



Free Flight

THE NEWS LETTER OF THE SOARING ASSOCIATION OF CANADA

July - August 1968

EDITORIAL

Though much interesting material has been received from clubs, we have postponed publishing club news so that articles on the World Championships can be presented.

S.A.C. NEWS

F.A.I. AWARDS: Paul Tingskou, of 187 Thompson Drive, Winnipeg 12, Manitoba, has taken over this job and is working hard at it. Clubs are advised that Paul now has A and B Badges at \$2.00 each, and also a stock of award application forms at 10 cents each.

S.A.C. SUPPLIES: A new stock of logbooks has been ordered. Requests for logbooks (\$1.50) and for S.A.C. Ties (\$2.75), blazer badges (\$6.50) and decals (.25¢), should be addressed to S.A.C., P.O. Box 2006, Station D, Ottawa 4, Ontario

1968 CANADIAN NATIONALS

1968 Canadian Nationals held at Rockton, Ontario, from July 23rd to August 1st. Peter Trounce, flying a 17 Metre Phoebus, was the winner. Because of the World Championships, there were only eleven contestants. One day of good weather enabled flights to be made to Gananoque (Jack Kane), and to Kingston, at 4,000 ft. (Peter Trounce), and on Sunday, 28th June, Wolf Mix took part and he and Peter Trounce flew 540 kms to an airport near New York City. Peter was fortunate to land at an airport as his divebrakes were taped up and would not open. The flight completes Wolf's Diamond Badge. On the same day, Charlie Bonds (HP 11), overflew Elmira but lost the piece of paper with his compass course on it and flew on 230° instead of 130° and so missed his Diamond Distance.

Final Scores were:

1. Peter Trounce	17 Metre Phoebus	5670 points
2. W. Deleurant	Standard Austria S (mod)	4514 points
3. J. Kane (Michigan)	Ka6-CR	4432 points
4. N. Tucker	HP 14	4383 points
5. G. Lockhard	HP 14	4063 points

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1969 CANADIAN NATIONALS

These are to be held at Innisfail, Alberta, from July 1st - 12th, and will be followed by a wave flying camp at Pincher Creek from July 12th - 19th. In order to help the organisers in their planning for these events, anyone interested is asked to write as soon as possible to Gordon Prest, Suite 1107, 9910 - 104th Street, Edmonton, Alberta.

HIGH ALTITUDE ENVIRONMENT SCHOOL, TORONTO

With the fall wave season approaching, it is time to consider attending a one-day school at the Institute of Aviation Medicine. In order to coordinate applications for this excellent course, we suggest that Eastern Club C.F.I.'s approach their members and send a list to Bob Gairns, c/o S.A.C., P.O. Box 2006, Station D, Ottawa 4. The Institute is very busy this year, but it may be possible to put on a course for out-of-town pilots on a Saturday.

LESZNO 1968

After leaving Canada on 23rd May, Charlie Yeates and Dave Webb were able to have a few practise flights at Kirchheim Teck. Charlie and Peggy then made their own way to Leszno, while Dave drove down to Munich to meet the rest of the team. As Wolf Mix was to pick up his eight year old FOKA in Poland, he was able to spend a day with relatives before leaving with Al Pow in a Ford van. However, the distributor drive sheared on their first car, and they then acquired a V.W. van, advertising to all the world that its owner, Mr. Merbold, was an Ein Uhr Unfelhelfer auto repairman.

31st May - On the Road:

Dave, Terry Beasley, and myself set off from Munich in the afternoon in a Mercedes 220, towing the BS-1 in a modified standard class trailer, with the wingtips and tail sticking out the end. Speed was restricted to 80 kph as the trailer had a habit of snaking at higher speeds. In spite of this, steady progress was made along the 1936-built autobahn, skirting Nurnberg, then heading due east. Pilsen was reached that evening where a polished aluminum trailer bearing a Texas number plate (along with two other trailers) indicated that the U.S. team was in town.

Saturday, 1st June:

Drove through rolling country with wooded hills and large fields. Some incredibly ancient cars were seen, also many two-stroke motorcycles and some heavy trucks with independently sprung rear wheels and a flywheel rotating in the centre of the rear axle. A few hours were spent in Prague, a city with a fine cathedral and public buildings, on a hill in a magnificent setting. The Polish border was reached by evening, after climbing through wooded hills, and a stop was made at a hotel which conveniently appeared.

Sunday, 2nd June:

A pleasant day, with sunshine. After passing through the old German town of Breslau (now Wroclaw). Leszno was reached by 1:30 p.m. Dave was allocated a room in the main building, to be shared with Wolf and Charlie and two Yugoslav pilots, while the crew members were directed to the tented area and to what turned out to be a comfortable 7 or 8 man tent. Our

three Polish crew members who shared the tent with us, were all glider pilots, Stan, aged 17, with a Silver "C" and Gold "C" height, Wieslaw, a helicopter pilot with a Gold "C", and another Wieslaw, soon nicknamed "Speedy", with a Gold "C" and three Diamonds, and 1500 hours power time. Al Pow had Speedy to look after him, or vice versa, as he was allocated to Wolf's team. The other Wieslaw was part of Dave's crew, and Stan helped Charlie. They were all very helpful. As in Canada, the weather had been good in March, but had deteriorated since. This first evening in Leszno it rained.

Monday, 3rd June:

A warm day. Breakfast consisted of milk, soup, rolls and butter, ham and cheese, and coffee - no complaints there. Rigged the Cirrus and BS-1, Wolf, Charlie and Dave all flew for three or four hours. One of the problems in the BS-1 was where to locate the instruments one wanted. With the reclining pilot position, the pilots legs have to go one on each side of an instrument console, which must be kept low to provide a view forward. The Polish Zephyr 4 had a shallow fuselage and extreme pilot position. There the designer got over the instrument space problem by mounting a turn-and-bank or artificial horizon vertically, and provided a rod to pull the instrument horizontal on top of the panel when necessary for cloud flying.

Tuesday, 4th June:

Washed glider - the usual practice every morning. We have a tie down area next to the West German team. Help rig the ASW-15, a neat little machine which goes together easily. The ASW-12 is also there; this has a thin wing with faired bulges over the flap hinges. The fuselage is like the Cirrus, but the wing is highly tapered, and is liable to have flutter problems at speeds of over 200 kph, they say. It has "Dreamship" painted on the side of the cockpit, has an all-flying tee tail, and a tail parachute, but no dive brakes. The BS-1 is there too, a shiny new one with the pitot in the nose. Dave's, an earlier model, has the pitot in the fin. Spanig, the German BS-1 pilot, has 150 or more hours in his ship, Dave has four flights. Spanig is glad to give tips on handling and on the use of the tail chute (pop it out just before touchdown). Dave took off at 12:22 p.m. but is down about 1:00 p.m. due to poor conditions. The chute jettisons on approach, but we find it in a ploughed field. A safety cord is therefore fitted, but there is no further trouble. The installed radio is uncertain, so an airfield staff man helps change over to Dave's "Bayside". It should be mentioned that the airfield, with a number of administrative buildings, two restaurants, three large hangars, and two runways at right angles, (1040 metres and 1000 metres long), with ample taxiing distance beyond these lengths, was used exclusively for glider flying.

Wednesday, 5th June:

Cloudy at first. Clouds cleared but left haze, and it became warm and humid. A 100 km triangle practice task was set, to try out pilots and the starting and finishing organisation. Conditions were not good, and U.S. pilots Moffat and Schreder, and Burton of the British team, landed out. Wolf and Charlie turned back because of poor conditions. With work on instruments, Dave did not fly.

Thursday, 6th June:

Rain during night. Poor conditions in morning. Re-rigged ailerons on BS-1. Dave has 15 minutes flight.

Friday, 7th June:

Very wet all night - overcast all day - no flying. Some of us go in V.W. to Poznan, a city

some 75 km to the North. One of the old German towns, it has a fine town hall and some picturesque buildings. We see the exhibits at the Poznan industrial fair, due to open in a few days. Canadian pavilion not impressive, but may have improved by time fair opened. Regaled by a four-piece fiddle and bagpipe band in the town square.

Saturday, 8th June:

Overcast, but with a cloudbase of from 7000 to 8000 ft. Showers expected, so no task set. At briefing, Per Axel Persson of Sweden was presented with a special cup to celebrate his twenty years in competitive gliding. He was first in the single seat class in Switzerland in 1948, second in Poland in 1958, and here he was again, in 1968. (This time he was to come second in the standard class, an excellent record). With the official opening the next day, the shops in Leszno were responding in a big way to help publicize the championship. Photographs of gliders were on show, and arrangements of goods in the shape of sailplanes were a display of ingenuity in several shops.

Sunday, 9th June:

Official opening day. A warm morning, happily with no rain. Aircraft began arriving at 8:30 a.m., with a Russian built DC-3 and a twin engined Illuyshin passenger plane, a large Antonin Biplane on the lines of a DeHavilland Otter, two Zlin aerobatic monoplanes, and several other light aircraft. In front of the hangars a raised enclosure had been put up for government and air force dignitaries. Facing this was a line of flagpoles, one for each of the 32 countries participating. The flags were arranged in alphabetical order of country. Argentina was on the far left when looking out from the stand, and Kanada was to the right of centre. To a visitor, the spelling of the names of some countries was a trifle bizarre, such as Wlochy for Italy and St. Zjedn, A.P. for U.S.A. Teams marched out to stand by their country's flags at 9:30 a.m., and before the official opening a helicopter appeared, towing gliders, and there were two lots of three gliders on tow behind one tug. Three Fokas on tow together cast off and landed in formation, one pilot making an unscheduled groundloop. After an official welcome and opening of the championship by the Vice-President of Poland, an airshow began, first with radio controlled models, then with parachute jumps from the AN-22 biplane, all delayed drops. Several gliders did aerobatics, the show including the famous helicopter tow of a Mucha Standart, with release made with the towrope vertical. The most versatile machine was the small Jastrzab aerobatic glider whose pilot performed outside loops and flick rolls, ending with a long inverted flypast. There was an inverted slip ball on the instrument panel of this machine and the g meter read $-4\frac{1}{2}$ and $+7\frac{1}{2}$ after the flight. One of the local pilots said the ply of the wing was 6 mm thick. The red line speed of this machine is 270 mph with or without airbrakes. The airshow finished with balloon bursting by Yak 18 two seat trainers at 1:15 p.m. By 1:30 p.m. there was a steady downpour. A concert by the Poznan Symphony Orchestra in Leszno ended the day's entertainment. Dennis Holliley, a friend of Dave Webb from England, arrived with his friend Bob Cook. Dennis was allocated to Dave's team and Bob to Charlie's team.

Monday, 10th June:

To the casual observer it was overcast and windy. To the met man the situation was unusual, with a high pressure system over Scandinavia. With typical June weather, the high should be over South Central Europe, and the low now over Central Europe should be over Scandinavia. The occlusion between these two air masses was over Poland, and was not expected to move quickly. The Sun came out briefly, between showers, and the day was spent swinging compasses, on the Foka and BS-1. In the evening a four piece band with long hair and electric guitars made us feel we had never left home.

Tuesday, 11th June:

Rain. Charlie and Peggy visited Poznan; the rest of us visited Wroclaw, the former German Breslau, a fine city, the second largest in Poland.

Wednesday, 12th June:

Heavy rain during the night. At briefing Frank Irving and another British team member raised a laugh by marching in in frogmen's suits, and the met man gave his briefing shaded by an umbrella (inside the hangar). Better weather is expected tomorrow. Noted that there were 25 towplanes, 20 Gawron and 5 Wilga monoplanes, both with engines of about 220 H.P.

Thursday, 13th June:

At last, sunshine, a task, a 224 km triangle for both open and standard classes. Dave crossed the starting line at 12:37 p.m., and was heard on the radio with Charlie. But our hopes were soon deflated by a "landing" call by Dave and a cross country dash was made to pick him up. After a second launch he nearly reached the first turnpoint before thermals ended for the day. Conditions were somewhat light, so it was not a BS-1 day, and Spanig in the other BS-1 came 25th. With the Pitot in the fin, Dave experienced lag in the variometer reading. Changing to cockpit static after the first day gave great improvement. Open class results for this day were Vergani, Italy, first in a Cirrus; Wroblewski, Poland, second in a Zefir 4; Charlie Yeates, Canada, third in his Cirrus, with Dick Schreder, U.S.A., HP-14T, fourth. In the Standard class it was a great day for Stouffs, Belgium, Standard Libelle, who came in first, six minutes ahead of the Open Class, in 2 hours and 50 minutes. The difference in times of the first three in the Open Class was about half a minute. It was going to be a close fight.

With 105 sailplanes, traffic was bound to be congested in some thermals, and on this first contest day two standard class pilots from East Germany and Turkey, flying Fokas, collided. Happily both pilots parachuted down safely. Other pilots had their adventures too. Malcolm Jinks of Australia in a 16½ m Diamant got away from 200 ft., indicated, by slope soaring over some pine trees and then contacting a thermal, and completing the course.

After helping Dave with his second take off, we were in time to see the first finishers. Dick Johnson was first back at the field, to be followed by waves of white machines suddenly appearing and roaring in at high speed. One poor man flew behind some trees, lifted over them, made the field, but was 100 yards short of the finish line. Another pilot flew in lower than the top of the hangars, landed, and just rolled over the line.

Friday, 14th June:

The task set was a 300 km triangle, with first take offs at 10:30 a.m. However, the forecast of early thermals was mistaken, and at 11:45 the task was changed to a 226 km out and return. The temperature did not increase as expected and eventually a Foka was sent up as a thermal sniffer, and the first take off was made at 1:30 p.m. A strong easterly wind gave a headwind on the first leg. As there were clear skies and only a few clouds on the horizon, to avoid congestion in thermals, only the standard class was launched: much grumbling by open class pilots. By 5:30 p.m. only George Moffat, Standard Elfe, had arrived home, the only person to complete the course. Thermals had stopped abruptly, as on the previous day, and a number of pilots were caught out by this phenomenon. Wolf Mix landed with Makula, without reaching the first turn point. His crew spent three hours finding him, and only did so by getting people in a narrow gauge railway car to look out from their elevated position. The road ran alongside the railway track, and the railway car occupants saw the glider about three-quarters of a mile away, and informed Al and Speedy of its location. After this second day of competition, the leader in the

Standard Class was A. J. Smith, with Moffat fourth.

Saturday, 15th June:

Hot, with light winds. At briefing the met. condition was described as dry and convective, with maximum thermal strength below cloud of 3-4 metres/sec., though generally $1\frac{1}{2}$ -2 m/sec. Winds at ground level 15-20 kph at 120-150 degrees, at 1000 m. 30-40 kph at 150-170 degrees. Cloudbase was forecast to be 1300 m, rising to 1600 m. Cloud flying permitted. The task was a 224 km triangle for both classes, with the open class first to take off, at 12:45 p.m. Dave Webb was airborne at 1:08 and crossed the start line at 1:26 p.m. Reports for first and second legs were good, but after the second turn point, conditions began to deteriorate. Charlie reported he was 20 miles past the second turn point and scratching with a crowd of others. Our car had been following Dave's progress all day, and we now turned on to a road which crossed the final leg of the triangle. Stopping just outside a small town, we saw seven machines in a group flying straight, at max glide angle, all white, tee tails and vee tails, flying quietly in the calm air. Dave still reported that he was behind this group. A few minutes later two gliders appeared, circling; one, an SHK, was on top, the other, a tee tail, was Dave, both gaining a little height in a weak thermal. The SHK set off, then Dave, who reported that he was at 1500 ft. We rushed on, and Charlie told us by radio that Dave had reached the group we had seen earlier. In fact he was one field beyond, with Hirth, Spanig, Charlie, and Burton, all in one field. Wolf's crew cut their search time down to two hours, though they had to phone Leszno to find out his position. The strangest story was probably that of the French pilot who had managed to make two kilometres more than Dave and who informed us that he had his trailer and glider, but had lost his retrieve car. Schreder and Johnson were some miles ahead. Winner for the day was Wodl, Austria, in a Cirrus, with Schreder and Johnson second and third. Dave and Charlie were equal ninth with five other pilots. Schreder had problems after the second turn point, having to make a climb up from 500 ft. Goodhart of the U.K. in an HP 14T, landed 25 miles out and did not start again.

Sunday, 16th June:

Cool at night, but another hot humid day followed. Up at 6:20 a.m., but the hot water in the crew's washroom had already been used up so one had a cold shower for a change. Briefing was at 10:00 a.m., the task a 313 km triangle, with 85, 115, and 113 km legs, via Wroclaw and Borkow for both classes. Dry thermals were forecast, with thermal activity from 11:00 a.m. to 5:30 p.m. The standard class were to take off first, with launching to begin at 11:00 a.m. Cloud flying was permitted, to a maximum height of 4500 metres. It was announced that the two pilots who had collided on the first day were equally culpable, and as they were not permitted to change their aircraft, they would be unable to continue in the contest. There were reports of unsafe flying. It was pointed out that this would not be tolerated, and that disqualification would follow for the offending pilots.

Dave took off at 11:46 a.m., crossed the start line at 12:06 p.m. and rounded the first turn point at 1:43 p.m. Charlie was at the 2nd turn point at 3:15 p.m. Ninety gliders reached the first turn point. Fifty-six the second. No one completed the course. Seiler, Switzerland, 18 m Diamant, was first with 276 kms; Wodl, Austria, Cirrus, was second; Ax, Sweden, 17 m Phoebus, was third. Charlie was 17th with 250 kms; Dave 18th with 249 kms. In the Standard Class, Persson, Sweden, Standard Libelle, was first with 270 kms; Reparon, Holland, Ka6E, second with 265 kms; equal with Balukin, Norway, SH-1; Stouffs, Belgium, Standard Libelle; and A. J. Smith, U.S.A., Elfe S3, were equal fourth with 262 kms. After three tasks, the standings for Open Class pilots were:

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|------------------------------------|-------------|
| 1. Wodl, Austria (Cirrus) | 2292 points |
| 2. Schubert, Austria (18m Diamant) | 2241 points |

3. Johnson, U.S.A. (HP 13M)	2179 points
4. Seiler, Switzerland (18m Diamant)	2175 points
5. C. Yeates, Canada (Cirrus)	2165 points

Dave was climbing up, and with 1191 points was equal 38th, out of 48 contestants.

In the Standard Class after four contest days the standings were:

1. Smith, U.S.A. (Elfe S3)	2316 points
2. Lindner, W. Germany (15m Phoebus)	2160 points
3. Nietlispach, Switzerland (15m Phoebus)	2132 points
4. Moffat, U.S.A. (Standard Elfe)	2130 points

Wolf with 1345 points was 37th out of 57 contestants.

Monday, 17th June:

Hot again, but with an easterly breeze. A maximum temperature of 90° F was forecast, maximum lift 3-4 metres below cloud, conditions dry and convective. For both classes a 215 km triangle was set, with turn points at Przylep and Lubin.

According to the organisers, many reports of dangerous flying had been received. This time the offenders were named by number, and one of the Canadian pilots was included. In one incident, an 18 m Diamant was reported to have joined a thermal in a dangerous manner and the Brazilian Vrepema pilot, only avoided a collision by quick avoiding action. On another occasion Wolf Mix told us that he was circling in a thermal when a wheel suddenly appeared just above his canopy - and he had to get out of the way in a hurry.

Today's task was the first and only time a task was set with one leg west of Leszno, and we were pleased to see a different countryside. After radio reports of booming conditions on the first and second legs, a quiet lunch at Lake Slawa was interrupted by a radio message from Dave to say he was at the second turn point with conditions rather poor there. However, he got away and found reasonable thermals soon after, to complete the task and also to be first for the day. He reported that at one point conditions were so good that at 120 knots he had to use dive brakes to avoid going into cloud. At this speed the BS-1 was shaking badly, so with thoughts of the flutter problems experienced by other high performance fibreglass gliders, he kept the speed down thereafter. The official press bulletin stated that after the first take off at 11:30 a.m. conditions were very good at Leszno between 12:00 and 1:00 p.m., and by 2:00 p.m., with turning point reports coming in, it seemed likely that the great majority of pilots would complete the task. First to cross the line was Goran Ax of Sweden (17m Phoebus), followed seconds later by others. 93 pilots completed the course, while 9 landed out, John Blackwell of Australia demolishing the fuselage of a Foka in the process. The one and only aerotow retrieve was made this day, as the only road to the glider was unsuitable for the trailer.

With Canada winning the honours in the Open Class, the score sheet for this day makes interesting reading:-

1. D. Webb, Canada (BS-1)	85.2 kph	1000 points
2. R. Spanig, W. Germany (BS-1)	84.6	983 points
3. J. Wroblewski, Poland (Zefir 4)	83.9	964 points
4. G. Ax, Sweden (17m Phoebus)	83.9	964 points
5. G. Burton, U.K. (SHK)	81.9	909 points
6. R. Hossinger, Argentina (17m Phoebus)	81.1	887 points
12 R. Johnson, U.S.A. (HP 13M)	77.6	791 points

29.	R. Schreder, U.S.A. (HP 14T)	71.1	613 points
31.	C. Yeates, Canada, (Cirrus)	70.4	594 points

and in the Standard Class:-

1.	G. Moffat, U.S.A. (Standard Elfe)	82.2	1000 points
2.	A. J. Smith, U.S.A. (Standard Elfe)	81.2	974 points
3.	H. Stouffs, Belgium (Standard Libelle)	80.4	953 points
4.	P. Persson, Sweden (Standard Libelle)	80.1	945 points
5.	H. Nietlispach, Switzerland (15m Phoebe)	80.0	942 points
12.	E. Makula, Poland (Foka 5)	73.6	776 points
39.	W. Mix, Canada (Standard Foka)	63.1	503 points

Another collision had occurred on 16th June. The Brazilian exotic Urepema, probably due to bad forward visibility, hit the left hand vee tail member of the Swiss AN 66 Open Class glider. The Urepema suffered damage to the nose and landed soon after, but the AN 66 pilot flew a further 40 kilometres. Both pilots flew the next day though the Swiss pilot had to use a borrowed Diamant as repairs to the AN 66 were not completed.

Tuesday, 18th June:

Out and return tasks were set for both classes, 182 km for the open, 170 km for the standard. The day was hot and cloudless. Conditions were difficult for the Standard Class, but much of the Open Class track was under a cloud street, and Dave Webb reached 7000 ft. on the outward leg and 6000 ft. on the return. Dave said he was down to 1700 ft. at the turn point, conditions were poor and there was a glider on the ground to prove it. However, he found a small thermal and shared it with other gliders. Then they saw a glider on the return leg circling, so shifted over to him. From there they saw yet another glider circling further on in good lift, and dived over to join him. From then on Dave had no trouble.

The Standard Class turning point was to one side of the Open Class track, and though it was smart to fly along the open class cloud street, their turning point was off to one side with very poor conditions there, and Wolf Mix was down to 1500 ft. twice in this area.

The Open Class winner was Heinz Huth in the A.S.W. 12. One explanation given for his fast time was that he spent a quarter of an hour climbing up from a low level and then decided that he could not possibly win and therefore flew as fast as possible for the hell of it. The scores were as follows:

OPEN CLASS:

1.	Wodl, Austria (Cirrus)	2 hrs.	02.20 mins.	89.2 kph	1000 points
1.	Huth, W. Germany (AS W 12)	2 hrs.	02.20 mins.	89.2	1000 points
3.	Spanig, W. Germany (BS-1)	2 hrs.	03.50 mins.	88.2	973 points
3.	Vergoni, Italy (Cirrus)	2 hrs.	03.50 mins.	88.2	973 points
5.	Schreder, U.S.A. (HP 14T)	2 hrs.	03.55 mins.	88.1	970 points
6.	Burton, U.K. (SHK)	2 hrs.	04.31 mins.	87.7	959 points
7.	Webb, Canada (BS-2)	2 hrs.	04.35 mins.	87.6	957 points
8.	Goodhart, U.K. (HP 14S)	2 hrs.	04.55 mins.	87.4	951 points
9.	Krolkowski, Poland (Zefir 4)	2 hrs.	05.31 mins.	87.0	941 points
21.	Yeates, Canada (Cirrus)	2 hrs.	12.43 mins.	82.2	812 points

STANDARD CLASS:

1. Stouffs, Belgium (Std. Libelle)	69.1 kph	1000 points
2. Vavra, Czechoslovakia (M-35)	67.9	971 points
3. Williamson, U.K. (Dart 15 W)	67.7	966 points
4. Nierlispach, Switzerland (15m Phoebus)	67.4	958 points
7. Smith, U.S.A. (Std. Elfe)	64.9	898 points
8. Moffat, U.S.A. (Std. Elfe)	64.8	896 points
36. Mix, Canada (Std. Foka)	44.5	406 points

Ian Loughnan, the pilot of the Indian team, was flying a Standard Foka without radio so his crew had a long wait before they found out where he was when he landed out. He managed to get round the 224 km triangle on 18th June, though he had only returned to Leszno at 4:00 a.m. from the previous day's retrieve.

Wednesday, 19th June:

Up at ten minutes to six to wake Al Pow so he could take Merbold (the V.W. van) to a garage for repairs. Able to enjoy hot water in the washroom at this early hour. A free distance task, out to a turning point and back along a line through Leszno, was set for both classes, but both tasks were cancelled because of weather. Drove to Boskowo Lake nearby for a swim, but a thunderstorm and heavy rain interrupted proceedings. Talking to A. J. Smith later, we learned that only a few Standard Elfe's had been built, as production was a spare time project of the designer. His aircraft weighed 15 kg more than George Moffat's, and as A. J. was heavier than Moffat, he had 100 lbs. all up weight extra.

Thursday, 20th June:

Heavy rain during the night gave a fresh morning, though the day was still very warm. The task was again free distance, with a turning point and return along a line through Leszno. For the Open Class it was 278 km and return, for the Standard Class 227 km and return. The weather was described as convective with thunderstorms, cloudbase 1300 m to 1600 m, thermal duration 10:30 a.m. to 5:00 p.m., max. temperature 29°C. Today the maximum height allowed above Leszno was 2000 m. After a question by the Italian team captain, it was announced that barographs would be compulsory. Calibration charts were also necessary, but a pilot could have a calibration made after the task for a small fee. The Open Class took off first, Dave at 11:21 a.m., crossing the line at 11:32½ and recrossing it again at 11:36½. Thermals seemed difficult at first. Driving along after the gliders, we listened to our pilots remarks about conditions. A number of gaggles of sailplanes along the course indicated that thermals were widely spaced. The only clouds were a long way ahead, with a thunderstorm building up right on course. We heard Dave and Charlie talking about this. Dave mentioned seeing three shafts of lightning and then said he was getting out of that area. He then flew North to try to get round the storm, and this was the last we heard of him as his radio was poor due to failing batteries. Our team searched for Dave in various locations, but did not find out his location until after 11:00 p.m. when a police station near Lodz reported that he had landed in a field close by. What had happened was that Dave had managed to press through the storm area to beyond Lodz, where he could see a line of cumulus leading to the turning point. He did in fact reach the edge of these clouds, but only at 500 ft., and though he got zero sink he was unable to climb up, and had to make a quick decision on a field, landing on a strip cut between standing crops, and flying under some telephone wires before touchdown. The crew were anxiously waiting until Dave's landing place was established: this was found out by the good work of Wieslaw, our Polish crew member, who organised telephone calls to the police in various districts. After driving steadily, the police

station near the landing spot was reached by 1:50 a.m. Here the police reported that Dave had left a quarter of an hour before. One policeman came with us a short way in the car, then we all walked some distance into a large field, but couldn't find anything. On returning to the police station we learned that Dave had been there a few minutes before. More searching of the field, this time starting from the police station. We gave up after a while and returned to the car. Woke up three-quarters of an hour later to hear Dave talking to Dennis (Dave had had a brain wave and had put new batteries in his radio and called us — Canada tow, do you read, etc.) so contact was made and with the trailer in tow we set off back at 4:30 a.m. Happily, because of rain, there was no task that day. Winner for the day was Rudy Seiler, with 178 kms. Though Dave had probably flown further, he was off track, and with a projected distance of 168 km he came equal second with Goodhart. Charlie was 14th with 150 kms.

In the Standard Class, Persson was first with 164 kms., followed by Ross Reid, New Zealand, Ka6E, with 149 km., and Rudy Lindner of West Germany, 15m Phoebus, with 147 km. Wolf was 35th with 53 km.

Friday, 21st June:

Rain.

Saturday, 22nd June:

With cloudbase 800 metres at first, rising to 1200 metres, westerly winds, and thermal strengths predicted at $1\frac{1}{2}$ to $2\frac{1}{2}$ m/sec., the task set was a 200 km. downwind goal race to Lublinek, a grass airfield near Lodz. In the Open Class, the results were:-

1.	Dekkens, Holland	18m Diamant	121.1 kph
2.	Huth, West Germany	ASW-12	120.0
3.	Manzoni, Italy	Cirrus	119.6
4.	Seiler, Switzerland	18m Diamant	118.9
5.	Wodl, Austria	Cirrus	117.0
11.	Webb, Canada	BS-1	111.5
12.	Yeates, Canada	Cirrus	111.3

In the Standard Class:

1.	Grosse, West Germany	ASW-15	107.1 kph
2.	Rodling, Sweden	Std. Libelle	104.0
3.	Makula, Poland	Foka 5	103.4
4.	Perotti, Italy	15m Phoebus	103.0
5.	Pronzati, Italy	15m Phoebus	102.0
31.	Mix, Canada	Std. Foka	92.2

In both classes the times were so competitive that a minute lost dropped the placing by a large amount.

Sunday, 23rd June:

The final day, with the closing ceremony, and, as usual on these occasions, the weather was beautiful. The Vice President of Poland arrived again to do the honours, and the Championships ended on a relaxed and pleasant note. After the ceremony, each wended his individual way home, but took with him or her memories of shared experiences and Comaraderie, and a feeling that it was all very worthwhile, and was, in a small way, a contribution to understanding amongst nations.

- R. C. G. -
Editor

BS-EINS

When the BS-1b which I was supposed to fly in the 1968 World Gliding Championships could not be produced in time, Mr. Hanle of Glasflugel generously supplied me with the factory prototype BS-1 in lieu, and was most helpful in many other respects.

A thorough briefing on the aircraft by Mr. Muller of Glasflugel was the start to a three week acquaintance with this aircraft. I say acquaintance, since I never really got to know it very well, but it tolerated me and I certainly had respect for it. Whilst getting used to operating the BS-1 it aroused a wide spectrum of feelings regarding its performance, i.e. when thermaling at low altitude - desperation; when rigging - a mixture of frustration, resignation and triumph. However, such feelings were mainly overcome by longer association and were overshadowed by the exhilaration felt when running flat out under good clouds. It was designed for this and the penetration was better than anything else I have flown. The miles seemed to turn into kilometers (although I remember one or two occasions when a curious reversal seemed to occur) and it is my opinion that the BS-1 is equal to any sailplane in existence in this respect and that it is probably superior to most.

However, to get back to basics. Herewith a brief description of the aircraft characteristics as I experienced them.

The cockpit was just a comfortable fit for me (6 ft. - 185 lbs.). Although the pilot position seemed extremely reclining at first, one soon became adjusted to it. Visibility directly ahead was poor, particularly so since some additional instrumentation which was added for the contest (e.g. horizon and compass) was outside the console envelope. Discounting the latter, the gradual slope of the canopy meant that the pilot was looking through the perspex at an extreme angle which cut the visibility appreciably. For instance, to check for gliders far ahead (which is obviously important in such a contest) it was necessary to yaw the aircraft and look through the side of the canopy. Controls were fairly well positioned except for the dive brake lever, which was about 6" too far aft on this prototype machine and was (for me) difficult to operate. This, of course, was rectified on the production machine.

The take-off was quite straight forward with no noticeable ground looping or wing dropping tendencies. The technique used was to hold the stick hard forward until the tail lifted (which occurred almost at take-off speed due to the forward wheel position) and then to apply two notches of flap (approx. 5-7° down) to lift off. Once airborne, the first thing one noticed was that the all flying tail was not particularly sensitive in pitch but the lack of stick force was disconcerting at first. The rudder was powerful but only relatively light forces were required for normal use. Ailerons again were light in operation, but as in all large machines, were not particularly effective for large angles of roll, although perfectly adequate for normal thermaling use. A $\frac{1}{2}$ slop (measured at the aileron T.E.) in the aileron control circuit may have been a detrimental factor and lowered performance in roll on this aircraft. (I drooped the ailerons to prevent up float due to this slop and this again may have contributed to a lower roll performance. It was not possible to locate the cause of this slop which lurked in the fuselage behind a glued in access panel, but again, production machines did not have this defect).

Thermaling required some concentration and at first it was difficult to keep the airspeed reasonably constant due to the different feel of the all flying tail. However, practice soon eliminated this problem leaving only the slightly larger radius of turn to worry about.

Various combinations of flap and speed were tried. For average thermal conditions about 5-7° of flap (estimated) i.e. two notches and 50 knots seemed to feel about right and this was confirmed during the contest since the best results against other aircraft were obtained this way.

Generally, the BS-1 performed quite well in thermals as long as the thermal diameters were large enough. Although the machine could be slowed down below the 50 knots normally used, the sink increased as speed was reduced and a net loss seemed to be sustained. Climbing up from low altitudes or using weak lift was, of course, not so easy in this aircraft and generally speaking the machine is not really suitable for creeping along in English style thermals. If the lift exceeded 2 knots, the BS-1 was able to compete on equal terms with anything else. Gliders such as the Cirrus, Diamant, Phoebus 17 and HP series would outclimb me, but overall the BS-1 would catch up in the glide (everything else being equal). The real problem was to keep it pointing in the right direction.

Contrary to expectations the machine appeared to be quite docile - stall characteristics were mild with the nose mainly dropping straight through and only very slight wing dropping tendencies. Full spins were not tried and exploration in this direction was limited to incipient spins in turns to get the feel of the machine and to know what to expect when thermaling on the slow side.

Landing the BS-1 was the only difficult part about flying the aircraft. With the aircraft grossing over 1,000 lbs. (empty weight 770 lbs.), there is a lot of energy to get rid of, and the aircraft drag is low even in the landing configuration. Unfortunately the airbrakes just did not work at the slower speeds (50 knots) just before touchdown and even the chute didn't seem to have very much drag at this speed. Both chute and airbrakes became effective as the speed was increased and the technique finally used was to select about 15° of flap and then open the airbrakes full on the circuit to dive off excess height. Sideslip was used for final glidepath adjustments after the speed had been reduced, and the chute was then popped about 10 feet off the ground. With this technique, there was no possibility of getting into a dangerous situation if the chute failed to open (incidentally it never did fail), and a relatively short landing run could be made, i.e. a ground run of less than 100 yards. Since the fields in Poland are large and the country flat, no real difficulties were experienced even though I had only six hours and half a dozen landings in the aircraft before the contest started. The aircraft could be (and was) landed with the wheel up if a short landing run was required or if a very soft field had to be used. Of course, this technique had to be used with discretion since rocks, etc., if present, could penetrate the fuselage shell. It is instructive to consider that ones posterior would be separated from such obstacles by about 3/16" of fibreglass and moving at 50 m.p.h. relative to them. Discretion is indicated when using this technique, but with this aircraft it can be useful.

Summing up, the BS-1 would be an ideal machine for use in Western Canada although with experience one could do well with it almost anywhere. And now for the commercial! This particular aircraft is for sale at considerably less than the new price, and the big fallow fields and superb soaring conditions of the Prairie Provinces would suit this machine admirably. How about it you Westerners?

- Dave Webb -

LONG FLIGHTS DEPARTMENT

Paul Tingskou has been keeping a record of achievements this year, and has sent the following list:

April 28th, 1968	John Firth, Ottawa	197.6 Mi Triangle	HP-11A
May 8th, 1968	David Marsden, Edmonton	207.5 Mi Out/Return	Blanik
May 12th, 1968	Paul Tingskou, Winnipeg	165.0 Mi Triangle	BG-12 B
May 18th, 1968	David Marsden, Edmonton	91.4 Mi Triangle	HP-14
May 20th, 1968	Paul Tingskou, Winnipeg	215.0 Mi Out/Return	BG-12 B

May 18th, 1968	John Pomietlarz, Edmonton	91.4 Mi Triangle	HP-11A
May 31st, 1968	David Marsden, Edmonton	298.0 Mi Distance	HP-14
June 3rd, 1968	John Pomietlarz, Edmonton	322.0 Mi Distance	HP-11A
June 3rd, 1968	Bogdan Wolski, Edmonton	209.0 Mi Goal	1-23D
June 5th, 1968	John Firth, Ottawa	189.0 Mi Out/Return	HP-11A
June 14th, 1968	David Marsden, Edmonton	418.5 Mi Goal	HP-14
June 15th, 1968	Ken Lewandowski, Edmonton	200.0 Mi Distance	HP-11A
June 18th, 1968	Harold A. Eley, Regina	214.0 Mi Goal	1-26
June 18th, 1968	John Firth, Ottawa	182.5 Mi Triangle	HP-11A
June 21st, 1968	John Pomietlarz, Edmonton	213.0 Mi Goal	HP-11A
July 28th, 1968	Peter Trounce, Ottawa	340.0 Mi Distance	Phoebus 17m
July 28th, 1968	Wolf Mix, SOSA	340.0 Mi Distance	Austria SH

FOR SALE

In addition to the sailplanes advertised in the June Free Flight, the following machines are available:

Ka6 CR, CF-RWO, three years old but like new. Fully instrumented, including new Crossfell audio and steel tube covered trailer. Owner has left country. Price \$5,900.00. Contact Steve Burany, 42 Aldenham Crescent, Don Mills, Ontario, Telephone 445-8786.

Cherokee II, CF-RCV, built 1962, licensed till June 1969, with enclosed aluminum trailer and instruments, including Crossfell electric vario. Price \$1,990.00. Also for sale Winter barograph, Bayside 990 radio, parachute. Contact J. Diez-Luckie, 138 Sherbrooke Street, Beaconsfield, Quebec.

BARGAINS

There were some excellent aircraft for sale in our June issue. We have been advised that several owners are open to offers. Why not write about them?

FIRST CANADIAN "FIRST"

My Polish crew member, Wieslaw, was a very efficient, precise man and a real "operator" in every sense of the word. He seemed to know the inner ring of top people at Leszno and could get things fixed and extract information from the organizing people with magical ease. For instance, after a task he would disappear for a while and return with the times of all the top people as well as our own. However, after the 215 Km. triangle race on the 17th June he was uncertain. The times were quite close and although I knew I had done reasonably well, there were the usual rumours that someone had made a really fabulous speed, etc. So we went for a swim and a beer and temporarily forgot the contest. Later on in the evening he disappeared again and on his return confirmed that I had indeed made the fastest time of the day. This was the first time that a Canadian had won a day at an International competition and I wondered

where I had put the "pilot" identification nameplate which I had contrived to "lose" after the first contest day. (Sometime I might write that "light up but right now I don't like to think about it. At least the article would be short!") We celebrated a little and later that night I cast my mind back over the day's flying to see if anything in particular stood out for use in future.

The starting time — this was a fairly important factor, because Chuck Yeates doesn't hang around and yet his time for the first leg was 15 minutes slower and he had started some 20 minutes earlier than I. I had stayed around the starting line for what seemed to be an age, watching in turn, the heavy cumulus build up towards the first turn point, the "hole" between it and the clouds I was using, and last, but certainly not least, the other "Lead Sleds" still milling around before the Start Line. I was beginning to bite my finger nails when a couple of cumulus puffs had appeared in the "hole" on the first part of the course. Shortly afterwards Wroblewski in his Zefir 4 put his airbrakes out and headed down to the Start Line.

It had seemed to be a good time to go and I had followed him to a good start at maximum placard speed just under the maximum allowable height of 1,000 metres. Lift under the first cumulus in the "hole" had been a good 5 knots and had given us the freedom to press on to the heavier cumulus. This better cloud was reached around 1/3rd of the way along the first leg and from that point on we had really moved, flying in almost continuous lift, on a weaving course, mostly without turning except when the variometer showed maximum up.

The line of cumulus had been so good that although I had known (via the calculator) that I would be too high to go round the first turn at the required 1,000 metres, there had not been much that I could do about it. I could not dive it off because I was already indicating 115 knots and the BS-1 always developed an unpleasant twisting and shaking motion in the fuselage structure around this speed in rough air. This shaking seemed to originate at the rear and shook the whole fuselage at a frequency of 2 or 3 cps. (I do not know what actual speed this was since after the first contest day, I had reverted to cockpit static instead of the pitot static set up on the fin to avoid lag in the total energy system and therefore the "position error" was any one's guess).

Wroblewski's Zefir 4 had disappeared into the haze ahead because it was not as flexible as the BS-1 and he was really driving it hard. (This was another minor lesson. A high usable rough air placard speed isn't required very often but when lift is very good and, in effect, three final glides have to be made on a triangle, it can be helpful). Eventually I had had to pull the airbrakes out and lose 1,500 ft. to round the turn point. This fast straight flying had obviously allowed me to catch up with a lot of people, but Wroblewski for one had been faster on this leg.

Once around the turn the decision to go back along the same course as far as possible was fairly easy because there was a big blue "hole" towards the second turn point. The only difference was the 'shoal' of other sailplanes which had been porpoising along all around the BS-1 at this point. (I remembered whimsically comparing the BS-1 to a shark chasing smaller fish as I watched first one and then another glider rocket up from 100 knots to almost stall speed as they hit lift in front of me — perhaps to escape the predator on their tail?). I had finally made cloud base at around 6,000 ft. approximately 1/3rd of the way back along the first leg and then turned 90° right and headed out into the blue slowing down to near best L/D speed as the size of the dead area became apparent. I had thought of going into cloud before turning but several aircraft in the base of the cloud had deterred me. Perhaps I had been foolish in ignoring the extra lift especially as I thought I had glimpsed the two Zefir 4s merging with the cloud base as I turned. It had been a long glide in silky smooth air and the sky had appeared empty of sailplanes until careful inspection had revealed a couple, relatively motionless to me, one on each side. A small puff of cumulus had appeared way ahead and had attracted these and several others previously unseen like a flock of vultures.

A few small weak thermals had been used and then that sailplane a mile or two ahead had gained height relative to the horizon. A few of us noticed and pushed on and we had driven into 6 knots up, climbed, and streamed into the second turn point in a long glide. This step over to a better thermal had been the important move on this second leg. (Charlie told me later that he did not notice the move and that he stayed where he was and lost several minutes at this point).

The turn point duly rounded we had again used weaker thermals. Cumulus puffs had pointed out the route. Suddenly the Zefir 4s had appeared circling ahead of me and perhaps 200 to 300 ft. higher. (The cloud climb had been the best thing to do after all). Together with the other machines I had been flying with I had pulled up and made a few turns while rechecking the final glide figures and had then pressed on wondering why the Zefirs were still climbing. The final glide had been uneventful and the speed had been increased at each check point until we had been doing 115 knots again for the last 10 miles. Wroblewski and the Zefir 4 had been beaten only on the final glide. Looking at the map and retracing the route I had taken showed it to be a good deal less than the optimum as far as the distance flown was concerned but following the clouds had paid off. I was forced to the somewhat lame conclusion that I had done a good routine job of flying, but nothing particularly clever. Flying with a lot of other aircraft around helps fast aircraft and the real winner was the BS-1 which had been operating in its designed environment (for the first leg at least) on this day.

In the Open Class for the first time we had aircraft that were equal to any other entries but Pilot and/or instrument errors, etc., caused us to fare badly on at least one day each. However, the aircraft we flew gave us an even chance for the first time to fight for the top places. Hitherto we were really only competing for the positions after the first 15% due to aircraft and equipment alone. To win of course means that the pilot must not make any major mistakes and have a good aircraft (or team fly). Because there are usually several pilots in this category he must be lucky as well. By recognizing the first ten positions in each class by awards, the F.A.I. confirms this concept. For this reason Canada may never win a World Gliding Championship but this should not (if at all possible) be allowed to be due to the aircraft performance factor. This means, of course, that sufficient money to transport our own gliders to the contest and back will be required. If this can be done in future, it will be the biggest single step to a placing above that 9th one which is our present limit.

The funds that Walter Piercy and our clubs across Canada raised for the 1968 competition were very much appreciated since they cut the individual pilot's expenses by 70% to say nothing of the assistance to the rest of the team. With this sort of support in future, I feel that we can do better than 9th and 13th, and who knows, we may even get lucky as well!

- Dave Webb -

TASKS - OPEN CLASS

1st Day	224 Km Triangle	Leszno - Miloslaw - Sulmierzyce
2nd Day	224 Km Triangle	Leszno - Sulmierzyce - Miloslaw
3rd Day	313 Km Triangle	Leszno - Wroclaw - Borkow
4th Day	215 Km Triangle	Leszno - Przylep - Lubin
5th Day	182 Km Out-and-Return	Dabrowa - Leszno
6th Day	Distance on Line	Leszno - Konskie - Leszno +
7th Day	200 Km Race to Goal	Leszno - Lubinek

TASKS - STANDARD CLASS

1st Day	224 Km Triangle	Leszno - Miloslaw - Sulmierzyce
2nd Day	226 Km Out-and-Return	Borkow - Leszno
3rd Day	224 Km Triangle	Leszno - Sulmierzyce - Miloslaw
4th Day	313 Km Triangle	Leszno - Wroclaw - Borkow
5th Day	215 Km Triangle	Leszno - Przylep - Lubin
6th Day	170 Km Out-and-Return	Malvgadow - Leszno
7th Day	Distance on Line	Leszno - Piotrkow - Leszno +
8th Day	200 Km Race to Goal	Leszno - Lubinek

Bob Gairns,
Editor

11TH WORLD GLIDING CHAMPIONSHIPS - LESZNO, POLAND - OPEN CLASS

S = Speed, kph
D = Distance, km
= = Equal Placing
One = Did not fly

Standing	SURNAME	COUNTRY	GLIDER	1ST DAY		2ND DAY		3RD DAY	
				D or S	DAILY		D or S	DAILY	
					Pts.	Pl.		Pts.	Pl.
1	Wodl	Austria	Cirrus	75.7 S	959	7	206 D	693	2
2	Ax	Sweden	Phoebus 17 M	74.1 S	912	8	174 D	683	3
3	Seiler	Switzerland	Diamant 18 M	72.3 S	860	11	198 D	706	1
4	Schubert	Austria	Diamant 18 M	75.8 S	962	25	197 D	605	4
5	Huth	G.F.R.	ASW - 12	68.6 S	753	23	184 D	674	4
6	Hossinger	Argentina	Phoebus 17 M	72.1 S	854	=12	182 D	546	=9
7	Burton	U.K.	Austria SHK-1	75.8 S	962	=5	184 D	554	=16
8	Johnson	U.S.A.	HP 13 M	74.0 S	909	9	199 D	612	=9
9	Yeates	Canada	Cirrus	76.7 S	988	3	184 D	554	=9
10	Zegels	Belgium	Austria SHK	71.2 S	828	17	184 D	554	=9
11	Cameron	New Zealand	Cirrus	69.7 S	785	21	197 D	605	=5
12	Horna	Finland	Austria SHK-1	71.7 S	843	14	184 D	554	=9
13	Webb	Canada	BS-1	76	18	47	184 D	554	=9
14	Wroblewski	Poland	Zefir 4	76.8 S	991	2	180 D	539	=18
15	Frene	Argentina	Phoebus 17 M	73.5 S	895	10	148 D	414	=26
16	N. Goodhart	U.K.	HP 14-S (18 M)	70.7 S	814	20	49 D	30	46
17	Dekkers	Holland	Diamant 18 M	67.7 S	726	26	197 D	605	=5
18	Spanig	G.F.R.	BS-1	67.8 S	729	25	184 D	554	=9
19	Litt	Belgium	Austria SHK	108 S	816	19	148 D	414	=26
20	Ehrat	Switzerland	AN-66	72.1 S	854	=12	167 D	488	22
21	Schneider	U.S.A.	HP 14 (18 M-T Tail)	76.0 S	968	4	201 D	620	2
22	Czuwikow	U.S.S.R.	A-15	66.4 S	689	29	170 D	500	21
23	Vergani	Italy	Cirrus	77.1 S	1000	1	140 D	383	=31
24	Satny	Czechoslovakia	VSB62 Vega	69.5 S	779	22	154 D	438	24
25	Manzoni	Italy	Cirrus	68.1 S	738	24	75 D	131	=41
26	Rudenski	U.S.S.R.	A-15	71.6 S	840	15	96 D	212	37
27	Gatolin	Yugoslavia	Meteor	53.1 S	302	=42	180 D	539	=18
28	Krolkowski	Poland	Zefir 4	71.0 S	822	18	93 D	201	38
29	Rowe	Austria	H 301 Libelle	71.5 S	837	16	182 D	546	=16
30	Csepon	Hungary	A-15	157.1 S	419	38	113 D	278	=33
31	Kvnsagi	Hungary	A-15	56.2 S	392	40	143 D	395	=28
32	Jinks	Australia	Diamant (16.5 M)	63.2 S	596	34	142 D	391	30
33	Olsson	Sweden	Phoebus (17 M)	65.5 S	663	30	98 D	220	35
34	Rokowski	G.D.R.	Foka 4	60.0 S	503	36	82 D	158	39
35	Mercier	France	Siren C-34	56.3 S	395	39	186 D	562	8
36	Thomosen	Denmark	Zugvogel III B	64.2 S	625	31	143 D	395	=28
37	Frenc	Yugoslavia	Meteor	176	76	45	81 D	154	40
38	Jungblut	Holland	Phoebus (17 M)	63.6 S	607	32	160 D	461	23
39	Hamalainen	Finland	IKV-3	66.7 S	697	28	67 D	100	44
40	Higginbotham	New Zealand	Phoebus C (17 M)	67.1 S	709	27	75 D	131	=41
41	Gavillet	France	WA-26 Squale	53.1 S	302	=42	151 D	426	25
42	Svoboda	Czechoslovakia	VSB 62 Vega	63.3 S	599	33	113 D	278	=33
43	Thorstensen	Norway	A-15	119	43	46	97 D	216	36
44	Junquira	Brazil	Foka	63.1 S	593	35	75 D	131	=41
45	Ara	Spain	HP 14 S (18 M)	53.2 S	305	41	52 D	41	45
46	Franzen	Denmark	Austria SHK	58.4 S	456	37	140 D	383	=31
47	Anglada	Spain	Foka 4	213	97	44	32 D	0	47
48	Elke	G.D.R.	Foka 4	26	0	48	D N F	0	32

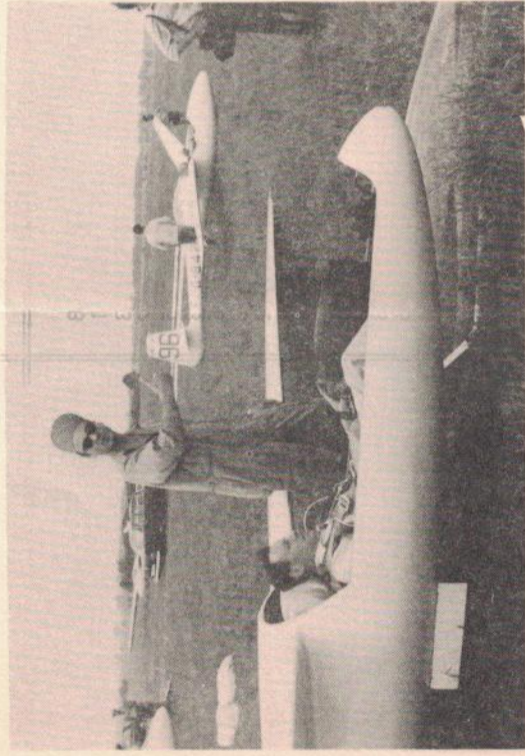
4TH DAY			5TH DAY			6TH DAY			7TH DAY			FINAL	
D or S	DAILY		D or S	DAILY		D or S	DAILY		D or S	DAILY		Points	Place
	Pts.	Pl.		Pts.	Pl.		Pts.	Pl.		Pts.	Pl.		
76.4 S	758	17	89.2 S	1000	=1	144 D	761	=16	117.0 S	919	5	5730	1
83.9 S	964	=3	86.7 S	932	12	155 D	838	=9	113.8 S	855	8	5699	2
71.6 S	626	=26	86.1 S	916	15	178 D	1000	1	118.9 S	956	4	5673	3
76.6 S	764	15	80.2 S	758	=28	165 D	908	4	113.7 S	854	9	5525	4
72.6 S	654	24	89.2 S	1000	21	144 D	761	=9	120.5	978	2	5374	5
81.1 S	887	6	82.3 S	815	20	155 D	838	=9	108.3 S	747	16	5348	6
81.9 S	909	5	87.7 S	959	6	113 D	543	30	105.3 S	688	=21	5263	7
77.6 S	791	12	86.9 S	938	10	138 D	719	19	100.5 S	593	31	5220	8
70.4 S	594	=31	82.2 S	812	21	150 D	803	14	111.3 S	806	12	5180	9
69.2 S	561	34	80.2 S	758	=28	160 D	873	=7	110.0 S	781	13	4981	10
74.2 S	698	19	78.9 S	723	31	124 D	620	21	113.9 S	857	7	4959	11
70.4 S	599	30	77.5 S	686	33	140 D	733	18	115.6 S	891	6	4941	12
85.2 S	1000	1	87.6 S	957	7	168 D	929	=2	111.5 S	810	11	4887	13
83.9 S	964	=3	82.0 S	806	22	78 D	297	41	102.2 S	627	26	4811	14
69.1 S	558	35	80.9 S	777	27	164 D	901	=5	101.8 S	619	29	4793	15
75.0 S	720	18	87.4 S	951	8	168 D	929	=2	107.9 S	739	17	4790	16
79.1 S	832	9	87.4 S	15	46	164 D	901	=5	121.1 S	1000	1	4743	17
84.6 S	983	2	88.2 S	973	=3	73 D	262	42	102.0 S	623	28	4721	18
76.8 S	769	14	69.9 S	482	38	160 D	873	=7	108.8 S	757	14	4718	19
71.6 S	626	=26	83.9 S	857	19	116 D	564	26	103.7 S	656	23	4668	20
71.1 S	613	29	88.1 S	970	5	94 D	410	=39	101.3 S	609	30	4614	21
76.5 S	761	16	81.8 S	801	23	123 D	613	=22	102.1 S	625	27	4605	22
70.2 S	588	33	88.2 S	973	=3	115 D	557	=27	93.6 S	457	40	4593	23
70.4 S	594	=31	81.4 S	790	25	152 D	817	12	105.3 S	688	=21	4569	24
78.9 S	827	10	86.2 S	919	=13	109 D	515	=32	119.6 S	970	3	4544	25
78.2 S	807	11	81.2 S	785	26	123 D	613	=22	92.9 S	443	41	4316	26
71.6 S	626	=26	84.7 S	879	18	135 D	698	20	102.3 S	629	25	4264	27
79.7 S	849	7	87.9 S	941	9	105 D	487	35	93.9 S	463	39	4223	28
72.3 S	646	=22	78.1 S	702	32	101 D	459	=37	100.2 S	587	32	4201	29
77.1 S	777	13	85.9 S	911	16	101 D	459	=37	105.8 S	698	20	4184	30
79.5 S	843	8	85.4 S	898	17	42 D	44	44	111.7 S	814	10	3989	31
72.3 S	646	=22	76.0 S	646	34	111 D	529	31	99.9 S	581	=33	3983	32
71.7 S	629	25	86.2 S	919	=13	122 D	606	24	86.6 S	319	42	3879	33
67.7 S	519	36	80.0 S	753	30	155 D	838	=9	99.9 S	581	=33	3831	34
122 D	29	46	81.6 S	796	24	118 D	578	25	108.4 S	749	15	3687	35
67.3 S	509	38	72.0 S	538	37	115 D	557	=27	94.1 S	467	38	3554	36
64.9 S	443	39	86.8 S	335	11	146 D	775	15	102.9 S	640	24	3486	37
62.7 S	382	41	68.1 S	434	41	71 D	248	43	106.2 S	706	19	3445	38
71.8 S	632	24	73.7 S	584	35	104 D	480	36	96.5 S	514	36	3425	39
72.7 S	657	20	63.1 S	300	43	107 D	501	34	99.5 S	573	35	3388	40
61.3 S	344	42	69.0 S	458	40	114 D	515	=32	107.0 S	721	18	3229	41
67.6 S	517	37	73.6 S	463	39	114 D	550	29	64 D	6	45	2646	42
64.5 S	432	40	58.6 S	581	36	151 D	810	13	67 D	7	44	2184	43
60.8 S	330	43	63.5 S	179	44	34 D	0	=45	94.9 S	483	37	1846	44
178 D	51	45	DNF	311	42	94 D	410	=39	77.6 S	141	43	1722	45
DNF			DNF			DNF			DNF			839	46
49.2 S			50.0 S			31 D	0	=45	DNF			703	47
DNF	65	44	DNF	43	45	DNF			DNF			0	48

11TH WORLD GLIDING CHAMPIONSHIPS - LESZNO, POLAND - STANDARD CLASS

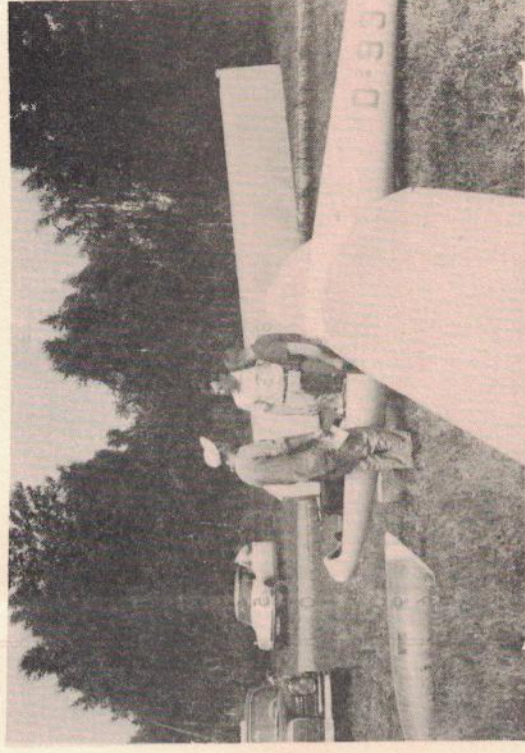
S = Speed, kph
D = Distance, km
= = Equal Placing
DNF = Did not fly

Standing	SURNAME	COUNTRY	GLIDER	1ST DAY		2ND DAY		3RD DAY	
				D or S	DAILY		D or S	DAILY	
					Pts.	Pl.		Pts.	Pl.
1	Smith	U.S.A.	Elfe 53	76.9 S	974	3	203 D	513	=7
2	Person	Sweden	St. Libelle	62.6 S	636	22	198 D	497	9
3	Lindner	G.F.R.	Phoebus A	77.9 S	997	2	101 D	308	30
4	Moffat	U.S.A.	Elfe 53	66.6 S	730	12	226 D	588	1
5	Stouffs	Belgium	St. Libelle	78.0 S	1000	1	104 D	191	40
6	Bloch	Switzerland	Elfe 53	71.1 S	837	6	212 D	543	=3
7	Peroth	Italy	Phoebus	64.8 S	688	=16	203 D	513	=7
8	Makula	Poland	Phoebus	69.5 S	799	8	82 D	119	=41
9	Nietispach	Switzerland	Foka 5	74.0 S	905	=8	212 D	543	=3
10	W. Grosse	G.F.R.	ASW-15	69.5 S	799	=8	137 D	298	=31
11	Vovra	Czechoslovakia	M-35	50.4 S	348	41	192 D	478	11
12	Pronzoni	Italy	Phoebus	67.3 S	747	11	128 D	269	34
13	Rodling	Sweden	St. Libelle	61.3 S	605	=26	191 D	474	12
14	Reparon	Holland	Ko-6E	70.0 S	811	7	110 D	211	39
15	Fritz	Austria	Austr. SH	145 D	147	48	214 D	549	2
16	Muszczyński	Poland	Foka 4 S	72.0 S	858	5	82 D	119	=41
17	Petroczy	Hungary	Foka 4	65.3 S	700	15	173 D	416	=22
18	Reid	New Zealand	Ko-6E	59.5 S	563	32	212 D	543	=3
19	Gombert	France	Siren 630 S	66.2 S	721	13	196 D	491	10
20	Nolte	G.D.R.	Foka 4	59.8 S	570	31	135 D	292	33
21	Johannessen	Norway	Vasoha	60.6 S	589	30	205 D	12	48
22	Williamson	U.K.	Dort 15 W	61.8 S	617	24	174 D	520	6
23	Kuzniecowa	U.S.S.R.	Foka 4	63.4 S	655	19	82 D	419	21
24	Wittonen	Finland	KK-1 UTU	69.1 S	789	10	120 D	119	=41
25	Schreibmoier	Austria	Ko-6E	60.7 S	591	29	189 D	243	37
26	Vrbancic	Argentina	Phoebus	57.1 S	506	37	173 D	468	=13
27	Finescu	Rumonia	Foka 4	64.5 S	681	18	123 D	253	36
28	Marusek	Czechoslovakia	M-35	58.5 S	539	35	176 D	425	=19
29	Van Bree	Holland	Foka 4	61.3 S	605	=26	187 D	461	=16
30	Innes	U.K.	Dort 15 W	138 D	136	50	172 D	412	=25
31	Munch	Brozill	Siren C305	58.6 S	541	34	187 D	461	=16
32	Penoud	France	Foka 4	65.9 S	714	14	173 D	416	=50
33	Fowke	New Zealand	Ko-6E	61.3 S	605	=26	173 D	416	=50
34	Szeredy	Hungary	Foka 4	61.7 S	615	25	112 D	217	=38
35	Defosse	Belgium	St. Libelle	64.8 S	688	=16	189 D	468	=13
36	Blavert	G.D.R.	Foka 4	62.2 S	626	23	169 D	403	27
37	Bulakin	Norway	Austr. SH	58.3 S	534	36	137 D	298	=31
38	Liljamo	Finland	KK-1 UTU	62.8 S	641	40	137 D	298	=31
39	Stanley	Argentina	Phoebus	51.0 S	362	40	80 D	113	44
40	Rusew	Bulgaria	Foka 4	51.0 S	242	=44	78 D	106	45
41	Mix	Canada	Foka 4	53.9 S	430	38	125 D	259	35
42	Perez	Chile	Foka 4	210 D	242	=44	60 D	360	29
43	Broes	Denmark	Ko-6E	59.1 S	553	=32	156 D	48	46
44	Loughron	India	Foka 4	37 D	0	=52	156 D	360	29
45	Iliescu	Rumonia	URUPEMA	52.4 S	395	=39	175 D	422	20
46	Schubert	Brozill	Ko-6 CR	210 D	242	=44	161 D	377	28
47	Didriksen	Denmark	Delphin	62.8 S	204	47	28 D	412	=25
48	Steponovik	Yugoslavia	Foka 4	46.9 S	265	42	172 D	0	=50
49	Zajcew	U.S.S.R.	Foka 4	45.7 S	263	43	0	0	18
50	Juez	Spain	Foka 4	28 D	0	=52	186 D	458	0
51	Blackwell	Australia	Foka 4	72 D	39	51	14	0	=50
52	Filippusson	Iceland	Foka 4	141 D	0	49	56 D	35	47
53	Fujikura	Japan	Foka 4	13 D	0	=52	0	0	=50
54	Sole	Spain	Foka 4	36 D	0	=52	16 D	0	=50
55	Hoflidsson	Iceland	Foka 4	44 D	0	=52	4 D	0	=50
56	Stanczew	Bulgaria	Foka 4	26 D	0	=52	DNF	0	=50
57	Ziyoydogao	Turkey	Foka 4	26 D	0	=52	DNF	-	-

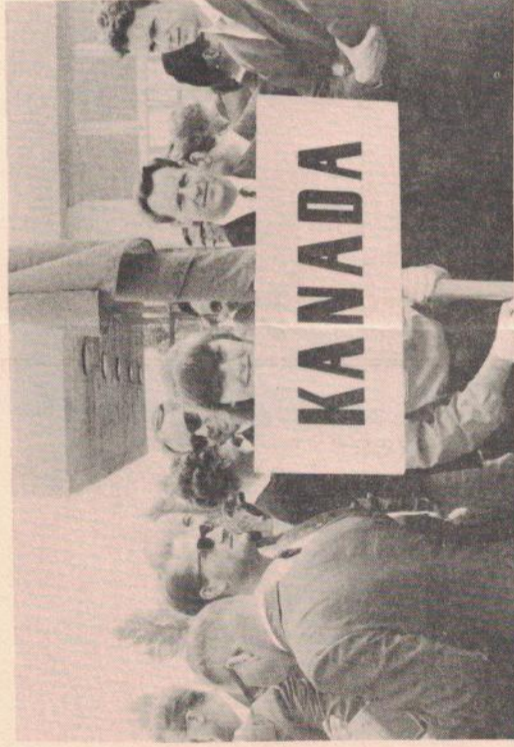
4TH DAY			5TH DAY			6TH DAY			7TH DAY			8TH DAY			FINAL	
D or S	DAILY		D or S	DAILY		D or S	DAILY		D or S	DAILY		D or S	DAILY		Points	Pl.
	Pts.	Pl.		Pts.	Pl.		Pts.	Pl.		Pts.	Pl.		Pts.	Pl.		
262 D	658	=4	81.2 S	974	2	64.9 S	898	7	104 D	542	18	101.1 S	865	=6	55.5	1
270 D	683	=1	80.1 S	945	4	56.9 S	705	27	164 D	1000	1	98.0 S	795	16	54.9	2
258 D	645	=6	72.4 S	745	22	63.6 S	867	11	164 D	870	=3	98.3 S	802	15	54.4	2
248 D	614	=16	82.2 S	1000	1	64.8 S	896	8	108 D	573	17	99.9 S	838	10	54.7	3
262 D	658	=4	80.4 S	953	3	69.1 S	1000	1	144 D	847	=5	84.7 S	496	45	53.82	4
225 D	541	=29	73.1 S	763	15	65.4 S	862	12	144 D	870	=3	98.9 S	815	13	53.69	5
253 D	630	=12	73.5 S	773	=13	55.2 S	664	29	144 D	847	=5	103.0 S	907	4	52.59	6
247 D	611	=18	73.6 S	776	12	64.1 S	879	=9	141 D	824	8	103.4 S	916	3	51.86	7
221 D	528	=33	80.0 S	942	5	67.4 S	958	4	81 D	367	22	96.3 S	757	=17	48.79	9
257 D	642	=8	72.9 S	758	=16	64.1 S	879	=9	40 D	123	39	107.1 S	1000	1	48.34	10
252 D	626	=13	72.6 S	750	20	67.9 S	971	2	132 D	756	12	94.1 S	707	25	48.79	10
251 D	623	=14	75.0 S	812	11	67.7 S	949	5	41 D	62	45	102.0 S	885	5	47.50	12
248 D	614	=16	77.6 S	880	8	59.6 S	770	15	75 D	321	25	104.5	930	8	46.26	13
265 D	668	=2	68.5 S	643	30	62.0 S	828	15	80 D	359	16	96.0 S	853	20	46.13	14
251 D	623	=14	72.7 S	916	19	65.6 S	915	6	109 D	580	=23	100.6 S	750	8	45.33	15
258 D	645	=6	79.0 S	589	6	62.2 S	756	14	133 D	763	11	66.1 S	78	52	44.74	16
235 D	573	=26	66.4 S	667	33	59.0 S	749	22	94 D	466	21	92.6 S	674	30	43.96	17
246 D	607	=20	69.4 S	667	28	60.7 S	149	48	149 D	885	2	95.9 S	748	21	43.87	17
216 D	512	=38	71.9 S	732	23	58.7 S	797	19	52 D	146	=36	93.4 S	692	28	42.23	18
245 D	604	=22	75.8 S	833	10	60.7 S	772	40	139 D	809	9	98.4 S	804	14	41.84	19
214 D	506	=39	65.6 S	568	35	58.7 S	749	24	138 D	801	10	94.2 S	710	22	41.72	20
128 D	234	=50	70.3 S	690	27	67.7 S	966	3	59 D	199	34	95.8 S	745	22	41.60	21
245 D	604	=22	70.7 S	701	26	53.5 S	623	17	65 D	245	=28	90.8	633	33	40.81	22
257 D	642	=8	69.2 S	662	29	61.7 S	821	17	42 D	70	=43	99.0 S	817	12	40.27	23
217 D	516	=35	72.9 S	758	=16	59.1 S	758	21	80 D	245	=28	93.9 S	703	26	40.24	24
185 D	414	=46	61.9 S	472	42	61.2 S	809	18	101 D	359	=23	101.1 S	865	=6	40.18	25
220 D	525	=34	57.2 S	368	45	54.4 S	645	30	42 D	519	19	90.7 S	631	34	39.83	26
227 D	547	=28	72.8 S	755	18	58.4 S	860	13	63 D	70	=43	85.9 S	548	=44	38.28	27
255 D	636	=10	67.3 S	612	32	61.9 S	741	25	20 D	230	=51	93.0 S	523	29	37.70	28
245 D	604	=22	76.9 S	862	9	61.9 S	826	16	32 D	0	=51	91.3 S	644	35	36.76	31
254 D	607	=20	71.7 S	703	25	50.1 S	541	43	98 D	496	41	90.6 S	629	35	36.72	32
217 D	516	=35	62.1 S	477	40	57.5 S	720	26	47 D	108	=41	96.1 S	752	38	35.47	33
222 D	531	=31	66.2 S	584	34	58.8 S	751	23	40 D	54	46	88.7 S	586	1	34.64	34
245 D	604	=22	78.5 S	903	7	85 D	125	50	128 D	725	13	48 D	541	43	34.27	35
212 D	500	=41	185 D	120	52	40.1 S	333	=37	117 D	641	15	86.7 S	757	=17	34.08	36
265 D	668	=2	73.5 S	773	=13	35 D	2	53	27 D	0	=51	96.3 S	757	27	33.72	37
214 D	506	=39	68.3 S	638	31	103 D	169	47	48 D	115	40	93.6 S	696	11	32.92	38
225 D	541	=29	200 D	132	=49	150 D	284	39	127 D	717	14	99.7 S	833	37	31.28	39
217 D	516	=35	52.0 S	215	47	46.8 S	462	36	142 D	832	7	89.1 S	595	31	30.72	41
247 D	617	=18	63.1 S	503	39	44.5 S	406	36	53 D	153	35	92.2 S	665	23	30.31	42
186 D	417	=44	64.9 S	550	36	46.8 S	462	=34	63 D	230	=31	100.5 S	851	9	24.69	44
235 D	573	=26	59.0 S	397	44	129 D	0	54	39 D	260	26	87.0 S	548	=41	24.33	44
200 D	462	=42	58.8 S	274	44	55.4 S	669	28	67 D	230	=31	87.0 S	611	36	24.22	45
90 D	113	=49	54.3 S	141	46	52.9 S	609	32	3 D	0	=51	89.8 S	561	39	23.69	46
139 D	269	=49	210 D	475	48	70 D	88	51	52 D	146	=36	87.6 S	552	40	23.28	47
185 D	414	=46	62.0 S	508	38	134 D	245	41	52 D	146	=36	87.0 S	552	40	23.09	48
200 D	462	=42	72.5 S	417	21	106 D	139	49	33 D	1	=48	29 D	0	=46	19.80	49
186 D	417	=44	63.5 S	513	37	DNF	176	45	DNF	1	=48	78.0 S	345	=46	18.43	50
222 D	531	=31	200 D	132	=49	DNF	-	-	66 D	253	27	76.6 S	-	49	11.83	51
35 D	0	=55	195 D	128	51	105 D	174	46	64 D	237	30	76.8 S	314	48	10.40	52
85 D	98	53	119 D	64	55	49 D	36	52	44 D	85	48	74.8 S	318	51	10.18	53
112 D	183	51	136 D	76	54	32.1 S	333	=37	33 D	1	48	75.6 S	273	50	8.65	54
DNF	-	-	DNF	78	53	111 D	188	44	DNF	-	-	DNF	291	-	8.18	55
DNF	-	-	DNF	-	-	DNF	-	-	DNF	-	-	DNF	-	-	141	56
DNF	-	-	DNF	-	-	DNF	-	-	DNF	-	-	DNF	-	-	0	57



Dave Webb in BS-1, Wieslaw,
Standard Libelle in background



Conference on radios. Tow-car and
trailer in background



Before closing ceremony. Speedy (with sunglasses)
Wieslaw, Peggy Yeates, Wolf Mix, Dave Webb, Stan



The Unfalhelfer himself. Al Pow with Merbold

100

100

100

100

100

100



Left to Right: Bob Gairns, Speedy, Al Pow, Wolf Mix, Stan, Wieslaw, Charlie Yeates,
Peggy Yeates, Dave Webb, Terry Beasley

