

# THE LIGHTWEIGHT HELIKITE

## WHAT IS A LIGHTWEIGHT HELIKITE ?

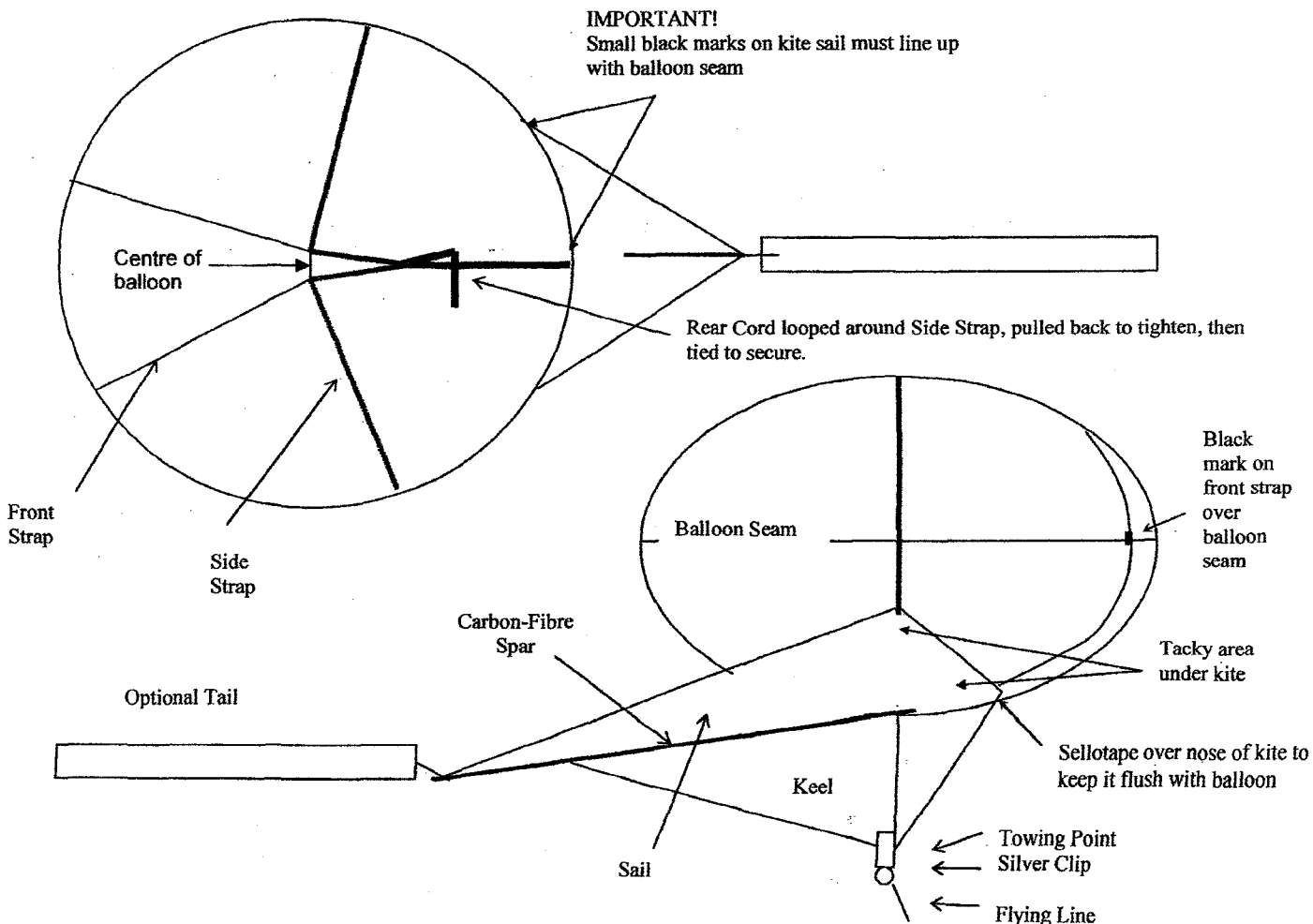
A Lightweight Helikite is a unique combination of a kite and a helium balloon specifically designed by ALLSOPP HELIKITES LTD to fly in hot climates or at high altitude. Originally created for bird control, the Helikite is the worlds only successful lighter-than-air kite.

Designed and patented in England in 1993 by Sandy Allsopp, the Helikite will fly in no wind and also in winds up to 25 miles per hour. Winds above this will bring the Helikite down, as will wet weather due to the weight of the water. However when conditions become favourable again the Helikite automatically re-launches itself. Only Helikites can fly reliably in the boundary layer zero to 200 ft height range, and also above.

Lightweight Helikites are designed to lift objects such as light cameras, radio antennas, banners, wind-meters etc. They can also be used as position markers, fishing kites and are excellent for birdscaring.

### PLEASE READ AND OBEY ALL THESE HELIKITE SAFETY INSTRUCTIONS

1. THIS HELIKITE IS NOT A TOY AND IS NOT INTENDED FOR USE BY CHILDREN.
2. READ ALL INSTRUCTIONS BEFORE USE.
3. OBEY ALL LOCAL, STATE, OR FEDERAL LAWS RELATED TO FLYING KITES IN YOUR AREA.
4. IF POSSIBLE, NEVER FLY HELIKITE DURING ELECTRICAL STORMS BECAUSE IT MAY CONDUCT LIGHTENING DOWN THE LINE. IF THE HELIKITE IS UP DURING AN ELECTRICAL STORM, DO NOT GO NEAR IT UNTIL THE STORM HAS FINISHED, IT WILL PROBABLY SURVIVE.
5. ENSURE NO POWER LINES, TELEPHONE WIRES, TREES, OBSTRUCTIONS, ANIMALS OR PEOPLE CAN COME NEAR THE HELIKITE ANYWHERE IT CAN POSSIBLY FLY. KEEP HELIKITE WELL AWAY FROM POWER LINES AS MAINTENANCE HELICOPTORS PATROL THESE REGULARLY. DO NOT FLY NEAR CROPSPRAYERS OR ANY LOW-FLYING AIRCRAFT.
6. IN BRITAIN, DO NOT FLY WITHIN 5 KILOMETRES OF ANY AIRFIELD WITHOUT AIR TRAFFIC CONTROL PERMISSION. IN THE USA, DO NOT FLY WITHIN 5 MILES OF ANY AIRFIELD WITHOUT AIR TRAFFIC CONTROL PERMISSION.
7. DO NOT FLY OVER ROADS AT ANY TIME.
8. MAX. HEIGHT ALLOWED IS 60 METRES IN BRITAIN AND 500 FEET IN THE USA .
9. IF YOU WISH TO MAKE THE LINE MORE NOTICEABLE, TIE SOME RIBBONS ALONG IT.
10. WEAR GLOVES WHEN HANDLING THE LINE TO AVOID IT CUTTING HANDS.
11. PLEASE NOTE; WHEN WET, THE DISPOSABLE BALLOONS MAY LOSE SOME COLOURING THAT CAN STAIN FABRIC.



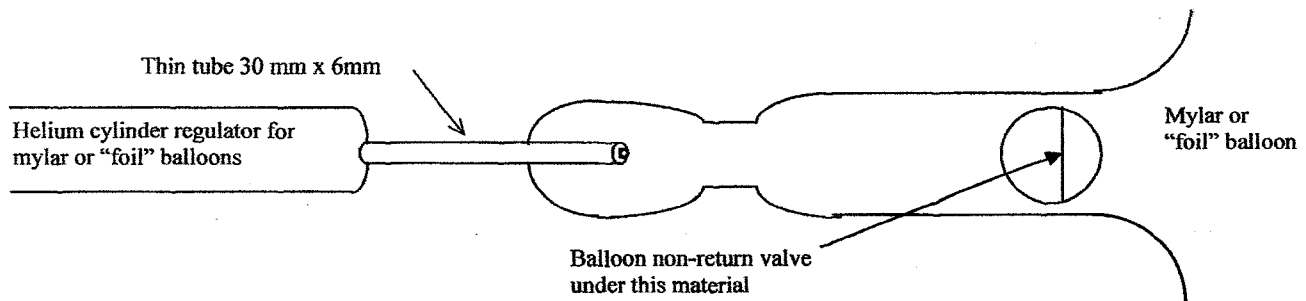
## THE LIGHTWEIGHT HELIKITE PACKAGE SHOULD CONTAIN:

Ripstop-nylon kite sail with straps  
5 Spare mylar (foil) balloons  
Carbon-fibre spar in two sections  
Special extra strength line plus handle  
Sellotape

Silver coloured flying line clip  
1 Heavy swivel  
Drinking straw  
Short length of strong cord  
Instructions

## INSTRUCTIONS FOR PREPARING THE LIGHTWEIGHT HELIKITE FOR FLIGHT

- 1) Push both the carbon-fibre spar sections together.
- 2) Carefully push spar into the two spar pockets. There are ribbons along the kite spine - tie them to the spar to stop the spar bending in flight.
- 3) Firmly tie the small silver coloured clip to the end of the flying line.
- 4) Clip the flying line to the aluminium mooring loop at the base of the triangular keel of the ripstop-nylon cover.
- 5) Lay the balloon on a very clean flat surface with the balloon valve opening facing downwards.
- 6) Place the tacky side of the kite onto the balloon so the black mark on the front strap is at the seam of the balloon. Make sure the kite is symmetrically aligned on the balloon. Place a few inches of Sellotape over the nose of the kite to keep it flush with the balloon.
- 7) Turn the balloon and kite over and arrange the straps around the balloon as shown on the diagrams.
- 8) Tie the straps loosely and be ready to adjust whilst balloon is being filled with helium.
- 9) Screw the helium gas regulator on to your helium or balloon gas cylinder.
- 10) Inflate the balloon by placing the stem of the helium regulator into the non-return valve of the balloon and **slowly** release the gas by turning the main cylinder gas tap on, then pressing the regulator stem gently sideways or downwards (BOC), or by simply pressing the regulator handle (Widget world). **Clamp fingers around balloon valve so air is not sucked into the balloon with the helium.** When the balloon is nearly filled, you will see big creases appear around the edge every four inches. Between these creases there will be numerous little ripples about 3mm wide. Fill the balloon until half of these little ripples have disappeared. **Never fill fast as this damages the balloon valve. To minimise strain on the balloon, fill during the hottest part of the day.**



- 11) Tighten the straps until the kite is firmly stretched onto the balloon to form one aerodynamic unit – a Lightweight Helikite.
- 12) Brush the balloon seam upwards to improve airflow.
- 13) Take the straw and introduce one inch (2.5 cm) of engine or bicycle oil into one end. Very carefully push this end into the first inch (No more!) of the delicate balloon valve. Blow gently to spread the oil up into the balloon valve. Carefully remove the straw. This will greatly reduce gas leakage. **DO NOT USE WD40 or any oil with solvents in it. The balloon valve is very delicate - take great care of it.**

Your Helikite will now be lighter than air. Don't lose it, especially in high winds!

## FLYING THE LIGHTWEIGHT HELIKITE

Moor the Helikite by tying the strong cord to the flying line handle, and then to a stake hammered firmly into the ground. Ensure that nothing can cut or fray the special 80 Kg breaking strain flying line. **Test fixing point by pulling on the flying line, especially if there are electric overhead wires in or near the field. Re-test every time you visit the Helikite.**

Release the line from the handle. The Helikite will move upwards and backwards with the wind. When the desired height is reached, fix the length of the line by doing a figure-of-eight around the hooks on the handle. To stop the line from twisting, introduce the large swivel near the Helikite or at the handle end where it will not add to the weight of the Helikite. The line needs to be cut for this. **If you intend to leave the Helikite unattended for some days, please note that the swivel does not work on its own. Untwist the line yourself every few days. Twisted lines are significantly weaker.**

## **PUNCTURES**

Find the hole by tightly filling with gas and listening. To repair the hole, clean away the colouring around the hole with soap and water, dry it, then cover the hole and surrounding area with any good contact adhesive (e.g. 'Bostic' or 'Evostik'), allow the glue to dry then cover the hole and glue with tape. When the balloon is worn out (normally 14-21 days) replace it with another.

## **WET WEATHER**

If the Helikite is wet it is unlikely to fly. When the rain or fog clears, do not wait for the Helikite to dry itself off, because in winter this may take a while. Dry it with a soft cloth and get it flying. Trying to make a wet Helikite fly by adding extra gas seldom works and strains the balloon. Lightly applying waterproof leather spray or vegetable oil to the Helikite will help repel rainwater. The lightweight Helikite provides little protection for the balloon so do not leave lying on bare ground for long. If you require a Helikite tough enough to leave on the ground in wet weather (as for birdscaring) ask us about the Vigilante Helikite. The colouring on the balloon may come off in wet weather. This does not affect performance but it may mark clothes or car seats if you are not careful.

If you need a Helikite to fly during rain then you need one of our larger "Skyhook Helikites" -- please ring us.

## **FLINTY LAND**

The Lightweight Helikite can be used very successfully above flinty land but care is needed to ensure that it does not touch the jagged flint. The Vigilante Helikite is better suited to flinty land as it has a ripstop-nylon cover surrounding the balloon, however this cover adds weight.

## **HIGH WINDS**

The Helikite, like any airborne object, is vulnerable in strong winds. Even light winds will wear it out eventually, hence the need for daily checking, but winds over 15 mph (26 km/h) increase the wear rate greatly - especially gusts. You fly the Helikite in these winds at your own risk. Having said that, the Helikite has the advantage over normal kites by being able to recover from the turbulent air that usually knock down normal kites in strong winds, especially near trees or buildings. These suggestions will help save you time and money;

- a) Ensure that the balloon is well filled and cannot move within the straps.
- b) Check all knots for looseness, the line for strength, and the Helikite for wear **every day**.
- c) Remove the Helikite from the field if the bad weather continues for long.
- d) Untwist the line every day.
- e) In areas of consistently high winds it is best to use two lines. Contact us for an extra flying line.

## **RODENTS**

There have been some reports of inquisitive hares biting the line of Helikites when they are down. The main problems were with nylon lines and as this Helikite is supplied with special "Dyneema" lines which are far harder to bite through than nylon the problem is reduced. However, check the line's strength every day by pulling it against the stake. If you have many hares, rabbits or gophers etc the use of 2 lines is highly recommended, so please ring us for extra line.

## **STORAGE**

After use, wash in cold water, dry well, roll up carefully and store in the packet. Beware of mice, damp and sharp objects.

## **AVOIDING THEFT**

If you intend to leave the Helikite unattended it is a very good idea for you to put your name, address and telephone number on the Helikite. This helps if you let go of it too! Permanent marker pen or indelible ink is fine for this. You can also offer a reward for return if you wish. It is surprising how much effect this has. Helikites have been returned hundreds of miles away from where they were lost! **To combat theft the Helikite can also be flown from a tall pole painted with grease or anti-climb paint.** You can retrieve the Helikite with a long stick or weighted rope.

## **WHAT ABOUT THE HELIUM ?**

### Within the UK

#### *Balloon Gas Cylinders*

Ask us to arrange 1 x Mighty Widget cylinder (£61 + returnable deposit of £85) and a brass regulator valve (£28) or:  
10 x Midget Widget cylinders including plastic regulator valve (£58.69 + 85 returnable deposit)

### Within the USA

#### *Balloon Gas Cylinders and regulator valves for mylar/foil balloons*

Contact your local industrial gas supplier (e.g. Praxair, BOC or Air Products) for balloon gas. In the US the price is usually about \$20 per bottle.

### Other Countries

#### *Balloons Gas Cylinders and regulator valves for mylar/foil balloons*

You should contact your local supplier (e.g. Linde Gas) for balloon gas cylinder containing about 1.8 metres cubed and regulator valves.

## USES FOR THE LIGHTWEIGHT HELIKITE

Helikites are superb for **publicity**. Banners can easily be attached to the line and flown hundreds of feet high. Everybody for miles can see them and they are virtually cost and maintenance free. Normally two Helikites are stacked one above the other to give extra display and lift. **ALLSOPP HELIKITES LTD** can make you special lightweight banners for Helikites in any design you choose. So if you have a farm shop, PYO business, car sales showroom or take stands at fetes or shows please ring us so we can help you make your bird control pay for itself.

Lightweight Helikites can also lift cameras for **aerial photos**. So you can monitor spray or fertiliser misses, investigate archaeological sites from the air, or photograph your own homestead or others for checking building deterioration, planning gardens, for profit or just fun.

Helikites are superb **birdscarers**. They control up to 25 acres for months at a time against all wild birds.

Nothing is better at **lifting aeriels** than Helikites for absolutely superb reception on very little power. Aerials lifted by Helikites can be very long and avoid the interference solid masts cause. We have contacted Chile from England with excellent reception from a short-wave car based radio.

Helikites allow you to **monitor** wind, temperature, pressure, electrical activity etc at height. Four stacked lightweight Helikites have pulled electrical monitoring equipment up to 5000 ft. On a fine day, all else you need is lots of strong light line, a winch and air traffic permission.

Why not **sample** for **pollutants** or even flying **insects** at height - with Helikites now it is easy and very interesting.

Fly a Helikite above base camp when on the trail so your companions can easily **find camp** before dark or if **lost**. In fact while near lakes or by the sea why not use a Helikite for **fishing**. Simply let the Helikite pull out a small log or buoy to which is attached your fishing line plus bait. In the absence of boats a Helikite will pull miles of line and many hooks out to sea to where the large fish are lying. You can fish safely when it is too rough for boats to venture out. Helikites can easily **pass lines** from boat to boat, or ashore in **emergencies**, or mark the position of **divers**.

Thank-you for taking the time to read all the instructions. If you have any problems or queries, please do not hesitate to contact us. We would also be very pleased to hear from you about any unusual bird behaviour or problems that you may know of either in the UK or overseas. If you are satisfied with your Lightweight Helikite, please tell your friends. If you are dissatisfied, have any suggestions for improvements or wish to purchase spares, please contact:

**ALLSOPP HELIKITES LTD, SOUTH END FARM, DAMERHAM, FORDINGBRIDGE, HAMPSHIRE, SP6 3HW, ENGLAND.**  
**WITHIN UK TEL: 01725 518750 FAX: 01725 518786 FROM USA TEL: 011 44 1725 - 518750 / FAX - 518786**