Aberdeen And District Soarers

Newsletter No. 58

Hillcrest
Disblair
Newmachar

July 1995

Contents

Indoor Scene

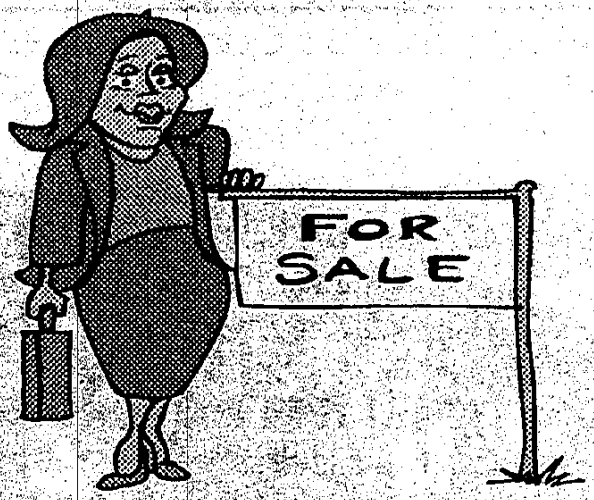
INDOOR SCENE

The final meeting of the 94/95 indoor season was held at Muirfield School on the evening of Monday lOth April. The theme of the night was rubber duration and fun. Attendance was good and a fair number of interesting flying machines turned up. Before the serious stuff began, Bill and Mike grappled with the intricacies of their mechanical birds - omithopters built from SAM's 'Manta Ray' plan, and designed by Roald Tweet would you believe! Despite a lot of flapping and clacking, the bamboo and tissue contraptions did not fly as well as the 'toy' one tnat Bill brought along and made from nasty plastic - but which eventually broke! So some experimental work to do there lads. Mike's rubber powered helicopter persisted in making everyrbody feel sick (think it needs a gyro).

The comp attracted seven entries and the results are given below. Flight of the evening was definitely Gerry's 'warp drive' penny plane which produced a flight of 2 minutle duration spending most of its time lazily circling just a foot below ceiling level - nice flight! The Easy bee, with re-covered tail plane (I used SAM's ultrafilm in Place of the original mircofilm) was not performing to its full potential as your's truly had attached the rubber band! Tom succeeded in trimming out his'borrowed' pennyplane to achicve a fair degree of success in his fights and finally a well done to Kevin for having a go.

Name	Position	Round 1	Round 2	Round 3	Total Time
Mike Pirie	1st	1.12	52	34	2.38
Gerry Mitchell	2nd	12	25	2	2.37
Tom Bartlett	3rd	20	28	46	1.34
Ray Stewart	4th	17	15	10	42
Bill Stark	5th	7	12	13	32
Jim Masson	6th	7	9	12	28
Kevin Bartlett	7th	3	4	4	11

M..A.P.



GLIDER FROM GERMANY

A large glider has arrived from Germany - yes it's one of Peters. Due to strict flying regulations in Germany, Herta has been unable to sell it there and she has expressed the wish that she would like to see it go to someone in Aberdeen. Unfortunately I have not been able to positively identify the glider but I think it could be the DG 600. The span of the model is just over 5 metres, it is all glass with a gell coat finish on the wings and weighs in at approx. 9.5 Kgs. The plane is almost ready to fly only needs a receiver. The servo connectors are Futaba compatible.

For further information contact Mike Pirie at 01224 323640 The price is open to offers.

For Sale (for full size flying support fund!)

Calypso Kit

3m Wing complete with joiners and servo leads fitted- ready for flaps to be cut out. Fuz untouched and complete £120 (a new one will cost you over 300!)

OS 25FP

Good condition - £15

Flinger Glider.

Excellent condition - ready for gear - £20 or with servos and Batt - £45

Andy

Slope Scene

At the slope outing at Durris only 6 people turned up to brave the snow showers and 12 knot wind. Lift was good till about 3.30 when it suddenly died leaving the pilots scurrying to land on top of the hill before they were forced to land in the fields below due to sink.

As you can see from the photo above (compliments of John Donald) there was as good selection of models ranging from Middle Phase, ASW 22, PSS Hawk, Capstan and an Arcus. From left to right in the photo are, Mike Pirie, an old club member recently transferred back to Aberdeen whose name escapes me, Graham Donaldson, Doug Patterson and Bill Sherriffs.

The next outing was at Cairn Of Mount and was just as poorly attended with only 5 people turning up namely Jim Masson, John McConville, Bill Sherriffs, Mike Pirie and Keith Donaldson. The weather was much better, a warm 15mph. wind was blowing crack on to the hill, lift was excellent and pilots only landing to revive themselves with coffee and rest their eyes.

Let's hope we see a better response to the next Slope Events, after all a 2 hour non stop flight must be better than several 3 minute flights at Calder Park!

Longest Flight At Calder Park

Well I wish I had some. Its not through lack of trying. I have several polished trophies ready to be dished out, but things do not seem to be going our way weather wise. I think now would be a good time to remind people of the Tuesday evening's longest flight competition. Dave Curry won last year but has since left for the States (less competition for the rest of us).

The rules are easy. You can use any type of glider as long as it does not have a whurry thing on the front (or back Mike before you start having ideas!) Launch can be by any means; winch, hand tow, hand launch, aerotow or knicker elastic.

The main thing is that it has to take place at Calder park on a Tuesday evening and witnessed by another ADS member (No Mike, your Dog does not count) Just think (Jim) you could Aerotow you Glider (K8) to 2000' sit in the back of the car and get driven down to the cliffs stooge about there for three or four hours or until it gets dark. Get driven back to the park for a perfect touch down in the middle of the field.... Some people will go to any length to get a pot.....

The prize will be dished out at the AGM (that should mean we get at least four members attending instead of three last year!)

Andy.

The Scottish Gliding Association ASH 25

History of Alexander Schleicher

The ASH 25

In 1927 Alexander Schleicher, who started his career as a cabinet maker, founded his glider production workshop at Poppenhausen. The first glider that was built in mass production was the "Hol's der Teufel" (the devil take it). It was designed by Alexander Lippisch, and a total of eight were built.

By 1945 the workshop had developed into one of the largest glider production businesses. In co-operation with the designers Alexander Lippisch, Fritz Stamer, Hans Jacobs, Heini Dittmar and Edmund Schneider, 21 different glider types were designed with over 1250 units being produced.

The occupation forces prohibited flying in Germany from April 1945 till May 1951. Therefore, temporarily, the factory produced furniture during this 6 year pause. In 1951 glider production was resumed.

At first Schleicher built gliders under licence, the single seater "Baby 111" and the two seater ES 49 designed by Edmund Schneider, and afterwards the high performance two seater "Condor 1V" designed by Heini Dittmar.

From Autumn 1952 onwards the designer Rudolf Kaiser joined the company and the first entirely new Schleicher designs were developed. With Rudolf Kaiser a new era was introduced into the glider production business and for the sport of gliding as a whole. He became the glider designer in general whose names and designs enjoyed the best reputation in the world.

The fourteen different glider types he designed have been built to over 4200 units at the Schleicher factory, with more than 1000 others being built under

licence.

The first of his Ka series was the two seater Ka - 2 followed by the Ka - 4, Ka - 7, and the single seater Ka - 6 and Ka - 8. With the beginning of the sixties a revolution changed the glider production business: glassfibre came in. The composite construction so far used (wood/steel) was progressively displaced by the glass-fibre-reinforced plastic (GRP) construction.

In 1964 the designer Gerhard Waibel joined the Schleicher company and with him the new era of GRP gliders started at the Schleichers factory. To date he has designed seven different glider types (plus different versions of them) and over 2000 units have been built. Most of his designs including the ASW19, ASW20, ASW22 and ASW24 are classed with the best gliders of the world and have ranked in international competitions.

Meanwhile apart from GRP, Carbon and Aramid fibres (Kevlar) are also used with the Schleicher designs. In 1981 the design department was expanded and Martin Heide joined the company as a further designer.

The concept of producing a two seater glider with the sole intention of breaking world records intrigued him, and in conjunction with Damstatt University a design was conceived as a research project, Initially using the wing profiles of an existing glider design (ASW22) married to a two seater fuselage.

At that time it was not put into production as there was thought to be a limited market, and that the glider would prove to be too expensive. Once records began to fall however to the ASH25 as it was called, then it was sought by glider pilots from around the world. To date over 150 units have been sold and there is at least a one year waiting list from the factory for the glider.

The ASH 25

Fuselage - GRP / Kevlar monocoque fuselage with roomy safety cockpit. Rubber shock mounted retractable landing gear. Hydraulic disk brake, in flight adjustable rudder pedals, adjustable fresh air ventilation for both pilots, infinitely variable speed trim, lockable by stick key.

Wings - Cantilever, for part wing, laminar aerofoil with boundary layer control at the wing underside.

Tail Unit - "T" tail design, vertical fin incorporates VHF radio antenna.

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Flight Instruments

2	Mechanical Variometers
2	Altimeters
2	Turn and Slip Indicators
1	Bohli Compass
1	Airpath Compass
1	Gyro Artificial Horizon
1	Cambridge S - Nav electronic vario with repeater for rear panel
1	Becker radio transceiver
1	Fototime camera
1	Rico databack camera
1	EW electronic barograph with camera interface
1	Garmin GPS (Global Positioning System)
1	Skyforce Locator
1	Oxygen system for both front and rear cockpit (Note1)
2	Robertson Parachutes

Water Ballast - Max 60 litres in each wing (Note 2)

Notes: 1 Oxygen is used during flights above 10,000ft.

2 The gliding angle of a sailplane or glider is measured as a distance travelled for the height lost. In the case of the ASH 25 it is 57 : 1

The glide angle varies according to different flying speeds, and depends upon the ratio of lift created by the wings, against the drag of the glider through the air. The best glide angle occurs when the lift / drag ratio (LD) is at a maximum.

The glide angle however is unaffected by the actual weight of the glider. Extra weight requires a higher flying speed to obtain more lift, but as both lift and drag are proportional to the square of velocity, the ratio between the lift and

drag remains the same. The rate of descent if the glider weighs more will have increased, although the glider will still fly the same distance from a given height.

The ability to vary the load of the glider means that when the thermal lift is strong, the increase in weight by carrying water in the wings is insignificant, but the resulting higher cruising speed is a big advantage. Later in the day when the thermal lift is weaker, the water ballast can be releases, and the lower sinking speed will enable the glider to stay up longer.

The Scottish Gliding Association ASH 25 will be used for Advanced Cross Country training. Training of pilots to National (and beyond) competition level.

Attempts to break existing gliding records. Compete in UK and International Competition.

Crew	2
Span	25 metres / 82.03ft.
Wing Area	16.31 sq m / 175.56 sq ft
Aspect Ratio	38.32 (Note 1)
Fuselage Length	9 metres / 29.53 ft
Empty mass	450 Kg / 992.25 Lbs
Max flight mass	750 Kg / 1653.75 Lbs
Max wing loading	46 Kg/sqm / 9.42 Lbs/sq ft
Min wing loading	38 Kg/sqm / 7.78 Lbs/sq ft
Best L/D	57 at 108km/h / 58.28 kts / 67.28 mph
Min sink	0.45 at 80 km/h / 43.17 kts / 49.68 mph
Min speed	77 km/h / 41.55 kts / 47.82 mph
Max speed (VNE)	250 km/h / 134.9 kts / 155.26 mph

Pilots flying the ASH 25 currently hold 15 of the Multi Seater International gliding records, and 18 of the British National and United Kingdom Multi Seater records.

Note (1)

Aspect Ratio: is defined as the ratio of the span of the wing squared, devided by the area of the wing. The induced drag is inversely proportional to the aspect ratio. For maximum efficiency a glider neads a high aspect ratio, as a smaller percentage of the wing is affected by the airflow leaking around the wingtip, from the higher pressure below the wing, to the reduced pressure above the wing.

FULL SIZE FLYING

Being the proud possessor of brand new Private Pilots Licence I thought I would do a short piece on the trials and tribulations of obtaining one.

SO YOU THOUGHT MODEL FLYING IS EXPENSIVE

Everything started last September when my wife bought me a 1/2 hour flying voucher. Unfortunately after half an hour in a Cessna 152 I was hooked. Full of enthusiasm I asked the instructor how much it would cost to gain a PPL, "Well" he said" 86 pounds an hour for a minimum of 40 hours but you'll need more say about 45 then you have books and maps that's another 200 pounds, you'll need a radio course that's 55 pounds, CAA fees and medical that's another 250- round it up" tap tap tap on the calculator " say 4500.

So with a glum expression on my face I returned home to tell the great cheque book holder of the cost. But I was determined And that is the single main thing, in my opinion, you need to gain a PPL.

DETERMINATION.

Determination to find the money. Try a loan or save up but don't do one hour a month as you'll spend all next lesson trying to remember what you did this one. Or if your flash and can get the time off work go to the States - It can be up to half the price - But there have been reports of dodgy instruction.... Determination to go on when the Flying club informs you that, on the first flyable day for three months, that your instructor has a cold, or the Cessna has a fault, or there is a bit of haze or, or ,or... and that they will have to cancel your flight.

Determination, when your brain goes into overload,the instructor tells you, your too high, you should have done your checks, have you called down wind yet? watch out for the three other planes on final! But do persevere it will all come together in time. At the end of it you will have a small bit of paper which tells you can fly single engine aeroplanes up to 5700Kg and a big smile on your face! And what then - well you can do an Instrument Met. Conditions (IMC) rating or an Aerobatic rating, that's another 10 hours at 86 pounds and of course you will need the books, that's another.....

To get my hours up I am offering passenger Flights in a C152 to anyone - cost will be around 20 pounds/hour. Please give me a ring on 712008 evening or 844229 during the day.

Andy Thoirs

MEMBERSHIP LIST

NAME	TELEPHONE No.
James Anderson	01224 594885
John Barnes	01651 22368
Thomas Bartlett	01224 898945
James Bisset	01224 868699
Gary Connel	**
John Corstorphine	01224 872826
David Davidson	01224 692922
Leslie Dempster	01651 891402
John Donald	01224 703766
Graham Donaldson	01224 486961
Keith Donaldson	01224 575663
Michael Duthie	01224 648739
Ronald Grant	01224 714454
Tom Hamilton	01224 310306
Chris Harper	01467 681452
Richard Holt	01651 842777
Forbes Kemp	01224 586728
Norrie Kerr	01224 324722
Jean Lescoeur	01224 641731
Ronald lock	01224 733693
Tom MacPherson	01569 63868
James Masson	01224 896794
John McConville	01224 824179
John McGrath	01464 20018
Gerry Mitchell	01224 324828
Brian Ord	01224 698449
Douglas Patterson	01224 702604
Michael Pirie	01224 323640
Mark Rogers	01358 723757
James Ruxton	01224 316082
Craig Scott	01569 64905
William Sherriffs	01651 862590
Alan Smith	01224 321536
David Smith	**
William Stark	01224 640560
Alan Stewart	01224 722663
Colin Stewart	01224 722663
Gordon Taylor	**
Andrew Thoirs	01224 712008
George Thomson	01224 315867
Robert Woods	01224 208151
Michael Woods	**

** Latest Editions

Humorous Crash Stories From The Internet

One of my favourite crash stories was from The Model Aviation safety column a few years back. There was some up - scale soaring competition going on and one of the participants got his nice (expensive) high - tech. composite beauty tangled in some nearby "high tension" power lines and it fell with it's wings touching two (440Kv) lines and FlASH - KABOOM!!!!

wow, carbon fibre is electrically conductive.(for a brief instant, before it got blown into snowflake sized cinders)

I have an older friend who flys full size who tells this story,. He and a friend flew control line models when they were young. It was common practice during the winter to "pre - heat" the engine by squirting a little fuel on the cylinder head and igniting it. The friend was attempting to "pre - heat"his brand new

P 40 and must have got a little fuel on the airframe (which had been lovingly painted in nitrate dope), WOOF 20 seconds later he had an engine sitting in a pile of glowing embers.

I have some friends who work for a research organization and I can tell you that we "amateur" modellers are not the only ones who know how to scatter the balsa. One vehicle they were testing was supposed to be dropped from a lift plane, whereupon the outboard wing panels would swing out and deploy. On one drop test that followed some internal work, someone had forgotten to hook up (linkage servo?), the result being that the wings stayed folded underneath. It dropped like a bomb..... no, scratch that, it dropped like a smart bomb, they did have directional control, so they could pick there divot.

These stories courtesy of Daniel C. Wroe from NASA Goddard Space Flight Centre Greenbelt Maryland USA.

Colours

Colour combinations have always been a part of our pride and joy, representing our creativity and individualism. problems with various colours and landscapes/skyscapes have been more of a focus these days in our attempts to maximise contrast and visibility.

Based on a chart by Elaine Jackson, orange seems to be the best all - condition colour, with light red coming in second for the best contrast. I imagine that an orange and red glider seems to be a good overall colour combination. Decide for yourself and have fun! See chart below

VISIBLE COLOR CHART

VISIBILITY AGAINST BACKGROUNDS

COLORS	RELATIVE BRIGHTNESS	SKY			EARTH/LANDSCAPE		
		Blue	Cloudy	Haze	Dry Grass	Brown	Green
white	10	G	F	F	G	G	G
aluminum	9	G	F	P	G	G	G
yellow	8	G	F	F	P	F	G
orange-yellow	6	G	F	F	P	F	G
orange	4.5	G	E	E	E	E	E
light green	3	F	F	F	G	F	P
light red	2.5	G	G	G	G	G	G
dark green	2	G	G	P	F	F	P
dark red	1.5	G	G	F	G	F	P
true blue	1.5	G	G	F	G	F	P
dark blue	1	G	G	F	F	F	P
maroon	.5	G	G	F	G	F	P

Legend: E = excellent G = good F = fair P = poor

Chart: Elaine Jackson

COMMITTEE MEMBERS

CHAIRMAN	James Masson	01224 896794
TREASURER	Michael Pirie	01224 323640
SECRETARY	Gerry Mitchell	01224 324828
SOCIAL SECRETARY	William Sherriffs	01651 862590
COMPETITION SECRETARY	Andrew Thoirs	01224 712008

THE ADS FLYLINE

Remember the easiest way to find out where and who's flying is to use the ADS Flyline. If you are going flying please ring in and leave a message and the controller will update the recording so that other people know where everyone is flying. Let's all try to get this extremely useful service (Which no other club in Scotland has) to work by leaving a message as to where you are flying.

REMEMBER THE NUMBER 01224 844283

THE ADS FLYLINE A BETTER WAY TO FLY