DUAL

BRUCE GOLDSMITH DES

MANUAL

Power	Trimmer
steering loads tested	risers weight
250 kgs	7.6 kgs

Version 1.4 October 2021

Contents

Manuel du Dual - Infos Rapides

FR

- Les meilleurs caractéristiques de décollage et d'atterrissage sont obtenues avec les trims sur la couture blanche. Cela correspond aux trims relâchés de 25 mm.

- La position tout trimé, n'est à utiliser qu'en cas de forte charge alaire (cad avec un PTV supérieur à 180 kg)

- La rigidité de la poignée de frein peut être ajustée selon la préférence du pilote en mettant, soit les joncs en carbone de 9 cm soit les inserts en plastique souple dans la poignée.

- Le Dual est livré avec une paire de trims de rechange. Cela permettra au pilote de les substituer dès qu'ils seront usés sans avoir à change les élévateurs complets.

Dual Betriebshandbuch – Zusammenfassung

DE

- Die optimale Position der Trimmer für Start und Landung ist die, mit einer weißen Linie markierte Position auf den Trimmern, dabei sind die Trimmer 25 mm offen.

- Die Trimmer ganz zu schließen ist nur empfehlenswert, wenn man am oberen Gewichtslimit fliegt

- Die 9 cm langen Karboneinschübe kann man in die Bremsschlaufen schieben, um sie mit einem harten Griffsteg auzustatten.

- Die mitgelieferten Ersatz-Trimmer sind für den Austausch vorgesehen, wenn die Originalen verschlissen sind.

Dual Manual - Quick Summary

EN

- The best trimmer position for launch and landing is with the trimmer on the white stitch mark (trimmer released 25 mm).

- The trim full slow position is only useful when flying highly loaded.

- The carbon rods 9 cm long can be inserted into the brake handles to make the handles rigid.

- Replacement trimmers are supplied to replace the fitted ones if they become worn.

BRUCE GOLDSMITH DESIGN

DUAL and DUAL LITE Owner's Manual
TANDEM PARAGLIDER EN / LTF B

Welcome to Bruce Goldsmith Design

BGD is a world leader in the design and production of paragliders. For many years Bruce Goldsmith and his team have been developing products with world-beating performance for pilots who want the best. We apply our competitive knowledge to design top quality products that combine the highest performance with the safe handling our customers value and respect. BGD pilots appreciate our quality and reliability. BGD´s world-class status is based on the skills and expertise we have developed in combining aerodynamic design with cloth and materials technology. All BGD products are developed and made with the same skill and attention to good design that are synonymous with the ultimate performance and precision required by paragliders.

Congratulations on your purchase of the BGD DUAL or DUAL LITE

The DUAL / DUAL LITE is a paraglider, designed to a high standard of safety and stability, but it will only retain these characteristics if it is properly looked after. Please read this manual carefully from the first to the last chapter to ensure you get the best out of your wing.

This manual has been prepared to give you information and advice about your paraglider. If you ever need any replacement parts or further information, please do not hesitate to contact your nearest BGD dealer or contact BGD directly.

Introduction

The DUAL/DUAL LITE is a tandem paraglider suitable for both commercial and recreational tandem flying. Exceptional handling and easy launch and landing combined with good speed and performance make this a wing which is real pleasure to fly.

This paraglider must not:

- be flown with more than the maximum certified total load
- have its trim speed adjusted by changing the length of risers or lines (except brake lines)
- be towed with a tow line tension in excess of 200 kg.
- It is your dealer´s responsibility to test fly the paraglider before you receive it. The test flight record of this is on the last page of this manual. Please be sure that this has been completed by your dealer. Failure to test fly a new paraglider may invalidate any warranty.

Any modification, e.g. change of line lengths (except brake lines) or changes to the speed system causes a loss of airworthiness and certification. We recommend that you contact your dealer or BGD directly before performing any kind of change.

Specifications

Projected area	34.33 m^2
Flat area	40.00 m2
Weight excluding bag	7.6 kg (6.3kg)
Total line length	450 m
Height	9.39 m
Number of main lines A/B/C/D	3/4/3/2
Cells	52
Flat aspect ratio	5.3
Projected aspect ratio	3.88
Root chord	3.46 m
Flat span	15.56 m
Projected wingspan	11.50 m
Weight range	120 - 220 kg
Trim speed	42 km/h
Top speed	52 km/h
Min sink	1.0 m/s
Best glide	9.0
Certification	EN B

2 Preparation

1. Select a suitable takeoff area determined by wind and terrain, clear of any obstacles that may catch in the lines or damage the canopy.

2. If your paraglider has been correctly packed, you should take it to the top of the takeoff area, and allow the rolled canopy to unroll itself down the hill (if on a slope). This should leave the paraglider with the bottom surface facing upwards, the openings at the downwind end of the takeoff area, and the harness at the trailing edge at the upwind side.

3. Unroll the canopy to each side so that the leading edge openings form a semicircular shape, with the trailing edge drawn together as the centre of the arch. The harness should be drawn away from the canopy until the suspension lines are just tight.

3 Pre-flight Inspection

The DUAL / DUAL LITE is designed to be as simple as possible to inspect and maintain but a thorough pre-flight procedure is mandatory on all aircraft. The following pre-flight inspection procedure should be carried out before each flight:

Whilst opening out the paraglider check the outside of the canopy for any tears where your paraglider may have been caught on a sharp object or even have been damaged whilst in its bag.

1. Check that the lines are not twisted or knotted. Divide the suspension lines into six groups, each group coming from one riser. By starting from the harness and running towards the canopy remove any tangles or twists in the lines. Partially inflating the canopy in the wind will help to sort out the lines.

2. It is particularly important that the brakes are clear and free to move. Check the knot which attaches the brake handles to the brake lines. Several knots should be used here or they may get entangled in the brake pulleys. Both brakes should be the same length and this can be checked by an assistant holding the upper end of the brake lines together whilst the pilot holds the brake handles. The brake lines should be just slack with the wing inflated when the brakes are not applied. After checking the brake lines lay them on the ground.

3. Always check the buckles and attachments on the harness. Ensure the two main attachment maillons/ karabiners from the harness to the main risers, and the six shackles which attach the risers to the lines, are tightly done up

4. Before the pilot and passenger are attached to their harnesses, both should be wearing a certified helmet. Put on the harness ensuring all the buckles are secure and comfortably adjusted.

Your paraglider is now ready for flight.

4 Flight Characteristics

This manual is not intended as an instruction book on how to fly the DUAL / DUAL LITE. You should be a qualified pilot or under suitable supervision, but the following comments describe how to get the best from your DUAL.

Weight range

The DUAL / DUAL LITE is certified for a very large weight range. The glider flies best in the range of 160-200 kg, though generally it is not sensitive to weight differences, retaining nice flying characteristics throughout the whole of the certified range. The weight refers to the overall takeoff weight, which means the weight of the pilot, the glider, the harness and all other equipment carried with you in flight.

If you fly the DUAL / DUAL LITE in the lower half of its weight range, it will be more damped and slightly less agile. In strong turbulence it will have a slightly greater tendency to deform or collapse than if it was more heavily-loaded. If you mainly fly in weak conditions you should consider flying the DUAL / DUAL LITE at the lower end of the weight range.

If you fly the DUAL / DUAL LITE in the upper half of the weight range it will be more agile, more stable in turbulence and slightly faster. If you fly in bumpy conditions or you prefer a dynamic wing, you should aim to be nearer the top of the weight range.

Active Piloting

Even though the DUAL / DUAL LITE is designed as an easy tandem glider, 'active piloting' is a tool that will help you fly with greater safety and enjoyment. Active piloting is flying in empathy with your paraglider. This means not only guiding the glider through the air but also being aware of feedback from the wing, especially in thermals and turbulence. If the air is smooth the feedback can be minimal but in turbulence feedback is continuous and needs to be constantly assessed by the pilot through

the brakes and the harness. Such reactions are instinctive in good pilots. Maintaining contact with the glider through pressure on the brakes is essential and allows the pilot to feel the loss of internal pressure, which often precedes a collapse. The DUAL / DUAL LITE is highly resistant to collapse without any pilot action at all, but learning how to fly actively will increase this safety margin even further.

Harness

The DUAL / DUAL LITE is tested with a 'GH' (without diagonal bracing) type harness. The GH category includes weight shift harnesses as well as ABS style (semi stable) harnesses.

Takeoff

The DUAL / DUAL LITE is easy to inflate in light or stronger winds and will quickly rise overhead to the flying position. The best inflation technique is to hold one A riser in each hand. It is a matter of personal preference if the pilot prefers to take the big ears riser as well as the main A riser. Both techniques work well.

Nil Wind

Inflation is best done by taking both of the A risers in each hand. The A risers are marked with red cloth to make them easier to find. In nil or very light wind, stand with all the A lines taut behind you, then take one or two steps back (do not walk all the way back to the canopy) and begin your launch run pulling gently and smoothly on the A risers. As soon as the canopy starts to rise off the ground stop pulling so hard on the A risers but pull all the risers evenly through the harness. Maintaining gentle pressure on the A risers always helps in very calm conditions. Have your hands ready to slow up the canopy with the brakes if it starts to accelerate past you.

Reverse Launch

In winds over 10 km/h it is probably better to do a reverse launch and inflate the canopy whilst facing it using the A risers, without the 'Baby A risers' to prevent the glider from inflating the wingtips first. The DUAL / DUAL LITE has little tendency to overshoot but releasing pressure on the A risers when the canopy is at about 45° will help to avoid overshooting. The

stronger the wind and the greater the pressure on the A risers, the more quickly the canopy will rise.

Turning

The DUAL / DUAL LITE does not require a strong-handed approach to manoeuvering. For a fast turn smoothly apply the brake on the side to which the turn is intended. The speed with which the brake is applied is very important. If a brake is applied fairly quickly the canopy will do a faster banking turn, but care must be taken not to bank too severely. To attain a more efficient turn at minimum sink, apply some brake to the outside wing to slow the turn and prevent excessive banking. The DUAL / DUAL LITE flies very well like this, but care must be taken not to over-apply the brakes as a spin could result, although the DUAL / DUAL LITE has a very low spin tendency. The DUAL / DUAL LITE will turn far more efficiently if the pilot weight-shifts into the turn in the harness. Remember that violent brake application is dangerous and should always be avoided.

Straight Flight

The DUAL / DUAL LITE will fly smoothly in a straight line without any input from the pilot. .

Thermalling

To attain the best climb rate the DUAL / DUAL LITE should be thermalled using a mild turn, as described above, keeping the wing´s banking to a minimum. In strong thermals a tighter banking turn can be used to stay closer to the thermal´s core. Remember that weight-shifting in the harness will make the turn more efficient and reduce the amount of brake required. Care must be taken not to apply so much brake as to stall. This is however very easy to avoid as the brake pressure increases greatly as you approach the stall point. Only fly near the stall point if you have enough height to recover.

Wing Tip Area Reduction (Big Ears)

The ‘baby A riser’ allows the DUAL / DUAL LITE to be ‘big eared’ simply and easily. It is recommended not to land in

big ears and to exit from big ears with sufficient height.

The big ear facility does not allow you to fly in stronger winds, but enables the pilot to descend quickly without substantially reducing the forward speed of the canopy (as is the case with B lining). To engage big ears the pilot will need to lean forward in the harness and grasp the big ears risers (one in each hand) at the maillon, keeping hold of both brake handles if possible. Pull the risers out and down at least 30 cm so as to collapse the tips of the glider. It is very important that the other A lines are not affected when you do this as it could cause the leading edge to collapse. Steering is possible by weight-shifting with big ears in. If the big ears do not come out quickly on their own, a pump on the brakes will speed things up.

Before using the big ears facility in earnest it is essential to practice beforehand with plenty of ground clearance in case a leading edge collapse occurs. Always keep hold of both brakes in order to retain control. Putting your hands through the brake handles so they remain on your wrists is a good method of doing this.

B-Line Stall

It is very difficult to make a B-line stall on the DUAL / DUAL LITE due to the high load on the B risers. It is however possible if the pilot is heavier than the passenger. This is a fast descent method and is a useful emergency procedure. With both hands through the brake handles, the pilot takes hold of the top of the B risers, one in each hand, and pulls them down by around 50 cm. This will stall the canopy and its forward speed will drop to zero. Make sure you have plenty of ground clearance because the descent rate can be over 10 m/s. To increase the descent rate pull harder on the B risers. When you release the B risers the canopy will automatically start flying again, normally within two seconds. Sometimes the canopy will turn gently when it exits from the B-line stall. It is normally better to release the B risers fairly quickly rather than slowly, to avoid the canopy entering deep stall. Always release the risers symmetrically. An asymmetric release from a B-line stall may result in the glider entering a spin. This manoeuvre is useful when you need to lose a lot of height quickly, perhaps when escaping from a thunderstorm. It should not be performed with less than 100 m of ground clearance. (see also Chapter 5).

Spiral Dive

A normal turn can be converted into a strong spiral dive by continuing to apply one brake. The bank angle and speed of the turn will increase as the downward spiral is continued. Be careful to enter the spiral graDUALly as too quick a brake application can cause a spin or enter an over-the-nose spiral.
BGD gliders are designed and tested to recover from normal spirals with a descent rate inferior to 16 m/s, automatically without pilot input. If the pilot increases the descent rate of the spiral to over 16 m/s or initiates what is known as an over-the-nose spiral, the glider may require pilot input to recover. In this case all the pilot needs to do is to apply some outside brake and steer the glider out of the turn.
The over-the-nose spiral is a special type of spiral dive where the glider points almost directly at the ground. You can initiate it by making a sudden brake application during the spiral entry. The glider will yaw around and enter the manoeuvre, its nose pointing at the ground, after this the glider picks up speed very quickly. This technique is very similar to SAT entry technique, and like the SAT it is an aerobatic manoeuvre, which is outside the normal safe flight envelope. Please do not practice these manoeuvres as they can be dangerous. Care should be taken when exiting from any spiral dive. To pull out of a steep spiral dive release the applied brake graDUALly, or apply opposite brake graDUALly. A sharp release of the brake can cause the glider to surge and dive as the wing converts speed to lift. Always be ready to damp out any potential dive with the brakes. Also be ready to encounter turbulence when you exit from a spiral because you may fly though your own wake turbulence, which can cause a collapse.

CAUTION:

SPIRAL DIVES CAN CAUSE LOSS OF ORIENTATION (black out) AND SOME TIME IS NEEDED TO EXIT THIS MANOEUVRE. THIS MANOEUVRE MUST BE EXITED IN TIME AND WITH SUFFICIENT HEIGHT!

Trimmers

The DUAL / DUAL LITE is sold with trimmers which have a large range. Launching and landing is normally done with the trimmers released 25 mm from the slowest setting. This position is marked with a white stitch line on the trimmer.

The glider will come up more easily to launch in this configuration. In order to reduce the brake pressure in flight the trimmers can be set to the slowest position, but try to avoid using the slowest trimmer position if you are flying near the bottom of the weight range (below 150 kg all-up weight). If you are near the top of the weight range (over 200 kg all-up weight) it is better to always fly with the trimmers applied fully (slow setting), except for at takeoff. Flying with the trimmers in the slow position helps to reduce the brake pressure and makes flying with heavier weights more comfortable.

IMPORTANT:

- Practise using the trimmer system in normal flying.
- Be careful flying fast in turbulent conditions as deflations are more likely to occur at speed. The speed increase is achieved by reducing the angle of attack, so the canopy has slightly more collapse tendency.
- Remember that your glide deteriorates at higher speeds. Best glides are achieved when the risers are level and the brakes are off.

Check the component parts regularly for wear and tear, and ensure that the system always works smoothly. The trimmers can be easily replaced by the pilot if they become worn. Every DUAL / DUAL LITE is delivered with a spare set.

Landing

Landing the DUAL / DUAL LITE is very straightforward. Flare in the normal way from an altitude of around 2 m when landing in light winds. It may sometimes help to take wraps on the brakes to make the flare more effective. In zero wind conditions it helps to use the pendulum effect of the glider to give a perfect stand-up landing. Trimmers should be released 25 mm, as for takeoff (on the white mark), for the perfect landing flare.

5 Recovery Techniques

Stalls

Stalls are dangerous and should not be practiced in the course of normal flying. Stalls are caused through flying too slowly. Airspeed is lost as brake pressure increases and as the canopy approaches the stall point it will start to descend vertically and finally begin to collapse. Should this occur it is important that the pilot releases the brakes at the correct moment. The brakes should never be released when the wing has fallen behind the pilot; the brakes should be released fairly slowly, to prevent the forward dive of the canopy from being too strong. If you do release the brakes quickly you should brake the canopy strongly during the surge forward, to stop the dive. All pilots who fly the DUAL / DUAL LITE are advised never to attempt this manoeuvre unless under SIV instruction. This manual is not intended to give instruction in this or any other area.

Deep Stall (or Parachutal Stall)

The DUAL / DUAL LITE has been designed so that it will not easily remain in a deep stall. However, if it is incorrectly rigged or its flying characteristics have been adversely affected by some other cause, it is possible that it could enter this situation. In the interests of safety all pilots should be aware of this problem, and know how to recover from it. The most common way to enter deep stall is from a flying too slowly, from a B-line stall or even from big ears.

When in deep stall the pilot will notice the following:

- Very low airspeed
- Almost-vertical descent (like a round canopy), typically around 5m/s.
- The paraglider appears quite well inflated but does not have full internal pressure. It looks and feels a bit limp.

Recovery from deep stall is quite simple:

The normal method is to release the trimmers to the fast position. Normal flight should be recovered in 2 to 4 seconds.

The second method is to pull gently on the A risers. This helps the airflow to re-attach to the leading edge, but be careful not to pull down too hard as this will induce a front collapse.

If the deep stall is particularly stubborn and the previous methods do not work then a full stall will solve the problem. To do this apply both brakes again fairly quickly, as if to do a strong stall, then immediately release both brakes and damp out the surge forward in the normal way. The canopy will swing behind you then automatically reinflate and surge forward in front of you before returning to normal flight. It is the surge forward that exits the canopy from deep stall.

Spins

Spins are dangerous and should not be practiced in the course of normal flying. Spins occur when the pilot tries to turn too fast. In a spin the pilot, lines and canopy basically stay vertical and rotate around a vertical axis.
The DUAL / DUAL LITE will resist spinning, but if a spin is inadvertently induced the pilot should release the brake pressure but always be ready to damp out any dive as the glider exits the spin. If the pilot does not damp the dive on exiting the spin the glider may have an asymmetric deflation.

Symmetric Front Collapse

It is possible that turbulence can cause the front of the wing to symmetrically collapse, though active piloting can largely prevent this from occurring accidentally. A pilot can reproduce the effect by taking hold of both the A risers and pulling down sharply on them. The DUAL / DUAL LITE will automatically recover on its own from this situation in around 3 seconds. During this recovery period it is advisable not to apply the brakes as this could stall the wing..

Asymmetric Front Collapse

The DUAL / DUAL LITE is very resistant to deflations; however if the canopy collapses on one side due to turbulence, the pilot should first of all control the direction of flight by countering on the opposite brake. Most normal collapses will immediately reinflate on their own and you will hardly have time to react before the wing reinflates automatically. The act of controlling the direction will tend to reinflate the wing. However, with more persistent collapses it may be necessary to pump the brake on the collapsed wing using a long, strong, smooth and firm action. Normally one or two pumps of around 80 cm will be sufficient. Each pump should be applied in about one second and smoothly released. In severe cases it can be more effective to pump both brakes together to get the canopy to reinflate. Be careful not to stall the wing completely if this technique is used.

Releasing a trapped tip (cravat)

On the DUAL / DUAL LITE it should be very difficult to trap the tip so that it will not come out quickly. However, following a very severe deflation any canopy could become tied up in its own lines. If this occurs then first of all use the standard method of recovery from a tip deflation as described in Asymmetric Front Collapse above. If the canopy will still not recover then pull the rear risers to help the canopy to reinflate. Pulling the stabilo line is also a good way to remove cravats, but remember to control your flight direction as your number-one priority.If you are very low then it is much more important to steer the canopy into a safe landing place or even throw your reserve.

NOTE: Test pilots have tested the DUAL / DUAL LITE well beyond the normal flight envelope, but such tests are carried out in a very precise manner by trained test pilots with a back-up parachute, and over water. Stalls and spins on any paragliders are dangerous manoeuvres and are not recommended.

FOR MORE INFORMATION AND FURTHER READING ABOUT RECOVERY TECHNIQUES WE HIGHLY RECOMMEND THE ‘SIV BIBLE’ WRITTEN BY BRUCE GOLDSMITH, AVAILABLE AS AN I-BOOK IN DIFFERENT LANGUAGES.

6 Storage and Servicing

Packing

The DUAL / DUAL LITE can be packed in a traditional roll-up method, or concertina folded. Concertina folding will help extend the life of the glider.

1. Select a suitable flat area that is out of the wind if possible.

2. Arrange the canopy with the underside facing upwards and the harness at the trailing edge. Lay all the lines on the canopy. At this stage you may wish to remove your harness.

Now different techniques can be used depending on the kind of inner bag you use:

Stuffsack

3. Roll up the canopy in sections from each tip inwards.

4. Then starting from the harness at the trailing edge, roll up the canopy squeezing out all the air at the same time.

The rolled canopy will now fit neatly into its bag.

Concertina bag.

3. Lay the glider bunched by the lines on top of the concertina bag with the leading edge in position.

4. Concertina the leading edge together with all the plastics lying side by side. Avoid dragging the leading edge over the ground during this procedure.

5. Lay the glider on its side and put the straps around the leading edge.

6. Now squeeze the rest of the air out of the canopy and close the zip.

7. Finally fold the bag in three making sure the leading edge remains unfolded.

Storage & Care

If you have to pack away your canopy wet, do not leave it for more than a few hours in that condition. As soon as possible dry it out, but do not use direct heat sources as it is inflammable!

Always store the canopy in a dry, warm place. Ideally this should be in the temperature range of 5 to 13 degrees centigrade.

Never let your canopy freeze, particularly if it is damp.

The DUAL / DUAL LITE is made from high quality nylon, which is treated against weakening from ultraviolet radiation. However, UV exposure will still weaken the fabric, and prolonged exposure to harsh sunlight can severely compromise the safety of your canopy. Therefore once you have finished flying, put your wing away. Do not leave it laying in strong sunshine unnecessarily. If you are concerned about any aspect of the integrity of your paraglider please contact your nearest BGD dealer or talk to BGD directly.

Do not treat your canopy with chemical cleaners or solvents. If you must wash the fabric, use warm water and a little soap. If your canopy gets wet in sea water, wash it with warm water and carefully dry it.

Small tears in the top or bottom surface (not normally the ribs) of a canopy can be repaired with a patch of self-adhesive ripstop nylon. Tears no longer than 100 mm can be repaired in this way providing they are not in a high-stress area. If you have any doubt about the airworthiness of your canopy please contact your dealer or BGD directly.

Servicing / Inspection

Your BGD DUAL / DUAL LITE should have a thorough check / inspection every 150 hours or 300 flights or 2 years whichever comes first. This check must be made by the manufacturer, importer, distributor or other authorised persons. The checking must be proven by a stamp on the certification sticker on the glider as well in the service book.

We will only accept responsibility for paraglider lines and repairs which we have produced and fitted or repaired ourselves.

Please print out the service pages from this manual, fill in the number of flights and hours flown in the Certificate of Service.and send together with your glider when it goes for inspection or servicing.

Equipment Life Expectancy.

TANDEM GLIDER: to be checked according to the BGD Service Requirements above.

KARABINERS: Make sure you use only certified karabiners with a breaking load of 30KN recommended for tandem use to attach the spreaders to the glider. Solo karabiners with a breaking load of 20KN can only be used to attach the individual harnesses to the spreaders. All karabiners must be replaced according the manufacturer's instructions. We recommend to replace them at least every 5 years or 500 hours or 1000 flights, whichever comes first.

SPREADERS: Spreader bars should be replaced as soon as there is any sign of wear or damage and replaced every 500 hours or 1000 flights or 5 years, whichever comes first.

Environmental protection and recycling

Our sport takes place in the natural environment, and we should do everything to preserve our environment. A glider is basically made of nylon, synthetic fibres and metal. At the end of your paraglider's life span, please remove all metal parts and put the different materials in an appropriate waste/recycling plant.

7 Closing Words

Your DUAL / DUAL LITE is an advanced, stable glider that promises you many hours of safe and enjoyable flying, provided you treat it with care and always keep a respect for the potential dangers of aviation.

Please always remember that flying can be dangerous and you are ultimately responsible for your own safety. With careful treatment you should enjoy many years' safe and happy flying with your wing. It has been tested internationally under current airworthiness standards.

However, the effective lifespan of the new fabrics used in the current generation of gliders is not yet proven, and there are always unforseen natural forces that can threaten your safety, regardless of the quality of construction or the condition of your glider. We strongly recommend that you fly carefully, adapt your flying to the weather conditions and keep sensible safety margins.

We recommend that you fly with a standard harness with back protection and a reserve parachute. Always use good equipment and a certified helmet.

See you in the sky!

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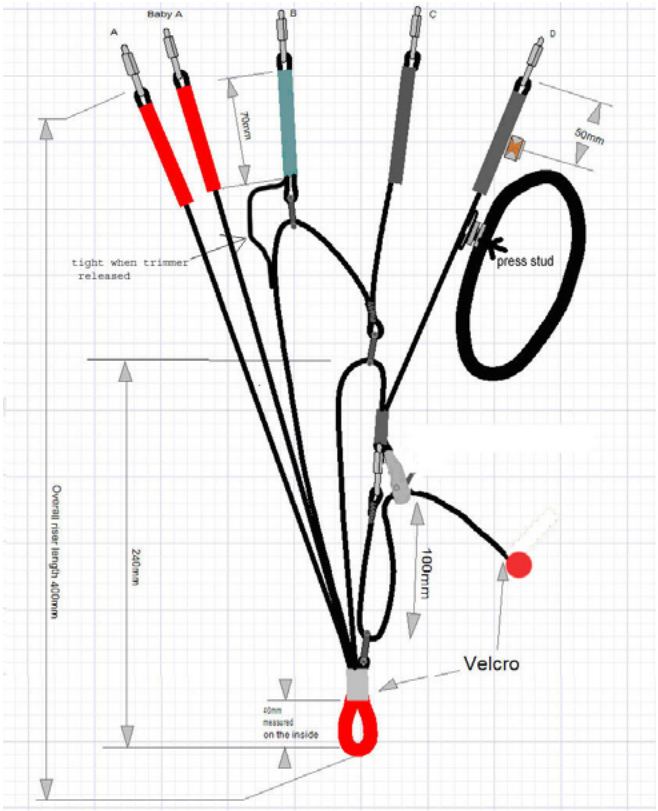
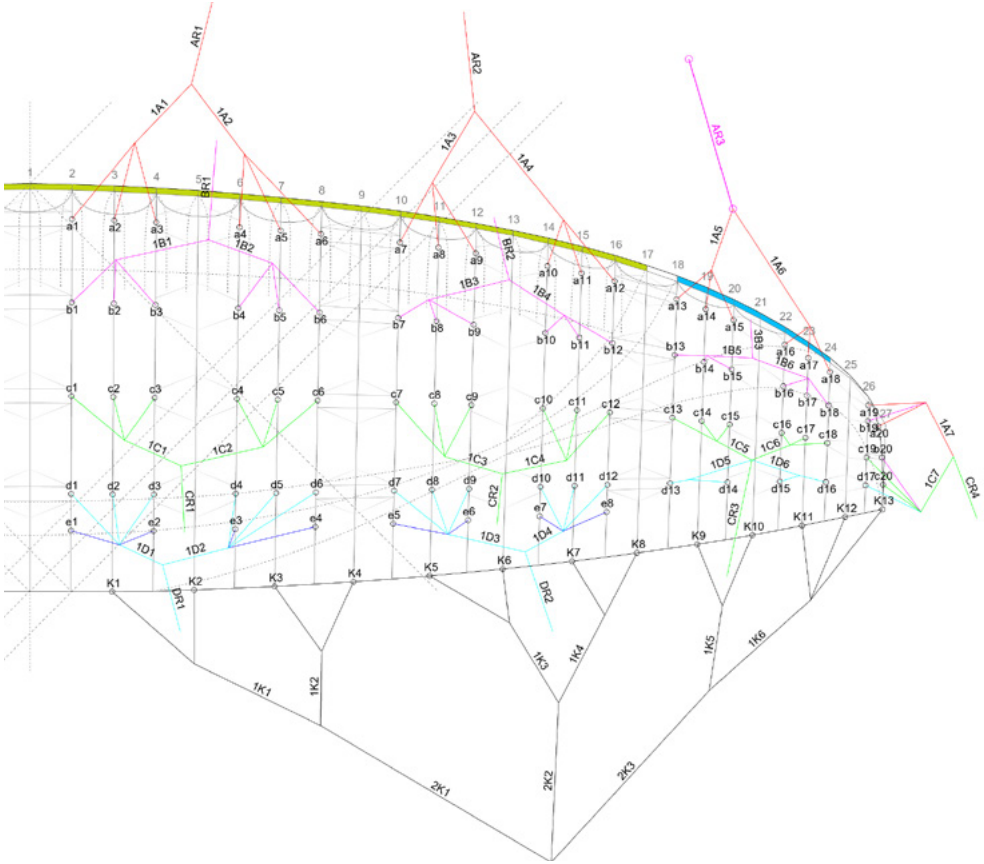
Risers


Baby A
A
B
C
D
70mm
50mm
tight when trimmer released
press stud
Overall riser length 400mm
240mm
100mm
Velcro
40mm measured on the inside

Line layout


AR1
AR2
AR3
1A1
1A2
1A3
1A4
1A5
1A6
1A7
BR1
BR2
1B1
1B2
1B3
1B4
1B5
1B6
3B3
1C1
1C2
1C3
1C4
1C5
1C6
1C7
CR1
CR2
CR3
CR4
1D1
1D2
1D3
1D4
1D5
1D6
DR1
DR2
1K1
1K2
1K3
1K4
1K5
1K6
2K1
2K2
2K3

Line Lengths

Checking	A	B	C	D	E	Brake
1	8593	8475	8518	8656	8729	9447
2	8492	8367	8397	8530	8592	9198
3	8500	8370	8383	8510	8569	8988
4	8468	8346	8361	8491	8659	8927
5	8436	8328	8353	8493	8590	8773
6	8508	8412	8448	8597	8481	8698
7	8431	8340	8371	8517	8479	8695
8	8343	8254	8276	8417	8535	8745
9	8350	8261	8275	8412		8686
10	8307	8239	8263	8409		8603
11	8279	8228	8258	8408		8522
12	8336	8297	8332	8485		8501
13	8186	8128	8191	8289		8566
14	8095	8043	8090	8141		
15	8079	8027	8053	8014		
16	7941	7903	7934	7903		
17	7869	7840	7857	7604		
18	7871	7838	7833			
19	7522	7505	7543			
20	7481	7476	7509			

Please always check the BGD homepage at www.flybgd.com for any updates on the line length check sheets before checking the glider.

SERVICE BOOKLET

Test Flight Record

Model	
Size	
Serial Number	
Colour	
Date of test flight	
Company signature and stamp	

Service Record

Service No 1:
Date :

Stamp - Signature :

No flights :

Type of service :

Service No 2:
Date :

Stamp - Signature :

No flights :

Type of service :

Service No 3:
Date :

Stamp - Signature :

No flights

Type of service :

Owner Record

Pilot No 1

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email:	

Pilot No 2

First name	
Family name	
Street	
City	
Post code	
Country	
Telephone	
Email:	