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2 **A Major Threat to Gliding** J.J. Ellis
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13 **Portmoak Wave Christmas**
Christmas Competition Result
14 **Beware of the Vaches** M. Bird
16 **Flying the PIK-20** R. H. Johnson
19 **Blown Handicapping** E. J. C. Vann
20 **Accident Review** W. G. Scull
22 **Design to Fly** Ann Welch
24 **New Sailplanes** A. Coates
30 **BGA & General News**
31 **Gliding Certificates**
32 **Annual Statistics**
34 **Overseas News** A. E. Slater
35 **Obituary-Sam Tolman** G. Leate
36 **Your Letters** M. Butcher, P. Fletcher, F.G. Irving.
38 **Club News**
41 **Service News**
45 **Prizegiving at Yeovilton** M. H. Livesay

Cover: The ground's no place for a Kestrel on a day like this. No. 269, flown by Chris Waller in Euroglide at Nymsfield, is in the foreground. Photo: R. A. Robertson



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INDEX TO VOLUME XXV, 1974

Compiled by Gillian Bryce-Smith

Pages 1—48 February-March
" 49—104 April-May
" 105—152 June-July

Pages 153—200 August-September
" 201—248 October-November
" 249—296 December-January 1975

A

A Bird's Flight – or Fantasy (Elena Klein), 272.
—Cup for Naomi, 134.
—Diploma for Andy, 182.
—Lay View of the 1974 Nationals (S. Morgan), 178.
—Loopy Story! (letter, R. Dare), 237.
—Misunderstanding (letter, P. Shaw), 141.
—New National Coach, 182.
—Pom in Oz (R.Q. Barrett), 80.
—Variometer for Weak Lift (H. Cook), 229.
Aboyne (Rhoda Partridge), 13.
Accidents: *See* Lucky Escape for Hans Nietlispach, 137; Pilot Responsibility (A.D. Piggott), 15; Safety Panel Report (I. Dandie), 61; Three Fatal Accidents, 231.
Aerodynamics: *See* Back to the Rule Book (Ann Welch), 83; Ballast Controversy Continued (letter, S. Jennings), 90; Gliding 1852 Style (A.D. Piggott), 24; Measured Glider Performance (R. Fortescue), 275; More About Tail Parachutes (letter, D.J. Carey), 140; Straight-Flight Performance Measurement (L.P. Moore), 122; Tail Parachutes and Landing Incidents (D.J. Carey), 55; Tail Parachute Effects (letter, A.D. Piggott), 140; The Cayley Flying Machine (J. Sproule), 23; The Spy at the Launch Pad (F.G. Irving), 82; Water Ballast and Airworthiness Requirements (letter, J. Sellars), 90; "Wavy Wings" Rejected (letter, K. Emslie), 39.
Airspace: *See* Airspace Committee Report (J.J. Ellis), 60; Latest on London TMA Changes (J.J. Ellis), 277; Serious London TMA Changes (J.J. Ellis), 182; The 1973 UK Air Traffic Census – A Review (J.J. Ellis), 118.
American Marathon, 136.
An Alternative to Private Ownership (letter, C. Bryant), 141.
—Expensive Weekend at Shobdon (Rhoda Partridge), 109.
—Important "Instrument" (letter, W.W. Eisermann), 285.
Animal Flight (letter, A.E. Slater), 38.
Annual Awards (BGA) 1973, 86.
—General Meeting, 60.
—Records, 62.
—Statistics, 34.
Approved 360 Channel VHF for Gliders (J.F. Seller and H.J.A. Page), 113.
Arm-Chair Pilot, Christmas Competition, 32, 277.
Around and Inside a 500km Triangle (S.N. Longland), 157.
Aviation Council, The (P.A. Wills), 87.
Awards: *See* Annual Awards (1973), 86; Aviation Council, 278; BGA Diploma Winners, 134; Lilienthal Medal, 73; Paul Tissandier Diploma, 182; United Service & RA&C Silver Medal and O.P. Jones Cup, 134.
Australia: *See* A Pom in Oz (R.Q. Barrett), 80; Back to the Rule Book (Ann Welch), 83; Boomerang Fund (R.Q. Barrett), 80; at Tocumwal (G.E. Collins), 186; Latest from Waikerie (Rika Harwood), 3; Philatelic Cover, 32; Post Waikerie Paris (Ann Welch), 117; Roger Barrett Talking with Bernard Fitchett, 202; The Spy at the Launch Pad (F.G. Irving), 82; Waikerie - it was a "Beaut" (Rika Harwood), 53; Waikerie Jan-1974 (Rika Harwood), Report, 64; Results, 78.

Back to the Rule Book (Ann Welch), 83.
Ballard, L.: Stubble Fire Danger (letter), 188; Whither Gliding Now?, 116; Why No British Kits (letter), 284.
Ballast Controversy Continued (letter, S. Jennings), 90.
Barrett, R.Q.: A Pom in Oz, 80; Boomerang Fund, 33;
Book Reviews: After Solo edited by W.E. Doherty (B. Rolfe), 282; Glider Pilot by Peter Champion (J.E.G. Harwood), 141; Gunther Groenhoff und die Goldenen Jahre des deutschen Segelflugs edited by Walter Zuerl (A.E. Slater), 282; Winning on the Wind by George Moffat (A.D. Piggott), 189.
Boomerang Fund (R.Q. Barrett), 33.
Bree, Ed van.: Obituary (Rika Harwood), 138.
British Gliding Association News: 32, 86, 134, 182, 231, 276. *See* A Cup for Naomi, 134; A Diploma for Andy, 182; A New National Coach, 182; Annual General Meeting, 60; Annual Awards (1973), 86; Aviation Council, 278; BGA Motif Competition, 276; BGA Diploma Winners, 134; Christmas Competition, 32, 277; Christmas 1974, 276; Competition Enterprise, 134; Competition Diary, 278; Enterprise Established, 183; Glider Radio Frequency Change, 182; Honours for Ralph, 134; Latest on London TMA Changes, 277; Midsummer Maxiglide, 183; Nationals Entry List 1975, 279; National Ladder Changes, 32; New BGA Technical Officer, 277; No Churchill Award, 183; Philatelic Cover, 32; Radio Frequencies Confirmed, 277; Ray Stafford Allen, 134; Serious London TMA Changes, 182; Structure of the BGA, 86; The British Team, 276; UK Single and Two-Seater Records Claimed, 134; Whitbread Bursary Awards Allocated, 183.
BGA Handicap Rating (letter, L.P. Moore), 91.
British Team, The (1976) 276.
Britain wins in South Africa, 88.
Bryant, C.: An Alternative to Private Ownership (letter), 141.
Bull, R.: Must You Be A Back-Seat Driver? 159.
Burton, G.E.: Hahnweide 74, 181; Improving the Mini PZL Turn and Slip, 263.

C

Cable Break—What's That? (D. Eddlestone), 230.
Calculation of Glider Competition Speeds (I.W. Strachan), 266.
Camp, G. The Carates of Cosford, 167.
Carburettor Icing, 132.
Carlton, M.R.: Silver, Gold and Diamond in Seven Days, 111.
Carey, D.J.: More About Tail Parachutes (letter), 140; Tail Parachutes and Landing Incidents, 55.
Carr, Sue.: What Can go Wrong with a Simple Retrieve?, 130.
Cayley Flying Machine, The (J. Sproule), 23.
Chairman's Report on 1973 (C.R. Simpson), 50.
Chamier, Sir John: Obituary (A.E. Slater), 185.
Championships, National: Finland, 234; Holland, 186; Italy, 37; New Zealand, 136; Rhodesia, 36; South Africa, 88; Soviet, 89; Switzerland, 186. United Kingdom: Entry List, 135; Euroglide, 216; Nationals, 170. *See also:* Eastern Europe International, 234; First International Motor Glider Competition, 166; First Vintage International on the Wasserkuppe, 214; Hahnweide International (Germany), 181; International Ardennes Contest, 186, International Mountain Soaring Contest (France), 234, 259; Smirnoff Sailplane Derby (USA), 136.
Chopped-off Comps (letter, B. Goldsbrough), 39.
Christmas Competition (1973, Results), (Arm-Chair Pilot), 32, 277.
—1974 (C.R. Simpson), 276.
Chronomat (H. Nietlispach), 84.
CIVV: *See* CIVV Meeting, The (Ann Welch), 254;
Cloke, Joan.: Development Committee Report, 60.
Coaching Corner (W.G. Scull): *See* Ailerons and Rudder, 213; A New Look at Instructor Training Programmes, 59; Errors and Omissions, 161; How Experienced Are You?, 11; Negative *g* and the Pilot, 258.
Collins, G.: Gliding at Tocumwal, 186.
Competition Enterprise (P.A. Wills), 134, 208. — Flying—A New Suggestion (letter, E. Richards), 140.
Competitions 140 Million Years Ago or Hahnweide '74 (G.E. Burton), 181.
Conservation and Gliding (letter, R. Tindall), 38.
Container Saga, The, 233.
Cook, H.: A Variometer for Weak Lift, 229.
Corn is Greener on the Other Side, The (R.A. Robertson), 207.
Cornish Secret, The (letter, J. Deakin), 39.
Correspondence: 38, 90, 140, 188, 236, 284.
Crawshaw, G.: Northern Regionals, 228.
Criticism of the Flying Progress Book (letter, A. Stuart), 284.
Crossing the Alps (J. von Kalckreuth), 125.

D

Dandie, I.: Safety Panel Report, 61.
Dare, R.: A Loopy Story! (letter), 237.
Deakin, J.: The Cornish Secret (letter), 39.
Development Committee Report (Joan Cloke), 60.
Dimock, H.R.: The Nimbus in the Alps, 259; Those Stubble Fires, 54.
Doc Slater and Editorial Independence (letter, P.A. Wills), 236.
Does S&G Have Editorial Freedom? (letter, A. James), 189.
Doing A Daily Inspection (Ann Welch), 164.
Doughty, A.: Wycombe Regionals, 180.

E

Eddlestone, D.: Cable Break—What's That?, 230.
Eighty Years of British Soaring (A.E. Slater), 250.
Eisermann, W.W.: An Important "Instrument" (letter), 285.
Electric Motor Glider, 89.
Ellis, J.J.: Airspace Committee Report, 60; Latest on London TMA Changes, 277; Serious London TMA Changes, 182, The 1973 UK Air Traffic Census—A Review, 118.

Emslie, K.L. "Wavy Wings" Rejected (letter), 39.
Encouragement for the 19m (letter, B. Goldsbrough), 90.
Entries: *See* Entries for Nationals and Euroglide, 135; Nationals Entry List for 1975, 279.
Errors and Omissions, Coaching Corner (W.G. Scull), 161.
Euroglide: *See* Euroglide 1974—A Personal Record (Anne Ince), 216; Final Results, 223.
Evans, D.W.: Ladder Points (letter), 237.

F

Farewell Pocket Size S&G (A. Yates), 2.
Finland: *See* Finnish Nationals, 234; PIK-20 Standard Class Sailplane from Finland, 17.
First International Motor Glider Competition (P.T. Ross), 166.
—Vintage International on the Wasserkuppe (A.E. Slater), 214.
Flying and Instructing: *See* Ailerons and Rudder – (W.G. Scull), 213; A New Look at Instructor Training Programmes (W.G Scull), 59; Doing A Daily Inspection (Ann Welch), 164; Errors and Omissions (W.G. Scull), 161; How Experienced Are You? (W.G. Scull), 11; Instructor Training Programmes (J. Stirk), 19; Must You Be A Back-Seat Driver? (R. Bull), 159; Negative *g* and the Pilot (W.G. Scull), 258; Pilot Responsibility (A.D. Piggott), 15; Spin Recovery (J.D. Spottiswood), 260; The Flying Progress Book (R. Hubble), 206.
Flying Committee Report (I.W. Strachan), 61.
—Progress Book, The (R. Hubble), 206.
Fortescue, R.: Measured Glider Performance, 275.
France: *See* First French All Glass-Fibre Sailplane, 186; Mountain Soaring Contest, 234; Sagittaire French Two-Seater, 17. St Auban Lives It Up, 37; The Nimbus in the Alps (H.R. Dimock), 259; Vinon Mountain Competition, 136.
Fuel Crisis, The (C.R. Simpson), 21.

G

Germany: *See* Alpine Record, 234; Club Class International, 36; German Aerobatic Contest, 137; German Statistics, 88; Glassflügel Club-Libelle, 16; Gliding Forecasts in NW Germany, 37; Hans-Werner Grosse Does It Again, 136; Holighaus and "Janus" 500km Triangle Record, 234; Multitude Record, 234; My Two-Seater Flight in Samedan (K. Holighaus), 280; Production Starts on Schweizer 1-35, 165; Record 100km Triangle, 37; Rhönbaby Flies Again, 88; Schempp-Hirth Two-Seater Janus, 16. SB-10 Joins the Hunt, 136; Sigi Baumgarti Also Joins the "1000km Club," 136.
Glider Radio Frequency Change, 182.
—Pilot (Book Review, J.E.G. Harwood), 141.
Gliding at Tocumwal (George Collins), 186.
—1852 Style (A.D. Piggott), 24.
—Certificates: 32, 86, 134, 183, 231, 278.
—Needs Competition (letter, E. Vann), 188.
Goldsbrough, B.: Encouragement for the 19m (letter), 90: Chopped-Off Comps (letter), 39.
Goodhart, H.C.N.: Operation Farglide, 107..
Grassroots of Gliding, The (P.A. Wills), 9.

H

Hahnweide 74 (G.E. Burton), 181.
Hall, C.E.: Words and Drawings, 115.
Hans-Werner Grosse Does It Again, 136.
Handicapping: *See* BGA Handicap Rating (letter, L.P. Moore), 91; Calculation of Glider Competition Speeds (I.W. Strachan), 266; Handicap System Questioned (letter, M. Wells), 91; Rating and Handicapping (letter, A.J. Watson), 236; Reply to letters (I.W. Strachan, Flying Committee Chairman), 93, 236.
Harwood, J.E.G.: Glider Pilot (Book Review), 141.
—Rika,: Ed van Bree (Obituary), 138; Heini Heiress (Obituary), 184; Latest from Waikerie, 3; Lucky Escape for Hans Nietlispach, 137; Nationals with the Waikerie Touch, 170; Sailplane News, 16; Waikerie—It was a "Beaut", 53; Waikerie Jan—1974, 64.
Heiress, H.: Obituary (Rika Harwood), 184.
Holighaus and "Janus" 500km Triangle Record, 234.
—K.: My Two-Seater Triangular Flight in Samedan, 280.
Holland: *See* Dutch Nationals, 186; First Cross-Country Holland-Switzerland, 137.
Honours for Ralph, (Jones), 134.
Hubble, R.: The Flying Progress Book, 206.

I

Improving the Mini PZL Turn and Slip (G.E. Burton), 263.
Ince, Anne.: Euroglide 1974—A Personal Record, 216.
Instructor Training Programmes (J. Stirk), 19.
Instructors' Committee Report (J.D. Spottiswood), 60.
International Ardennes Contest, 186.
—One-Design Class for the Other 95% (J. Maplin), 265.
Inter-Service Gliding Awards (E.G. Shephard), 45.
Is Your Parachute a Valid Insurance? (I.B. Wright), 85.
Italy: *See* Italian Championships 1973, 37.
Irving, F.G.: Ray Stafford Allen (Obituary), 184; Reply to letter, 91; The Spy at the Launch Pad, 82.

J

James, A.: Does S&G Have Editorial Freedom? (letter), 189.
—D.B.: Watership Down: A review (letter), 284.
Jamieson, K.: 300km Two-Seater Triangle, 54.
Jennings, S.: Ballast Controversy Continued (letter), 90.
Jones. H.: Turn and Slip Indicator (letter), 38.
Just Not Good Enough, 32.

K

Kahn, W.A.H.: Lasham Regionals, 226.
Kalckreuth, J. von.: Crossing the Alps, 125.
Kites in Thermals (A.E. Slater), 120.
Klein, Elena.: A Bird's Flight—or Fantasy, 272.
Know Thyself Quiz (Platypus), 30.

L

Ladd, P.J.: Never on Sunday (or Saturday), 123.
Ladder Points (letter, D.W. Evans), 237.
Lange, K.O.: Obituary (A.E. Slater), 185.
Lasham Regionals (W.A.H. Kahn), 226.
Latest on London TMA Changes, 277.
Latest from Waikerie (Rika Harwood), 3.
Lathbury, J.F.F.: What's in a Name? (letter), 285.
Laurie, M.: Obituary (Oxford Gliding Club), 33.
Lilienthal Medal for Ann Welch, 73.
Lindbergh, C.L.: Obituary (A.E. Slater), 281.
Long, E.: Spotting Your Crop for the Drop, 162.
Longland, S.N.: Around and Inside a 500km Triangle, 157.
Lovell, C.L.: The Year of the Long Distance Glider Pilot, 154.
Lucky Escape for Hans Nietlispach (Rika Harwood), 137.

M

Macintyre, R.: New Zealand Nationals 1974, 136.
Maplin, J.: International One-Design Class for the Other 95%, 265.
McMullin, T.A.: Radio Installations in Gliders, 112.
Measured Glider Performance (R. Fortescue), 275.
Meteorology: *See* A Glider Pilot's Guide to Wave Forecasting—(Part 2) (M.P. Garrod), 28; The Year of the Long Distance Glider Pilot (C.L. Lovell), 154; Wave, Glorious Highland Wave! (Ruth Tait), 106.
Midsummer Maxiglide, 183.
Millson, S.C.: Wave Eludes Rhodesia (letter), 236.
Moore, L.P.: BGA Handicap Rating (letter), 91; Straight-Flight Performance Measurement, 112.
More About Tail Parachutes (letter, D.J. Carey), 140.
—About Turning Point Photography (letter, E. Pearson), 188.
—Standardisation (letter, C. Street), 93.
Morgan, S.: A Lay View of the Nationals, 178.
Motor Gliders: *See* Electric Motor Glider, 89; First International Motor Glider Competition (P.T. Ross), 166; New Motor Glider Record, 137.
Mountain Soaring Contest, 234.
Must You Be a Back-Seat Driver? (R. Bull), 159.
My Two-Seater Triangular Flight in Samedan (K. Holighaus), 280.

N

National Championships (British): *See* A Lay View of the Nationals (S. Morgan), 178; Competition Diary 1975, 278; Entries for Nationals and Euroglide, 135; Euroglide 1974—A Personal Record (Anne Ince), 216, (Results 223); Nationals Entry List for 1975, 279; Nationals with the Waikerie Touch (Rika Harwood), 170, (Results 175).
National Ladder: *See* Exceptional National Ladder, 182; Longest National Ladder, 278; National Ladder, 86; National Ladder Changes, 32; Record Breaking Ladder, 231.
Negative *g* and the Pilot (W.G. Scull), 258.
Never on Sunday (or Saturday) (P.L. Ladd), 123.
New BGA Technical Officer, 277.
—Power for Gliders (R.R. Rodwell), 261.
News of Old Gliders (C. Wills), 119.
New Zealand: *See* Nationals (R. Macintyre), 136.
Nietlispach, H.: Chronomat, 84.
Nimbus in the Alps, The (H.R. Dimock), 259.
Northern Regionals (G. Crawshaw), 228.

O

Obituaries: *See* Ed van Bree (Rika Harwood), 138; Sir John Chamier (A.E. Slater), 185; Heini Heiriss (Rika Harwood), 184; Malcolm Laurie (Oxford Gliding Club), 33; Charles Lindbergh (A.E. Slater), 281; Ray Stafford Allen (F.G. Irving), 184.
Operation Farglide (H.C.N. Goodhart), 107.
Oxford Gliding Club: Obituary (M. Laurie), 33.

P

Page, H.J.A.: Approved 360 Channel VHF for Gliders, 113.
Partridge, Rhoda.: Aboyne, 13; An Expensive Weekend at Shobdon, 109.
Pearson, E.: More About Turning Point Photography (letter), 188.
Philatelic Covers, 32.
Piggott, A.D.: Gliding 1852 Style, 24; Pilot Responsibility, 15; Tail Parachute Effects (letter), 140; Winning on the Wind (Book Review), 189.
Plea for Standard Class Records (letter, C. Rollings), 93.
Platypus: Know Thyself Quiz, 30; "Q" Talking with Platypus, 256.
Post Waikerie Paris (Ann Welch), 117.
Production Starts on Schweizer 1-35, 165.

Q

"Q" Talking with Platypus, 256.

R

—Radio *See* Frequencies Change, 182. Confirmed, 277.
—Installations in Gliders (T.A. McMullin), 112.
Rating and Handcapping (letter, A.J.Watson), 236.
Records: (Claimed or Homologated) *See* British National: (annual list), 62; Absolute height (Canada), 137.
United Kingdom: (annual list), 63; 100km triangle, 134; Multi-Seaters: 100km triangle, 134.
Foreign National Records: Goal-and-return (German), 234; 100km Triangle (France), 137; Multi-Seaters; 500km Triangle (German), 234; Distance (German), 136.
World Records: (annual list), 62; Goal, 136; 100km Triangle, 37; 100km Triangle, 234; 100km Triangle (feminine), 234, Multi-Seaters: 300km Triangle, 281;
Motor Glider Records: (annual list), 63; Distance, 137.
Regionals: *See* Competition Diary 1975, 278; Inter-Service Regional Championships, 167, Lasham, 226; Northern, 228; Wycombe, 180.
Rhodesia: *See* Nationals, 36; Wave Eludes Rhodesia (letter, S.C. Millson), 236.
Rhönbaby Flies Again, 88.
Richards, E.: Competition Flying—A New Suggestion (letter), 140.
Robertson, R.A.: The Corn Is Greener on the Other Side, 207.
Rodwell, R.R.: New Power for Gliders, 261; Wave—And a Warm Welcome (letter, 237).
Rolfe, B.: After Solo (Book Review), 282.
Rollings, C.: Plea for Standard Class Records (letter), 93.
Ross, R.T.: First International Motor Glider Competition, 166.

S

Safety Panel Report (I. Dandie), 61.
Sailplane News (Rika Harwood), 16.
Sailplane (News and Types): *See* Club-Libelle, Glasflügel, 16; "Duster" BJ-1b, 265; Kestrel 22m, 16; Janus, Schempp-Hirth Two-Seater, 16, 234, 280; Nugget, Laister USA Standard Class, 16; PIK-20, Standard Class Sailplane from Finland, 17; Sagittaire, French Two-Seater, 17; Schweizer 1-35, Production Starts, 165.
Scarcity of Gliding Facilities (letter, J. Stevens), 285.
Scull, W.G.: Ailerons and Rudder, 213; A New Look at Instructor Training Programmes, 59; Errors and Omissions, 161; How Experienced Are You?, 11; Negative *g* and the Pilot, 258.
Sellars,: Water Ballast and Airworthiness Requirements (letter), 90.
Seller, J.F.: Approved 360 Channel VHF for Gliders, 113.
Serious London TMA Changes (J.J. Ellis), 182.
Shaw, P.: A Misunderstanding (letter), 141.
Shelton, A.: 300km Two-Seater Triangle, 54.
Shephard, E.G.: Inter-Service Gliding Awards, 45.
Silver, Gold and Diamond in Seven Days (M.R. Carlton), 111.
Simpson, C.R.: Chairman's Report, 1973, 50; Christmas 1974, 276; The Fuel Crisis, 21.
Slater, A.E.: Animal Flight (letter), 38; Sir John Chamier (Obituary), 185; Eighty Years of British Soaring, 250; First Vintage International on the Wasserkuppe, 214; Gunter Groenhoff und die Goldenen Jahre des deutschen Segelflugs (Book Review), 282; Kites in Thermals, 120; Karl O. Lange (Obituary), 185; Charles Lindbergh (Obituary), 281; Vintage Club Autumn Rally, 283.
Socialist International, 36.
South Africa: *See* Britain Wins, 88; South African Championships, 186.
South-West Africa Rally, 137.
Soviet Championships, 89.
Spin Recovery (J.D. Spottiswood), 260.
Spotting Your Crop from the Drop (E. Long), 162.
Spottiswood, J.D.: Instructors' Committee Report, 60; Spin Recovery, 260.
Sproule, J.: The Cayley Flying Machine, 23.
Stafford Allen, R.: Obituary (F.G. Irving), 184, 134.
Stevens, J.: Scarcity of Gliding Facilities (letter), 285.
Stirk, J.: Instructor Training Programmes, 19.
Strachan, I.W.: Calculation of Glider Competition Speeds, 266; Competition Diary, 1975, 278; Flying Committee Report, 61; Replies to letters, 236, 93.
Straight-Flight Performance Measurement (L.P. Moore), 122.
Street, C.: More Standardisation (letter), 93.
Structure of the BGA, 86.
Stuart, A.: Criticism of the Flying Progress Book (letter), 284.
Stubble Fire Danger (letter, L. Ballard), 188.
Switzerland: *See* First Cross-Country Holland-Switzerland, 137; Lucky Escape for Hans Nietlispach, 137; Swiss Nationals, 186.

T

Tail Parachute Effects (letter, D.J. Carey), 140.
—Parachutes and Landing Incidents (D.J. Carey), 55.
Tait, Ruth.: Wave, Glorious Highland Wave!, 106.
Technical Committee Report (R. Tetlow), 61.
Testing Finland's Thermals, 234.
Tetlow, R.: Technical Committee Report, 61.
The Aviation Council (P.A. Wills), 87.
—British Team, 276.
—Carates of Cosford (G. Camp), 167.
—Cayley Flying Machine (J. Sproule), 23.
—CIVV Meeting (Ann Welch), 254.
—Container Saga, 233.
—Corn is Greener on the Other Side (R.A. Robertson), 207.
—Cornish Secret (letter, J. Deakin), 39.
—Flying Progress Book (R. Hubble), 206.
—Fuel Crisis (C.R. Simpson), 21.
—Grassroots of Gliding (P.A. Wills), 9.
—1973 UK Air Traffic Census—A Review (J.J. Ellis), 118.
—Nimbus in the Alps (H.R. Dimock), 259.
—Spy at the Launch Pad (F.G. Irving), 82.
—Year of the Long Distance Glider Pilot (C.L. Lovell), 154.
Those Stubble Fires (H.R. Dimock), 54.
Three Fatal Accidents, 231.
Tim Biggs Winds Again, 36.
Tindall, R.: Conservation and Gliding (letter), 38.
Towing Hook for Chipmunks, 181.
Turn and Slip Indicator (letter, H. Jones), 38.

U

UK Single and Two-Seater Records Claimed, 134.
USA: *See* American Marathon, 136; Laister USA Standard Class Nugget, 16; 100mph Barrier Broken, 234; International One-Design Class for the Other 95% (J. Maplin), 265.

V

Vann, E.: Gliding Needs Competition (letter), 188.
Vinon Mountain Competitions, 136.
Vintage: *See* First Vintage International on the Wasserkuppe (A.E. Slater), 214; News of Old Gliders (C. Wills), 119; Vintage Club Autumn Rally (A.E. Slater), 283.

W

Waikerie—It was a "Beaut" (Rika Harwood), 53.
—Jan-1974 (Rika Harwood), 64.
Watership Down—A review (letter, B.D. James), 284.
Water Ballast and Airworthiness Requirements (letter, J. Sellars), 90.
Watson, A.J.: Rating and Handicapping (letter), 236.
Wave and a Warm Welcome (letter, R.R. Rodwell), 237.
—Eludes Rhodesia (letter, S.C. Millson), 236.
— Glorious Highland Wave! (Ruth Tait), 106.
Welch, Ann.: Back to the Rule Book, 83; Doing a Daily Inspection, 164; Lilienthal Medal, 1973, 73. No Glider – Can't Fly, 212; Post Waikerie Paris, 117; The CIVV Meeting, 254; World Championships—A Review of 25 Years, 5.

Wells, M.: Handicap System Questioned, 91.
What Can Go Wrong with a Simple Retrieve? (Sue Carr). 130.
What's In a Name? (letter, W.W. Eisermann, 285.
Whither Gliding Now? (L. Ballard), 116.
Why No British Kits? (letter, L. Ballard), 284.
Williamson, J.S.: "Follow the Energy Gentlemen!" 264.
Wills, C.: News of Old Gliders, 119.
—P.A.: Competition Enterprise, 208; Doc Slater and Editorial Independence (letter), 236; The Aviation Council, 87; The Grassroots of Gliding, 9.
Winning on the Wind by George Moffat (Book Review, A.D. Piggott), 189.
Words and Drawings (C.E. Hall), 115.
World Championships. *See* A Pom in Oz (R.Q. Barrett), 80; Back to the Rule Book (Ann Welch), 83; Boomerang Fund (R.Q. Barrett), 33; Final Results, 78; Latest From Waikerie (Rika Harwood), 3; Philatelic Cover, 32; Post Waikerie Paris (Ann Welch), 117; The Spy at the Launch Pad (F.G. Irving), 82; Waikerie—It was a "Beaut" (Rika Harwood), 53; Waikerie Jan—1974 (Rika Harwood), 64. Venue (1976), 276. *See* also World Championships—A Review of 25 Years, 5.
Wright, I.B.: Is Your Parachute a Valid Insurance?, 85.

Y

Yates, A.: Farewell Pocket Size S&G, 2.
Year of the Long Distance Glider Pilot, The (C.L. Lovell), 154.

A MAJOR THREAT TO GLIDING

The full story behind the London TMA Changes

JOHN ELLIS (Chairman of the BGA Airspace Committee)

The London TMA.

It now appears certain that from the Spring of 1975, gliders will no longer be able to fly within the revised London Terminal Manoeuvring Area. The affect on gliding in the south-east will be considerable and the natural reaction of BGA members will be to ask Why? Why indeed? It is time to try and explain, as far as is possible in a short space, the story of the negotiations and position to date—the end of 1974.

For many years glider pilots have been able to fly in the London TMA - and certain other areas of controlled airspace - provided that they maintained at least 1000ft vertically from cloud, at least 1nm horizontally from cloud, in a general visibility of at least 5nm (*ie* in Visual Meteorological Conditions - VMC). This right was granted, not by any new Rule, but by an exemption from an existing Rule which requires pilots to hold certain licences, file flight plans, communicate by radio to air traffic control etc etc. Known as Rule 22, the exemption has also applied to powered aircraft pilots up to 5000ft within the London TMA.

NB. The number of the relevant Rule has been changed by 1974 legislation to 21, but in order to avoid further confusion this fact will be ignored. It is this exemption from Rule 22 that is to cease.

The procedure followed prior to changes in airspace is roughly as follows: New proposals normally originate from the Civil Aviation Authority/National Air Traffic Services (CAA/NATS). Prior to introduction they are circulated to the members of the Civil Aircraft Control Advisory Committee (CACAC). The members of this Committee represent just about every UK body with an interest in airspace, including of course the BGA. Some of the proposals are non-controversial, members of CACAC raise no objections and the changes are made without discussion.

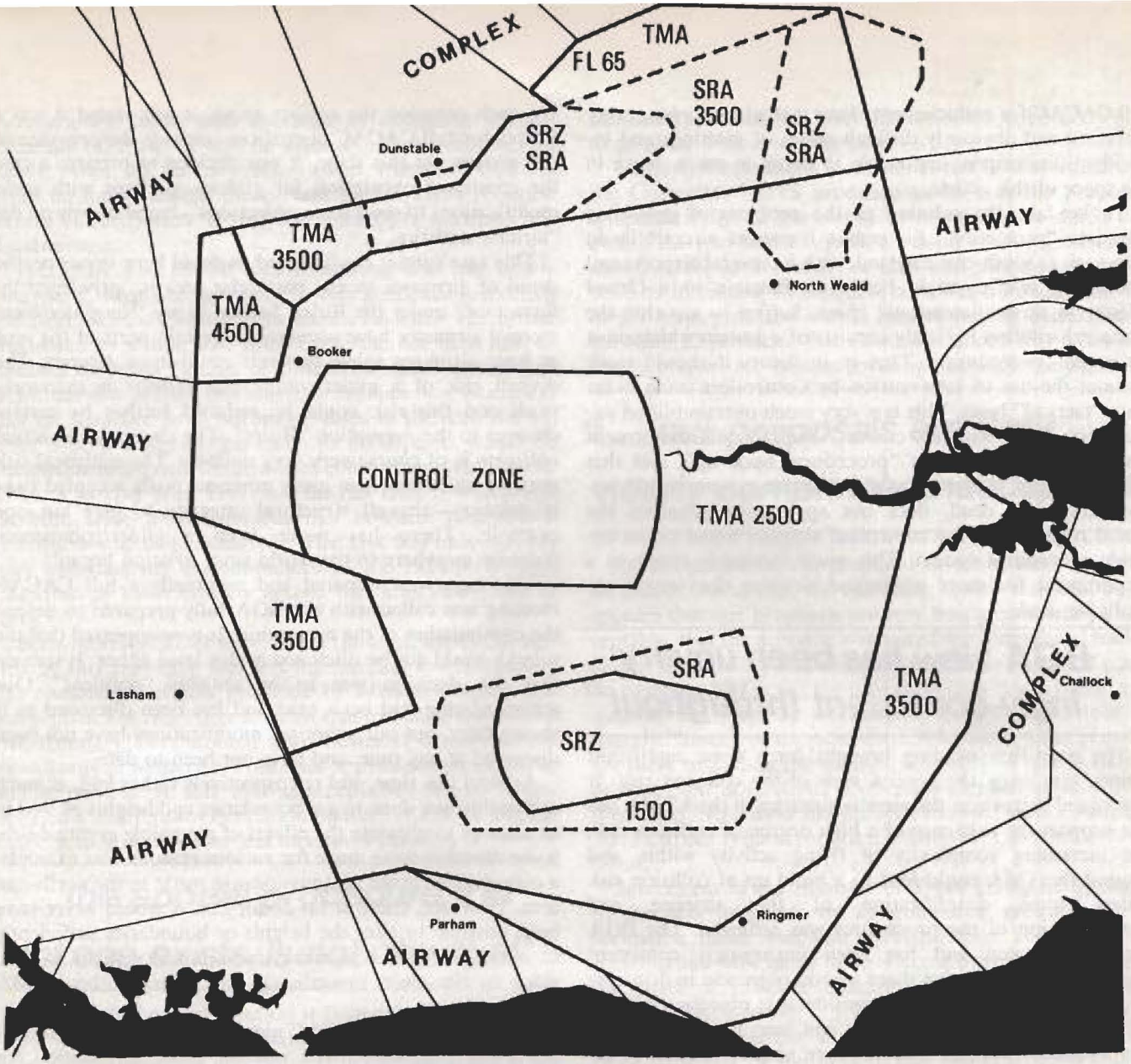
In the case that objections are likely, the proposal is discussed at a meeting or meetings of CACAC members. The object is to attempt to persuade the users of the need and, if necessary, to reach a compromise such that the majority is reasonably satisfied and will agree without feeling unduly hard done by. This system is peculiarly British in that no one body can say that changes are imposed from "above" without being given an opportunity to object or offer amendments. Indeed, as it is understood that the CAA has a mandate to consider the proper needs of all airspace users, it is difficult to imagine any other workable system.

Since CACAC is by definition "advisory", its decisions are not necessarily binding on the CAA, however, it usually seems to work that way. The appeal against an adverse decision used to be via a further Committee called the Standing Joint Committee for Private and Club Flying and Gliding (PACFAG) at which one could gain direct and official access to MPs. Due to changes in legislation this Committee no longer exists, the equivalent now being the Private Aviation Committee (PAC). Since the Chairman of PAC is the Chairman of the CAA it is obvious that there are considerable difficulties in the event that an appeal becomes necessary. Now, with an idea of the procedures involved, it is possible to continue with the specific problems of the London TMA.

"... forced to fly at dangerously low levels below the TMA"

The original idea did not in this case come from CAA/NATS but from the Guild of Air Pilots and Navigators (GAPAN). A Committee within GAPAN had been discussing the London area airspace throughout 1971 and on November 15 that year they sent a paper to CAA containing an analysis of the situation as they saw it. The paper was mainly concerned with a "simplification of procedures" in the lower levels. It stated that because of the variable base of the TMA at places down to 1500ft asl, transit general aviation traffic was often forced to fly at dangerously low levels below the TMA. The alternative being to fly VMC within the TMA under the Rule 22 exemption, relying on "see and be seen" which it was stated is "clearly undesirable" - for various reasons, among them being that it was not liked by controllers. The way round this was to have a uniform base cutting out the lower portions—2500ft asl seemed the right height, allowing adequate terrain clearance.

It was further stated that "since the space available below 2500ft would be sufficient for the uncontrolled general aviation movements, the corollary must be that controlled airspace above this altitude could be notified under Rule 22; a clear cut distinction would now exist between controlled and uncontrolled airspace and the present anomaly would be eliminated"- (*ie* the exemption could cease). In order to implement a uniform base it would be necessary to make certain extensions to Control Zones and the general area of the TMA. Also, Luton and Stansted ought to be brought more fully into the system. With this in mind a map was at-



The map, drawn by John Glossop, should not be taken as definitive. Some heights, boundaries and airfields have been excluded for clarity.

tached whose "boundaries have been outlined to be simple and as devoid of awkward corners as possible...providing a logical, and hence memorable, shape of the controlled airspace."

The membership of GAPAN, although relatively small, does contain considerable expertise, particularly among the higher echelons of airline management and commercial aviation. However, the BGA was highly critical of the statement that airspace boundaries need to be simple. Simplicity of controlled airspace means excessive controlled airspace - a fact admitted by the CAA. Airline pilots are not unduly interested in precise boundaries, they rarely consult topographical maps, navigating on radio logs or by similar methods. Glider pilots can easily cope with odd map boundaries and do so all the time. So simple for who? Only general aviation power pilots and the mapmakers are left.

Also controversial was the statement that the airspace below 2500ft would be sufficient for uncontrolled general aviation. Would "compression effect" in fact move a very small "airmiss risk" within the TMA to a bigger one outside it? Gliders are considered to be "general aviation"; 2500ft asl was obviously not sufficient for them; was it proposed to include them in the general discontinuance of the exemption? There was no specific mention of gliders in the paper apart from the phrase "general aviation". Since GAPAN's mandate also includes the interests of the gliding movement, surely they would support a continuation of the exemption for gliders?

This GAPAN proposal has been quoted quite fully because it has proved to be a reasonably accurate forecast of events. GAPAN representatives have never specifically mentioned gliders in any negotiation, but neither have they made any positive moves to assist us.

This paper was digested by CAA/NATS and re-emerged as a discussion item for CACAC members in June 1972. It seemed, even at that stage, that the authorities were basically "for" the idea—in principle. It was clearly too large a subject for one meeting, therefore "sub groups" were set up to discuss the matter by area, the purpose being to resolve the differences and eventually put a completed paper before the

full CACAC for endorsement. Thus started a very long, very technical and obviously difficult series of meetings and individual discussions, impossible to detail in much depth in the space of this article.

To be fair, the solution of the problem of providing adequate "protection" for public transport aircraft in an area such as south-east England, with its several airports and interacting traffic, might baffle an Einstein or a Grand Master in three dimensional chess. Suffice to say that the technical solution basically consists of a system which must be called "procedural." That is, in theory it should work without the use of intervention by Controllers using radar on a "tactical" basis. This is a very much oversimplified explanation but is basically correct. The fact that the present system is "tactical" with "procedural back up", and that without doubt, without radar the entire system would immediately stop dead, does not apparently influence the stated requirement for controlled airspace based on an entirely procedural system. This must inevitably result in a requirement for more controlled airspace than might actually be used.

"... BGA view has been unvaryingly consistent throughout"

The very first meeting brought forth some significant points, one being the general view of the collision risk. It was stated that whilst the airmiss statistics in the LTMA did not support the existence of a high degree of collision risk, the increasing complexity of flying activity within and around the TMA could lead to a build up of collision risk unless some simplification of the airspace and rationalisation of the procedures was achieved. The BGA view was stated and has been unvaryingly consistent throughout. That is, that there was no objection in principle to TMA changes, there was considerable objection to simplification of lateral boundaries and base levels where the simplification process took in more airspace than was actually required and that, most important, since gliding could not continue with a 2500ft asl upper limit, the Rule 22 exemption must continue. To put this another way, providing it could reasonably be seen to be necessary, the BGA has no objection to changes in shape or height providing gliding could still continue within the new TMA in VMC - possibly with some modifications.

So the sub group meetings and discussions continued. Quite early on, amendments proposed by the Guild of Air Traffic Control Officers (GATCO) included considerably revised commercial routings with a "one way system" north of London regardless of wind direction at London Airport. This in effect was designed to make the task of controllers simpler, it also provided routings for the "expedition" of commercial traffic. It stated GATCO's complete opposition to any Rule 22 exemption, in particular for gliders, and it required a considerable extension of controlled airspace to the north-west. Incidentally, so complete is the Guild's opposition to gliders in controlled airspace that, at one meeting, the GATCO representative rather emotionally threatened to walk out if this was even to be contemplated!

Strangely, it proved not possible to actually discuss the Rule 22 exemption for gliders at any of these early meetings. On each occasion the subject arose, it was stated it was a matter for full CACAC discussion—outside the province of sub groups. At this stage, it was decided to prepare a case for continued exemption for gliders—perhaps with some modifications to meet some objections—based mainly on the "airmiss statistics."

This case cannot be discussed in detail here since specific detail of airmisses in any particular area is "privileged information" under the Rules. Suffice to say that glider/commercial airmisses have occurred in certain parts of the area as have airmisses solely between commercial aircraft. The overall risk of a glider/commercial *airmiss* is extremely small and this risk could be reduced further by certain changes to the exemption "Rules". The chance of an actual *collision* is of course very very unlikely. The statistical risk must be much less than many other normally accepted risks in aviation—aircraft structural integrity to give but one example. There has never been a glider/commercial collision anywhere in the world since aviation began!

This case was prepared and eventually a full CACAC meeting was called with the BGA fully prepared to defend the continuation of the exemption. It now appeared that the subject could not be discussed at this level either. It seemed that the decision was to be entirely "political". Our statistical case had been read and has been discussed as is shown later, but our proposed modifications have not been discussed at any time, and have not been to date.

Around this time, and retrospectively rather late, as much as possible was done to get boundaries and heights altered in an attempt to alleviate the effects of a possible eventual ban. Some mistakes were made for various reasons. For example, a considerable error of omission was made in the north-east area. However, there is no doubt that it would never have been possible to alter the heights or boundaries sufficiently to allow safe and reasonable cross-country flight to take place by the clubs immediately concerned, without TMA penetration.

The final formal CACAC meeting took place in December 1973. Left unresolved was the Rule 22 question for gliders. Also unresolved were several points of detail including the question of exactly where gliders would be able to fly in the Special Rules complex surrounding Luton and Stansted—the area in the middle was to be discussed, but the final adverse decision was made without discussion in any form. It was very obvious that the CAA were determined that since the majority were in agreement, the proposals would be implemented in due course. Since a major new route was part and parcel of the system, environmental aspects would have to be considered by the relevant Government department - not so far involved in the negotiations.

In June 1974, without any further consultation, a letter was received from the Controller NATS stating that: "further detailed consideration had been given on the effect of Rule 22 upon gliding activity within and around the TMA, balanced against the overriding factor of flight safety. As a result of this further study we have reluctantly come to the conclusion that we can no longer allow gliding to take place in this area of intensive public transport activity. The General Aviation Powered Aircraft fraternity have accepted, in the interest of flight safety, that they must conform to Rule 22 in the LTMA and I trust that you and your

members will agree with the logic of extending the application of Rule 22 to the gliders". Unfortunately, we didn't. After all the powered aircraft fraternity had not given up much, indeed the current British Light Aviation Centre (BLAC) view is that the advantages outweigh the disadvantages.

The BGA had gained almost nothing and lost nearly everything, what was the logic? A very gentlemanly meeting was held with the Controller to discuss his letter. He further elucidated by stating that since CAA had not been able to discover the exact number of glider TMA penetrations (the BGA was not asked), the only fair estimate was to assume that *all* launches from the major clubs in the area did so, from S & G statistics this came to 68000pa. It would be reasonable to average the airmisses concerning gliders in the TMA at two per year. Therefore the risk must be 1 in 34000 (at best, since it was obvious that nowhere near 68000 penetrations actually occurred). This risk was unacceptably high and thus the discontinuance of the exemption. The Chairman of CAA entirely agreed with this view....end of story.

BGA representatives were, to say the least, somewhat baffled by this reasoning and left the meeting to contemplate the consolatory effects provided by Messrs. Gordon and Schweppes. On reflection it seems that to obtain the *airmiss* risk from a glider, account must be taken of commercial movements as well. This works out approximately as one in half a million. Is this also unacceptable? There is undoubtedly a difference in opinion between the BGA and the CAA as to how one uses and interprets statistics.

"... the appeal procedure, if in fact one exists, is not obvious"

Faced with the final solution it became a little uncertain as to what further action could be taken. As has already been stated, the appeal procedure, if in fact one exists, is not obvious. It was thought that in the interim, the current views of the clubs concerned should be obtained. This was done first through correspondence and telephone and then via a meeting at Artillery Mansions. Obviously all clubs were extremely concerned at the potential effect of the new system and many comments and suggestions were offered. It became apparent that some would be immediately affected, disastrously, and all would be affected more or less in the longer term.

Already, the Essex Club based at North Weald had become so concerned that, with considerable justification, they had started a form of publicity campaign. (This proved very unwelcome to the CAA). For various reasons the problems of the Essex Club had been missed in the overall general negotiation and it was decided to look at them again. Using a statement from the CAA that no actual changes in routes or heights of aircraft were planned for that area, it was realised that apparently an excess of controlled airspace had been planned. With considerable work from the Club itself, a revised plan was put to the Controller NATS. At the same time the Sports Council was contacted, to advise them that the outlook for gliding in the south-east looked bleak. Also around the same time, it became apparent that the Minister for Trade had given his consent for the CAA plan to go ahead—more of this later.

The plan for revisions in the north-east looked logical and the Controller NATS promised to look at the proposals sympathetically. In the course of discussion we stated that even if this plan was accepted, it was only really a short term answer to the problems of one club with perhaps some small benefits in passing to others. There was no doubt that the longer term problems would require further discussion of the Rule 22 problem. The Controller stated that CAA was always prepared to discuss anything that might help gliding.

"... our proposals are very nearly completely unacceptable"

On the subject of the proposed revisions there has been an answer. As always, the reasoning is very technical but it appears that our proposals are very nearly completely unacceptable, that the airspace is required for commercial traffic, all bar a possibility that the base level of one position could be raised by 1000ft. At the time of writing this is being considered. On Rule 22 discussions, we have been told by slightly "lower" echelons of the CAA that it is not possible for them to discuss the subject. It is obvious that it cannot be discussed at CACAC level since this has already been precluded. No answer has yet been received from Controller NATS to our request for clarification—it is awaited with interest.

Subsequent to the Minister of Trade giving his approval to the new proposals on environmental grounds, an information paper was sent to those local councils, noise societies and MPs likely to be affected by the new routing to the north of London. Basically this stated that the new routing was essential on Flight Safety grounds. This is perhaps debatable but any comment on this is not for the BGA. However, it was noticed that two procedural heights annotated on the map accompanying this information document were 1000ft higher than had previously been stated as necessary during the 1972/73 negotiations. For technical reasons, these heights are crucial to the exact amount of airspace required to be controlled in the north and north-west and it was assumed that noise considerations had caused the upwards change. A letter has been sent pointing this out, detailing the considerable revisions that could take place as a result. As yet there has been an acknowledgement but no reply. It will be interesting to see if these proposals bear fruit or alternatively what the objections might be—there will be some without doubt!

The likely effect of noise and other objections to the proposals is of course unknown, but it should be noted that Ministerial approval has already been given. As a result of a press conference, at least one newspaper air correspondent has stated in print that the new system will go through regardless of any local objection. My own impression is also that the new TMA will be implemented with no changes whatsoever, in spite of our submissions regarding Rule 22, the Essex area or the anomalies apparent in the information document to noise bodies etc.

The time scale for preparation of the change is now such

that the BGA could not expect to influence the implementation date. This is not to say that any or all of our continuing proposals will not become effective at some time after implementation, whether or not during 1975 is impossible to say, whether at all, is impossible to forecast. We shall undoubtedly continue to campaign against the unnecessary and illogical aspects of these proposals as long as is necessary.

Assuming that no alleviation proves possible, what will be the effect on gliding in the south-east? Here a certain amount of speculation is involved but there is general agreement that the situation is far more serious than may be obvious at first sight.

In the short term, even local soaring will be impossible from some sites. Bronze C and Silver C qualifications will be impossible from a larger number. The ability to hold competitions, break records, fly cross-country, will suffer from the increased difficulties or even prove impossible. A side effect for clubs below the TMA may be an increase in general aviation traffic or even more ATZ infringements, by powered aircraft confined below the base level because of the loss of their Rule 22 exemption. *Up to 30% of the entire BGA membership* will be affected to a greater or lesser degree.

In the longer term—particularly for those clubs directly affected - one must ask if they have any future at all. Can they go ahead with plans for expansion of amenities or members? Will they keep the members they already have, with little opportunity past the circuit and early solo stage? Will they eventually have to close altogether and, if so, what about financial compensation or more important the loss of gliding potential to everyone?

All this in an era of contraction rather than expansion of commercial aviation. It could statistically be proved that the exclusion of gliders *might* stop the possibility of an average of two airmisses per year—on past figures and without any changes to the current exemption. This seems to be the only advantage on Flight Safety grounds and the only point that can genuinely be weighted against us. The gliding community is the *only section* of UK Aviation to have suffered considerably more than some minor inconvenience from these changes.

To conclude I should like to quote some extracts from a letter received from the Kent Gliding Club. These seem entirely relevant and state the situation far better than I could:

"There is no evidence, either in fact or statistically, to show that our operation within the LTMA over some 14 years or more has in any way affected flying safety and, therefore our exclusion cannot be shown to improve such safety by any measurable degree."

"It seems to us that there are considerable emotional pressures from various parties....and very little logic".

"We feel that this cessation of exemption is to some extent a 'slap in the face' for our considerable efforts at strict discipline and responsibility".

"If we cannot fly at a safe height either to the west or to the north....we may see a spate of low level and dangerous cross-country flying or possibly, even worse, the breaking of rules, which hitherto we have respected and obeyed without question".

"Is it right that we should suffer from the pressure groups of commercial traffic...."

IS IT RIGHT?

all pilots can read — but the BEST PILOTS read

Sailplane & Gliding

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Gliding by Objectives

"BALD EAGLE"

Can business techniques be applied to a sport such as gliding without spoiling the essential quality of fun? I believe they can. I believe, too, that sensible application can markedly increase our enjoyment.

With just one life to lead it follows that time, and the way we allocate it, is exceedingly important. Here I am concerned only with leisure time—before and after working hours, weekends, holidays—and the best ways of using it to get more out of gliding.

Gliding is a greedy, even profligate, consumer of time. We spend hour after happy hour at the airfield—and suddenly another priceless, irreplaceable day has gone with little to show for it.

My proposition is that we could set out to use more efficiently the time we give to the sport so as to improve our skill and thereby increase our pleasure. The idea of translating "Management by Objectives" into "Gliding by Objectives" flashed over me during the fuel crisis. (Subsequent flashes have seared me each time I buy petrol to drive to the airfield.) If time is precious, so is money—and we need to get value from both.

Dismal Reading

First, I took stock of my meagre accomplishments as at the end of 1973. They made dismal reading:—

Total hours 85, total hours Pl 64, number of flights 171. Silver C complete after 47hrs Pl, 143 flights.

I consoled myself with the wishful thought that I might be only a shade below average. Nevertheless, I was appalled to realise that since I had finished my basic training which is, of course, to a syllabus, I had not followed any systematic programme that would help me to fly better. I had been aimless, a drifter, a gliding bum —and I had enjoyed every moment! However, with costs mounting I now wanted to get down to working sensibly.

As a start, I recorded what it was I aimed to do in 1974, knowing that once this was committed to writing not a line could be cancelled, if Omar Khayyam is to be believed. I knew, too, that "**MBO**" requires a monitoring process; the gymnastic feat of confronting my inner self with a backcheck was one I shrank from attempting and so made achievement of my objectives vital. Summarised my 1974 objectives included:—

1 **Fly cross-country.** My flying is restricted to weekends. By late summer I had attempted two out-and-returns, and one 300km triangle.
2 **Field landings.** Carried out three in same period. Selection, circuit planning and landings satisfactory.
3 **Gold/Diamond height attempts.** Visited Black Forest Gliderport, Colorado Springs, US but a shade too late for wave. No joy, either, at Shobdon.
4 **Begin cloud flying.** Entered cloud at every opportunity, practised instrument flying, gained a little experience.
5 **Begin speed flying.** Used best cross-country speed to set targets for improvement.
6 **Fly from different airfields.** Visited, and flew from, four sites during summer.
7 **Learn about use of oxygen.** Received first rate theoretical and practical instruction from Micky Jensen, CFI at Black Forest.
8 **Stay current on winch launches.** (My club uses aerotows.) Checked out.

This simple programme, which in fact involves a good deal, has certainly given me a greater sense of purpose and, in consequence, a corresponding feeling of achievement tinged with that essential ingredient, frustration. It has also been a lot of fun!

From a tentative 1974 approach it has been easier to set my "Gliding by Objectives 1975". Overall title: "Cross-country and Knowledge-Improvement Year".

Practical:—achieve Gold distance; achieve Gold height; extend cloud flying; compete in a Regional; enter National Ladder; make 12 field landings; make a wave expedition; achieve speed targets set from 1974 "best" and improve turning point photography.

Theoretical:—improve knowledge of weather, navigation and radio equipment/installation. This round dozen objectives, or ambitions as they are in some cases, offer the promise of a good, full year in 1975, with winter evenings and flightless weekends for the theoretical programme, so that the soaring season may be approached with even greater zest. Whilst it is improbable that all aims will be achieved, I hope I shall be able to look back on 1975 as a year in which I made systematic, all-round improvement in my gliding and became a better, safer pilot.





JOHN BRENNER describes a recent flight over the Welsh mountains from the Long Mynd

FOUR WAYS UP SNOWDON

This flight started out in a rather casual and leisurely way, but ended up achieving two of my long-standing gliding ambitions: to soar over Snowdon, which is the highest mountain in North Wales, and to combine in one flight all the four types of lift commonly found in the UK, namely: hill lift, thermal, wave, and sea breeze front. Hence the title: Four Ways Up Snowdon. But first, some background.

Gliding folklore is rich with tales of heroic bungey expeditions to the North Wales Mountains. After a couple of outings with the Cambridge Club several years ago, I was convinced that this was not for me. It was great fun, with spectacular launches and memorable prangs (fortunately mine was only a little one!), but it all resulted in very little flying. So if you are hooked on wanting to soar among these big hills, as I am, there has to be a safer and more effective way of doing so.

The answer is to make out-and-return trips into the mountains from an established airfield elsewhere. From a site such as the Mynd or Sleap, this involves about a 200km round trip, which is well within the capability of a modern high performance glider.

I have spent the last couple of years trying to make this kind of flight in my SHK, and am beginning to have some success.

The first snag is the apparent lack of landing fields. Careful exploration on the ground and from the air shows that most of this area is actually within five or ten miles of landable fields. So provided that you have good performance and keep fairly high, a field can always be kept within gliding range. The real difficulty is in navigating reliably to the known fields, and not meeting the ground unexpectedly elsewhere. This requires good visibility and a reasonably high cloudbase, which leads on to the second and most difficult problem, which is the weather.

In westerly wave conditions there usually tends to be almost complete cloud cover over the Welsh hills, and cloudbase is often down onto the higher peaks. This makes reliable navigation difficult, and means that one must keep very high above cloud tops to stay within range of the only safe landing grounds in such conditions, which are out on the Cheshire-Shropshire plain to the east. Also the strong westerly headwind tends to bring one disconcertingly low on each upwind hop to the next wave. Flights as far west as Lake Vyrnwy and the Vale of Clwyd are now quite common in wave. But it is rare to get further into the big mountains. Louis Rotter does so in his RF-4 motor glider from Liverpool - but that's cheating!

In thermal conditions, a high cloudbase and good well distributed thermals are needed to be sure of keeping in range of a field. Good thermal days of this type are rather rarer than in the south or east of England. But over the years there have been several thermal flights into the area, some of them rather hazardous and ill prepared.

With careful planning, choosing the right sort of day, glider flights into these mountains need not be dangerous. My guess is that in a few years time they will be quite commonplace.

THE OUTWARD FLIGHT

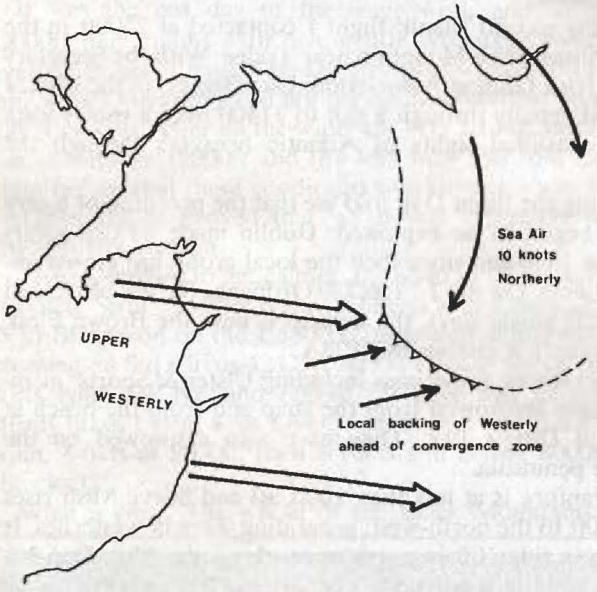
Saturday July 20 at the Mynd gave a 15kt WNW wind, and about one third cover of strato cumulus, based initially at 3500ft asl. Having nothing better to do, I half jokingly declared an out-and-return to Snowdon, as there were signs of it being a reasonable wave day. At about 11.30 I was winched into the hill lift. There was a fairly persistent edge of strato cu off the north end of the ridge, presumably marking the wave off the Stiperstones hills. After half an hour I got a thermal strong enough to take me into the bottom of this cloud, and then climbed up out of the front of it into the wave.

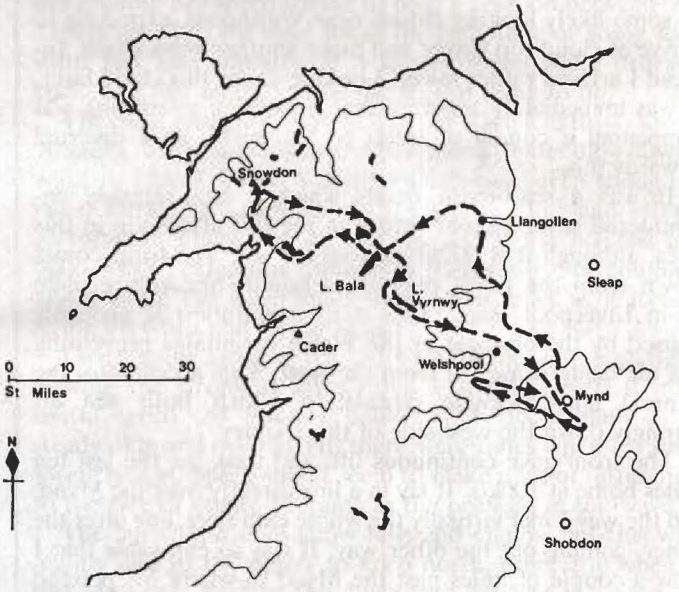
This initially gave about 4kts, weakening to 1kt at about 7000ft asl, at which I set off north along the wave. Heights and times are approximate, as I had no barograph. After a few miles, I jumped upwind to another wave about ten miles west of Shrewsbury. This was only vaguely marked by some rather scruffy cu, but gave a fairly brisk climb up to about 7000 asl again. Over the radio I talked to other gliders at the Mynd and on the ground at Sleap who were now coming up as well.

The first real obstacle to the flight was Airway Amber 25.

This runs north-south along the Welsh borders, generally based at 4500ft. It is usually rather difficult to cross in wave conditions without risking infringing the rules. This time it nearly brought me down. I had a good climb on its eastern edge near Oswestry, and hopped upwind in VMC to the next wave which was just about on the centre-line. Moving on forward through this to remain legal left me about 2000ft above cloud tops, which was just sufficient to plunge into the back of the next cumulus cloud bank on the other side of the airway. Coming out of the front of this, I could only find weak wave lift.

The next hour was very tense. I first ran northwards along this rather poor wave over rough country. This course edged me back underneath the airway, which kept me down to little more than cloud-top height. Near Corwen I made a rather desperate upwind run of several miles by sliding along the northern flank of a large cloud bank in reduced sink and got free of the Airway. This glide ended below cloudbase at the upwind end of the cloud just north of Lake





Bala. So I had fallen completely out of the bottom of the wave system.

This disaster seems to befall me at least once on every wave cross-country. This time, after about 20 minutes of misery, sweating it out in broken thermal lift, I regained cloudbase, moved out into the wave and ran southwards along the face of the cloud to a stronger looking bit over Lake Bala itself. This wave was a good one, and took me to about 7500ft asl.

By now it looked as if I might have a real chance of completing the task. The Snowdon massif stood out clearly above the countryside in front of me 20 miles away. There was only about one eighth cloud, so navigation was easy, and the wave, although now weak and not very high, was fairly predictable. Also for the next three hours I found no strong sink anywhere.

From here onwards was very inhospitable landing country, so each move had to be carefully planned. With the fields near the southern end of lake Bala as a secure base, I stepped five miles over the mountains to the next set of wave cu. I flew along this to the south-west, but could not get higher than 6000ft. Perched at the top of this wave over unlandable country, the safe fields near Bala were about ten miles upwind, which was much too far for safety.

Fortunately, there was another of those providential bridges of reduced sink extending upwind, which took me forward to the Trawsfynydd nuclear power station with little loss of height, and to within range of the Portmadoc fields. From this position there was no possibility of turning back. I was a bit apprehensive, as reports over the radio from the Mynd seemed to confirm my suspicion that the wave system was collapsing. The wind here was light, so I lost little height on the next step which took me just over the top of the cu inland from Portmadoc. Snowdon was now out of sight somewhere among the clouds a few miles off to the north-east.

After 20 minutes jittering about here gaining very little height above cloud top, and much too low for comfort, I edged up into the mountains along the valley to Beddgelert. I felt very pessimistic, and doomed to scuttering back out again to land in some wretched swamp near the Portmadoc estuary. Instead, conditions got better and better, and my spirits rose with them. Each puff of cu had lift in front of it, and soon I was out in the blue over the south-east bowl of Snowdon, climbing happily at 4kts. Snowdon in the bag at last!

This climb took me to 9000ft asl, the highest point of the flight. The mountain tops themselves were covered with cloud, which occasionally parted to show the mountain railway and the peak itself. On the radio I could hear gliders in the north of England reporting climbs to 15 and 20,000. The time was about 4.30.

By now I was really enjoying myself again. Being high and safe, and pretty sure of eventually getting back home, I felt brave once more. There was a terrific view to the left across Tremadoc bay with the sunshine blazing on its surface. Ahead was the Lleyn Peninsular, with Anglesey a grey smudge upwind of the clouds over the big mountains. On the right was the whole of North Wales and Colwyn Bay. Far to the west I could see cu rising above the horizon over what was probably Ireland.

THE RETURN TRIP

This was leisurely and quite uneventful, until I met the sea breeze front.

From the climb over Snowdon, the safe fields at Bala were once again in range. On the way there I found very little sink. The sky locally was almost completely blue, but upwind of each patch of cu, there was steady wave lift. I did not linger much until meeting stronger lift in the blue directly in the lee of Carnedd Filast mountain.

This took me to about 8500. I then spent a pleasant hour over the Berwyn mountains, wandering around between lakes Bala and Vyrnwy, relaxing in the late afternoon sun and enjoying the view. Over the radio I could hear two gliders from Sleap pushing forward through the border mountains a few miles to the north near Corwen. At the Mynd they had all lost the wave now.

At about 6.30 I decided to glide it out home to the Mynd, and set course from Lake Vyrnwy across a 20 mile blue gap to some likely looking clouds near Welshpool, expecting to arrive at cloud top height and make another wave climb. Instead I arrived rather lower. Looking under this cloud layer, it was immediately apparent that something interesting was happening a couple of miles to the north, so I diverted towards this.

It was a sea breeze front, which I have already encountered several times before in the late afternoon in this area, although it is 60 miles from the sea. The front comes down from the north over the Cheshire-Shropshire plain from Liverpool Bay. This deep penetration is probably caused by the obstacle of the Welsh mountains preventing sea air being drawn in from the west. This accentuates the general anti-clockwise circulation which pulls sea air strongly down the west side of the country.

The front gave continuous lift, and took me the last ten miles home at 100kts. It lay in a line directly over the Mynd. On the way I met virtually the whole club fleet, one after the other, coming out the other way. It was so enjoyable that I flew a couple of miles past the Mynd to where lift petered out, and then turned and rushed 15 miles back out to the western end of it again.

I spent another half hour trying to get high enough to climb up through the cloud to the wave again, but did not succeed. Meanwhile, Mike Horan had been winched up into the front in his Skylark 4, thermalled up through the cloud and out into the wave which was still there in the upper westerly flow. He got to about 8000ft asl, and flew around Shropshire for a couple of hours.

I went in and landed after flying for seven hours 20 minutes. My cross-country speed was abysmal. But as far as I know this is the first time anyone has ever wave-soared a glider (excluding RF-4) over Snowdon.

The only previous glider flight over Snowdon was Stuart Waller's remarkable thermal trip from Dunstable in a Swallow about ten years ago. It was also the first flight that I know of to combine all four types of lift. Such conditions must be rare.

What I am hoping for now is to re-visit Snowdonia on a strong wave day, and find out just how big the legendary Snowdon primary wave really is, before our rivals from Sleap or Shobdon get there.

IRISH WAVE
an untapped potential

STEVE MACKEY

There are only four gliding clubs in Ireland. Ulster & Shorts near Belfast, Dublin near the Eire capital and two small groups at Clonmel, Tipperary, and Farranfore near Killarney, Kerry.

Less than a dozen enthusiasts started the Kerry Club in 1970 at a small country airstrip within easy towing distance of the juicy Kerry mountain lenticulars.

I spent a few days at Farranfore in mid-August while the Dublin Club was holding a two-week safari visit—bringing their own gliders and tug.

The air over the mountains which form the Ring of Kerry is virtually unexplored by gliders but infested with wave cloud.

On my second Blanik flight I contacted at 2500ft in the lee of Slieve Mish Mountain near Tralee. With the Secretary of the Irish Gliding Association, Dan Begley, in the back, I climbed rapidly through a slot to 11400 over a snowy vista with occasional sights of Atlantic breakers through the gaps.

During the flight Dan told me that the potential of Kerry hasn't begun to be exploited. Dublin made its first safari there in 1970 and since then the local group has grown under its wing. On the 1 : 126,720 Ordnance Survey of Ireland (sheet 20 Single Bay), the airstrip is near the Brown Flesk River where it crosses the T28A.

Safari teams, sometimes including Ulster & Shorts' members, have aerotowed from the strip and from the beach at Inch, in Dingle Bay. They have also autotowed on the Dingle peninsula.

Farranfore is at less than 100ft asl and Slieve Mish rises to 2400ft to the north-west, generating wave in westerlies. It also gives ridge lift in north or south winds. Also, Dan has wave soared in a northerly over Dingle Bay to 8000ft in its lee.

Other pundits swear by Macgillycuddy's Reeks—no that's not an obscure Irish whisky but another range wave 3400ft high, south-west of Farranfore. Here the successful wave pilot would have a panorama of the lakes of Killarney.

Only three Gold heights have so far been claimed on these safaris, all climbs having broken off for want of O_2. Dan thinks this poor record is more for want of gliders than any fault of the wave.

Lenticulars often pose innocently in picture postcards of Kerry and jet pilots from Shannon have reported strong lift at 20000ft over the area. Dan said both the Dublin and Kerry Clubs would welcome British clubs to join in the wave bonanza on future safaris. I'd certainly recommend a visit. Even if you don't fly, it is marvellous countryside in which to be grounded.

The Irish are cagey about their airspace but a phone call to Shannon usually gives clearance to the desired height. Camping and caravaning are possible on the airfield which has full facilities including two bars. For more details, contact Ken Mellor, CFI of the Dublin Gliding Club, 28 Hillside Drive, Dublin 14.

The accent is very much on wave flights as we continue with a report by IVOR SHATTOCK

100 SQUARE MILES OF LIFT

— OCTOBER 27, 1974

THE MET

12.00 hrs at Long Kesh. Dry adiabatic to 850mb (5000ft). Inversion at 770mb. winds NW from 2000 to 30000ft, 55kts at 5000ft and 120kts at 24000ft. Nil shear. Forecast — waves 7000ft down.

THE FACTS

Wave over Usk (wave top) extending to 14000ft at least. Wave length 20 miles. Lenticulars 10000ft. Cloudbase 3000ft plus. Lift strength 10kts plus at 6000ft.

Why write it up? Because it is the most extraordinary wave flight I've ever had. I hope I don't bore you but as this is less easy to do in winter, here goes.

It was the last day of the wave week and we'd had 12000ft plus climbs with nice gentle tyros-type waves for five out of seven days. The last few pilots lingered on and they were kind enough to ask my opinion whether to go or stay, I said go. After all the wind was very strong, instability was evident to 12000ft and the Met man had told me the night before that these conditions wouldn't produce wave.

Three flights proved that yes it was extremely rough. Enough was enough.

Then it seemed to get calmer, the wind to abate and I was tempted. So at 15.00hrs Danny Roberts towed me to the last N in Blaenavon on the 1:500000 map, west of the river rail crossing, in Std Cirrus 424. At 3000ft I could see an edge of sorts lying SW-NE and ragged lift gave way to smooth, steady lift as I went west. Over Blaenavon it was going like a train, 4-6kts at 5000ft, then 8-10kts and before 8000ft, off the clock!!

What a view. The whole of the Black Mountains were covered in thick cloud - a wall of it, while below fields of mushroom-type clouds came and went as quickly as mushrooms, sometimes leaving only the merest glimpses of the ground. My speed varied to hold a position between 60-110kts on 330°. I'd read about the technique of going forward fast and climbing at a slower speed while drifting back, and this seemed to be the logical thing to do.

The most revealing feature was the wave length – about 20 miles. There was lift over Abergavenny extending downwind to Usk. I know. I drifted south-east, even though I never turned, and flew mostly at 60kts to climb and 110 to go forward. There was lift over the lake at low heights, say 5000-7000ft, extending forward to Blaenavon. One couldn't travel along the wave more than a few miles as it meant flying very fast and losing height.

I tried going along to the north and to the west, each time seeking the strongest lift so that I could convert it into useful speed. At 90kts I could climb occasionally at a steady 4kts and even at 110 there were times when I wasn't losing height. Speed didn't seem to make a lot of difference to the rate of climb, so much as the position in the wave.

The barograph does show falls and climbs, but this was mainly due to the desire to keep north, especially when I was obviously nearing the downwind crest of the wave, *ie* over the Usk motorway and in the airway. The area of lift in the one wave was over 150 square miles, work it out yourself.

Although I got the oxygen out I didn't use it other than for moral support. The radio was invaluable as Earl Duffin, my 424 partner, kept me informed of the cloud state, etc.

The flight terminated in playing leap frog with cloud at 8000-9000ft, trying to get to a hole. Flying at 110 over and in cloud in a wave length of 20 miles at 9000ft is the most incredible experience I've had for a *very* long time. I got to the hole and with the brakes (??) out and VNE got down into the gloom below. It was raining, dark *and rough!!* Rough!! that's an understatement.

Incredibly I landed out. From Abergavenny at 3500ft it's easy to glide to Usk, but not in this air. The rotor extended from Abergavenny to Usk and, rather than risk any turn below 800ft, I chose a big field and landed in rain. Not very pleasant but very nice when its over.

CONCLUSIONS. That was a big one and I'd like the Met man's comments. That was enough flying to last me for ages – well – at least a week.



Drawing by Charles Hall

Not having the aspirations of the true Pundit, George Day of the Norfolk Club, would like to be considered as the first gliding *"FUNDIT".*

He also wishes to report aquaintance with a new cloud type—the *"PECULIONIMBUS".*

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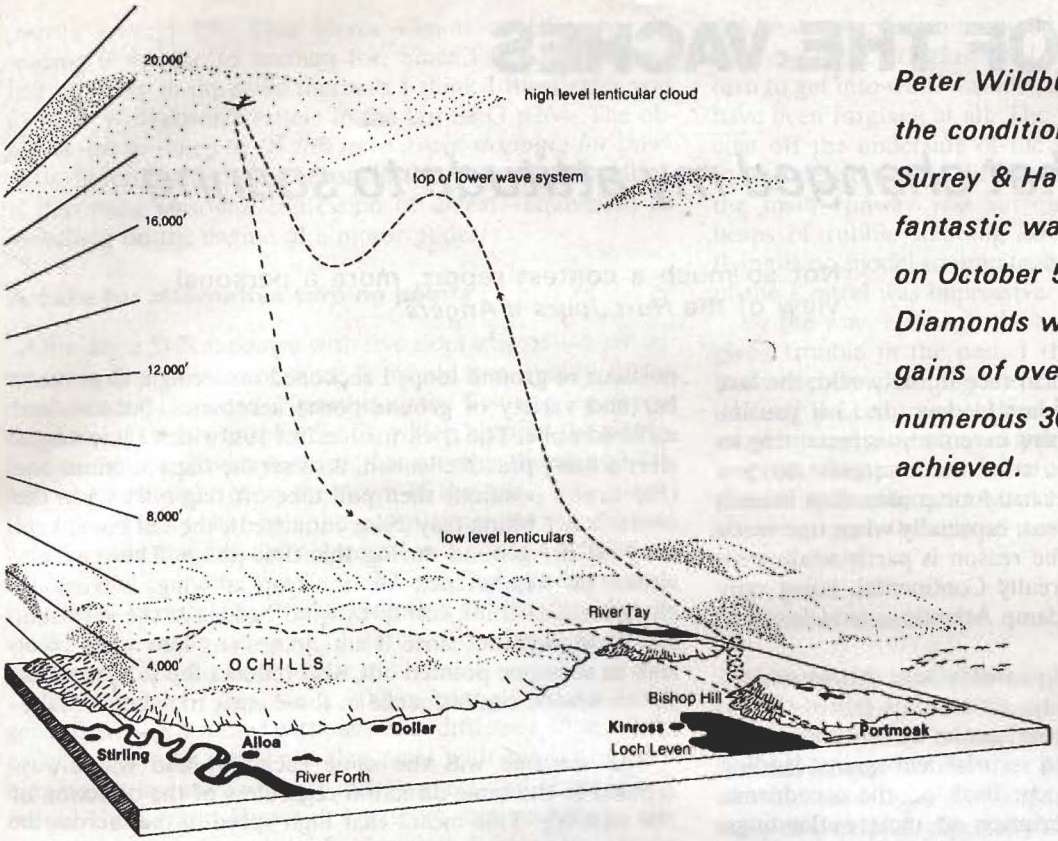
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Peter Wildbur's interpretation of the conditions which gave the Surrey & Hants Club their fantastic wave day at Portmoak on October 5 when eight Diamonds were claimed from 13 gains of over 5000m and numerous 3000m climbs achieved.

Christmas Competition Result

Our Christmas Competition, set and judged by the Arm-Chair Pilot, asked for a weather forecast aimed at a particular sport though in reality giving the glider pilot the maximum information. We had a batch of ingenuous and entertaining entries with Alan Purnell's version, printed below, winning him the year's subscription to S&G.

Here is the weather forecast for cricketers and it covers the whole country.

There will be no interruption due to rain or showers and it will be fine and sunny with the chance of a few scores of 500.

The opening fast bowlers should start from the west with what little wind there will be. There will not be enough lift off the slope at Lords to be useful, even to slow bowlers. At Hove the wind will swing round to the seaside end by mid-afternoon.

On the hard pitches, there will be quite a few bumpers and these will rise to four feet and later get up to a height of five with a few rising quite sharply to six later in the afternoon.

The ball should be kept well up but even so there will be plenty of fours with the occasional six. On damp grounds, catches will be difficult low down since it will be awkward to turn, and slips will not be needed.

Those bowling first should aim to take an early lunch and declare early in case of a late finish.

Umpires will need their sunhats as the shade will only occur for about two or three overs in every eight with no wispy cloud to lessen the glare. All areas of the ground will be clearly seen.

The outlook for the Test Match at Headingly, Leeds, for the weekend is for strong winds from the Pennine end with unbroken sunshine through a long gap in the clouds. The pitch will be smooth with lots of green and plenty of lift for the fast bowlers up to about 12 in the morning. Pressure will remain high on the England team.

That is the end of the forecast for cricketers.

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BEWARE OF THE VACHES

or

Eight days that changed my attitude to soaring

Not so much a contest report, more a personal view of the *Huit Jours d'Angers*

MIKE BIRD

The French are the most logical race in the world; the fact that the *Huit Jours d'Angers* last 11 days, or 13 if you include registration and the closing ceremony, is reassuring to us illogical British. It might come as a surprise to you therefore to learn that we only had four contest days in each Class in July 1974 *Championnat,* especially when one reads of Continental conditions. The reason is partly to do with the fact that Angers is not really Continental, being only 125kms from the windy and damp Atlantic – and partly to do with *vaches.*

A British taskmaster would probably have thrown us into the air, if only out of curiosity, on ten days out of the 11. But M. Hersen, the tall, stooping, gimlet-eyed taskmaster of countless *Huit Jours,* is all for *securité* and against landing *aux vaches, ie* anywhere except back on the aerodrome. *Aux vaches* is a literal description of most outlandings. Vineyards cover the Loire valley to the east, everywhere else wheat and maize, hardly any of it cut, abounds.

The only remedy, therefore, for that sinking feeling is cow pasture – if you don't mind gathering up a few kilos of *merde de vaches* with the tail parachute and having to hose it down in the cowshed afterwards, not to mention the joys of lugging a Kestrel wingroot in the dark through ankle-deep *mdv* with its alarming effects on traction and uprightness. However, cow-pastures are not large and often not available, so when someone is reported *aux vaches* they may in fact have been less lucky and may have prematurely harvested two-metre high maize or pressed the odd grape ahead of the vintage. The wreckery and prangage, having in mind the great experience of the pilots and the small number of contest days, was indeed spectacular: M. Hersen traditionally gives charming stuffed cows (toy ones, of course) to the victims on the following morning, if they can hobble up to the rostrum, that is.

A sad tail

An attempt to repair the damaged tail of a Jantar with the aid of heat resulted in the aircraft catching fire; all that remained of the fin and rudder was a heap of charred threads looking like a giant lampwick – a melancholy sight that did not prevent some uncharitable souls from falling about with mirth.

Groundloops (absence of) : Chandelles (abundance of)

Take-offs were always carried out parallel to the main *piste* which runs roughly north-west; since the wind was usually westerly the crosswind was interesting. As a connoisseur of ground loops I reckoned on seeing a large number and variety of ground-borne aerobatics, but saw and suffered none. The trick for Kestrel 19s, which I was taught after a hairy practice launch, is to set the flaps at minus one (fast cruise position) then pull take-off flap *only* when the controls are biting (say 20kts indicated), the tail being kept hard on the ground during this first phase. The tendency either to weathercock or to drop a wing is virtually eliminated. (I think full downwind rudder at the very start is a good idea too, since it anticipates any into wind swing and, as someone pointed out, also reduces the side-area that the crosswind can influence in those early moments of take-off.)

The startline was the same each day and was always crossed in the same direction regardless of the direction of the first leg. This meant that high speed dashes across the line sometimes ended not only in the customary steep zooms but in chandelles as the pilots hurtled round onto the first leg. Since nearly 80 Open and Std gliders were usually in the air at the same time, this was more than interesting...

Waving the Union Jack – just a little

In the large (53 entries) Standard Class Simon Redman, an old *Huit Jours* hand by now, distinguished himself in fast company by coming ninth in his Std Cirrus. Justin Wills – who has recently been hang gliding at 2000ft above the flock at the Mynd – flew somewhat faster in his Std Libelle than his home built dangler and came 21st.

George Burton in the Kestrel 22 came sixth in the Open (20 entrants), David Carrow 11th in the orignal carbon-fibre-spar Kestrel 19 and M. Bird 15th. As the final placings show, the French cleaned up.

There is little doubt that the Kestrel 22 goes better than it appeared to at Angers—the temptation to enter the latest prototype in a major competition is difficult to resist, but it does mean that the pilot is, frankly, learning about the aircraft as he goes along and single-minded dedication to soaring technique is not compatible with this. George came 11th on the first day and third on the last, which is indicative.

Pensées : Why did the other "rotters" go so fast?

Even with a barrel-load of excuses I can't work out why I take 4hrs 44mins to do the 343km task on the first day when the winner, Memmert, takes 3hrs 11mins (then wrecks his glider the next day, but that's another story). I give 15mins for not using ballast, 30mins for getting stupidly lost, 5mins for the extra 1.3 metres (the most I would grant a Nimbus 2

over a Kestrel 19). That leaves 43mins of difference in soaring technique to account for. Since I was climbing as fast or faster in the same thermals I think I must refer you to John Williamson's article in the last S&G p264. The object *is not so much to fly fast as to avoid stopping for thermals*. Stopping to circle except for the really big, fast climb is becoming almost a confession of defeat—equivalent to switching on the engine of a motor glider.

A case for alternative turning points

One day a 512km course with five sides was set—much to my own disappointment since it would not qualify for a much needed Diamond. Nonetheless the first two legs were exhilarating dashes in splendid lift which brought the whole field up against a massive storm that sat over the second TP and which brought everyone down in the same area. Since the rules specify that half the competitors must complete half the task, the day did not count as a contest in spite of the fact that everyone did about 200km. Perhaps not such a silly rule—certainly with the closeness of the landings it would have made no great difference to the final result whether such a day counted or not.

The Standard Class, set a 300km triangle in the same general area, got round without much difficulty. One's only reflection on this result was that races with alternative turning points in cunim weather make a great deal of sense and reduce the *vaches*. However I suspect that such tasks are regarded by the French with suspicion, bearing an untidy resemblance to cat's cradles and their unspeakable parent, free distance.

Sky reading

Reading a sky intelligently takes local knowledge. More than one British pilot went slower than he needed on the second contest day because the sky in the later part of the day looked messy and lacking in the shapeliness we expected. In practice it was still quite strong and the locals pressed on at speed towards the cunningly disguised updraughts.

Docile Kestrel

The best test of whether you are beginning to feel at home with a glider is when you can enjoy scratching in it. Well, nobody really enjoys scratching, but if you can spend an hour in it below 1500ft without getting miserable and ulcerated, you are somewhere near that happy reconciliation of man with machine. Perhaps it only *seemed* like an hour, but on the fourth and last day *(tout le monde* went *aux vaches)* I actually managed to enjoy the scrape—maybe it's because I'm a Londoner, as the song says, and because I thought the foreigners were suffering even more. The field was small, and though approaches-at-40kts-and-tail-parachutes-out-at-50ft are not in the Kestrel handling notes, perhaps for some situations (or for pilots under 155lb?) they ought to be...

One incident was educational; on the practice day immediately before the contest I was at about 100ft on tow when quite suddenly I saw the tug sail away waving its towline in my face. Winch cable breaks I've had by the dozen but this was something different, especially as the airfield was quite unfamiliar and the boundary fence was much too near for a straight-ahead landing. The subsequent 300° turn to get into wind was low, slow, and in a Dart would not have been forgiven at all. The fact that I knocked some gel coat off the underside of the starboard tip was due to my foolish desire to land directly into wind and to the fact that the main runway was surrounded by *travaux* including heaps of rubble standing 20 inches off the ground. The flying is no model to imitate, but the docility and toughness of the Kestrel was impressive.

By the way, although the aerotow ropes at Angers have given trouble in the past, I think the real reason was my inadvertently clutching the release knob too hard! If the take-off procedure mentioned above is followed and the usual recommendation to take-off holding the release is ignored, this particular *betise* can be avoided. It is important to be able quickly to abort, but in bumpy conditions a tense grip on the release may lead to a premature and unwanted abort.

A word of thanks

I would like especially to thank Messrs. Henry and Cartry—Standard Class Champ 1965 and Angers Champ 1974—who put in a great deal of their own elbow-grease and advice (not to mention filler) into the refurbishing of my starboard tip. Few worldclass sportsmen are so courteous and helpful, especially to a stranger low down on the totem-pole.

Other pleasures

On days when the sun shone and the cumulus drifted overhead, we more than once found ourselves grounded by the combined effects of iron discipline and somewhat dodgy weather forecasting; there is nothing wrong, however, with an afternoon by the Loire, with its great sandbanks and islands, giant insects bumbling in the hazy air, a litre or so of the local wine gently eroding that fine edge of concentration that is so essential to the art of fishing with sewing-thread, safety-pin and a redundant cork...

Are you Moffatting or just Willsing?

Philip is right, though. Apart from one or two amazing hours of Moffatt-style speed flying (punctuated, not to say ruined, by the extra hour or so of Bird-style fumble) the memories that stick most in my mind are the farmer's children who showed me how to catch fish for supper, the gigantic bowls of soup and local wine in a farmhouse smothered in climbing flowers, the long conversations about pretty well everthing with gnarled farmers, miles from big cities or main roads, whom tourists never see. If it hadn't been for landing *aux vaches*, I'd have remained just another tourist...

Final Placings: Standard Class (four races), 1 Rantet (France) LS-1; 2 Penaud (France) LS-1D; 3 Schroeder (France) H-201, Henry (France) LS-1D; highest placed foreigner, 6 Stouffs (Belgium) LS-1; highest placed British pilot, Redman, Std Cirrus.

Open Class (three races and one uncompleted), 1 Cartry, 1 Mazalerat, 3 Ragot, 4 Mattern—all French and flying Nimbus 2s. The highest placed foreigner, 6 Burton (Britain) Kestrel 22.

FLYING THE PIK-20



RICHARD JOHNSON, eighth in the Open Class at the World Championships, writes about the Pik-20 in which he won the USA Standard Nationals

PIK-20 stands for the Polytechnic Institute Club's 20th design project. They are either extremely lucky or very capable design engineers, because this design turned out to be surprisingly good and well ahead of the normally unbeatable West European competition. The 1963 OSTIV prize winning PIK-16, Vasama, was an earlier design project from this group.

I first saw the PIK-20 at Waikerie, Australia, where the first prototype was entered in World Championships Standard Class Competition. Since I was entered in Open Class with my ASW-17, we only flew together occasionally while thermalling before entering the start gate. This PIK-20 appeared to be able to climb as well as the ASW-17, which is quite good. It was rumoured that Ingo Renner had stated during the practice period that he found the PIK-20 could both outclimb and outcruise Ingo's fine Std Cirrus. This may have been true, but the Finnish pilot R. Nurminen was either not lucky enough or not sufficiently experienced to fully prove this in the final standings, where he was placed 13th.

The PIK on Loan

My next encounter with the PIK-20 was about six weeks later near the opposite side of the world at the Atlanta, Georgia, National Soaring Convention. Here Martti Riekkinen, Andy McQuigg, and the Finnish designers/builders participated in the Convention and placed a second lighter prototype on display. I tried the cockpit on for size a second time and inquired as to the possibility of flying it at the coming Hobbs Standard Class Nationals. No commitment could be given then, but Martti phoned two or three weeks later with good news. The fourth PIK-20, which is the first production unit after three initial prototypes, was due to fly about May 1. Nurminen was to enter it in the International Hahnweide Competition in May, then send it immediately on to its US owner, Andy McQuigg in Florida, and Andy had kindly consented to loan it to me to use at Hobbs.

The schedule was tight, but all the arrangements worked out as planned. It arrived in Florida on Tuesday, June 25, and by Friday was instrumented, licensed and on its way to Adrian, where Andy was to test it by flying in the Open Class Nationals, while I again competed with my ASW-17. Considering it was Andy's first Nationals, and that his first flight in his PIK-20 was made on a no-contest day at the start of the competition, he did well by being placed 25th overall and fourth highest in Standard Class. On most days the weather was weak, but Andy kept it up with the best.

Only four days remained between the close of the Open Nationals at Adrian, Michigan, and the start of the Standard Nationals at Hobbs, New Mexico, some 1600 miles distant. We drove all night to sleep the next in Dallas, and then were off to new adventures in the arrid skies of the south-west. Fortunately for me, Andy's crew, Rich Audette, was able to tow the PIK in its neat little trailer to Dallas, and then continued on to assist Alice and me at Hobbs whenever needed.

We arrived at Hobbs in time to make only one practice flight before the competition started. I hopefully calculated that the PIK-20 flaps would be easy to use and almost identical in operation to those of my HP-13 that I had flown for some five years before acquiring the ASW-17.

A check of the PIK weight and balance report showed its empty weight to be 536lbs. This particular sailplane had lead balance weights attached along the flap leading edges. I was told that these were found to be unnecessary and they were being removed from the production design, which would reduce the empty weight to about 505lbs. The weight placard indicated a Max gross weight of 880lbs, and this permitted me to add 170lbs of waterballast to the wing tanks, without exceeding its certified limitation. The wing loading so ballasted is 8.2 lb/ft^2.

Somewhat Top Heavy

The take-off was accomplished without difficulty, but I could feel the extra weight of the waterballast, which tended to make lateral control response less than nimble and perhaps somewhat top heavy. Excellent skids are moulded into the wing tips so no harm is done should one drag. The aerotow characteristics are very good. The small chord elevator, along with the large chord fixed horizontal stabilizer, no doubt contribute well to the good longitudinal stability. Directional stability on tow appeared to be excellent.

The tow line was released in thermal and a climbing spiral initiated, with the flaps set at 46°. Even fully ballasted the PIK climbed easily in the New Mexico/West Texas thermals, with no tendency to wing drop or misbehave. The climb rate appeared to be fully as good as that of the competing sailplanes.

Next, the stall was investigated. A slight buffet 1 to 2kts before stall, with gentle behaviour and quick recovery. With full ballast the calibrated stall airspeed was about 40kts with the flaps neutral, and about 36kts with the flaps in their full 90° down landing position.

A shallow dive with rapidly increasing airspeed showed the true cleanliness of PIK. The airframe and controls were solid and steady as the speed rose past 100kts. As the airspeed was approaching 110kts a sudden roar of the airstream let me know I had a problem. The removable canopy, which was pinned fore and aft along its top centerline, had sucked out laterally along one side about one half-inch, due to the airloads. I slowed down and pulled

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the canopy side back into place. Then while holding the errant canopy edge in place with one hand, I repeated the dive only to have the opposite side suck out at the same 110kts airspeed I feared that I might lose or damage the canopy if I flew to the full 129kts rough air placard speed; so on this one practice day I kept the airspeed below 110kts. That evening Rich Audette attached two metal tabs to the inside of both the left and right canopy lower frames, and this fixed the problem.

Despite the canopy problem, the practice task went fairly well, and I was pleased with both the handling and performance qualities of the new PIK. Because it handled and flew well ballasted, and we had a large smooth concrete landing area, I elected not to dump the water after finishing the tasks. Just as with the HP-13, the flaps provided outstanding glide path and airspeed control. Undershooting the final approach would be easy, and must be guarded against by maintaining adequate airspeed at all times. The large 60 to 90 degree flap deflection angles used during landing result in considerable ground effect during the final part of the flare-out. This requires a little practice to get used to, and my soft but embarrassing bounces reminded me of early flights in my HP.

The large husky 5" x 5" Tost landing wheel is identical to that in my ASW-17 and the Nimbus 2. When I applied brake on the landing roll, practically no effect could be felt. My ASW-17 had also been that way from the factory, but not the Nimbus. Both the PIK and the ASW-17 mount the wheel with the brake actuating arm on the right hand side; whereas the Nimbus has it on the left hand side of the wheel. I had found with the ASW-17 that considerable braking improvement could be achieved by reversing the two brake shoes, and so we made this change. For some reason little braking improvement was achieved this time.

Only a Fair Start

The next day the formal competition started. The canopy stayed nicely in place during a 125kts gate start, and the flight appeared to go only fairly well speedwise. Some rain and overdevelopment near the second TP dictated a long 70kts glide in and out of Lamesa, and about eight miles of detouring on the last leg. It was a complete surprise to find my 73.8mph was best for the day by 3.8mph. I had hoped to be in the top ten, but 1000pts right off was hard to believe!

During each of the following three days I figured developing afternoon storms would likely prevent finishing the long tasks; and therefore I started almost as soon as the gate opened. On two of the three days I was wrong in taking the early starts, and the later starters, Beltz and Striedieck, justifiably claimed the 1000pts on those days. The one day where the overdevelopment did cut us all off on the last leg, I succeeded in arriving at the troublesome area first, but little good that did me. I had hoped to be able to finish before the storms cut off the final 25 miles, but despite my efforts I arrived too late and found only crosswinds and a few weak thermals just short of the overcast.

Except for the final day's finish, this is the only time I dumped the water-ballast. A downwind chase to a weak dust devil at 1200ft prompted me to pull the handle. The water quickly departed, and I found myself thermalling at about 5kts lower airspeed than I heretofore had found optimum. The PIK thermalability appeared to be quite good with the empty ballast tanks, but the subsequent 1.5hr struggle only achieved about ten miles more course credit. A landing on a ranch pasture road was disheartening but easily accomplished.

Must Fly Better

It was now becoming apparent that my early lead would be lost if I did not judge the tasks and fly better than I had the past three days. Tom Beltz was methodically reducing my lead each day now.

The fifth day was a 287 mile triangle that I resolved to fly for speed. Periodically throughout this flight I would find a competitor above and ahead of me, and than challenge myself to get above and ahead of him as quickly as possible. It worked beautifully and no challenge was too strong for the PIK and me that day! 73.3mph was good for 1000pts, though Beltz was close and claimed 975pts.

The sixth day task was a 311 mile triangle, and I resolved to use the same technique and to push the PIK even harder. The flight again went well, though I did have some difficulty getting ahead of Ben Greene on the first leg. My 85.7mph seemed unbeatable to me. It was shattering to find Beltz had soundly beaten me with 89.5mph, and now had trimmed my lead to an even 50pts.

Renewed determination drove the PIK to 86.8mph average speed over the following 245 mile task, but somehow Tom Beltz had coaxed a fantastic 91.9mph from his Cirrus to again win the day, and now claimed a 5pt lead overall.

Dark thoughts of losing the lead made me more determined than ever to make this up. The eighth task was a long 345 mile triangle. During the first 60% of the task I felt frustrated most of the time for not finding the strong lift I thought sure some of my competitors were finding. On the long second leg I could see dust devils in the ploughed fields below. These caused me to pass up one mediocre thermal after another, looking for the elusive strong one. Eventually if running out of sensible altitude, I would be forced to tediously climb at about 600fpm until I was able to chase after the next cloud or dust devil. Finally, well down the second leg and under a big cloud, I found the strong one and gained 10000ft in about seven minutes. An easy run into the second TP and more frustrations or a weaker last leg brought me home for 76.8mph and 1000pts. However, Tom Beltz was not letting his 5pt lead slip entirely away. He masterfully achieved 76.6mph in his Cirrus and 997pts; so he still kept a 2pt overall lead.

The last day dawned with considerable alto stratus and alto cumulus that had blown down into the contest area from evening storms to the NE. A Texas-size 328 mile taks was set, but the forecast did not sound entirely good. It predicted an early start to moderately strong conditions, with overbuilding in the early afternoon, and weak conditions thereafter. I knew I would have to play the task well if I were to regain the lead.

Catching up to do

The predicted early cu did not materialize, though it was hot and the sun shone brightly at Hobbs. The high alto cu and stratus were still blocking the sun considerably along the first leg to the NE. I took-off at 11.30 and found moderately strong lift in the cloud free Hobbs area. I began to suspect the forecast for early overdevelopment was in error. Since it was obviously weak on the first leg and early overdevelopment appeared unlikely anywhere in the viewable task area, I delayed starting until a late 12.58. All my 53 remaining competitors had gone earlier; so I had some catching up to do.

The persistent high clouds did not permit much surface heating for the first 50 miles and progress was relatively slow, using 300 to 500fpm thermals. Then glorious confidence building dust devils appeared in the cultivated fields ahead and I pushed on, determined to thermal in 600fpm or better. No such lift was found in the first few tried, but cumulus were now beginning to form and it was not long before strong lift was contacted. The PIK was now racing along well. Many gliders were encountered going in and out of the first TP, and quite a few on the second leg. Clear air and dry thermals still produced 600fpm near the second TP, and then the downwind run back to Hobbs was made using up my excess altitude. It was quite a surprise to find the ramp was clear of gliders and only two or three were in the pattern barely ahead. The wonderful PIK's 73.2mph average speed was good for 111pts over the next fastest, and so brought a triumphant and unforgetable close to a hard fought contest for me and my good crew.

John Hulme of Bottisham, Cambridge, has just been appointed the UK agent for the PIK-20, See advertisement on p35.

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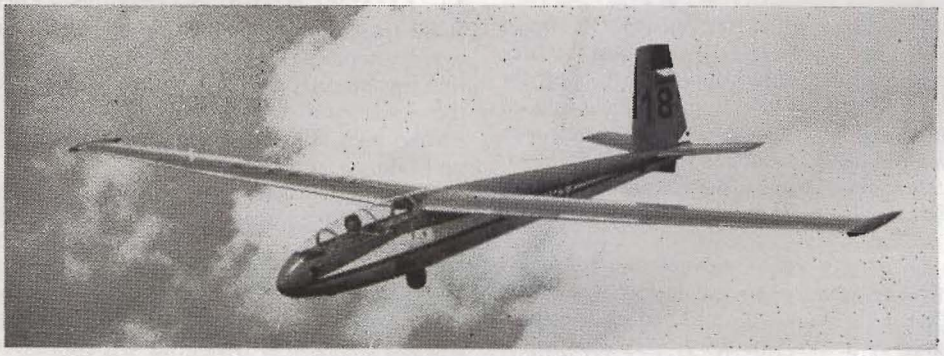
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BLOWN HANDICAPPING

OR

How to put the wind up the Handicappers

EDDIE VANN

Ian Strachan's treatise on Glider Competition Speeds in December's S&G (P266) is very good except for one glaring weakness, the allowance for wind.

The effect of wind on a closed circuit task is to increase the performance differential of the machines. Since a headwind slows the machines down the into wind part of the task takes a greater proportion of the flying time as the wind increases, and this effect is greater for the slower machines. To illustrate this, let us take the example of a Great Big Plastic Vulture (GBPV) and a Nice Little Wooden Wafter (NLWW), flying a 200kms out-and-return aligned directly into a wind of 20kmh (approx 11kts). Assuming that the GBPV achieves a theoretical airspeed of 75km/h using BGA standard thermals, its first (into wind) leg will take 1hr 48mins and its return leg 1hr 3mins, a total elapsed time of 2hrs 51mins for an average speed of 70km/h.

In the same BGA thermals, the NLWW makes a theoretical airspeed of 50km/h, so that its times are 3hrs 20mins out, and 1hr 26mins back, total 4hrs 46mins for an average speed of 42km/h. The ratio of these average speeds is 1.67, comparing with the ratio of theoretical airspeeds of 1.5.

The Worst Case

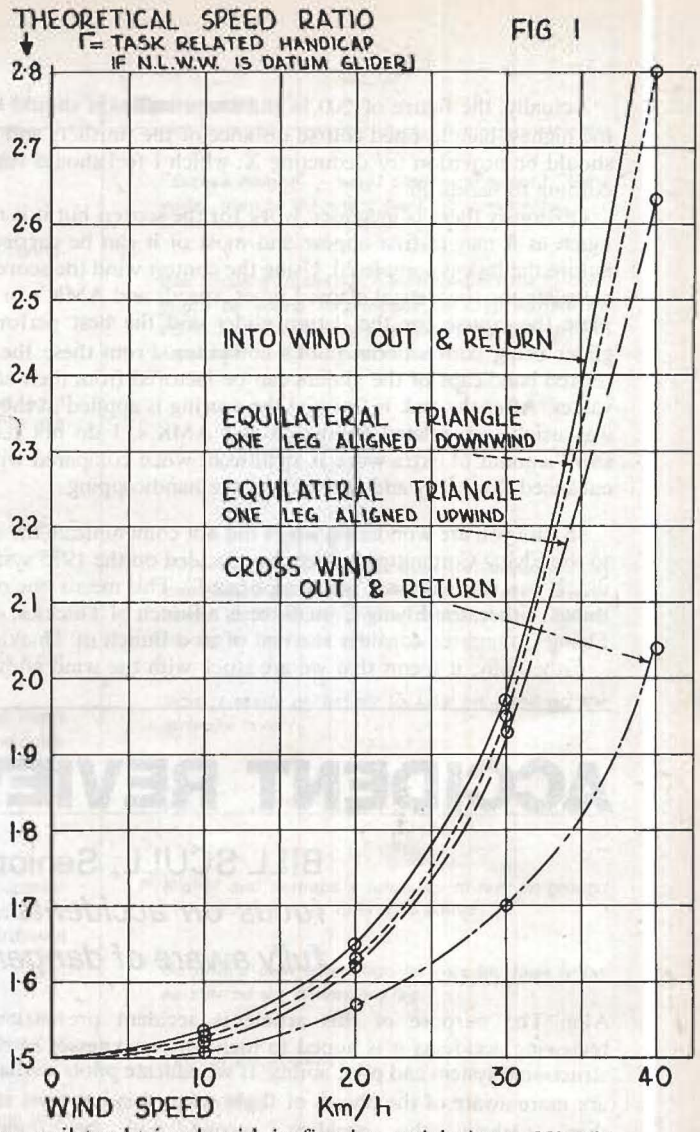
An into wind out-and-return is the worst case in this context, and a crosswind out-and-return is the least significant, the above ratio being 1.57. Fig 1 shows the effect of wind speeds up to 40km/h (approx 22kts) on the ratio of our two gliders' speeds over four different tasks, into wind and crosswind out-and-returns, and equilateral triangles with one leg into wind and one leg down wind. Note that the second of these has the greatest wind effect since there are two legs with headwind components so a greater proportion of the flight time is into wind.

Fig 1 illustrates that picking one particular task shape (*eg* into wind out-and-return) and applying the result to all tasks is just not good enough, since in the presence of a 20km/h wind, changing the shape of the task alters the speed reduction of the NLWW over the range 8% to 16% *ie* 8% variation, and in the presence of a 40km/h wind the variation is 26%. This makes the initial effort to determine the nil wind airspeeds to + 1% look pretty silly. Basically, the handicapping applied on any day must take account of the wind's effect *on the task flown*.

I suggest that the theoretical speed (assuming BGA thermals) of the datum glider is calculated for the task set and the wind prevailing, and compared with the theoretical speed of the glider being scored, the resulting ratio being the day's or task-related handicap. (Knowing the still air handicaps, only two speeds need be calculated and the remainder factored from these.) The resulting handicaps are applied to the finishers' speeds to determine the scores.

If the NLWW is the datum glider then the curves in Fig 1 give the task-related handicaps *vs* the wind strength.

We have so far considered completed races but the handicapping must be adjusted to allow for non-finishers. In order to do this we must consider the distance that each glider flies through the airmass which we will measure in Air Mass Kilometres (AMKs). To explain this we take the example of the GBPV flying around a



200kms equilateral triangle with its first leg straight into a 20km/h wind:-

Leg	lst	2nd	3rd	Total
Speed (km/h)	55	82	82	2hrs 53mins
Time	74mins	49.5mins	49.5mins	

air speed in BGA thermals is 75km/h, so distances travelled through airmass in AMK's in the times given are:-

AMK's	92.5	62	62	216.5kms

on the same task the NLWW covers:-

AMK's	112.5	60.5	60.5	233.5kms

The distance travelled *in AMK's* of non-completing gliders is factored to the task length and the *task-related* handicap applied to the resulting distance to give the scoring distance. As an example, suppose the GBPV lands half way along the second leg, the distance travelled will be:-

$$92.5 + \frac{62}{2} = 123.5 \text{ AMK's}$$

therefore the scoring distance is:-

$$\frac{123.5 \times 200}{216.5 \times 1.62} = 70.4 \text{ km.}$$

If the NLWW (considered the datum glider) lands at the same point it has travelled

$$112.5 + \frac{60.5}{2} = 142.75 \text{ AMK's}$$

and its scoring distance is

$$\frac{142.75 \times 200}{233.5 \times 1.0} = 122.26 \text{ km}$$

Actually, the figure of 200 in the above equation should be M, the highest handicapped course distance of the finishers and there should be provision for deducting X, which I feel should vary according to handicap.

Obviously there is increased work for the scorer, but it is not as much as it may at first appear and most of it can be carried out before the task is completed. Using the contest wind the scorer can calculate the theoretical elapsed times, speeds and AMK's to complete the course for the datum glider and the best performing glider using conventional pilot's computer. From these the task-related handicaps of the gliders can be factored from their still air values. After the task is finished the scoring is applied in the usual way using task related handicaps and AMK's. I do not feel the small amount of extra work is significant when compared with the enhanced flexibility and accuracy of the handicapping.

In case you are wondering why I did not communicate the above to the Flying Committee before they decided on the 1975 system, I did. It was discarded as "too complicated". This means one of two things, either, the Flying Committee is a Bunch of Thickies, or the Flying Committee consider the rest of us a Bunch of Thickies.

Either way, it seems that we are stuck with the wind allowance we deserve and for those of you with a Kestrel or Nimbus who think it doesn't matter anyway, I should point out that if a crosswind out-and-return is set in a fairly strong breeze (as is likely), a well flown Skylark or similar could establish a lead in one day that several days of triangles will not allow you to recoup.

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ACCIDENT REVIEW

BILL SCULL, Senior National Coach *begins a series in which he will focus on accidents and their causes in the hope of making pilots fully aware of dangers.*

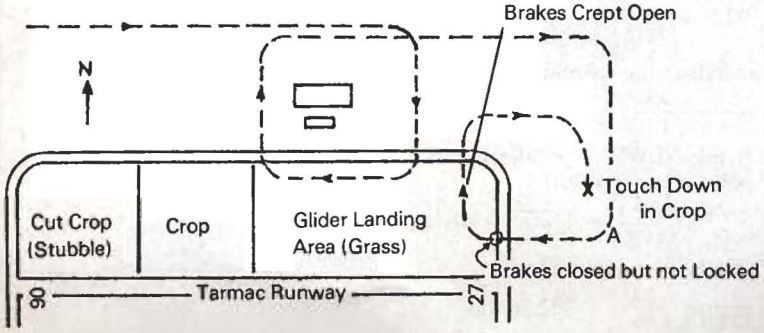
Aim: The purpose of this article is accident prevention. By reviewing accidents it is hoped to highlight weaknesses of the instructional system and pilot ability. If we educate pilots so that they are more aware of the phases of flight when they are most at risk, then perhaps the accident record will be improved.

In reading this article try to believe that "it could happen to you". The statistics bear out the fact that pilot experience is no real protection and whether you have 5, 500 or 5000hrs, there are still dangers lurking around the corner to which you are oblivious. Perhaps the best protection for any pilot is a good imagination; not so good that he puts his glider away and has his accident falling off a bar stool, but good enough to be aware of the areas where experience is limited and the risks are greatest.

A Series

This is the first of a series of articles so it will be worth giving the various categories of accident which will be considered.

Failed launch, landing, approach control, circuit planning, failure to take over in time (instructors), soaring airmanship, stalling and spinning, blow over/ground handling, airbrakes open unnoticed, motor gliders, airfield organisation and solo supervision.



In certain cases it may not be possible to put a particular accident into one category; a landing accident may occur due to poor approach control which in turn is due to poor circuit planning. Generally speaking the category into which an accident is placed will be the one where things first started to go wrong—the mistake which might have been corrected but wasn't. To start with I want to look at circuit or approach planning.

Circuit planning

There are only two principle causes of accident in this phase of flight; poor perception, *ie* failure to recognise that things are going wrong and/or indecisiveness, *ie* failing to take remedial action when or if the situation is recognised. Underlying these two principle factors are a considerable number of contributary ones.

Details of an Accident

Glider: Pirat. First flight on type, aerotow launch followed by 20min, thermal soaring.
Pilot: 47 hrs., 312 launches on ten types from five sites.
1st solo – June 1970
Bronze C – August 1973
Accident – August 1974
Weather. No cloud, visibility 12 miles, wind 260°/10kts, no crosswind.

Witness's statement

"I saw the incident from the final turn (point A) onwards at which point the glider was high, though with use of full airbrakes it would have landed safely on the grass area ahead or could have landed on the tarmac runway as their was no conflicting powered traffic. As it came over the airfield boundary, the airbrakes were closed and the glider turned right.

The airbrakes then came open again and the glider continued to turn to the right. With the airbrakes still open the glider was soon too low to turn finals for a landing on the airfield so the pilot straightened up and landed in a crop field to the east of the runway. The landing run ended up with a ground loop."

Pilot's statement	Comment
Flying locally to allow height to be lost until circuit joined at NW corner of airfield and downwind leg performed very wide as I had excess height.	*"Excess height" – why? Under-confident? "Very wide" may be disputed, see Club comments.*
Having reached the point on this leg level with the NE corner of the airfield and having flown through lift I reversed my direction.....	*Bad circuit airmanship. A turn towards the airfield might be sound in principle, ie keep airfield in sight, but usually ends up cramping the circuit, especially if a 360° turn is made.*
.....and flew a rectangular course to lose height to bring me back onto a downwind leg. I continued east until I judged that I should make a crosswind leg (to the south). I did not use an effective amount of airbrake on this leg.	
Having turned west onto the final leg (approach) I judged that I was too high to enter the landing area and found speed control difficult due to a combination of unfamiliarity with aircraft performance and brake action.	*If the type conversion had been well organised the pilot would have functioned the airbrakes several times, both on the ground and in the air, before having to make an approach.*
I judged that I needed to close the airbrakes and do a repeat right-hand circuit. This I did and as a result had insufficient height and landed short in crops.	
On making the approach to the crop I realised the brakes were fully out and judged that I did not effectively operate the locking mechanism on starting the second circuit. I did not while under the stress of the situation realise from the performance that the brakes were fully out.	*Was it really necessary to take his hand off the airbrake lever!*
CFI's Analysis	
Pilot's previous experience at a hill site with rigid close circuit rulings. Pirat was of superior performance to previous types flown and pilot admitted a general tendency to make circuits too close to the landing area. These factors together with the thermal activity contributed to his being too high on the downwind leg.	*Right! and perhaps a tendency to rely on ground features as circuit reference points.*
A half-hearted attempt was made to correct this high situation on the downwind leg, but this was not definite enough. Brakes were unlocked but not used on base leg resulting in a high final turn.	*On pilot's own admission he was too high when he started the downwind leg.*
Though adequate landing area was available (runway 4000ft long) he became nervous and after crossing the downwind boundary, closed his airbrakes and attempted to "go round again". The brakes were not locked (over-centre type) and they re-opened.	*Lack of decisiveness!*
Much height was lost quickly due to the powerful airbrakes such that the pilot had to straighten up and land crosswind into a crop field. Minor damage only resulted despite ground looping; the incident could easily have been more serious. A full briefing on the type was given before take-off.	*Keep a hand on the airbrake lever!*
	Perhaps more emphasis might have been placed on tendency of brakes to come open once unlocked!

Summary of Contributary Factors

1 Joined circuit too high and perhaps too close (conflict of opinion on this point).
2 Not positive enough in circuit disciplines *ie* better to brake off height rather than fiddle about with the pattern.
3 Square pattern flown to lose height may not have done so significantly. Although in principle turning towards the airfield is sound, the final stages of a circuit often become cramped as a consequence.
4 Did not position the base leg far enough back. (A going-behind-the-downwind-boundary fixation, not uncommon among hill site pilots). Going too far back because height is excessive is also bad practice.
5 Some height should have been lost by use of brakes on base leg.
6 The base leg may not have been long enough.
7 Alternative landing on runway rejected or not considered at all. Surely this is a contingency which should have been covered in the site briefing.
8 Took hand off airbrake lever which was unnecessary (what did he do with it in the meanwhile?).

This accident is an interesting one showing pilot uncertainty and a failure to make best use of time in the air. It also highlights a number of undesirable circuit practises.

We are indebted to the pilot, the witness and the CFI for permission to use this material.

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DESIGN TO FLY

The Tweetie ready for flight. A design by Ron Wheeler of Australia. Photo: Ann Welch.

ANN WELCH, back from the other side of the world where she has been snifting gliding trends, takes a further look at the cheaper end of the market and poses the thought that perhaps something is to be gleaned from the development of ultralights.

There is little doubt that the passionate desire for super performance ships is, at the moment, flagging slightly while the desire to get airborne for the more simple pleasures of flying is growing. Helping this shift of emphasis are large capital outlay, combined with a complex flying machine that demands both experience and continual practice to fly well, plus lengthy repair periods if it is broken, and substantial insurance premiums.

The vintage glider enthusiasts have recently been showing that a couple of hours evening soaring over the downs can be just as attractive in its own way as bombing around a 100km triangle in near record time. It was, after all, the somewhat gentle, exploratory type of soaring that built the gliding movement in the first place. It is not that there is anything against super performance ships or the super flying that can be achieved with them, but simply that gliders of modest performance are cheaper, and can be more readily home built. That there are many people willing and able to get airborne in this way by their own efforts is obvious from the correspondence and requests for more information that followed my article in the October issue of S&G, p212.

At the other end of the performance scale thousands of people across the world from New Guinea to Afghanistan (true) are now soaring Rogallo hang gliders with a glide ratio of barely 1:4. Flights of an hour are no news they happen so often. But 1:4 is not much and inevitably many of these people are now looking for *more* performance. Improvements to Rogallo type sailwings are not really a long term answer, as increasing the aspect ratio is the first step to performance improvement, the simple answer is to go to the more conventional rigid aerofoil. Work is actively proceeding in this direction with detractors morosely watching while the ordinary glider is reinvented. But it isn't, quite.

New lightweight materials are providing a flexibility of constructional methods that have not been previously possible. Some of the new rigid hang gliders are swept tailless monoplanes with a relatively thick wing and wingtip rudders, and others are of conventional aeroplane plan form. Controls range from normal aircraft surfaces on the Volmers to pilot weight shift only, as on the Tweetie. Some of the newest projects even have cockpits and seats. But to the rapidly growing population of sailwing pilots the rigids have one distinct disadvantage; they are not so portable.

It has taken only a few years to breed a whole race of pilots used to rolling up the aircraft on a roof rack, and carrying it on their own shoulders up the last few hundred yards of sheep track. They do not want an aircraft that requires a trailer, a crew, or that will blow away if left out in a wind, and the slowness in switching to the higher performance rigids (1:8 – 1:10) is primarily for these reasons, since they may cost little more than a fancy Rogallo.

There is now, however, a rigid that does roll up – the Tweetie – designed by Ron Wheeler of Sydney, Australia. Not only can it be rigged and launched single handed, but up to three Tweeties could be carried on one car. Tweetie is also interesting in that it is of conventional aircraft ancestry in shape, but in construction it is entirely a product of marine technology. It is built like a racing dinghy of marine materials.

The fuselage is an alloy mast spar, and the two leading edge spars are alloy booms with built-in sail track. The wings are threaded

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into the track and maintain their aerofoil shape by means of preformed aluminium battens as ribs. Both the wings and the tail surfaces are of 3.8oz Dacron, and the whole aircraft is wire braced into a structure using 1x19x7.5cwt stainless steel cable. The wings and tail surfaces are kept taut and shapely by the marine practice of lanyard lashings. The pilot uses either a normal or prone harness, or can use a standard dinghy trapeze harness, and land on the wheels with his feet up on the A frame.

Tweetie has a span of 28ft, wing area of 125sq/ft, wing loading of 1.6lb sq/ft, weighs 51lb empty, and has a glide ratio of 1:8 with a 150lb pilot. Some 25 Tweeties have been built. One owner taught himself to fly on it without any previous experience, and in his year of ownership has clocked up about 60 – 70hrs with many flights of over an hour's duration. Tweetie is, of course, intended for slow speed slope soaring, and, like all other ultralights, is not intended for high speed flying or any form of stunt or aerobatic flying. Red line has not been determined but performance deterioration discourage trying to dash around at over 30kts.

The swept tailless Icarus 5 of Taras Kiseniuk, USA, although not so easily portable, is also an example of simple construction; it uses an alloy tube leading edge main spar wrapped with foam sheet to give a good leading edge shape, and tubular aluminium ribs. Icarus 5 has a span of 32ft, wing area of 160sq/ft, and an empty weight of 65lb.

Some manufacturers of conventional gliders are also moving away from preoccupation with super performances, but wisely with care, because jigging and tooling is unprofitable if the product does not fit the market. The Club Libelle has been followed by the Scheibe FS-30 and the K-18. Ursula Hanle's Hippie is a big leap from conventional performance into the fun range and is launchable by a VW. It is, however, more of a replica than an excercise in new ideas.

The gap between 1:10 of the rigid ultralights and the 1:30 of the new generation conventional middle weights is quietly narrowing, and it is an area full of possibilities and promise for the homebuilder, because he can choose what he wants. 1:10 – 1:15 is fine for slope soaring, and the aircraft can be really cheap, light and simple because both foot launching and a low red line are acceptable. 1:15 – 1:22 approximately can add the delights of district thermal soaring, but is likely to require the extra flexibility of car and aerotow launching. 1:22 – 1:30 we have already, with the K-8 being one of the most attractive aircraft in this range. Here any development could best move in the direction of constructional cheapness and simplicity.

Apart from the performance range, which determines the use, the most important things that the new designer will have to consider are red line speed and whether aerotowing and/or winch launching are to be permitted. Foot launching ceases to be practical at about 100lb empty weight, so the aircraft will have to be designed around a conventional undercarriage for any greater weights resulting from the ability to use mechanical launching. Even so, aircraft designed into the 1:15 – 1:22 bracket is possible if the intention is fun flying and district soaring and exploring.

It is not just a matter of rediscovering hill soaring as well as reinventing the glider, some hang glider pilots are finding that micrometeorology is something to be looked into, and that for lightweights better than 1:10, usable lift can pop up in all sorts of unexpected places.

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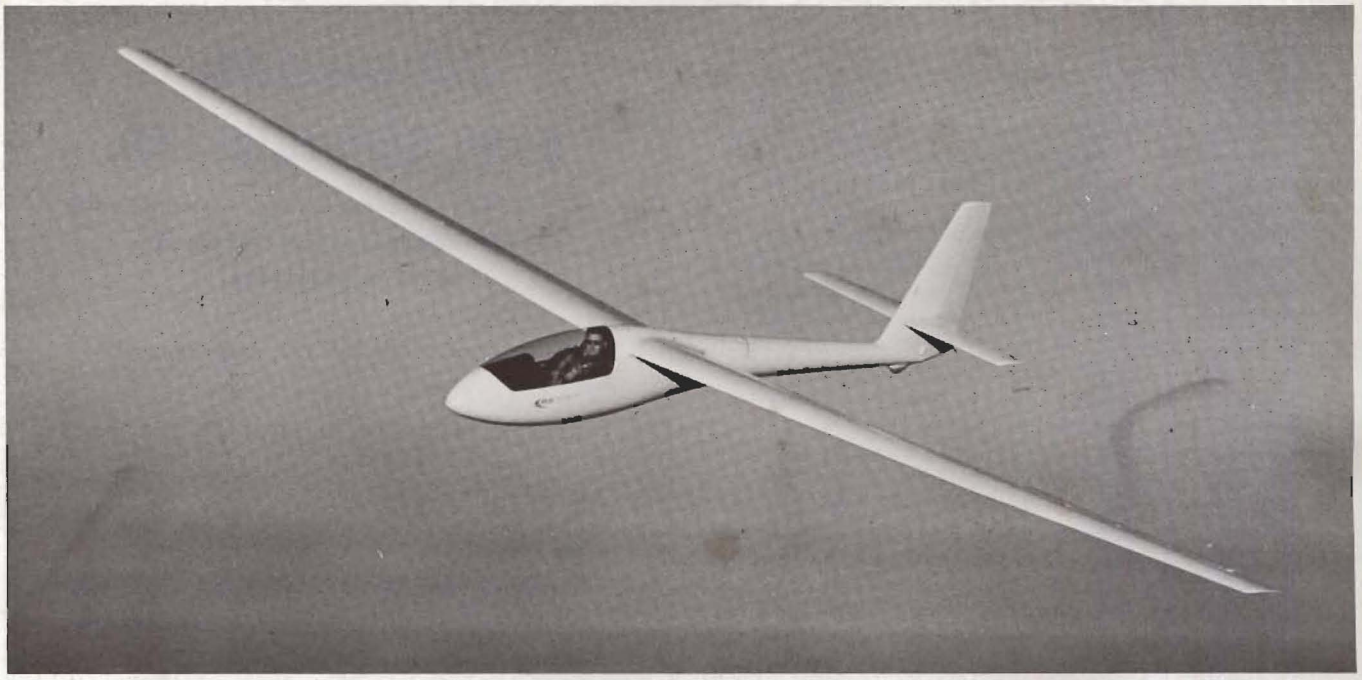
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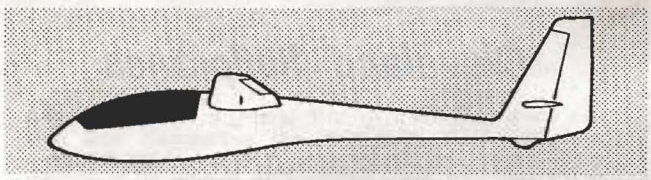


SAILPLANES 1975

Compiled by ANDREW COATES

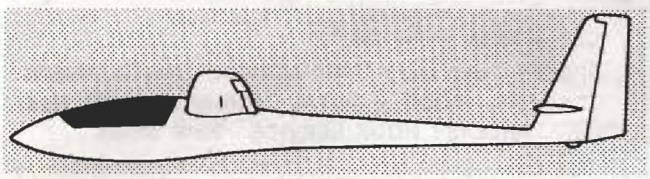
The following tables present (in alphabetical order) the majority of sailplanes on the market in the UK today. The figures included give a guide to the gliders but for a complete picture, careful reading of the Pilot's manual is necessary. Price quoted (September 1, 1974) is for the basic sailplane ex-works and is exclusive of Duty and VAT. Some prices include the cost of a selection of instruments, fitted as standard.

The sideviews are drawn to the same scale, except the two-seaters and motor gliders which are all to a slightly smaller scale.



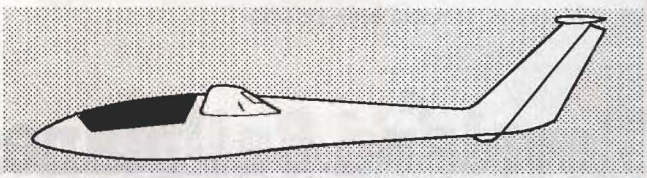
ASW 15B

Manufacturer	Schleicher	Empty/auw	230/408kg
Span	15m	Water ballast	90kg
Wing area	11.0m²	Stall/max speed	63/220km/h
Wing loading	37.1kg/m²	Min sink	0.6m/s at 73km/h
Aspect ratio	20.45	Max L/D	38 at 90km/h
Wing section	Wortmann	Price	DM 29,000



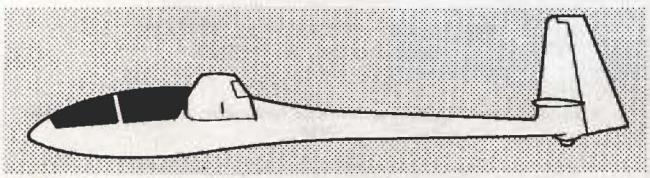
ASW 17

Manufacturer	Schleicher	Empty/auw	405/570kg
Span	20m	Water ballast	100kg
Wing area	14.84m²	Stall/max speed	68/240km/h
Wing loading	38.4kg/m²	Min sink	0.5m/s at 75km/h
Aspect ratio	27	Max L/D	48 at 95km/h
Wing section	Wortmann	Price	DM 58,800



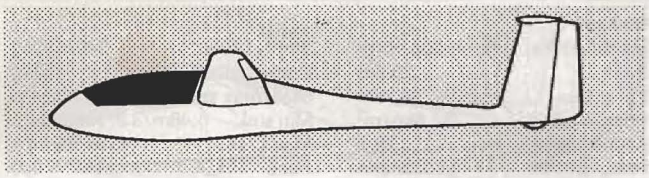
Cobra 15

Manufacturer	SZD	Empty/auw	257/385kg
Span	15m	Water ballast	None
Wing area	11.6m²	Stall/max speed	67/250km/h
Wing loading	33.2kg/m²	Min speed	0.6m/s at 73km/h
Aspect ratio	19.4	Max L/D	38 at 96km/h
Wing section	Wortmann	Price	£3,500



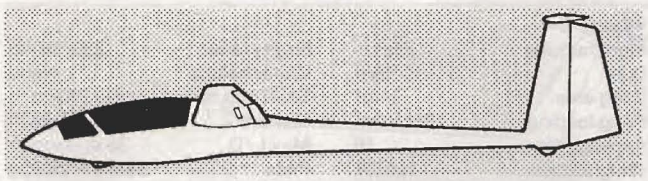
Cirrus

Manufacturer	Schempp-Hirth	Empty/auw	260/460kg
Span	17.7m	Water ballast	98kg
Wing area	12.6m²	Stall/max speed	62/220km/h
Wing loading	36.5kg/m²	Min sink	0.5m/s at 73km/h
Aspect ratio	25	Max L/D	44 at 85km/h
Wing section	Wortmann	Price	DM 29,125



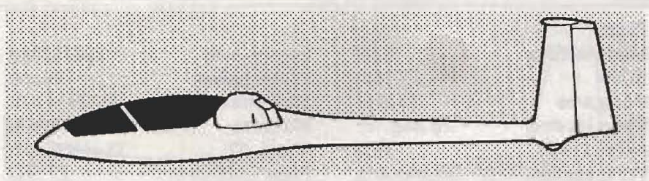
Std Cirrus

Manufacturer	Schempp-Hirth	Empty/auw	202/390kg
Span	15m	Water ballast	60kg
Wing area	10.0m²	Stall/max speed	62/220km/h
Wing loading	39kg/m²	Min sink	0.57m/s at 71km/h
Aspect ratio	22.5	Max L/D	38 at 85km/h
Wing section	Wortmann	Price	DM 28,700



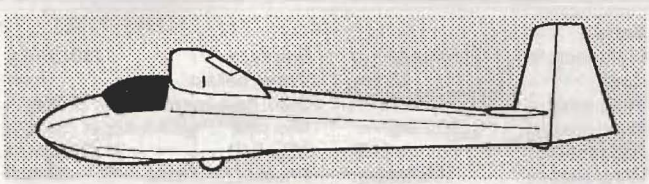
IS-29D

Manufacturer	Romanian	Empty/auw	220/320kg
Span	15m	Water ballast	None
Wing area	10.4m²	Stall/max speed	65/220km/h
Wing loading	30.8kg/m²	Min sink	0.58m/s at 78km/h
Aspect ratio	21.5	Max L/D	37 at 90km/h
Wing section	Wortmann	Price	£4,300



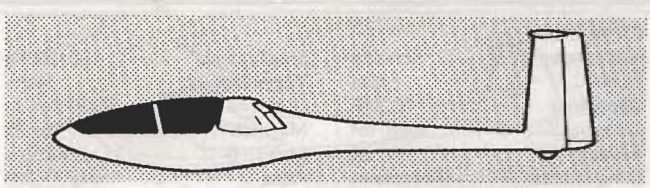
Jantar-1

Manufacturer	SZD	Empty/auw	290/520kg
Span	19m	Water ballast	100kg
Wing area	13.38m²	Stall/max speed	65/250km/h
Wing loading	38kg/m²	Min sink	0.5m/s at 75km/h
Aspect ratio	27	Max L/D	47 at 97km/h
Wing section	Wortmann	Price	£5,700



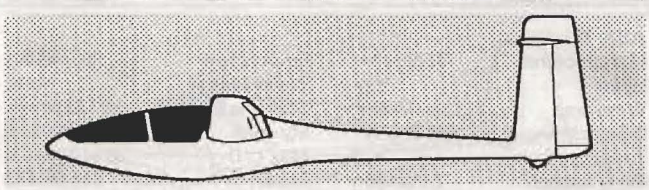
K-8B

Manufacturer	Schleicher	Empty/auw	190/310kg
Span	15m	Water ballast	None
Wing area	14.15m²	Stall/max speed	54/200km/h
Wing loading	19.5kg/m²	Min sink	0.65m/s at 60km/h
Aspect ratio	15.9	Max L/D	27 at 73km/h
Wing section	Göttingen	Price	DM 18,640



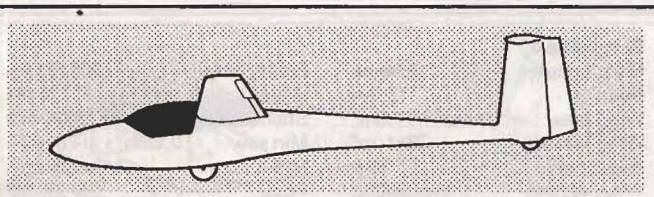
Kestrel 19

Manufacturer	Slingsby	Empty/auw	330/472kg
Span	19m	Water ballast	63.6kg
Wing area	12.8m²	Stall/max speed	61/250km/h
Wing loading	36.9kg/m²	Min sink	0.52m/s at 74km/h
Aspect ratio	28	Max L/D	44 at 97km/h
Wing section	Wortmann	Price	£5,680



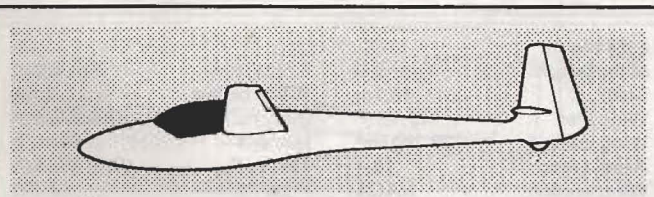
Kestrel 22

Manufacturer	Slingsby	Empty/auw	445/570kg
Span	22m	Water ballast	63.6kg
Wing area	15.6m²	Stall/max speed	61/250km/h
Wing loading	36.53kg/m²	Min sink	0.48m/s at 74km/h
Aspect ratio	30	Max L/D	50 at 97km/h
Wing section	Wortmann	Price	£8,250



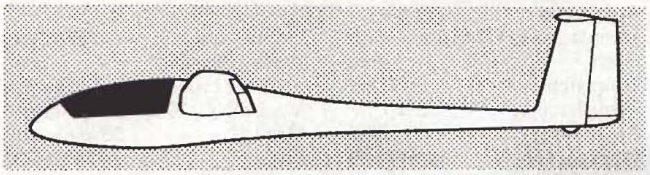
Club-Libelle

Manufacturer	Glasflügel	Empty/auw	180/300kg
Span	15m	Water ballast	None
Wing area	9.8m²	Stall/max speed	60/200km/h
Wing loading	33.7kg/m²	Min sink	0.65m/s at 75km/h
Aspect ratio	23	Max L/D	33 at 85km/h
Wing section	Wortmann	Price	DM 22,000



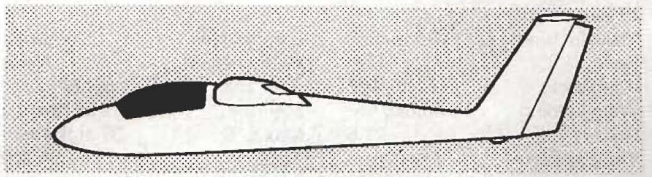
Std Libelle 201B

Manufacturer	Glasflügel	Empty/auw	185/350g
Span	15m	Water ballast	50g
Wing area	9.8m²	Stall/max speed	62/250km/h
Wing loading	35.7kg/m²	Min sink	0.6m/sat 75km/h
Aspect ratio	23	Max L/D	38 at 85km/h
Wing section	Wortmann	Price	DM 24,000



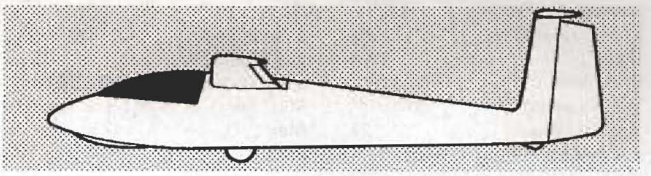
Nimbus 2

Manufacturer	Schempp-Hirth	Empty/auw	340/530kg
Span	20.3m	Water ballast	120kg
Wing area	14.4m²	Stall/max speed	64/220km/h
Wing loading	32.6kg/m²	Min sink	0.48m/s at 75km/h
Aspect ratio	28.6	Max L/D	49 at 90km/h
Wing section	Wortmann	Price	DM 55,000



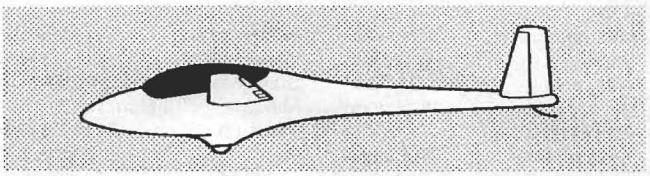
Pilatus B-4

Manufacturer	Pilatus	Empty/auw	230/350kg
Span	15m	Water ballast	None
Wing area	14m²	Stall/max speed	62/240km/h
Wing loading	25kg/m²	Min sink	0.64m/s at 72km/h
Aspect ratio	16	Max L/D	35 at 85km/h
Wing section	NACA	Price	Swiss Fr 28,700



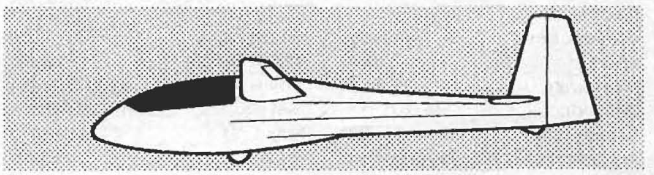
Pirat

Manufacturer	SZD	Empty/auw	260/370kg
Span	15m	Water ballast	None
Wing area	13.8m²	Stall/max speed	60/250km/h
Wing loading	26.8kg/m²	Min sink	0.7m/s at 74km/h
Aspect ratio	16.3	Max L/D	33 at 83km/h
Wing section	Wortmann	Price	£2,982



Salto

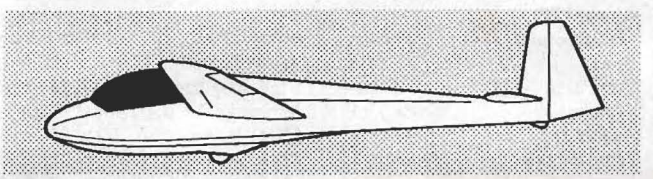
Manufacturer	Start and Flug	Empty/auw	180/310kg
Span	13.6m	Water ballast	None
Wing area	8.58m²	Stall/max speed	65/250km/h
Wing loading	36.13kg/m²	Min sink	0.6m/s at 75km/h
Aspect ratio	21.6	Max L/D	35 at 90km/h
Wing section	Wortmann	Price	DM 19,800



SF-30 Club

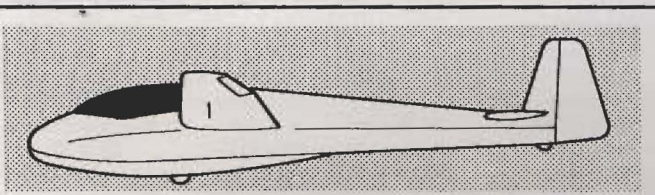
Manufacturer	Scheibe	Empty/auw	190/300kg
Span	15m	Water ballast	None
Wing area	9.3m²	Stall/max speed	65/211km/h
Wing loading	30kg/m²	Min sink	0.59m/s at 75km/h
Aspect ratio	24	Max L/D	37 at 91km/h
Wing section	Wortmann	Price	DM 21,300

Two-seaters



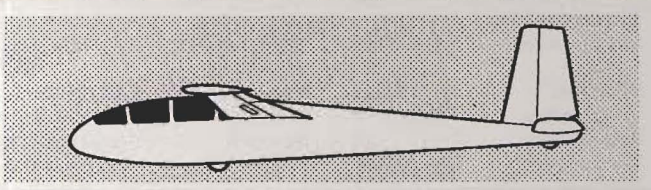
ASK-13

Manufacturer	Schleicher	Empty/auw	290/480kg
Span	16m	Water ballast	None
Wing area	17.5m²	Stall/max speed	56/200km/h
Wing loading	26.8kg/m²	Min sink	0.73m/s at 64km/h
Aspect ratio	14.6	Max L/D	28 at 90km/h
Wing section	Göttingen	Price	DM 26,270



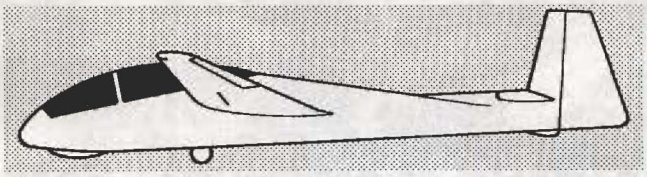
Bergfalke 4

Manufacturer	Scheibe	Empty/auw	300/505kg
Span	17.2m	Water ballast	none
Wing area	17.5m²	Stall/max speed	65/200km/h
Wing loading	28kf/m²	Min sink	0.68m/s at 75km/h
Aspect ratio	16.9	Max L/D	34 at 85km/h
Wing section	Wortmann	Price	DM 25,100



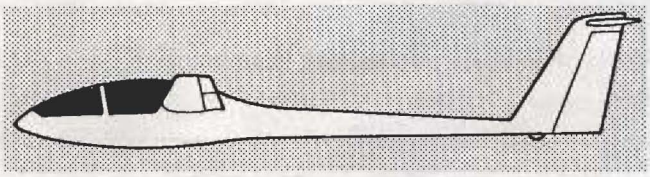
L-13 Blanik

Manufacturer	Omnipol	Empty/auw	307/500kg
Span	16.2m	Water ballast	None
Wing area	19.15m²	Stall/max speed	55/253km/h
Wing loading	26.1kg/m²	Min sink	0.82m/s at 80km/h
Aspect ratio	13.7	Max L/D	28 at 88km/h
Wing section	NACA	Price	£3,350



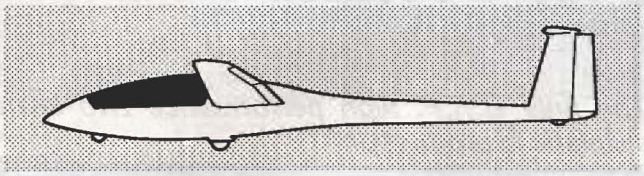
Bocian 1E

Manufacturer	SZD	Empty/auw	342/540kg
Span	17.8m	Water ballast	None
Wing area	20.0m²	Stall/max speed	60/200km/h
Wing loading	27kg/m²	Min sink	0.82m/s at 71km/h
Aspect ratio	15.85	Max L/D	26 at 80km/h
Wing section	NACA	Price	£2,662



Calif A-21

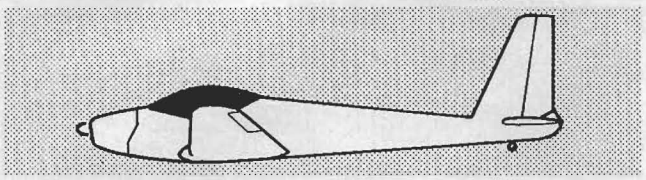
Manufacturer	Caproni	Empty/auw	436/644kg
Span	20.38m	Water ballast	None
Wing area	16.19m²	Stall/max speed	63/255km/h
Wing loading	39.8kg/m²	Min sink	0.6m/s at 85km/h
Aspect ratio	25.65	Max L/D	43 at 105km/h
Wing section	Wortmann	Price	approx £10.500



Janus

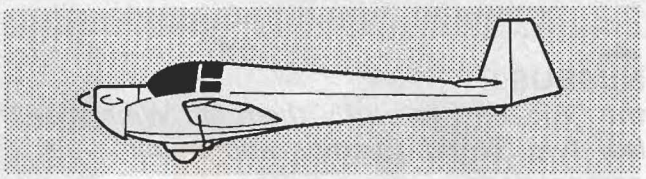
Manufacturer	Schempp-Hirth	Empty/auw	370/620kg
Span	18.2m	Water ballast	None
Wing area	16.6m²	Stall/max speed	67/220km/h
Wing loading	37kg/m²	Min sink	0.61m/s at 75km/h
Aspect ratio	20	Max L/D	39 at 95km/h
Wing section	Wortmann	Price	DM 55,000

Motor Gliders



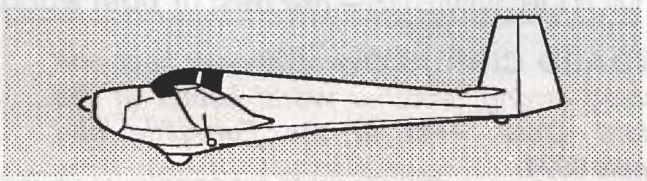
ASK-16

Manufacturer	Schleicher	Empty/auw	470/700kg
Span	16m	Engine	68hp Limbach
Wing area	19.0m²	Stall/max speed	69/200km/h
Wing loading	37kg/m²	Min sink	1.0m/s at 74km/h
Aspect ratio	13.5	Max L/D	25 at 94km/h
Wing section	NACA/Wortmann	Price	DM 58,870



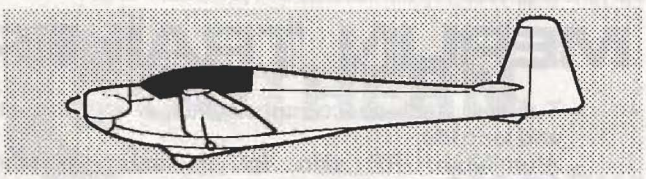
SF-25c Falke

Manufacturer	Scheibe	Empty/auw	375/580kg
Span	15.3m	Engine	60hp Limbach
Wing area	18.2m²	Stall/max speed	65/180km/h
Wing loading	31.3kg/m²	Min sink	1.0m/s at 75 km/h
Aspect ratio	13.8	Max L/D	24 at 70km/h
Wing section	Mμ (Scheibe)	Price	DM 42,500



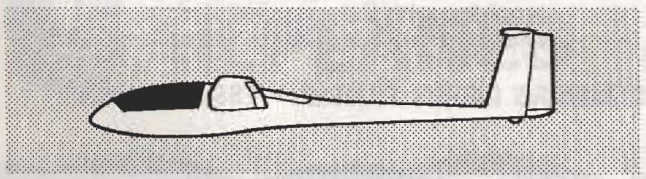
SF-25E Super Falke

Manufacturer	Scheibe	Empty/auw	430/630kg
Span	18m	Engine	70hp Limbach
Wing area	17.4m²	Stall/max speed	70/180km/h
Wing loading	35kg/m²	Min sink	0.85m/s at 75km/h
Aspect ratio	18.6	Max L/D	30 at 85km/h
Wing section	Mμ (Scheibe)	Price	DM 47,600



SF-28A Tandem Falke

Manufacturer	Scheibe	Empty/auw	390/590kg
Span	16.3m	Engine	60h p Limbach
Wing area	18.5m²	Stall/max speed	62/180km/h
Wing loading	31kg/m²	Min sink	0.9m/s at 70km/h
Aspect ratio	14.5	Max L/D	27 at 95km/h
Wing section	Göttingen	Price	DM 30,000



Motor Nimbus 2

Manufacturer	Schempp-Hirth	Empty/auw	430/580kg
Span	20.3m	Engine	50hp 'Hirth
Wing area	14.4m²	Stall/max speed	70/250km/h
Wing loading	34kg/m²	Min sink	0.54m/s at 85km/h
Aspect ratio	28.6	Max L/D	47 at 100km/h
Wing section	Wortmann	Price	DM 60,000

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Membury Airfield, Lambourn, Berks

(RALPH JONES) **Telephone Lambourn (0488) 71774**

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MANUFACTURES OF



JANUS
The only G.R.P. high performance two seater sailplane in production

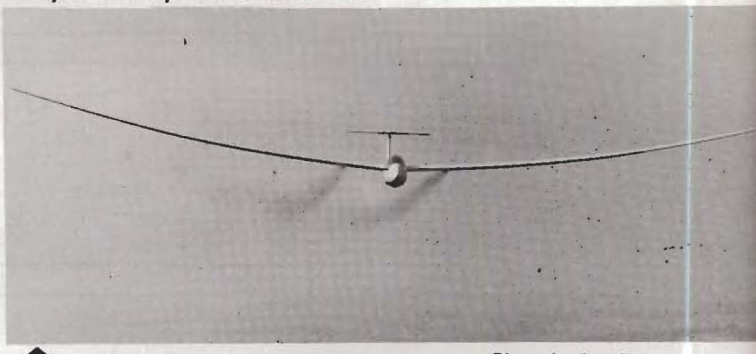


Photo by Ray Brown



NIMBUS II
the "Big Un" to outfly them all. Winner of the last two World Champs and many other top competitions.

MOTOR NIMBUS— ***the best of both worlds***

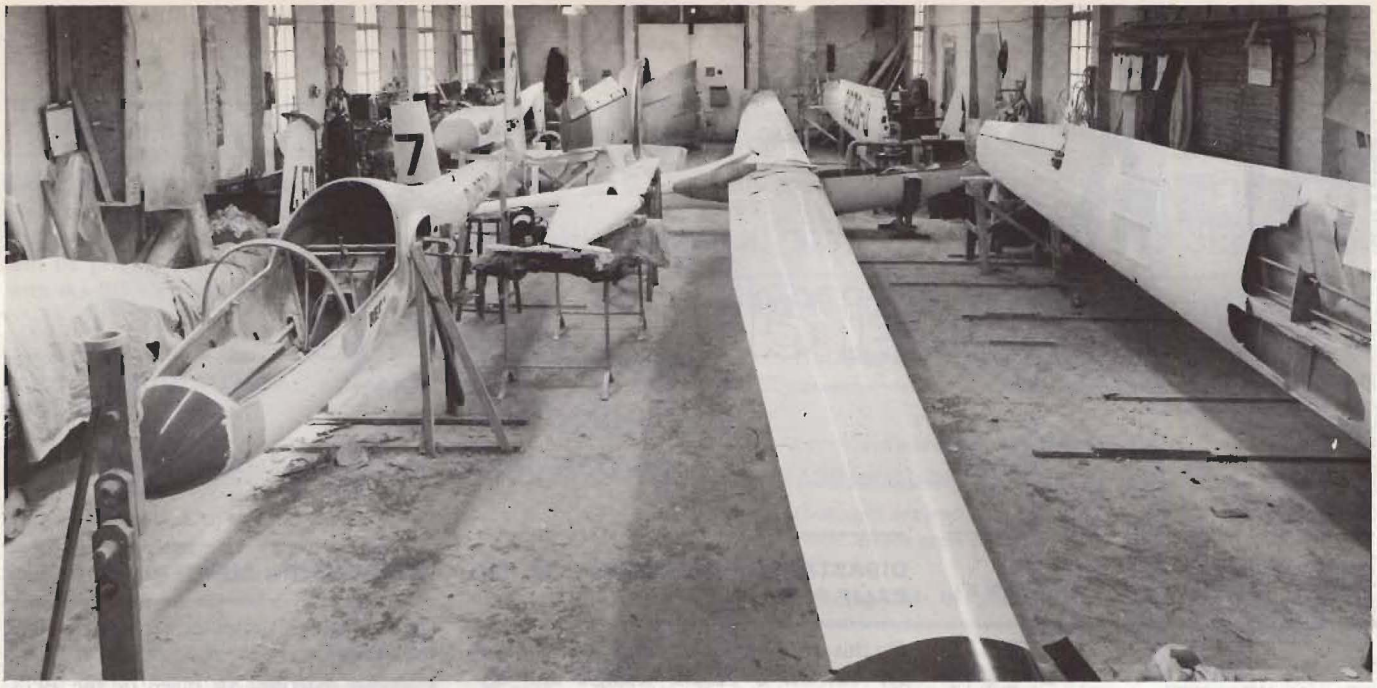
STANDARD CIRRUS *Over 500 now built and still going strong, another world beater in the Standard Class. First in the Euroglide and Nationals 1974.*

Your new ship deserves the security and protection of a

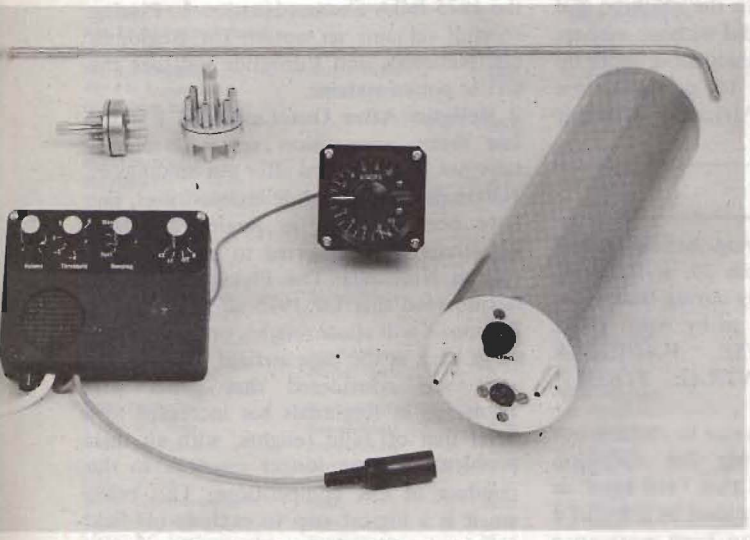
MERLIN TRAILER

—Tubular steel space-frame chassis for strength and long life.
—Aluminium/GRP skin for maximum weather protection with minimum maintenance.
—New low profile shape with all construction complying with European regulations.
—Fully fitted for *your* glider to highest standards.

STANDARD CIRRUS TRAILER — £850 fully fitted



REPAIRS
This is one of our workshops on Dec. 20th, 1974—the "slack" time of year.



RING us for your C of A renewals and Repairs if you want Quality not just Airworthiness

WE ALSO STOCK—

PZL—Varios, A.S.I's and T& S's.
WINTER—Varios, A.S.I's and Barographs.
IRVIN—Parachutes.
Ex. RAF—Alts., A.S.I's and T & S's.

We are sole agents for SOARING SYSTEMS superb variometers:

Constructed from high quality components, 2 dia. visual presentation only 2" deep to fit on that small panel. Remote control unit which may be panel or cockpit side mounted. This contains the audio speaker. The capacity and sensing unit can be mounted in the fuselage behind the cockpit.

Stainless steel Braunschweig type T.E. units *with detachable probe.*

4 and 6 way airline connectors, our own.

"Norlock" locking plate to fit into your Direct Vision panel to keep those light fingers outside the cockpit.

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BGA & general news

750KM WORLD SPEED RECORD THREE BRITISH NATIONAL RECORDS

The new 750km world triangle speed record has already been hotly contested in South Africa. On January 5 a number of pilots set out on these large flights, the fastest time being claimed by Georg Eckle of West Germany who flew approx 751km at 123km/h in a Nimbus 2. Britian's "newcomer" Mike Carlton (Silver C, Jan 1974) flew his Kestrel 19 over a 763km triangle at 108.7km/h starting from Bloemfontein while Chris Falkingbridge (ex Coventry Club) flew a Std Cirrus from Oranjekrag over a 756km triangle at 102km/h. Mike thus claims the first British National 750km speed record.

Con Greaves is the first claimant for the British National goal and return 500km speed with a flight of 545km at 117.5km/h on January 1, Kestrel 19. Chris Falkingbridge broke the Brit Nat goal and return record on December 14 with a flight of 708km in a Std Cirrus. All flights subject to homologation.

FIRST 100KM SET . . . BUT NOT FLOWN

During the practice week of the SA Nationals on December 23 an alternative 1000 or 750km triangle was set. However, the weather did not come up to expectations and the task was reduced to a mere 300km triangle.

Klaas Goudriaan, of Dutch origin, won the Open Nationals in a ASW-17, and Chris Falkingbridge the Standard in a Std Cirrus. Tasks were flown on all but two days.

Mike Carlton, Con Greaves and Bill Scull who had taken the Kestrel 19 and Calif-21 to South Africa on December 17 flew between them over 6000km cross-country in about 150hrs. Bill Scull, our National Coach, gained his distance Diamond with a 500km triangle.

DISASTROUS DECEMBER 22 IN CALIF A-21

On this day Con Greaves and Mike Carlton set out on a 325km triangle and approached the startline at about 105/110kts at 3000ft agl when they suffered severe aileron flutter buckling the wing tips from about one meter in. The two-seater became almost uncontrollable (there was a fairly high wind with moderate turbulence) and they decided to stay with the machine and try to land which they did without mishap, flying very slowly. The incident is under investigation. We hope to publish more details on the South African trip in our next issue.

NEW BGA OFFICES

The BGA will be leaving Artillery Mansions on Monday March 24, and making the trek to the Midlands during that week. We hope to be settled in by April 1st at *KIMBERLEY HOUSE, VAUGHAN WAY, GREAT CENTRAL STREET, LEICESTER.*

We hope that our service to clubs is not greatly disrupted during the transition period, but moving all that "red tape" is not going to be easy! We shall be grateful if members will help us to keep work to a minimum during March and especially early in April whilst the new staff are getting settled. Afterwards, we hope as many members as possible will call on us and see the beautiful new accommodation which should give us the space and conditions to improve our services.

I am sure you would all like to join me in thanking those members of the BGA staff who cannot make the move with us from Artillery Mansions, for their devoted attention to the Gliding Movement. Several of them have been with the BGA for many years and our parting will be a sad occasion.

Barry Rolfe

There is the threat of postal charges going up yet again and regrettably this will mean postage increases on subscription copies. We will print details once the decision is known but this may not give readers much notice of extra costs in getting their S&G by mail.

COMPETITION MATTERS

Recent Flying Committee decisions include the following:

1 Points Scoring. In place of the BGA "1000 Points" scoring, the International (CIVV) points scoring will be adopted. This scoring system has been used in the last two BGA Euroglide contests and achieves a similar result to the BGA "1000 Points" system. Details will be published in the 1975 BGA Contest Handbook. Placing scoring remains an option for Regionals but Nationals and Euroglide will use the CIVV points system.

2 Relights After Out Landings. For the last three competition seasons, relights have not been allowed after out landings in Nationals and Euroglide competitions, but have been optional in Regionals. Many Regionals have preferred to use the same rule as Nationals. The Flying Committee has decided that for 1975 all BGA Rated Regionals will allow relights only from landings back at the base airfield.

It was considered that glider performance in Regionals has increased to a level that off-field relights, with all their problems, are no longer essential to the conduct of UK competitions. This being so, it is a logical step to exclude off-field relights because competition scores should reflect flying ability and not retrieving performance. Before reaching this decision the Committee also considered the alternative of allowing relights up to a certain distance from base, such as "X", but rejected this option as being a compromise with too many undesirable features — in particular anomalies amongst pilots either landing near "X", or even attempting to glide back to "X".

3 International Contest Rules. It is Flying Committee policy to use International (CIVV) contest rules wherever compatible with UK conditions and several small changes will be made in the 1975 BGA Contest Handbook with this object in view.

Ian Strachan,

Chairman, Flying Committee

CLUB NEWS CORRESPONDENTS

Please note that the deadline for the next issue has been changed from February 11 to February 5. This is because the magazine will be printed earlier in March to fit in with the BGA's move to Leicester. (ED).

ICAO AERONAUTICAL CHART: 1:500,000

The CAA has published the first in a new series of ICAO Aeronautical Charts. This series will replace the GSGS 5154 Series and the first sheet is *Northern England* Sheet 2171 AB, available from the accredited Chart Agents and AIS Units, price 75p.

The new series has clearer tints and includes radio frequencies of Special Rules Zones and Areas, an improved legend, the morse code and phonetic alphabet.

GLIDING CERTIFICATES

ALL THREE DIAMONDS

No.	Name	Club	1974
42	G.R. Paddick	Surrey/Hants	29.5
43	P.N. Loewenstein	Surrey/Hants	2.10

DIAMOND DISTANCE

No.	Name	Club	1974
1/73	M.R. Emmett	in South Africa	4.11

DIAMOND GOAL

No.	Name	Club	1974
2/581	C.B. Cogger	Chilterns	7.5
2/582	D.G. Roberts	Cotswold	24.8
2/583	J.P. Saunders	Surrey/Hants	14.5
2/584	T.D. Gorely	Four Counties	29.5
2/585	E.G. Elliot	Bristol/Glos	4.6
2/586	H.K. Harwood	Surrey/Hants	13.6

DIAMOND HEIGHT

No.	Name	Club	1974
3/204	P. Wildbur	Southdown	5.10
3/205	G.R. Paddick	Surrey/Hants	5.10
3/206	P.N. Loewenstein	Surrey/Hants	5.10
3/207	M.T. Carr	Surrey/Hants	5.10
3/208	R.T. Cole	Surrey/Hants	5.10
3/209	P.S. Garnett	Surrey/Hants	5.10
3/210	M.J. Cowburn	Surrey/Hants	5.10
3/211	T. Fox	Lasham	25.10
3/212	J.N. Stevenson	SGU	25.10
3/213	W. Lawson	Ouse	24.10
3/214	R.G. Mortimer	Surrey/Hants	25.10
3/215	P.W. James	Surrey/Hants	24.10
3/216	W.J. Verling	Midland	24.10
3/217	D. Brown	Surrey/Hants	5.10

THE BRITISH GLIDING ASSOCIATION

AGM
DINNER DANCE
TROPHY PRESENTATION

Saturday 15 March, 1975

CROWN HOTEL, OAKHAM, RUTLAND, LEICS.

Tour and tasting: Ruddles Brewery Langham 11.30—12.30pm.
(By courtesy of Mr. K. A. Ruddles, Chairman and Managing Director)

AGM 2.30pm

Lunch and afternoon tea available at Hotel

DINNER DANCE 7.30 for 8.00pm £4.50 (inc.)

Overnight accommodation available at reduced rates from the Hotel. Please apply direct.

For tickets and location details apply:—
Miss L. E. Munnro, Buckminster Gliding Club, 14 Harris Road, Chilwell, Nottingham.

GOLD C COMPLETE

No.	Name	Club	1974
445	C.B. Cogger	Chilterns	7.5
446	B.D. Jackson	Derby/Lancs	29.5
447	R.T. Cole	Surrey/Hants	5.10
448	M.R. Carlton	Clevelands	21.9
449	T. Fox	Surrey/Hants	4.10
450	J.L. Smoker	Oxford	9.10
451	P.S. Whitehead	Cambridge Univ	6.8
452	T.D. Gorely	Four Counties	29.5
453	H.K. Harwood	Surrey/Hants	13.6

GOLD C HEIGHT

Name	Club	1974
J.P. Ellner	Surrey/Hants	5.10
D. McNicol	SGU	5.10
R.D. Pearson	SGU	5.10
R.A. Jarvis	SGU	5.10
P.E. Williams	SGU	5.10
A.R. Dick	SGU	5.10
A.M. Fleming	Surrey/Hants	5.10
D.R. Hills	Surrey/Hants	5.10
D. Dooley	Surrey/Hants	5.10
J.D. Hill	Yorkshire	29.7
R.T. Cole	Surrey/Hants	5.10
H.K. Harwood	Surrey/Hants	5.10
M.R. Carlton	Clevelands	21.9
Stella Harrison	Chilterns	16.9
T. Fox	Surrey/Hants	4.10
D.R. Wilkinson	NAE Aero Club	25.10
D.A. Salmon	Derby/Lancs	5.10
M. Day	Surrey/Hants	25.10
R.E.B. Johnson	Surrey/Hants	24.10
T.D. Gorely	Four Counties	22.7
G.V. Matthews	Fenland	24.10
G.C. Bawden	Fenland	24.10
R. Johnson	Surrey/Hants	24.10
J.L. Smoker	Oxford	9.10
P.S. Whitehead	Cambridge Univ	6.8
A.R. Walsh	Cambridge Univ	20.8
G.W. Meacham	Four Counties	24.10
W.V. Ogley	Surrey/Hants	26.10
P.F. Orchard	Midland	27.10
N. Taylor	Heron	17.8
R. Surtees	SGU	5.10
J.A. Kane	Yorkshire	20.7
A.J. Dibdin	Cambridge Univ	13.9
J.A.D. Ford	Heron	18.8
C.F. Wilson	Yorkshire	21.7

GOLD C DISTANCE

Name	Club	1974
C.B. Cogger	Chilterns	7.5
B.D. Jackson	Derby/Lancs	29.5
D.G. Roberts	Cotswold	27.8
J.P. Saunders	Surrey/Hants	14.5
T.D. Gorely	Four Counties	29.5
C.R. Scarborough	Midland	16.8
E.G. Elliot	Bristol/Glos	4.6
H.K. Harwood	Surrey/Hants	13.6

SILVER C

No.	Name	Club	1974
3851	C. Carter	Cotswold	18.9
3852	A.D.W. Mattin	Inkpen	3.6
3853	J.A.F. Barnes	Essex/Suffolk	24.8
3854	P.R. Orchard	Midland	28.8
3855	A.P. Porter	Imperial College	18.9
3856	S.G. Falla	Eagle	8.9
3857	J.R. Edyvean	Bath/Wilts	19.5
3858	M.F. Johnson	Kestrel	20.9
3859	I. McCalla	Surrey/Hants	20.9
3860	A.C. Swann	Cotswold	17.9
3861	W.L.C. O'Neill	Aquila	19.9
3862	K.J.J. Jarman	Aquila	20.9
3863	T.D. Lamb	Cambridge Univ	5.6
3864	D.M. Merryweather	Four Counties	14.9
3865	G.D. Aram	Cranwell	11.8
3866	I.J. Pickworth	Eagle	29.9
3867	D. Lloyd-Roach	Midland	27.8
3868	I.S. Grant	Oxford	27.8
3869	J.D. Hessey	South Yorkshire	28.9
3870	N. Ratcliffe	London	13.9
3871	R. Harding	Herefordshire	20.8
3872	J.P. Ellner	Surrey/Hants	28.9
3873	S.T. Evans	Shropshire	20.9
3874	J.S. Downes	Bicester	29.9
3875	D.R. Browrigg	Phoenix	23.6
3876	C.H. Slade	Devon/Somerset	26.5
3877	A. Kirtley	London	5.10

WOULD U LIKE TO WORK FOR THE BGA?

The following full-time jobs will be available at our new offices in LEICESTER from March or April—

Assistant Secretary — young man or woman
Cashier/Bookeeper — male or female
Secretary to the General Secretary
Receptionist, Telephonist
Clerk/Typist
Office Junior

RING 01 799 7548.... and speak to BARRY ROLFE if you are interested in any of these situations vacant

ANNUAL STATISTICS—October 1, 1973 — September 30, 1974

GLIDING CLUB	AIRCRAFT					LAUNCHES		HOURS		KM CROSS COUNTRY		FLYING DAYS		COURSES		MEMBERSHIP		
	Club MG	Club 2S	Club 1S	PO	TUG	Gliding	MG	Gliding	MG	Gliding	MG	Total	Soaring	No.	Pupils	Male	Female	Non-Flying
Albatross		2	1		1	652		47				29	9	6	82	32	2	8
Angus		2	2	2		5097	108	479	40	101		97	32			68	11	11
Aquila		2	1	3	1	3002		409		396		113	34			31	4	6
Avro		2	2			4228		571		170		125	67			217	8	11
Bath & Wilts		2	3	10	2	2811		1069		2805		91	47			97	10	7
Blackpool & Fylde		3	2	4		2460		750		255		90	73			122	6	
Borders (Milfield)		2	2	2		2922		289		146		104	26			52	4	2
Bristol & Gloucestershire		3	4	21	3	6330		3513		53144		231	141	24	194	195	18	55
Buckminster		2	2	4	1	5024		714		3802		149	30			105	5	
Burton & Derbyshire		2		6	1	3765		982		850		130	68			99	5	11
Cairngorm (1973 figures)		1	1	1		1807		305		550		114	56	13	69	31	1	10
Cambridge University		2	5	20	2	8763		3867		33552		235	147	9	50	219	17	29
Cornish		2	2	8	1	5039		957		492		204	82	19	128	59	6	38
Cotswold		3	1	8		4711		775		1426		133	56			85	11	20
Coventry	1	3	3	28	4	4998	554	2791	268	21300		132	83	13	101	292	24	25
Cranfield Institute of Technology		1	2	7	2	1219		675		3940						105	7	
Deeside		2	1	1	1	2380	20	1509	15	1700		190	113			55	6	
Defford Aero Club (RRE Pershore)(CISAVIA)		2	1			1545		119				40				23	2	
Derbyshire & Lancoshire		4	3	20		8350		2692		6165		175	117	13	156	- 163 -		79
Devon & Somerset		3	2	12	1	6928	14	1455	6	3036		192	101	4	34	172	15	17
Doncaster & District	1	2	3	10	1	5279	657	1406	480	1717		18	10	4	48	- 150 -		54
Dorset		3	3	10	1	3453		1488		4975				1	7	161	9	208
Dumfries & District		2		3								7	5	1	10	20	2	4
Enstone Eagles		1		9	1	2298		934		3250						40	5	
Essex		2	2	18	1	6543		1660		9564		131	68			185	10	82
Essex & Suffolk		1	2	6	3	2323		978		1166		107	28			63	6	
Glamorgan		1		1		339		31				19	11			20	2	
Glasgow & West of Scotland		1				Included in SGU Returns										20		
Hambletons		3	3	3	3	4324		1044								117	8	
Herefordshire	1	1	1	15	4	4035		2469	579			200	100	31	156	90	10	
Highland		1	2	1	1	1207		273		170		97	26			23	9	
Inkpen	1	2	1	16	3	3355	209	2348	155	11370		219	160		96	104	3	3
Islay (no flying during this period)		1														16	2	
Kent		4	2	11	1	9316		1308		4178		274	148	32	263	150	30	46
Kirknewton		1				122		70		120		31	26			11		2
Lakes		2	1	5	1	2346	30	510	21	270		126	35	7	52	60	5	9
Lanarkshire		1				Included with Universities of Glasgow & Strathclyde										15	3	
Lasham Gliding Society	2	4		69	4	23700	7314	4065	1314	35000		316	98	38	291	- 698 -		300
Imperial College			3	3		372		527		3200						68	4	9
Polish AFA		1	3	1		562		461		6550						28	1	6
Surrey & Hants			11			4786		2227		24615						293	24	37
Scout Association	1	1				2400	580	200	400							- N/A -		
Lincolnshire		3	1	5	1	4292		352								40	4	5
London		4	5	50	4	13074		4193						31	221	358	20	30
Midland		3	3	14		10654		3788		5300				32	530	149	14	38
Newcastle & Teesside		1	1	7		1911		455		200		119	86	6	50	40		10
Norfolk	1	2	2	6	1	1624	1170	889	465	4463	400	24	12	6	40	102	8	12
Northumbria		4	2	16	1	4502		633		1000		149	69	6	32	168	9	4
Norwich Soaring			1	2	1	192		244		3600						12		
Ouse		2	2	9	1	4492		882		2234		132	32			99	10	16
Oxford		2	2	8		4510		1279				115				78	8	15
Peterborough & Spalding		2	1	7	2	1811		933		2200		105	68	2	24	45	5	6

RAE Farnborough (CISAVIA)		2	2	1		679		70				26	3			81	6	21
Scottish Gliding Union	1	5	5	23	2	8975	1204	5792	543	3000		298	231	22	184	186	16	42
Southdown		2	2	6		5190		912		967		118	35			135	14	36
South Wales		3	1	11	1	3303		954		1900		115	48	4	20	88	3	
South Yorkshire		2	2	4		2817		268		200		101	29	1	7	35	4	1
Staffordshire		3	1	5		2462		206				82	30	1	20	50	4	
Stratford-on-Avon		1	1	6		1580		270		880						48	3	26
Swindon		2	3	8		5126		1010		8880						83	3	3
Tiger Club Soaring Group				2	4	183		58				30	18			9	1	
Trent Valley		2	1	6	1	3771		459		870		69	29			87	7	10
Ulster & Shorts (1973 figures)		1	3	3	1	699	50	291	23	700		60	25			50	5	
Universities of Aston & Birmingham		2	1			1583		161		50		77	31	3	18	30	3	
Universities of Glosgow & Strathclyde						411		20								15	2	
Upward Bound Trust		2		2		1863		194				53	17		26	20	5	
Vale of Neath		1	1			1141		92								51	6	15
Welland		1		2		1142		157		100						30	2	
West Wales	1	2		1		782	282	103	189			110	25	20	40	28	1	
Wolds		2	1	2	1	5195		668		100		176	70			89	12	5
Wycombe Gliding School (Airways & Thames Valley Gliding Clubs)	1	3	9	30	3	8800	1570	6400	470	50000		295	200	25	100	400	20	
Yorkshire	1	2	2	23	2	7095	1700	1286	900	11989	3000	310	250	22	220	260	15	60
CIVILIAN TOTALS	12	141	132	597	70	268650	15462	78986	5868	338608	3400	6683	3305	439	3269	7420	505	1444
Army Gliding Association																		
Kestrel		2	4			5301		1005		822						48	4	36
South West District		2	4	2	1	4637		1707		4800		119		2	25	69	3	
Royal Air Force GSA																		
Anglia		2	4	2		2856		452		1402						87	12	
Bannerdown		2	3	3		4173		732		5037		96	23			72	14	
Bicester	2	6	14		4	15752	1989	5752	663	23808	8000	300	190	14	148	525	25	
Chilterns		2	3	1		4621		1300		7321		137	60			89	2	6
Clevelands		3	5	8	4	7865		2223		8082				3	30	190	10	2
Cranwell - RAF College		1	2	4		4055		837		3335		91	36			85		
East Midlands		2	2			4043		486		593				3	25	35	2	
Fenland		2	3	1		6480		1078		1100		123	60			100	4	
Four Counties		2	4	4		5423		2465		4000						75	5	3
Fulmar		2	2	1	1	2300		482		375		97	26			51	10	
Humber		1	4	2		4788		890		800		108	40			50	2	
Mawgan Vale		2	2	1		2842		284		20		85	10			38	6	5
Mendip		2	1	1		1500		249		250		51	10			35	7	
Wrekin		2	4	3	1	11042		3315		59009		192				120	20	1
Royal Naval GSA																		
Culdrose		3	3	2	1	3034		603		2174		98	41	1	12	57	12	6
Heron		2	5	2	3	3172		846		3550				2	12	42	4	
Portsmouth Naval		3	4	1	3									1	14	147	8	12
SERVICE TOTAL	2	43	73	38	18	93884	1989	24726	663	126478	8000	1497	865	26	266	1915	150	71
(CIVILIAN TOTAL C/F)	12	141	132	597	70	268650	15462	78986	5868	303608	38400	6683	3305	439	3269	7420	505	1444
SERVICE & CIVILIAN TOTAL	14	184	205	635	88	362534	17451	103712	6531	430086	46400	8180	4170	465	3535	9335	655	1515
Overseas																		
Crusaders (RAF Cyprus)	1	4	3		1	3818	436	980	203	510		138	79	1	6	69	5	
Eagle (Army Germany)		2	6			5865		1031		5055		135	25			250	15	
Phoenix (RAF Germany)		3	4			7996		1104		2073		104	57	8	46	58	8	6
Two Rivers (RAF Germany (1973 Figures)		3	7	1		7950		1961		10168						69	6	10
OVERSEAS TOTAL	1	12	20	1	1	25629	436	6056	203	25444		377	161	9	52	446	34	16
ATC																		
28 Gliding Schools	1	137	12			157071												

overseas news

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



Gliding activity in Denmark in 1911.

DANISH JUBILEE

Forty years of organised gliding in Denmark were celebrated recently by a reunion of pilots of the old and new generations, the Danish Sailflyers' (Svaeveflyver) Union having been formed on October 5, 1934. The accompanying photo, sent by Per Weishaupt, Editor of *Flyv*, takes history still further back, having been taken in 1911 on Arnholt Island in the Kattegat. In the cockpit is seen its designer, the late Paul Feddersen, whose son Aksel has flown in the World Gliding Championships of 1952, '54 and '56.

First of Denmark's 764 Silver C pilots, Harald Jensen, got it on August 21, 1953, though Fritz Rasmussen got his in Germany on June 10, 1939. First of 46 Gold Cs was Per Meulengracht on July 1, 1950. First of four with all three Diamonds was Age Dyhr Thomsen, May 28, 1966 (FAI Nr.475).

Denmark's first vintage glider rally, held last July, included two Grunau Babys (one of which got first prize for good preservation), B-Spatz, L-Spatz (2nd prize), and a Bergfalke 2. - *Flyv.*

FIRST 400KM RECORD

John Firth of Canada is believed to be the first to set up the 400km triangle record recently recognised by the FAI, according to *Free Flight*. In an HP-11 he flew 408.8kms in 5hrs 15mins at 77.9km/h (255 miles at 48.5mph) on June 2 last.

Believed to be Canada's youngest pilot, Carol Bandmann, aged 14, had to go to Franconia Soaring Centre in USA, where student permits are issued at 14yrs, in order to achieve that honour. She still may not fly solo in Canada.

ANY ADVANCE ON EIGHTY?

Dudley Hiscox, who joined the London Gliding Club in June, 1930, and has served a spell as its Chairman, attained the age of 80 on July 25 and celebrated it on August 11 by taking Skylark No 42 up to 4000ft, just about cloudbase, trying without success to outclimb Chris Will's Minimoa. He wonders if he can lay claim to be the world's senior practising glider pilot.—A.E.S.

4TH COMMUNIST INTERNATIONAL

A report of the 1974 gliding contest comes from the Russian magazine *Krilya Rodiny*, written by A. Zagoryansky and translated by Chris Wills.

This time it was not confined to Eastern European countries, as a visiting team came from Cuba. Also remarkable was the large number of West German glass-fibre sailplane types being flown. The weather was also unusual: four good days followed by a week of cloud and rain. Orel was the site as usual; 52 pilots took part, including 17 women who all flew the Cobra-15 type in the Standard Class. Among the types flown by the various teams were: Czechs, ASW-15 in Standard; Kestrel and ASW-15B with waterballast in Open; Hungarians, Cobra in Standard; Cirrus in Open; Russians with two teams, Phoebus 2, ASW-15 and Cobra. Poles, Kepka flew Orion in Standard, other Poles and the East Germans flew Jantar. Teams also came from Bulgaria, Romania and Cuba.

Leading Final Results

Open Class	**pts**
1 Matsushek, Czech	3989
2 Shatny, Czech	3977
3 Muszczinski, Poland	3822
Standard Class	**pts**
1 Kepka, Poland	3609
2 Vavra, Czech	3687
3 Vala, Czech	?
Women	**pts**
1 Maria Bolla, Hungary	3803
2 Eda Laan, USSR	3663
3 Y. Pollerman, Hungary	3581

COMPETITION ENTERPRISE

1975

The Devon & Somerset Gliding Club will again run this unique competition from June 7th—15th 1975.

This time a single class and there will be tasks for all—from vintage gliders to glass ships.

ENTRY FEE £28 PLUS V.A.T.

"Competition Enterprise is an attempt to restore colour to gliding"—Philip Wills.

Applications to:
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QUEEN'S COMMENDATION FOR A GLIDE

An RAF pilot was flying a Hunter at 20000ft over a built-up area of Germany when the engine seized up. To quote the Ministry of Defence hand-out: "Immediately setting the aircraft up for a controlled glide back to the base, which was 15 miles away" (*ie,* giving a gliding angle of about 1 in 4) the pilot "sent out distress calls and considered the possibility of jettisoning the wing drop-tanks to improve the aircraft's handling" but did not as he was over a populated area. Four minutes after the engine failed, "the Hunter made a perfect 'dead' landing on the runway."

The pilot was most strongly recommended for an immediate award of the Queen's Commendation for Valuable Services in the Air for an outstanding feat of pure pilot ability and for the cool way in which he handled a potentially dangerous situation."

CLUB CLASS INTERNATIONAL

Speed points could only be given on one of the six contest days at the Second International Club Class Championship held at Oerlinghausen in NW Germany, owing to frustrating weather. Distance marks only were given on the other five days. Overall winner was Rolf Nagel, 4286.9pts in a K-6E, second, Horst Laucht of Berlin, 4142.1pts in an SB-5B; 3rd, Curt-Olle of Sweden, 4072.9pts in a K-6E.

Can Anyone Speak Italian?

Humphry Dimock wants someone with fluent Italian to assist with crewing in the 1975 Italian Nationals in August. Reply to 21 North Cross St, Gosport. Hants.

OBITUARY

SAM TOLMAN



It is with sadness that I report the death of Samuel George Tolman, aged 70, President of the Devon & Somerset Gliding Club, who died tragically in a road accident whilst returning from gliding at North Hill.

Sam had a great interest in flying from his school days, and travelled to all flying events in the south-west whenever he could. He designed and built an airscrew driven powerboat which became a familiar sight on the Exmouth sea front in the early thirties.

January 1935 saw the start of his flying career when he assisted in forming the Devon Gliding Dlub, becoming Secretary. Enough money was collected at the inaugural meeting to buy materials for building a glider. Sam spent the next six months building a Dickson primary in the printing works of the Exmouth Journal, assembling it in the gymnasium of the Exmouth Grammar School. The Club first flew in September 1935 in a 35 acre field at St. Johns, near Exmouth, and later moved to Haldon Hill near Exeter.

At the outbreak of war he was halfway through building a second glider for the Club but this was curtailed. He joined the Civil Air Guard and qualified as a power pilot, throughout the war working on Rolls Royce Merlin Engines at Pinhoe. Afterwards he and a group of enthusiasts began to glide at Haldon. They attracted the attention of the Air Ministry department working on the establishment of ATC Gliding Schools and largely through Sam's ability at exploiting opportunities, there were eventually Service facilities.

When the Service influence became predominant, the unit moved to Exeter Airport as No. 84 ATC Gliding School, with Sam as CFI. In 1948 he obtained a commission in the RAFVR, and after a short time of gliding in Buckeberg, Germany he returned later to become the CO. He resigned his commission in the period 1957/1958 when the School moved to Chivenor, and became 624 Squadron.

Late 1958 saw the start of flying at the Taunton Vale Gliding Club at Dunkeswell, and Sam was soon elected as both CFI and Chairman. The Club grew at an amazing rate under his guidance and changed its name to the Devon & Somerset Gliding Club. Sam retired as CFI in 1962, remaining as Chairman until 1966 when the Club purchased its own site at Northill. Last year he was elected as President on the retirement of Mr. T.R.N. Whyte. **G.L.**



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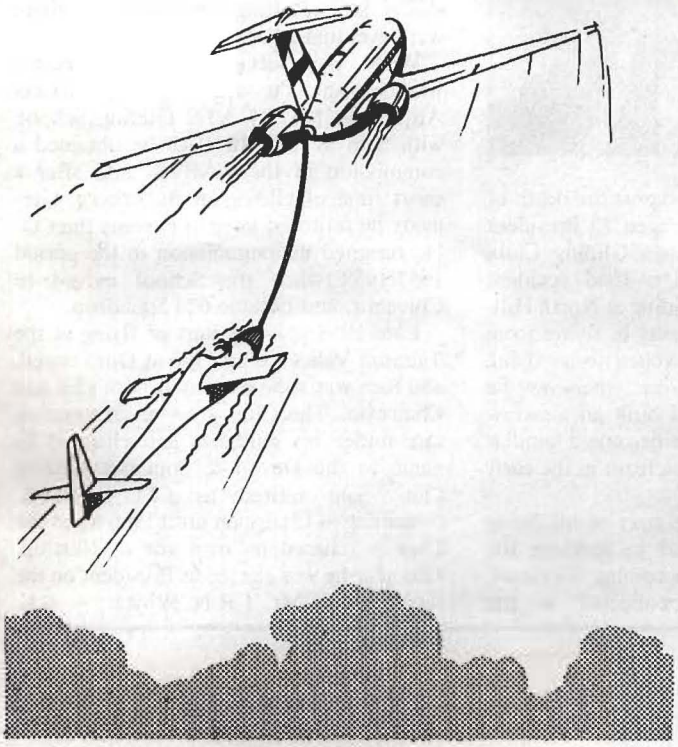
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your letters

MACH-LIBELLE

Dear Editor,

Have any of your readers come across variable-span gliders? A chap in a pub, on spotting my Bronze badge, let drop that he had "become aware of" (his words) a fascinating machine which provided its owner with endless free gliding. A few drinks (on me) loosened his tongue.



Drawing by Charles Hall

Two seemingly unconnected observations had led my friend to his discovery—the first was of a Libelle with incredibly short wings climbing steeply behind a psychedelic one-eleven over Dunstable; and the other, having been invited to the flight-deck during a package-tour flight, was of the captain pulling at a yellow knob under the instrument panel at 35000ft.

The machine, when traced, proved to have telescopic wings, twin wheels *a la* A-21, oxygen and a heat shield. The owner earned his keep playing a glass flügel horn and, in this capacity had befriended members of the BALPA Young Wives Association and somehow obligated one or two husbands into clandestine tows on quiet Sunday mornings—or so my friend said.

Staying high on the tow had little effect on the one-eleven, it seems, and kept the Libelle from melting. Release at 500kts over Paris was truly exciting, as 40000ft could be reached before the excess speed was burned off. During this time the wings were slowly extended to their normal span by compressed air. Even in stable conditions the scope for an extended flight was tremendous.

My friend offered an introduction, but explained that to try out this machine the owner insisted on a pilot holding Gold C and having logged at least six one-eleven launches.

Wreningham, Norwich MIKE BUTCHER

THE LEGEND OF THE CROSS-CHANNEL GULL

Dear Editor,

With reference to Tony Smallwood's Gull 1, the bit of information given in the October-November 1974 issue of Sailplane & Gliding is incorrect. I know since I once held a share in this machine, got my Silver C in her and did some 200hrs of very happy flying in her cosy cockpit.

For the record, she isn't the cross-Channel Gull, that was the old Blue Gull which I have also flown and which met her end in the service of the RAFGSA. Tony's Gull was built for Freddie Coleman of the "Mustard" family, who was killed during the war in a Spitfire. I understand the Spitfire turned over on a Yorkshire airfield and somehow the cockpit ended up in a ditch of water and the pilot was drowned before he could be released.

Tony's Gull then went to the Derby & Lancs Club where she was finished in the old style — all varnish and clear doped with the Club sign on her sides.

Sufficient time has now elapsed for me to reveal that this machine was sold to the late Hugh Wheatcroft, Norman Preston and myself for a very low figure by the pilot who then owned it, because his tales had given the dear old thing a "bad name". He had got into a high speed spiral dive in a cloud, which he thought was a spin!

"Doing over 90kts old boy, tried to get it out!" Left to her own devices she sorted herself out!! I regret to say we were selfish enough not to enlighten him — he wouldn't have believed us anyway.

We took her to Dunstable where we flew here for about 500hrs, getting two Silver Cs and one Gold (Norman Preston, see S&G June 1958).

That, very briefly, is the story but I think I know how the cross-

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Channel legend started. The real cross-Channel Gull was involved in a collision with the T-21A at Dunstable in about 1949. The T-21A was being flown by a highly respected and extremely competent pilot, a present-day CFI who shall be nameless. The Gull lost out and landed in a very bent condition, without the pilot being hurt.

It was rebuilt by Vic Ginn who put on two new struts, which came from an Auster and were modified. When this cross-Channel machine met her final end, the pieces were given to me for a proposed rebuild which proved impossible, so I gave the struts to the late Ron Watson, who had taken over the Tony Gull for an extensive rebuild and improvement. And it was he who put on the existing blown canopy and designed and fitted the airbrakes in place of the spoilers.

This is an interesting case of how legends grow. The only part of Tony's machine from the cross-Channel Gull are the struts, and these were not on it for the immortal first cross!

I was able to salvage the pitot head from the wreck and I gave this to Geoffrey Stephenson years ago. I had the privilege of flying Tony's Gull at the Booker Regionals last year and she is as nice as ever.

Hornsey, London. PETER FLETCHER



A photographic reply from the Kent Club to Andrew Stuart's letter in the last issue (p284). Big Brother Hubble admonishing a pupil after a flight in which some medium turns were poorly "executed."

HAVE YOU INSPECTED YOUR PROAPTORS RECENTLY?

Dear Editor,

If John Lathbury (the last issue. p285) were to consult *Reports and Memoranda* No 3562, he would find that all his problems of nomenclature are resolved by a kindly Royal Aircraft Establishment (p35 of Part 2).

After observing that the most simple control system would incorporate three force motivators and three torque motivators (to modify the forces and moments along and about the three aircraft axes), the author proposes some generic names such as "fore-and-aft motivator" and "roll motivator". He is careful to observe that, whilst the roll motivator's primary object is to produce a rolling moment, it may also produce other effects.

He then proposes some tentative shorter names. The moment-producing motivators become "roller", "pitcher" and "yawer", of which ailerons, elevator and rudder are but particular examples. The "roller" could also consist of spoilers.

The force motivators bear much more exotic titles: "proaptor" (fore-and-aft), "dexilator" (transverse), and "catanator" (heave). Did you know your airbrakes were proaptors?

Imperial College. F.G. IRVING

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CLUB NEWS



Taking-off at Lasham. Photo: Hugh Hilditch.

Copy and photographs for the April-May issue should be sent to the Editor, S&G, 281 Queen Edith's Way. Cambridge CN1 4NH, tel Cambridge 47725, to arrive not later than February 5 (see p31) and for the June—July issue to arrive not later than April 15.
December 7, 1974

GILLIAN BRYCE-SMITH

BRISTOL & GLOUCESTERSHIRE

Since Euroglide the weather has been abysmal with very little flying of note, although first solos have been flown by Phil Fowler, Mike Taylor, Richard Webb and Dave Giddy.

The Shobdon weekend was held in October and there was a good turnout, although the best wave flight was to 8000ft by Tom Bradbury.

November 30 dawned bright and clear with obvious signs of wave directly over Nympsfield. One member contacted from a 900ft winch launch and was whisked up to 12000ft. Unfortunately the long series of poor weekends took their toll and most members didn't turn up until the base of the wave was well out of reach.

Following the unfortunate accident to our Blanik just before Euroglide, a replacement is now due which will return our two-seater fleet to full strength - T-21, Bocian and Blanik.

R.A.R.

BUCKMINSTER

Our year started with the first annual dinner which was a great success and held appropriately at the birthplace of Isaac Newton. The AGM saw the resignation of our CFI Brian Spreckley who has joined Bill Scull as a BGA National Coach. Willy Bailey has taken over and more than maintained our meteoric progress with eight instructors now and at least two more next year.

The soaring season was very successful with Chas Cowley running six weeks of continuous flying. Four completed their Silver Cs, including "Dib" Clewes who, at 67 years, still makes our young pundits sweat! Ron Willett and Brian Spreckley became our first Diamond pilots.

Sincere thanks to Paddy for the use of the workshop. An expedition is being planned to unleash us north of the border in the spring.

We now have the use of the NS runway on our site at Saltby and the hangar is growing fast and fully clad. We are becoming experts in bricklaying, drains, welding, concreting... Our thanks to the Sports Council for their help.

R.A.A.

DERBYSHIRE & LANCASHIRE

Nothing much has happened at Camphill in recent weeks; the weather being very unkind to hilltop aviators. *Ab-initios* are just about managing to get airborne but the pundits appear to have hibernated for the winter months, except for occasional forays to sample the congenial atmosphere of party nights.

The last flying highlight of the cross-country season was Peter Blacklin's 300km triangle to complete his Gold and add a Diamond, which coincided with his full category instructor rating. He has temporarily left us for Cranfield, where his gliding talents are presumably being put to good use. Three other instructors have become fully catergorised.

Another Olympia 463 has joined the private owner fleet and we are adding a Scheibe Falke to the club ranks. This should be flying by the time this is in print. Bill Scull paid us a visit at the beginning of December to talk to instructors about Scheibe Falke training.

At long last green grass has actually germinated and even grown on our new east-west runway. We thought we would never see the day. However, a stone and/or boulder picking party will have to be organised before we can use it.

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A group of members expedited to Royal Deeside in October. Simon Duxbury managed a very respectable Silver height, but Tony Vermot climbed to 13000ft in his Oly and had to land out, only to find the strap holding his barograph had switched the thing off. He is now busy trying to organise a party for next year.

P.H.

DEVON & SOMERSET

Sadly we have to report the death of our President, Sam Tolman. Although President for barely a year, Sam will be greatly missed, especially as an instructor. Our sincere sympathies are extended to his wife Joyce and family.

Eric Green and Alan Barnes have recently gone solo - the latter soaring for 30 min on his second flight; and Ian Patterson has completed his Bronze C.

The petrol pump for the tug is now installed and in working order, cutting down delays in refuelling.

Our AGM was held at the clubhouse in December, followed by the usual party.

J.R.H.

DUNKESWELL

Our members have combined with the Aero Club in most enjoyable social activities including a firework display and party, plus three dances in the new clubhouse.

We have been operating successfully with wire launching and are about to embark on the ICI Parafil rope described in the October 1974 issue of S&G, p230.

Mike Bird, Dave Bailey and Roy Young have recently gone solo and Mike Fairclough has acquired a PPL and joined the queue of tug pilots eagerly awaiting our tow plane.

Wet days have been consumed by lectures, ably delivered by our CFI, Dave Bindon, who proposes to run a regular course of talks for trainees and advanced pilots during winter evenings.

We have been inundated with membership ap-

plications and are also delighted to have been visited by so many familiar faces during our short period of operation. We hope to run a club week in the spring and invite pilots from other clubs.

B.H.F.

ESSEX

We have come to the end of another successful year at North Weald with more launches, hours and cross-country kilometres recorded than ever before.

Our high launch figures are almostly entirely due to the work put into the launch system by Tony Mainwaring and his helpers.

Our new clubhouse is taking on its final shape, thanks to Brian Murphy and his band of workers: at one point Brian had almost forgotten what a glider looked like! By the time this is printed we should have moved in and had our clubhouse warming party promised by the clubhouse manager, Andy Joslyn.

The AGM was on December 1. After two year's hard work, our Chairman, Ken Derno, has resigned and will be replaced by John Wilson. Ken has seen us through a difficult spell with airspace restrictions, the building of the M11 and the acquisition of the control tower lease for the clubhouse. I would like to thank him on behalf of the club for all his efforts and wish John a happy term of office.

Peter McElarney has given up as PRO, a post he has held for many years, and Steve Mackey has taken on the job. Sheila Corbett has handed over the Membership Secretary's work to Ken Davis and his tame computer. She has signed up a greater part of the present membership during the last five years. Our thanks to Peter and Sheila.

Chris Nicholas told us the latest on the airspace problem and we hope it will not prevent us doing even more kilometres next year.

The trailer building season has started with three being built,for a Cirrus, our third Pirat and a Grunau.

D.A.

ESSEX & SUFFOLK

Rain! Rain! Rain! That basically has ruled all our activities over the past few weeks. Our grass runways have never been in such a waterlogged state. The usual sight at weekends is for all members to be stretching their necks and looking skywards; lately we've all been looking downwards at the state of the ground.

In spite of the present weather conditions, our gliding hours for the year show an increase of about 50 over the previous year. At the end of October we took the Skylark 3, Swallow K-6, SHK and K-6CR to the South Wales Gliding Club at Usk, for their wave week. Several members were lucky enough to contact wave and also enjoyed ridge soaring for the first time. In comparison with our flat East Anglian site, it was exciting flying from such a picturesque site with so many hills around.

C.C.S.

HIGHLAND

This has been a very disappointing soaring season and we hope that the wave season now upon us will bring better flying. The Taits and their Oly 2B had a week at Aboyne in October, where the Oly proved once again that, vintage or not, it can still outsoar most machines!

The club has just changed its Skylark 3F for a K-6CR; the new toy is in great demand, and we look forward to proving its worth when we get some soaring weather.

R.E.T.

KENT

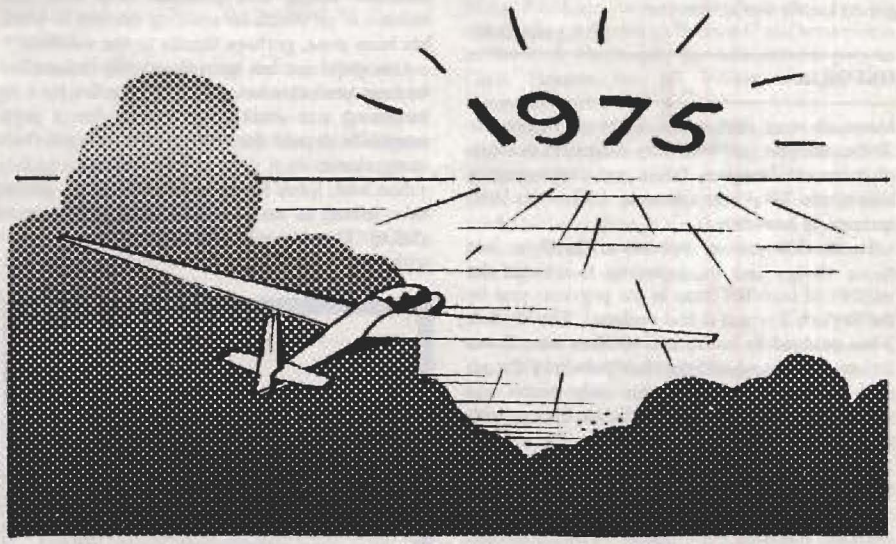
The end of last season gave us some good soaring weather and enabled Colin Baines (K-6CR) to gain Silver height and complete his Silver C, the eighth Silver leg in this syndicate aircraft this season. On the same day Bruce Wickens flew his Skylark 4 on a Silver distance, valid by a fraction of a kilometre.

We are delighted that at last we have a tug of our own, a Super Cub from Belgium flown over by Glyn Richards.

The news concerning the proposed ban on gliders in the London TMA is very serious. Though not definite, it looks as though the TMA may stay about the same size but with a base of only 2500ft asl. This would leave us rather trapped, not being able to get high enough to cross the Thames estuary for flights to the north and with about 200km of our usual 300km route between Gatwick and Heathrow to the west, to be flown at less than 2000ft above ground! We can only hope that the Airspace Committee can work a miracle and all this won't happen.

On a more cheerful note, we held our annual dinner-dance in October and were well entertained by Frank Irving. Most of the cups were won by Ron Cousins and Richard Pitman with the ladies cup going to Phil Buckley.

C.B.



New Year Optimism at Tibenham.

LONDON

Many congratulations to Norman Burgess for his continued patience and perseverance through 492 launches on the two-seater — he finally went solo on October 14. Norman's motto during the last 8¼yrs while training has been "Teach me and you can teach them all!"

One Sunday in November, after a prolonged and hectic summer season, all our launching equipment seemed to give up the ghost. Members are greatly indebted to Colin Stephens, our Chief Tug Pilot, who came to our rescue with his privately owned Chipmunk and towed the entire day. Colin, who has just added to his long list of flying qualifications an aerobatics rating, found some unique ways of returning to the launch point.

While flying is still at full force, a six-man team of private owners, lead by Peter Claiden and Bob Firth, have undertaken the major task of overhauling the winches and most day-light hours at week-ends have been devoted to this arduous, essential task.

Like many clubs at this time, we too are involved with our continued and future expansion during these tight times. An extremely well attended forum was held in which a free exchange of ideas and views was made between club and committee members.

Our winter social events began with Carl Vey's extremely entertaining vintage gliding films of the Wasserkuppe. It will end with our annual dinner-dance on February 14.

D.Y.

NORFOLK

Despite the general gloom of rising costs we look forward optimistically to 1975. Successive years have seen the introduction of the Falke, a change from auto to aerotowing and, most recently, the erection of the new clubhouse. The new year will mark the addition of a second K-13 to the club fleet, thanks to contributions from the Sports Council and the University of East Anglia.

The new two-seater will be replacing the T-21, which has been bought by two club members who hope to keep it flying at Tibenham. The Swallow also came in for careful consideration, but it has been decided to keep it for the time being in view of the number of new solo pilots expected this season.

Falke flying charges have been increased to £5.40p per hour — based on the simple charge of 9p per min, members and visitors alike.

For anyone interested in flying from a different location, we are organising residential courses starting on June 30.

C.E.H.

OUSE

It is with deep regret that we record the death of Stan Park after a long illness. For many years Stan was our ground engineer and whilst he spent very little time in the air, he devoted a great many hours building and repairing equipment so that the rest of us could fly. He was possessed of many abilities and his outlook on life endeared him to all who knew him.

Crisis time again for the club. Last year at this time we were fretting over fuel supplies now, with the Defence cuts, we are uncertain about the future of the airfield. We have already had the electricity and water supplies cut-off, though fortunately this doesn't interfere with our flying operations.

I was going to conclude on yet another gloomy note by mentioning the non-appearance of the Pennine wave this winter. However as I write, reports are coming through of the Cobra, Std Libelle and club Skylark up in the 10000ft region.

Congratulations to our first Diamond height member, Roger Mortimer. Unfortunately not gained locally but at Aboyne.

E.R. and G.M.

OXFORD

Members were told at the AGM on November 30 that the year had been very successful in terms of increased launches, hours and cross-country kilometres. Total hours were up 18% for a ½% increase in launches.

In its first year of operation, the Pirat had flown 184hrs and exceeded by five times the number of launches done in the previous year by the Skylark 2 which it had replaced. The Skylark 3 has doubled its hours and 4000km were flown across-country, which is probably short of the actual distance since it includes only ladder and badge claims. There were 24 Silver C legs, with two Gold Cs completed.

The Executive Committee elected were Eric Smith, Richard Hall and Steve Evans with the officers remaining unaltered; Chairman, Peter Pratelli; Treasurer, Joy Taylor; Vice-Chairman, John Gibbons; Secretary Norman Woodward.

The two club trophies were presented to Peter Brooks. The Simpson cup for his Gold C distance triangle and the barograph for winning the club ladder.

J.R.

SHROPSHIRE

Despite abysmal weather, November produced some excellent wave soaring with numerous flights of over 10000ft and Vic Carr setting a new site record of 16500ft. The wave appears to work quite well in winds of between NW and SW.

The last day in November saw Arthur Jones (K-6) narrowly missing Gold height with 14000ft — he just hung on to the tug a shade too long!

The following day proved quite exciting when, after earlier fumbles with the tower radio, three aircraft launched at mid-afternoon into lowering cloud, 7/8 with a base of about 1500 ft, to be rewarded with a magnificent wave-ride in brilliant sunshine. Vic Carr (Kestrel) climbed to 12500ft and Ian Paul (Std Cirrus) to 6000ft. Tony Adams (K-6) was somewhat less successful and splashed down in a water-logged field resulting in a rather tricky retrieve operation.

The problem of returning to base after two hours spent above nearly 8/8 cloud and descending through 4000ft of cloud with a base now lowered to only 600ft agl, provided fascinating radio listening. With what amounted to a VDF let-down, it was gratifying to observe both aircraft emerge within minutes of each other from the murk at 600ft, but within half a mile of the upwind boundary.

Finally, we should like to extend a welcome to a limited number of visitors and their aircraft to our site, but by prior arrangement only. Anyone interested should contact Ian Paul at Tarvin 40787.

D.I.V.

SOUTHDOWN

Two of our most popular members have gone solo from our new site, Margaret Norton and Harry Wainwright, and have now converted to the Swallow.

Margaret is our membership Secretary and with Jean Thomas, organises the catering. Harry, a lecturer on building, has given invaluable technical advice and practical help with our clubhouse on which an amazing amount of work has been done, perhaps thanks to the weather.

Our pupil list has been drastically reduced so we have been able to cut our waiting list, both by increasing our intake and asking for a non-returnable deposit for those wanting to put their names down.

Sue and John Frampton, both power pilots, have joined us and are becoming proficient at gliding. They brought their Swedish Super BA-4 with them and, after extensive tests, it is going to be used as a tug. I understand it has caused quite a lot of interest at Lasham and elsewhere.

We will be having the children's party on December 14 and our wine and cheese party on December 21. It's a trial run for what we hope will be the first of many social occasions.

S.E.

FLIGHT

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SOUTH WALES

The October wave week at the site was well filled by our members and visitors from such clubs as Essex & Suffolk, Kent, Inkpen and Midland. A weather genius must have chosen the exact week, because we had wave conditions on Monday, Wednesday, Thursday and Friday with Ivor Shattock achieving the max height of 12400ft. We're hoping the spring wave week, beginning on March 23, has been chosen with the same expertise.

The clubhouse was again used for a general evening when a film was shown by Eric Fitzgerald, and our bonfire night was a great success.

Slippery conditions on the field are making winch manoeuvring a work of art, so club operations are almost entirely limited to aerotowing.

B.J.E.

STAFFORDSHIRE

While the weather at Morridge has been poor, there have been the occasional good days such as when we had the K-4, K-7, K-13, Swallow, Dart 15 and Olympia 403 staying up on our ridge.

Our new clubroom was opened with a magnificient buffet by our gastronomic expert, Robert Wilshaw, who was also responsible for organising this successful clubroom project.

F.B.

SURREY & HANTS

The great altitudes of Portmoak are now just a memory and among the mud, snow and frost of winter Lasham, the new season's plans are hatching. With ever rising fuel costs, efficiency is the greatest cry and the maximum use from the towcars and tugs with minimum wastage is essential. To that end we have been experimenting with a new biplane tug which gives two-seater tows to 2000ft in three minutes — sounds splendid, especially at 6gph continual use. Pulley launching is also under investigation.

Inflation is also having a good "soaring" season but you can still get round your 300km and get change from a tenner, even if it takes 6½hrs.

The Lasham Regionals promises a good entry again and this time we'll lay on some normal Lasham 500km weather.

C.L.

TRENT VALLEY

We are now privileged to have Marcus Kimble, MP., as President. We are extremely happy that he has agreed to act in this capacity as he did so much towards helping us to obtain our present site at Kirton-in-Lindsey when we moved from Sturgate.

Our ex CFI., Ray Parkin, who now flies with the Anzuk Gliding Club in Singapore, has presented us with a cup to be awarded to the pilot who has covered the greatest distance on an out-and-return.

Our current CFI, Win Fillingham, is at the moment doing rating checks on all our hard-working instructors. Congratulations to Simon Day and Alan Pickard who have gone solo and to Tony Cooke for his Silver C duration. J.P.N.

ULSTER & SHORTS

There hasn't been much to relieve the monotony of circuit bashing at this dog-end of a rotten year — except gales and storm force winds which have stopped all flying and threatened to lay Scrabo tower flat. But at least we can now watch unflyable weather panoramically and curse in comfort as our landlord, the Ulster Flying Club, recently opened a large and lavish clubhouse to replace its former wartime shack.

We've doubled our strength on the distaff side, when Twy Miller soloed some weeks ago and ended Monica Galloway's distinction of being Northern Ireland's only current woman glider pilot. There have been several first soloists recently but we are concerned about the low recruitment of *ab-initios.*

Much excitement on the local streets recently when, after a rope failure, Billy Craig landed the Blanik, with a pupil, in a small field nearby. The Blanik trailer was away for mods so after we'd derigged and carted the wings back in a Skylark 2 trailer, the fuselage was walked a mile or so back along the public pavements to the airfield — much to the astonishment of passing drivers and delight of the local kids.

Jeremy Bryson was away doing his stuff for the balance of payments in Australia as these notes were written. On one previous such trip he came back with a Diamond goal; with our own '74 soaring season being an estimated six hours one day in April, we eagerly await to hear whether he got in any high-summer gliding.

R.R.R.

VINTAGE

Our Easter rally will be at the South Wales Club, Usk, from March 28-31. EC

WORCESTERSHIRE

It is some time since we appeared in these columns but in spite of reports in the last issue that we have collapsed, the club is flourishing and flying throughout the year.

We share our airstrip with the Warwickshire Parachute Club, a very thriving group, and many of their members now glide as well. The current fleet of gliders in our hangar include a Blanik, T-21, a Grunau Baby plus several privately owned "hot ships" and powered aircraft.

We are lucky to have what we consider is the finest tug in the business, the Polish Wilga, and it has had a good record this year. A second tug aircraft is now being rebuilt for next year, so we shouldn't be short of launches.

Chris Buxton, our CFI, keeps his eagle eye on us and our safety record is extremely good. Membership is increasing slowly but the dreadful weather hasn't helped.

This year has seen many visitors landing at Bickmarsh from Shobdon, Nympsfield and Husbands Bosworth, all claiming various badges etc. We hope they have been made welcome and will come again.

I.N.J.

WYCOMBE AIR PARK

At the end of the 1974 soaring season our total launches were 8800 compared with 11000 the year before. This was a reasonable achievement considering the petrol crisis and the generally bad weather we had last summer. At one time the rain was so bad that even when it did clear enough to fly, the airfield was waterlogged for three days and we had to operate on the hard runway normally only used by the power clubs on the site.

One interesting statistic does emerge — has anyone else noticed what fantastic gliding weather we have had on all but a few Tuesdays this year?

Our two week expedition to Sutton Bank didn't produce the hoped for crop of Golds and Diamonds. The longest flight was by Doug Walker who achieved an hour in a snow storm.

As for personal achievements, our "home-grown pundit", Alastair Kay, completed his Silver C in 1973, gained his Gold distance last summer plus his PPL and now has his Gold C with a height gain of only 200ft short of Diamond height. This was at Portmoak after being driven away from Sutton Bank by the bad weather.

Richard Aldous, having discovered how his glass ship works, has again been flashing around doing spectacular things and is now at the top of the National Ladder. As only the third largest gliding operation in England, it gives us a great feeling of satisfaction to whip away the Ladder from the biggest club!

J.M.C.W.

YORKSHIRE

As usual we look forward to a new soaring season with enthusiasm. Let's hope our fireside plans for longer, faster and higher flights than ever before don't fade into the harsh reality of a long, wet summer.

The fact that there is an economic crisis appears to have escaped a large number of our syndicate members who have found ways and means of acquiring sleek new gliders for 1975. Those of us with wood and glue aircraft would feel quite ashamed to open the trailer doors if it were not for the fact that Mike Carter in the "vintage" K-6E managed top place on the club ladder last year.

Although we continue training and soaring flights throughout the winter, many of our members keep in touch at this time of year by attending our various social functions. These are usually a great success and we are grateful to the organisers.

The Northern Regionals in August will again be at Sutton Bank and we expect a good entry. We would advise anyone interested to get their applications in early to avoid disappointment. There are ample facilities in the area for family and friends to come along and enjoy the amenities of the club and the North Yorkshire National Park.

P.L.



SERVICE NEWS

ANGLIA (RAF Wattisham)

We welcome Sqd. Ldr Hewitt as our new officer in charge of gliding and wish Alan Lacey, who has been an instructor with the club for some seven years, the best of luck as a civilian, together with our thanks for all his hard work.

The CFI's trophy was awarded for 1974 to Mike Faulkner, our present Secretary, for his outstanding progress to Bronze C and conversion to the K-8. The trophy for achievement goes to Chris Heames for his 300km triangle and Diamond goal.

In spite of abominable weather, and other matters which interfere with flying, our numbers continue to grow and last weekend our first USAAF member went solo in the Blanik. It certainly looks as though we shall have a good crop of solo pilots for the K-8 and K-6CR when the soaring season starts again.

E.R.

BANNERDOWN (RAF Colerne)

During the past year we have had several happenings of note. We welcomed Roger Crouch as CFI and with Ken Hartley as his deputy, maximum flying has been the keyword. Congratulations to Ken and to Dave Williams on gaining their full category and to Dave for completing his Gold C. We also offer best wishes to Barny Barnes in his new role as assistant instructor.

The legs and certificates gained this year are too numerous to list but two solos are worthy of mention. The first was by Ray Speke, whose interest in gliding goes back to the 1930s. and the second by Yvonne Britton who re-soloed after several years. Yvonne is our only current solo lady but is being caught up rapidly by more of the girls.

On the MT side (I prefer to call it "support service"), our narrow drum winches are proving that this is certainly a better system than having scroll gears to contend with, although the winch drivers have to be switched-on to avoid the cable coming off the drum. Skinhead, our elderly Nuffield tractor, is still doing sterling service, often being brought out of the hangar when our temperamental Czech Zetor or Fordson decide they've had enough for one day.

On the aircraft side, big changes are in the air. We have said goodbye to our K-6CR, are getting a Std Cirrus and expect the Bocian to be soon replaced with a K-13. Changes are taking place on the private side as well. Tom Bobbin's SHK is making way for a Cirrus, "Yorky's" Blanik is

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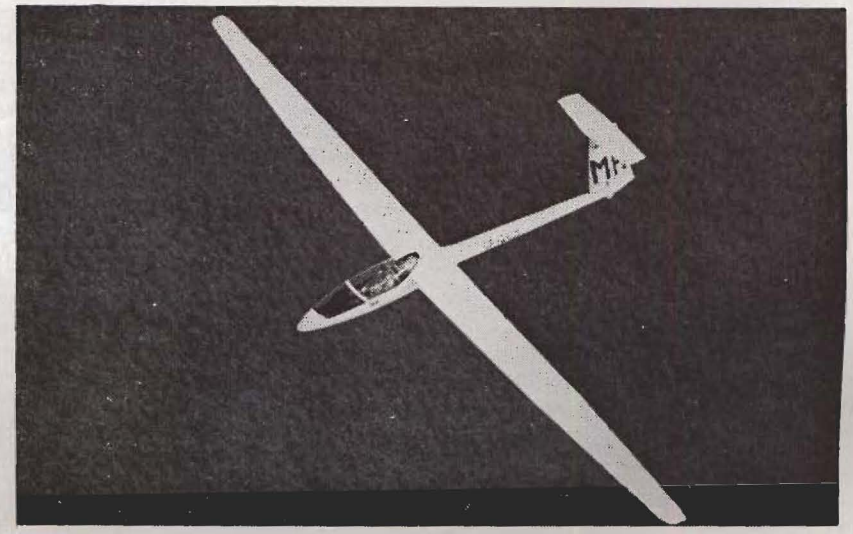
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being replaced by an IS-29D, the Blanik being bought by another member. The workshop contains the remains of a Kranich which is being rebuilt by Fred Porton.

Our social life has had a great lift in 1974. Our new enlarged bar with its dance floor has been packed to capacity with curry parties and discos throughout the autumn.

Prospects look great for 1975 with several expeditions arranged for pilots chasing duration legs and Diamonds.

F.C.P.

CHILTERNS
RAF Weston-on-the-Green

Our Chairman warned members at the AGM of the need to "stick together" and work to overcome the dangers of inflation. This was underlined by the Treasurer's report which noted that fuel bills for the last half of the year were treble those of the first six months.

However we did show a small profit but, with regret, the meeting increased the launch fee to 25p and added £1 onto the annual membership. This equated to an increase of 25% — current inflation rates (not Government figures) were estimated at 22%.

The CFI's report was happier. For the first time the club achieved over 1000hrs, an increase of 33% to 1300. Launches had increased as well and the average flight time per launch was calculated at 17mins compared with 14mins in 1973. The number of Bronze and Silver C pilots remained about the same.

The club had eight completed Gold Cs, 11 Diamonds and 11 Gold legs. Cross-country mileage had nearly trebled.

The Chairman presented the trophies and the CFI's trophy for "unsung heroes" went to Eddie Wright. Malcolm Norris was awarded the "member of the year"trophy for the third time and also made an honorary life member in recognition of his continuing work on our MT. The "pundit pot" went to Geoff Millward and a special gift was made to Tony Blyth's wife, Marge, in appreciation of her work for the many club barbecues etc.

Nick Nicholls took over as deputy CFI from Brian Cogger. The club will miss Brian's drive and enthusiasm and records its thanks.

The Aboyne expedition wasn't very productive in terms of badges — only one Gold height, although there were several climbs of over 1700ft.

G.M.

CRANWELL (RAFGSA)

The close season is well and truly with us. While our CFI disports in the Maltese sunshine, the rest of us seem to be increasingly confined to the hangar. However, last minute, feverish preparations for the RAFGSA AGM and jubilee celebrations (hosted by Cranwell) paid off and we had a most enjoyable evening joined by many old friends.

The same weekend we had a welcome visit by a Centre Chipmunk, Falke and Blanik. The tug was kept busy launching first solo aerotows while the Falke gave several members a much needed opportunity to complete field-landing checks.

The planned wave expedition fell through due to "exigencies of Service". One member, however, struggled through wind and rain to Aboyne with the K-8 and spent an expensive week looking out of the caravan at an unpromising and unhelpful sky.

Quote of the year must be from the pilot who, when offered a pint in the bar, replied seriously: "No thanks — I'm flying tomorrow!"

S.T.E.W.

CRUSADERS (Cyprus)

When the situation in Cyprus flared up, our airstrip at Kingsfield became an evacuation point for many Service families and tourists. Hercules aircraft were used to ferry these people from Kingsfield to RAF Akrotiri. Obviously, with so much official traffic around, "Kingsfield International Airport" was no place for a Gliding Club, so we de-rigged the gliders and put them in storage wondering if we would ever fly them again in Cyprus.

At last, in early September, we were given permission to fly within the boundaries of the Dhekelia Sovereign Base Area, a space of about 36sq/m. So on September 15 we took to the air again in the K-13, this being the only available glider at the time. A further restriction on our flying was that we were not allowed to use the tug, so we had to make do with winch launches only. Aerotows were given the go ahead at the beginning of October, but they had to stop after about six weeks. This was due to a lack of insurance on the hired tug and because the only qualified light aircraft engineer on the island had gone to Greece, so the tug's C of A could not be renewed.

On a number of days there was plenty of lift around, but that was just it!! It was all beyond our reach, being outside the boundaries of the Sovereign Base Area, so we had to be content with circuits and bumps. When the lift ventured into our "territory" it was used to good effect, an example being the Silver height gained by Malcolm Brooks in the Swallow. On another occasion Mick Elsom managed to stay up for 4¾ hrs with a pupil in the Blanik.

Our CFI Bill Dickson, has been getting the Adventure Training Courses underway again, using the Motor Falke for this purpose. However the Falke is now undergoing some major servicing so we are hoping to get our T-21 back on the line in time for the next course. The "Barge" has been out of action for some time now, waiting for a consignment of wood from UK to enable repairs to be completed. The wood finally arrived a few weeks ago and it won't be long now till the 21 is flying again.

Another glider which has now flown since July is the Oly 401, the Crusaders "Hot Ship". It was in the process of having a major servicing carried out when it had to be put into storage along with the other gliders. However, the work on it is nearing completion now and it should be in the air again by the middle of December. Our biggest problem at this time is the Oly 2B, which is being worked on at Episkopi by our aircraft member, Pablo O'Kerwin, and his two able helpers Mike Barratt and Malcolm Brookes. It still looks like being a long time before it spreads it wings again, the Swallow should be very popular over the next few months.

The Club has gained a lot of new members recently, and already three of them have gone solo in the K-13. Congratulations, therefore, to Chris White, Derek Smith and Ken Taylor. Chris was on an Adventure Training Course in October and liked it enough to join the Club afterwards. Congratulations also go to Brian Ward, who complete his Silver C with a distance flight from Bicester to Lasham whilst on an instructors course in October.

Max Mallinson, a very active member, has left for the UK. Another member we shall miss is Ken Jones, one of our instructors, who has been posted to RAF Little Rissington.

The really sad point about gliding in Cyprus now that we cannot go anywhere. Even a Silver distance is impossible! On most days conditions are soarable towards the Kyrenia Mountain Range, but there is absolutely no chance of going there to fly. We are hoping the situation will improve but in the meantime our prayer is for lift over Kingsfield. Please note that all donations of lift will be gratefully accepted!

B.W.

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EAGLE (Detmold)

The Zell am See expedition was snowed off, so they all went to Innsbruck. On the last day the Foehn worked. The sun came over the hills to the sound of bagpipes and incantations from the Eagle's party. At the end of the day we had two Diamond heights (Eric Smith and Martin Hardy), one Gold height (at long last to Rip Kirby) and two Silver heights.

The hard luck story belonged to Alan Sommerville and John Needham who exceeded the British two-seater height record but by less than 3%. They thought the record was 1000m more having reached 24000ft in the K-13.

Despite an appalling summer, we achieved well over 5600 launches, about 1000 more than the previous best. We still haven't broken 1000hrs and, in fact, at 937hrs are slightly down on our best efforts. However we have again made a good profit, although it will all be ploughed back.

The club has only managed one Gold C this year, Eric Smith's, who gained his two Diamonds at the same time. The rest of the statistics are 17 A and Bs, eight Bronze Cs, nine Silver heights, six Silver distances, seven durations, two Gold heights, one Gold C distance, one Diamond goal and two Diamond heights.

We now have the hangar erected and are taking a short course in concrete mixing and civil engineering prior to laying the floor.

During the summer holidays the airfield at Detmold was swamped on Wednesdays with school children flying for the first time. By the end of the holidays several were just about ready for solo but were much too young — a mere nine to 13 years. This proved a great success, both from the point of view of the children and the club.

We are now in the market for a secondhand Falke to ease the training load.

P.W.W.

EAST MIDLANDS (RAF Swinderby)

You may not have heard from us lately but "no news is good news" as the saying goes. Apart from the usual club flying during the summer months, we were inundated with requests for social membership. Gliding seems to have become very popular with civilians here.

Rick Heselwood decided that the only solution to this influx was to form a civilian club which is how the Witham Gliding Club came to exist alongside East Midlands. You may be hearing from them in the near future. Rick is now CFI of

SHOBDON

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both clubs and he and Alf Newton, deputy CFI, are working hard.

During October-November we had two expeditions and an *ab-initio* — and the only word to describe them is WET! The expeditions were to Sutton Bank and Aboyne.

A.H.

FENLAND (RAF Marham)

Our AGM on November 23 was taken by our new Chairman, Sqd Ldr Peter Humphrey. The highlight was CFI Jim Pignot's report which showed we really topped the chart this year by exceeding our goals for hours and launches.

With our fleet of five aircraft and a total of 126 flying days, we achieved 6865 launches for a total of 1145 flying hours. Other statistics from the report showed a total of 23 A and B certificates, 25 Bronze legs, 28 Silver legs, three Gold legs and one Diamond goal. Two of the Gold legs were achieved by Geoff Bawden and Geoff Matthews in late October at Aboyne.

Three trophies were presented by Grp Capt Caillard, our Station Commander, as follows:- Lyndon trophy for the longest cross-country, Colin Rooke; the "member of the year" trophy, Tony Steel and the John Hall trophy for keeness and progress, Floyd Svrko.

The K-13 is in the workshop undergoing a major and is to be followed by our K-8 and T-21.

We said a reluctant goodbye in early November to Phil Hart and send our best wishes to him in his new assignment in Germany.

C.B. and J.E.

FOUR COUNTIES (RAFGSA)

Despite rumours, we are still at Spitalgate and look like staying. We reviewed a very successful year at our AGM in November.

This was so well organised by our CFI, Albert Johnson, that it only took 30mins drinking time, but one thing he didn't plan was the presentation of the "Bloggs memorial trophy" for the most interesting flight of the year. This was for one circuit in the Kestrel with the tail dolly still fitted, flown by himself.

Meanwhile winter drags on. The Kestrel, K-6E, Skylark and Oly 460 are in the workshop and other aircraft are due to go in soon. We should have a magnificent fleet for the summer, if we get one this year.

A.S.M.

PHOENIX (RAF Brüggen)

It has been all go at Phoenix over the last two months. Wally Lombard has gone ahead with the erection of our new hangar. The "readymix" wagon arrived early one Saturday and everyone worked at the run to beat the initial set! (In fact, the only thing that solidified was the wagon itself when it got bogged down in all the mud along side of our strip.) By 10.30 am all the foundations had been laid and there was still some concrete remaining — there is now a foundation laid for a ladies' "loo"!

There have been one or two unfortunate incidents involving our gliders, resulting in the Swallow taking up its usual pose, upside down in the workshop, and the K-8 needing "treatment" for a broken wing. The K-7 is in for its major and should come on line again resplendent in new colours of black and yellow.

The outcome of our AGM was a much firmer line being taken in pilot training. A "flight standards" man in the form of Tim Oulds has been appointed. The idea is that he will weave in and out of the training programme to ensure the same standards of flying apply throughout pilot training.

"Spud" Murphy has been appointed "standards" man of the winch, the principle being the same as Tim's though we all hope he'll hold off with the weaving.

Jerry Wallace, to our regret, is to be repatriated soon, so Jim Hough was elected secretary in his place. Tom Jones is the new Technical Member (ground) and Ron Cawthorne was re-elected social member.

Mick Simmonds was awarded the *ab-initio* trophy and Ron Cawthorne the CFI's trophy for outstanding contributions by a club member.

We now have our own club magazine. The first issue was distributed after the AGM and seemed to be received quite favourably. All contributions from ex-Phoenix members would be most welcome. Please send copy to A. North-Graves, c/o Sgts' Mess, RAF Wildenrath, BFPO 42.

We say farewell to Ray and Mary Brownrigg and to Steve Stevenson. Their new clubs are taking valuable assets from us and we can't pretend that we won't miss them.

J.H.

Prizegiving at Yeovilton

MIKE LIVESAY

It was the turn of the RNGSA to welcome pilots from the Army and the RAF to the Royal Naval Air Station at Yeovilton at the end of the 1974 competition season for the Inter-Service gliding awards.

Vice Admiral Peter Austin, the Flag Officer Naval Air Command and President of the RNGSA, presented the awards to pilots who had been successful at Nationals and Regionals level.

As at Dunstable, George Lee made off with the lion's share of the trophies. The luckless Bob McLuckie arrived late on sticks with an ankle in plaster (though he swears the damage wasn't done in a glider!).

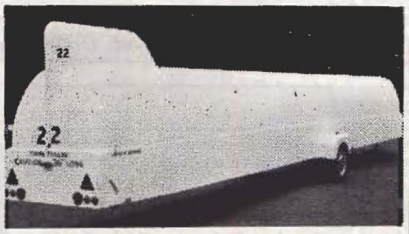
The RNGSA were particularly happy to welcome Frank Tinsley and Grp Cpt Goodbody who came to see their trophies awarded.

The Heron Gliding Club organised a party later in the evening and provided flying for the visiting pilots throughout the weekend.

The prizewinners were as follows:- Emmott trophy (Inter-Service National Champion); McEvoy cup (RAF Senior Champion) and the Kinghurst gold trophy (most meritorious flight in Inter-Service Competition) Flt Lt George Lee who was awarded the latter trophy for completing 502.2km at 77km/h; Salmon memorial trophy (Inter-Service National Team Championship) - RAF; Kinghurst silver trophy (Inter-Service Regional Champion) equal first, Lt Cdr R.J. Hale and Flt Lt R. McLuckie; William Younger trophy (highest placed Army pilot in the Nationals) Lt Col E.J. Shephard (2nd in the Standard Class); Tinsley cup (RAF Junior Champion) Flt Lt R. McLuckie and the Goodbody trophy (RAF Inter-Command trophy) Strike Command.

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ADVERTISERS' INDEX

Aero & Engineering Services	38
The Bookseller	22
Bristol & Gloucestershire Gliding Club	Inside back cover
British Gliding Association	31
Cameron Balloons Ltd	47
Chalair Ltd	42
Chiltern Sailplanes Ltd	42
Classifieds	46-47
Cleveland Sailplanes	23
Peter Clifford Aviation Co Ltd	18
Cobb-Slater Instruments Co Ltd	Inside front cover
Competition Enterprise	34
Cornish Gliding & Flying Club	Inside back cover
Daltrade Ltd	42
Deeside Gliding Club	47
Derby & Lancs Gliding Club Ltd	47
DGC Aviation Services Ltd	36
Doncaster Sailplane Services	44
Dunkeswell Gliding Club	Inside back page
Electechniques	7
Gliderwork	47
J.Hardy Instruments Ltd	42
J.A.Harrison (Brokers) Ltd	18
J.S.W.Soaring	23,46
Herefordshire Gliding Club	44,47,48
H.T.Communications	12
J. Hulme	35,44
Inkpen Gliding Club	48
Kent Gliding Club	48
Lasham Gliding Society	44,47,48
J. & T.Linee	46
London Gliding Club	Inside back page
London Sailplanes Ltd	18
Mechanical Services Ltd	41
Midland Gliding Club	Inside back page
Mowbray Vale Insurance Brokers	12
John Murray Publishers Ltd	40
New Inn Hotel	Inside back page
Nordic Star Marine	45
Norvic Racing Engines Ltd	47
Otto von Gwinner	20
Oxford Arms Hotel	42
Piggott Bros & Co Ltd	47
Pilatus Flugzeugwerke AG	37
Radio Communications (Guernsey) Ltd	46
R.E.F. Electronics	45
Sailplane & Engineering Services Ltd	48
Sailplane & Gliding	6
Scottish Gliding Union	Inside back page
Shorgard Airfield Accessories	46
Singer Products Inc. (UK) Ltd	Inside front cover
Slingsby Sailplanes	12
Southdown Aero Services Ltd	23
Southern Sailplanes	28-29
Southern Soaring	37
Speedwell Sailplanes	18
Strugnell Aviation Services	13
Surrey & Hants Gliding Club	Back cover
Thermal Equipment Ltd	21
Three Counties Aero Club Ltd	43
Brian Weare	42
Wycombe Gliding School	16, Inside back cover
Yorkshire Gliding Club	Inside back cover

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THE ALTERNATIVE to PRIVATE OWNERSHIP

Progressive requirements from 15 solos for Ka8b to 150 hours solo for Kestrel 19.
See where you fit - talk to Chris on 01-643 4911 one evening during the week.

Fleet

Ka8b x 4, Pilatus B4 x 2, Ka6e, Dart 17R, Phoebus 17c x 2, Kestrel 19.
Seven days a week.
Lasham Airfield, Alton, Hants.
Herriard (025 683) 270
or 01-643 4911 (evenings).

