

THE

APRIL 1983

SPORT PARACHUTIST



THE JOURNAL OF THE BRITISH PARACHUTE ASSOCIATION

95p



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DAIRY OF EVENTS 1983

- MARCH 19-26 - World Cup Para-Ski, Austria
APRIL 2-4 - 5 Man Accuracy Meet, Verona (Italy)
MAY 2-6 - PI Course 2 - 83, Strathallan
MAY 7-9 - Scottish Nationals, Strathallan
MAY 9-13 - Exam Course 2 - 83, Strathallan
JUNE 6-16 - APA Championships, Netheravon
JUNE 18-19 - Police Accuracy Meet, Sibson
JUNE 25 - JULY 10 - National Championships,
Classic/RW, Sibson
JULY 11-17 - BCPA Nationals, Sibson
JULY 13-23 - RAPA Championships, Bad
Lippspringe
AUGUST 4-7 - Fokker Friendship Boogie, Langar
AUGUST 5-7 - Duck End Accuracy Meet, Rectory
Farm
AUGUST 8-21 - Cyprus Meet, Cyprus
AUGUST 8-12 - PI Course 3 - 83, Long Marston
AUGUST 15-19 - Exam Course 3 - 83, Long Marston
AUGUST 19-28 - International Parachuting
Competition, Canada
AUGUST 27-29 - Pat Keeley Round Accuracy Meet,
Shobdon
AUGUST 27-29 - Open RW/Accuracy Meet,
Netheravon
SEPTEMBER 2-4 - CRW Nationals, Netheravon
NOVEMBER 7-11 - PI Course 4 - 83, Venue Not Yet
Decided
NOVEMBER 14-18 - Exam Course 4 - 83, Venue Not
Yet Decided
DECEMBER 9-19 - World RW Championships, South
Africa

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BRITISH PARACHUTE
ASSOCIATION
47 Vaughan Way
Leicester LE1 4SG
Tel. (0533) 59778/59635

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Editor's Note
The views of contributors to 'The Sport Parachutist'
are not necessarily those of the Editor, or of the
British Parachute Association, and no liability is
accepted for same.

EDITORIAL

A part of the British Parachute Association's Articles of Association reads;

"The objects for which the Association is established are:-
(a) To promote and encourage SPORT PARACHUTING (my capitals)"

It could be argued that many of the BPA activities have little or nothing to do with sport with a capital S. Particularly if the figures published in this issue's Coaches Column are correct.

However, our National Championships have **everything** to do with Sport, competition, pursuit of excellence, comradeship, team work and exchange of ideas. As such they deserve support, not only from the governing body but much more important from you, the membership.

To quote from a previous article by Andy Meysner, "A lot of people never become interested in competition because they feel that the standards are too high for them. This is a silly attitude because the most important aspect of competition is being a competitor. Of course it is nice to win and everybody who seriously enters should set out to do so. But without losers there would be no competition (and no real winners either). The international medal winners of today would never be where they are now without at some time just competing for the fun of it. Look at some of the results of the past Meets and you'll be surprised at some of the names down near the bottom!"

So don't be intimidated by the established teams and individuals, Have A Go!

At least take a couple of days off and support this year's Nationals. You never know, perhaps next year??

DAVE WATERMAN



A C.R.W. eight stack building at last light. Dave Waterman

THE DROP MAN

THE DA

Z-HILLS NEWS

Zephyrehills DZ in Florida is now producing a news letter called 'Z News'. Edited by British jumper **Ian Head**. it contains information on whats happening and happened lately at the Big Z.

For instance **Jim Hooper** has just installed a large oval swimming pool for cooling off between dirt dives. Balloon dives are now available on the DZ in the mornings and evenings. **Tony Vragallo** and **Gary Johnson** have produced an amazing Rainbow Windsock on a 20ft pole, and it is rumoured that the British military are making a take-over bid to convert Z Hills into a JSPC centre, judging by their high attendance there over the winter.

CHRISTMAS STAR

The Big Christmas Star formation at Z Hills last year was a nice 26-way Cluster Flake Flake which included nine Brits. **Mike Wills**, **Taff James**, **Nigel Watson-Clark**, **Rod Boswell**, **Fred Ryland**, **Chris Thomas**, **Dave Morris**, **Ian Head** and **Tony Vragallo**.

15,000ft FOR TURBO 206

Thruxton's Cessna Turbo 206 has been given STC clearance to operate up to 15,000ft. The aircraft owner, **Mr. John Ball**, claims that from 12,000ft to 15,000ft takes only 3½ minutes.

CHEAP SPRINGS

The BPA Council have agreed to purchase in bulk, reserve Kicker Springs, in order to reduce unit cost.

The Springs will be sold to Clubs at cost, plus VAT and postage.

LOANS AND GRANTS TO CLUBS

The BPA has been helping several clubs fight expensive legal battles to get planning permission, two of which have been recently won meaning a more secure position for all D.Z.'s in the future.

THINGS ARE SWINGING

Just prior to the Aussie Nationals a nudist accuracy competition was run at a local nudist camp with national TV coverage. We are told there were no crash and burn landings.

S/L STUDENTS FROM 15,000ft

The STC recently agreed to allow the Peterborough Para Centre to drop S/L students from 15,000ft using their Pilatus Turbo Porter aircraft. The Porter is able to maintain a slow run-in speed without any altitude loss.

BETWEEN HEAVEN AND EARTH

A new "Zwischen Himmel und Evde" book is planned by **Hienz Fischer** for the end of 1984 and a new skydiver magazine in January 1984 in both German and English.

TOP ARMY SKY-DIVER FALLS IN FOR THE TERRITORIALS

The Army's 'Prince of Parachutists' with more than 8,500 para drops to his credit, retired from regular soldiering after 22 years - by plunging 8,000 feet out of the sky.

Warrent Officer **Stewart 'Mac' McQueen** (43) rated as the Western World's most experienced sky-diver, made his farewell drop onto Sunderland Airport, Tyne and Wear.

That is only 10 miles from where he has just started his new job on the permanent staff of 101 Field Regiment, Royal Artillery (Volunteers) in Newcastle-upon-Tyne.

Jumping with 'Mac' was his new Commanding Officer 42 year old Lieutenant Colonel **Sean Lambe**, an experienced parachutist himself and Vice President of the Army Parachuting Association. Both free-fall 5,000 feet before opening their parachutes.

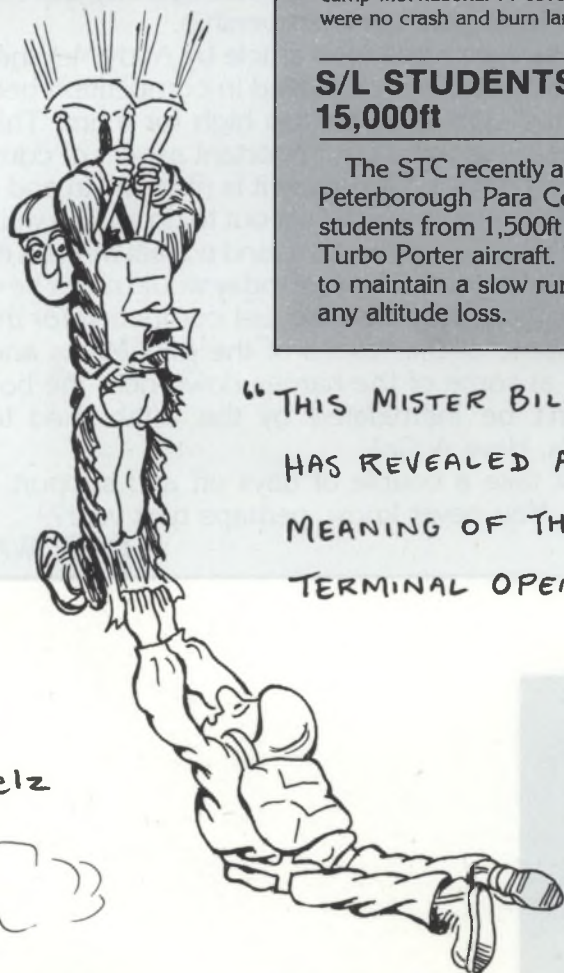
For the last 10 years 'Mac', of the Royal Artillery, has been Chief Instructor at the Joint Services Parachute Centre at Lipp Springs, Germany, where he has made up to 17 jumps - in one day.

He has jumped from heights up to 21,000 feet and on occasions fallen for up to 1½ minutes before opening his parachute.

As a guest jumper he has also taken part in displays by the 'Red Devils' Free Fall Team of the Parachute Regiment.

Said 'Mac': "Although I am retiring as a professional parachutist I hope to keep my hand in with my own parachuting kit."

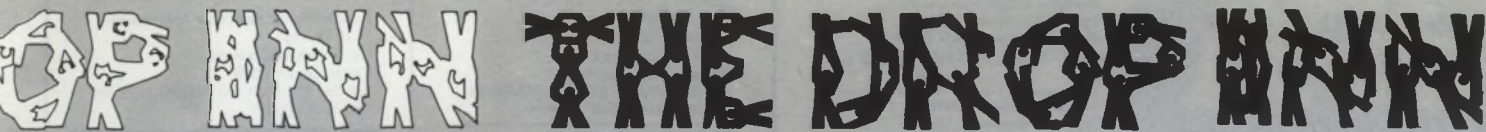
Picture: "After you, Sir". With only seconds between them 'Mac' follows his CO back to earth.



"THIS MISTER BILL DIVE HAS REVEALED A NEW MEANING OF THE PHRASE TERMINAL OPENING!"

Filwelz





SKY-DIVE - NORTHERN IRELAND

The "Wild Geese" Skydiving Club is opening its doors to the public on Monday 2nd May 1983 with a spectacular display of canopy relative work (C.R.W.) and accuracy parachuting. This is a dream come true for **Dave Penny** of 27 Drumeil Road, Aghadowey, Coleraine. Dave is a parachutist who has parachuted into many countries including Northern Ireland; his wife Maggie is also a parachutist, and they will run the school with qualified instructors affiliated to the British Parachute Association.

To introduce the sport to the Province they have organised a first Free-fall seminar which will take the form of a students first parachute jump on static line from 2000ft, progressing to 5 second delay free-fall and beyond.

The "Wild Geese" centre will provide accommodation and catering, and is located at 27 Drumeil Road, Aghadowey, Coleraine, Co. Londonderry, N. Ireland BT51 4BB.

A Skydiving Display Team has also been registered and will be a well known feature through-out Ireland in the near future, at Festivals, shows etc.

The telephone number of "Wild Geese" is 026 585 669.

RADIO CONTROLLED ACCURACY

Lincoln Parachute Centre now boasts a brand new pit. CCI **Dave Tylcoat** is available for accuracy instruction with radio controlled helmets.

OVERHEARD AT HEADCORN

One morning this winter, outside **Dave Parker's** room. "C'mon Dave, get up, its 9 o'clock."

"Go away and leave me alone, I work in the summer time."

Q. How do you make a small fortune out of skydiving?

A. Start with a large fortune.

The BPA council will be allocating grants of up to £150 for clubs to host week-end competitions.

The Council are looking for events that will encourage novice and intermediate participation, in order to improve the development of skills, and to increase retention in the sport.

P. ROSS WINS MIKE FORGE MEMORIAL TROPHY

As many do these days **Paul** started parachuting as part of a group making a sponsored parachute jump for charity. He made his first descent in January and was immediately caught by the bug. He has spent all available time at the Drop Zone, proving to be a determined and capable pupil.

Paul made his first free fall on his 8th jump, Cat 8 on 44, and Cat 10 on his 56th jump. He obtained the BCRW 4 stack aware on his 117th jump. Actively working at the moment towards his SCR, (not easy from a 206).

Paul is very active within his own club, recently being voted on to the committee, he is also working towards a riggers certificate.

PI COURSE IN SCOTLAND

The Scottish Parachute Club, in conjunction with the Scottish Sport Parachute Association, are hosting a Potential Instructors/Examination course early in May 1983. The Scottish Parachuting championships will be held over the weekend of 7, 8 and 9 May and, if necessary, 14 and 15 May.

Rather than be left at home, why not visit 'the

most beautiful DZ in the country' and enjoy the hospitality of Scotland. It may be possible to organise visits to places of interest (distillery, knitwear factory, glass blowing works etc), while your partners are working.

Further information is available from Martin Rennie, 5 Bonnington Road Lane, Edinburgh EH6 5BP. Tel: 031-554-8121.

GEORDIE LAING

I would like to express my sincere and heartfelt thanks to the many clubs and friends who contributed to the splendid decanter and spirits presented to myself at the last Safety and Training meeting.

It is an item I shall treasure and of course use on special occasions.

I was deeply and humbly moved by the presentation, after many years of often heated debate and argument round the table, I thought perhaps to leave it the same way! Most CCl's are pretty strong willed characters for those of you wondering why.

Good luck for the future, hope to see you round the Drop Zones in the form of Judge or even picking up litter.

JOHN LAING



The formation is an all PJI 20-way and the dive took place at El Centro California December 1982. Jumpers from all 4 elements of the detachments, Boscombe, Falcons and FFTF (Free Fall Training Flight) took part.

The dive was a 'one off' and although the majority of jumpers had little experience of formations over the 8-12 mark the dive went very well indeed, being complete by 7,000ft (exit 12,500).

The camera man was **Dave 'Kiwi' Ward**.
MICKEY

POPS WED

Ex Secretary/Treasurer of POPS UK **Laurel Kinbrum** pictured at her marriage to **Peter Carey** in attendance are several veteran jumpers including **Mick Boys**, **Ray Willis**, **John Parker** and **Joe Gallagher**. Laurel's husband she points out to us, is on her right. The gent with the dicky bow tie is Micky Boys.



SCORE BOARDS

Score boards for competitions, which are waterproof and reusable, are available from the Scottish Sport Parachute Association. They give details on how to work out combined placings for LAC, Trac, Style/Accuracy etc. and cover up to 6 teams per board. They can be specially made up if standard designs do not suit. Forget your scraps of paper and send for a set now, enclosing your remittance of £15.00 for each board (incl carriage), or send for further details to: M.H. Rennie, 5 Bonnington Road Lane, Edinburgh EH6 5BP, Tel: 031-554-8121.

BPA

Clubs & Centres

BPA Club Approval is granted to BPA Affiliated Clubs who have attained a high minimum standard of staff, facilities and equipment as laid down by BPA. They are subject to inspection by BPA every 2 years.

BPA Club Affiliation is granted to those clubs who have a minimum amount of equipment as laid down by BPA. All operations are strictly in accordance with BPA Regulations.

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Relative work instruction available	RW
CRW instruction available	CRW
Accuracy pit on DZ	○
Camping on DZ	△
Washing and toilets on DZ	WC
Non-members welcome	NM

British Skysports

Bridlington Aerodrome, Bridlington, Yorkshire.
Chief Instructor (at club address)
Tel: (0262) 77367

* < FT = BB x © BS KS KFRW CRW
○ △ WC NM

Headcorn Parachute Club

Headcorn Airfield, Ashford, Kent.
Tel: Headcorn 890862
The Secretary (at club address)
** <<< BS RW KS KF ○ = △ BB x
© WC NM FT

Hereford Parachute Centre

Shobdon Aerodrome, Leominster, Hereford.
Tel: Kingsland 551
Chief Instructor (at club address)
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CRW △ WC NM

Peterborough Parachute Centre

Sibson Airfield, Wansford, Peterborough.
W.J. Meacock (at club address)
Tel: Elton 490
** << BS RW KS KF no charge ○ = △
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Ipswich Parachute Centre

Ipswich Airport, Nacton Road, Ipswich, IP3 9QF.
A.G. Knight Tel: (0473) 76547
* << BS RW CRW KS KF = △ BB x ©
WC NM FT

Ashford Parachute Centre

Ashford Airport, Lympe, Kent.
Tel: Hythe 60816
Club Secretary (at club address)
* << BS RW KS KF ○ △ BB © WC
NM FT

East Coast Parachute Centre

8 Burns Crescent, Chelmsford
CM2 0TS, Essex.
* FTBSKSHKFF NM

Thrxton Parachute Club

Thrxton Airfield, Nr. Andover, Hants.
Tel: Weyhill (026 477) 2124
contact: Dennis Woods (at club address).
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British Parachute Schools

Langar Airfield, Langar, Notts.
Chief Instructor (Club address)
Tel: 0949 60878
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WC NM

Montford Bridge Para Centre

The Airfield, Montford Bridge, Shrewsbury. Tel: (0743) 850953
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Lincoln Parachute Centre

Sturgate Aerodrome, Upton, Nr. Gainsborough, Lincs. DN21 5PA.
Tel: Corringham (042 783) 620
(Anaphone)
Secretary (at Centre address)
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Cornwall Parachute Centre

Fran's Ranch, St. Merryn Airfield, St. Ervan, Wadebridge, Cornwall.
Tel: Rumford 691.
J. Fisher, Tathamway Hotel, Port Isaac, Cornwall. Tel: Port Isaac 214
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NM

Midland Parachute Centre

Long Marston Airfield, Nr. Stratford-upon-Avon, Warks.
Tel: Stratford-upon-Avon 297959
Dave Deakin, Tilton Cottage, Stourport-on-Severn, Worcs.
Tel: Stourport-on-Severn 5954
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Black Knights Parachute Centre

Patty's Farm, Cockerham, Nr. Lancaster. R. Marsden, Primrose Hill Farm, Bilsborrow, Nr. Preston, Lancs.
Tel: Brock 40330
WEBB(C)BSKSHKFFRECRW
WC NM

British Prison Officers Parachute Club

HMP Box 369, Jebb Avenue, London, SW2
*see Headcorn for details

Cambridge University Free Fall Club

R. Stenning, 30 Green End Road, Cambridge, CB4 1RY.
*no more details

Shrewsbury Skydiving Centre

The Airfield, Montford Bridge, Shrewsbury. Tel: (0743) 850622

Leeds/Bradford Free Fall Club

Elvington Airfield, Yorks.
Tel: (0904) 85595
B. Pickersgill, 36 Cricketers Green, Rawdon, Leeds 19. Tel: (0532) 506930
* < BS RW KS KF BB © WC NM

Shetland Sport Parachute Club

Tingwall Airstrip, Tingwall, Shetland.
Sec: Martin Fraser, 185 Sandveien, Lerwick, Shetland. Tel: (0595) 5880

Duck End Parachute Group

Rectory Farm, Abbotsley, Hunts.
G. Lilly, 11 Parkfield Close, Fairfield Crescent, Edgware, Middlesex.
* < ○ = △
They may not have much but they are cheap!!

Halfpenny Green Parachute Centre Ltd.

Halfpenny Green Airport, Bobbington, Nr. Stourbridge, West Midlands.
Tel: Bobbington 293
* < BS RW KS KF ○ △ x © WC NM

The Glenrothes School of Parachuting

Glenrothes, Fife. Tel: (0592) 759204
* < BS RW CRW KS KF ○ BB © WC
NM

Golden Lions FFT

Glenrothes (see above)

Parachutists Over Phorty Society

(POPS UK)
J. Cooke, Broughton House, Field Broughton, Nr. Grange-over-Sands, Cumbria.
Tel: Cartmel 4545
*no more details

Scottish Parachute Club

c/o Strathallan Airfield (ZLL) near Auchterarder, Perthshire
Tel: 0764 62572
* < BS RW KS KF ○ BB © WC NM

Paracan II Sport Parachute Club

Kinnell Airfield, c/o Stuart Charleton, 15 Cameron Avenue, Bridge of Don, Aberdeen.
Tel: 0224-703412 (H) 0224-574588 (B)
WEBB(C)BSKSHKFFRWNM

Blackpool Parachute Centre

Blackpool Airport, Blackpool FY4 2QS
Tel: 0253 41871
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CRW △ WC NM

Skybird Parachute School

Mayridge Farm, Theale, Reading, Berks
Tel: (0734) 760584

South Cotswold Parachute Club

Badminton, Avon.
DZ Tel: Badminton 486
Carol King, 82 Forrester Green, Coleme, Wiltshire. Tel: Box 742890 (1730-1930)
* < BS KS KF BB © WC

Staffordshire Sport Skydivers

D. Cox, 80 Cambridge Drive, Clayton, Newcastle, Staffordshire.
Tel: (0782) 619606
*no more details

Sunderland Parachute Centre

Sunderland Airport, Sunderland, Tyne & Wear.
W.J. Barnes (at club address)
Tel: Boldon 367530
* <<< BS RW CRW KS KF ○ x ©
WC NM △ = BB

Manchester Free Fall Club

Tilstock DZ, Twemlows Hall Farm, Whitchurch, Shropshire.
N. Law, 9 St. Andrews Road, Stretford, Manchester, M32 9JE.
Tel: 061-865 3912
* < BS RW KS KF BB NM

Martlesham Parachute Club,

Mrs L. Bennett, Currant Cottage, Dyke, Woodbridge, Suffolk. IP12 2RX
Tel: Eyke 365
* < WC BS RW CRW ○ KS KF = BB
WC NM △

North West Para Centre

Cark Airfield, Flookburgh, Nr. Grange-over-Sands, Lancs.
Tel: 044853 672
J.D. Prince, 21 The Coppice, Ingol, Preston, Lancs., PR2 3OL
Tel: Preston 720848
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WC NM

Spread Eagles Parachute Club

N. Melcombe Bingham, Dorset.
Sally Corr, 24 Southsea Avenue, Tuckton, Bournemouth. Tel: (0202) 421108
* < BS KS KF △ BB © WC NM

Manchester Skydivers

(see British Skysports)
Brian Greenwood, 33 New Street, New Mills, Stockport. Tel: 0663 45487

TPA Parachute Centre

Elvington Airfield, Nr. York.
G. Evans, Springbank Overhouses, Green Arms Road, Turton, Nr. Bolton.
Tel: Bolton 852295
* < BS RW KS KF △ BB © WC NM

West Lancs Parachute Centre

Burscough Airfield, Nr. Ormskirk.
Roy Harrison, 77 Argyle Street, St. Helens, Lancs.
Tel: St. Helens 35342
BS • WC < RW KF © BB NM

Swansea Parachute Club

Swansea Airport, Fairwood Common, Swansea, West Glamorgan SA2 7JU.
Tel: 0792 296464
* FTBBXBSKSHKFFRWCRW
WC NM

Border Parachute Centre

Brunton Aerodrome, Chathill, Nr. Alnwick, Northumberland.
contact: Kerry Noble, 44 Salisbury Avenue, Preston Village, North Shields NE29 9PF.
Tel: (0632) 596712
* WEBB(C)BSKSHKFFRWNM

Dunkeswell Skydivers

Ian Louttit, Dunkeswell Airfield, Nr. Honiton, Devon (Lupitt 350)
* < FT = BB x © BS KS KFRW CRW
○ △ WC NM

Scottish Sport Parachute Association

M. H. Rennie
c/o 5 Bonnington Road Lane, Edinburgh EH6 5BP
Tel: 031-554 8121 (B) 031-669 1872 (H)
*no more details

The London Skydiving Centre

The Secretary, London Skydiving Airfield, Parnpford, Cambs. Tel: (0223) 834613
FT BB X (C) BS KHS KHFF
RW WC NM

SERVICE ASSOCIATION & CLUBS

The Golden Lions Free Fall Team

Fife Airport, Glenrothes Airfield, Glenrothes, Fife, Scotland.
Tel: (0592) 759802

Other Service affiliated Clubs:

REME Parachute Club
The Ravens Para Sport Free Fall Club
The Parachute Regiment Free Fall Team (Red Devils)
Royal Artillery Parachute Club
The Light Infantry Parachute Display Team (Flying Bugles)
The Royal Green Jackets Display Team
Guards Free Fall Team

Army Parachute Association

Commandant, JSPC Airfield Camp, Netheravon, Salisbury, Wiltshire, SP4 9SF
Tel: Bulford Camp (09803) 3372
Ext. 277/245
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Rhine Army Parachute Association

The Commandant, RAPA Centre, STC Sennelager, BFPO 16
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NM **

Cyprus Joint Service Adventurous

Training Camp (CJSATC)
Chief Instructor (CCSPC), CJSATC Pergamos Camp, BFPO58
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RAF Sport Parachute Association

Hon. Sec., RAFSPA, RAF Brize Norton, Oxon. DZ, Weston on the Green.
Tel: Middleton Storey 343
* < RW CRW KS KF ○ x △ © WC

Royal Navy & Royal Marines Sport

Parachute Association
The Secretary, RN & RMSPA Commando Training Centre RM, Lympstone, Exmouth, Devon EX8 5AR.
Tel: Topsham 3781 Ext. 491 or at Club, Lupitt 697
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Hong Kong Parachute Club

CCI, JSPC (HK), Borneo Lines, Sek Kong, BFPO 1.
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Royal Corps of Transport (RCT) Parachute Club

(Silver Stars Para Team)
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Tel: Box (0225) 743585/743446
WEBB(C)BSKSHKFFRWCRWWCNM

British Collegiate Parachute Association

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KEYS TO REMEMBERING SEQUENTIAL SKYDIVES

The following notes outlining a Dive Learning System are taken from Perris Valley Visions' team logbook and contributed by **Dave Wilds**.

1. Verbal Memory

Use any verbal shortcuts that will aid memory. Information is often more easily memorized in 'bits' of three (i.e. Cat, Do-Bok-Bi, Zip.)

2. Visual Memory

Visualize what the dive will look like both as a participant and as a spectator. Use different angles and speeds.

3. Motor Memory (mental and physical)

Go through all the different moves and turns; movement is more easily memorized than static formations. Do a couple of dirt dives without stopping at each formation, as if it were a dance.

4. Position in the Sky

From each formation, where are you going? What is the distance you will be travelling relative to where everyone else is in the present formation? How fast will you have to go to stay with the team rhythm? Will you have traffic?

Remember, there will be no ground references. Try dirt-diving with eyes closed and see if you end up in the proper positions.

5. Keys

Who are they? What is the key (head nod, pulse, shake, touch?)

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CORRESPONDENCE

GIRLS RECORD

October's issue of Sport Parachutist carried a story and photo of the latest British Ladies Record of a 9 girl round or O manoeuvre. Heartiest congratulations to all involved and to Jackie for organising it.

However, I'm sorry to have to disappoint those concerned who assume it to be a European record.

The European record was established on the 5th August, 1976 at the French RW Championships at Vichy, from a height of 11,500ft and utilizing a Puma helicopter. **Monique Lenotte** organised the jump. The plan was that the first eight girls be French and that I close 9th, in order that they be able to claim a French 8 girl record. Order of entry was: (1) **Monique Lenotte**, (2) **Claudie Companij**, (3) **Josette Loziguez**, (4) **Brigitte Meens**, (5) **Manryse Guary**, (6) **Evelyne Blidon**, (7) **Jacqueline Royères**, (8) **Monique Bouflet**, (9) **Annie Swinbourne**.

A coloured photograph of the formation was published on the front cover of the French Magazine Les Hommes Volant a few months later, proclaiming the new European record.

Regards,

ANNIE SWINBOURNE UK D1226
AUST. F99

PEGASUS MOD

This is in reference to the Pegasus Canopy Mod. which has been mentioned twice now in the SP mag. The first time was in the October 1982 issue under BPAS and TC A.O.B. number 2, and the second time in the December 1982 issue under BPASTC item 6.2.

As I own a Pegasus it is of great interest to me, however, it does not make any sense, obviously I am not up to date on the old? mod. or was it the canopy as made in the first place??

Perhaps something as serious as a problem with a very popular canopy should be a bit more explicit and prominent in the mag. i.e. Kit News. Also I think that a page should be set aside for incident reports as in the Parachutist Mag. so we can all learn from others mistakes or kit failures.

DAVE HEREFORD

THRUXTON

I read with interest, the letter from Simon Jacobson, see Chairmans notes October issue, who describes the facilities at Thruxton as very poor.

LETTERS on any parachuting topic are welcome and should be sent to:

The Editor, *Sport Parachutist*, c/o BPA,
Kimberley House, Vaughan Way, Leicester,
LE1 4SG.

He also complains of the organisation. I don't know when he last visited the club, but as you know the club has recently changed hands, and I would like to take this opportunity to outline some of the facilities we now offer.

- 1) Two Cessna 206s one of which is turbo, plus one Cessna 180.
- 2) Kit hire to include Ram air (tandem systems).
- 3) Centrally heated (bunkbed) accommodation.
- 4) Ground training rooms and lecture theatre.
- 5) Full time staffed canteen serving hot cooked meals all day.
- 6) Parachutists shop selling kit from razor blades to rigs.
- 7) Resident free fall photographer. Plus a number of other benefits planned for in the future, not the least of which is a Britten Norman Islander.

In closing, we have just completed our first year as Thruxton Parachute Club having trained the best part of a thousand students of which there are remaining some ninety students still awaiting their first jumps through bad weather. Some 5,000 descents have been made since February last year. We actively encourage experienced jumpers to use the club and hope that more people will take the time to visit us in the future.

Finally, we look forward to the new year with what we think are some of the best facilities currently available to jumpers in the south of England.

Many thanks, and seasons greetings to all in the new year.

MAC McLAUGHLIN D2916

1st MR BILL OVER SIBSON, 18/12/82

Graham Heywood and I recently attempted a Mr. Bill over Sibson and I felt it might be helpful to let others know what lessons we learned from the experience.

Our first attempt was unsuccessful, but second time around it worked like a dream (much to the delight of our pilot, **Paul Havad**, who was able to see it all through the Porter's beautifully cavernous doorway!)

The two most important factors are obviously kit and technique.

KIT

1. Use a throwaway pilot chute rather than a pull-out. On our first attempt, **Graham** acted as host. Because he was using a pull-out he wanted to take just a brief moment after exit to ensure full stability before dumping. But time in freefall of course means extra speed. The second time around I acted as host using a throwaway pilot chute. This allowed us to safely deploy while leaving the aircraft.

2. Do not use a rig with free-stowed lines — stow them on the bag. On our first attempt we had agreed that I should wrap my legs around as I saw the host's bag lift off. As I did so we began to roll sideways. Very quickly lines began to deploy around my right foot and I had to loosen my grip for fear of entanglement. With lines stowed on the bag the whole deployment takes place over the host's head, well out of harms way.

3. The canopy needs to be a sniveller, but not one that first snivels and then opens with a bang. **Graham's** relatively new Pegasus was too sudden to cope with. For our successful attempt I borrowed a trusty GQ Security Unit (my thanks again to **Bob Thompson** for his generosity). I knew the canopy to be a classic of its type. With 22-plus stone underneath it opened perfectly.
4. Don't use chest-mounted altimeters. They make the cuddling uncomfortable to say the least!

TECHNIQUE

The **Pilatus Porter** has no facility for a step exit. It didn't take us long to decide on a student-style exit with the host facing into the slipstream, his legs dangling out of the door. The clingon sits in similar fashion facing the host and takes harness grips under the three rings. The host can hold the door frame with his left hand to steady himself and have his right hand on the throwaway for immediate deployment. Obviously the exit is coordinated with a ready - set - go.

On our first attempt **Graham** as host also took a grip under my right hand three ring. I opted as host to keep that arm free for stability. We agreed that once I had deployed I would clasp the clingon behind his pack. This worked perfectly well. **Graham** as clingon wrapped his legs around me as he saw

the bag lift off and I simultaneously interlocked my legs in his.

I cannot say this is the best technique, but it works from a Porter, and I am sure it will work from any aircraft with a reasonable size of door.

I have seen Mr. Bill attempts with the host centre-floating. They were unsuccessful but doubtless somebody will succeed that way too.

Once under canopy the clingon has little trouble climbing up on the host's shoulders. I felt little discomfort from the mountaineering over my north-west face, and watching the clingon dive off is a great moment.

So do try a Mr. Bill dive, it's great fun, and if you go about it the right way you should have no problems.

Des Atkinson D3596

MR BILL

Just a few lines for devotees of 'Mr Bills', I have just this last week heard from **Curly MBPB**. Should anyone wish to register for a number, they should send \$2 plus a note signed by a witness — by (a) the Pilot, (b) a ground observer. Should a T-shirt be required a further \$8 or \$9 for both. I sent a little extra to cover postage. To **Curley Roe**, PO Box 1451, Tahlequah, Oklahoma 74462. (delivery is quite fast).

In his last letter **Curly** mentioned that a 'Night Bill' has now happened, by two guys in Texas, just over a month ago. Recently a 3-way Bill was launched including **Mike** as host, a girl called **Beth** and **Curly**, himself. It was successful and both parasites climbed onto the host's shoulders (that will make a good snap). He has also landed a Mr. Bill but doesn't recommend it as he ended up limping to the bar. All the best.

FOGGY, USA MBPB 16

SAFETY CONSCIOUS

I have been a Parachutist and a Member of the BPA for 2½ years and have read and studied every book and article on our sport that I could lay my hands on. For the first year I was in the sport, I devoted every spare moment and penny I had to jumping, achieving category nine status well within the year.

When I was cleared to jump high performance (square) canopies, I (after careful study of what was available) bought first rate equipment, going as many other jumpers do, I am sure, into debt to do so. I believe that

nobody could deny that I was every bit a hardcore skydiver, always ready to listen and learn from my fellow and more advanced skydiving companions.

I believed from reading and studying each and every copy of Sport Parachutist issued since my introduction to the sport, and also many issued before this time, that the BPA were concerned above all in the safety and wellbeing of their members. I have even learnt from the last (October 1982) issue of the mag, as John Meacock makes clear, administer a fund, 'quote' for badly injured jumpers and their dependants.

It is in fact the same copy of the magazine that has prompted me to write to you. Just for the record, I'll tell you about my second year as a sport parachutist.

On the 31st of October 1982, while making a descent at Ashford Parachute Centre, under a Pegasus Canopy, following my successful participation in my first 3-way rele jump, I was struck while some 15 or so feet above the ground (well inside the DZ perimeter - in fact almost dead centre) by a tractor moving at some speed directly across my flight path. The tractor was equipped with a dung form bucket, which as a matter of course, carries long (maybe 18-24in) prongs. The bucket was raised to its full height and I became impaled upon these spikes. The tractor driver stopped, dropped the bucket, climbed out of the cab and ran off, leaving me still impaled and screaming. One of the first people to arrive and find me in this condition was my wife, who among some 40 or 50 other jumpers and spectators had seen the whole thing happen. (I have even been told the whole thing was filmed with a video camera, whatever happened to the cassette I wonder). I was lifted off the bucket and placed on the ground while we waited some 20 or 30 minutes for an ambulance. I remained fully conscious during this time, mainly due to the efforts of **George Dunn** and **Mike Cable** I believe. I was taken to the William Harvey Hospital, Ashford and after some time I was operated on, by the resident surgeons, who tried unsuccessfully to stop the internal bleeding. At some time while I was in the theatre, my wife and father were informed that all that could be done had been, and they should prepare themselves for the worst.

Then a specialist Surgeon was called in from the Kent and Canterbury Hospital to operate on me. To do so he had to open me from the front, and thankfully he succeeded in his task.

The whole process I believe took some 8 or 9 hours and much blood was lost and replaced.

When I awoke my wife and father were with me in intensive care and had been told that if I were to mention my leg being numb, they were to say it was because of the anaesthetic, and, of course you can guess what almost my first words were.

I spent the next eight weeks in the hospital, the pain being indescribable, for four weeks I was dosed every 4 to 6 hours with Omnipon, a morphine based painkiller, and even to this day I take many DF118 painkillers daily.

During my time in hospital I had two further operations and went from 13

stone in weight to 7½ stone. I was told that my sciatic nerve had been severed and my right foot and lower leg were paralysed, but nobody could say if it was temporary or permanent.

I left hospital a few days before Christmas and spent the next four weeks at home in bed. I then started to get about on crutches, and my leg started to recover movement below the knee.

I contacted a specialist in sciatic nerve damage and went back into hospital in June (St. Marys), for an operation which involved opening my leg from just above the back of the knee to the top of my buttock and folding the flesh back and attempting to repair the damage, but this was unsuccessful. After a further two weeks in hospital I returned home.

Now a year after the accident I still have a paralysed foot and severe muscle wastage on the whole of my leg. I walk with the aid of a stick and am a registered disabled person, three stone lighter than I was at the time of the accident. I am unable to return to my normal occupation as a heavy equipment operator on motorway and overseas construction sites, (approximate earnings £10,000 - £12,000 per annum).

My interest in parachuting is still as strong, I still have all my equipment and I still recruit students for courses (at Headcorn now) and hopefully I will be able to get back to jumping myself.

In the meantime I would like to hear from the committee as to why you believe this matter not to be worth pursuing.

This one cannot be put down to jumper error I'm afraid. If you are not safe landing in the middle of the DZ where the hell is it safe to land.

Yours respectfully,
MARTIN DOUGLAS EVANS

SKYBIRD

References:

- a) DW's Editorial Vol 19 No 4 Aug. 82.
 - b) JM's BPA and Clubs.
 - c) Chairman's notes - Simon Jacobson Vol 19 No 5.
 - d) CSS answer Vol 19 No 5.
1. Skybird commenced operations on 1st Oct 81. Since that time 1027 then P2 now P6 members have been processed with an income to the BPA of some £2315.00. Of those 1027 students, to my knowledge 53 have gone on to become full members of the BPA.
 2. Contrary to gossip both myself and Jennie are full BPA members. 5382 and 97050 respectively. Expiry date 31st March 83.
 3. Currently in my capacity as CCI Skybird I am both an advanced instructor and examiner, and as such all my students are trained in accordance with BPA Policy.
 4. My equipment whilst limited in quantity is all British and I consider 100% safe. In addition all students, are armed with FXC 12000 AOD's. All jumpers here receive clean jumpsuits, jumpboots, helmets, goggles (where required) and of course a main and reserve.
 5. Planning and land ownership restrict my operation at time of writing to 40 days a year - 1200 to 1800 Monday to Saturday (no Sundays). With such a tight restriction, I am not eligible for BPA affiliation. These restrictions

remain in force until the trial period expires in July 83.

6. The Skybird operation is therefore designed at present for 1st time jumpers, and those whom I have trained and those who wish to continue.

7. I have also served on Council and STC, I also believe in a well organised and safe operation. Hence my anger at the comments made in Chairman's notes Vol 19 No 5 October 82.

8. I have asked for no assistance other than for the normal mandatory paperwork and magazines for my students. As far as planning problems are concerned they have been fought and are currently under review, at my own expense, in conjunction with the landowners goodwill.

9. You may not agree with all that is written, it is just my way of running a safe enjoyable, but restricted operation.

TED LEWINGTON

INCIDENT REPORT

Just a note of agreement with Dave Hereford's letter in the February mag. I, too would welcome an incident page as per the USPA mag. I find these reports most valuable and, let's face it, it is infinitely preferable, where possible, to learn from the mistakes of others.

I have always felt that the incident reports in the minutes in the BPA mag are so hazy that not only do we not learn any lessons from what happened, but often end up not having much of an idea what DID happen.

Any comments from 'the powers that be'?

ALISON GILMOUR D4211

RUNNING POPULAR?

I would like to comment on Nick Pinegers letter in the last magazine. Is he living in the real world? Is he so blinkered by his enthusiasm for parachuting that he has not noticed that running is one of the most popular participatory sports in the country? The national cross country championships have fields of nearly 2000 runners; I myself entered a race recently on a cold Sunday morning, through the mud of the Derbyshire Dales in which only 1700 took part. Compare these figures to last years pitiful 'Nationals' turn out, and you have your answer as to which is the minority sport.

I would encourage Nick to engage his brain before writing.

S.R.L. EVERSFIELD D1705

VACATION INSURANCE

Some useful info for those vacationing in the States and wishing to take out medical insurance. By taking advantage of the USPA 'Para-Care Vacation Plan', (30 days, \$48.50, or about £32) you get \$25,000 for accidental death or dismemberment, \$10,000 medical expenses, \$200 per week income protection for 52 weeks, as well as becoming a member of USPA for the period covered and getting members normal benefits, i.e. 'Parachutist'.

This compares very favourably with one particular insurance company who advertise in our magazine, i.e.

£34 for 18 days or £54 for 30 days!

Address to write to:- USPA, Headquarters, 806 15th Street, Washington DC 20005, U.S.A.

Regards. PAUL RENTELL (QE 2)

SP 95p

I noticed with interest that the last two issues of 'Sport Parachutist' had the price of 95p printed on the cover. This is surely not to fool the readers into thinking they are getting an expensive magazine included in their membership.

You must be intending to make 'Sport Parachutist' available to the public, if so, I hope this is to raise funds to improve the magazine. It seems to me that you are battling against the odds to produce a professional publication on a shoestring. The cover picture and paper quality are always good and I am sure like others, I always eagerly open it, only to be disappointed by the contents, which I usually finish reading in ten minutes or so. I then amuse myself by picking out spelling mistakes, incorrect typesetting and jumbled up articles. Surely the typesetters or compositors are at fault here, with modern data processing it is virtually impossible to make these sort of mistakes, especially if the script is proof read before going to press.

If there is a drastic shortage of money, why not do away with the glossy paper and print in a newspaper format such as 'Skydiving' and delete the less interesting items, for example, the minutes of the last council meeting etc. which could be xeroxed and made available on request to those who sent in a stamped addressed envelope. The newspaper idea is certainly not so attractive but most jumpers just want to read straight forward facts about Skydiving.

If there is to be an increased financial income from going public, why not offer a fee of say £25 on all printed articles? This would probably bring in a multitude of items to choose from in quantity and quality. After all, if you are trying to produce a professional parachuting magazine available to the public why not pay the people (the Skydivers) who 'do it'? What other journal do you see in the newsagents that does not pay its editors and authors.

I admit I have not made any research into these ideas but they could be worth exploring. I feel that if 'Sport Parachutist' is to become a window for the public to view Skydiving, it needs to be a dynamic and polished publication which requires more cash and more input to be a success. If I saw it in the newsagents in its present state I am sorry to say I would not buy it.

JOHN PARKER

Well John I'm sorry you get through reading SP in just ten minutes. We are trying to work towards producing a magazine that could be sold to the public, but not of course in its present form. Most of the current information is only of interest BPA members. Our aim is to produce perhaps only two issues a year which will be aimed towards the general public, be more pictorial in content, and perhaps more sensational in its attitude to parachuting.

Well at least you are putting your pen where your mouth is. Thanks

OLD MYTHS NEW MYTHS

Good skydivers do most of their manoeuvring with little or no conscious effort. They skydive by intuition and concentrate on remembering the dive, avoiding "brain lock" and watching others screw up. The details of how to make a turn or maintaining levels have slipped into the subconscious to become part of the balance of freefall. That's good for the good skydivers. But it's not good for the novice who wants to know the technical aspects while he is still mastering this freefall balance. When a novice asks how to do a back-in or what he should do to keep from going low, he often gets vague answers from the experts who haven't really given it much thought since when they were novices. The answers are often exactly what the experts were told by their instructors a long time ago. Maybe it's time to re-examine some of the old theories based on what we see and do now. We've come a long ways since the good old days.

Old Myth: To get down, you get small. To get up, you get big.

New Myth: Alice In Wonderland is the only person who has ever changed her size and she did it by taking drugs... The 'get small, get big' syndrome has come down to us as a relic of the Wing War. In the days when suits required type ratings and currency checks, there were swoop cords, vents and paddles that could be used to alter fall rate. Now we have learned that it's more fun to fly our bodies than fly our suits and current models are very streamlined and simple. With little or no wing, these suits cannot be made to speed up or slow down by stretching out limbs. We have learned that fall rate is controlled through the curve in our shoulders and hips and back. We alter the air resistance around our bodies by streamlining (curved back in the RW Stable) or creating turbulence (pushed flat with elbows and knees down but not necessarily stretched). With no wing or swoop cord, reaching out with your arms does not increase the surface area of sequential RW suits. Pushing your elbows and knees low to flatten your body curvature will create more air resistance and slow your fall rate.

Old Myth: Formations float. More and more as more people are added to them.

New Myth: There is nothing about the physical contact between freefalling bodies that will affect their fall rate. If that were true, whenever Mirror Image turned a manoeuvre the whole team would rush the cameraman above them. When they broke for the next move, they would all speed away from him. The films of sequential teams in action would be a nightmare of receding and approaching jumpers. Teams do not change fall rate during each manoeuvre because they maintain their body positions (curvature) throughout the dive. The actual contact does not cause the change we sometimes see in less experienced skydivers. It is the change in their body positions once docked. This may be caused by tension (holding onto the formation rather than flying with it) or simply snoozing once the dock is made. Formations don't float, people in them float. Remember that the next time you're briefing a big

load - emphasize the early people flying heads up rather than the late people getting out their big suits.

Old Myth: To go forward slowly, use a Hand Track.

New Myth: Nobody ever went forward by curving their hands. The proof in this is in your own experience. Remember the frustration you had in your early attempts when you did exactly what they told you for a hand track? Not only did you not go forward, you may have even gone BACKWARD!! Forward ment in freefall is as a result of an induced head down tilt. This is done by shifting your centre of gravity back; by adding to the back end (lowering your legs) or taking away from the front end (bringing your hands back by bending at the shoulder and elbows) or both. The more radical the shift in CofG the greater the tilt and the faster the forward speed. To go slowly forward, you may have to stretch your legs when you curved your hands, then you went forward. Why didn't you tell anyone you had discovered how to go forward...? And why do you now tell your students to Hand Track just the way you were told?

Old Myth: Carry a bit of extra speed entering a star to penetrate the burble.

New Myth: Burble, what burble? Have you ever noticed The Burble since you got your SCS? It only seems to exist for your first few RW docks, then it disappears...If there was a burble around a freefalling body, each time we tried to throw a donut, we would be bounced off the leg grips by this force. The airflow around a freefaller is much smoother than this. We know there is burble above a falling jumper (an area of reduced air pressure) but this does not extend to the sides. Remember it is us moving through still air not high speed air rushing by us as it seems. The Old Myth was probably an honest interpretation of something that was observed regularly. That is, when novice relative workers approach a formation, they often get close enough to dock and then don't. Probably this is really due to the early inclination to reach (causing a backward handtrack...) or the feeling in the slot that they are crowded and cannot initiate the movement forward from close range. We will continue to see novices get close and fail to successfully dock. And a good solution to this problem for them is to carry a bit of extra speed through the slot so they can coast the final few feet. Probably reminding them not to reach and to keep flying forward with their feet down will accomplish the same thing but success is its own reward. Don't create hairy monsters for them. There is no BURBLE!

Old Myth: A Back-In is done by flying backwards.

New Myth: We all saw during the film WINGS when the jumper in the yellow suit turned in front of the camera 20 feet out and FLEW BACKWARDS INTO THE SLOT!! It was truly amazing. And if he could do it, so could we. It turned out to be harder than it looked but that did not deter the popularity of back-ins. Maybe the manoeuvre was misnamed. Although you end up facing out in the formation, we now do back-ins as an almost purely rotational type of dock. The easiest and most successful way to back-in (as the competitive teams have shown us) is to fly forward to position on your target, then watching all the time as you turn, place your knee in the catchers

hand, and then continue turning until you are in place facing out. Flying backwards is not only tricky, it means we lose our most valuable cues for corrections. We lose eye contact.

Old Myth: If you go low on a formation, get into a reverse arch with your head down and hold that position until you are level again.

New Myth: They seem to be saying that having your head down will make for a most efficient reverse arch. And if you don't have your head down, you will not get back up. To start with let's just remember that your head is more or less spherical and its surface area in all attitudes is pretty much the same. Now let's go back to your student days again. Did they tell you on your first jump to put your head back to get a good arch? And did they tell you that if you put your head down and watched the ground you would tumble and die...? How many jumps did it take before you got the nerve to look at the ground and found that not only did you not tumble but you lived to tell the tale? Later you found that, however unlikely it seemed when you were a student, you could move your head any way you wanted and still maintain your freefall balance. Does any of this sound familiar? They're doing it to you again...You can get into a good reverse arch with your head down. But you can get into just as good a position with your head up. You do not have to move your body when you move your head. Your neck is a swivel. And there is real benefit to having your head up when you reverse arch. You are moving in that direction towards a target above you. By all means you should watch where you're going! How many dead spiders have you seen rising off in the distance? Or better yet, rising directly below you? Do you think they would be doing that if they could see where they were going to end up? (Ever wonder why we call them DEAD spiders? Probably BLIND spiders would be just as appropriate...)

There is no absolute truth. Only current theory. We try to be responsible in our beliefs and match theory with observation. It is all myths. Some myths are better than others....

Written by: ERIC BRADLEY
Zephyrehills RW Instructor for 3 years
Silver Medalist, IV WPC, 8-Way

ARMY VOTES

The February issue of Sport Parachutist contained a letter from P.D.N. Parker, in which he expressed his disquiet on the ballot involving this years election to council. He invited a reply through the columns of the magazine from 'those concerned'.

In the absence of any other claimant to that dubious title, I have elected myself as the BPA's representative in Germany, (incidentally, I am often surprised at the number of times I have been referred to in this manner, but usually when some form of assistance is required). I therefore duly take up pen and will attempt to allay any fears which Mr. Parker's letter may have aroused amongst the membership.

The issue is obviously whether any irregular or underhand method was used to affect the result of the ballot for election to council. If canvassing votes for candidates who one knows are representative of our outlook can be deemed irregular, the answer must

be 'yes'. By this definition, every vote taken throughout the country, for whatever purpose, must fall into the same category.

This, of course, is nonsense. Every voter in any election is subject to some form of exhortation to cast his vote in a particular direction. Why should the BPA be any different in this respect?

Mr. Parker states that a large number of the ballot papers appeared to have been completed by three or four persons although signed by bonafide members of the BPA, "who just happened to be German Nationals". Ten out of ten, Mr. Parker. You are absolutely right!

Is it really surprising that some ballot papers from Germany were signed by German Nationals? I should think that those from the UK were probably signed in the main by British Nationals. The reason why they were filled in by three or four people is also equally simple. They were filled in on behalf of non-English speaking members, or those who speak very little English, in order to assist them in completing the ballot paper correctly. However, there can be no doubt that they knew exactly who they were voting for.

At this stage I should perhaps explain exactly what happened to bring about a large vote in favour of certain nominees for this years council.

RAPA, as most members will know, is based at a military centre in Germany. We have a very large German civilian and military element who use our facilities on a regular basis. It is our policy to support the BPA wherever possible and we therefore make BPA membership a mandatory condition for all jumpers who use the centre. This, by the way, includes all Services students who attend our official adventurous training courses. To most of these members, their sole contact with the BPA is via this centre and the magazine. As such, it would be fair and honest to say that they are quite willing to give their support to the centre in matters relating to the BPA, if so requested. I feel sure that this situation must also exist within the various clubs in the UK. Purely as an example; if Headcorn decided that they wished to see Mr X nominated to council and canvassed their members to this effect, it is very likely that Mr X would receive a large number of votes from Headcorn.

In RAPA's case we explained to our members that we, as a military club, were keen to obtain a strong Service's representation at council and that we would appreciate their support in the way of votes for our nominees. We made it CRYSTAL CLEAR THAT THE DECISION TO VOTE FOR MILITARY CANDIDATES WAS ENTIRELY UP TO THE INDIVIDUAL, and that we would be more than willing to deliver to the AGM any ballot papers, regardless of the votes they carried. For your information, not everyone agreed to do so, take for example the mysterious member of HM Forces in Germany who wrote to a senior and well respected member of the BPA?? Those that did, had, in many cases, met a number of military candidates, at some time or another, on Bad Lippspringe DZ.

It is therefore quite wrong to say that

certain elements were guided in the direction they voted. They were asked, Mr. Parker. It is also very wrong to speak in terms of a blatant organisation of a block vote. This choice of words in itself smacks of Mafia methods. We made no secret of the fact that we had openly canvassed for votes for Services candidates and a number of people discussed this with me at the AGM. Mr. Parker, I hasten to add, was not one of them.

I am not sure where the idea came from, that the responsibility for the distribution of ballot papers was placed with the military. This certainly was not the case. As everyone knows, the publication of the October '82 issue of the magazine was very late. We at RAPA realised that in all probability, a large number of voters in Germany would, of necessity, be unable to register their vote. Accordingly we duplicated a number of blank ballot papers by use of a photocopier and, as I have explained, we passed these to our members, as and when they visited the Centre, during the period mid-December/early January. For a number of years the BPA has dealt with their members in Germany through RAPA. After all, it is much more economical to send one package of membership forms and one invoice, covering up to one hundred transactions, rather than individual correspondence with all those involved. The brunt of the work of distribution and accounting then falls on RAPA, a penalty we are prepared to accept. However, this system does not apply to the distribution of the magazine, which goes direct to the members themselves.

I agree with Mr. Parker when he says what has happened is immoral. Not, however in the same context as he is thinking. I would not be surprised to discover that what has happened is also illegal. I am referring to the fact that ballot papers can be extracted, scrutinised and the expressed votes of certain members be published for all to read in the magazine.

Who exactly was entrusted with this task? I sincerely hope that the only person involved was the nominated recorder for the election and, if he had satisfied himself that everything was legal and that there was no infringement of the rules, he should have then expressed his satisfaction with the propriety of the results, — end of story!

If this was not the case, can we assume that anyone may have access to the ballot papers, to discover just who has voted for whom, then comment on his observations via the magazine? I have no doubt that anyone with a vested interest in the ballot should NOT be given access to the ballot papers. What our BPA rules state on this matter would be of some interest to me in the light of this recent event. One thing is for sure. A lot of RAPA members are very angry over this aspect, and not only those who have voted. Privacy in the ballot has always been a fundamental right in British affairs but apparently not where the BPA is involved.

Finally, I would like to express my personal opinion of the services candidates for council. I felt they represented an excellent cross section of the BPA membership in that they collectively have; knowledge, management expertise, youth and experience, dedication and enthusiasm to

the sport in all its many facets and they have integrity. The do not have any vested interests, nor do they seek any form of self glorification. They wish to be on council to serve the sport. For me, that is the type of council I wish to see. I am sure that these qualities may also be attributed to many of the civilian candidates, but I do not know them as well as I know their service counterparts. One other factor which I am convinced on, is that a strong services representation on council can only be good for the BPA. With the contacts and facilities available to them, the advantages to all are obvious. Why not use them?

TOM OXLEY

P.S. For years accusations of apathy in voting for council has been levied at the BPA memberships. If only all clubs and centres would take a leaf from RAPA's book. If time had allowed we could probably have canvassed about four hundred voters.

ALAN MCKAY

Life is full of memories, some good, some not so good, some shared and mostly dimmed by time. Whenever old friends meet vivid stories of past happy moments are recalled and relived again and for a brief time you are back where it all happened.

Since I have been parachuting there have been numerous events that have special significance one of which was my first RW jump.

It was done with a Scot named Alan McKay. As jumps go it was no great shakes, but we did all we set out to and it was the first time I had seen anyone else in sky, let alone touched them.

Whenever Mac and I met it usually warranted a mention along with the time he landed, face splattered with blood and a wonderful set of fat lips after being walloped by his altimeter at dump time!

Alan always had a certain wanderlust that even continental truck driving could not satisfy and so a couple of years back he went to the States.

Well sadly I will be unable to relive my first relly jump with the one guy who made it special because, for reasons known only to Alan, he decided he had had enough of this life.

His mother kindly informed a mutual good friend, Ray Perkins, that Alan had taken his own life.

I am sure the people who knew Alan will spare a thought for him even if only to remember his annoyance at having he photo taken as he swore at his alti.

Thanks for the memory Mac and I hope you found what you were looking for.

JOHN D2733

BIG JUMP SHIPS

Having read the letter 'Big Jump Ships' by Nick Pineger in the February edition of SPI I feel I must reply in order to put into context the availability of big aircraft in England and Europe. In particular I would like to answer the point he made in his letter, quote "Yes the Swedes I know are getting another Hercules in, but it is a very expensive and long way - both in time and distance to run the risk of just watching the wind blow."

Nick, I have been jumping in England for coming up to ten years

now and it wasn't until last year that I had the opportunity to jump an aircraft that could take in excess of ten jumpers. I was fortunate enough to jump the Hercules in Sweden and the C-47 in Swansea. This good fortune did not just happen along but was organised by effort from myself and a willingness to accept the risk of travelling two thousand miles to Sweden and back with the possibility of 'just watching the wind blow'. The same situation existed for the C-47 at Swansea. On my return from Sweden, having jumped the Hercules just three times, I travelled to Swansea to risk jumping the C-47. This particular event was considerably more successful than Sweden and everyone in attendance had a most enjoyable weekend with some very worthwhile jumping.

The point I am trying to make is that there is only one way of jumping from big jump ships and that is to make the effort and risk wasting a lot of time and money just to jump these large aircraft. I progressed through the English progression system as you did, a normal civvie student struggling on an LEA grant and wondering when I could one day jump at any time of year without exam timetables to concern me, and with a little more money available to spend on the sport we love so much. Nick I implore you to be a little more realistic, as big jump ships are indeed very special events to English and European skydivers and as such require special efforts to jump them.

Blue skies,

DAVE STEPHENS D 1897

AIRLANE

We were very disappointed to receive a letter from the National Air Traffic Service, dated 10th February 1983, advising us that as early as November 1979 the British Parachute Association, through its representatives, was made aware of the proposals to inaugurate new airways in Scotland.

As these could seriously curtail, and hinder, parachuting activities in Scotland we would appreciate receiving information on the procedures adopted to fight against, and inform our members of, these proposed changes.

Mr. Rutter's letter (copy enclosed) suggests that the 'least contentious airway route' was chosen. We would suggest a better alternative would be to have flown this route over the North Sea and therefore avoid RAF Leuchars, Glenrothes, East Haven, Arbroath, Kinnell, Fouldoun and not least, Strathallan.

MARTIN H RENNIE
CHAIRMAN SSPA

CLUBS REPS

As a newly elected member of the 1983 BPA Council I thought a letter to the magazine for all to read was called for, as there seems to be a great deal of dissension from large areas of the membership. The main criticism seems to be that the BPA Council over the years has alienated itself from the members and, to quote a remark from P.J. McCormack's letter in the latest magazine, he says that "The Leadership, the Committee, only come to life when they can slap somebody's wrist like a bunch of schoolboy prefects".

Of course, this is not really a reasonable criticism as many of us know that the Association, over the years, has done a great deal to aid clubs affiliated to it in many different ways. Loans and grants in order to assist in the purchase of equipment or aid in the legal costs of obtaining planning permission, to mention only two.

At the inaugural Council Meeting, Danny Hennessy and myself were nominated to be club representatives in the hope that people would contact us with their problems and grievances. We would then consider these with the other members of Council in an effort to assist in any way possible, providing the requests were valid.

I am writing now to invite you to do that. My address and phone number are available from the BPA Office and I would like to hear from you.

There are a number of projects being looked at this year in an effort to try and orientate "The Leadership" back towards the membership. These are still very much in the early stages and it will take time to put them into motion, should we find them to be acceptable and of course not too costly.

In another recent letter to the magazine, S. Chalk raises the point that the competitive element of our sport only represents something like 4% of the membership and we should make our decisions with this borne in mind. I agree with this sentiment wholeheartedly in principle and costly overseas championships that plunge our Association into a deficit situation are possibly no longer acceptable. However, our international competitive members, although in the minority, are an extremely important section of our Association and should be given, in my opinion, as much support and backing as is financially viable, but certainly not at the expense of our own jumping scene at home.

To conclude, once again, please contact me with any points of issue you want raising. Without this very important feedback from the members we cannot begin to solve any of the problems that are driving a wedge in between the BPA Council and you.

JANE WATTS

AVIATION INSURANCE

I am taking this opportunity in bringing your attention to our company, who are International Insurance Brokers representing the largest British renowned insurer.

We are not large Insurance Brokers in the market, therefore we are able to offer a first class competitive service that is second to none.

We are able to arrange every description of insurance that we can envisage you would possibly require.

We would be pleased to discuss this with you and to help in any way we possible can.

Looking forward to hearing from you in the near future.

Intersure International Insurance Brokers Ltd., Intersure House, 5 Sandy's Row, London E1 7HW. Telephone 01-377 8959.

DAVID GREEN
Aviation Director

for the article on Islander exits.
Ed.

ATLANTA

While I'm at the typewriter doing this license application I thought I would take a moment to let you know what we are up to over here in Atlanta and to extend an invitation for British jumpers (or anyone else for that matter) passing by to have a few dives with us.

Our operation is known as the Skydive Air Command, SAC, and we're located about an hour out of Atlanta in the town of LaGrange, Ga. Currently we are flying a Cessna 195 and a Douglas DC-3. We carry 37 jumpers in the DC-3 and hope to have it up to 40 or 42 after we remove some excess equipment from the ship.

This is a DZ run by skydivers for skydivers and I can assure a warm welcome for our visitors. As I am the owner of both jumpships I make sure they're not off doing something else when they could be hauling jumpers. We have a wide range of experience and have been doing some very interesting large star sequential from the '3' as well as four and five way out of the 195. Visitors can call **Steve Moran**, (404) 977-7054, or **Phil McCormick**, (404) 926-9565.

Come see us!

STEVE

SP COVER PICS

I thank you for making such a good job of the February issue of the magazine, particularly of the photographs I supplied you with.

However I would like to amend the credit for the photographs which were supplied by Mr. Arthus Harrison, Technical Director of GQ Parachutes. I hope you can correct this in the April edition of the magazine.

D. STEPHENS

HELP

As you are always asking for comments, I think its about time I put pen to paper.

As a relatively keen jumper (i.e. two trips to the States, the first a washout, the second very successful) I have managed to get advanced fairly quickly, therefore, getting away from the foul UK weather conditions and its inherent effect on progression.

I have just come back from Marana, Arizona, where under a one-to-one instruction, I transitioned from 'rounds' to 'squares' - aerial manoeuvres, night jump, SCR (attempts) 2, 3 and 4 Ways - I purchased my own rig out there also - 47 jumps in 14 days to bring my total up to 66 (60 freefall). I also took out a BPA Category form and the instructors put me through all of it to Cat. 10. Contrary to most beliefs about the US this club is very, very safe and accommodating, i.e. taking a C182 to 8,500 just for myself for \$9.

Now after all that, I come back and find that I cannot stay on the 'Square' because there is no provision for jumpers who will to go any lengths to progress.

I don't really object to much that the BPA says and does, however on this point I feel that a tier system should be introduced.

I have to show (and its near the end of the season) control in the air, back to front and rear system, for a few jumps, perhaps even the 25 PCs required.

Now having learnt all my RW with a

Piggyback, I am going to have to learn to fly again because of the difference in shape of my air-shape, and hopefully when I show the observers what I can - cannot do - then back again to a Piggyback. I did 47 signed and certified jumps the last of which was only a week ago, quite frankly the view which I now have is that the BPA is at least 5 years behind the States.

Before I close, I would like to point out that the club in the States jumps first time students on squares - the most serious incident was a sprained ankle. Our students have a return rate to 20 jumps level of one in two hundred. The return rate of Maranas students is 90% and these stay on indefinitely!

I hope that this letter will stir up some comments and hopefully some action. Regards,

PAUL GRAY BPA114567

Try getting an exemption. At one time most of our CCI's were on one! Ed.

BCPA MEET

The BCPA looks like having got to a healthy awakening! Replies to my letter in the December issue of SP and to a newsletter and questionnaire sent out in November flooded in, and the AGM last Saturday was enjoyed by all, in spite of my plans falling through at some crucial stages...The weather over the weekend was the best we've had for months (apart from a few midweek exceptions and one Sunday in February), and we got down to some jumping at Weston-on-the-Green and at Long Marston.

Although the wind was too high for students for most of the weekend at Long Marston, it let up on Sunday evening to allow a few lifts to get a taste of paradise. At Weston, nine of us were let loose with the Islander, and after I had demonstrated with consummate ease how to dissect a five-way into its constituent bodies, we built to a seven way and an attempt at the Collegiate record of eight. A further attempt is being planned for the Easter weekend at Netheravon; anyone interested should contact Spike Wright at 234 Wentworth Road, Southall, Middlesex or on 01-574 7902.

The response to the idea of the summer meet has been most encouraging, with well over a hundred jumpers expressing their intentions to take part. The meet will be held at Sibson, between July 11th and 17th, and the events will be as follows:

- Static line style,
- Round canopy accuracy,
- Style,
- 4-way speed and accuracy,
- 2-way sequential RW,
- 4-way sequential RW.

Provided the weather is clement (which it certainly should be, in mid July!), the meet looks like being quite a success!

A recent development for the BCPA has been the setting up of three challenge cups, in round accuracy, open accuracy, and RW. These will be awarded at the end of the summer competition, and will thereafter be open to any collegiate challengers —

with the advantages that both holders and challengers can dispute a cup over a month, (thus avoiding the problems caused by bad weather), and from their respective DZs; judging to be carried out by instructors, and adjudication by the BCPA secretary. A sort of 'postal skydiving' if you like.

If there are any of you out there I haven't yet been in touch with, and are interested, don't hesitate to drop a line, to 110 Marlborough Road, Oxford OX1 4LS, or ring me on 0865 725 962.

Azure Skies,

HENRY ROBINSON

SAFETY NOTICE

I have noted with concern the present publicity regarding the premature release of a three rig system caused by a split grommet. I know for a fact that this fault was discovered on an Instructors kit FOUR YEARS AGO! The retaining loop was only frayed not broken and no incident report was made, but the British manufacture obviously saw fit to sweep this information under the carpet.

I wonder how many other potentially fatal faults sit on our backs which have already been spotted and rectified years before?

I suggest that the present system of incident reporting is an inadequate form of accident prevention which only allows us to pick up the pieces (an unfortunate but accurate pun).

Perhaps the only remedy would be to encourage every member to report faults direct to the Safety Officer. I am sure that most Riggers would see this as 'constructive feedback' while only the shoddy and unprofessional have anything to fear.

BARRY MILLINGTON 35181

SKYBIRD

More than once I became frustrated over the fact that I could exit an aircraft almost immediately behind a base, only to find myself disappointingly far away from it within a few seconds. Eventually I utilized some of my education and found an explanation. My parents will undoubtedly be relieved to know that sixteen years of scholarly enlightenment hath now borne fruit. Without going into the 'formula for the motion of a falling body' stuff too deeply, here is the source of the predicament.

When the base exits and starts its

freefall it drops 16 feet in the first second. Another jumper exiting one second behind the base will start only 16 feet away from it. But at that instant the base is falling at 32 feet per second and gaining speed while the diver who is just entering freefall has a downward speed of zero.

One second later the base has dropped to 62 feet below the aircraft while the diver has only fallen 16 feet. The gap between them has increased to 46 feet and the base is now falling at 62 feet per second, while the diver is now falling at 32 feet per second. The base is falling away from the diver faster than he is falling toward it, and they will continue to do so until they reach terminal velocity.

By the time the diver reaches terminal, approximately 1100 feet below the exit altitude, the base will have been there one second earlier and will now be about 160 feet below him.

It looks pretty grim on paper; much grimmer than in the air. That's because skydivers don't simply fall, they fly. In the time it takes to reach terminal, a floating base and a diving diver can compensate for the exit lag and easily dock with each other.

The real issue in this number juggling is that a small gap on exit results in a large gap in freefall to be compensated for by flying. Consequently — and this is the bottom line — a fast, tight exit is important, much more important than it would appear to be.

**This formula is expressed as 'Distance at time t = initial distance + initial velocity * t + 0.5 * acceleration * t²' says Philippe deLorheilhe, and does not account for friction due to air resistance.

Philippe has taken this formula as his thesis subject in his math studies at USC, and promises a thorough explanation of how it applies in freefall, for all of you physics freaks. by SCOTT MEEK,

Scott is one of the erudite freefall engineers of Perris Valley Visions.

DAVE HONE

You should find enclosed a photo (one of a series) of me (**Dave Hone**) about to back in on a four man comprising, **Pete Lambson**, **Bernie Parker**, **Keith Skelley** and **Charlie Oloan** taken high over Netheravon in January by **Proff Hallam**. I was hoping that it might be included in a future issue of Sport Parachutist.

DAVE HONE D3276

P.S. I've never been in the mag before!

Ed:- a case of beer, Dave



SOUTH AFRICA

As one of the rare members of the BPA to be found in South Africa I feel it is time you heard things from this end. Perhaps it will help to get things in perspective.

Let us not allow the medium of this magazine to be used for making political points and I certainly hope the council's most recent decision to pull out of the world championships at Sun City was made on purely mercenary ground with respect to the possibility of losing Sports Council money, and not on any pious moralistic basis calculated to degenerate another sport by involving politics where it is not wanted.

If the proportion of black people parachuting in the UK does not reflect the black proportion of the British population then the BPA would hardly be to blame; the same can be said of parachuting in South Africa. Black/coloured people are as welcome as anyone else at my DZ in Pretoria - in practice as well as theory I may add. The top south African RW teams are of course as engrossed in their training as any other team in the world and without meaning to sound facetious I must ask you what the eventual 'Springbok' team here are supposed to do - include a token black as their fourth man? The point is, and you must take it from me as an ordinary grass-roots jumper who found a job in Pretoria, the skydivers out here are just like you and me, they are not interested in politics and the only colours that really matter to them are those on their canopies. They live to SKYDIVE.

I should make it clear however that I am fully aware this has really nothing to do with Council's decision, but I feel so helpless 6,000 miles away watching the BPA take sanctimonious votes which may affect the direction of British RW in the next two years when I have the suspicion some people have made up their minds more than anything else because of their fear of criticism.

Regards to all in the UK.

Simon Turner D4189

The current debate on whether or not the BPA should participate raises a few interesting points - particularly for the anti-SA faction.

1. I do not recall a similar uproar or troubled consciences when the World Cups of 1974 and 1976 were held here. Granted, the teams present were not the 'national teams' per se. However, they did have BPA sanction and must, therefore, be seen as the official British teams.

Dave Waterman and Bob Colpus were members of the separate parties; so why the sudden about turn? They have the opportunity to judge for themselves, so why deny the same right to the current generation of competitors?

2. Their comments ostensibly imply a desire to avoid becoming embroiled in a political minefield based on some moral objection to the policies practiced by the current government here. I would suggest their real concern is money. If the BPA were to lose their government funding it would put an end to future trips to exotic destinations not yet visited. They need have no fear for the Gleneagles Agreement has no power whatsoever to create such a unpleasant situation.

3. Why pick on sportsmen as political footballs? Most sportsmen merely want to play the game against the best opposition available with international travel as an added bonus. Those that do wish to make a political platform of their actions are quite at liberty to withdraw from any team which may compete against rivals not to their liking. We find it strange to observe that there is never this agonising over moral issues, when East Germany (Berlin Wall), Russia (invasion of Afghanistan) or Uganda (during Amin's regime) trot on to the playing field.

4. Just where is the consistency in this whole sorry exercise? Your recently retired Rugby Captain receives an O.B.E./M.B.E. (?) upon returning home with a defeated team and your cricket players are banned for three years for earning a legitimate income. Stop and think about what sort of an image that creates.

5. And the greatest hypocrisy of all is the steady stream of handsome profits which leave this country for the shores of some of our most vociferous critics. BP, Shell, Valvoline, Barclays, Hill Samuel, British Leyland, British Airways, Thomas Cook, Lever Brothers, Cadbury's etc. etc. You name it - they are here.

Sport, money and politics are an interwoven fact of life we cannot deny. The Nationalist Government created the shambles with the D'Olivera and Maori rugby player incidents. The sports boycott has succeeded in rectifying these iniquities in the sporting world. The recent West Indies cricket tour was a quantum leap into the space age in comparison to circumstances that had prevailed prior to ±1975. Change is taking place even if it is at a snail's pace, but maybe your media is not reporting all the facts. 'Cheque Book Tours' have only arisen as the 'other side' has not honoured their side of the bargain.

In the World Meet's case, the venue, Sun City, is the Las Vegas of Southern Africa. Like its counterpart in the USA, its profits are determined by the shows that are staged to attract the crowds to the gaming tables. I doubt if a bit of show-biz will do sky-diving any harm and any serious team worth its salt will be able to discipline itself until the competition is over. After all, some competitors even find organising a slide show at nationals too much during a serious meet.

The issue, therefore, is quite straightforward. Those teams that wish to be considered to represent their countries in international competition must be duly selected at a national, and their national bodies must give them every support to bring home the medals. Its high time that sportsmen and women are left alone to get on with the same in their own way and that politicians direct their actions at the sources that really matter. But then again, they might get hurt in the process.

In 1982, ±30,000 British businessmen visited South Africa, and a further ±20,000 Britons considered it a worthwhile place to emigrate to. Your skydiving delegation will only bring

the figure to 50,020, so the BPA will not be precipitating an international crisis.

ALAN BANFIELD (D182)
Cape Town, South Africa

Hang on a minute! Let us not forget that it was the South Africans who first brought politics into sport with their policy of apartheid, to the extent that players chosen on merit by this country were not allowed to compete in South Africa. Remember Basil D'Olivera? No doubt things are changing, but with respect, this has very little to do with action from within South Africa but by action taken by Sportsmen worldwide.

Having said that, I have yet to hear an argument, put by those against holding the world meet in South Africa, based on a political or anti South African reason. There simply is no 'anti SA faction'. The anti arguments are based on narrower and in many ways more selfish reasons. The Competitors want a World Meet with the best competition, in the form of the best teams in the world. That will not happen in South Africa this year. You may not be aware that after the last World Classic Meet an unofficial meeting of CIP delegates requested that the criteria for choosing future world venues should be based on the maximum of countries able to compete in that venue, and not finance. South Africa hardly fits this criteria nor maybe for that matter would Moscow.

You may also be aware that the current BPA Council (of which I am not a member) with one exception voted not to go to South Africa. At that meeting (which I attended) not a single anti South African argument was put forward. What I'm trying to say is that any talk about the Gleneagles Agreement, apartheid, West Indian cricket and the like are red herrings (no pun intended). Ed.

RIGGERS

If you would like your name and address in our Parachutist Diary next year, please contact us at the address below with details of qualifications. It won't cost you anything - except the stamp.

AMERICA

If you plan to go to America any time after September and would like to make some money selling our very popular diaries contact me at:-

**Janet Korsak, Sports Diaries,
Little Dean, Heath Close, Beacon Hill,
Hindhead, GU26 6RU, Surrey.**



"WE JUST BOOBED, I'M AFRAID!
THEY WERE'NT CALLING FOR THEIR BALLS BACK.
JUST TELLING US THAT THE DEMO IS IN
THE NEXT FIELD!"

Coach's Column

In 1982 there were approximately 186,750 descents made at BPA Affiliated Clubs and Centres; of these; 162,000 were made in Great Britain, the remainder were made at British Clubs in Germany and Hong Kong, this does not include all the jumps made on demos. There is no real way of finding out how many of the descents were made by first time jumpers as not all the centres make their students BPA members, but from the statistics I have obtained I can give an estimate of approx. 24,300 first timers trained last year. Now out of these first time jumpers it would be nice to see how many actually stay in the Sport, again no real way of finding out, but to get a rough idea would be to find out how many 'C' Certificates were issued, as most people who get to Category 8 apply for a 'C' licence. Averaged out over the last few years we issued 291 'C' Certificates each year, so for 1982 approx 1 person in 83 who does a first jump course actually takes up the sport as a hobby. There are 53 Clubs, Centres and Teams in the country that train ab-initio students, so

spread over the whole lot only about 1½ students per club stay in the sport, if you consider that the larger centres keep several students each year, it means that some clubs do not retain any students at all - not very good is it?

So then how do we keep more students in the Sport? First you have to find out why they don't stay - Well many people on jump courses only ever intend to do one jump, especially now that so many of the courses are for charity. I think that the two main reasons people don't stay in the sport are, (i) The Weather, (ii) Fear. You may not agree with me, but let us know your opinions because the more people we can get to stay in the sport the better it will be for all of us.

1. The Weather, well there is not much we can do about it, but it would be nice for the student to get a couple of jumps on the first week-end if possible. I know it is a lot of work, but if you can encourage the student to get a couple more jumps straight after his first, while the enthusiasm is still there, it will do a lot to get him

to come back again. There is nothing worse for a student than hanging around on a bad day not knowing what is going on, you may have an idea that the weather is going to clear up in the late afternoon, but the student probably won't. Generally people will wait about, if they know what is happening - keep them informed.

2. Fear, everyone is scared at first, and for quite a few jumps after their first descent, tell the student that this is natural. When I first started jumping I thought that I must have been more scared than all the other students around me. (I probably was!) This is something where everyone at your club could help, if you see someone come back for a second or third jump, talk to them, make them feel welcome, instructors could try and remember names, remember how pleased you were the first time the instructor remembered your name.

Everyone can do something even if its only to include a new face in your game of hacky, we know what a magic sport this is, let's try and share it with more people.

TONY BUTLER
Joint National Coach &
Safety Officer

Mal



"THOSE ACCURACY HOT-SHOTS
MISS OUT ON THESE LOVELY
COUNTRY WALKS!"

GQ STUDENT CANOPY RELEASE

Midland Para Centre have been given STC approval to use the GQ Student Canopy Release system on their student rigs.

These releases have been used in Cyprus by the Military for approx one year with no problems.

DJANGO BANDIT

The new ram air from Django Enterprises called 'The Bandit' is in fact a nine cell and not a seven cell as reported earlier. The Bandit is a 168 sq. ft. high aspect wing ratio canopy, with a span of 21ft and a chord of 8ft. It weighs in at 7.25lbs with risers and Dacron lines, or 6.25lbs with risers and Kevlar lines. It is reported to have a 4 to 1 glide ratio and is capable of tiptoe landings with 210lbs. Django say the Bandit should be considered an ultra-high performance vehicle, not to be used by novice ram-air pilots, or by those who are transitioning from round canopies to Ram Air.

DEMONSTRATION RAM AIRS

Thomas Sports Equipment of Lofty's Loft, have available the following ram airs for demonstration purposes: BANDIT, DRAGONFLY, PEGASUS, FIREFLY and OSPREY. Anybody wishing to make a jump or two on these canopies, contact Derek Thomas, most weekends at Sibson.



PEGASUS/FIREFLY CONTROL LINES

To clarify the Pegasus/Firefly mod situation we contacted Django Enterprises Inc. It seems that at the end of 1981 they started to produce the canopies with the cascades lowered 40 inches in an attempt to reduce the number of steering line malfunctions.

This change did not help, but in fact appeared to aggravate the problem. Since then they have carried out a test program and the results have indicated that the cascade point on the steering system should be as high as possible, so that the slider will clear the upper control lines sooner during deployment.

To sum up:

1. The early canopies had a medium cascade length, which is unlikely to cause many problems.
2. The middle era canopies had a long cascade length and need to be modified to the new specification.
3. The new era canopies from 11th September 1982 have a short cascade length and therefore need no mod.

If you are in doubt about your canopy's specification — contact Django Enterprises or check with a rigger.

PILOT SAFETY

GQ Security have brought out a new Safety chute for Jump Pilots. Called the Security 850 safety chute this 22ft diameter SAC canopy packs into a very small emergency back pack system. The whole set up weighs in at 12½lbs.

PILOT CHUTE IN TOW

It was brought to the attention of STC that there appeared to be several procedures for dealing with a Pilot Chute in Tow.

The STC decided that the recommended procedure in case of Pilot Chute in Tow is to 'ACTIVATE RESERVE'.

RUSTY PINS

Because of the continuing incidents of non-stainless steel Ripcord Pins rusting and jamming in nylon loops. From the 1st July 1983, Piano Wire type Ripcord Pins are no longer to be used.

RAM AIR RINGS

In addition to the Safety Bulletin printed in the February issue of SP concerning the failure of toggle rings.

The following GQ Security Rigs fitted with the X210R ram air reserve, should also be checked for the suspect ¾" diameter 'O' Rings.

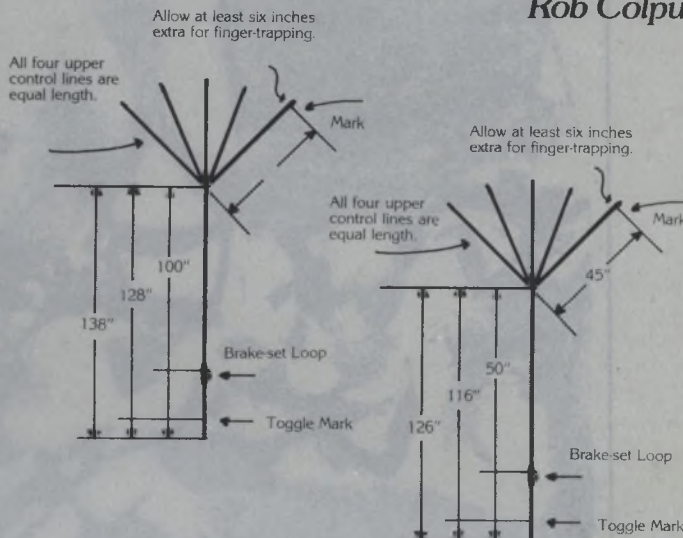
1. The ALPHA
2. The SYSTEM II and III

THROWAWAY ENTANGLEMENTS

After several incidents of throwaway pilot chutes becoming entangled with their own bridle, Relative Workshops of Florida USA have recommended that after the pack is closed and the velcro routing has been mated, the remaining bridle should be stowed between layers of pilot chute fabric, rather than between the mesh. All twists should be removed prior to stowing. It was also stated that the nylon cord type bridle is more likely to entangle than the Type 4, 1" Flat Tape variety.

PEGASUS CONTROL SYSTEM
Updated 11 Sept. 1982

Rob Colpus



RESERVE AOD

The manner in which a reserve canopy was folded into a tandem reserve tray which contained the power pack for a FXC, caused a minor 'lock up'.

The diaper was stowed in the same corner as the power pack. The next bulky fold of canopy was stowed on the opposite side. The next less bulky folds had been stowed on top of the power pack and had apparently become trapped between the power pack and the side of the container.

It appears that if the diaper had been stowed in the corner opposite the power pack and the next (bulky) fold was placed over the power pack, this problem would not have occurred. The bulkier fold would not have been able to lodge itself at the side of the power pack.

PRESERVE IV

Airotech of USA have released a Hanbury design, 22ft, F111, reserve called the Preserve IV.

This latest in the Preserve range has Kevlar reinforcing at the skirt and apex. It has a meshed Tri Vent mod and weighs in at 4½lbs. The reported rate of descent is 16ft/sec with 200lbs.

CONVERTING TO TANDEMS

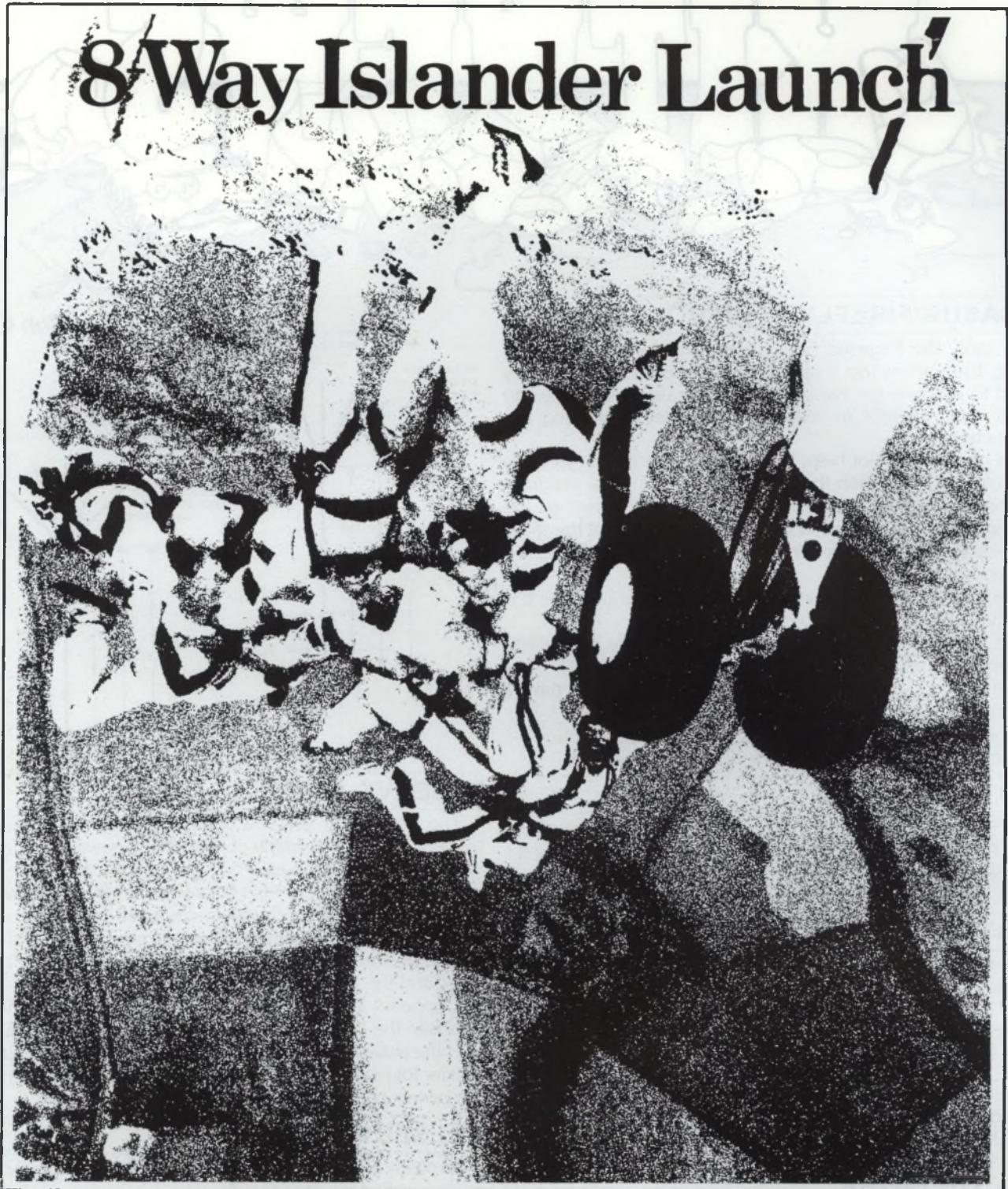
RAFSPA at Weston on the Green have recently taken delivery of a number of Tandem Rigs especially designed to train students for cutaway procedures on tandem systems.

The rigs, built by Thomas Sports at Lofty's Loft have a static line operated 'upper' container, which contains a bag packed I24 canopy.

This is cutaway using a standard 3 ring single point release system. The 'lower' container (equipped with a GQ Aero conical) if then activated by a normal tandem reserve ripcord, mounted on the left lift web as per standard.

The rigs are fitted with low slung 'Dee' rings which accept an additional front mount reserve, which is mounted well clear of the cutaway pad and reserve handle.

8-Way Islander Launch



Gravity and air flow are usually considered to be a skydiver's best friends, but when organising an aircraft Exit (better described as a freefall Entry) they are the enemy. Remember that, with no grips between jumpers, if there is a one second gap between the first and last person to leave the door then, when the last leaves, the first will be 16ft below the aircraft and, moreover, will have a downward velocity of 32ft/sec. One second later the first person will have fallen 64ft and be travelling at 64ft/sec as against the first man's 16ft and 32ft/sec respectively. All this considers the effect of gravity alone, ignoring the aircraft slipstream, (which would further increase the separation) but it emphasises the need for a linked Exit, or to depart as one

unit 'a launch' and shows why tension is bound to exist even in quite good and successful launches.

Launch Principles

The general principles of a launch of any size are quite simple. All persons should leave the aircraft as close together as possible and should each individually be stable. These principles have been written about before but suffice it to say that each member should face the airflow with the front of his body all the way from the door. Each should also have sufficient control surfaces, i.e. be able to use his arms and/or legs to control his flying. Also, the climb-out may be cramped and uncomfortable but that is not important, as long as people are not over-stressed.

The Islander

This aircraft used widely in Europe is convenient for several types of 4-way launch but does not lend itself easily to 8-way. The door is fairly small and cramped, unlike the door on a C-47. The DC-3 also has a small door but is clean and tall whereas the Islander door is not even symmetrical with the rear top cut off.

Because of this, it is important to get as many people as possible outside while the rest must get close to the sill. Those who are inside must push the whole launch out of the door, rather than being dragged out by the rest, and usually the rear two still feel a lot of tension.

Positions

This section will probably not be easy to understand on the first time through, so read it in conjunction with the diagrams or, better still, get eight people and go through it on a real Islander or a mock-up.

All the positions will be referred to by numbers (as shown in diagram 1) which roughly correspond to a climb-out order. There are effectively four floaters, two leaners, who lean out on to the floaters, a closer, who closes the centre four and a tail pusher.

1. First Rear Floater (first out)

Left foot in the rear corner of the door
 Right foot raised along the fuselage
 Left hand on rear edge of the door
 Right hand holds the base of the aerial on top of the fuselage. You must hold the base, since a new aerial can be very expensive.
 On exit take No.5's left arm and No.5's side.

2. Second Rear Floater (second out)

Left foot next to No.1's foot in the door.
 Right foot trailing
 Left hand also on rear door edge below No.1's hand
 Right hand over No.1's shoulder (With practice you should put very little weight on No.1, although he can take quite a lot.)
 On exit, drop onto No.3's right arm, you may also take No.1's left arm or crawl down to No.3's legs, depending on the first formation.

3. Centre Floater (third out)

Right foot in the door next to No.2's foot
 Left foot trailing
 Both hands are on the wing flap hinge. Note that gloves are essential for this position and there should be enough room at the front of the hinge for No.4's right hand. You should also lean out as far as possible but keep looking in.
 On exit you give the count and should kick your legs back.

4. Front Floater (fourth out)

Right foot next to No.5's left foot on the door sill. Note that No.5 should place his foot as you are climbing out. Left foot in the front corner of the door. You may try trailing this foot but our front floater felt he wasn't able to. Right hand holds the front of the wing flap hinge.
 Left hand in the top front corner of the door. This hand takes quite a lot of pressure, due to the slipstream, so you should push on the right foot to take some of the weight off.
 On exit push hard with the legs and delta up towards the group keep looking at the centre. No.6 will be holding you in close.

5. First Leaner (the two leaners get into position simultaneously)

Left foot in door between No.3 and No.4's right feet.
 Put this foot in place as No.4 is climb-

ing out.

Right knee in door next to No.4's right foot.

Left hand takes No.3's upper arm.
 Right hand takes No.6's left arm.
 Lean out onto No.3 as far as you can and keep your head up.

On exit you will be able to do very little but will find yourself in a sort of instant free-fall.

6. Second Leaner

Both feet together on the door sill between No.4's left foot and No.5's right knee.

Left hand takes inside of No.3's left arm.

Right hand takes No.4's right arm.
 Keep the right elbow high in No.4's throat so that the right shoulder does not fold underneath on exit. On exit, keep your grips tight not letting them snatch and ensure your right shoulder is high, so putting the air onto your chest and keep your knees up.

7. Closer

Left hand takes No.5's right leg strap.
 Right hand takes No.6's left leg strap
 You are closing the central four comprising Nos. 3, 5, 6 and 7
 Keep tight, almost on top of them
 On exit keep your arms short so they are not snatched away from you and keep your legs tucked up.

8. Tail

Left hand takes No.7's right leg strap
 Right hand takes No.6's left leg strap
 These are the normal grips but you can move around No.7 depending on the first formation to be built.
 On exit you do not sway in with the others but hold them and push hard on the actual exit. Keep your knees right up to prevent being flipped over the top.

Exit (Entry into free-fall) Diagram 2

The count, Ready Set Go, is given by No.3. It should be loud and positive but not too fast, since eight people need to get the rhythm. It should be accompanied by a good sway in from the front since Nos 1 and 2, and sometimes No.4, have difficulty in hearing the count and need to see it. Nos. 5, 6 and 7 should absorb

the sway, No.8 should not sway at all and be positioned up against the wall opposite the door, pushing the whole unit out. **Grip Switches**

We worked quite hard on being able to grip switch to most of the first formations from the launch, rather than free fly. We did even manage to build a Hope Diamond this way but some random formations are clearly very difficult. Working out the grip switches must be done lying on the floor to get a real perspective. Standing up serves virtually no purpose, as in a lot of skydiving. After you have done a few successful launches, you will have a much better idea of what is possible and what isn't for the grip switching.

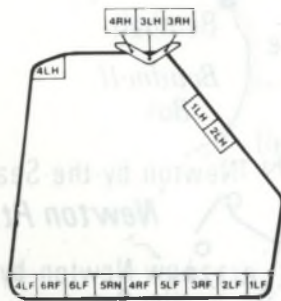
On good launches the grip switching can start immediately but some need time to settle. Very bad launches need no decision. Only experience of launches can help you make these decisions. Use cloudy days, say 5000ft base, to practice launches and possibly grip switches.

Usually Nos.3, 5, 6 and 7 are the centre four, but this leaves Nos.1 and 2 in the same quadrant so sometimes No.1 should take No.7's place. One point to remember on the more complex manoeuvres is to be aware of the entire formation. For example, each wing of a Buzzard should be aware of the other even though they are not involved in the same grips.

To keep the run-in speed constant, ask the pilot for approximately 70 knots flat and level with 14" of manifold pressure and no cut. Do not forget to inform the pilot as to what parts of the aircraft you are hanging on to, he won't like it, but tell him anyway!

Finally, bad launches almost always result in bad dives, but good launches do not guarantee good dives, however, they certainly set the scene. The last bit of advice is to CONCENTRATE. Never take the launch for granted, even if you are doing it regularly, they always need working on and can be improved, so try different grips and positions, they may work better for your particular team.

JOHN PARKER BRIAN MASON



FOOT & HAND POSITIONS IN DOOR & ON WING FLAP HINGE
 L - LEFT
 R - RIGHT
 F - FOOT
 H - HAND
 K - KNEE

DIAGRAM 1



DIAGRAM 2

CLUB PAGE

Border Parachute Centre

I am very pleased to report that parachuting recommenced at Brunton on 19th February 1983. Some members will have already sampled the delights of the place during the days of Windy Gyle P.C. but for those that haven't I am taking advantage of the new Club page to bring everyone up to date.

Windy Gyle was set up in 1975 as a 40 bed outdoor activity centre offering courses in various pursuits, Climbing, Canoeing, Sailing, Land Yachting, Riding, Basic Mountaineering, etc. etc. and of course, Sport Parachuting. The first sport jumps were made at Brunton on 5th May 1975. The para courses were mainly of a week's duration the idea being for participants to progress to free fall in that week. For this reason we had a high retention rate and many active and experienced jumpers around today started their careers in this way. The Centre was very popular but for various reasons was not a financial success and we were forced to sell the operation in 1981. It is still in

existence as an outdoor centre but with parachuting. After that blow I purchased a fast power boat and disappeared to Spain to run a water ski school in the sunshine. That continued for two seasons until some Spaniards decided to sink my boat! I returned to the UK wondering what the hell to do but in the back of my mind was Brunton. I had kept the clearances going in the hope that we could put the DZ back into operation, but with my finances somewhat limited I wasn't hopeful. The position changed at the end of January when an old friend of mine tracked me down with a concrete proposition.

John Hudspeth had taken over the job of Regional organiser for MIND. The National Association for Mental Health, his main task being to raise funds. He felt sure that sponsored jumps, as we all know, was an excellent fund raising vehicle but he wanted to really do it properly as a structured set up. After the initial talks I was convinced that he was right and that all the publicity these events attract is excellent for our sport if things are shown to be well organised and run. I agreed to act as CCI for their own club to be set up as a part of BORDER PARACHUTE CENTRE which I would reopen at Brunton. Hence the birth of skyMINDers Parachute Club.

With the first two courses already waiting to go I was faced with the task of setting up an entire operation within two weeks! With the unfortunate

demise of Glenrothes due to the loss of their student DZ I knew that an entire set of kit was available and with the very generous support of SILVERSCREEN our local screen printing firm, this was duly purchased. The biggest headache, as always, was an aircraft and **John Ball** proved extremely helpful and G-AXZO the 180 from Thruxton was positioned at Brunton on 19th February. Before its arrival **Ronnie Groat** from Glenrothes came to the rescue with his excellent 207, enabling us to jump the first two courses on the one day. Our next big problem was fuel to keep us in the air and this was solved by **Mike Gill** of GILL AVIATION, Newcastle who has given us the use of a 300 gallon fuel bowser and a good deal on the supply of Avgas.

That's how it all happened, so what have we got. A superb totally unrestricted DZ next to the Northumbrian Coast in the middle of a very busy holiday area with lots to do if the weathers against us. Hot food and cuppas provided from the caravan by John's girlfriend, **Barbara**. A 4 place aircraft with excellent climb rate and reasonable jump prices. An ex diving lodge near to the airfield with bunk and room facilities, showers, bar and restaurant. This is our Saturday night watering hole and video lounge!

Bag systems, freefall systems and P.C.'s. We welcome RW progression students, 4-way teams and any other member (BPA membership mandatory) who wishes to jump at a very beautiful no-hassle DZ. There are literally hundreds of B & B establishments and several well appointed camping and caravan sites all around the field. We are fully booked for courses until November and will be operational every weekend with the exception of Easter and the last in July first in August when the Centre will be closed for staff recuperation purposes! Midweek jumping will also happen fairly frequently and a telephone call to (0632) 596712 will confirm.

Future plans hope to include a couple of summer weeks with extra aircraft to give us 10 way potential and may be a week with a C.47! There are no membership charges for visitors but make sure your docs and kit are in order especially reserve packing cards, they are inspected so be warned. We'll have some photos for the next Mag and an update on progress. The DZ is only 6 miles off the A1 just before you get your passports out to cross into Scotland but it is hard to find so I have enclosed a sketch map to assist. We look forward to seeing you and promise you a good taste of Northumbrian hospitality. **KERRY NOBLE D716**

Red Devils

Contrary to popular belief, Red Devils don't hibernate in the winter! Some, however, have sought solace in warmer countries during the 'off-season' from regular display jumping. But before this, the first notable occasion was a REAL 'bottle job', this involved the O.C. flying to France and collecting bottles of Beaujolais Nouveau, from the vineyards on the stroke of midnight on November 14th; and bringing them back to the UK in order that eight members of the team could jump into the Thames, with a bottle of the new season's wine firmly attached to their person; and then deliver the wine to the Savoy Hotel to be auctioned for military charities. That was the theory; and so at noon on November 15th, eight team members jumped in two sticks of four, from either a Sea King or Lynx, using Strato Cloud canopies. All the parachutists landed safely, with mouths tightly shut, in the cold waters of the Thames, but one errant wine bottle went AWOL - happily with no disastrous consequences, and at the end of the day £8,000 had been raised for charity. The fact that one team member has been seen at Netheravon wearing a T-shirt proclaiming 'I lost my bottle over London' is pure coincidence!

The team assisted the BBC in the making of a Eureka programme, featuring the history of parachuting. **Jeremy Beadle**, the series' presenter, spent several days with the team, and himself made a static line descent from the Islander over Queen's Avenue. November also saw the Annual Team Reunion, but the presentation to the Red Devil of the Year, to **Graham Copestake**, could not be made, as Graham was already in the Southern Hemisphere. WO2 **Ken Yeoman** had led a British Army Team to an International Parachute Festival in Mozambique. The team consisted of **John Rix** and **Graham Copestake** from the Red Devils and two members of the Royal Artillery Team. The team acquitted themselves very well, coming second in the accuracy and winning the relative work competition. This was an excellent performance as three of the four Russians were national team members.

Bob Harman spent an interesting Christmas keeping a fatherly eye on four of the younger team members: **Julian Spencer**, **Jim Scarratt**, **Eddie Carroll** and **Guy Hudson**; who chose to spend Christmas at Zephyrhills, amassing approximately 500 jumps and a broken leg between them.

1983 will see some new faces in the team. Two of the soldiers wounded during the Falklands Campaign have now joined the team: **David Grey**, as a rigger, (a mid thigh amputee, who has now been given permission to jump); and **Dave Kempster**, at present working in the stores. The team will all be jumping the familiar red, white and blue 200 square foot Unit canopies, provided by GQ of Woking; and this season will again be flying the flag for Zenith Windows the other main sponsor. After the early spring spent in training 'one-jump' students: **Captain Munn** and his team have their sights set on such exotic places as Bermuda, Berlin, Hong Kong....and Newcastle.

LUCIFER





Some experiments with single layer square parachutes

by Dick Gays



At the time of writing I have designed, made and jumped four simple single layer square parachutes. Although one of these is now approved for use as a normal main parachute by experienced jumpers, one of the four has never been landed, and another was only landed once.

The story begins in October 1979 after months of idle thought about various parachutes, the way they are made, why they behave as they do and of course, how else can they be made?

The first idea came after thinking about the great difference in performance between the flat circular parachutes and the Para-Commander type, a difference mainly due to the improved efficiency brought about by the various aerofoil section slots, particularly the turn slots. It soon became obvious that if a parachute was designed to make maximum utilisation of this type of aerodynamic

slot, then the canopy would not be a round one. There just isn't anywhere else on a round parachute to put more of this type of slot, they can not be positioned at the front and rear of the canopy as they would cancel each other out.

The idea of putting a leading edge slat in front of a ram air canopy was also one I toyed with, aeronautical books point out that a slatted aerofoil is far more efficient at low airspeeds than a more conventional one, and in aeronautical terms the (overestimated?) 30mph or so claimed for some ram air canopies is very slow. Getting such an idea to work in practice on a parachute which after all is only a flexible air sustained membrane, would not be easy.

A final recurring thought is that of the inefficient use of materials made by some modern canopies. A few examples here will illustrate the point. A 28ft

diameter flat circular canopy (the C9) requires 616 sq ft of material, however, its inflated diameter is only in the order of just under 19ft, or 283 sq ft, giving it an area efficiency of 45.9%. The PC, better in performance has only a slightly better area efficiency at 46.2% and the typical high performance ram air canopy has the lowest area efficiency of all at a mere 37.8%.

Let us look at the way a ram air parachute is made to see why it has such a low area efficiency. Any pilot will tell you that the most important part of the aerofoil section of an aircraft wing is the upper surface, it generates most lift. Our ram air canopy not only has an upper surface, but a lower surface, all the vertical cell walls and the stabilizers as well. Now although the cell walls are needed to give the upper surface its all important shape, and the lower surface contains the "stagnant" air to provide ram





JUMP MARINE AT Z HILLS

Dave Floyd and Dave Waterman record the marines team training at Z Hills for the coming display season



Southern Cross.
Exit! The Team flow
through the door of

AFF Student Brit Tom Donnelly in a thirteen man star with the marines on his thirteenth jump!

Tom was at Z Hills as part of his training for a Hot Air Balloon High Altitude record attempt, 80,000ft!

All the pilots of the balloon did an AFF course just in case they have to abandon ship.

Tom's next jump with the marines was gate-crashed by another group from Southern Cross DC3, giving Tom yet another unforgettable experience in his short but eventful time in the sport.



The Marines take part in a 36-way.

air stiffness to the canopy in flight, they don't provide the all important lift, not do the stabilizers.

Would it be possible to make a canopy similar to ram air except without the material consuming non-lift generating lower surface, cell walls and stabilizers? At first this idea was dismissed as impractical although I was to return to it later.

My first serious design for a simple single layer square canopy made use of an idea developed from the now disused Derry Slot. A Derry Slot is a gap between the two adjacent gores on a conventional round parachute, since both sides of the gap or slot are of equal length and subject to the same forces, the gap is normally closed though of course air escapes through it. A steering line is attached to the centre of each side of the gap, if one steering line is pulled down, the slot opens and the escaping air is directed towards the side on which the line was pulled, thus making the canopy turn.

Why not make a canopy with rows of slot in line with each other, and in order to make construction very simple, have each edge of the slots the same length. This would mean that instead of the fairly involved number of various shaped panels that make up a PC type of turn slot, this new canopy could use material straight from the roll with no cutting or shaping required for the panels at all. Furthermore it need not be made out of many small panels but out of very few long ones! The slots having both edges equal like Derry Slots would be closed unless, also like Derry Slots they had a line attached to pull them open. The lines would only be attached to one side of the slots, they would not be steering lines but load bearing suspension lines.

A model was made, tried and found to be successful, that is to say it opened, flew in a stable manner with an encouraging forward speed. Here then was the idea for an entirely new type of parachute that should in theory be quite a bit better than a PC in performance, though unlikely to get anywhere near ram. The big advantages this canopy would have are a very simple construction together with an area efficiency as high as 63%.

A full sized parachute was next designed for dummy drop tests, it was not anticipated at that stage that the first off would be much more than an experiment to prove or disprove the basic concept. After all, I had never made a parachute before so didn't expect too much from it. The cheapest materials would be quite good enough just to give a sandbag a ride.

As work progressed on the first parachute, more confidence was gained, the model had been shown to such experts as Ronnie O'Brien and Lofty Thomas, and as they both cautiously announced it might work, the idea of jumping it (if the sandbag survived) came to mind.

My approach to the Safety and Training Committee was handicapped by my being unable to reveal any details about the canopy, as to do so would amount to a prior publication and jeopardise my chances of getting the idea patented.

The canopy was soon built and given its first test by inflating it on a windy day. The simple test revealed one or two errors in the line lengths which caused the leading edge to curl under.

The first drop tests were from 500ft on static line with a 160lb sandbag, using no form of deployment retarding device. This was thought preferable to having a slider sticking part way, how right this was. The first test was a 100% success, but the second one blew a panel out. That may not sound so good on the second test of a new canopy but the fault was in the material which had zero porosity and not much more strength, wet newspaper would have been as strong.

The hard work of carrying the heavy sandbag to and from the Porter, and back from the DZ made me decide to live jump it next, before it fell apart completely. My cut away rig was converted to static line deployment so that the first live test would be just the same as the dummy drops, except for the height which was increased ten fold.

The jump went well, the opening was quite positive and on the hard side, but the canopy itself was undamaged and basically stable, though there was some fluttering which is now accepted as a

characteristic of this type of parachute. The turns were fairly fast and very stable, but best of all, Neil Townsend and Fred Ryland who had followed me out and dumped alongside, were actually sinking out on me on their ram air machines. The only thing that marred the jump was the landing being so very far from the DZ, a disc would have been nice on that jump. The poor accuracy was more to do with spending almost the entire ride looking up at the canopy than anything else.

The second, third and fourth jumps were all made with a slider fitted, though it never did slide despite major surgery to it by the fourth jump. These were not malfunctions, they were tests, enough was learned from these non-openings to develop a new system to suit what was a new type of canopy. No similar problems have been encountered since. By this time thoughts were on Slots Mk 2 which would be made of sterner stuff, but not until more was learned from Mk 1.

The useless slider was removed from another live jump intended to be a five second delay from five grand. Due to the awkwardness of reaching the throw away pilot chute on the low slung cut-away seat pack, together with a very sloppy exit made the five seconds into ten. The near terminal opening was not too hard, but looking up to check the all white canopy revealed six sky blue panels, or rather space where panels had blown out. According to Ronnie O'Brien on the telemeters, there was more nylon fluttering down than confetti at a wedding.

With the safety of height it was possible to stay with it long enough to find it still under control though wanting to do a gentle turn if not corrected. The rate of descent seemed quite reasonable, but doesn't it always at three thousand feet? The use of the capewells was the end of Slots Mk 1, after five live jumps but only one landing.

Before being written off in this way it had proved the basic idea was practical and worth further development. The answer to the sticking slider was found though not then tested and the canopy had also showed some promise as an ascender.

Having filed an application for a patent it was alright to make the details of the canopy public, by explaining to the Safety and Training Committee what was being tested and the theories behind it. After this presentation, Jim Crocker who was then still the Chairman, announced that he thought the work that had been done deserved some recognition, and that he would endeavour to get the council to award me a development grant. Thanks to Jim and the co-operation of first of all the Finance Sub Committee and then Council, £350 was awarded. This was promptly invested in a twin needle sewing machine for making canopies and a zig-zag machine for the lines.

Another spin-off from the STC meeting was an invitation from Jack Hiley of the Northern Parachute Systems to have the free use of his spacious loft, an offer gladly accepted as this was prior to getting the grant. Three days were spent at Jack's. I learnt a lot from him and built Slots Mk 2 and Thin Wing.

Slots 2 differed from Slots 1 by having only four long panels instead of five, thus reducing the cord by 20% though the span remained the same. This time in addition to the ram air type of trailing edge steering used on Slots 1, an independent slot reversal steering system was also fitted for comparison. The possibility of linking the two systems was borne in mind. Another change in the design was that the slots were made longer, there now being three rows of six against the former four rows of eight. The theory of longer slots was that since the amount of lift varied according to the changing section of the aerofoil along the length of each slot, having a longer slot and then restraining the extent of its opening by a short line across each slot would spread the area of high lift and reduce the area of low lift.

Construction differed by using a far better material though still only a cheap ripstop, fewer lines due to fewer slots and better workmanship all round thanks to Jack's advice. This was clearly a canopy that was not going to give Ronnie O'Brien further hysterics, it was going to stay in one piece.

Slots 2 was live jumped straight off, again using the static line and with nothing to slow down the opening. It handled very well, the trim wasn't quite right but not too bad for a start. Stability was very good though the characteristic fluttering was still there on full drive.

The first test of Slots 2 revealed that the trailing edge steering provided fast flat very stable turns. On the other hand the slot reversal steering was slow, erratic and caused some canopy buffeting so it was promptly discarded. This was quite convenient because the slot reversal steering lines served no other purpose, whereas the trailing edge steering lines also supported the trailing edge and would be needed even if not used to steer with.

Experience has since shown that the steering on Slots 2 does have its own characteristics. If under the canopy the steering is handled firmly and confidently, nothing unusual is noticed. Delicate handling reveals a 'tight spot' when the toggles are near shoulder level, toggle movement being free and easy above and below this point. Looking up at the canopy shows a normal configuration with the toggles above the tight spot, but when one toggle is pulled below this spot the canopy bends in the middle as if the toggle pressure side is trying to go backwards faster than the full drive side is going forwards. When coming abruptly out of a fast turn, the canopy seems to stop dead for a moment before gently resuming normal forward flight.

After a few more static line descents to get used to the handling and get the trim to my liking, the new deployment retarding device was fitted ready for free-fall.

Having carefully observed three slider assisted non-openings on Slots 1, it appeared that as much air escaped out of the many slots as entered the still folded canopy. Clearly the initial force that opens the canopy was low, though the final force which brings about full inflation was alright. This is just the opposite to ram air, where the initial opening force is almost explosive, and the final force fairly low, hence the fairly frequent end cell closures on some ram airs.

Two ways looked likely to tame my canopy, one method being to use a conventional slider but to fit slider stops a couple of feet or so below the canopy in order to allow just a little more deployment before restraint was imposed. Since slider stops a little way down the lines would be a potential source of malfunctions the alternative method of a long armed spider was chosen. The spider made has arms that span a full one metre and this has proved to be successful. A feature of the lines on Slots 2 is that from links to cascade a heavy line is used, about the cascades a lighter line comes from the canopy, down to the cascades and back to the canopy. The canopy being experimental, the upper lines are tied to the lower lines in a way that allows adjustment. This means relatively bulky knots at the cascades where the spider inevitably sticks, though it always comes all the way down with a pump of the toggles.

Jumping it shows that the canopy reaches near full deployment with the spider stuck at the cascade knots, and does so with a bend in the middle giving a sort of swept wing effect similar to that adopted by the canopy in a fast turn. When a spider comes down to the links there is no apparent difference in flight.

Before progressing to free fall, permission was obtained from the Safety and Training Committee for any D licence holder to jump the canopy. Andy Meysner being the only one to do so whilst still at the static line cut away rig stage.

Following successful tests through to terminal openings once again a trip to the STC this time coming away with permission to use the canopy as a normal main parachute after two more terminal openings.

Slots 2 has now been used by a number of experienced jumpers with complete success, unlike its predecessor it has suffered no damage and never been cut away. Roger Dearman of the Red Devils after two jumps on Slots 2 reported as follows:

Openings: Strange to look at — but nice and smooth — not a lot of difference from a sub-

terminal square opening.

Turns: Were just as briefed, the first part of toggle depression is quite smooth, then becomes quite stiff, then followed by a smooth push all the way down. On the turn you do not experience a swing out like on a high

performance canopy, but given a second or two it begins to turn very quickly and you are still directly underneath the canopy. The sides tend to delta backwards — fun!! Coming out of the turn, simply let go of toggle and the canopy chugs off on its new heading with no oscillation.

Stall: You lose a lot of lift and the front and rear edges tend to push towards one another then quickly re-inflate, this action repeats itself and does so until you return the toggles. There is no swing forwards on recovery like a square.

Sink: Didn't really notice, should imagine it's very effective. By putting on a little brake, the canopy stables out.

Full Drive: With toggles up to the keepers, the canopy tends to spasmodically shudder. So to remedy, simply apply a few inches of brake, then it becomes the most stable parachute I have ever jumped.

Landing: Keep it into wind and do not flare. Tip toe landings both times. Treat accuracy the same as a PC. Try it, it's fun. Roger Dearman.

Earlier, reference were made to an idea for a ram air type of canopy minus the lower surface and also to a canopy called Thin Wing, the two being one and the same.

Thin wing is not yet a success, though I firmly believe it can be. Basically the canopy is an upper surface of a ram air, with the material being continuous spanwise, and with vertical shaped supporting panels below, to which the lines are attached. These vertical panels amount to cell walls in a ram air canopy.

When designing this canopy I was influenced by childhood aeromodelling experience and chose to have the supporting panels shaped to give a very deep under camber to the wing surface. This I now believe led to all the problems experienced with it so far.

Wind inflation caused the canopy to rapidly climb overhead whereupon the leading edge would curl under reducing the cord by some 50%. The canopy would then rapidly descend almost to the ground before violently re-inflating and soaring aloft only to repeat the process.

Jumping the canopy in that state would provide

more entertainment than I cared for so some changes were made. Lack of wind brought the sandbag back into use for the next test from 500ft. From directly below things looked good, the canopy opened fully, made no effort to close, flew in a gentle turn as stable as one could wish for. What I failed to notice from my viewpoint was explained to me by John Meacock and Ronnie O'Brien, it flew backwards!

More changes were made, back to the sandbag. Again a nice opening and it stayed fully open, it didn't turn or fly backwards. Instead it started to swing backwards and forwards until it was doing the most terrifying oscillation I have ever seen, the sandbag swinging with a loud hiss of air through a full 180 degrees. The sandbag hit the soft earth whilst in full swing making a most impressive furrow. Perhaps if a jumper tried it at different toggle positions the oscillation could have been brought under control?

Further adjustment, the next dummy drop with a fully open canopy, no oscillation, very fast forward flight but with only the front half of the canopy properly inflated, all the rear half fluttering like a flag in a strong wind.

After very minor changes another try, another good opening, no fluttering at the back, flying forwards faster and faster, leading edge rolls under reducing the cord by half, then the sides collapse inwards causing the whole thing to drop like a stone. The next moment it is back to full inflation and the whole cycle repeats itself until whilst in the semi-collapsed state the sandbag strikes the earth and bursts.

The trouble with a dummy test is the dummy, it can neither observe nor attempt to rectify the faults that occur. Since I was getting nowhere and suspected the excessive under camber was the root cause of the problem, it would be worth a live test to see if human hands could tame the wild beast.

Yet another static line opening at 5,000ft, this time following John Curtis who hopped and popped to observe and give me some idea of rate of descent. A good opening followed by a few seconds of fairly gentle flight before an ever increasing oscillation set in. Using the toggles did no good at all, the oscillation which was a wild swing back and forth just went on. A most unpleasant lurch to the right and turn to the left came at the end of both backward and forwards swings. That canopy has not been used since pulling the capewells on it.

Slots 3 made its first appearance in October 1981 and has now had more use by more jumpers than Slots 2. The individual parts that make up this canopy are the same size and shape as on its predecessor, but the final assembly is very different.

In order to get maximum lift, minimum drag and therefore more speed, the four main panels were not joined to each other except at their ends where the stabilisers are sewn on. This means that the three rows of six slots on Slots 2 has become three rows of one slot on Slots 3, which could perhaps be called 3 slots! By joining the panels together at the right places, Slots 3 would become Slots 2, or if 15 little cuts were made to Slots 2, it would become Slots 3. It would be necessary to retrim the lines on making such a change to either canopy. The material used for slots 3 was F 111, the lines are of 750lb nylon, all correctly finger trapped, and despite the bulk of the latter, canopy and lines weigh in at 5 pounds 14 ounces, occupying a packed volume of 320 cubic inches.

Slots 4 has been designed but not built, the basic change from Slots 3 is that none of the main lift panels will meet at all, the stabilisers instead of being partly an extension to the lift panels prior to curving downwards, will be at right angles to the lift panels. This will do away with the non lift producing or "washed out" ends of the lift panels. Slightly deeper stabilisers, particularly deeper towards the trailing edge should help to reduce the spanwise distortion of the canopy by exerting more outwards force. "Stabilisers" is probably the wrong term to use on these canopies which do not need them, "spreaders" might be more descriptive.

My thanks are due to John Meacock of the Peterborough Parachute Centre for his very great tolerance and understanding towards me and my test programme during the past two and a half years. Although he hasn't got round to wanting to jump my canopies, he no longer writes "malfunction" on the manifest against my name. Thanks are also due to the rest of the staff at Peterborough, and to those other jumpers who have shared the experience of something "different, very different".

Finally, thanks are due to the B.P.A. Council, Safety and Training and Finance committees, particularly to Jim Crocker who sat on all three and started the ball rolling, to provide some financial aid to a costly but enjoyable project.

DICK GAYS
(A Patent is pending on the parachutes referred to as 'Slots'.)

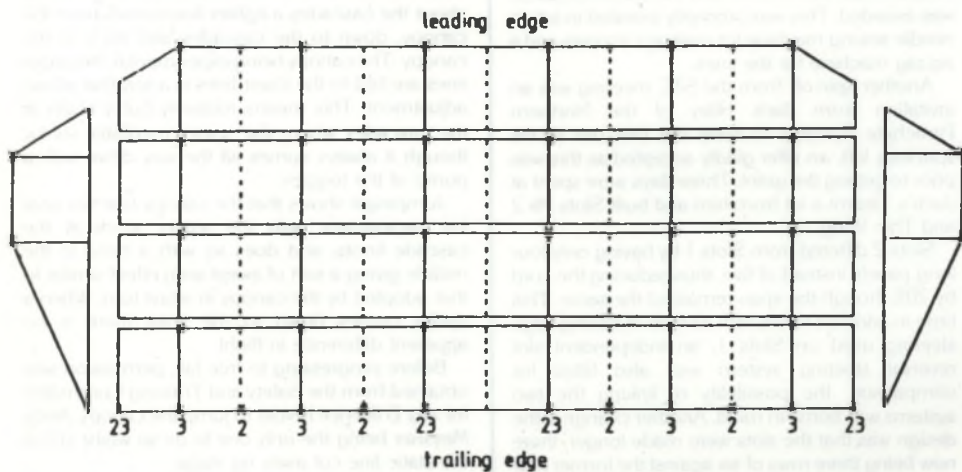


Fig. 1 shows the four main panels and two stabilizers used to make Slots 2 and 3, though the assembly of each differs. All the solid lines are where reinforcing tape is sewn to the panels on both Slots 2 and 3, the broken lines being where extra reinforcing tape is sewn to the panels of Slots 2 only. It is where these extra reinforcing tapes end at the edge that adjoining panels of Slots only, are sewn together. The stabilizers are sewn continuously along their longest edge to all four main panels on both Slots 2 and 3, in the case of Slots 3, this is the only place where the main panels are directly joined to one another.

The unmarked 'x' are where the suspension lines are attached to the canopy on Slots 2 and 3. The 'x's marked '2', '3' or '23' are where the steering lines are attached to the trailing edge of Slots 2, 3 or 2 and 3 respectively.

Fig. 2 shows a typical cross section through Slots 2 at any point where the adjoining main panels meet (shown by the broken lines in Fig. 1).

Fig. 3 shows a typical cross-section through both Slots 2 and 3 at any of the points where the suspension lines are attached. The short lines marked 'S.R.L.' are the slot restraining lines. This cross-section would change to that of Fig. 2 on Slots 2 on each of the five rows of slots, but would be continuous between the outer sets of suspension lines on Slots 3, only changing where the panels come together at the stabilizers.

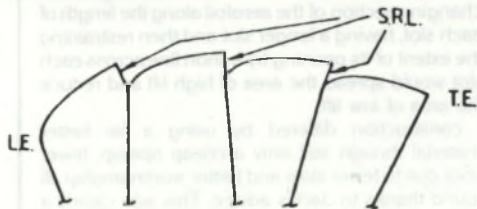
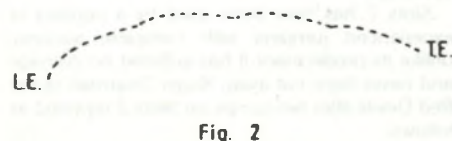


Fig. 3

Why a Diaper?

There are plenty of theories and rumours flitting along the skydiving grapevine concerning reserve diapers. Why bother to use one? Do reserves open faster or slower, harder or softer, better or worse etc. etc? We decided it was about time we had some facts from the experts, so we contacted some of the US manufacturers and picked their brains on the subject.

We decided it was about time we had some facts from the experts, so we contacted some of the US manufacturers and picked their brains on the subject.

But before we go into diapers, perhaps we should take a look at why and how round parachutes malfunction.

Inversions

The predominant type of abnormal parachute inflation is, and probably always has been, canopy inversion; the well-known 'Mae West'. Although it seems to have taken years to identify the method of formation, an inversion is rather simple in concept and, once understood, can explain many types of local parachute damage that at times may seem to mysteriously appear.

An inversion forms when a portion of the canopy skirt area does not expand outwardly during the first stages of deployment and inflation, but rather moves or is blown inwardly, across the normal inlet, and then passes between other opposite or neighbouring suspension lines (see Figure 1). The wayward fabric is often quickly withdrawn by action of the normally-expanding canopy and the user will not be aware of any abnormal occurrence (but may later puzzle over the source of a few small burn marks near the skirt). At other times the errant section of canopy 'catches air' and inflates to form a small bubble adjacent to the remainder of the canopy. The fabric forming the bubble is of course inside-out, hence the term 'inversion'.

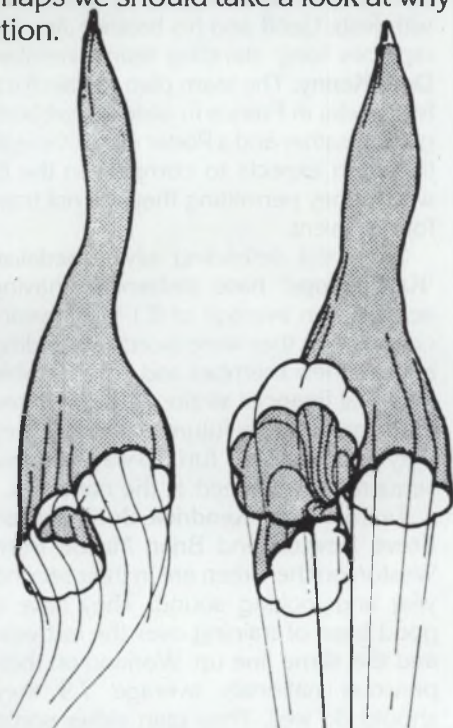
In order to grow and continue to expand, the inverted portion must draw fabric from the normal portion of the canopy. At first, when lines are relatively slack, there may be little resistance to this movement of cloth and the bubble can grow to an appreciable size. But, in the meantime the normal portion may inflate and soon demand return of the fabric so that it can continue towards "full-open". A sort of tug-of-war ensues. The bubble may be forcefully withdrawn, permitting normal development of the canopy, or it may continue to grow and finally draw all of the fabric through and form a normal — but inside-out — canopy shape. More often it ends a stalemate, with both portions inflated, the Mae West configuration.

The chief casualty of this tug-of-war is the canopy's skirt band and adjacent fabric — the no-man's land under which the contested fabric is drawn. The skirt band becomes badly abraded as cloth and radial seams pass beneath and often is forced to expand the size of its arch by drawing one of the constraining (and more elastic) suspension lines over the material. This now-highly-stressed line may fail, further expanding the arch and relieving pressure, or it may remain as part of the dividing line between the two halves — to so called "line-over" condition.

Porosity

The rate of inversions has a direct relationship to the type and porosity of fabric used in the reserve canopy. It seems that the rate is dramatically higher with today's more popular, low porosity materials. This is because:

- 1) The lateral (lifting) forces acting normal to the relative wind increases as porosity decreases, therefore the tendency for a portion of fabric to move laterally is increased, and
- 2) The low porosity of the errant fabric may more effectively block the normal inlet area and delay or prohibit the corrective influence of the normally inflating portions.



Sketch of inversion in early stages.

Orderly

The probability of experiencing an inversion is strongly dependant upon the method employed for canopy deployment! This is where the Diaper comes in! A Diaper does basically the same job as a sleeve or bag system, in fact it could almost be considered as the mouth lock portion of a bag or sleeve.

The Diaper is an effective method of preventing inversions in canopy first deployments by ensuring an orderly, staged sequence of events.

It controls the evenness of the canopy skirt, and prevents any inflation of the canopy until all suspension lines are taut and even, and therefore reduces the chance of a slack area of skirt from inflating out of turn, as is allowed to happen with unstaged deployment.

Faster or Slower

The next obvious question is whether diapered openings are faster or slower than non diapered. It was originally thought that diapered openings were, on average a fraction of a second slower, but more orderly and reliable. But a paper released in 1978/79 by GQ Security and the AIAA (American Institute of Aeronautics and Astronautics) contained a chart which showed that diapered openings were on average faster than non diapered due to this orderliness, and this view is now widely held.

Sub Terminal

Most authorities on the subject would also agree that a diaper is preferable for very slow sub terminal openings, such as after a cutaway. The inversion problem as described above is still present and even at low speeds a substantial rebound of the Apex can occur without controlled deployment.

Hand Deploy

As far as 'Hand deploying' a reserve, as in 'Canopy Transfer' (no cut-a-way) or CRW entanglement is concerned, it is generally thought that no diaper is probably preferable, so that air is deliberately allowed to enter the canopy early in an attempt to take it away from the jumper. However, if at all possible, it is a much better proposition to cut-a-way and use a diapered reserve.

The answer to this is an extra non diapered reserve (Tertiary) for unavoidable hand deploying, with a regular diapered reserve for normal use.

Extended Life

The use of a diaper definitely extends the life of a canopy, because by avoiding inversions, you also avoid line burns etc. Also staged deployment reduces opening shock. It is generally felt that without the use of diapers, we wouldn't be using today's lightweight fabrics for the construction of reserves.

Most manufacturers agree that it is advisable to fit a diaper to any old surplus reserves intended for sport use. They do, however, recommend that the diaper manufacturer is consulted first. This brings me on to the final question! WHICH DIAPER? There are currently three main types available today.

- 1) The two bite or $\frac{1}{2}$ diaper, (Pioneer) Figure 2.
- 2) Para-Innovator's chock type with perpendicular line stows (Featherlite, National Phantom and GQ, 350 safety chute), Figure 3.
- 3) Hanbury chock type with vertical line stows (GQ Sack and X210 ram air reserve).

The 'two bite' or $\frac{1}{2}$ diaper wraps around the periphery of the canopy, and only one group of lines is employed to lock the diaper closed. The slack in the other line group plus the remaining line length is stowed in the pack tray. This single line group method is designed to prevent the canopy from being snatched prematurely from the diaper at high speed. One of its disadvantages is that the lines do not heave the jumpers back with the canopy, but deploy from the pack tray.

Some manufacturers believe that there is a chance that this type will open sometimes before line stretch due to the whiplash effect of the lines unstowing from the rubber bonds in the tray.

The Para Innovators chock type, on the market since 1971/72, uses both line groups in two stows to lock it, and all the remaining lines are stowed on the diaper left to right. On this type the canopy skirt is doubled back, producing more bulk in the diaper. Some experts say that it is possible for the canopy to be snatched from this diaper under certain high speed tests.

The 'Hanbury' type is very similar to the Para-Innovators, but with three locking stows, and the remaining lines stowed vertically or parallel to the radial seam. This design is similar to the strong Lopo Lite diaper.

R & D

So to sum up. It is obvious that the diaper has proved its worth and is here to stay. The choice is still largely subject to manufacturers informed opinions. But a lot of research and development has been carried out on the subject and I will finish on a quote from **Jim Mowrey** of Pioneer Inc, manufacturers of amongst other things, the Recovery Chutes for the Space Shuttle programme. "DO NOT alter reserves without consulting the manufacturer first. Believe it or not, we do have good reasons for building parachutes the way we do. A lot of things show up in TSO testing that may not readily meet the layman's eye."

I would like to thank the following people for helping me to compile this article. **John Sherman - The Jump Shack, Jim Mowrey and Jim Reuter - Pioneer Parachute Co.**

ROB COLPUS

Run up to the Nationals 83

SARAH BREARLEY

1983 looks like being a good year for National Championships. The Classic and RW events will be held over two weeks at Peterborough Parachute Centre (PPC) (Classics 25 June - 1 July, RW 2 - 10th July). The CRW will be held separately due to landing problems at Sibson and will be at Netheravon from 2nd - 4th September.

At Sibson the meet will be run for the BPA by the PPC and judging by previous speed and trac meets run by the centre it should be a well organised competition.

There seems to be a special emphasis on making it an enjoyable meet for all jumpers not just those who aim to win medals; every entrant will be presented with a commemorative medal and a new 8-way speed star event has been introduced to encourage jumpers who are not normally interested in the nationals.

Both the country's Pilatus Porters will be available for the meet with a C182 for the classics. The porters should greatly improve the chances of finishing a full meet due to their incredible climb and descent rate, for those who have not jumped the aircraft before the Nationals will be a great opportunity to see the aircraft in its element.

The competition is open to all BPA members and you don't need to have thousands of jumps either. To compete for the Novice Accuracy title you must be Cat. 5, 6 or 7 and have B licence and less than 350 jumps. 2 years ago someone made a name for himself jumping a basic round canopy, a trend which caught on. For those who have just started RW the 4-way Novice event is an excellent opportunity to get some encouragement and often pick up helpful tips from the top teams.

It is an RW 'on' year, this year to coincide with the world meet, held in South Africa in December. Unfortunately because our military and all public employee members would be excluded from representing us and because of possible adverse repercussions, the BPA will not be sending a team. However, the winning teams will represent the country at an International Competition held in Canada in August, which promises to be of a higher competitive standard.

The top 8 competitors in the Classics will also represent us at a competition in Graz in Austria.

As usual the teams who hope to win plus a few others are already planning

and training. The defending champions 'Symbiosis' will compete with a new line up, **Rob Colpus, Geoff Sanders** and **Tony Vragello** will be joined by **Fred Kerry** who has competed with the 8-way team before and last year on the 4-way with Rob, Geoff and his brother Jim. He replaces long standing team member **Dave Kenny**. The team plan to train for a few weeks in France in order to get both good weather and a Porter exit. Although the team expects to compete in the 8-way money permitting they will not train for the event.

Sadly the defending silver medalists 'Kalidoscope' have disbanded, having achieved an average of 8.1 in last years competition they were faced with finding another new member and considerable personal financial strain; we hope to see them back in the future. Although they may do some fun 8-way teams, sequential and speed at the nationals.

Team 'I' **Colin Kendrick, John Parker, Steve Newton** and **Brian Mason** from Weston on the Green are in their second year and looking sound. They have a good base of training over the last year and the same line up. Working on their previous nationals average 7.9 they should do well. They plan either some weeks at Sibson or in France depending on work commitments.

Also from Weston and possibly training in France as well, on weekends, is, as yet, an unnamed team **Mike Flemming, Steve Scot, Terry Woodgate** and **Graham Henderson**. This is their first year together although they obviously hope to do well. They formed the team with the purpose of getting better quality jumps and giving their jumping an aim.

The RAF themselves hope to enter a team composed of Weston staff possibly **Bob Souter, Pete Reynolds, Jo McCready** and **Barry Henderson**, but as usual with the military time off is the problem.

Also from Weston is an 8-way, they plan to train on weekends, some at Weston and some at Sibson for the Porter exit. They are **Rod Boswell, Con Homer, Dave Williams, Wendy Millar, Pete Drysek, Dave Stevens, Graham Hayward** and **Bob Hiatt**. As yet they've only done a few jumps together but seem quite happy with their performance.

Training at Sibson will be a new team 'Refraction' - **Fred Ryland, Chris and Derek Thomas** and **Richard Niel**. Three of them have been jumping together for some time but have only decided to

compete since Fred joined them. They have done quite a lot of weekends together and plan a lot more, but can not get away to train, they report they are now doing anything between 8-12 points in time so they should be a team to watch. The 4 of them also hope to join with another group to do both the 8-way events.

Also at Sibson is the basis of another potentially good team, consisting of **Dave Morris, Garry Napp** and **Tim Moore** they are still searching for a suitable fourth member.

At Netheravon the Army 8-way are training and although they are still selecting members are happy with their progress although they've had some problems with the Porter exit. The line up will be from **Mike Smith, Stevie Taylor, Les Carol, Tim Pape, Brian Dyas, Proft Hallam, Keith Scully, Paul Applegate, John Rix** and **Plug Grieine**. They will do mostly weekends but also 2 weeks in Germany at Easter.

Another new team at Netheravon is 'Apogee' consisting of **Howard Robson, Clive Flynn, Neil Matthews** and **Charlie Hoare**. They are originally Thruxton jumpers and formed the team to get better quality dives which they certainly seem to be doing, they report doing anything from 2.8 points from 9,000ft but have been timed on 7. Not bad, for a team with a 400 jump each average.

The Scottish team 'Summertime Blues' - **Hypo, Bountie, Billy Glasgow** and **Kenny Sinclair**, who won the British Novice 4-way last year will be back to compete in the senior event but can't get practice, although they have gained more experience at the Australian Nationals in the meantime.

Besides these teams there are several individuals floating around who will no doubt turn up on the day. It's rumoured that there may be teams from Ipswich lead by **Dave Hughes** and **Halfpenny Green**, and the 'Flying Woopsies' from Langar who aim on entering the 8-way speed event.....they have a small problem though they are all still Cat. 9, so keep jumping and lets see you there.

Entry forms, dive sheets and all relevant information is available from the BPA Office, but briefly entry fees will be £17.50 and include Buffet and Disco. Bunkhouse accommodation is available at £1.00 per night and caravans and tents are welcome. Full catering facilities will be available as will showers etc. The centre also has a comfortable bar on the DZ.

NATIONALS DOWN UNDER

At least it will be sunny we kept telling ourselves as we set off to travel halfway round the world for a fourway competition. Well it was sunny, sometimes too sunny but it was definitely worth it for the Australian National Championships held over Christmas and New Year at Corowa, New South Wales were great fun from start to finish. The flight out took 36 hours and by the time we arrived in Sidney we hardly knew what day it was let alone the time, so the first thing was to find the nearest jumpers.

In our case this turned out to be **Gary (Shorty) Myres** of Parachutists Australia who didn't seem in the least surprised when three Scots arrived in his office wanting to know where the Nationals were. The fact that the entire staff of 'PA' were in the middle of their Christmas party may have had something to do with it, and several cases of 'Fosters' later we were starting to think that Australia might not be too bad.

The overnight train to Albury was just a blur followed by the post bus to Corowa, it stops at every mail box and we were there, or at least in the town. The last five miles were to prove the hardest. We stopped the first likely looking DZ van which turned out to belong to **Geoff Little** of 'CROOZE', he was quite happy to rus us to the airfield but first we have to have a drink. This took slightly more than five minutes and when we did get to the DZ it was getting dark and we were all having problems with jet lag, or possibly the Australian beer!

You don't sleep in long at Corowa, by 7a.m. the temperature was already starting to soar so it was up to see what the Aussie Nationals were like. We weren't disappointed, six 182's for the fourway, an Islander and a Navahoe for the eights with two DC3's, two helicopters a 206 and a balloon for fun jumping. Now fully recovered we were all itching to jump, all we needed was our fourth team member, ex-patriot Scot **Pat McLenan** now living in Melbourne, but she wouldn't arrive for another couple of days. As luck would have it the first person we approached to jump was **Brian Scofield**, an Aussie from Queensland. He was happy to jump with us and even turned out to have his own 182 piloted by his wife Alison.

In Australia the four way is held from 182's so all the locals always try to launch the first point. After trying a ropey compressed accordion off the step we decided to stick to a tee launch as we were used to it. This was to turn out to be little disadvantage as several teams were busted on the first point for failing to display the formation to the judges. Formations which come off steep did not show on the video at first and had to be held until they flattened out a bit. With three days till the start of the RW the DZ was really starting to fill up with teams getting in some last minute practice and a host of people just down for the fun jumping.

By registration on Boxing day there were thirty four way teams seven eight way teams and enough fun jumpers to fill two DC3's, it felt like every jumper in Australia was in Corowa.

The first day of the competition was straight into eight way and after only one round it was clear to everyone who would win. **Prometheus** had set the standard and none of the other teams could even

get close. They had received a dispensation to jump with their video man, **Paddy McGue** as part of an experiment in aerial judging so we were all able to watch their jumps as soon as they landed. This seemed to have a disheartening effect on the other teams as they watched **Prometheus** performing world class eight way. As the end of the competition it was **Kemotherapy** in third with 19 points, **Pizzas** second on 33 and **Prometheus** first with a grand total of 84 points over ten rounds. Unfortunately due to the current political difficulties with the World Meet it is most unlikely that they will be able to attend, however they did hope to participate in the World Cup in Canada.

The four way proved to be a far more open competition with several teams having trained seriously for the event. **Prometheus** had split to form **Still Waters** and **Run Deep** and with **Test Pateren**, **Air Conditioned** and **Cancer** made up the teams in the running for a place. At the halfway stage **Still Waters** had started to pull away from their team-mates in **Run Deep** and only **Cancer** looked like being able to stop a 'Grand Slam', but a bust in round 5 had left them with a lot to do. It was to prove too much, **Still Waters** and **Run Deep** continued to score steadily so in the end **Cancer** had to settle for third. **Prometheus** had certainly left their mark on the RW.

The CRW had only a four way competition as there were no entries for eight way or sequential. The event was won by **Geoff Little's** new team **Snooze** which bears more than a passing resemblance to **Crooze**, the team which came second in the World Meet last summer.

While all this was going on there was the fun jumping, lots of it. It had actually started the weekend before with the **Bangalee** nudist accuracy competition just down the road in the local nudist camp. Over the last few years this has become a famous event and even received national TV coverage. Back at Corowa there were two DC3's and a six place helicopter going all day and often into the night to keep the fun jumpers satisfied, and although the standard might not have been the best in the world, everyone was having fun. There was a 24-way launch attempt from the DC3 cargo door followed by a 24-way funnel. After a great amount of organising by **Alison Quick** there was a successful 36-way, an Australian record, she also arranged several good 16-way sequential dives. The helicopter, a **Hughes 8000**, went almost non stop. At A\$15 for 8500ft and with the pilots hovering for exit, people were queuing up for the buzz of falling off the skid. On the CRW side there were several big stacks, the best a night 12 and a 22 attempt which didn't come off. The organisers even threw in a night accuracy competition just in case you got bored.

Was it worth it? Well I think so, although its a national championship, the Australians don't seem to have let this take the fun out of the competition like some countries. It cost me £650 for a return flight, the jumps were A\$15 to 12500ft in the DC3 and DZ fees A\$2 a day for camping, showers and entertainment etc. so its not too bad.

Anyone who does make the trip will be sure of a warm welcome, good jumping and lots of Australian beer.

8 way	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total
	Set 7		Set 1		Set 14		Set 4		Set 5		
Prometheus	11	7	11	6	12	6	10	7	7	7	84
Pizzas	6	2	6	4	4	2	3	4	1	1	33
Kemotherapy	3	2	5	3	4	2	WD				19
4 Way											
Still Waters	8	10	9	12	7	10	7	4	8	10	85
Run Deep	5	4	8	10	6	7	6	8	6	7	67
Cancer	8	6	8	6	1	9	7	8	6	0	59

HYPO
PROMETHEUS - **Chris Bramhill, Dave Flood, Ray Morgan, Graeme Jeffrey.**
BLUEBAKER - **Warren Howard, Col Porter and Rod Cullen.**

STILL WATERS - **Graeme Jeffrey, Chris Bramhill, Ray Morgan and Dave Flood.**

Thanksgiving Boogie- Perris Valley Paracenter

November must qualify as the most miserable month of the British jumping year. The summer with all its venues and competitions is over and for those of us who don't crawl into the wood work for the winter, the prospect of the next four months being wet, windy and cold, hangs over us like a damp fog.

One way to combat those winter blues is to take off and head for the sunshine of California, which is just what 9 of us from Duck End Farm did last November for a whole month's jumping incorporating the Thanksgiving Boogie in our last week.

On our arrival at the Drop Zone we were greeted by **Lu Land**, who runs the office and manifest, and she arranged to have our kit and documents checked. Our next priority was to get accommodation sorted out and for that there are a number of alternatives available. There are facilities for camping, tents, campers etc., which proved to be pretty muddy after some rain we had early in our stay. However, they were in the process of excavating a new camp site which will have hard standing for vans and more solid ground for pitching tents, so it should prove to be a whole lot better in 1983. The Drop Zone bunk house, a dollar a night, consists of rows of bunks with mattresses (sleeping bags required), cooking facilities and a large communal fridge. It's far from being luxurious but it was warm and dry and kept clean and tidy by resident Brit **Vic Logan**. For those with a bit of spare cash, 2 motels are very near by and don't work out too expensive. You do require transport to and from these though.

The experience of our group varied greatly in quantity of jumps from over 1000 for some to less than 200 for others. The objective of the trip, however, was the same for all of us. To improve our relative work as much as possible and to have fun by making as many jumps as we could.

The jump ships operating at Perris are a **Twin Otter** (22 people) and a **Cessna 182** during the week, with a DC3 used at the weekends if the number of jumpers proved sufficient. The minimum load for the Otter is 14 people to 10,000ft or 18 up to 12,000ft, often higher as we very soon found out, as the first lift we organised was climbing its way up to 13,500ft. The first few jumps we made tended to be amongst ourselves but on the second day, **Spider**, one of the resident instructors, got us involved in an International 16 Way which set the general trend for the rest of our stay. Getting loads organised with other people on the Drop Zone was no problem at all with everyone there proving to be extremely willing and friendly. In November, although the weather is still fairly reliable, the Drop Zone tends to be a bit quiet during the week. Sometimes we had long intervals between jumps because there were only just enough people on the ground to make up one Otter load. Because of this slack period, **Don Rumble**, the DZ manager, decided to close down on Mondays in order that they could work on the aircraft and get it ready for the seminar week. On these days we took the time out to go sightseeing and some of the group went skiing as the season had just started and the slopes were only a couple of hours away in the car.

On one of our first jumps, the first and only piece of bad luck hit the group. **Steve Bartholomew**, on his third visit to Perris, ended up on his reserve and an unfortunate landing on the rock-hard and uneven Perris turf put him in hospital for a week for an operation to screw his ankle back together again. He opted to stay on with us for the rest of the month though, and somehow managed to stay remarkably cheerful throughout his ground-bound stay.

During our second week some of us decided to enroll with the **New Dimensions Flite School** for some instruction in RW techniques. This is an independent operation at Perris run by **Gerry Swovellin** and **Bob Buehrer**, especially set up to teach people progressive and advanced RW. The school has a number of well qualified instructors, including **Gerry's** brother **Pat**, who jump with people

either in groups or on a one-to-one basis, depending on the individual's requirements. Most jumps are backed up by air to air video and, although the prices are rather high, \$8 for group work and \$21 for one-to-one, they really are beneficial. Each jump with video, in my opinion, is worth 6 without. The facility to watch each dive over and over again afterwards and to analyse each point separately is invaluable and well worth the extra money. Our improvement on these first jumps was substantial enough to give us all the confidence to enroll with the Flite School for their week long seminar during the Thanksgiving 'Turkey Boogie'.

Whilst we'd been jumping with the school we had watched the progress of a number of AFF students with great interest. I'm sure, like many other jumpers in the UK, some of us went out there with fairly sceptical views on this training technique. However, it soon became clear to us that the individuals under instruction with the Flight School were getting the most comprehensive and well thought out tuition. The amount of time dedicated to the student by the instructors was 100%, with constant attention to the highest safety standards. I was most impressed with the students I saw trained under this method and do think that in the right environment this way of teaching free-fall will hold a firm place in our sport in the future. Having said that, I do believe that only certain centres in the world will ever be able to teach this method successfully with the weather playing a major part in that success. The jumper must be able to go to bed at night knowing that tomorrow he will go up and make his next 3 jumps. Not knowing from one week to the next when he will jump again would

not be conducive, in my opinion, to successful training.

A continual stream of people were arriving during the week preceding the seminar and when things kicked off on the Saturday there were several hundred jumpers present from all over the US and abroad. Our British contingent had been swollen in number by the arrival of **Dave Turner** and friends from the Midlands, and **Eric** and **Pam Finney** from Brid.

The fee for the week's seminar was \$115 per person, which covered all instruction, lectures every evening, ground to air and air to air video coverage. In addition to this all the jumps were loaded by a further \$2 each, taking the price for 12,500ft up from \$12 to \$14 a time. Again, this may seem rather expensive but the benefits are enormous. There were about 45 jumpers taking part in the training camp and 31 instructors sharing the work throughout the week. There was a total of 667 individual jumps made, with 72 dives being covered by air to air video and another 120 on ground to air. There were 4 air to air video men, **Wayne Stevens**, **Bob Buehrer**, **Dick Pedy** and **Norm Kent**, who nearly jumped their legs off to get as much coverage as possible. Seeing Wayne Stevens chasing the taxiing DC3 down the runway, still trying to get all his clobber on at the same time and making it, was a fine demonstration of their determination to cover as many dives as possible, and the quality of filming was excellent too.

We collected two certificates at the prize giving. One, Best Student Award, was presented to **Steve Etienne**, and the other, the highly coveted Perris

Good Vibes Award, was presented to the whole Duck End Group. Needless to say we were really chuffed with both of these.

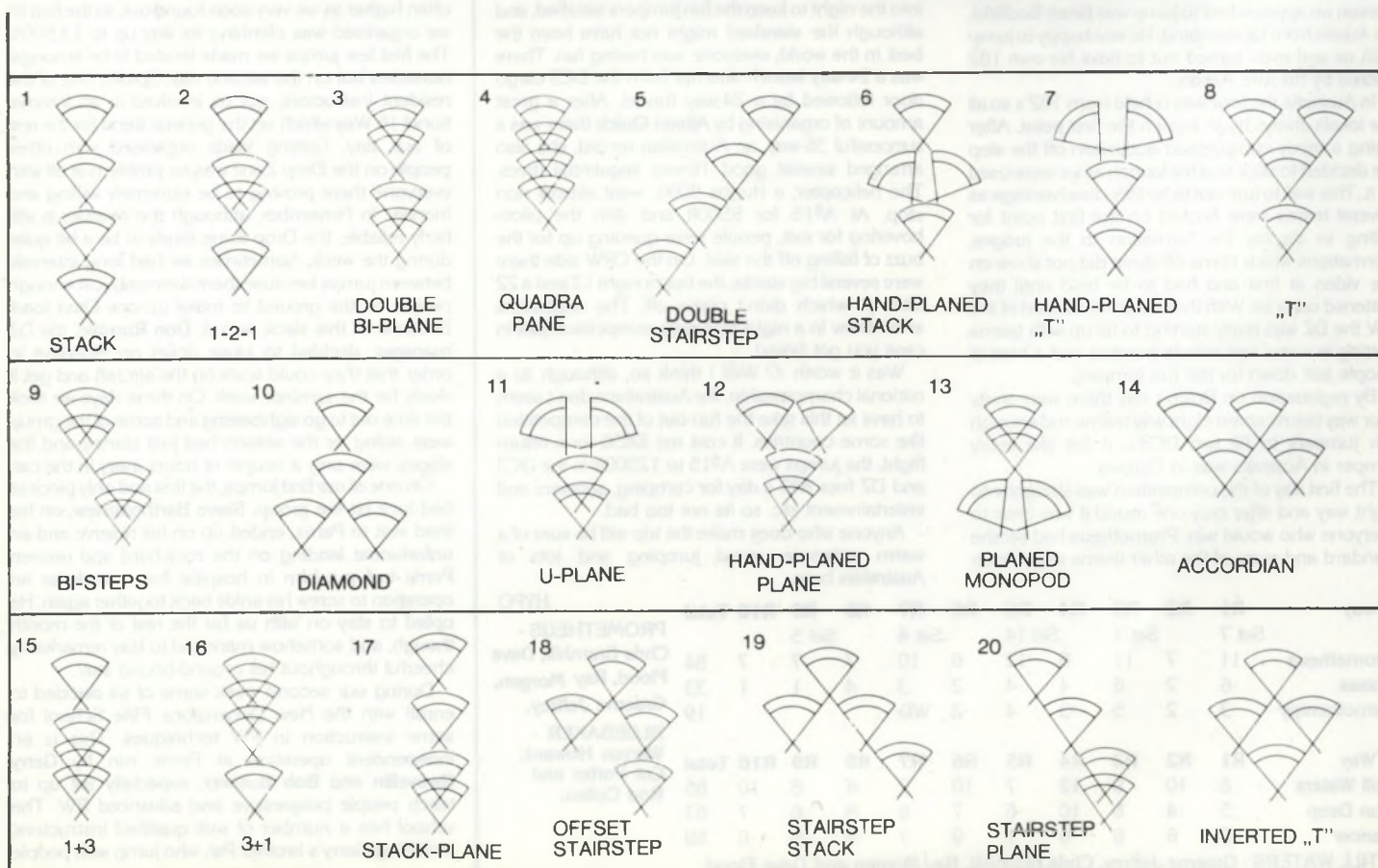
All in all, at the end of our stay, most of the people who had taken part in the seminar felt that it had been money very well spent. There were one or two hiccups on the first day of the training camp for some, but these were very soon sorted out and everybody got down to some good constructive jumping. Everybody was given a personal video tape and, as each dive was reviewed, we all got the chance to copy our jumps to make up a very nice souvenir of our visit to bring home.

Another attraction of the Drop Zone is the hot air balloon club about half a mile up the road. The balloons take off at dawn every morning and there is always the opportunity for people to make a jump from one, if they so wish. You have to pay for this privilege of course, and rather heavily at that, but oh boy, what a buzz! It will certainly go down in my log book as one of my most memorable jumps and one that I would jump at the chance of repeating whenever I could. The ride up with the view in the early morning sunlight is absolutely beautiful.

When the time came for our departure back to the UK, the wrench was very hard. Coming home to our regular jobs and the freezing cold weather was not easy. Most of us are determined to go back again this year for the same event, if we can afford it, that is, with our ever-sinking pound, and would fully recommend the place to other people if they're looking for good training and a great time.

JANE WATTS


International Random Formations for 4-way Sequential Competition



International Set Sequences for 4-way C.R.W. Competition

1	2	3	4	5
<p>DIAMOND</p> 	<p>DIAMOND</p> 	<p>QUADRA PLANE</p> 	<p>BI-PLANE STAIR-STEP</p> 	<p>STACK</p> 
<p>INTER STAIR-STEP</p> 	<p>INTER 3 + 1</p> 	<p>INTER</p> 	<p>INTER BI-PLANE</p> 	<p>INTER</p> 
<p>DIAMOND</p> 	<p>ACCORDIAN</p> 	<p>QUADRA PLANE</p> 	<p>BI-PLANE STAIRS-STEP</p> 	<p>DIAMOND</p> 
<p>INTER STAIR-STEP</p> 	<p>INTER 3+1</p> 	<p>INTER</p> 	<p>BI-PLANE STAIR STEPS</p> 	<p>FREIER ÜBER GANG</p> 
<p>DIAMOND</p> 	<p>DIAMOND</p> 	<p>BI-PLANE STAIRSTEP</p> 	<p>BI-PLANE INTER BI-PLANES</p> 	<p>STACK</p> 
<p>INTER STAIR-STEP</p> 	<p>INTER 3 + 1</p> 	<p>INTER</p> 	<p>BI-PLANE STAIR-STEP</p> 	<p>INTER</p> 
<p>DIAMOND</p> 	<p>ACCORDIAN</p> 	<p>BI-PLANE STAIRSTEPS</p> 	<p>INTER BI-PLANES ZU</p> 	<p>DIAMOND</p> 
<p>INTER STAIR STEP</p> 	<p>INTER 3+1 ZU 1</p> 	<p>FREIER ÜBER GANG ZU 1</p> 	<p>INTER BI-PLANES ZU</p> 	<p>FREIER ÜBER GANG ZU 1</p> 





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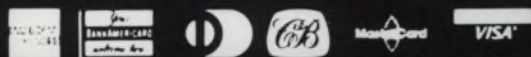
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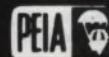
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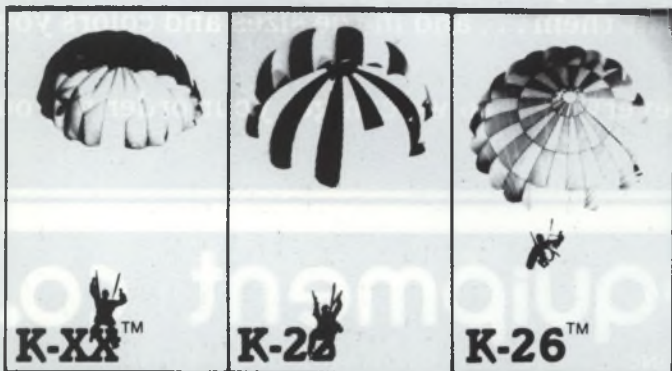
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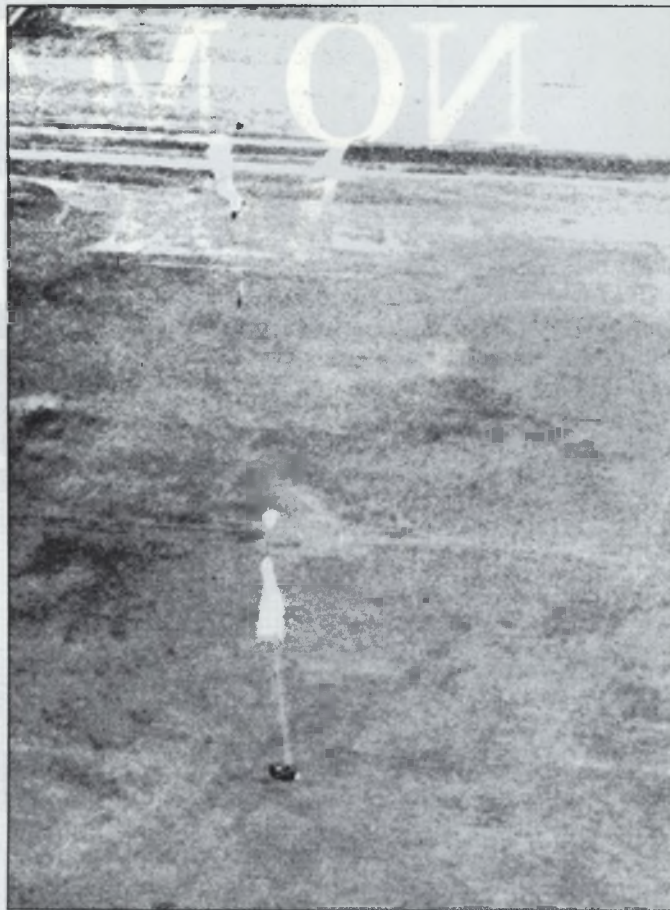
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Breakaway over Calif. Photo © Norm Kent.

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Present:

J. Sharples	Chairman
D. Tylcoat	Lincoln
M. Mortlock	London Parachuting
P. Slattery	E.C.P.C.
L. Thomas	Riggers
D. Parker	Headcorn
T. Knight	Ipswich
B. Bias	Thrupton
J. Laing	Netheravon
K. Yeoman	Red Devils
Y. Nisbett	R.A.O.C.
R. Ellis	L.I.F.F.T.
D. Wilkinson	Montford Bridge
J. Meacock	P.P.C.
R. Souter	R.A.F.S.P.A.
D. Howerski	Paraski
D. Hickling	B.P.S.
P. Cavanagh	B.K.P.C.
J. Lines	M.P.C.
G. Evans	T.P.A. & S.S.S.C.
D. Chadwick	R.G.J.

In Attendance:

J. Hitchen	Joint NCSO
T. Butler	Joint NCSO

Apologies for Absence:

M. Bolton	Cornwall
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Observers:

Some 37 were present.

The Chairman started the meeting by welcoming all the CCI's to the first meeting of 1983 and also welcoming the many observers who had attended.

1. Previous Minutes and Matters arising**Item 3 Incident Reports - resume**

The Chairman stated the question concerning insurance cover regarding items that could accidentally be dropped from the air. This had been checked by the Secretary General with the BPA Insurance Company, and parachutists are in fact covered for this type of accident.

All CCI's

It was proposed by K. Yeoman and seconded by J. Lines that the Minutes of the meeting of 25th November 1982 be accepted as a true record.

Carried Unanimously

2. Approval of Minutes of Riggers Meeting 25th November 1982**Item 4 Exemption - Cpl. Brian Hill**

The Riggers Committee recommend that Cpl. Brian Hill be given an exemption from BSRs 27/2, because of his exceptional experience be permitted to attend an Approved Riggers Course.

The Minutes and the recommendations from the Riggers Meeting of 25th November 1982 were unanimously accepted by the STC.

3. Application for Blind Person to make a S/L Descent

The Chairman asked G. Horan to present his proposal for a Blind Person (Mr. G. Price) to make a S/L descent, which Mr. Horan did at some length, outlining training and safety points from his paper (already circulated), when Mr. Horan had finished the Chairman asked Mr. Price if he would like to add any relevant details, which Mr. Price did stating the reasons he believed he could make a safe parachute descent. The Chairman thanked Mr. Horan and Mr. Price and stated that as the technical details were to be discussed he would like all the observers to leave while this was done.

Much discussion then took place and a letter from Mr. C. Shea-Simonds was circulated and discussed. It was then proposed by G. Horan and seconded by D. Howerski, that Mr. G. Price be permitted to make a S/L Parachute descent.

For	2
Against	16
Abstentions	0

The observers were then invited to return. The Chairman then informed Mr. Price of the decision of the Safety and Training Committee stating that it was STC's opinion that Blindness was incompatible with safe parachuting and that STC believed that it was in Mr. Price's own interests that he should not make a parachute descent. The Chairman then thanked Mr. Price for attending.

4. Student Tandem System

the Chairman stated that two papers had been circulated one by M. Mortlock and one by himself, he stated that comments should be directed to Mr. Mortlock for London Parachuting or John Lines for MPC. John Meacock started by presenting points from his paper (that also had been circulated). A paper by Rob Noble-Nesbitt was also circulated and various points from it were also discussed. After a great deal of discussion on the subject it was proposed by J. Lines and seconded by M. Mortlock that BSRs be altered to permit the use of Approved Tandem Systems for students.

For	2
Against	16
Abstentions	2

5. Instructor Course

Gary Douglas who was to present this item was unfortunately unable to attend the meeting so the item was put back for discussion at the next STC Meeting.

NSCO

6. Incident Reports - resume

Only two incident reports had been sent in to the BPA Office since the last STC. The first of a student who grabbed lines on deployment of his main canopy preventing full deployment and the AAD firing at approx 600ft fully deploying his reserve. The jumper landed on a hanger roof, with no injury.

The second incident of CAT IX jumper with a problem locating her 'pull out' chute. She deployed her reserve which had a line over, the jumper landed on the runway with no injury.

Some discussion on the eligibility to jump 'pull out' pilot chutes took place and it was generally believed that only jumpers of Cat X are permitted to jump pull out pilot chutes.

The Joint National Coach was tasked with checking through STC Minutes to clarify the subject.

N.B. The only proposals on the subject of pilot chutes was included in STC minutes of the 14th March 1979 and they are:

Qualifications to use Hand-Deploy systems

A paper on this subject produced by D. Orton was studied by the meeting. After discussion regarding the desirability of introducing legislation on the matter, it was proposed by T. Hartley and seconded by D. Orton that authorisation for jumpers of Cat. 8 to use hand deploy systems should be a matter of CCI discretion and that such authorisation should be entered in a jumpers log book and signed by the CCI. Carried by 20 votes to 2.

The pull out pilot chutes has been discussed at STC Meetings on 14th November 1978, 7th February 1979 and Instructors Convention 6th January 1979, but no amendments were made to BSRs.

7. A.O.B.

1) An applications from Ashford P.C. requesting exemptions for two jumpers was discussed. The first John Baker to be permitted to carry on jumping a square canopy while he completes his training to Cat. X. John has completed 10 jumps at Ashford on the BPA System, 7 jumps at Z Hills on an AFF Course and 1 Jump at Z

Hills on a square canopy. This request for an exemption was not granted.

NCSO

The second request was for Keith Hughes (Cat. X 76 jumps) to be permitted to continue to jump a rig with a 'pull out' pilot chute which he has been jumping in the states.

N.B. As there are no BSR's to cover the 'pull out pilot' chute, the above exemption is not required.

2) Martin Wilshaw to act as CCI for Montford Bridge

An application for an exemption for Martin Wilshaw to act as CCI for Montford Bridge P.C. was put forward by D. Wilkinson. M. Wilshaw is short of the 2 years required as an Instructor to become an Advanced Instructor, but he intends taking his Advanced rating as soon as possible.

It was proposed by R. Ellis and seconded by D. Parker that M. Wilshaw be permitted to act as CCI for Montford Bridge P.C.

For	16
Against	0
Abstentions	2

3) Extension of PI Rating - Chris Clements

A letter had been received from Chris Clements requesting a 6 month extension to her PI rating as she has been unable to attend an Instructors Exam Course. This was granted by STC.

N.B. CCI's please note, if you have a PI who needs an extension please apply in writing to STC.

All CCI's

4) M. Winwood - Co-opted onto STC

An application from M. Winwood had been received requesting co-opted Membership to STC with voting rights. M. Winwood an Advanced Instructor/Examiner who has been an Instructor for over thirteen years explained his reasons for making this request.

It was proposed by D. Hickling and seconded by D. Howerski that M. Winwood be co-opted onto STC.

Carried Unanimously

5) Talking Hat - Bob Souter

Bob souter from RAFSPA outlined his proposals that when a parachutist becomes eligible to jump a Ram Air canopy he should be permitted to wear a Protec Helmet in conjunction with a Ground to Air Radio. After some discussion J. Laing proposed and Yorkie Nisbett seconded that BSRs be amended as follows:-

Section 8 (Equipment) 9 (b)

A hard protective helmet without a peak approved by the British Standard Institute or equivalent foreign organisation. FAI 'D' Certificate holders may only use the following types instead.

- 1) The French 'ribbed' leather helmet.
- 2) The Cebe Ski Helmet.
- 3) The Cooper SK600 Hockey Helmet.
- 4) The 'Protec' Helmet.

FAI 'D' Certificate holders may only use other types of helmet if cleared to do so by STC.

The Protec Helmet may also be used by jumpers. The Protec Helmet may also be used by jumpers on Ram Air familiarization jumps in conjunction with ground to air radios.

Carried Unanimously

6) Foreign Instructors - Reciprocal arrangements

Dave Tylcoat requested information on whether the BPA had any reciprocal arrangements with Zimbabwe concerning instructors. It was stated that we do not, and a foreign Parachute Instructor should attend a PI Course for assessment.

7) PI Course - Hong Kong

A brief report was given by Bob Card concerning a PI/Exam Course run by Mac McQueen

and Tim Andrewes in Hong Kong. He stated that at the end of the course the three instructors passed satisfactorily, but as they were not assessed in despatching above 10 sec delay students, it was recommended that they be permitted to instruct students up to this standard in Hong Kong only and that they are re-assessed when they return to Great Britain. Mrs. Andrewes also attended a PI Course which she passed and it is recommended she be given PI Status. (Report to follow). Proposed by J. Laing and seconded by K. Yeoman that these proposals be excepted.

	T. Andrewes
	NSCO
For	16
Against	0
Abstentions	0

B) A request by John Hitchen that Pete Reynolds from RAFSPA be permitted to be examined at Weston on the Green as he is unable to attend the next Instructor Examination Course. This was granted.

The Chairman reminded CCLs that all the Annual returns from Clubs had not been received, and he requested those who have not sent in theirs to the BPA Offices should do so.

The Chairman informed the meeting that anyone interested in Training Students in Northern Ireland to contact Dave Penny (Wild Geese School of Adventure Training) number available from BPA Office.

P. Cavanagh requested that 'Mr Bill' jumps be put on the agenda for the next STC Meeting and it was left to him to put a proposal in writing.

The date of the next meeting is 3rd March, 1983. Venue The Post House, Leicester. Time 19.00 hours.

N.B. Please note following STC Meeting is now Wednesday 20th April, 1983.

21st January 1983
Tony Butler, Joint National Coach & Safety Officer

The Following Changes have been made to BSRs Part 1, Section 8 (Equipment) 1 (b)

The reserve parachute will be mounted integral with the main harness. Parachutists that have not completed dive exit and backloops must use front mounted top pull reserves; they may use side pull reserves only if the use of an Automatic Opening Device necessitates it.

Part 1, Section 8 (Equipment) 1 (d)

Parachutists that have completed dive exit and backloops may use single point release systems approved by STC with the permission of the CCL in writing.

Part 1, Section 10 (Training) 14 (a)

Category IX Parachutists (and above) only are permitted to jump ram air parachutes, as laid down in BSR's Part 2, Appendix F. On completion of a minimum of 5 familiarisation ram air jumps, a further 20 ram air jumps must be made before such canopy may be used for display jumping.

Part 1, Section 10 (Training) 14 (c)

No parachutist will be permitted to use a 'High Performance' round canopy until he/she has passed out as a Category VII parachutist and has completed dive exit and backloops.

Part 1, Section 14 (Parachuting Limitations) 5 (d)

Display cutaways will only be performed by 'D' licence holders and when a cutaway rig designed for the purpose is being used. Students passed out as Category VII and having completed dive exit and backloops can perform a cutaway on a proper cutaway rig under simulated emergency conditions but only after the approval of the CCL has been obtained and the student has been thoroughly drilled in the cutaway procedure.

Part 3, Section 10 (Training) 66

No parachutist will be permitted to use a 'Paracommander' or similar high performance canopy until he/she has passed out as a Category 7 parachutist and has completed dive exit and backloops.

1. Introduction

The excellent facilities of the Centre were once more at the disposal of the BPA for a week. (The Course was not run over two weeks because of the low number of candidates on the Examination phase of the Course). Accommodation was free and meals were provided at £2.42 per head per day. The Centre's Pilatus Turbo Porter was used for 30 lifts including 8 lifts of night jumps in which Candidates and Examiners broke a couple of night RW records.

There were 19 candidates for the Potential Instructors Course, with one observer, 4 for the Exam phase and 8 for upgrading to Advanced Instructor.

2. The Advanced Course

The eight candidates attending for upgrading to Advanced Instructor were:

Gerry O'Hara	JSPC Netheravon
Pete Lambson	JSPC Netheravon
John Home	JSPC Netheravon
Pete Carroll	Red Devils
Brian Dyas	JSPC Netheravon
Roy Harrison	Burscough
Gary Lawry	RN & RMSPA
Chris Francis	JSPC Netheravon

All eight candidates completed the syllabus, and gave good assistance in coaching and assessing the Potential Instructors Course. Gerry O'Hara and John Home's specialist papers were on 'Intentional Water Descents'. Pete Lambson - Water Demo, Pete Carroll - Sequential RW Training, Brian Dyas - Time for a Basic RW Coach? Roy Harrison - Mr Bill Jumps, Gary Lawry - CRW and Chris Francis Halo-v-AFF. Advanced candidates also gave lectures from the PI Course Syllabus and were assessed on their own parachuting ability.

Gerry O'Hara, Pete Lambson, John Home, Brian Dyas, Gary Lawry and Chris Francis were successful and were awarded 'Advanced Instructor' status. Roy Harrison and Pete Carroll failed to reach the required standard and were advised to re-apply.

The successful candidates were:

Steve Beasant	Thruyton
Dave Ruffell	British Skysports
Bob Sturtivant	JSPC (N)
Barry Henderson	RAFSPA
Tony Johnson	RAFSPA
Derek Grieve	Royal Artillery
Les Carroll	Royal Artillery
Dave Hone	JSPC (N)
Ivor Toms	Cornwall
Frank Mallabone	East Coast
Alex Jackson	Royal Green Jackets
Pete Roberts	JSPC (N)
Pete Barlow	REME
Sandy Inglis	Paraclan 2
Bob Walters	Army
Adrian Thornton	RN & RMSPA
David Ward	Peterborough
Ray Menzies	Peterborough

Dave Laing was advised to re-apply in 3 months. Results and individual reports have been sent to their CCLs.

4. Examination Course

This Course was held the same week as the PI Course owing to the fact that only four candidates applied. All candidates were assessed on lectures and briefings 11 to 17 in the Instructors Manual, their briefing of students and flight line checks. They were checked on their S/L despatching and their own personal parachuting, they were also given a written examination at the beginning of the week.

All four candidates were successful and have been awarded 'Approved Instructor' status, the successful candidates were:

Toby Drew	JSPC (N)
Charlie O'Loan	Golden Lions
Keith Skelley	Royal Green Jackets
Paul Austin	JSPC (N)

5. Conclusions

The candidates on this course came, in general, better prepared than of late. The PI Course candidates worked long hours but got good value from the Course. The Advanced candidates on the whole came with good specialist papers, but tended not to be as knowledgeable on BSR's as they should be. The four candidates on the Exam Course reached a good average standard.

6. Recommendations

1. That all candidates wishing to attend courses for PI Approved or Advanced ratings send written recommendations from their CCLs at least one month before the Course.
2. That Roy Harrison be given an exemption to act as CCL until he can attend a Course for upgrading to Advanced Instructor, as soon as he possibly can.

Tony Butler, Joint National Coach & Safety Officer

BRITISH PARACHUTE ASSOCIATION SAFETY AND TRAINING COMMITTEE 1900 HOURS THURSDAY 3rd MARCH 1983 THE POST HOUSE, LEICESTER

Present:

J. Sharples	Chairman
D. Parker	Headcorn
L. Thomas	Riggers
P. Slatery	ECPC
J. Diamond	MFFC
B. Bias	Thruyton PC
M. Beynon	South Cotswold
L. Melville	RA Para Team
G. Evans	TPA & SSSC
D. Wilkinson	Shrewsbury SC
M. Winwood	Co-opted
R. Ellis	LIFFT
K. Yeoman	Red Devils
A. Collingwood	Ashford
J. Home	Netheravon
D. Hickling	BPS
R. Souter	RAFSPA
J. Meacock	PPC
P. Cavanagh	BKPC
M. Bolton	Cornwall
M. McCarthy	HPC
T. Knight	Ipswich
J. Lines	MPC
M. Mortlock	LPC
G. Douglas	RGJ
A. Oakes	HGSC

In Attendance:

J. Hitchen	JNCSO
T. Butler	JNCSO
J. Laing	Netheravon

Apologies for Absence:

D. Tylcoat, P. Walters, D. Howerski, M. Wilshaw, T. Lewington

Observers:

A. Jackson, N. Law, S. McGoldrick, D. Gays, J. Curtis, J. Wright, J. Ball, D. Woods, K. Mempton, B. Colclough, C. Colclough, M. Collins, V. Slatery, B. Parry, D. Palmer, E. Smith, J. Lennon, P. Beck, D. Richardson, M. Goch, L. George, B. Cassidy, K. McCarthy, R. Burgess, P. Newman, M. Newall, S. Cooper, B. Hill.

The Chairman opened by welcoming all CCLs and Observers to the Meeting, and said that before starting the Meeting proper he had a few announcements to make, the first a Presentation to John Laing in gratitude for all his work and contributions to Sport Parachuting in Great Britain.

The Chairman listed some of Johns' many contributions to the Sport and presented him with a beautifully engraved 'Ships Decanter', (and some liquid to put in it) on behalf of the many clubs and individuals that contributed.

John thanked the Chairman and those present, made a short speech and retired to applause.

The Chairman informed the meeting that Norwich Union are pulling out of Parachuting Aircraft Insurance and he advised those present to check with their insurance brokers as to whether their own aircraft insurance will be renewed when it expires.

The Chairman advised the meeting of a talk on 'Recent Advance in Parachute Technology' at The Royal Aeronautical Society, 4 Hamilton Place, London W1V 0BQ. (Tel: 01-499 3515) on Thursday 10th March 1983 at 18:00, any one is welcome and there is no charge.

The Chairman spoke on the subject of Club Affiliation and Annual Returns, stating that some clubs had still not sent in their Annual Return and advised them that it does affect their BPA affiliation. He said that the BPA has not got records of all Club Affiliations and asked if there was any objections to the Annual Returns being a Club 'Annual Re-affiliation'. No one made any objections to this proposal.

1. Previous Minutes and Matters Arising Item 7 - P.I. Course, Hong Kong

The report for this has now been received and the following three people have been given Approved Instructor Status to operate in Hong Kong only. Messrs Brander, McWilliams and Noble.

Item 8

L. Melville stated that he believed people should not be permitted to be examined away from an actual PI/Exam Course. The Chairman explained that each case would be judged on its merits, and in this case, Pete Reynolds was examined at Weston because the dates of the last Course had been changed and he had been unable to attend at Netheravon.

The Chairman reported that P. Reynolds had been examined this week and had passed and was now an Approved Instructor.

It was proposed by L. Melville and seconded by D. Parker that the Minutes of the meeting of 20th January 1983 be accepted as a true record.

Carried Unanimously

2. Approval of Minutes from Riggers Meeting 20th January 1983

Item 1.5 S/L Bag Specification

The Chairman informed the Meeting of the background to this item. The CAA had only approved the Irvin S/L bag for Cessna 206's. The BPA had agreed to produce a specification, and the Riggers have now done so. This specification will be sent to the CAA at Redhill for approval.

J. Sharples

Item 5 A.O.B.

J. Curtis reminded the meeting that thumb test should be made on 124 Canopies for the years between 1962 and 1964 as some with serial No. A409460 were found to be U/S.

The Minutes and recommendations from the Riggers Meeting of 20th January 1983 were unanimously accepted by the STC.

3. PI/Exam Course 1 - 83

John Hitchen gave a brief resume of the PI/Exam Course which took place at Netheravon from 31st January - 4th February 1983. There were 19 candidates for the Potential Instructors Course, 4 for the Exam phase and 8 for upgrading to Advanced Instructor. 18 candidates on the PI Course were successful, all four on the Exam Course were given Approved Instructor Status and six of the eight on the Advanced phase were given Advanced Instructor status. Because of the large number on the PI and Advanced part of the Course there were some problems, but these were made easier because of the excellent facilities at Netheravon.

The recommendations from the examiners

stated that R. Harrison be given an exemption to act as CCI, but J. Hitchen stated that he believed this was not now necessary as there was an Advanced Instructor willing to act as CCI for the Club.

The other recommendation, that all candidates wishing to attend Courses for PI, Approved or Advanced ratings send written recommendations from their CCIs at least one month before the Course (ALL CCIs PLEASE NOTE).

All CCIs

4. Incident Reports - resume

The Chairman gave a resume of five incidents that had been reported since the last meeting, the first: **Ashford** This concerning a Cessna 206 which had handling problems, three S/L Students were despatched at a low altitude, the Jump Master and the last student landed with the plane, which landed at approx 120mph, ground looped and damaged the prop. there was no injury to any persons. A. Collingwood (CCI Ashford) also gave a brief report.

The second incident:

Shobdon A first jump student on an Aeroconical had a very slow opening, possibly 'high twists' which streamered until approx. 1000ft when the AAD fired at the same time as the main inflated, the student landed under two canopies, with no injury. M. McCarthy gave a report and a brief discussion took place.

The third incident:

Scottish Parachute Club An experienced jumper, jumping a new Racer fitted with FXC, which was not switched off upon opening. The AAD fired at approx. 1200ft, the reserve only partially deployed, and it is believed it was kept from fully deploying by the positioning of the FXC in the pack. L. Thomas gave a report on this incident, which was also discussed at the Riggers Meeting.

L. Thomas stated that the drawing from R. Noble-Nesbitt should be circulated to Clubs so that anyone using this system with an FXC can relocate the AAD. (drawing attached).

All Clubs

The fourth incident:

Skybirds Where a student on her second jump drove all the way from opening, landed on a dead tree and sustained a crushed vertebrae, this appeared to be a case of bad canopy control.

The fifth incident:

Ashford A Student on a 20 second delay had a total malfunction, it appeared that the wire pins had caused rust to get on to the loops causing this problem. J. Curtis gave a report as this had been discussed at the Riggers Meeting. The Riggers recommended that all rippcord pins be changed to stainless steel pins.

It was proposed by A. Collingwood and seconded by J. Laing that wire pins (not Stainless Steel type) be withdrawn from use within 4 months of this STC Meeting.

All CCIs Note
Carried Unanimously

5. Helmets - L. Thomas

L. Thomas stated some helmets that were not at this time allowed for student use were in fact ideal for general parachuting purposes. It was suggested by J. Meacock that the NCSO's compile a list and a recommendation for the next STC Meeting.

JNCSO

The Chairman stated that anyone with input concerning helmets they think should or should not be used for parachuting should contact the JNCSO's.

All CCIs

6. Mr. Bill Jumps

Two papers had been distributed concerning this item. Little discussion took place and the same rules that apply to RW jumps, apply to Mr. Bill Jumps, and it is up to the CCI to decide who (if anyone) makes Mr. Bill jumps on their DZ.

All CCIs

7. Clearance to 15,000ft for Turbo C206

The Chairman asked Mr. Ball from Thruxton to put his proposal to the Meeting. Mr. Ball said that he

would like this exemption to occasionally take his plane to 15,000ft as the time it took to climb to this height from 12,000ft was approx 3½ minutes.

It was proposed by G. Douglas and seconded by J. Laing that G-AYJU be given clearance to 15,000ft for the purpose of dropping parachutists.

J. Ball

8. Formation of Pilots Committee

Mr. Ball stated that he would like the formation of a Pilots Committee to advise on all aspects of jump flying. Liaison with CAA regarding aircraft clearances, modifications, servicing etc. Advising STC on Aircraft matters. Compiling a Jump Pilot's Manual and many other things concerning parachuting aircraft and flying. It was generally considered to be a good idea. Mr. Ball suggested that the Pilots Committee would meet 3 or 4 times a year. It was stated that this Committee would report to STC. Mr. Ball was given the go ahead to form this Committee. Any pilots wishing to be on the Committee or any input for the Committee should be sent to the BPA and it will be progressed to the Pilots Committee.

J. Ball

BCSO

NCSO

All CCIs

9. S/L Jumps from 1,500ft

J. Meacock explained the reasons for his request to occasionally drop S/L Students from 1,500ft. This was discussed at some length and it was finally proposed by J. Meacock and seconded by J. Lines that the Peterborough Parachute Centre be permitted to drop static line parachutists from 1,500ft using their Pilatus Turbo Porter with a maximum of two out on any one pass.

For 14 Against 5 Abstentions 2.

D. Tylcoat requested that his proxy vote against the proposal be made known.

J. Meacock

10. Instructor Rating - Cpl. L.R. Hitchcock

The Chairman informed the meeting of a request from Capt. C.G. Wilson asking that Cpl. L.R. Hitchcock be permitted to attend the next Examination Course at Strathallan in May to requalify as an Approved Instructor. G. Douglas stated that it was an APA recommendation that Cpl. Hitchcock should lose his rating for a year and it was their recommendation that he should be re-examined at Netheravon or Bad Lippspringe. After a great deal of discussion the Chairman asked if there was any objection to Cpl. Hitchcock attending the May exam course, as there were none, Cpl. Hitchcock is permitted to attend at Strathallan.

NCSO

11. A.O.B.

1) Kicker Springs - D. Wilkinson

D. Wilkinson informed the meeting that he would like Kicker Springs for his Centre and that he had not heard of any reports from the Clubs that were given Kicker Springs to test. The Chairman stated that reports had now been received and that they were favourable to Kicker Springs.

The BPA had already agreed to buy Kicker Springs, but it would be needed to know what the current price and minimum quantity are. This will go to the next Council Meeting for approval.

2) Instructor Signatures - D. Wilkinson

D. Wilkinson stated that he was concerned with the fact that students arriving on drop zones with signatures in their log books that were illegible. He asked that a list of all Instructors with their D Certificate numbers be circulated to all Clubs.

NCSO

3) Clearance for DZ at Clacton - P. Hewitt

P. Hewitt has sent in a request for a DZ at Clacton to be cleared for Student Parachuting. P. Hewitt was unable to attend the meeting and requested that this item be dealt with. After much discussion and with verbal reports from

J. Hitchen and T. Knight, it was decided that this item could not be dealt with, without the presence of Mr. Hewitt.

NCSO

4) RAPA to hold PI/Exam Course

A request had been received from the Rhine Army Parachute Association to hold a PI/Exam course at Bad Lipspringe during the period 1st - 6th March 1983. Under the supervision of T. Oxley and R. Charters. A great deal of discussion took place on this matter considering that it appeared that STC were presented with a fait-accompli, it was suggested that they carry on with the course and the Chairman write to them reminding them that STC should have more warning of requests to run courses.

It was proposed by M. McCarthy and seconded by J. Meacock that RAPA be permitted to run this PI/Exam Course.

For 11 Against 6 Abstention 3

J. Sharples

5) Renew exemption to act as CCI - Ian Louttit

A request from I. Louttit for renewal of his exemption to act as CCI. In his letter he stated that due to heavy work, financial commitments and many other things he has been unable to attend another course since Netheravon a year ago. A great deal of discussion took place on this item and it was finally proposed by T. Knight and seconded by M. Beynon that I. Louttit's exemption to act as CCI should be extended until the next PICourse at Strathallan on 2nd May 1983.

For 12 Against 6 Abstention 1

NCSO

6) Pilot Chute in TOW - Pat Slattery

P. Slattery brought to the attention of STC that there appeared to be several procedures on the correct way to deal with a Pilot Chute in tow, after some discussion it was agreed that the general recommendations to the procedure to take if someone has a pilot chute in tow is to **ACTIVATE RESERVE.**

All CCI's

7) GQ Student Canopy Release

J. Lines had put a request in for STC approval for the GQ Student Canopy System to be used by the Midland Parachute Centre. These releases have been used in Cyprus for approx a year with no problems, after some discussion:-

It was proposed by J. Lines and seconded by K. Yeoman that the GQ Student Canopy release system be accepted for general use.

For 19 Against 0 Abstention 1

NCSO

8) P. Carroll to act as CCI for a maximum of 6 months in Belize

A request had been received for P. Carroll to act as CCI for a maximum of 6 months while he is stationed in Belize. It was proposed by J. Laing and seconded by A. Collingwood that P. Carroll is permitted to act as CCI for a maximum of 6 months providing they only train Military Personnel.

For 8 Against 7 Abstention 5

The date of the next meeting will be 1900 hours Wednesday 20th April 1983 at The Post House, Leicester.

4th February 1983

Tony Butler, Joint National Coach & Safety Officer

REMINDER

ALL CLUB AND DISPLAY EXEMPTIONS EXPIRE ON 31ST MARCH 1983. PLEASE RENEW WITH THE CAA IF YOU HAVE NOT ALREADY DONE SO.

The Chairman has asked that all STC Members observe the agreement of no alcohol at the Meetings.

To All CCI's

Helmets

The Joint NCSO's have been tasked with the job of compiling a list of Helmets suitable for Parachuting, by the next STC Meeting. If you wish a particular helmet to be included on this list whether it be for student or experienced jumpers please contact the BPA Office.

Tony Butler, Joint National Coach & Safety Officer

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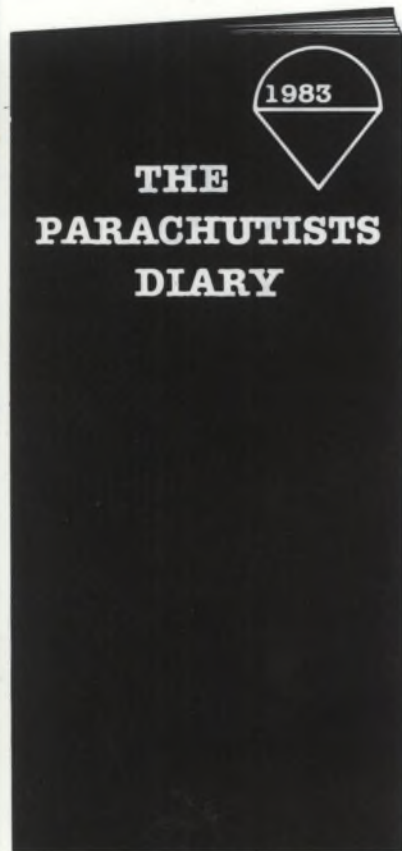
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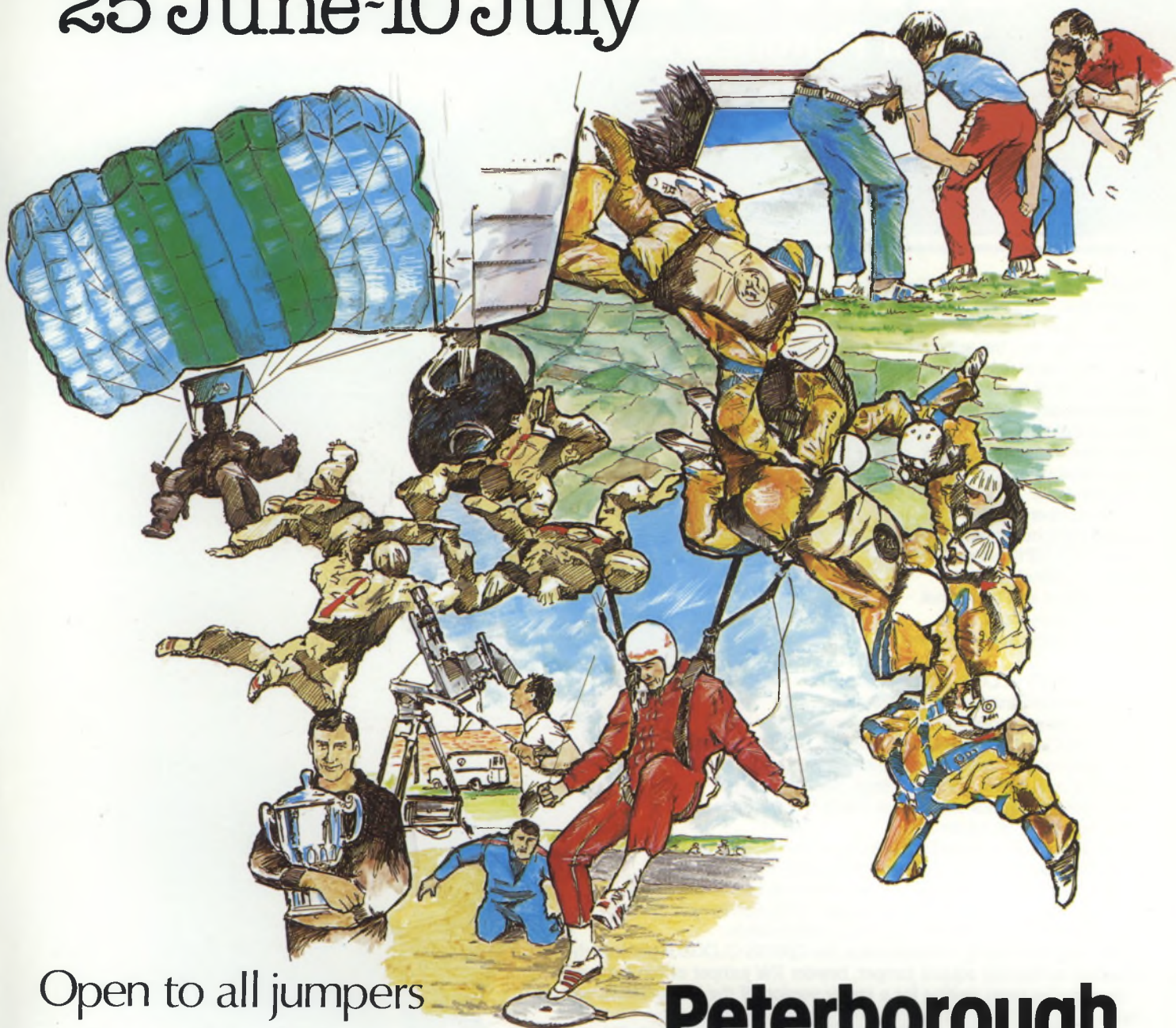
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