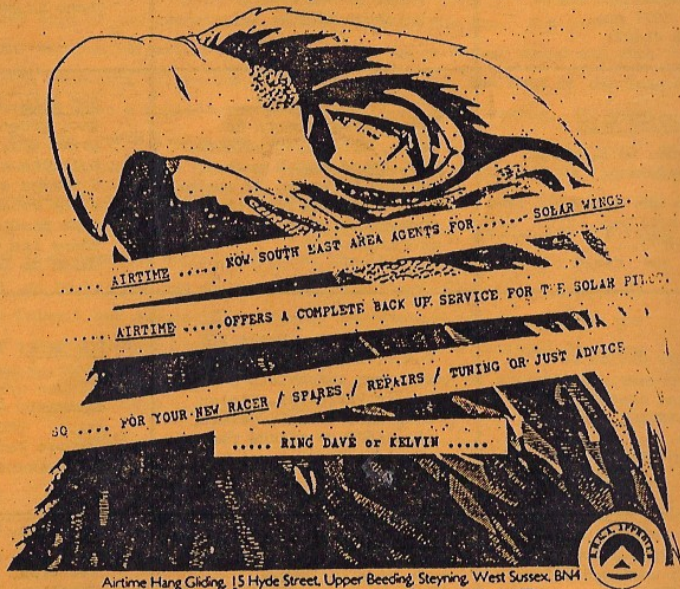


Mr. Ellis 870329 (Alfriston)

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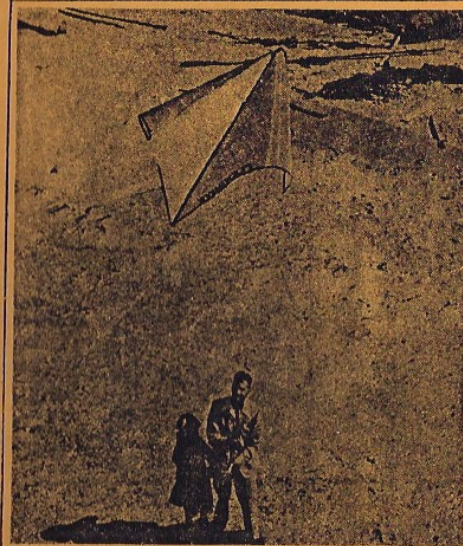


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OCT 85



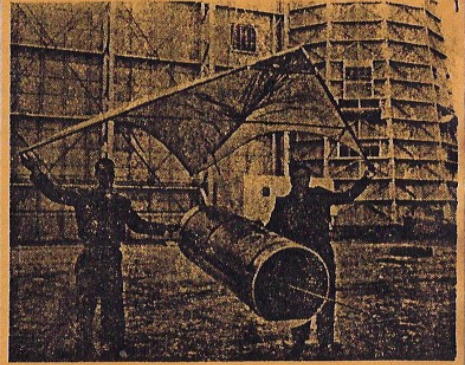
Francis M. Rogallo, the inventor, flying his original all-flexible kite.



F.M. Rogallo and his flexible wing model with metal keel and leading edges, but no cross bar in the Langley 7 x 10-foot wind tunnel.



A powered wind tunnel model of a Rogallo wing utility aircraft.



A 1/12th-scale, radio controlled dynamic research model of a Rogallo supported dummy Saturn booster, 1961.

SHGC '84/85 COMMITTEE



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If you have an interesting story to tell or accident to report just write it down clearly and send or give with any photos to either of the editors. Please send a S.A.E. if material is to be returned. All items must be in by the 25th of each month, for the following months' magazine.

ADVERTISING

Private advertisements for members (to sell gliders, lost and found etc.,) are free.

All commercial advertisements are charged at the following rates:  
1/6 of a page: £12 per year (in advance); 1/3 page: £22 per year (in advance); full page £5 per month, or £45 per year (in advance).

# Editorial

The evenings draw in, the clocks go back, thermals start to hibernate, and Damart catalogues drop through the letterbox in seemingly endless streams. So it is as winter approaches in Britain. But sensible people, like Simon and Jonathan Cattlin, John Pendry and Hilary Smith, Tim and Sheila Bardon, and, I hear, Lindsay Ruddock and possibly Golly Robertson, migrate to Australia, either to work or to further their flying careers. All the pilots I know who have been to Australia to fly have returned the better for it, such is the consistency of the flying conditions there. Congratulations to Tim and Sheila upon their recent wedding; good luck you two! Perhaps you can drop WINDSOCK a line to cheer us all up when we're snowbound.

Kelvin Wilson has stepped down as Club Safety Officer and his place has been filled by a very keen pilot Paul Ray. Paul flies a Magic 3 glider coloured with a dark green leading edge and a lime green undersurface. He also flies in a red and blue two-tone Supp, so he should be pretty easy to spot. (What terrible taste you have, Paul!). His address can be found opposite and all pilots suffering accidents should file an accident report and send it to him.

The meteorology lecture given by RAF Instructor Dave Milcliffe was quite well attended and included a slide show to illustrate various cloud types and other relevant information. I think most people learned something or were able to refresh their memories. The next Club Night is on Saturday 2nd November at 8.00 pm at Devil's Dyke. Dave Clayton will be giving a talk on "Flying Experience and Techniques".

Unfortunately the weather was unsuitable for the towing weekend with Mike Mcmillan and had to be cancelled. Details of any new dates, when arranged, will appear in WINDSOCK. The big field at the bottom of the Dyke has now been re-sown and is therefore in crop. Pilots landing there should expect to pay a £10 fine.

I must mention an XC flight made by John Young, back in June, I think it was. I'd heard he'd flown to Hastings from the Dyke, but it turned out that was where he was last seen. He went on to reach 4600' asl over Camber Sands, then crossed the Romney marshes and landed after 56% miles at Hythe near Folkestone. So near the record, John, and yet so far. At one stage he had to return several miles towards the Dyke to find any decent clouds; technically it sounded like a difficult flight, taking nearly 5 hours to complete.

( over )

Lastly, you will find in this issue a couple of articles on towing. At the most recent Committee meeting there was much talk about the various possibilities of towing within the Club. The Club is on the look out for any suitable sites in the area and if anybody knows a place or a contact who might open a few doors in that direction, would they please make themselves known to any of the Committee members.

Bye for now,  
Ian CS.



#### BEACHY HEAD.

A NEW LOG BOOK AND MARKER FLAGS HAVE BEEN MADE FOR BEACHY. PLEASE WOULD ALL PILOTS WHO FLY BEACHY SIGN THE LOG BOOK. YOU WILL FIND THE LOG BOOK ALONG WITH THE FLAGS AT THE SIDE OF THE PUB. THE FLAGS SHOULD OBVIOUSLY BE PUT OUT WHEN PILOTS FLY BEACHY TO WARN THE PUBLIC. FILLING IN THE LOG BOOK AND PUTTING UP THE FLAGS ARE JUST SOME OF THE RULES WE AGREED WITH THE COUNCIL, IF YOU WISH TO CONTINUE FLYING BEACHY PLEASE FOLLOW THEM, READ THE SITE GUIDE.

#### TOWING SITE.

WELL SO FAR WE HAVE FOUND A PROVISIONAL SITE ON THE BASIS THAT WE WILL DEMONSTRATE OUR TOWING SYSTEM TO THE FARMER FOR HIS APPROVAL. AS USUAL ANY ATTEMPTS TO OR, ANISE MIKE MACMILLAN TO COME DOWN HAVE RESULTED IN FORCE TEN TOTALLY UNFLYABLE CONDITIONS. HOWEVER THE COMMITTEE STILL HOPES TO SORT SOMETHING OUT. ANY SYSTEM WE USE SHOULD AND MUST HAVE FULL B.H.G.A. APPROVAL.

**BRITISH HANG GLIDING ASSOCIATION**  
Cranfield Airfield, Cranfield, Beds, MK43 0YR  
Tel: 0234 751688

2nd October 1985

Dear Club Secretary, Coaches and Observers,

I would like to inform you that the much talked about RIDGE SOARING ENDORSEMENT has now been implemented and the first ones are beginning to appear on the hill.

For those who are unfamiliar with the RSE, let me explain its purpose and use:

The RSE is now part and parcel of the Pilot Rating Scheme and sits inbetween the P1 and P2, ie its like a P1 1/2. The reasons for its existence are three fold:

1. After attaining a P1 most new pilots find it difficult to relate to all the tasks of the P2. It seems to them that the P2 is too difficult to master straight away. This therefore leaves them in an unknown situation without a clear direction to follow.

The RSE is designed to alleviate this problem by introducing a series of tasks that will continue to progress the new Pilot at a natural pace.

2. It is a common fact of life that up to now when a new P1 joins a club for the first time he finds himself in a big void.

Also he is uncertain what to do with his new glider, harness, sites and social environment. The RSE won't cure all these problems but it will let him know what to do next in a safe manner.

3. How do you feel about giving advice, maybe not too bad, but what about other club members? More often than not, experienced fliers do find it difficult to answer questions like:

"I've just got my P1 at Fred's school and want to fly here. What do I do?"

Unlike all the other pilot ratings the RSE tasks are laid out in order, ie you start off with N01 and work your way through to the end. In other words you learn how to walk before running!

This therefore will help everyone including yourselves and other club members. The tasks have already been defined all you have to do is to make sure the site and the conditions are suitable.

(continued)

New pilots will receive the RSE task form when still at a school through the Training Membership Scheme packs. They should have the RSE task form on them when they come out flying.

For your information the precise tasks are below:

- Task 1. 5 down flights including turns and landing disciplines.
- Task 2. Figure of 8 task (for Delta Bronze)
- Task 3. 5 Soaring flights of at least 5 mins duration.

Although Tim will be putting this information in *Wings* shortly, I would be very grateful if you would circulate details to members of your club.

Thankyou,  
Bob Harrison  
BHGA Training Officer

## S.H.G.C. CALENDAR

ALL CLUB NIGHTS TAKE PLACE AT DEVIL'S DYKE PUB.

Here's a couple of dates for your diary:

NOVEMBER 2nd (note: NOT Sept. 14th as previously advertised)

David Clayton, B.H.G.A. Training Chairman, will give a short talk on "Flying Experience and Techniques". The talk is, basically, for early PI pilots desperate for knowledge on all aspects of hang gliding cross country flying. It will be a good chance for all pilots to fire questions at an experienced competition pilot.

8.00 pm at the Devils Dyke Hotel. A light buffet will be available.

DECEMBER 7th SATURDAY CLUB CHRISTMAS PARTY 8 till late

Buffet and optional FANCYDRESS!!

Full details next month!

## Winged lizard takes to the air of California

Ian Anderson, San Francisco

AT SIMI VALLEY in California this week engineers will start flight testing a flapping, half-scale model of *Quetzalcoatlus northropi*, the largest animal ever to fly. After more than 12 months of intensive testing on simpler models, the engineers believe they have overcome the main technical problems facing their ambitious project—achieving stability of both forward pitch and side-to-side roll.

If all goes according to plan, next spring in Washington a full size replica of *Quetzalcoatlus northropi*—QN for short—will take off from outside the National Air and Space Museum, swoop around the Washington Monument, and land at the Natural History Museum. It will control its own flight with only occasional direction from the ground. The flight will last for about five minutes, longer if it soars rather than flaps.

QN was a pterosaur or flying reptile (in Greek, the word means "winged lizard"). Many millions of pterosaurs roamed the Earth during the age of the dinosaur. They died out about 65 million years ago, after existing for almost 150 million years.

About 20 palaeontologists, palaeobiologists and aerodynamicists from around the US are attempting to recreate the pterosaur. The biological and structural advice comes largely from Wann Langston, director of the vertebrate palaeontology laboratory at the University of Texas in Austin, and Kevin Padian, a young palaeontologist at Berkeley in California. Langston's laboratory is custodian of fossil bones found in Texas that are being used to determine what QN looked like.

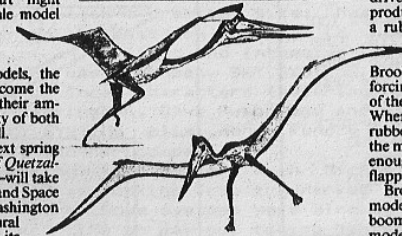
The construction is being handled by engineers from AeroVironment, a company founded in Monrovia, California. The Johnson Wax Co and the Smithsonian Institution, which will use the replica as centrepiece of a new film about flight, are funding the work.

The willingness of the palaeontologists and the engineers to listen to one another is making the project possible. "This is probably the first time that the engineers have stayed within the boundaries of what the fossil evidence dictates," said Langston.

Most of what is known is not based on QN at all—only fragments of one wing and one neck vertebra have been found. But more complete skeletons exist for a creature called *Quetzalcoatlus sp.* It is about half the size of QN and has not yet been given a species name. Langston believes it is an immature version of QN.

The palaeontologists have concluded that QN had a wingspan of about 11 metres, some 4 metres longer than any other flying creature in the fossil record. Early estimates suggested the wingspan could be as much as 17 metres. It weighed about 64 kilograms, had a wing loading of 8 kilograms per square metre, and an area of 8 square metres.

MacCready said that its comparatively low wing loading, made possible by light, hollow bones, was the main reason such a huge creature could fly. The full-size replica will weigh about 52 kilograms rather than 64 kilograms. The resulting lower wing loading will reduce the flight speed by



Ready, steady, go

about 10 per cent. But it will provide gentler landings, easier flight testing, and will still be well within the bounds of what the original creature was like. "We have set up a goal that if it is flying 50 metres from you it will look like the original," said MacCready. "Weighing a bit less won't matter."

The evidence provided by the palaeontologists has made it clear that the engineers must build a distinctly unstable creature. QN had a huge head and long neck, stretching almost 3 metres from the massive wing. "It is like trying to build an airplane with the vertical tail out the front," Alec Brooks, head of the project at AeroVironment said last week. The legs were far too short to provide stability.

Also, QN lacked a horizontal tail, which would have given it stability and controlled the forward pitch. A vertical fin or a tail would have provided lateral control. The engineers concluded that without "active control" the creature would have turned backwards and flipped over. QN, they believe, continually moved its head and wings to achieve stability and control. They built two models to determine how this was done.

One showed that a variable sweeping of the wings could shift the centre of gravity thereby solving the problem of pitch. The other showed that by moving the head from side to side, lateral yaw and roll could be controlled. For example, if the wind was coming from 10° to the right, QN would have moved its head about 20° to the right to offset the wind. Also, it had little fingers or claws about halfway up the wing to act as "spoilers". These would have provided drag, dampened yaw, and helped to straighten out the creature in flight.

The claws, moving head, and sweeping wing will be part of the half-scale model. The palaeobiologists were able to tell the engineers about a ball joint in the neck which allowed the head to turn.

Information from a gyro, detecting motion around QN's vertical axis (yaw), and a vane, detecting wind direction, will be fed to an autopilot. In effect the model will control itself. More general commands like turning will be controlled from the ground by radio.

The model will also have flapping wings to provide thrust. "We will start with gentle flapping and watch how the stability

changes", said Brooks. The flapping will be driven by servo motors. The energy produced by the motors will be absorbed by a rubber band stretching down the neck.

"As the downstroke occurs, the band will start to wind up," said Brooks. "It will put torque on the motors, forcing them to slow down." At the bottom of the stroke, the band will be at its tightest. When the wings start the upstroke, the rubber band will wind down and accelerate the motors. It is hoped that this will provide enough propulsion to keep the wings flapping.

Brooks is confident that the half-scale model will fly, but at first an auxiliary tail boom will be left on to ensure stability. The model will look as realistic as possible. It will have fur on its body, a fabric to resemble membrane in the wing, and a "proper colour scheme. Besides size, the main difference from the full-sized replica will be that it will flap at twice the rate—about 1-2 flaps per second.

QN will be sent airborne by an electric winch in much the same way that gliders are launched. It is hoped that one day it might be catapulted into the air and start flapping immediately. The palaeontologists now believe that the real QN launched itself from the ground, often making use of thermal air currents. Earlier theories suggested it jumped off cliffs, but there were no cliffs in the region in Texas where the fossils were found. □

## small ads

FOR SALE: Lindsey Ruddock digital vario Mk V. White case £30 update. Just checked in perfect condition throughout £110. Ring Eddie 01-684-7427 (Croydon).

FOR SALE: GYR 188. Good condition, with harness, vario and several books on hang gliding. £650 ono. Phone Chris 01-778-0796 (South London).

FOR SALE: Superscorpion 2C. Yellow & green. Good FI machine for pilot 11 svone upwards. £387. Phone Andy Webb on Forest Row 3182.

## SMALL ADS

FOR SALE: Clubman CFX 100 Gold sail, blue 1/e. 23hr airtime. Immaculate cond. superb handling. The best P1 glider available! Owner leaving the country in a hurry, hence only 2600. Phone Jonathan Cattlin 01-633-2986(!!) or 01-247-5901(!).

FOR SALE: SUPERSCORPION 20 Sliding box type. Yellow & green. Good condition. Ideal for P1 weighing 11 stones or more. Andy Hebb, Forest Row 3182.

FOR SALE: Secondhand SUPP harness, £70 ono. Phone Paul Ray on 04446-47262.

FOR SALE: Large Typhoon S4 Racer. Exponential undersurface. £600. Phone Airtime.

Mark Woodhams is the Hiway representative in the south east, living at 60 Compton Road, Brighton. Telephone Brighton (0273) 501 043. Excalibur 177 for sale. Rainbow undersurface and stinger, £900. Fantastic Vision demonstrator available for demo flights.

## club sweatshirts



AVAILABLE NOW FROM ALL COMMITTEE MEMBERS. THE NEW CLUB SWEATSHIRTS SEEN HERE ON DENIS'S GIRLFRIEND. ARE £7.50 EACH TO CLUB MEMBERS. THEY CAN BE MAIL ORDERED FROM JOHNNY CARR, PLEASE RING JOHNNY SHOULD YOU WISH TO ORDER OR SEE ANY COMMITTEE MEMBER ON THE HILL. SIZES ARE SMALL, MEDIUM, LARGE AND EXTRA LARGE. THE COLOUR IS LIGHT GREY AND THE CLUB BADGE IS IN THE CLUBS BLACK AND YELLOW STANDARD.

## A STATIC WINCH MADE IN BRIGHTON

If Devil's Dyke, Britain's premier site, has not seen much ridge soaring during the past few months, it has nevertheless been the nucleus of an exciting and intensive development from the team at Brighton based company SKY SYSTEMS.

The team is made of local characters featuring Michael Carnet, Johnny Carr, Ian Carrington, Dave Rusbridge and Pieter the Kiwi, all working at SKY SYSTEMS plus John Pendry who works for, sorry, is paid by, another company.

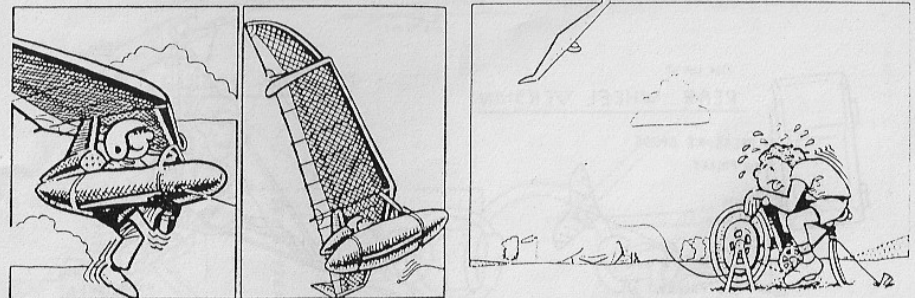
It all started during the summer when Michael Carnet, the company's designer, was looking into the market and the future of towing hang gliders. Some systems were already in action such as aerotowing, fixed line or pay-out towing behind a moving car, and static winching as used by sailplanes.

Aerotowing was rejected for many technical reasons but mainly because Michael hates flying microlights. Towing behind the moving car, the only form of towing which the SKY SYSTEMS' team had practiced in the past, had presented problems as well, more administrative than technical. Very large fields or runways are needed for all wind directions, with a smooth dry surface not to damage the car. Experience has shown that there are very few places with such potential in the south of England and that farmers or land owners are not interested nor convinced.

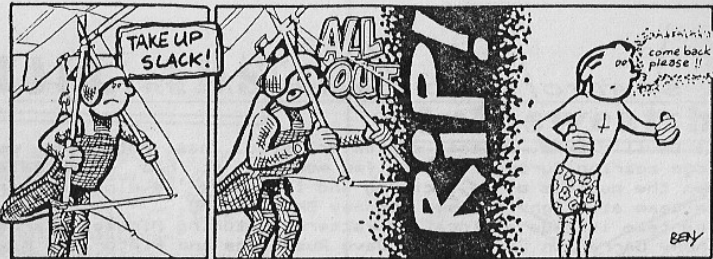
Static winching as used by sailplanes is obviously the way to go but remains expensive, bulky, expert-operated..etc.. Hang gliders are much cheaper, easier to fly, more forgiving and give more freedom than sailplanes, and therefore static winches for hang gliders should be in-the-car transportable, in-the-home storable, cheap to buy and to use, easy to operate, efficient and failsafe, not necessarily in that order. Can you imagine hang glider pilots arriving at 9am at a gliding club to put their name on the list for an afternoon flight?

We are all looking for an alternative to into-wind ridges, but wanting to keep the same freedom by keeping the gliding bureaucracy and the CAA as they are now: not directly involved. That was the philosophy that SKY SYSTEMS followed whilst designing their static winch.

(cont'd)



Cartoons are from "The story of hang gliding" by Ben Ashman



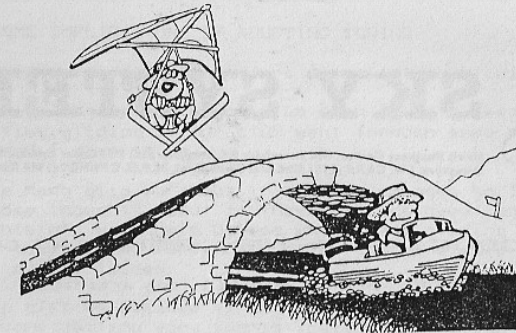
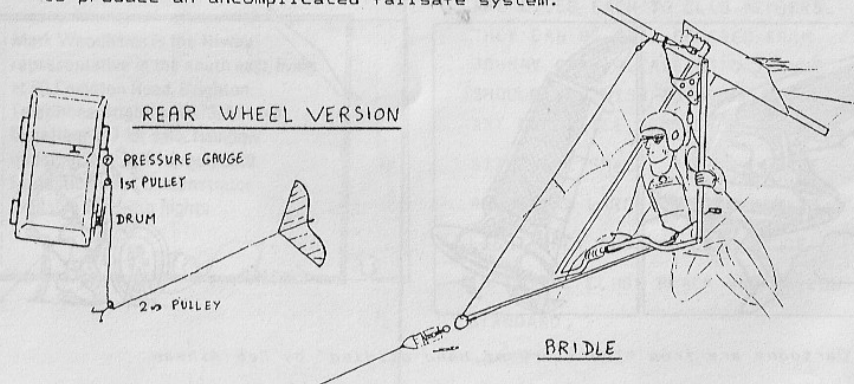
Over 100 tows have been performed on the large field on top of the Dyke by the bowl, but the Club would like to point out than the experimentation conducted so far by SKY SYSTEMS is a restricted experimental situation following an arrangement between SKY SYSTEMS, farmer Williams and the Club. It should be noted that in general, no towing should take place on SHGC sites without prior consultation with the committee.

By the time you read this article, this winch should have BHGA approval. Dave Clayton was sent by the BHGA council to check the system and he did so indeed by getting towed himself. A very favourable report was given and although a towing endorsement is needed to be towed, the person operating the winch should not need a winchman endorsement.

If you own a car, you have already got 90% of a static winch. You've got the engine, the transmission, the pedals, the seat and the wheels to carry it all.

SKY SYSTEMS have designed the missing 10% as a package featuring a drum, a pressure gauge, a line feeding device, the towing line and other necessities.

The SKY SYSTEMS' static winch, works according to the principle that a car with one wheel jacked up becomes a perfect winch. Replace the wheel by the drum, feed the line through the pressure gauge and line feeder, and then to the pilot and glider. The winch has 4 or 5 gears (or automatic gear box), which means different ranges of towing speeds are available according to different wind conditions. What is more natural for the winchman than to sit in a car, using the normal pedals to which his reflexes already relate? The engineering put into the design of this winch's engine, transmission, speed, brake and clutch controls is obviously approved by the Ministry of Transport (as long as the car is roadworthy). For the remaining parts, SKY SYSTEMS have spent a long time refining the design and engineering but has kept it as simple as possible in order to produce an uncomplicated failsafe system.



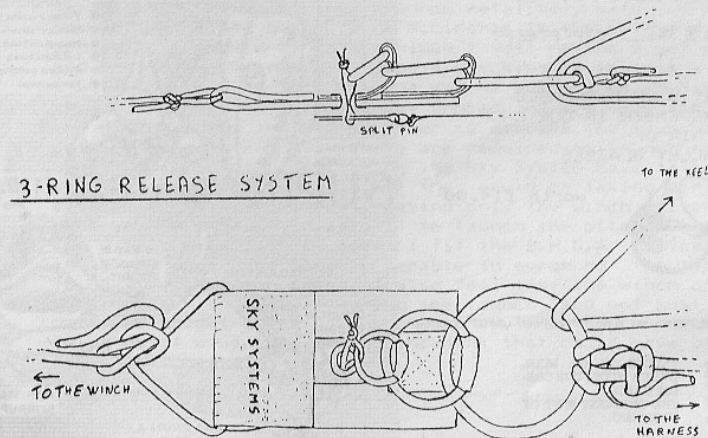
All types of car or van should work, with front or rear wheel motion. The part of the drum which is fastened to the car is detachable and interchangeable, thus allowing one drum to fit different cars. The bridle can be used with most harnesses: stirrups, cocoons or Supp type.

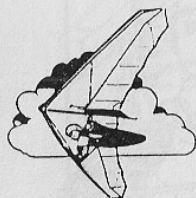
The whole package fits nicely in the boot and therefore does not present any storage problems. Running costs are reduced to a few weak links and the petrol consumption, which is minimal compared to normal driving or chasing into-wind sites.

The complete starter package contains everything that is needed except the car, the glider and the harness: 1 steel drum, 1 axle stand, 3 aircraft type wheel chocks, 1 pressure gauge, 2 heavy duty custom made pulleys with straps, 2 long spikes, 550 meters of rope (1800') including the weak link and release systems, 1 bridle with keel and harness connectors, 1 windsock, 2 dayglo signalling bats and an instruction manual.

SKY SYSTEMS have also put on the market a range of equipment for all towing needs including release systems, different types of rope for the towing line, bridles, glider and harness connectors, release cords, windsocks, dayglo signalling bats, weak link material, all sizes of stainless steel rings and quick links.

For more informatin call SKY SYSTEMS (0273) (423650)





# SKY SYSTEMS

Knoll Business Centre, Old Shoreham Rd, Brighton BN3 7GS Great Britain. Tel: (0273) 423650  
Directors: J.W. CARR (1981 National Champion), M.P.G. CARNET (1984 National Champion)

## INTRODUCING A NEW GENERATION OF STATIC WINCHES! (see article)

\*\*\*\*\*  
....CHRISTMAS...CHRISTMAS...CHRISTMAS...CHRISTMAS...CHRISTMAS...  
\*\*\*\*\*

SANTA & RUDDOLPH HAVE ALREADY DROPPED IN AT SKY SYSTEMS' SHOP  
AND OUR SHELVES ARE NOW SMOTHERED WITH XMAS GOODIES!

MOST OF THE PILOTS' WIVES WILL FIND SOMETHING TO MATCH THEIR  
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ARE ALWAYS SKY SYSTEMS' GIFT VOUCHERS FOR ANY VALUE THEY CHOOSE.



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worth £1, £5, £10, £20 or £50 are the  
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## SOME IMPLICATIONS OF ADOPTING TOWING

(In this article "gliding" refers to sailplane gliding).

I used to belong to a gliding club when I was a teenager. In that time gliding at our club went through some profound changes and I gave it up.

Now I see hang gliding about to undergo changes so I want to air some thoughts about it. Maybe a consideration of some gliding history will help us see where hang gliding might go. Remember that in the early days gliders were simple and were launched off hillsides.

I gave up gliding because it got too expensive and the gliders were getting very sophisticated. One reason for the increasing expense was this increasing sophistication and another was a change-over to aerotowing. The gliders were getting more sophisticated because of the demand from pilots who wanted to win competitions and aerotowing was adopted because winch launching had too many snags and little chance of getting a thermal compared to aerotowing.

Towing has been tried in the past but only lately have the systems and procedures been sorted out and shown to be safe enough. Winch launching is coming into hang gliding and there is much talk of getting a towing system for our club. What might the implications be. The considerations include safety, expense and social effects.

Sky Systems and friends have been experimenting and developing a system. Mike McMillan was meant to bring his system over from the Isle of Wight but the weather blew that one out. Mike's system costs about #4000 and Sky System's will cost about #400 but there is the possibility of getting a grant towards the cost.

Adopting towing means we would need the use of a large flat field. This would also solve the problem of our lack of a westerly site, and some land might be easier to acquire than you may at first think.

Established towing systems are now relatively safe. However there are bound to be accidents in the safest system. How can we keep them down to a minimum? Well having a set of tried and tested procedures with people sticking to them is a good start. The BHGA has published a set of procedures in Wings (Aug.85 by Mike McMillan) These procedures are very stringent and include having a trained observer to oversee the launching at the pilot's end. In all 2-3 people are required to launch another. Some people involved in trying the Sky System have talked of using other procedures. I feel they would be taking a risk especially with the idea of having only the winch driver (no observer or other help at all) to launch the pilot ('pilot and his wife system'). This doesn't fit the B.H.G.A. policy and seems to be the procedure most vulnerable to error but the temptation to do it will often arise. I also feel that the winch driver should watch the glider during the launch (and not just the pressure gauge) because you never know (see the report in October 85 Wings of a serious towing incident that could have been a nasty accident).

### Social Implications

How will the finance be raised? Some members may not want a towing system at any price. A solution to that problem is to have a 'Towing Section' within the club, with a membership fee to cover the extra cost. One possible disadvantage is a split in the club and a division and dilution of efforts at protecting the sites and the sport, especially if the Towing Section had its own permanent flat site.

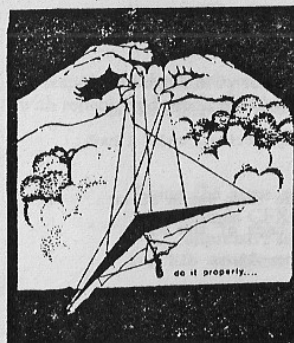
Who would be responsible for the system? Who would maintain it. Who will the trained observers and drivers be, how will they be trained and will there be enough of them to share the work load. Will they mind being left on the ground (with the wives) on a good day while everyone else is going for it?

How efficiently could a system be operated. Can we really find a flat site large enough for heights that can practically ensure getting a thermal? Consider the turn round times. If everybody is switched on and there are no snags then three minutes is a very good turn round time. It's more likely to be 5 minutes (without snags) and that means the pilot at the end of a queue of 20 pilots will have to wait at least one hour and 40 minutes for his one launch.

The gliding clubs have had to be organised differently to hang gliding clubs because of all these factors. A greater degree of co-operation is required than some hang glider pilots are used to. There are those in the club who believe that there would not be enough co-operation to make it work. One solution to some of the problems is for groups of friends to syndicate with a cheap system like Sky System's. Their system should be cheap enough, flexible enough and is likely to be approved by the B.H.G.A. soon. Could that lead to an even greater splintering though? And the possibility of some abuse, when pilots could fly on an unknown site away from the eagle eyes of the club coach (how are your eyes?) or a membership secretary?

Some last thoughts. Hang glider pilots don't seem to appreciate how much they rely on wives and cars. Poorer pundits don't have cars or wives (There are a lot of potential members among the poorer e.g. students - about 40 at Brighton Poly alone). Its very difficult to glide without a car and many drop out for that reason. With a permanent site it should be possible to store gliders there thus encouraging glider sharing and doing away with the need for a car. If small syndicates do form then in some cases it will make sense for them to share a glider as well as a towing system (since 3 pilots might be left on the ground). Such developments would take us further down the road to sailplane club type organisation.

Towing is going to come. I feel that we should try to see where the sport might go. Gliding was ruined for me and many others because the competitive thrust swept it along to a point where few could afford the cost and/or time. Competition is great but we should be aware of its possible disadvantages. Though as long as hang gliders remain foot launched I think we are safe. I hope 'faster aircraft with wheels' is not the next move after towing (see the report of the Nimbus in Oct.85 Wings) I throw these thoughts into the debate in the hope that they might be useful. I'm no expert and I could be wrong about any of it. Use it as you wish. Ray Swinfield



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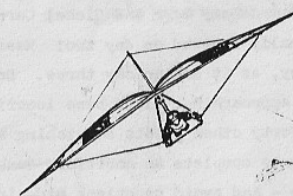
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DEC 84

Just getting into the League is hard enough these days so the least you'd expect, after paying your £50 registration fee, is some decent flying weather.

Out of the 21 days set aside this year for the league competition, only 3 had what could be called 'good' flying conditions.

The first league at Parlick had one flyable day. The task was a 13 km race to goal which turned out to be a bottle job over the back of the hill, into a valley full of rotors: 360's required - zero. Three pilots did get away in thermals early on but for the rest it was whoever could grip the base bar tightest and hang on the longest before shouting "mummy, let me down!". At least two gliders were badly damaged that day. So the stories about the league seemed to be coming true, I thought.

The second league, in the Lake District, again had only one good day's flying: the first day an open distance XC task was called. Due to over reliance on the appalling weather, forecast to hit northern England, I managed to miss this day's flying and so blew a 500 point task out of the window. Johnny Carr and Michel Carnet shared with me the ribbing I got when we finally arrived on day two! Needless to say, day two it rained and blew a holey, as it did on day three. Day four was promising but with a warm front approaching, cloud base lowering and rain falling, I found myself with forty other pilots scratching around like lunatics in the rain and mist trying to complete an ambitious task - a 100 km ridge race with two turn points - and avoid countless mid-air's at the same time. This was especially interesting for me as I wear glasses for flying; it was rather like driving in town with the windscreen wipers on the blink in the pouring rain.

The third league at Newton in mid Wales started with a simple duration task, top to bottom, due to a complete lack of both thermals and wind. Day two at Corndon saw a two turn point race, in and out of ridge lift mainly, in difficult conditions. I had the surprise of my flying life when at 20' up on final approach to land out at the bottom of the hill, I found a series of little blobs enough to scrape back to the hill and scratch back up to the top and through the finish gate. But because I'd taken more than twice as long to complete the task as the fastest pilot in my pool of five, I still scored zero! There was however a sensible reason behind this apparently mad scoring system; it was simply to encourage pilots to race the task instead of finish in 3 hours or some other ridiculously long time. If there's one thing the league teaches you, it's never to give up until you're on the ground.

(continued over)

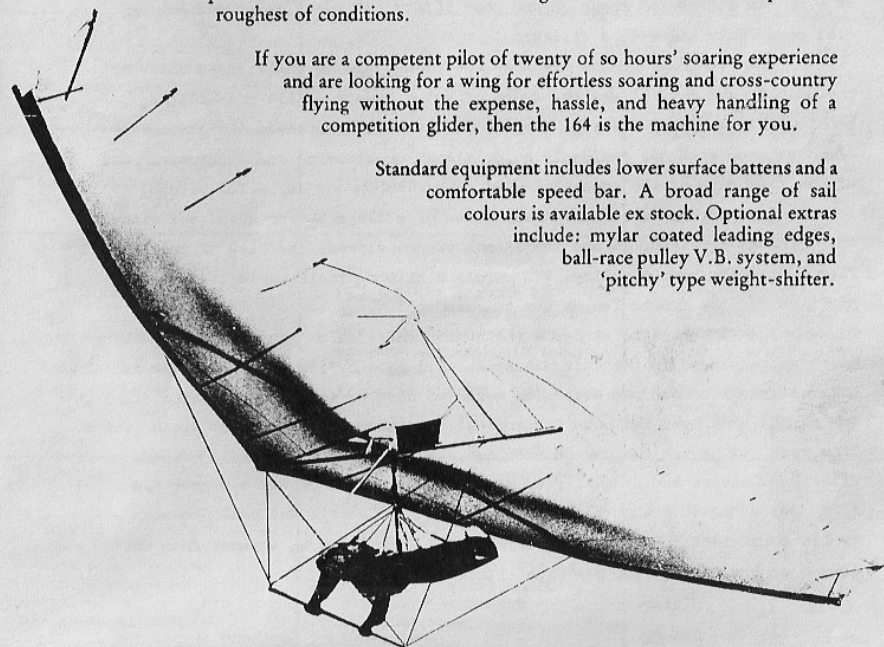
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Day three was a classic XC day but at Corndon Hill we were in wave suppression from another ridge upwind. This meant that while we could all see fabulous clouds forming two or three miles upwind, by the time they were overhead they were decaying fast. Consequently, nobody could get away for ages but Robin Rhodes sneaked away low over the back and reached goal long before anyone else. Once away from Corndon he found thermals everywhere. Eventually at 5 pm the suppression broke up and most pilots got away, about ten making goal some forty kilometers distant.

The fourth league at Glenshee, Scotland, was an unmitigated disaster: the weather was abysmal and the death of Ralph Bygott, whilst free-flying, particularly saddened everyone there. In these circumstances the atmosphere of those mountains was decidedly cold, bleak, unwelcoming and dangerous. Out of the five days of the competition we only flew on one day. Two pilots, John Pendry and Bob Bailey, got away ahead of a large shower cloud and with only minutes remaining before the launch window closed, the rest of the league flew - straight down a valley with hardly a blip on their variors. My total air time for the fourth league was ten minutes!

The fifth league at Hawes in the Yorkshire dales got off to a cracking start as mentioned in the last Windsock. Six pilots flew over 100 miles and a new British XC record was set. The next two days weren't flown and the final day saw a goal task over the back in marginal conditions. John Pendry again won this task as he had the one on Scotland, thus placing him overall second, after Bob Calvert had disqualified himself for reasons of his own from the first day's task. Graham Slater thus became this year's National Champion by his consistently good flying performance, even after an absence from the league of two years. Top ten final placings were :-

1	Slater	2565		
2	Pendry	2558	<u>Other Southern pilots :-</u>	
3	Harvey	2435	14	Bardon 2001
4	Flynn	2392	17	Carr 1834
5	Calvert	2362	20	Martello 1745
6	Muddleston	2288	21	Carnet 1739
7=	Rusbridge	2275	27	Clayton 1463
	Bailey	2275	36	Carrington 1168
9	Graham	2239		
10	Arkwright	2176		

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