Monday Charles Webb went to Matlock (26 miles) on a similar errand.

Pete Galvin has been appointed an instructor bringing our strength in this department to six. John Kaye and Pete had a busy time during a course for members which ran from 1st to 5th June. Ten members and two instructors took part and though the shocking weather permitted only 2½ days flying some very useful flying was done.

The Coventry Club obliged us by lending a Tiger tug and their Ka-2B two-seater for the week, though they couldn't get up to Meir till Wednesday due to the weather.

The comments on aero-towing and the Ka-2B were uniformly favourable and this exercise will be of value in deciding future policy. Altogether 140 launches were possible in the week with nearly 17 hours of flying logged.

During the course Les Myatt re-soloed after a long absence from gliding and Alan Mclean did his A and B on the last day. J. Simpson also went solo on Sunday, 7th June.

A. W. H. L. W.

SWINDON

CROSS-COUNTRY flying this year has progressed, as hoped, with a fair amount of success. We already have at the time of writing, two completed Silver C's. These are the first to be attained within the Club and congratulations go both to Bernard Keogh and Peter Dainton-White. Keogh managed his third task by flying the Swallow to Dunstable to gain his distance. Dainton-White flew to Lasham, gaining both duration and distance. Four more C's have been gained: Fred Butcher, Malcolm Parkins, Jeff Turner and Bill Rawlings.

Our C.F.I. has instigated a novel approach to cross-country landing checks. The examinee is aero-towed out to a large field some four miles from our site and has to do a normal landing under real conditions. Derigging is not required as it is possible to aero-tow out again.

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Swanton, the owner of the site at Huish, near Marlborough, to use the ridge for hill soaring expeditions. For this we are very grateful, and no doubt we shall be meeting members of other Clubs at Huish.

We have nearly finished the Clubhouse but work ceased a couple of months ago because our chief "Liberator" Stan Perry "acquired" a hangar. It is hoped to give a full account of both Clubhouse and hangar in a separate article.

D. E. S.

WORCESTERSHIRE

WHIT-SUNDAY saw the commencement of flying from our site at Bickmarsh. Over the two days of the Whit holiday a large number of our members saw, from the air, the results of their winter's labours.

A thirsty Jeep has joined our ground equipment but is proving quite useful. A field telephone is also being installed between launch and winch points solely for the purpose of ascertaining "what is causing the hold up the other end".

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A fortnight's summer camp for members will commence on 13th July. This, of course, will be run from our own site, unlike last year, when an expedition journeyed into Herefordshire and spent a very successful fortnight at Shobdon airfield.

T. M.

YORKSHIRE

THE early part of this year has been less active weatherwise than in the previous year. The appointment of Mr. and Mrs. Jack Machin as Club Steward and Stewardess at Easter has made a great improvement in our creature comfort. The Club is developing a steady Sunday Lunch fraternity, whereas in the past, the weather has been the overriding consideration for attendance.

These improved facilities have allowed us to hold two Inspector's courses under the auspices of the B.G.A., one in March and one in April. Both were very successful and we were pleased to see so many of our friends from other Clubs.

Over Easter members of the Cambridge Club were with us. Siegfried Neumann took his Skylark 3F up to 5,000 feet in a lee wave we laid on by aero-tow. At Whitsuntide a party from the London Gliding Club were with us and were unfortunate in poor anti-cyclonic weather.

The Club fleet has been increased by the purchase of a second Swallow fitted with an accelerometer for aerobatics. The two Tutors are still with us but will soon be going to other homes. The private owner fleet has also increased with an addition of Dr. Bill Waugh's Eagle and John Griffiths' Skylark 4, all the way from Sunny Scarborough. Radio has also been tried out recently, mainly through John Griffiths' good offices, and shown to be a great help in facilitating retrieves.

Club training continues and two Silver C's have been awarded, one to Cliff Banks and the second to Patricia Simpson. Pat is the first lady member since Amy Johnson to have a Silver C in the Club. (Amy had a C, not Silver C.—ED.)

Hugh Hayes and Elizabeth Taylor both completed their five hours in the same aircraft on the same day. As Liz has just become engaged to Chas Boyer, R.A.F. and Silver C, we wish them

many thermals together.

Altogether we have had 14 five-hour duration legs this year to date. This did not include the chap in an Olympia from another place who was towed up to Sutton but had to land with us 4 hr. 45 min. after release as the wind died. A brave effort.

J. C. R.

SERVICE NEWS

BANNERDOWN (R.A.F. Colerne)

"Wanton with long delay, the gay spring leaping cometh."—ROBERT BRIDGES.

IT could be that the poet has something here, but so far the leaping has been done from launch point midfield and back again at the double thus inspiring the thought—does launch rate vary inversely with temperature? Notwithstanding Weather Willie's churlish moments the period produced 613 launches for 62 hours and the tempo increases as the list lengthens and the slack gets taken up.

Aerial activity was average until 17th February when 15 hardy souls travelled from the West to make Camp at Bicester only to meet a steady wind travelling from the east. We returned with a creditable total of 346 launches for 32 hours A and B Certificates for Chris Reid, Peter Bucke and Derek Aldous and a high regard for Andy Gough and his Centre Organisation.

Thermal activity started on 7th March when a few small smoky cu appeared each apparently sitting on a thermal 20 up and 20 wide, but in chasing the vortices good fun was had by all.

Martin Yates flew his C on 27th March and followed this with 41 minutes in his first Olympia flight.

P. H.

CHILTERNS (R.A.F. Benson)

UNFORTUNATELY we were absent from this column in the last issue but have been progressing well since Easter. We have had six A and B Certificates and five C's, including Bill Maltby, Jim Fail and Andy Wilkinson.

Our Silver C legs are now mounting up well with distances from Jock Manson, Alan Smith, Bob Lyndon, Steve Hope and Dave Seamark. Jock also got his height whilst on cross-country.

Wilf Pickles is still working miracles with the aircraft. The Grunau is now finished and flying, and we have repainted the open T-21 and the canopied T-21 is nearly completed now after a partial re-cover and paint.

Jim Martin and helpers have built a signal box and Terry Perry has managed to get an old caravan which we are now converting into a club-room.

Lastly, we must congratulate Jack Harrison on his attempted Gold C cross-country from Bicester to York.

A. T. B. W.

EAST MIDLANDS (Swinderby)

SINCE the last report, the club has undergone changes due to a spate of postings. Ian Hamilton (our C.F.I.), Jim Gregory, Pete Rickwood, Bob Kirkland, Tom Thomas and Tubby Jordan have all departed but as some people are posted out of the area, other gliding types seem to arrive to fill the gaps.

Chas Morgan took over as C.F.I. only to be detached overseas almost immediately! Don Spottiswood is now C.F.I. until Chas returns. We welcome to the Club Paddy Hogg and John Delafield, and also several *ab initio* members who seem to have the bug.

Recently, Don Spottiswood held an instructors' course and John Shorter, Des Sheen and Jim Wild are now assistant instructors. Spike Jarred and Bob Kirkland went to Bicester and are now full and assistant instructors respectively.

A couple of changes on the aircraft side plus repairs and inspections have kept our Tech. Air member, Barry Cohen, busy, and our fleet now consists of a T-21, Kranich, Tutor, Grunau, Olympia 2, Skylark 3, and Dart. Also, an SF-26 is due soon, and we are hoping for some good soaring conditions to utilise these machines to the full.

On the ground side, after a conversion programme, we now have two diesel winches. These, together with our auto-tow vehicle, form our launching equipment, but with the fleet mentioned above,

we long for aero-tow facilities. A recent acquisition has been a single-decker bus. This now serves as a combined signalling vehicle, timekeeper's office and refreshment bar. Bill Marshall, our tireless M.T. member, has spent many hours on the conversion of the winches, and Jack Nicoll many hours on the bus conversion.

Successes since our last report are a C Certificate for Pete Litherland, three Silver distances, Bill Marshall, Jack Nicoll and Barry Cohen, and one Silver height, Bill Marshall.

Finally, we again extend a warm welcome to any gliding types who find themselves in our area.

J. G. W.

FENLAND (Swanton Morley)

BACK in the news again after a year of struggling where energies have unfortunately been diverted sometimes from the primary aspects of gliding to secondary haggling behind the scenes, we are beginning to get on our feet again and getting airborne more frequently.

Congratulations to our recent solo successes, especially S.A.C.W. Di Miller who is our first W.R.A.F. to be trained in the Club and to go solo with us.

We were hosts, among the other Norfolk Clubs at Swanton Morley, to the pundits who came along for a very wet Easter competition. However, everyone enjoyed the opportunity to discuss gliding matters and get things fettled.

The M.T. has taken a bit of a pounding, most of it needing some fairly major repair; as soon as one thing is put right another component seems to go wrong fairly soon after. But again members are doing Trojan work and this shouldn't be an insurmountable problem.

We are quite proud to have five of our members in the R.A.F. team this year! Dennis Stubbings, who has recently joined us and has taken over the Secretaryship; Ken Fitzroy, who is ably looking after the aircraft serviceability; Ian Strachan, who is our Equipment member; Stew Mead, the deputy C.F.I.; and C.F.I. Pete Kevan.

They flew a variety of aircraft, and were ably assisted by the keener members of the Club who earned a place in the retrieving teams. With Alfred Warminger also at the Nationals it was quite a Fenland invasion. Congratulations to all on the results.

Much pressure is going on behind the scenes to get the equipment we so badly need in order to achieve greater things, and with the magnificent airfield at Swanton Morley the sky should be the limit.

P. D. K.

MOONRAKERS (R.A.F. Upavon)

SINCE we last reported we have made excellent progress in our efforts to improve our equipment. The new lightweight trailers have been built, the last nail in the Dart trailer being driven home in the early hours on the day before we assembled for the Nationals.

Both our T-21's are now fully canopied and our mobile winch petrol engine has been replaced by a diesel one. We have obtained a second diesel tractor and once our third winch is converted we shall be fully diesel. Already the savings in cost of launches is showing.

On the operational side success has been less marked by only a few solos and a C Certificate. A Silver C distance each for Ted Norman and John Martin and height for Fred Bass. Alex Chapman jumped into a cunim and out again at 14,000 ft. Gain 3,000 metres.

We regretfully say farewell to Club stalwarts Jock Reilly, who has returned to his native Scotland, and Les Manley to Malta. Peter Purdie has gone to Borneo and we hope he will be back in time for the Internationals. We thank these three and wish them good luck. They will always be welcome at Moonrakers.

E. J. M.

R.A.F.G.S.A. CENTRE (R.A.F. Bicester)

DURING April we had our annual visit to Nympsfield. We took down several aircraft and the Auster and expedition provided a week of good thermal soaring.

This annual expedition is most valuable in showing those pilots who learnt

to fly at a flat site how the other half live and we are most grateful to the Bristol Club for allowing us to use their site.

During the Nationals the Centre was closed and most of us were working at Lasham. Besides the competition aircraft we also took the Blanik to Lasham where it provided local soaring for the workers.

The programme of *ab initio* courses and instructor courses continues unabated.

Peter Saundby is posted to Cyprus and will be leaving us at the end of August.

R. P. S.

EAGLE
(Detmold, Germany)

ON 9th May, at a ceremony held in the local German Club's clubhouse, a Grunau Baby was officially handed over to us on loan from the German Club. This ceremony also marked the German Club's 35th anniversary, and the anniversary of Robert Kronfeld's first flight of over 100 km. at the end of which he landed very near Detmold. In the evening a very enjoyable dance was held, to which we were invited. Our most sincere thanks are due to the Detmold Luftsport Verein.

Several soaring flights have been made recently. Lyn Yates kept the Swallow airborn for nearly two hours over Whitsun and Wally Lombard has had a couple of flights of over an hour. On the second of these he reached Silver C height, only to find that the barograph had not functioned, so he will have to do it over again; bad luck, Wally.

Our first A.G.M. showed that the club is firmly on its feet, and that we have made a reasonable profit on our activities.

At the time of writing we are preparing for the Army Air Corps flying display, to be held on 13th June, in which we have been allotted 10 minutes flying time and a static display. We hope to be able to report more fully on this event in the next issue.

H. B. E.M.

Kevin Hampson, the 15-year-old son of Sqn.-Ldr. J. Hampson, at R.A.F. Laarbruch in Germany, was prohibited by regulations from gliding solo at that age either in Britain or in R.A.F. Germany. So during the Easter holidays he crossed the frontier into Holland, where solo gliding is allowed at 14, and joined the Club at Terlet. There the Dutch instructor pronounced his ability "remarkable" and sent him solo. He qualified for his A and B in four flights one afternoon.—R.A.F. NEWSLETTER.

OVERSEAS NEWS

ADEN

THIS was to be our first joyful report to the gliding world about the numerous changes that have occurred at our sandy gliding site. This is not to be; because the carefree young man whose character and initiative made it all possible, met his death in a Hunter aircraft accident.

Because we in the Club feel this loss rather deeply, we have decided to make this, the first entry for the new Club, a tribute to Martin Herring. A man with such a basically sound approach to life, that one cannot help feeling that the main loss is to those who would have met him, during what promised to be a bright career. We thank him for his example.

AUSTRALIA

BOB MULLER, convener of the organsing committee for participation in the next World Championships, said it was hoped to send a team of three pilots, each with a ground crew of three, and a team manager. Seeded pilots chosen by the selection committee will be expected to fly in the 1964-65 Nationals, after which the final team will be decided: they will be expected to practise regularly and attend a one-week training period about March or April, 1965. Crew chiefs will be selected from unsuccessful seeded pilots and will be regarded as reserve pilots.

Two bird strikes are reported in *Australian Gliding*. Otto Brand was circling in a Lo-150 over Benalla in company with a hawk when it hit the outer leading edge of the wing, making a

British Gliding Association

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large hole and leaving several large flight feathers inside; Otto carried on flying for seven hours. Tony Tabart, before the Mildura competitions, was soaring a Bocian at 6,000 ft. when it struck a hawk, which then entered a slow spiral dive and finished with a vertical dive into a lake below.

AUSTRIA

THE Alpine Gliding School at Aigen in Ennstal achieved 12,237 launches during 1963; there were 1,115 pupils including 205 foreigners. Flights included 12 of 300-km. distance and one of 500 km., one 500-km. triangle, and 17 climbs of over 3,000 metres.

The 8th National Championships were held at Zell am See from 23rd May to 6th June, 1964.—AUSTROFLUG.

Harro Wödl is again Austrian Gliding Champion. He won in six contest days with 4,872.6 points, followed by flying policeman Johann Fritz, with 4,803.7 points. Both belong to the Wörschach Club, and were flying the Ka-6 type. Franz Ulbing, another of those who flew in the last World Championships, shared third place with the Innsbruck pilot Kier; they each had 4,527.2 points. The 35 participants covered an aggregate of 39,108 scoring kilometres (24,301 miles). HANS GRAWE.

CANADA

AT the 19th Annual General Meeting of the Soaring Association of Canada, held at Kingston, Terry Beasley of Montreal was re-elected President and John Chesborough of Ottawa Vice-President.

This year's National contests are at Brantford from 21st to 30th July.—SOARING.

FRANCE

BREGUET 906 tandem two-seater, named Choucas (described in SAILPLANE & GLIDING April, 1961, p. 91) is to go into series production at the C.A.A.R.P. factory at Beynes. With a span of 18 metres, all-up weight 410 kg. (904 lb.) and gliding angle 30:1 at 70 km./h., the Choucas is a development of the Fauvette single-seater (Breguet 905) of which 50 examples have now been sold.

At Saint Auban in mid-March, during a spell of north-west winds, nine pilots exceeded 5,000 m. height gain. Greatest heights were the Swedish record of 28,215 ft. absolute, already reported (June issue, p. 243), and one by Maurice Sieurin (25,787 ft. absolute, 19,718 ft. gain). A Belgian visitor, Herman Smet, reached 22,900 ft. absolute. On 14th April, reinforced by a cold front, five more Diamond heights were flown, one by a German visitor.—AVIASPORT.

Regional contests, mostly lasting three days each, have been held at 12 different centres, and the winners will fly in the National Championships due to be held from 3rd to 13th July. The centres are Besancon, Romorantin, Toulouse, Nantes, Issoudun, Nevers, Lille, Nancy, Moret, Périgueux, Gap, and Lyon-Corbas. (Well-known pundits do not appear in the lists of results of these, except that Pierre won at Lyon.—ED.)

An international contest at Hagenau

from Thursday, 7th May, to Sunday, 10th, brought six visitors from Germany and three from Belgium to join nine French pilots. As the first two days were no good, three contests were crowded into the last two. On the Saturday a 247-km. triangle via Colmar and Bitche included the Vosges; Labar won at 64 km./h., the wind being N.N.W., 10-15 knots.

Sunday's wind turned from S.W. to E. during the day, reaching 30 kts. at 5,000 ft.; cumulus bases exceeded 6,500 ft. and thermal strengths reached 4 m./sec. The first task, a 108-km. triangle via Saverne and Bitche, was won by Henry at 68 km./h., and all but three completed the course. Then came the day's second task, a repetition of the first, but conditions had become difficult, and only five got round, while four, including Henry, could not get away at all. Labar, who had finished 8th the first time, won this time with 54 km./h. Leading total scores:

Labar (France)	Edelweiss	2742
Gross (Germany)	Ka-6 CR	2226
Lacroix (Belgium)	Mucha-St.	1924
Henry (France)	Zefir	1844
Frowein (Germany)	Zugvogel 3A	1789

At a "Three Towns Meeting" (Lille, Roubaix, Tourcoing), 15th-17th May, the two top scorers, Gombert and Arnaud, each flew an M-100.—AIR ET COSMOS.

HOLLAND

UNTIL the start of our Nationals we had had very little good flying weather. During the Easter Rally at the AKU Gliding Club only test flights were possible and the Victor Boin Contest had to be postponed from Ascension Day, 7th May, to the 9th May when suitable conditions were available.

The only flights of note, apart from the Victor Boin Contest and the Nationals which are reported elsewhere in this issue, were:

April 22nd: A. Breunissen, Terlet—Boberg, 327 km., getting back the "Cowbell' which travels between the two sites.

May 8th: J. Huberts, Venlo—Hohnebostel, 310 km.

May 9th: J. Steinfoorn, Terlet—Boberg, 327 km. Also J. van Melzen and Annebé Slotboom set up a new two-seater distance record of 315 km.

May 14th: J. Robinson, aged 67, completed his Silver C distance leg with a flight of 100 km. in a Ka-8.

May 15th: A. Breunissen nearly completed a 300-km. triangle, which has only once been achieved in this country.



In the Market Place in Middelburg.

May 16th: J. Klijnstra, Goal Diamond, Witten—Luchow, 313 km.

The A.G.M. was held on 18th April at Middelburg, to celebrate the 30th anniversary of the Walcheren Gliding Club, who operate from the Woensdrecht Air Base 80 km. away. By request of the Club some of the delegates arrived by air (on tow) in Ka-7's, and landed in a field in the vicinity of the town, from where they were trailered to the Market Place and rigged in the middle of Middelburg. After the Meeting the Burgomaster of Middelburg held a well-attended reception in the Gothic town hall. The day was closed with a visit to the Delta works (land reclamation programme) and a dinner in Flushing afterwards.

J. v.E.

IRELAND
(Dublin—Baldonnel Airfield)

THE Club progresses steadily, if rather slowly. The number of launches and the hours flown and the ratio between them, likewise show a small but encouraging increase each year. The total number of flying members appears to be limited to about 50, due to local conditions, of whom about 35 form

the hard core of "regulars" who have been with the Club for several years. Curiously, only four of the original founder-members of 12 years ago still remain, all very active on the Club's behalf.

Our "friends" in Clonmel (see June issue) are apparently resorting to desperate measures to increase their membership. Last April, their C.F.I. literally and figuratively pinched one of our most popular members, Helen Moore; spirited her away to Clonmel, and married her! Our heartiest congratulations to both!

The Ka-7, our best aircraft, is so popular among the soaring pilots that flights are limited to 30 minutes on Sundays, from noon until thermals disappear, to the exclusion of all *ab-initio* members. The limit applies only to the Ka-7, leaving our Kite available for cross-countries, duration, etc. Though not quite so popular, the Kite is still hard-worked.

Annual C. of A.s are now mandatory over here too. When our Tutor was recently grounded for its usual overhaul and the wing-spar modification, at least three members ready to go solo were bitterly disappointed. However, it should be flying again by the time this appears, perhaps even supplemented by a Prefect.

Speaking of disappointments, our hopes were quickly raised and dashed in May by news of a last-minute acceptance of our British Nationals Entry, closely followed by our rejection, because of the "foreigners" Rule for the World Championships! Oh well—roll on May '65!

Recently, Stanley Dunne, our present C.F.I., achieved 15,100 feet over Dundalk in a wave system and was sorely tempted to "pop over to Wales". However, he didn't, but was later overheard remarking this was due to "severe undercarriage icing".

Aer Rianta are now subsidising the insurance costs of all flying groups in the 26-Counties. This is just one of many small signs that the knots in the red tape of officialdom are beginning to slip.

The hard-working Committee have their hands full this year, with a Ka-7 trailer, a permanent soaring site, Group Insurance for individual members, three new aircraft on order, forming the Club

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C. G.

ITALY

THE Italian Standard Class M-100 is becoming popular in France, where it is being produced under licence and named Mesange (French for Titmouse).

Alberto Morelli has now produced the M-200, a training two-seater, which first flew at the beginning of June. The prototype was built at the Polytechnic Gliding Centre of Turin to the order of the Italian Aero Club. It has side-by-side seating, a span of 18 metres, and airbrakes of the multiple type. Morelli first envisaged an all-metal machine, but has reverted to wood after all.

—AIR ET COSMOS and VOLO A VELA.

NEW ZEALAND

A 200-MILE flight in two hours by Eric van Notten in a 15-metre Sagitta is described by Neil Hart in *Australian Gliding*.

On 4th January van Notten had already been flying for several hours in the morning and afternoon in thermal and weak wave lift, when he took off again from Omarama at 4 p.m., spent nearly an hour contacting wave lift, and set course at 5 p.m. for Hanmer Springs, 200 miles away. He reached it in two hours, flying at an average height of 16,000 ft. with an indicated airspeed of 80-85 m.p.h. He used oxygen throughout, but the supply had been partly used up on the previous day, or he could have continued for another 100 miles, as twilight lasted till at least 9 p.m.

Another Sagitta is on its way to New Zealand from Holland.

POLAND

AT the National Championships at Leszno on 10th June, Adam Zientek cables, 34 out of 36 Fokas completed a 535-km. triangle (332.4 miles). The weather chart shows an anticyclone centred just N.E. of Leszno, so winds were light.

The Championships were won by F. Kepka, aged 23, who went solo at the age of 10 (by special permission), had all three Diamonds at 19, and came 6th in the 1962 Championships and 5th in 1963. J. Wroblewski, also aged 23, was last year's Champion. Leading final scores :—

1.	Franciszek Kepka ...	6,478
2.	Andrzej Kmiotek ...	5,913
3.	Jan Wroblewski	5,893
4.	Henryk Muszczynski ...	5,662
5.	Jozef Pieczewski	5,615
6.	Jerzy Adamek	5,461
7.	Edward Makula	5,453
8.	Miroslav Krolikowski ...	5,436
9.	Gyorgy Petroczy (Hungary)	5,366
10.	Stefan Makne	5,260

Three new Polish National records are reported by *Skrzydlata Polska*. Jan Wroblewski flew a 512-km. triangle, Leszno-Jaksice-Lodz-Leszno, at 91.701 km./h. (56.98 m.p.h.) on 23rd May; Krzysztof Trzpil flew a 245-km. triangle, Warsaw - Plock - Ciechanow - Warsaw at 97.8 km./h. (60.77 m.p.h.) on 27th May; and Henryk Lisiecki made 740 km. (460 miles) from Jelenia Gora to Berlin on 24th May, beating Edward Makula's 716 km. which was the longest flight at the World Championships in Argentina. The weather chart for 24th May shows a light E.N.E. wind, force 2, on the flight course, which went north-westwards.

SOVIET UNION

PAVEL ANTONOV and Valeri Oplachko have beaten the World two-seater record for Goal Flight, 636.6 km. (395.56 miles), set up in Poland by F. Kepka and E. Lopato on 8th August, 1962. The Soviet pilots flew 690 km. (428.75 miles) from Dniepropetrovsk to Volgograd, taking 7 hr. 42 mins. (Date not given; news received 28th April.)

Mikhail Veretennikov, flying an A-15, put up a National record of 84.7 k.p.h. (52.63 m.p.h.) round a 300-km. triangle, beating the previous record by 14.1 k.p.h. Olga Manafova, with Evgeniya Chirkova as passenger, went round the same course in a Blanik at 62.71 k.p.h. (38.97 m.p.h.), beating the Women's National record by 18.1 k.p.h. (News received 29th May.) World's records respectively 67.2 and 42.6 m.p.h.

Olga Manafova, a student at the Moscow Institute of Electronic Engineering, has now beaten two World women's two-

seater records, both previously held by Pelagia Majewska of Poland. Her flights were: 71.28 k.p.h. (44.29 m.p.h.) round a 300-km. triangle, and 500-km. Goal Flight (354.2 miles). Previous records 42.58 m.p.h., 335.8 miles. (News received 18th June.)

—SOVIET INFORMATION SERVICE.

SWITZERLAND

AT a contest held at Hausen am Albis during the eight days 16th-23rd May, seven tasks were set and five contest days achieved. Urs Bloch and Hans Nietlispach led in the earlier days but were finally overtaken by Markus Ritzi in a Skylark 3, who thus became Swiss Champion.

Tasks:—May 16th: 223-km. out-and-return Klosters; three Ka-6's were in the lead. Thermals started late. May 17th: 153-km. triangle set, but no contest, due to too much cirrus. May 18th: out-and-return Thun; Nietlispach won, making his final glide from 2,300 m. (7,550 ft.). May 19th: the remains of a night thunderstorm cleared by midday, but no-one achieved an 85-km. goal flight to Grenchen. Thunder and rain all next day. May 21st: an excellent day; 11 of 18 competitors completed a 170-km. out-and-return to Walzenhausen, but the apparent winner, Harro Wödl of Austria, was found to have photographed Gais instead of Walzenhausen, so Baumgartner won. But next day Wödl and another visitor, Michel Marchand from France, did best on a triangle, though Nietlispach took the overall lead. On the final day, 23rd May, free distance was given; Rudolf Hächler won with 312 km. to Zell am See in a Ka-6, landing after 8 p.m.; but Ritzi, though he was one of four who fell short of 300 km., made enough points, 824, to take the overall lead from Nietlispach, who scored only 355.

Leading final results:

Pilot	*Sailplane*	*Points*
Ritzi	Skylark 3	4372
Nietlispach	Skylark 4	4105
Bloch	Ka-6	3722
Baumgartner	Phönix	3688
Marchand	Breguet	3147
Wödl	Ka-6	3068
Seiler	Ka-6	2873
Hächler	Ka-6	2661

Baumgartner, Bloch, Nietlispach, Ritzi and Rudolf Seiler are seeded for the World Championships; three will be eventually chosen.—SWISS AERO REVUE.

UNITED STATES

LATEST pilots with Three Diamonds are Dale May, John Williams and Leslie Benis, the last two having achieved their third Diamonds with wave flights. They are the 30th, 31st and 32nd in the U.S., with international numbers 359, 366 and 367.—SWISS AERO REVUE.

Believed to be the youngest pilot to achieve Diamond altitude, John Christopher Jury, aged 14, reached 30,000 ft. at Tehachapi, California, on April 5th. He released at 7,500 ft. and gained 22,500 ft. His father was flying at the same altitude at the same time, piloting a TWA 707 from New York to Los Angeles.—SOARING.

WEST GERMANY

HEINZ HUTH became German Gliding Champion for the sixth time when he won in the Standard Class at the National Championships at Roth-Kiliansdorf near Nuremberg. Rudolf Lindner, in the new Phoebus, and Jakob Laur alternately overtook Huth after the first day, but Huth regained the lead after the fourth contest day and stayed there. On that day a 300.4-km. triangle was set, and 55 out of 61 starters completed the course. This was the greatest achievement yet in any German competition.

In the Open Class the Darmstadt student Gehrhard Waibel was an unexpected victor. The new design D-36V1 contributed much to his success. Waibel designed it with his fellow-student Wolf Lemke. The D-36V1 showed itself to be the surprise aircraft of the Championships. Waibel was taking part in a competition for the first time.

The Championships were favoured by good weather, and there were eight contest days. On the last competition day the pilots had started on a ninth contest task, but the weather became so bad that the jury ordered them to land.

Sixty-three pilots took part in the Championship. The Frenchman Labar broke his Edelweiss when landing on

the first day and returned to Paris. A German pilot, Auer of Augsburg, also fell out after crashing his Zugvogel 3.

During the contests 85,126 scoring kilometres were flown (52,895 miles).

Leading scores:

Open Class

Pilot	*Sailplane*	*Points*
G. Waibel	D-36V1	5853.3
R. Spänig	Zugvogel 3	5561.7
R. Kunz	HKS-3	5385.4
E. Hezel	Zugvogel 3	5006.0
R. Gailing	Phönix	4977.3

Standard Class

H. Huth	Ka-6	5049.8
J. Laur	Ka-6	4809.9
R. Lindner	Phoebus	4650.5
K. Fischer	Ka-6	4477.6
H. Schlüter	Ka-6	4461.3
G. Brodersen	Ka-6	4436.2
Glöckl	Ka-6	4409.1
Grosse	Ka-10	4407.2
Schäuble	Ka-6	4394.9
Scheidhauer	Ka-6	4390.7

By adding 15 per cent of the scores at the 1961 and 1962 Championships and 70 per cent of those at the last World Championships, the leading total scores become: Huth, 9,730.3; Spänig, 9,632.8; Kuntz, 9,210.1; Lindner, 9,015.9. This evaluation will influence (*ist von Bedeutung für*) the choice of a team for the next World Championships.

Heinz Scheidhauer, who came over from Argentina, was lent a Ka-6 by a friend. (He has been test pilot for the Horten Brothers' tailless sailplanes for over 25 years.—ED.).—HANS GRAWE.

Since April the North Rhine-Westphalia broadcasting station UKW has been putting out a weather forecast every Friday evening between 18.15 and 18.30 specially for glider pilots. (The region includes Oerlinghausen.)

The German Alpine Gliding School at Unterwössen has completed 10 years of operation. Including the year 1953, when it was only a gliding "site", the total flying in 11 years was 79,269 launches and 30,610 hours, including 1,024 five-hour flights.—AEROKURIER.

The Institute for Soaring Flight Research at Munich has sold its Kranich 3 to the Lilienthal Club of California.—DER FLIEGER.

Heinz Huth has just been awarded the Lilienthal Medal.

YUGOSLAVIA

A NEW Standard Class machine, the Delfin, has been produced by two young engineers, T. Dragovic and Z. Gabrijel. The first test flights at Vrsac last December confirmed the calculated performance, particularly a gliding angle of very nearly 34:1 at 90 km./h. The Delfin is of wood construction, with mid-wings, straight-tapered, with a dihedral of 2°, aspect ratio 17.55, profile NACA 63-3-618 modified, streamlined "shapes" at the tips, and airbrakes at 60° chord. Empty weight 222 kg. (489 lb.), all-up 332 kg. (732 lb.), wing loading 25.9 kg./sq.m. (5.3 lb./sq. ft.). Sink 0.90 m./sec. (2 ft. 11 in./sec.) at 110 km./h., 2.2 m./sec. at 150 km./h., 5 m./sec. at 200 km./h.

A new 17-metre two-seater with an estimated gliding angle of 31:1 is under construction at Belgrade.

—AIR ET COSMOS.



The Delfin, Yugoslavia's latest Standard Class design.

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