

Aero Modeller

NOVEMBER 1969
THREE SHILLINGS
USA & CANADA 70 CENTS

INCORPORATING
MODEL AIRCRAFT

MAP HOBBY MAGAZINE

WORLD CHAMPIONSHIPS REPORT



Andreason BA4 model plans

Elton Drew wins A/2 glider

World Champs

for Free-Flight models
at Wiener-Neustadt



IT WAS almost like returning home to revisit Wiener Neustadt, which had been the scene of an earlier championships in 1963. Krill was still at the helm as contest director with his pawky Viennese humour and unflappable manner; the 'office' still occupied the local union headquarters; the same enormous stony airfield continued to lose hundreds of contestants over its vast area—anyone without binoculars was definitely at hazard! After reports of super-policing of other events it was a great relief to be in Austria, where public opinion is so anti-police that they are usually referred to as 'gendarmes' rather than the hated 'polizei' . . . we only saw one policeman throughout the three days' flying actually on the airfield . . . and he was pointedly whistling Blue Danube as he looked the other way to avoid seeing a minor breach of the law!

A great entry of thirty-two nations with thirty-one actually taking part (South Africa did not arrive) was welcomed on the airfield parade ground by Austrian Aero Club officials, members of the government, the Mayor, with music from an enthusiastic brass band, and goodwill speeches of introduction. An interesting newcomer to international competition was the team from Egypt—three strong with a team manager, all speaking beautiful English—products of the British School in Cairo. They were enthusiastic, but were the first to agree their mission was not to win; but to learn. Wisely, they competed only in the glider event, but were keen students and will no doubt field a strong team next time. Turkey had a full team, including a most elegant young lady, who demonstrated that nation's new emancipation. Denmark also included Anita Delbaek in their team—who was subsequently awarded the 'most beautiful competitor' prize! From South America it was nice to see old friends from Brazil again. Even more distant visitors came from Australia—whose members, if not solely engaged in competing, had made it a major part of their trip to Europe. Another competitor/observer was Kei-ichi-Kibiki from Japan, who competed only in the power event and was by no means outclassed in 49th place.

This was the first occasion that the new seven round programme with progressive fly-offs to follow had been put to the test. With a daily entry of 84, 72 and 61 competitors, an early start was imperative, so that breakfast was scheduled for 6.30 a.m., and on the bigger glider day, which included the official opening ceremony, on-field lunch was taken without an official break to keep to timetable.

A criticism of the 1963 event had been timekeeping/scoreboard delays. This could not be levelled on this occasion, as the organisers sported quite the prettiest little score booth we have seen. A metal framework enclosed a small 'office' and times were recorded on neat panels, filled from within. All 'max' scores of 180 were shown in pink, less perfect ones on white card, so that instant appreciation of contest 'state' was possible. Rounds occupied one hour each, broken into three 20 minute periods and at no stage did we check and find progress more than half-a-round in arrears; times were usually being posted within ten minutes of a given flight—or just walking time to hand in record cards! The whole scoring booth could be lifted onto a trailer and towed off to a new site when conditions changed and made it necessary.

No organisation that we remember has been perfect and weakness at Wiener Neustadt was undoubtedly the public address announcements, where the second and third 'official' languages of English and French suffered sadly. Keen-eared British listeners could follow, but pity the poor Dutchman who may have relied on English for his information . . . It

was also evident that a bi-lingual team manager is surely a *must* for future events. With the large numbers of timekeepers required very many of them had only German and matters of rule interpretation sometimes proved difficult to say the least. All timekeepers and officials sported Australian-type bush hats in various colours; all persons on the actual flying field were required to have either hats or other 'authority' to be there, or else remain behind rope barriers. From time to time sweet reason from the officials over the p/a sought to clear the areas. That it worked even moderately well was due to small numbers of public present because of bad weather. With hot days it could have been chaotic! Motorcycle recovery men were sometimes over-enthusiastic in their efforts and more dangerous than helpful! Apart from which, round followed round and programme times were kept admirably . . .

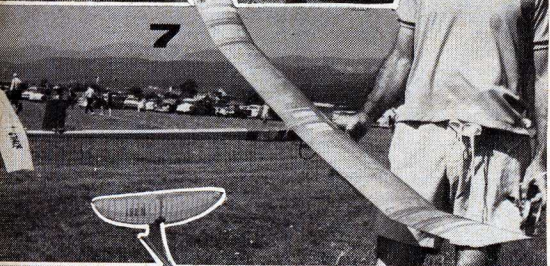
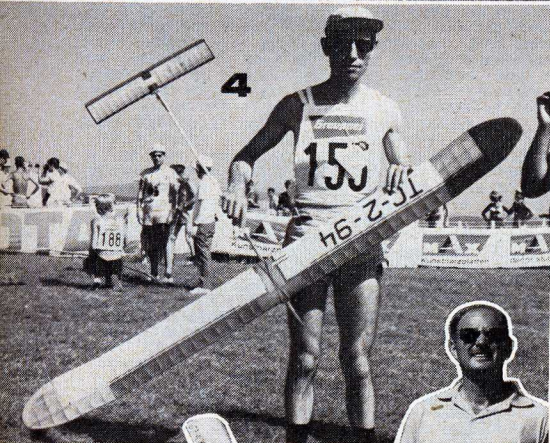
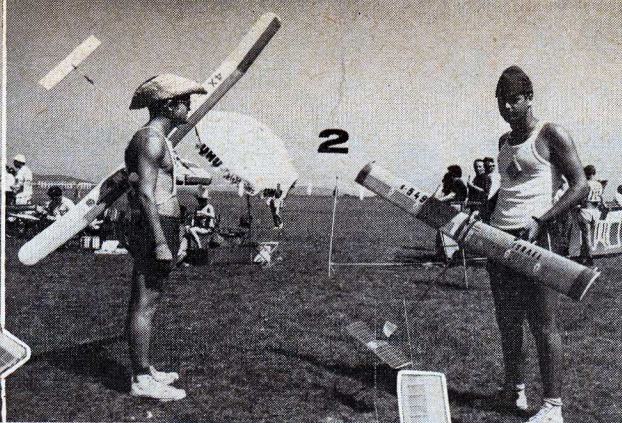
Glider

After a sunny start covering the opening ceremony the glider maroon for round 1 was only a few minutes behind schedule. Shorts and sunhats seemed the order of the day, following the hot practice days which had preceded the event. Hardly had the first flights been towed aloft than a wind change involved a rapid change of operating venue. However, max flights seemed the order of the day even this early in the morning with prospects of an organisers' nightmare and a 50 strong mass fly-off at the end! A further wind change involved another change of tow-off area, but this was followed by a sudden, fierce storm with thunder and lightning which drenched nearly everyone, most of the models, and led to some review of final outcome. Round 1 had produced 62 max. out of 84 flights; round 2 reduced this to 56 still all-on; round 3 a further drop to 42. At this stage our own Drew and Young were still clear; third man Batty had dropped 39 on his first flight. Four teams still had clear scores—USSR, Italy, Austria and France.

The shorter round times of one hour divided into twenty minute sections, plus the limited tow-off area introduced another major factor into contest flying . . . the efficiency or

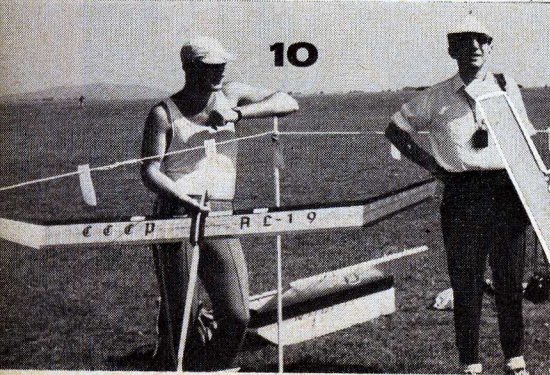
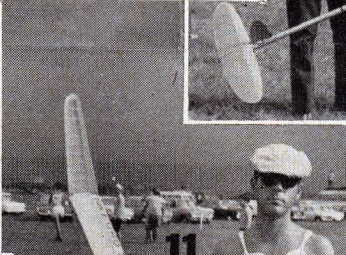
Winner Elton Drew, G.B. with 2nd place man George Pataki of Hungary. Although it looks smaller, the Hungarian model is actually of about the same span as the winner's.





GLIDER

1. C. Boscard of Italy, 10th, has novel diagonal bracing. 2. Vishniza (left) and Herzberg, Israel, latter had string of 5 max's, then dropped. 3. J. Schreiner, East Germany, model like last year's winner. 4. A. Tanyu, Turkey, placed 9th this time after fabulous 4th in his first International last time. 5. N. Munnukka, Finland, 7th, model in A/Annual this year. 6. Martin Dilly - proxy for P. Lagan of New Zealand. 7. A. Young, G.B., who suffered from theft of his No. 1 model. 8. S. O'Connor, Australia, furthest travelled. 9. P. Kirtworth, U.S.A., uses elliptical sweepback. 10. A. Lepp, U.S.S.R. 12th; in paper hat - Team Manager, Orletinov. 11. Jesus Lopez, Spain, their top man at 16th. 12. Amer Moh Fathi, Egypt, new Nation in W/Champs.





otherwise of various 'neddy boxes' or thermal sniffers. These varied from assorted transistorised marvels from Russian and American stables, including several barograph writing types, via Jack North's super bubble blower at a great height, to simple soap bubble dispensers walking through the mob with a bubble to the left, a bubble to the right like confetti at a wedding. Add to this the chase to get up after a good bubble . . . or special tips via the almost universal walkie-talkies in operation, and more line-snagging than usual became inevitable. Wind, though fitful, was never strong so that at times the air was thick with circling models at fifty to a hundred feet . . . the last fifty feet taking very nearly a full 50/60 seconds in most cases.

Round 4, in improving weather conditions cut down the top scores leaving only 29 still with possibilities. Only USSR still had a perfect team total, so that hopes began to rise for a GB team victory. Drew was still a max, but Young had a fourth of only 103; Batty had meanwhile redeemed a moderate start with three max's in following rounds. At this stage of flying, Pete Jellis, proxying for Graves, New Zealand and Martin Dilly for Lagan also New Zealand with max's, made a 'down under' victory quite on the cards. For Aussie David Anderson the event was becoming disastrous—adding to his incredible problems of world travel. Having successfully negotiated the South Pacific, USA, GB, etc. on the way, Quantas did not offload his box at Vienna—took it on to Baghdad! Consternation!! Three days later it arrived special delivery at W.N. having gone to Sydney, thence around the globe again just in time for practice! What a way to see the world! The weather did not hold and conditions became more and more 'typical British weather' so that **round 5** saw a murderous drop in possibilities, only ten surviving at this stage; Drew, GB; Pataki, Hungary; Pugatschenko and Lepp, USSR; Soave, Italy; Graves, NZ; Braire, France; Patterson, Sweden; Kongsted, Denmark and Herzberg, Israel. The **sixth round** was really the vital moment, for in thundery conditions the ten contenders still there were reduced at once to two only. We were sorriest for Konsted of Denmark and Herzberg of Israel, who produced quite unexpected disasters with 88 and 50 seconds respectively. (In the event their last flights were almost equally disappointing).

Round seven started then with two only still there . . . a possible fly-off limited to two only . . . or an outright win. Eton, Drew flew first and seemed quite unconscious that the occasion was something special . . . shy, a little nervous, with a half smile deprecating the whole thing . . . but then, he had been flying like that all day. Up smoothly under the eye of a grim, efficient lady timekeeper, who knew her rules to the last letter; a comfortable max was clocked without special fears. That left Hungary's Pataki to fly! Thundery conditions threatened so that uplift or down draught could be the order of the day. He towed up and showed at once that this could be no winning flight; but skilful lineplay (so well done by both the Hungarians and the French) to bring the model back to earth for a no-flight gave spectators an exciting few minutes. Up again shortly and off to a moderate but by no means perfect launch when the model snagged on someone's lines. Another 'nil attempt' claimed though it was not upset by its line contact and could have been a good flight. Last and final attempt with minutes passing and the final maroon imminent. Off! and a loud click as every available British watch went on! Two minutes, 2½ minutes and coming down . . . will it, won't it? . . . No . . . 2:55 so British watches said . . . a rush to the official watch . . . yes, 177 secs . . . A British outright

The winning U.S.S.R. Glider team, specially posed by their team manager for the papers 'back home'. They had borrowed their medals to wear in the picture in advance of their official award, left to right: Lepp, Pugatschenko and Grigorash.

win for Drew! . . . Hurray . . . Chris Fuller's Union Jack umbrella and chair the victor! Bad luck Pataki, but a truly wonderful effort to get there too, appreciated as a great sporting finish by all!

No team produced a full possible score, but USSR proved team winners once again with a convincing total of 3,642 from Czechoslovakia, Italy and United Kingdom in a modest fourth place.

Wakefield

Friday, 15th August was Wakefield Day and also a public holiday, Saint's Day in Austria, so that with fine weather, a good crowd could have been expected. The weather that had been so fine in the days before the contest continued to be wet and overcast with only occasional sunny spells. It was by no means cold, just fitfully wet. Only very modest numbers of spectators turned up in spite of the holiday. An innovation this year was the introduction of a military helicopter recovery service. This was very nice for those who had not seen helicopters at close range, but with the huge flat airfield, the available motorcycle recovery squads, and the absence of any strong winds, was really superfluous.

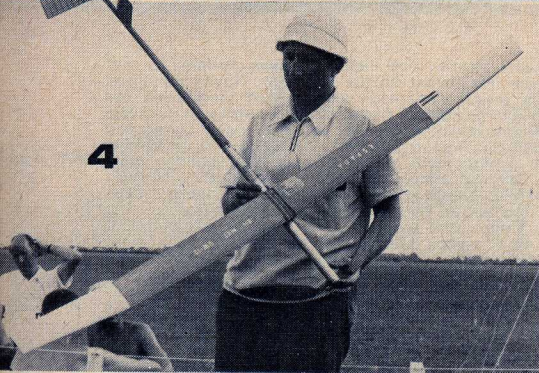
Entry at 72, though down on the glider total was still a formidable number to run through and **first round** provided 38 max's as a start. Models have nearly all moved into a standard pattern of tubular wound fuselage, folding prop, low pylon mounted wing so that the few unconventional entries made a sharp contrast with square fuselage or all sheet wings. Notable amongst the unusual efficient group was Hofsass of West Germany with his attractive 'Espada'—high aspect ratio wing of sheet construction and for the frankly curious department our old friend Mabilie of Belgium with a twin boom, V-fuselage, twin prop design that never distinguished itself in the air—though it claims some considerable successes in the past, we understand. Good looking conventional models we liked included the ageless Knoch of Yugoslavia—elegant as ever—the smart Russian team models and Burg of France with his neat, very long fuselage design. O'Connor of Australia was another with a sheet wing and—rare this—a diamond fuselage. The Brazilian entry by Eolo Carlini was another beautifully turned out model. Interest centred a great deal on methods of winding up—a number of metal protector tubes were in use, plus other breakage protector devices—and a number of winding stands enabling a one-man wind-up. Omo had provided teams with drums in which their rubber could be stored—or used as a seat by tired winders. The team stock was usually brought out from the shade and hustled back under cover again.

Second round ended with 24 max's left in. Weather was deteriorating into 'best British' again. Thermal sniffers were again largely in evidence—though again the simple soap bubble seemed as good as anything. In the more modest rate of Wakefield climb it was possible to watch bubbles going forty or fifty feet in the flight line of a model. More in evidence on this occasion was the use of bright tail fins, propeller flashes and so on to provide a sparkle that would help keep a model in sight on the edge of visibility.

On this second day there was a regular lunch break which coincided with the heaviest deluge of rain yet. This rain invalidated the beginning of the first post-lunch round, which restarted after several contradictory announcements. By this

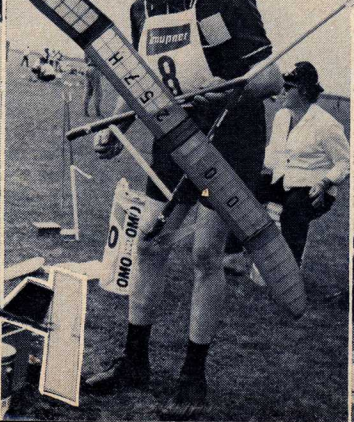
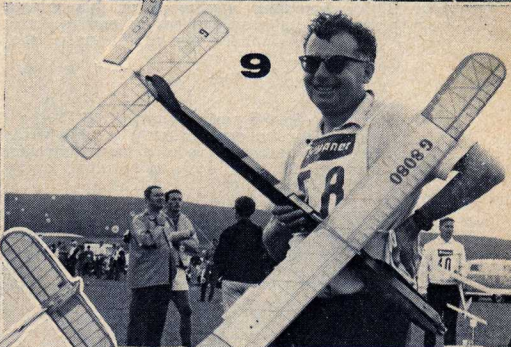
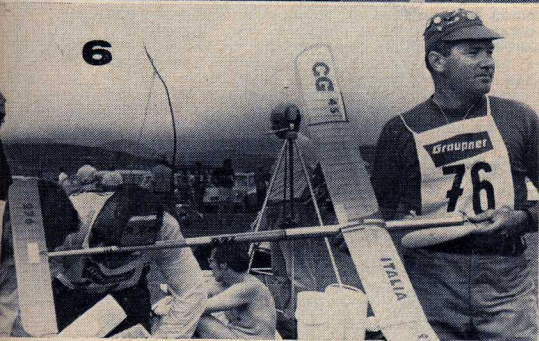
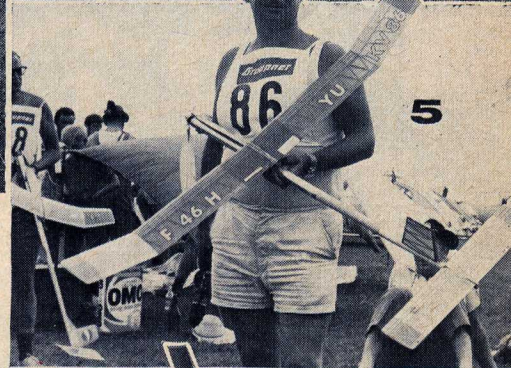
Albrecht Oschatz, East Germany, Wakefield winner, taken after fifth round when prospects rosy but future still by no means assured!





WAKEFIELD

1, Luiz Serrano and Eolo Carlini with their beautiful models from Brazil. 2, Ray Elliott, Wakefield proxy for P. Lagan, New Zealand. 3, Laurie Barr, G.B., our top at 20th, fuses up, with eye on the 'magic box'. 4, R. Hofsass, West Germany, with 'Espada' sheeted wing model, most technically interesting entry. 5, V. Knoch, Jugoslavia, 6th, with his usual immaculately built model. 6, G. Cassi, Italy, in fly-off 1967, only 2 max's this time. 7, John Gard, U.S.A., 5th, note also formidable American thermal sniffer. 8, A. Yurov, U.S.S.R. puts on last turns. 9, J. O'Donnell, G.B.; also wielded an invaluable camera and notebook. 10, A Burg, France. 11, Much-photographed A. Mabile, Belgium, with V-frame twin prop puller. 12, Canada's J. McGillivray.





time the first four rounds had winnowed out contestants somewhat drastically, going down in geometric progression from the **second round 24**, to **third round 16** and **fourth round 8**. At this rate it seemed possible that a less than perfect score could win! Those with only a few seconds off began to enjoy new hopes. The **fifth round** ended more hopes – leaving in with max only Oschatz of East Germany, Kmoch, Jugoslavia; Sulkala, Finland; Parmenter, USA; and Simerda of Czechoslovakia. **Round 6** was even more time destroying . . . only Oschatz retained an unblemished total. Kmoch had dropped 40, Sulkala 13, Parmenter 53, Simerda 14, so that now those with minimal losses in earlier rounds came back into the running such as Martin of Austria (9); Silberg, USSR (10); Gard, USA (29); Loffler, E. Germany (19). It all depended on Oschatz achieving a final max! Once again the new scheme appeared to have eliminated the fly-off! There was little cliff hanging: Oschatz went ahead and flew quite early in the round and achieved a comfortable max . . . so was the unapproachable winner. Strangely enough, the same timekeeper who had timed Drew's flight the day before officiated at this flight. (She asked for an East German souvenir – we hastened to give her a British team supporter badge for the morrow – though it was not to prove helpful, alas!) Winning design is very much a team effort, other team members flying almost identical models. Conventional constant chord wing with tip dihedral, forward

Right, Baumann wiping down his winning model in the gloaming. Its sturdy sheeting and robust structure made it ideal for the conditions of the day.

Runner-up in the power event, K. H. Rieke. Tipped as a good prospect by the experts early on, his model was technically interesting and in spite of a launching mishap in one of the fly-offs, was seen to outclimb everything else.



imposing array of hardware in local shop window. Largest trophy is famous Wakefield. Glass vase, left, is the Czech Journalist Trophy. Missing in 1967, Franjo Kluz trophy in delicate filigree work is next to salver on right and was duly awarded this year. Gold, silver and bronze medals on fine red and white (Austrian colours) ribands were also awarded.

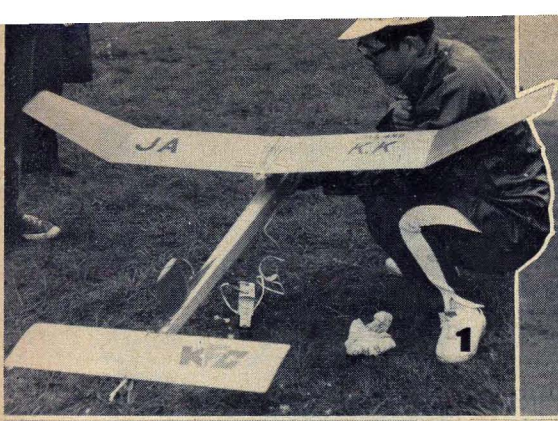
set fin, small tail, tubular fuselage, two blade folder, Pirelli rubber was the winning formula. Martin of Austria with a final max coasted into second place. It proved another team victory for USSR with their men Silberg (3), Melentiev (7) and Yurov (8). British efforts were unexciting with Barr best at 20th which included four max.; J. O'Donnell 34th and Wells 44th. Team position 10th.

Power

If weather had seemed bad before, it was nothing to that provided for the final event on the Saturday. Newly equipped with an ankle length 'peasant' plastic mac we joined the throng of anti-wet operators. Fortunately, the stony ground and sandy subsoil was absorbing water well and never developed into the quagmire that we feared. All kinds of ingenious devices were improvised to deal with the unexpectedly severe wet. Several people were wearing plastic booties made from plastic luncheon bags (we still had our galoshes from Genkl). Numerous tent devices were rigged from plastic sheeting; the Bulgarians' fine weather tent really came into its own at this stage. Careful teams had brought more robust tent equipment, notably the Italians who thoroughly deserved their ultimate team win, and unofficial award of driest team in the event! The Africola sun awnings were pressed in to protect models; car heaters were running most of the day to dry off models; the British Union Jack umbrella was working overtime. The Danes rigged up a kind of hairdryer using their starter motor and batteries . . . everybody had his pet keep-dry method.

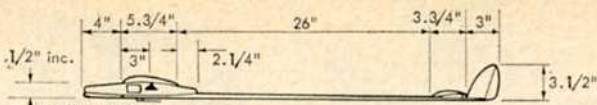
All this seemed to have little or no effect on performance – other than creature discomfort. Motors were going well, although not quite so well as they had during the dry, hot practice days before the comp. Some claimed the quality of the fuel had gone off, which might well be in the excessive wet and humidity, but max's were coming fast and furious . . . Again provision was made for a luncheon break, enlivened by stunting of military helicopters. Rain was evidently going to be there all day, as it was with unabating fury . . . but so were the max's. Of a total entry of 61, 34 had first round max's, 26 second round, 19 third round and 16 still in at the end of the fourth round. By the beginning of the fifth round Wiseman was the only British team man to have dropped points. He had had a disastrous first flight of 89 through variable incidence troubles and thereafter changed



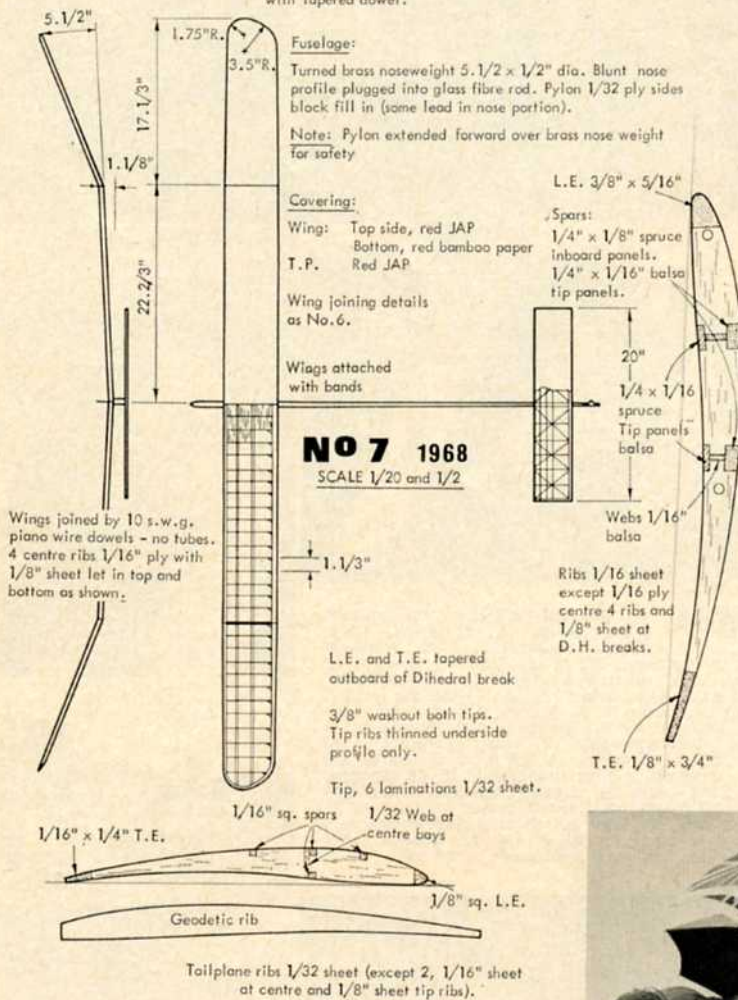


POWER 1, Kei-Ichi Kibiki, lone entrant from Japan. 2, B. Fiegl, Italy, most successful of winning Italian power team, 3rd in '67, 7th this time. 3, A. Parovel, Italy, gives a shake-up before launching. 4, S. Savini, Italy, unlucky in the fly-off, but for 2nd time in top team. 5, S. Norton, U.S.A., with 'Lipstick', assisted by H. Spence and B. Sifleet. 6, Z. Malina, Czechoslovakia. 7, Jose Gorgorcena of Spain. 8, A. Grethcin, U.S.S.R. flick starts his motor, dropped in first round only. 9, H. Spence, U.S.A., 3rd - with his elegantly finished model, was also in '67 fly-off. 10, Dave Wiseman prepares to let go for a max. 11, Wet but cheerful Ray Monks with his models ready for the fly-off. 12, George Fuller gives it a good hard push in the rain.





Tow hook attached with 2 woodscrews for adjustment. Glass fibre rod plugged locally with tapered dowel.



Franz Baumann, power winner from West Germany, chaired on the stout shoulders of glider man Herbert Schmidt, his fellow clubman, also from Regensburg.

In the shelter of the British umbrella! Front centre 'Wiz' Wiseman, behind him is George Fuller and on his right Elton Drew. Extreme left Jim Punter - a tower of strength to Laurie Barr and extreme right the omnipresent John Bickerstaffe - in attendance at every free flight champs in the memory of our man! Glider No. 7 is Elton's, as used for first flights.



to spare model, though even here it was dogged with trim trouble throughout. Meanwhile, George Fuller and Ray Monks had been going great guns. Young Chris Fuller proved a tower of strength in his efforts to keep Dad's models as dry as possible... that umbrella! The brightest weather period with a momentary rain stop let them both get quick max's with plenty of drying off time left in the round which enabled a longer choice of time in the critical sixth and seventh.

By this time it was clear that the Italians would be well in the running for the team prize with two members (Fiegl and Savini) still holding possible full scores; a team status also enjoyed at this stage by West Germany with Baumann and Rieke still at max. The fifth round 16 whittled down a mere three to 13 with one more departing after the sixth. Twelve then flew in the final round to lose yet another, leaving a grand total of eleven for the first fly-off. This included our own Fuller and Monks, the two from Italy, two from West Germany, and one each from USA, Sweden, Switzerland, Denmark and Czechoslovakia. With different luck of the trim, any of the first fifty of the sixty odd flyers could have been concerned in the finish. To drop half a minute in seven rounds earned no better than 20th place!

But back to the fly-off. Light was already murky by 5.45 (bad weather had lost just over a quarter of an hour on time schedule, which was later to fall back rather more) when the eleven lined up for the start maroon of the first fly-off, with a max of 4 minutes. Everyone got off quite smoothly, but four, alas, failed to make it. Our own two, Savini and Krycer of Czechoslovakia dropped out to leave seven still in. All, as was remarked, from the West... it

must be a long time since no eastern bloc country was involved right up to the last stage... The next five minute stage followed swiftly with the light fading fast... a problem to timekeepers and the gathering hordes of photographers which the digger-hatted officials did their best to keep in check. Seven then became two, with Fiegl getting a sad 004, Koster 150, but Spence of USA only just falling with 287. This left Baumann and Rieke, both from West Germany, to contest the final fly-off. Baumann was down first with 240 and Rieke's 186 was obviously never going to make it. Chaired on the stout shoulders of fellow citizen of Regensburg and gliderman Herbert Schmidt, Baumann was pivoted round and round for the cameras, before a mass rush off to clean up for the presentation and beanfeast to follow.

Winner is a post office official with a sixteen-year-old son, who has twice been national junior champion . . . so a right good aeromodelling family. Model has interesting sheeted wing, high aspect ratio design, with rear fin, Super Tigre G.15 (worked on, of course) motor with pipe. Second man, K. H. Rieke, was flying a model very like the Seelig 'Gambirinus' which won last time.

Motor starters were very much in evidence throughout due to high degree of tuning needed today. Both Fuller and Monks seem to stick to the old fashioned finger - though George's, as usual, sustained passing damage. Piping continues to be a controversial question; often solved by one with, and one without.

Final stage was presentation of trophies in the hall which forms part of the union offices used by the organisers. Trophies, all beautifully displayed on the stage, were taken down and handed over by a bevy of attractive young ladies, much to the enjoyment of winners, who improved the occasion with appropriate embraces. (One team who had been unduly chaste in their kisses, rushed back for more!) Edwin Krill kept the ball rolling with a droll commentary - some of his best cracks went untranslated, alas! - and managed to award a prize to a Dutch entrant who had been presented with twins during the meeting.

Washed, smart and happy, everyone then went on in the strangely dry evening for a final banquet under the arches by the old city walls - with a delightful platter of meats and salad, two bottles of wine and additional vouchers. Wisely and happily we were at a Russian table and joined in the vodka. *Summary:* as nice an international meeting as we can remember . . . we hope our Austrian hosts do it again . . . So thank you, everyone.

POWER Team Results

1. Italy	3,691
2. Hungary	3,680
3. U.S.A.	3,675
4. U.S.S.R.	3,646
5. United Kingdom	3,626
6. Fed. Germany	3,600
7. Sweden	3,569
8. Czechoslovakia	3,559
9. Austria	3,543
10. France	3,454
11. German dem. rep.	3,397
12. Canada	3,348
13. Switzerland	3,303
14. Finland	3,282
15. Yugoslavia	3,239
16. Poland	3,003
17. Bulgaria	2,690
18. Denmark	2,486
19. Brazil	1,120
20. Rumania	1,102
21. Turkey	1,021
22. New Zealand	1,003
23. Japan	987
24. Spain	761

RESULTS

POWER F.I.C.

1. Baumann F.	W. Germany	180	180	180	180	180	180	180	1,260
		(+240+300+240)							
2. Rieke K. H.	W. Germany	180	180	180	180	180	180	180	1,260
		(+240+300+186)							
3. Spence H.	U.S.A.	180	180	180	180	180	180	180	1,260
		(+240+287)							
4. Friis H.	Sweden	180	180	180	180	180	180	180	1,260
		(+240+222)							
5. Spring P.	Switzerland	180	180	180	180	180	180	180	1,260
		(+240+202)							
6. Koster Th.	Denmark	180	180	180	180	180	180	180	1,260
		(+240+150)							
7. Fiegl B.	Italy	180	180	180	180	180	180	180	1,260
		(+240+004)							
8. Krycer B.	Czechoslovakia	180	180	180	180	180	180	180	1,260
		(+233)							
9. Fuller G.	G.B.	180	180	180	180	180	180	180	1,260
		(+209)							
10. Savini S.	Italy	180	180	180	180	180	180	180	1,260
		(+207)							
11. Monks R.	G.B.	180	180	180	180	180	180	180	1,260
		(+204)							
12. Simon G.	Hungary	180	180	180	180	180	177	180	1,257
13. Iribarne M.	France	180	180	180	174	180	180	180	1,254
14. Sedlak J.	Czechoslovakia	171	180	180	180	180	180	180	1,251
15. Schmeling G.	E. Germany	168	180	180	180	180	180	180	1,248
16. Grehcin A.	U.S.S.R.	168	180	180	180	180	180	180	1,248
17. Cszimark F.	Hungary	180	180	180	165	180	180	180	1,245
18. Onufrienko B.	U.S.S.R.	180	180	180	180	180	180	158	1,238
19. Guilloteau R.	France	180	180	161	180	180	175	180	1,236
20. Keinrath H.	Austria	180	155	180	180	175	180	180	1,230
21. Agner S.	Denmark	174	180	180	180	180	180	152	1,226
21. Engelhardt K.	E. Germany	170	180	158	180	178	180	180	1,226
23. Foley J.	Canada	180	180	156	180	180	162	180	1,218
24. Siffleet B.	U.S.A.	156	158	180	180	180	180	180	1,214
25. Norton S.	U.S.A.	180	180	160	179	177	145	180	1,201
26. Hollander N.	Sweden	165	180	177	180	180	157	161	1,200
27. Sülisz Z.	Poland	170	166	180	134	180	180	180	1,190
28. Meczner A.	Hungary	180	180	180	180	180	180	98	1,178
29. Brooks J.	Canada	172	158	180	180	170	136	180	1,176
30. Hartwagner F.	Austria	180	99	180	180	172	180	180	1,171
30. Haapalainen S.	Finland	180	180	180	180	176	114	161	1,171
30. Parovel A.	Italy	180	180	172	177	180	151	131	1,171
33. Verbitzki E.	U.S.S.R.	180	180	125	179	177	139	180	1,160
34. Fritsch L.	Austria	162	155	170	132	180	180	163	1,142
35. Kovacic L.	Yugoslavia	180	180	180	180	43	180	180	1,123
35. Schneeberger F.	Switzerland	180	180	180	129	180	180	94	1,123
37. Carlini E.	Brazil	150	180	120	164	180	171	155	1,120
38. Hagel R.	Sweden	180	168	180	41	180	180	180	1,109
39. Wiseman D.	G.B.	89	180	148	155	180	180	174	1,106
40. Cringou E.	Romania	167	167	148	143	180	180	127	1,102
41. Benedikt J.	Poland	180	177	149	180	170	169	76	1,101
42. Kumpulainen J.	Finland	180	178	159	176	168	163	70	1,094
43. Reda S.	W. Germany	0	180	180	180	180	180	180	1,080
44. Glogoscan M.	Yugoslavia	180	160	126	180	122	130	180	1,078
45. Malina Z.	Czechoslovakia	180	41	137	171	159	180	180	1,048
46. Matio R.	Yugoslavia	134	150	163	123	180	137	151	1,038
47. Rintamaa	Finland	180	180	134	180	80	180	83	1,017
48. Hewitson N.									
(Proxy J. Allen)	New Zealand	170	128	154	180	177	145	49	1,003
49. Kei-Ichi-Kibiki	Japan	108	159	140	142	153	105	180	987
50. Dazer L.	Bulgaria	76	136	139	132	123	178	180	964
50. Remy D.	France	0	155	180	172	153	171	133	964
52. Eggleston B.	Canada	180	180	31	77	180	126	180	954
53. Kammer A.	E. Germany	149	180	118	179	106	27	164	923
54. Schenker R.	Switzerland	134	140	126	165	79	134	142	920
55. Sinapou A.	Bulgaria	145	148	143	122	117	108	93	876
56. Gogorcena J.	Spain	5	137	113	113	175	142	76	761
57. Tser B.	Bulgaria	122	93	91	146	135	171	92	850
58. Krzeminski J.	Poland	160	85	119	128	105	0	115	712
59. Tecimer C.	Turkey	87	91	161	92	131	66	39	667
60. Akca T.	Turkey	9	27	23	31	74	24	91	269
61. Kalayciyan O.	Turkey	0	0	4	43	38	0	0	85

GLIDER (F.1.A.)

1. E. Drew	G.B.	180	180	180	180	180	180	180	1,260
2. Pataki G.	Hungary	180	180	180	180	180	180	177	1,257
3. Procházka O.	Czechoslovakia	180	180	180	175	176	180	180	1,251
4. Czerny P.	Poland	180	180	180	180	165	180	180	1,245
5. Grigerasch A.	U.S.S.R.	180	180	180	180	168	180	173	1,241
6. Horejsi I.	Czechoslovakia	154	180	180	180	180	180	180	1,234
7. Munnukka N.	Finland	180	180	180	180	141	180	164	1,205
8. Pugatchenko A.	U.S.S.R.	180	180	180	180	180	176	128	1,204
9. Tanyü A.	Turkey	180	180	180	122	180	180	180	1,202
10. Boscard C.	Italy	180	180	180	180	121	180	180	1,201
11. Varetto C.	Italy	180	180	180	120	180	180	180	1,200
12. Lepp A.	U.S.S.R.	180	180	180	180	180	121	176	1,197
13. Woien Th.D.	Norway	151	180	180	180	167	150	180	1,188
14. Soave P.	Italy	180	180	180	180	180	117	160	1,177
15. Weiss J.	Israel	180	180	180	180	162	180	110	1,172
16. Lopez J.	Spain	180	180	180	180	136	180	135	1,171
16. Graves A. R. (p.p. Jellis)	New Zealand	180	180	180	180	180	167	104	1,171
18. Höbinger R.	Austria	180	180	180	127	180	180	142	1,169
19. Kosorus S.	Yugoslavia	180	180	180	180	174	144	125	1,163
19. Müssig G.	W. Germany	180	180	180	180	87	180	176	1,162
21. Braire L.	France	180	180	180	180	180	166	87	1,153
22. Rihs A.	Switzerland	180	180	180	180	127	120	180	1,147
23. Hirschel M.	E. Germany	180	180	180	180	112	133	180	1,145
24. Batty CE.	G.B.	141	180	180	180	135	180	147	1,143
25. Borell M.	Sweden	180	180	105	180	146	180	170	1,141
26. Surri D.	Canada	180	180	180	141	160	180	119	1,140
27. Jurczeniak St.	Poland	180	180	180	180	116	180	122	1,138
28. Vörös E.	Hungary	180	180	93	180	150	180	173	1,136
29. Taylor J.	U.S.A.	103	180	180	180	130	180	180	1,133
29. Petterson J.	Sweden	180	180	180	180	180	133	100	1,133
31. Kongsted Th.	Denmark	180	180	180	180	88	144	132	1,132
31. Xenakis G.	U.S.A.	180	180	180	180	127	132	153	1,132
33. Young A.	G.B.	180	180	180	103	122	180	180	1,125
34. Klintworth Ph.	U.S.A.	180	180	60	180	130	176	167	1,123
35. Schmidt H.	W. Germany	124	180	180	141	180	180	135	1,120
35. Bazillon M.	France	180	180	180	82	138	180	180	1,120
37. Aksu S.	Turkey	90	180	180	180	128	180	180	1,118
38. Haudenard A. V.	Belgium	168	180	180	141	174	180	92	1,115
39. Lagan P. (p. M. Dilly)	New Zealand	180	180	180	180	120	148	126	1,114
40. Skabraba A.	Czechoslovakia	180	180	180	180	117	115	160	1,112
41. Spann R.	Austria	180	180	180	140	180	125	105	1,090
42. Verbree G.	Netherlands	180	180	180	93	107	180	169	1,089
43. Sulisz A.	Poland	180	180	60	168	136	180	174	1,078
44. O'Reilly L.	Australia	180	180	180	180	102	144	109	1,075
44. Ducklaus J.	E. Germany	117	180	180	132	106	180	180	1,075
46. Berthe J. M.	France	180	180	180	180	93	111	147	1,071
47. Herzberg G.	Italy	180	180	180	180	50	120	1,070	
48. Schreiner J.	E. Germany	180	180	180	180	127	78	133	1,058
49. Andersson K.	Sweden	180	180	64	117	172	180	163	1,056
50. Yalcinkaya N.	Turkey	180	180	58	176	175	129	152	1,050
51. Boduwo D.	Bulgaria	180	180	180	95	142	180	85	1,042
52. Zach G.	Austria	180	180	180	78	176	138	108	1,040
53. Vaeth Th.	Denmark	139	180	95	127	141	180	175	1,037
54. Fernandez A.	Spain	180	180	33	180	145	161	156	1,035
55. Aben A.	Netherlands	97	180	180	132	140	145	159	1,033
56. Schellekens A.	Netherlands	180	180	104	180	178	114	91	1,027
57. Klink D.	W. Germany	180	180	180	180	123	96	77	1,016
58. Sarpila A.	Finland	180	180	180	141	123	95	114	1,013
59. Geiser W.	Switzerland	180	180	180	119	117	107	126	1,009
60. Lommer P.	Luxembourg	180	180	90	96	177	180	104	1,007
61. Surry D.	Canada	180	180	56	180	163	125	115	999
62. Masari D.	Yugoslavia	180	180	180	180	118	114	45	997
63. Mikulcic E.	Yugoslavia	180	180	156	100	146	133	93	988
64. Mertens N.	Luxembourg	85	180	180	128	148	113	152	986
64. Thomson W.	Canada	180	180	180	50	168	123	105	986
66. Emilio R.	Argentina	113	128	180	105	125	175	155	981
67. Abadjier K.	Bulgaria	67	180	170	174	93	120	159	963
68. This M.	Luxembourg	180	91	112	180	118	135	144	960
69. Gaensli F.	Switzerland	180	180	134	23	150	145	118	930
70. Dehnbek A.	Denmark	77	180	180	66	125	180	93	901
71. Vishniza D.	Israel	167	101	180	180	152	96	5	881
71. Fernandez M.	Spain	126	180	163	177	55	109	71	881
73. Buggenhout J. V.	Belgium	180	83	64	180	180	144	49	880
74. Anester G.	Bulgaria	65	180	180	55	51	157	180	868
75. Glennly B. R. (G. Mabey)	New Zealand	180	180	70	123	126	86	95	859
76. Pyykkö M.	Finland	73	29	180	137	138	131	147	835
77. Vida G.	Hungary	180	51	95	101	113	177	114	831

TEAM RESULTS

1. U.S.S.R.	3,642
2. Czechoslovakia	3,597
3. Italy	3,578
4. United Kingdom	3,528
5. Poland	3,461
6. U.S.A.	3,388
7. Turkey	3,370
8. France	3,344
9. Sweden	3,330
10. Austria	3,299
10. West Germany	3,299
12. East Germany	3,278
13. Hungary	3,224
14. Netherlands	3,149
15. Yugoslavia	3,148
16. New Zealand	3,144
17. Canada	3,125
18. Israel	3,123
19. Spain	3,087
20. Switzerland	3,086
21. Denmark	3,070
22. Finland	3,053
23. Luxembourg	2,953
24. Bulgaria	2,873
25. Belgium	2,801
26. Australia	2,325
27. Egypt	1,722
28. Norway	1,188
29. Argentine	981
30. Rumania	826

NEXT MONTH

A review of technical developments in contest model design

78. Letter M.	Rumania	826
79. Amer Moh.F.	Egypt	815
80. Foucat G.	Belgium	806
81. O'Connor S.	Australia	683
82. Anderson D.	Australia	567
83. Mabrouk Moh.A.	Egypt	558
84. Mehrez Moh.A.	Egypt	349

WAKEFIELD

F.I.B.

1. Oschatz A.	E. Germany	180	180	180	180	180	180	180	1,260
2. Martin H.	Austria	180	180	180	171	180	180	180	1,251
3. Silberg I.	U.S.S.R.	180	170	180	180	180	180	180	1,250
4. Löffler J.	E. Germany	180	180	161	180	180	180	180	1,241
5. Gari J.	U.S.A.	180	180	160	171	180	180	180	1,231
6. Kmoch V.	Yugoslavia	180	180	180	180	180	140	180	1,220
7. Melentiev	U.S.S.R.	180	180	154	180	180	180	164	1,218
8. Sulkala M.	Finland	180	180	180	180	180	167	143	1,210
8. Yurov A.	U.S.S.R.	180	180	180	134	176	180	180	1,210
10. Formenter F.	U.S.A.	180	180	180	180	180	127	180	1,207
11. Tukiendorf Z.	Poland	180	180	180	180	168	136	180	1,204
12. Oskamp E.	Netherlands	180	180	180	120	180	180	180	1,200
13. Segrave M.	Canada	143	180	180	161	175	180	180	1,199
14. Schweinsberg	Netherlands	154	180	180	180	180	144	178	1,196
15. Simerda A.	Czechoslovakia	180	108	180	180	180	166	112	1,178
16. Schaller U.	Switzerland	144	180	180	163	150	180	180	1,177
17. Xenakis G.	U.S.A.	180	180	180	96	180	180	180	1,176
18. Kiss N.	France	180	180	180	160	180	135	157	1,172
19. Pierre-Bes G.	France	180	180	165	126	160	180	180	1,171
20. Barr L.	G.B.	167	180	120	180	180	161	180	1,168
21. Den Ouden P.	Netherlands	180	180	169	180	180	154	122	1,165
22. Cassi G.	Italy	156	178	174	148	145	180	180	1,161
23. Kosinski J.	Poland	180	180	156	125	160	180	177	1,158
24. Dohne W.	E. Germany	180	177	137	180	180	119	180	1,153
25. Zetterdahl J.	Sweden	180	180	180	180	154	163	115	1,152
26. Nienstaedt E.	Denmark	180	180	180	180	101	148	180	1,149
27. Jakobsen E.	Denmark	180	167	180	127	180	133	180	1,147
28. Czinczel W.	W. Germany	180	180	180	160	135	123	180	1,138
28. Rothenberger Ch.	Switzerland	180	180	135	180	115	168	180	1,138
30. Thomas M.	Canada	118	180	180	153	180	141	179	1,131
31. Alujeuc N.	Yugoslavia	124	180	180	142	180	144	179	1,129
32. Durech L.	Czechoslovakia	180	180	146	144	162	135	180	1,127
33. Johansson R.	Sweden	164	180	180	180	168	102	147	1,121
34. O'Donnell J.	G.B.	180	179	165	156	180	148	103	1,111
34. Klima J.	Czechoslovakia	180	102	180	164	180	125	180	1,111
36. Ljutika M.	Yugoslavia	180	168	126	160	153	153	180	1,110
37. Aalto P.	Finland	127	180	120	180	139	180	180	1,106
38. Artoli R.	Italy	123	180	155	147	138	180	180	1,103
39. Popov P.	Bulgaria	180	130	169	180	155	146	136	1,096
39. Serrano L.	Brazil	180	114	150	180	180	154	138	1,096
41. Rohrer E.	Switzerland	125	144	180	128	180	180	150	1,087
42. Hakansson A.	Sweden	135	162	180	104	180	145	180	1,086
43. Jürgen H.	W. Germany	180	166	155	130	110	180	163	1,084
44. Wells A. R.	G.B.	136	189	135	96	180	169	180	1,076
45. Legnani S.	Italy	172	180	157	105	176	180	104	1,074
46. O'Connor S.	Australia	134	180	180	141	70	165	174	1,044
47. Edwards A.	Australia	131	180	144	180	123	121	157	1,036
48. McGillivray J.	Canada	180	118	95	125	180	155	180	1,033
49. Koster Th.	Denmark	180	180	180	92	136	180	80	1,028
50. Hofsász R.	W. Germany	104	180	180	40	180	152	180	1,016
51. Pásztor J.	Hungary	180	147	75	155	151	131	174	1,013
52. Haiden A.	Austria	180	180	180	68	172	117	107	1,004
53. Farkas I.	Hungary	152	57	171	171	154	180	109	994
54. Pohjola S.	Finland	100	180	180	98	148	150	122	978
54. P. Logan	(Proxy Ray Elliot)	New Zealand	180	96	141	123	175	83	978
56. Rauch A.	Austria	172	180	88	108	180	130	88	946
57. Nes e Yalcinkaya	Turkey	163	180	81	62	142	137	180	945
58. Skjulstad P.Th.	Norway	131	117	180	90	79	159	180	936
59. Mersenburger C.	Spain	145	112	152	156	154	124	92	935
60. Dihm J.	Poland	90	180	128	87	115	141	170	911
61. Akca T.	Turkey	180	134	63	138	180	112	103	910
62. Constantinescu R.	Rumania	153	130	180	96	107	165	76	907
63. Tecimer C.	Turkey	156	180	138	86	123	93	127	903
64. Malkin J. (Proxy M. Woodhouse)	New Zealand	137	180	120	0	110	153	180	880
65. Burg A.	France	75	180	110	61	109	164	180	879
66. Roots G. B.	(Proxy D. Morley)	New Zealand	135	95	92	150	180	141	838
67. Kreis R.	Hungary	144	124	33	88	131	137	176	833
68. Carlini E.	Brazil	180	61	124	89	120	134	118	826
69. Tavetkov D.	Bulgaria	111	104	165	77	62	134	109	762
70. Goldberg M.	Israel	69	113	163	95	84	96	134	754
71. Stamenor St.	Bulgaria	7	180	117	103	140	100	87	734
72. Mabelle A.	Belgium	65	0	125	96	88	94	92	560

TEAM RESULTS

1. U.S.S.R.	3,678
2. German dem. rep.	3,654
3. U.S.A.	3,614
4. Netherlands	3,561
5. Yugoslavia	3,459
6. Czechoslovakia	3,416
7. Switzerland	3,402
8. Canada	3,363
9. Sweden	3,359
10. United Kingdom	3,355
11. Italy	3,338
12. Denmark	3,324
13. Finland	3,294
14. Poland	3,273
15. Fed. Germany	3,238
16. France	3,222
17. Austria	3,201
18. Hungary	2,840
19. Turkey	2,758
20. New Zealand	2,696
21. Bulgaria	2,592
22. Australia	2,080
23. Brazil	1,922
24. Norway	936
25. Spain	935
26. Rumania	907
27. Israel	754
28. Belgium	560

H. Martin of Austria, 2nd man in Wakefield. A home win would have been immensely popular but alas for a storybook ending, it was not to be.

