2003

CO2 | BLACKTIP | ACCESS

KITE MANUAL

CABRINHA

KITEBOARDING CULTURE

RELEASE OF LIABILITY AND ASSUMPTION OF RISK

DO NOT USE THIS PRODUCT UNLESS YOU AGREE WITH THE FOLLOWING TERMS AND CONDITIONS

IMPORTANT WARNING!

THIS WARNING

IS FOR YOUR OWN SAFETY AND PROTECTION. IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS, DO NOT USE THIS PRODUCT. KINDLY RETURN THIS PRODUCT BEFORE USE, AND YOUR PURCHASE PRICE WILL BE REFUNDED IN FULL.

YOU MUST READ THIS INCLUDED USER MANUAL BEFORE USING THIS PRODUCT.

THE INFORMATION CONTAINED
IN THIS MANUAL
IS FOR YOUR REFERENCE
AND MAY BE SUBJECT TO CHANGE
AT ANYTIME.
PLEASE VISIT OUR WEBSITE AT:
www.cabrinhakites.com
FOR CURRENT UPDATES
TO THIS MANUAL.

The user of this product is an adult who understands that the use of this product may expose the user to certain unavoidable risks, dangers, and hazards. The user of this product voluntarily assumes these risks. Before using this product, the user has carefully reviewed, understood, and agrees to comply with the terms of the User's Manual. The user of this product understands and agrees to comply with the terms of the sale. The user of this product understand that the seller is not responsible for any damage to property or injury caused by negligent operation of this product by the user, and the user releases the seller from all such liability. Kiteboarding is an adult sport. Power kites and their lines and control equipment can be dangerous to flyers and to anyone in the vicinity of their use. Kiteboarding must be taken seriously and we recommend that, at least in the early stages of your use, you seek the guidance of experienced kiteboarders. Improper and/or negligent use of this kite may result in serious injury or death to yourself and others. Do not use your kite near power lines, airports, streets and keep your kite fly lines away from people and obstacles. Always fly in an open area, observe wind and weather conditions, particularly in circumstances where you may encounter offshore winds or strong winds. Do not attempt to use your kite on water until you are confident and comfortable with its use on land. Spend time to become familiar with the operation of your kite and remember that you are responsible for its safe operation and for the safety of those around you. As you learn the sport, work within your own limitations and do not exceed them. If you intend to use the kite on water, always use appropriate safety and floatation devices and do not attach yourself or tie yourself permanently to the kite lines. The kite is not intended for use as a flying device nor indeed is it intended as a means of flotation.

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INTRODUCTION

THANK YOU for purchasing a Cabrinha kite and welcome to the sport of kiteboarding.

As you may know, the excitement of kiteboarding is attracting people of all ages from all corners of the globe. It's one of the most dynamic and fastest growing sports of the new decade.

It can also be overwhelming if not approached in an educated and safe manner. That's why we have supplied this extensive user's manual. It will help to educate you about your new kite and about the safe ways in which to use it. It also contains information regarding the set-up, care and maintenance of your new kite so that you can spend as much time on the water as possible.

Please read this user's manual carefully and entirely before using this kite. Do not attempt to kiteboard without appropriate instruction. It will make this sport safer, not only for yourself, but for those around you.

SAFETY

SAFETY GEAR

We strongly recommend the use of the following protective gear:

- GLOVES
- EYE PROTECTION
- SUNSCREEN
- SAFETY KNIFE
- HELMET
- NEOPRENE WET SUIT
- FOOT PROTECTION
- LIFE JACKET, IMPACT VEST OR FLOTATION VEST

KITEBOARDING is an extremely diverse sport, with many disciplines and ability levels. As with all sports, there can be certain inherent risks. The following contains key safety points to remember when operating your Cabrinha kite.

- Always use this kite with the supplied Quick Release Harness Leash.
- NEVER permanently attach yourself to this kite, the control bar, or lines.
- NEVER use this kite as a flying device.
- NEVER touch the bridle lines or the kite lines while under tension; do not catch the kite using any of these lines.
- When inflated but not in use, secure your kite with sand or with something heavy and non abrasive... the more weight the better. An inflatable power kite will still fly, even without a pilot, so be mindful of those around you and secure your kite. Your kite may cause serious injury or death if it launches unexpectedly.
- Do not lend your gear to someone who has not been fully instructed on the use of inflatable kites. Other users should also read this user's manual and be proficient in all its points. ■

WIND, WATER and WEATHER CONDITIONS

- Do not underestimate the power of the wind.
- Be aware of unpredictable and changing weather conditions.
- Avoid "offshore" wind conditions and use extreme caution in "onshore" wind conditions.
- Avoid strong, gusty wind.
- Be careful of wave conditions, especially when learning.
- Be educated about tides and rip currents.
- Be educated about air and water temperatures and wear appropriate protection against the elements.
- Do not use this product in thunderstorms.
- Consult an anemometer to determine wind speeds if necessary.
- Do not use an oversized kite. Consult your Wind Range Chart for correct recommended size. Use your common sense, if in doubt about the size go smaller rather than bigger.

WIND RANGE CHART

These general guidelines are purely for reference only. Your ability, water conditions, and board size will also affect kite selection.

When choosing a kite size please use your personal experience and always refer to the riders on the water for a size reference.

BLACK TIP

SURFACE AREA	CALCULATED AREA	WIND SPEED
7.5	5.5	25 +
8.5	6.3	20 - 25 MPH +
10	7.4	20 - 25 MPH
12	8.8	12 - 24 MPH
14	10.3	10 - 20 MPH
17	12.5	8 - 18 MPH
20	14.7	8 - 15 MPH

CO2

SURFACE AREA	CALCULATED AREA	WIND SPEED
5.5	4.0	25 +
7	5.1	20 - 25 MPH
9	6.6	15 - 25 MPH
12	8.8	12 - 24 MPH
16	11.8	10 - 20 MPH
20	14.7	8 - 18 MPH

ACCESS

SURFACE AREA	CALCULATED AREA	WIND SPEED
5	3.7	25 +
7	5.1	15 - 25 MPH
9	6.6	12 - 24 MPH
12	8.8	10 - 22 MPH
15.5	11.4	8 - 18 MPH

KNOW YOUR ABILITY LEVEL

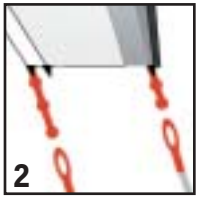
- Do not attempt kiteboarding without appropriate instruction.
- Do not kite alone.
- Launch, land, and ride together with a partner or have someone on shore who can keep an eye on you.
- Make sure you are in good physical condition before using this product.
- Practice flying a small, traction kite or a "trainer kite" before flying this kite. The more time spent on the "trainer kite" the safer and the faster you will learn.
- Make sure you are a proficient swimmer before using this product near the water.
- Make sure the wind and water conditions are within your ability level and that you have made the correct equipment choices.
- Never kiteboard further from shore than you are able to swim back.
- Always save a reserve of energy. End your kiteboarding session before you are exhausted.
- Make sure you've done your homework and that you know the safety precautions of all aspects of the sport; launching, landing, flying, riding, kiting among other water users, self rescuing, etc.
- Understand the technique of self-rescue before using this product near the water.
- Never let someone who is not familiar with inflatable kites launch or catch your kite. You will endanger them, as well as yourself and those around you. You are responsible for the safe operation of your kite.

KITEBOARDING LOCATIONS

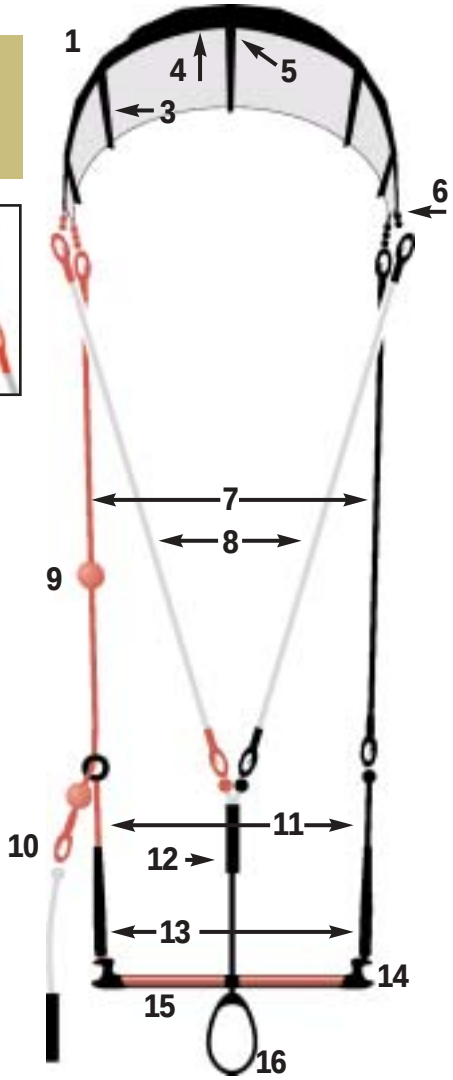
- Talk to the local riders about the weather conditions and beach rules.
- Check your area thoroughly before launching your kite.
- Observe local laws and regulations regarding this product and the usage area.
- Avoid launching, landing or using this product near power lines, telephone poles, trees, people, pets, buildings, automobiles, streets, sharp objects downwind and airports.
- Avoid crowded beaches and waterways.
- Make sure you have considerable space in which to launch, land, and use this product.
- You should have at least 100 meters of space on both sides and downwind of you. Be especially aware of your downwind area.
- Avoid areas with rocks and / or shallow or exposed reefs.
- Be careful and mindful of other water users, including windsurfers, boaters, jetskiers, swimmers, floating objects, etc.
- Be mindful and aware of the wind direction in relation to your launch area.
- Before launching, make sure you have scouted a safe landing area, in case you do not make it back to your launch spot.
- Make sure your lines do not cross a walkway or passage.
- Do not let others walk between you and your kite.

KITE OVERVIEW

THE BLACK TIP KITE
with POWERLOCK CONTROL SYSTEM

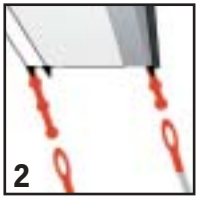


1) 4-Line Kite
2) Multiple Hang Points
3) TruMatch 3D Battens
4) Multi-Segmented Dacron Leading Edge
5) Airlock High Volume Valve
6) Carbon Load Transfer Tip
7) Steering Lines
8) Depower Lines
9) Ball Stopper For QRS Harness Leash
10) Quick Release System Harness Leash
11) Leader Lines
12) Centerline Adjustment Strap
13) Bar Floats
14) Multi-functional Bar Ends
15) Powerlock Bar
16) Powerlock Depower Loop W / Quick Release

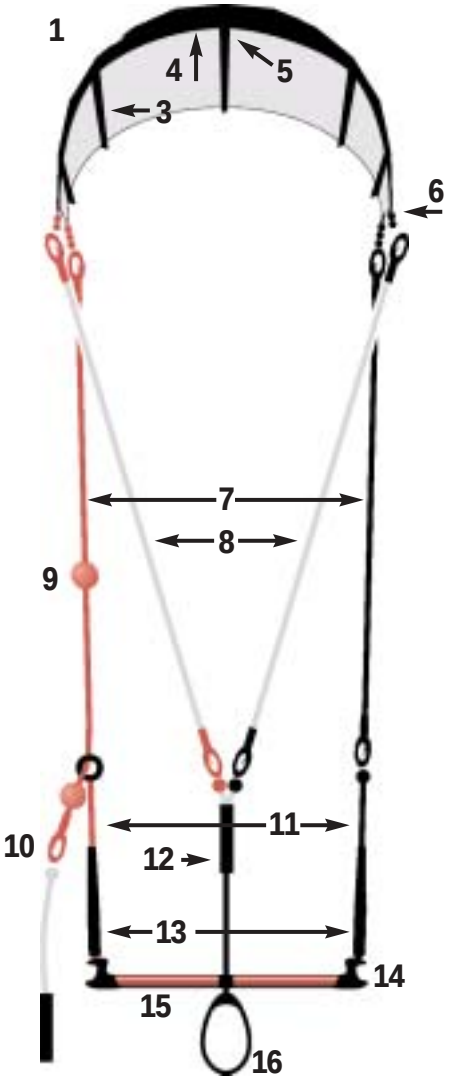


KITE OVERVIEW

THE CO2 & ACCESS
with POWERDRIVE CONTROL SYSTEM (4-LINE)

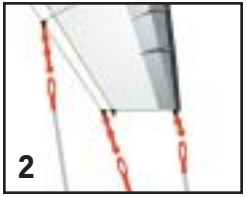


1) 4-Line Kite
2) Multiple Hang Points
3) TruMatch 3D Battens
4) Multi-Segmented Dacron Leading Edge
5) Airlock High Volume Valve
6) Carbon Load Transfer Tip
7) Steering Lines
8) Depower Lines
9) Ball Stopper For QRS Harness Leash
10) Quick Release System Harness Leash
11) Leader Lines
12) Centerline Adjustment Strap
13) Bar Floats
14) Multi-functional Bar Ends
15) Powerlock Bar
16) Powerlock Depower Loop W / Quick Release

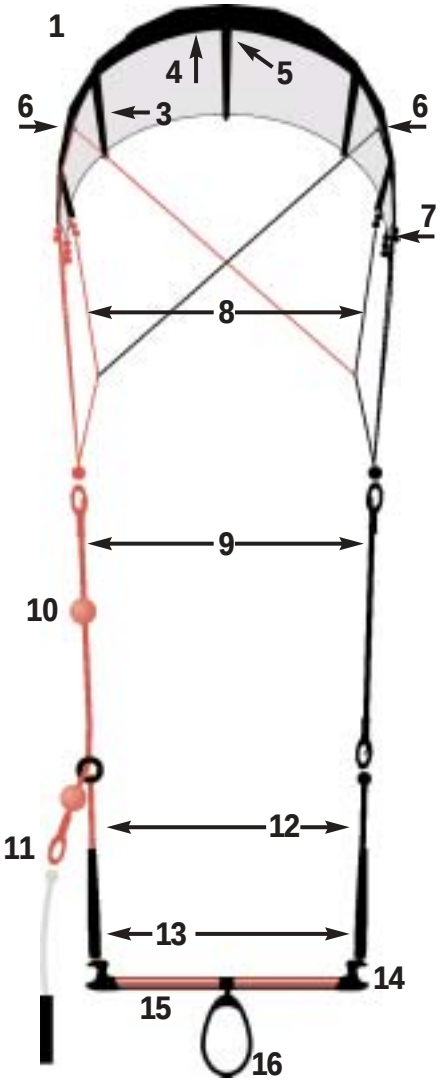


KITE OVERVIEW

THE CO2 & ACCESS
with ERGONOMIC CONTROL SYSTEM (2-LINE)



1) 2-Line Kite
2) 4-Line Capability
3) True Match 3-D Batterns
4) Multi Segmented Dacron Leading Edge (L.E.)
5) Airlock High Volume Valve
6) 2-Line Pulleys
7) Carbon Load Transfer Tip
8) Bridle (2-Line Mode)
9) Steering Lines
10) Ball Stopper For QRS Harness Leash
11) Quick Release System Harness Leash
12) Leader Lines
13) Bar Floats
14) Multi-functional Bar Ends
15) Ergonomic Bar 2- Line
16) Spin Loop w/ QRS



QUICK RELEASE SYSTEMS

We supply a variety of **QUICK RELEASE SYSTEMS** (**QRS**) to aid you in your ability to release completely from your kite.

IMPORTANT QRS TIPS

- Make sure your QRS PULL TAB is facing you.
- To avoid confusion, always ride with the pull tab facing the same direction. In the case of an emergency, you will know where it is.
- You should be familiar with the operation of the QRS in the event of a situation where you wish to activate the QRS feature.

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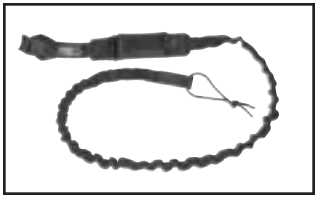


QRS LEASH TETHER

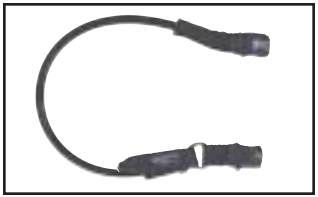
The QRS LEASH TETHER incorporates the design and construction features of our proven wrist leash with the addition of a harness attachment system. This system frees the rider's hands for board handling and comfort.

QR SPIN LOOP

The QR SPIN LOOP HARNESS features a stainless steel swivel in the Spin Loop for smooth action of this harness loop. The swivel is covered with a neoprene sheath for protection and to reduce the "swing" normally associated with spin loops.

QR POWERDRIVE LOOP

This harness loop attaches to the centerline adjustment strap through the Powerdrive fitting allowing "on the fly" tuning of the kite's power. Available in three sizes to suit the needs of all kite boarders. New red color P / U tubing for improved visibility.



QR HARNESS LINE - Standard

Our Quick Release Harness shares the same 2-point attachment and proven design of our standard Harness, with the addition of our new Quick Release System.

QR POWERLOCK LOOP

The Quick Release Powerlock Loop has a manually operated QR detach system to separate rider from rig.

CONTINUED

QR OPERATION

Grab the release tab and pull until the curved pin is free.

Under tension the Velcro will release the harness loop.

RESETTING THE QR

Slide the Velcro through the stainless steel d-ring

Fold the flap back over itself

Guide the grommet over the QR pin retainer

Slide the QR pin through the retainer

Flatten the Velcro over the top of the QR pin

Close the thin Velcro around the system. Your QR system is now ready for use again.

STEP 1
SET UP THE POWERLOCK CONTROL SYSTEM

The **POWERLOCK CONTROL SYSTEM** is a control system for **4-LINE** kites and comes in carbon construction only.

The Powerlock CS allows the rider to interactively lock and unlock the power of the kite.

The PowerLock fitting eliminates the need to have two harness loops on the control bar. The rider has the benefits of both depower and fixed 4-line control with a single harness loop.

IMPORTANT POWERLOCK TIPS

You may fine tune the power of the kite with the Centerline Adjustment Strap (C.A.S.).

Your kite should be tuned so that when the rider is unhooked from the harness line the kite is fully sheeted in (but not over sheeted.)

CONTINUED

POWERLOCK CS INCLUDED COMPONENTS:

- **CONTROL BAR**
  with end fittings and Powerlock fitting
- **30 CM QRS POWERLOCK LOOP**
  (27 cm and 33 cm available)
- **LEADER LINES (2)**
  red (w/ leash ring) = left, black = right.
- **CENTERLINE ADJUSTMENT STRAP**
- **BAR FLOATS**
- **QRS HARNESS LEASH**
- **POWERLOCK "FANGS"**
  There are 3 different power lock "fangs" used to tune the Powerlock Fitting included in this package.

OPERATING THE POWERLOCK CS

TO LOCK: Pull the Bar toward you and engage the Lock Ball into Powerlock fitting.

TO UNLOCK: Pull the bar slightly toward the body and using your wrists, twist the bar towards the rider, disengaging the Lock Ball from the Powerlock Fitting.

Lock Ball *ENGAGED* - Kite is powered and locked

Lock Ball *DISENGAGED* - Kite is depowered

CONTINUED

POWERLOCK TUNING OPTIONS

The Powerlock CS’s locking ability can be tuned to suit rider preference by changing the "fangs".

1. Disengage the Lock Ball from the fitting
2. Using a #2 Phillips head screwdriver, remove the set screw from the fitting.
3. Gently slide the ‘fangs’ vertically from the fitting.
4. Insert the desired ‘fangs’.
5. Replace the set screw and tighten.

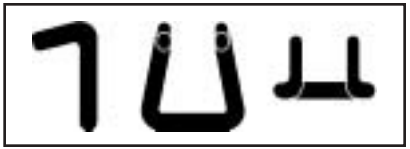
IMPORTANT: Be sure that the fitting has not rotated on the control bar. There is a fixed position for the fitting that is set by a protrusion inside the fitting. This protrusion fits into a hole in the bar. Do not tighten the fitting until you are sure that these line up.

POWERLOCK “FANGS”

Different Powerlock "fangs" are used to tune the Powerlock Fitting.

AGGRESSIVE LOCK: These Fangs are aggressively angled to lock into the Powerlock Fitting most securely. Recommended for riding predominately in the fixed power position with the option to unlock and depower.

NON-AGGRESSIVE-LOCK: These Fangs allow you to disengage from the Powerlock more easily. Recommended for riding predominately depowered with the option of locking in. Recommended for learning to use the Powerlock.



NO-LOCK: These Fangs slide through the Powerlock without the Lock Ball engaging. Works like a regular de-power system without locking ability.

STEP 1.1 SETTING UP THE QRS HARNESS LEASH

When attaching the **QRS HARNESS LEASH**, start by laying out your flying lines, bar, QRS harness leash, accessories and disconnect all hang tags and packaging.

1. Lay the control system on the ground with an unobstructed distance of 40 meters in which you can lay your fly lines out. Make sure that the red leader line is on the left and the black leader line is on the right. Do not untie the knots at the ends of the leaders.
2. Unwind your fly lines, starting at the ends of the leaders and lay them out away from the bar. Be sure you lay the red on the left and the black on the right.
3. You must first attach your QRS (Quick Release System) leash to the red flying line.
4. Attach your leash by sliding the bottom loop of the control line through the ring attached to the end of the left red leader line and then through the eye of the ball and out the other side.
5. Take the end of the line and larks head it to the knot at the end of the QRS harness leash.
6. With one hand hold the ball and the with the other hand pull on the flying line.The knot should pull up into the stopper.
7. Make sure when you pull on your QRS harness leash the leash that the line cleanly slides through the ring with no friction.

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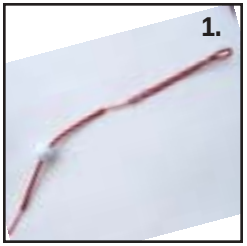
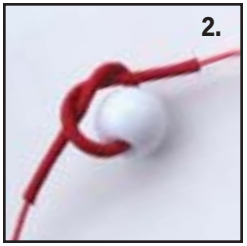
STEP 1.2 THE BALL STOPPER

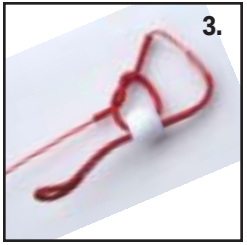
The ball stopper should be preinstalled on your control line. These directions will assist you in reinstalling if necessary.



Lay out your red, left-hand control line with the red ends, slide the top loop of the red control line through the eye of the ball stopper provided and out the other side.

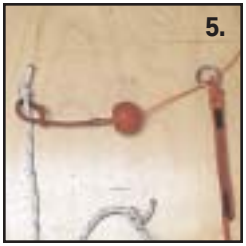


Take the end of the line and tie a half hitch with the ball stopper centered in the middle of the knot.



Now thread the end back around the ball stopper and through the same side of the ball again. Make sure the line is threaded through the hole in the same direction as it was originally threaded through.

Make sure the control line has the red sleeve tubing between the line and the ball, this sleeving protects the control line from the friction on the ball.



To attach the QRS harness leash, you need to first pass the same red control line with the ball, through the stainless steel ring on the end of the left-hand red leader line. When it is through you must now larks head it onto the QRS leash leader line, (same as above).

Now attach the Velcro leash to you harness bar and leave it permanently attached. You are now able to disconnect and connect when launching and landing by using the Velcro connection attached to your harness bar. This leaves your hands free for board handling and comfort.

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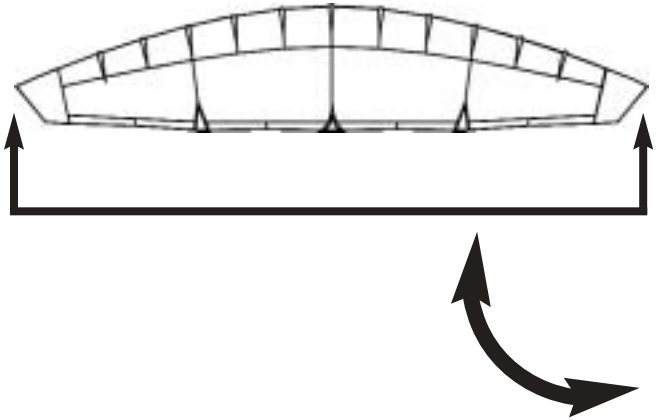
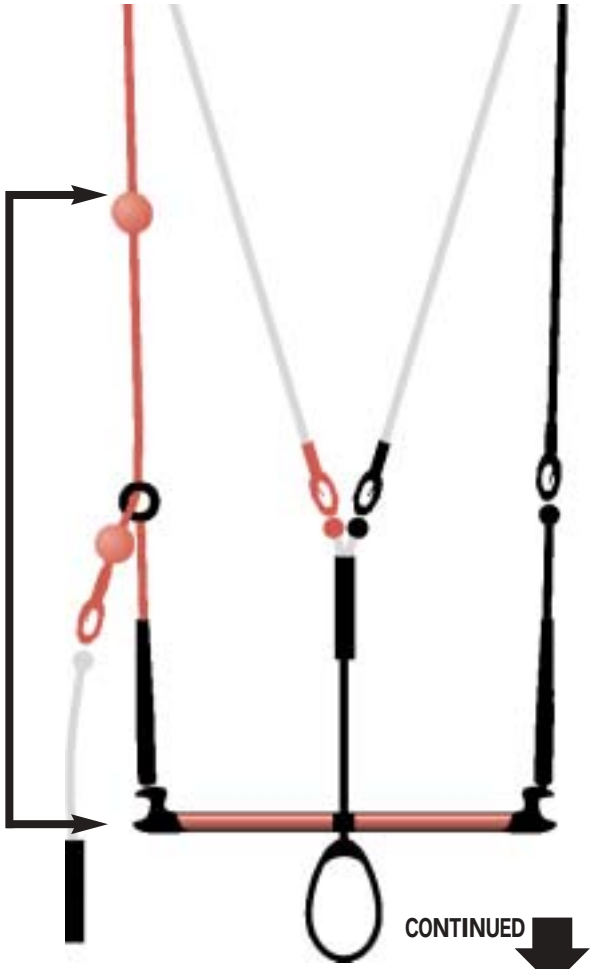




VERY IMPORTANT
SETTING THE LENGTH OF YOUR QRS HARNESS LEASH

The distance the Ball Stopper must be set from the bar is important and should be equal to the span of the kite. For example lay your kite out flat, measure the span of the kite by pacing out the length tip to tip. When you have determined the length, set the Ball Stopper on the flying line the same distance from the bar.

CONTINUED

STEP 1.3 CHECK YOUR LINE LENGTHS BEFORE GOING ON THE WATER

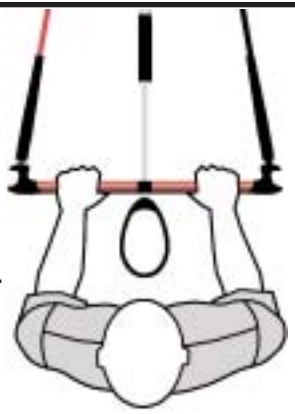
1. Loop a piece of line (any rope or cord) around a tree or fence post
2. Tie the line in a knot, leaving 2 ends of equal length.
3. Tie a knot at the base of each line end.
4. Set your control bars about 30 meters away
5. Lay out the leader lines toward the post. Make sure there are no obstructions in between your bar and the post.
6. Unwind and lay out the color-coded STEERING LINES between the CONTROL BAR and the post.
7. Attach the two red lines to the left rope end on the post
8. Attach the two black lines to the right rope end on the post.
9. Walk back to the control bar
10. Make sure that the centerline adjustment strap is extended, so that the kite is set up at full power.
11. Standing directly in line with the post or tree, increase pressure on the control bar by pulling straight back toward yourself. Do this a few times to tighten the knots you have just made.
12. Now pull back hard and steady on the control bar several times.
13. Your control bar should be in line with your shoulders and should be straight and not at an angle.
14. You will find that all of the lines should have even tension under pressure- i.e. no slack in the depower lines or steering lines.
15. If your control bar is even, your **POWERLOCK CONTROL SYSTEM is ready to attach to your inflated kite.**

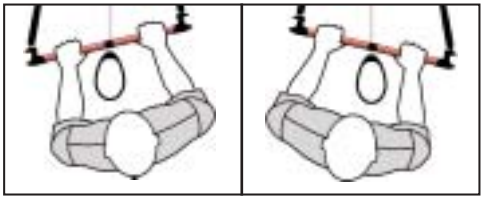
    Proceed to SET UP|STEP 2 - INFLATING YOUR KITE.
16. If you control bar is not even, follow the instructions below in LINE LENGTH CORRECTIONS.

CONTINUED

STEP 1.4 LINE LENGTH CORRECTIONS

CORRECT
Control Bar is even and parallel with your shoulders.





If your bar is at an angle, your leader line needs adjustment.

Adjustments are made by moving the knot on the end of the leader line **on the leader *opposite* the wrist leash leader**.
DO NOT CHANGE THE LEADER LINE WITH THE WRIST LEASH. This line has a set length that enables the system to work properly.

- If the LEADER LINE is too long, loosen the knot and move it toward the bar.
- If the LEADER LINE is too short, loosen the knot and move it away from the bar.
- Re-tighten the knot and check your line length again. Adjust again if necessary until the control bar is balanced.
- DO NOT put knots in your STEERING LINES. Knots in the STEERING LINES compromise the life of the line.
- It is highly unlikely that your centerlines are uneven. If they are, you may make the adjustment by adjusting the knots on the center line adjustment strap leaderlines. You will attach the longer of the two flying lines to the knot closest to your bar and the shorter line to the knot closest to the kite. Once you've made the proper adjustment, check the bar again. ■

STEP 1
SET UP THE POWERDRIVE CONTROL SYSTEM

The **POWERDRIVE CONTROL SYSTEM** is a control system for **4-LINE** kites and comes in alloy or carbon constructions. Both the alloy and carbon bars are set up identically.

The POWERDRIVE CS allows the rider to interactively change the power of the kite when hooked into the Powerdrive Harness Loop.

- By hooking solely into the depower loop, the rider can simply push the control bar away from your body to reduce the power of the kite. It is also possible to hook into both the fixed harness loop and the depower loop at the same time. This sets the kite into fixed power mode. To change back to depower mode, simply unhook from the fixed harness line while remaining in the depower loop.
- You may fine-tune the power of the kite with the centerline adjustment strap (C.A.S.).
- Your kite should be tuned so that when the rider is hooked into the fixed harness line the kite is fully sheeted in (but not over sheeted.)
- See 4-line tuning for proper settings.

CONTINUED

STEP 1.1 SETTING UP THE QRS HARNESS LEASH

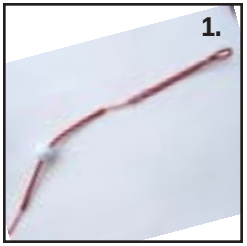
When attaching the **QRS HARNESS LEASH**, we suggest you start by laying out your flying lines, bar, QRS harness leash, accessories and disconnect all hang tags and packaging.

1. Lay the control system on the ground with an unobstructed distance of 40 meters in which you can lay your fly lines out. Make sure that the red leader line is on the left and the black leader line is on the right. Do not untie the knots at the ends of the leaders.
2. Unwind your fly lines, starting at the ends of the leaders and lay them out away from the bar. Be sure you lay the red on the left and the black on the right.
3. You must first attach your QRS (Quick Release System) leash to the red flying line.
4. Attach your leash by sliding the bottom loop of the control line through the ring attached to the end of the left red leader line and then through the eye of the ball and out the other side.
5. Take the end of the line and larks head it to the knot at the end of the QRS harness leash.
6. With one hand hold the ball and the with the other hand pull on the flying line.The knot should pull up into the stopper.
7. Make sure when you pull on your QRS harness leash the leash that the line cleanly slides through the ring with no friction.

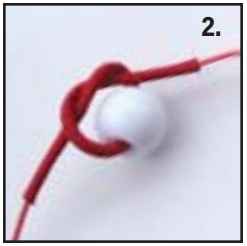
CONTINUED

STEP 1.2 THE BALL STOPPER

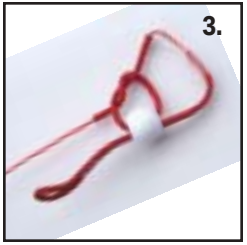
The ball stopper should be preinstalled on your control line. These directions will assist you in reinstalling if necessary.



Lay out your red, left-hand control line with the red ends, slide the top loop of the red control line through the eye of the ball stopper provided and out the other side.

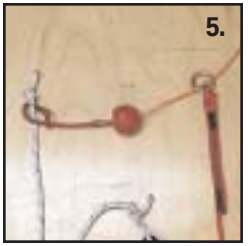


Take the end of the line and tie a half hitch with the ball stopper centered in the middle of the knot.



Now thread the end back around the ball stopper and through the same side of the ball again. Make sure the line is threaded through the hole in the same direction as it was originally threaded through.

Make sure the control line has the red sleeve tubing between the line and the ball, this sleeving protects the control line from the friction on the ball.



To attach the QRS harness leash, you need to first pass the same red control line with the ball, through the stainless steel ring on the end of the left-hand red leader line. When it is through you must now larks head it onto the QRS leash leader line, (same as above).

Now attach the Velcro leash to you harness bar and leave it permanently attached. You are now able to disconnect and connect when launching and landing by using the Velcro connection attached to your harness bar. This leaves your hands free for board handling and comfort.

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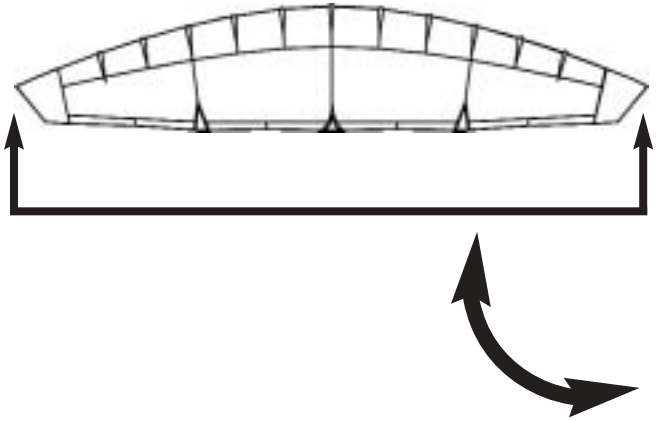
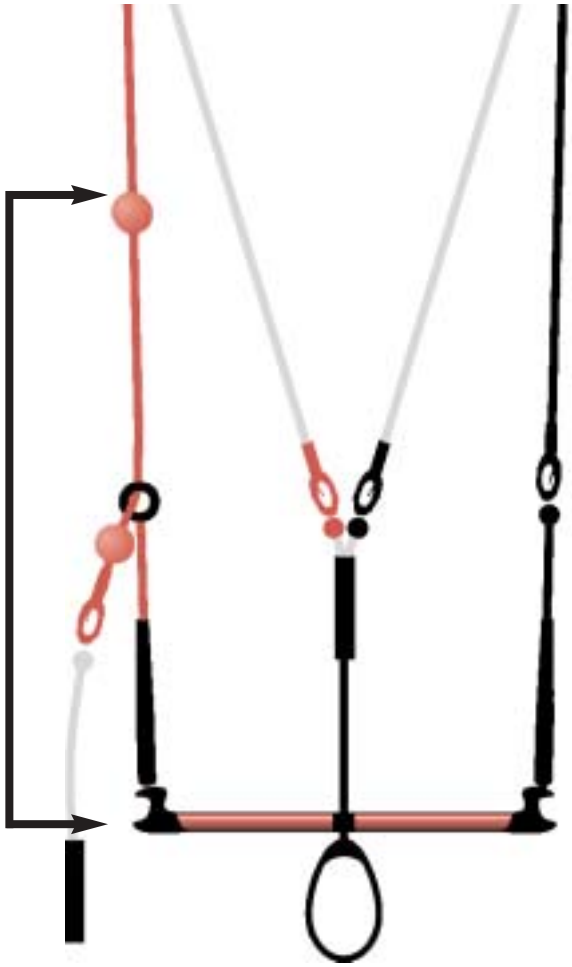




VERY IMPORTANT
SETTING THE LENGTH OF YOUR QRS HARNESS LEASH

The distance the Ball Stopper must be set from the bar is important and should be equal to the span of the kite. For example lay your kite out flat, measure the span of the kite by pacing out the length tip to tip. When you have determined the length, set the Ball Stopper on the flying line the same distance from the bar.

STEP 1.3 CHECK YOUR LINE LENGTHS BEFORE GOING ON THE WATER

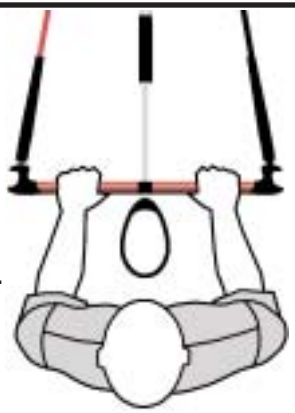
1. Loop a piece of line (any rope or cord) around a tree or fence post
2. Tie the line in a knot, leaving 2 ends of equal length.
3. Tie a knot at the base of each line end.
4. Set your control bars about 30 meters away
5. Lay out the leader lines toward the post. Make sure there are no obstructions in between your bar and the post.
6. Unwind and lay out the color-coded STEERING LINES between the CONTROL BAR and the post.
7. Attach the two red lines to the left rope end on the post
8. Attach the two black lines to the right rope end on the post.
9. Walk back to the control bar
10. Make sure that the centerline adjustment strap is extended, so that the kite is set up at full power.
11. Standing directly in line with the post or tree, increase pressure on the control bar by pulling straight back toward yourself. Do this a few times to tighten the knots you have just made.
12. Now pull back hard and steady on the control bar several times.
13. Your control bar should be in line with your shoulders and should be straight and not at an angle.
14. You will find that all of the lines should have even tension under pressure- i.e. no slack in the depower lines or steering lines.
15. If your control bar is even, your **POWERLOCK CONTROL SYSTEM is ready to attach to your inflated kite.**

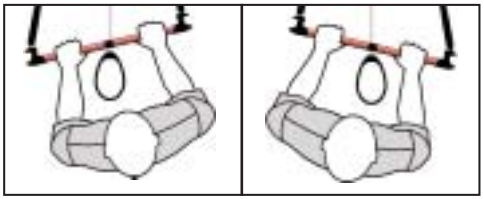
    Proceed to SET UP|STEP 2 - INFLATING YOUR KITE.
16. If you control bar is not even, follow the instructions below in LINE LENGTH CORRECTIONS.

CONTINUED

STEP 1.4 LINE LENGTH CORRECTIONS

CORRECT
Control Bar is even and parallel with your shoulders.





If your bar is at an angle, your leader line needs adjustment.

Adjustments are made by moving the knot on the end of the leader line **on the leader *opposite* the wrist leash leader**.
DO NOT CHANGE THE LEADER LINE WITH THE WRIST LEASH. This line has a set length that enables the system to work properly.

- If the LEADER LINE is too long, loosen the knot and move it toward the bar.
- If the LEADER LINE is too short, loosen the knot and move it away from the bar.
- Re-tighten the knot and check your line length again. Adjust again if necessary until the control bar is balanced.
- DO NOT put knots in your STEERING LINES. Knots in the STEERING LINES compromise the life of the line.
- It is highly unlikely that your centerlines are uneven. If they are, you may make the adjustment by adjusting the knots on the center line adjustment strap leaderlines. You will attach the longer of the two flying lines to the knot closest to your bar and the shorter line to the knot closest to the kite. Once you've made the proper adjustment, check the bar again. ■

STEP 1
SET UP THE ERGONOMIC CONTROL SYSTEM

The **ERGONOMIC CONTROL SYSTEM** is a control system for **2-LINE** kites and comes in alloy or carbon constructions. Both the alloy and carbon bars are set up identically.

INCLUDED COMPONENTS

- Control bar with end fittings
- 33 cm Quick Release Spin Loop
- Leader lines (2)
  red (w/ leash ring) = left
  black = right.
- Bar Floats
- Quick Release System (QRS) Harness Leash

CONTINUED

STEP 1.1 SETTING UP THE QRS HARNESS LEASH

When attaching the **QRS HARNESS LEASH**, we suggest you start by laying out your flying lines, bar, QRS harness leash, accessories and disconnect all hang tags and packaging.

1. Lay the control system on the ground with an unobstructed distance of 40 meters in which you can lay your fly lines out. Make sure that the red leader line is on the left and the black leader line is on the right. Do not untie the knots at the ends of the leaders.
2. Unwind your fly lines, starting at the ends of the leaders and lay them out away from the bar. Be sure you lay the red on the left and the black on the right.
3. You must first attach your QRS (Quick Release System) leash to the red flying line.
4. Attach your leash by sliding the bottom loop of the control line through the ring attached to the end of the left red leader line and then through the eye of the ball and out the other side.
5. Take the end of the line and larks head it to the knot at the end of the QRS harness leash.
6. With one hand hold the ball and the with the other hand pull on the flying line.The knot should pull up into the stopper.
7. Make sure when you pull on your QRS harness leash the leash that the line cleanly slides through the ring with no friction.

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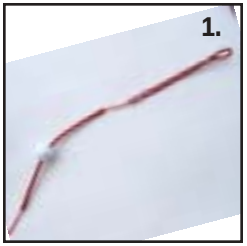
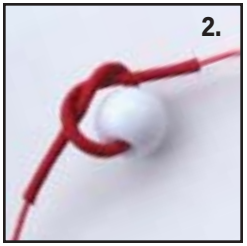
STEP 1.2 THE BALL STOPPER

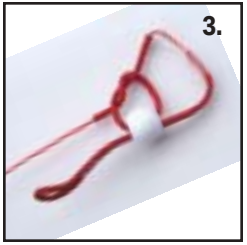
The ball stopper should be preinstalled on your control line. These directions will assist you in reinstalling if necessary.



1. Lay out your red, left-hand control line with the red ends, slide the top loop of the red control line through the eye of the ball stopper provided and out the other side.

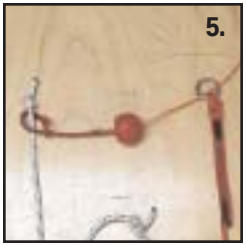


2. Take the end of the line and tie a half hitch with the ball stopper centered in the middle of the knot.



3. Now thread the end back around the ball stopper and through the same side of the ball again. Make sure the line is threaded through the hole in the same direction as it was originally threaded through.

4. Make sure the control line has the red sleeve tubing between the line and the ball, this sleeving protects the control line from the friction on the ball.



5. To attach the QRS harness leash, you need to first pass the same red control line with the ball, through the stainless steel ring on the end of the left-hand red leader line. When it is through you must now larks head it onto the QRS leash leader line, (same as above).

6. Now attach the Velcro leash to you harness bar and leave it permanently attached. You are now able to disconnect and connect when launching and landing by using the Velcro connection attached to your harness bar. This leaves your hands free for board handling and comfort.

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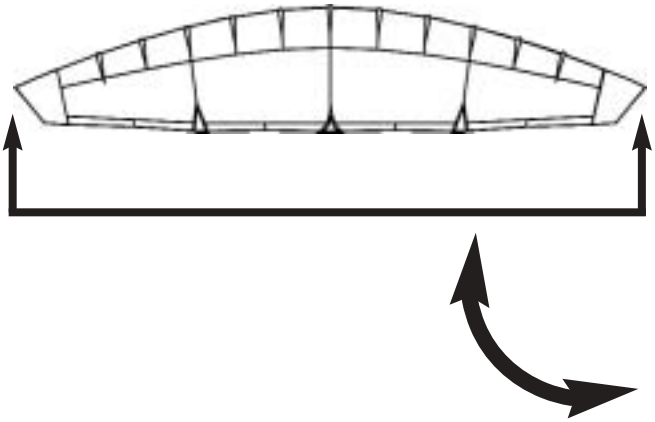
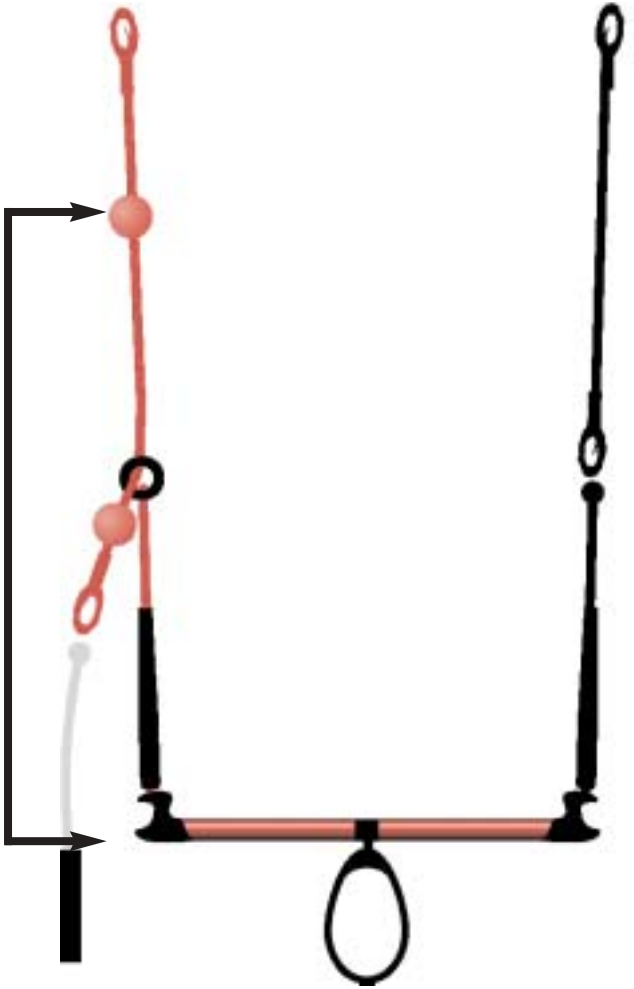


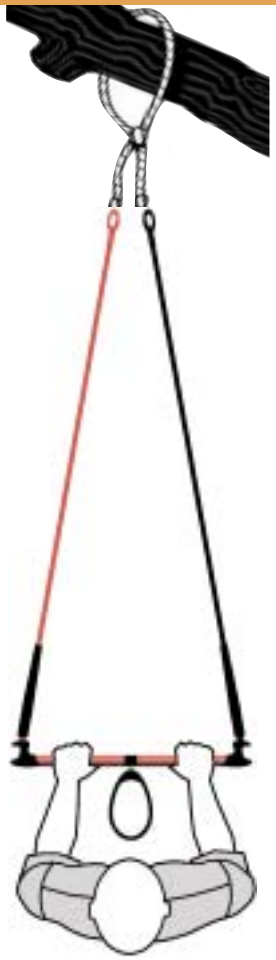
VERY IMPORTANT
SETTING THE LENGTH OF YOUR QRS HARNESS LEASH

The distance the Ball Stopper must be set from the bar is important and should be equal to the span of the kite. For example lay your kite out flat, measure the span of the kite by pacing out the length tip to tip. When you have determined the length, set the Ball Stopper on the flying line the same distance from the bar.



STEP 1.3

CHECK YOUR LINE LENGTHS BEFORE GOING ON THE WATER



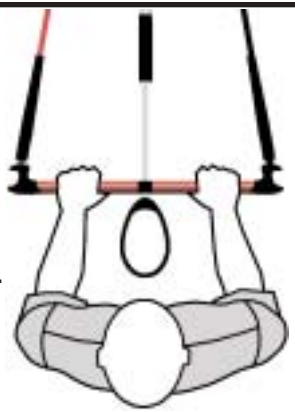
1. Loop a piece of line (any rope or cord) around a tree or fence post
2. Tie the line in a knot, leaving 2 ends of equal length.
3. Tie a knot at the base of each line end.
4. Set your control bars about 30 meters away
5. lay out the leader lines toward the post. Make sure there are no obstructions in between your bar and the post.
6. Unwind and lay out the color-coded STEERING LINES between the CONTROL BAR and the post.
7. Attach the steering lines to the knots on the post. (IMAGE)
8. Standing directly in line with the post, increase pressure on the control bar by pulling straight back towards your self. Do this a few times to tighten the knots you have just made. Pull back hard on the contol bar several times.
9. Your control bar should be inline with your shoulders and straight, not at an angle.
10. If your control bar is even, your **ERGONOMIC CONTROL SYSTEM is ready to attach to your inflated kite.**

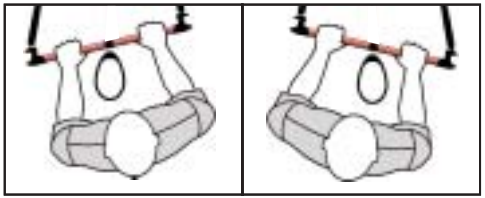
    Proceed to SET UP|STEP 2 - INFLATING YOUR KITE.
11. If your control bar is not even, follow the instructions for Line Length Corrections.

CONTINUED

STEP 1.4 LINE LENGTH CORRECTIONS

CORRECT
Control Bar is even and parallel with your shoulders.





If your bar is at an angle, your leader line needs adjustment.

Adjustments are made by moving the knot on the end of the leader line **on the leader *opposite* the wrist leash leader**.
DO NOT CHANGE THE LEADER LINE WITH THE WRIST LEASH. This line has a set length that enables the system to work properly.

- If the LEADER LINE is too long, loosen the knot and move it toward the bar.
- If the LEADER LINE is too short, loosen the knot and move it away from the bar.
- Re-tighten the knot and check your line length again. Adjust again if necessary until the control bar is balanced.
- DO NOT put knots in your STEERING LINES. Knots in the STEERING LINES compromise the life of the line.
- It is highly unlikely that your centerlines are uneven. If they are, you may make the adjustment by adjusting the knots on the center line adjustment strap leaderlines. You will attach the longer of the two flying lines to the knot closest to your bar and the shorter line to the knot closest to the kite. Once you've made the proper adjustment, check the bar again. ■

STEP 2
INFLATING THE STRUTS

Hold the pump at a perpendicular angle to the valve. Use one hand to hold the valve steady and the other hand to operate the pump.

Secure Velcro covering over each strut valve.

1. Unroll your kite, with the Struts facing up.
2. Make sure your back is to the wind and that the leading edge of the kite is closest to your body. Secure the wingtips with sand to keep the kite from flapping.
3. Partially inflate the center strut, then the two middle struts, followed by the end struts.
4. When inflating, hold the pump at a perpendicular angle to the kite valve. Use one hand to hold the valve steady and the other hand to operate the pump. This will help maintain the life of the internal bladder.
5. When all struts are partially inflated, go back to each strut, making sure the internal bladders are lined up correctly.
6. Confirm that the corners under the leading edge are able to fully inflate. Lightly push air around in the bladders until the corners are free and correctly lined up.
7. Now fully inflate each strut.
8. Secure the valve plug and attach the Velcro covering across each valve. image
9. Do not over-inflate the struts, if it is fairly solid to the touch, it is fully inflated.
10. Do not under-inflate the struts, this will cause poor performance and relaunching problems.

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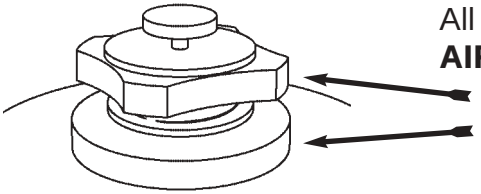
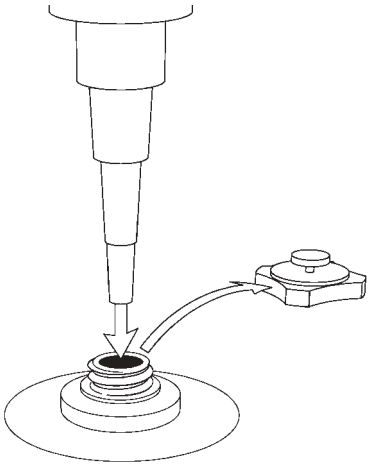
STEP 2
INFLATING THE LEADING EDGE



All Cabrinha kites feature the 2-part, high-volume **AIRLOCK VALVE**.

THE UPPER SECTION IS THE INFLATION CAP.
THE LOWER SECTION IS THE RELEASE VALVE.



1. Make sure that the release valve is seated firmly by turning clockwise. Do not over tighten the valve when the kite is not inflated. Doing so may damage the bladder.
2. Open the inflation cap by screwing it counter clockwise. Insert pump (use the adapter tubing if using a hand pump) and inflate the leading edge (L.E.).
3. When the L.E. is fully inflated, remove pump valve and screw the inflation cap back on. Lightly turn / tighten until LE is fully inflated. Check that the release valve is secure.

CONTINUED

STEP 2
INFLATING THE LEADING EDGE (CONTINUED)

TIPS FOR SECURING YOUR KITE

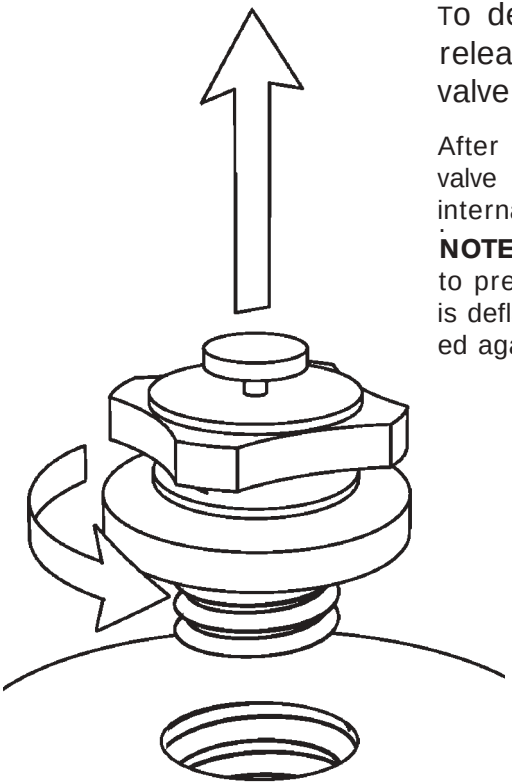
- Always secure your kite with more weight than you think you need. An unmanned kite is dangerous. If you do not have a sandy beach launch, consider sandbags.
- Do not store the kite on the beach exposed to the wind. This will compromise the life of your kite.
- Never secure your kite with rocks or sharp objects; they will compromise the life of the kite.
- Keep in mind other beach users and make sure your kite and lines will not be a danger to others.
- Wind your line onto the bar when you are not kiting. This will keep the beach free of line and will prevent other beach users from becoming tangled in your equipment. ■

4. Make sure you line up the triangle arrow with the white marker dot on the valve.
5. If this white marker dot is not in line, deflate bladder, twist valve into position, and reinflate.
6. Do not under-inflate Leading Edge. Proper inflation will make it difficult but not impossible to bend the ends of the kite in. If it is very easy to do this, the leading edge is under-inflated. Kite should be firm enough that if you turn it onto its back, wing tips should extend into the air and kite should retain its bowed shape.
7. Secure the kite with sand.

Your inflated kite is now ready to be attached to your assembled control system.
Proceed to SET UP|STEP 3 - ATTACHING YOUR KITE

■

DEFLATING THE LEADING EDGE

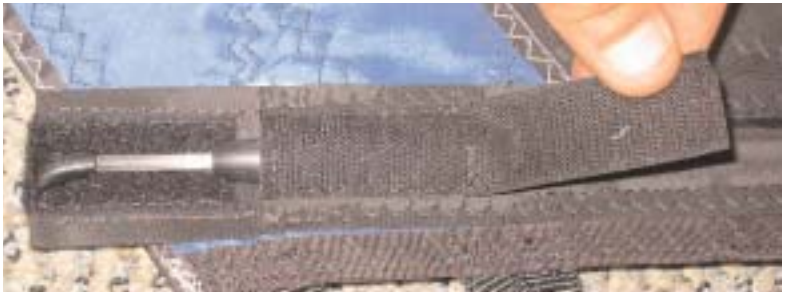


To deflate the Leading Edge, you must unscrew the release valve and not the inflation cap. The release valve is the lower portion of the **AIRLOCK**.

After deflating, clear valve of any sand or debris, then seal the valve before stowing kite to prevent debris from getting inside internal bladder
.

NOTE: when closing valve on deflated kite, hold bladder in place to prevent twisting bladder. Do not over tighten valve when kite is deflated. You may tighten it further when kite is partially inflated again.

THE CARBON LOAD TRANSFER TIP



The **CARBON ROD BATTEN** comes pre-installed.
If the rod has been removed, replace the rod as follows:

1) Slide the batten into the back of the batten pocket, slide it all the way forward in the batten pocket.

2) Use the Velcro adjustment located at the trailing edge of the batten pocket to secure batten and tension you do not need positive tension in the wing tip material.

STEP 3
ATTACHING CONTROL LINES (4-LINE KITE)

Once you have completed **SET UP|STEPS 1 and 2**, you are ready to connect your Control System to your inflated kite.

In order to use your 4-line control system, your Access or CO2 must be configured for four lines. (See section on removing the 2-LINE bridle)

1. With your lines laid out carry the kite to the end of the flying lines furthest from your control bar. Make sure the leading edge is facing into the wind.
2. Secure the kite with sand or sand bags.
3. You will notice four connection bridles on your kite (2 on each wingtip). There are three knots on the rear bridle and one knot on the front bridle. Utilize the middle knot on the rear bridle. The other knots are there for tuning purposes.

Proceed to SET UP|STEP 3 - DOWNWND or UPWIND LAUNCH SET UP

CONTINUED

STEP 3
DOWNWIND LAUNCH SET UP
(bar and lines extend downwind from the kite)

1) Lay the bar 30 meters downwind of the kite so that the tips are facing the control bar. When setting the bar up downwind of the kite, you must turn the bar upside down before walking the lines out. This means that the red-sheathed lines are on the right, while the black-sheathed lines are on the left.
2) Walk out the steering lines and attach them to the back bridles (trailing edge). (Remember, red-to-red; Black-to-Black)
3) Walk out the white depower lines and attach them to the front bridles (leading edge). Make sure that the depower lines do not cross the steering lines.

Your kite is now ready to fly. Please see the sections of this manual that relate to safety and make sure you are familiar with the conditions before getting on the water. Kite tuning tips are located in this manual under the 4-Line Tuning.

CONTINUED

STEP 3
UPWIND LAUNCH SET UP
(bar and lines extend upwind from the kite)

This is the necessary set up when performing a self-launch.

1. Lay the bar 30 meters upwind of the kite so that the kite tips are facing away from the bar. The control bar should be right side up.
2. Walk out the steering lines and place them parallel to each other on the ground about 4 ft. apart, near the kite. (Remember, red sheathed lines on the left and black sheathed lines on the right)
3. Walk out the depower lines and place them in between the back lines, parallel to each other so that all four lines are lined up as follows, left to right: Red sheathed red line, red sheathed white line, black sheathed white line, black sheathed black line.
4. Place steering lines far apart, so the kite will lie between them.
5. Place kite on top of the depower lines so the wing tips of the kite are pointing downwind and near the ends of your steering lines.
6. Secure the kite.
7. Attach the steering lines to the back connection points from outside next to the kite.
8. Attach the depower lines to the front connection points from the inside of the kite. (Remember, red-to-red, black-to-black).

Your kite is now ready to fly. Please see the sections of this manual that relate to safety and make sure you are familiar with the conditions before getting on the water. Kite tuning tips are located in this manual under the 4-Line Tuning.

STEP 3
ATTACHING CONTROL LINES (2-LINE KITE)

STEP 6

STEP 9

Once you have completed **SET UP STEPS 1 and 2**, you are ready to connect your Control System to your inflated kite.

The CO2 comes with the bridles removed. Please see the section on installing the bridle before proceeding. The Access Kites come with the bridle pre–installed

1. Lay out your control lines. Unroll your control lines from the bar. Walk down the control lines and remove any twists. (Red = left / black=right)
2. Carry the kite to the end of the flying lines furthest from your control bar. Make sure the leading edge is facing into the wind.
4. Secure the kite by holding it or weigh it down with sand or sand bags.
5. Check the bridle and free it of any twists and knots.
6. Attach the RED larks head on your STEERING LINE over the RED knot on the BRIDLE.
7. Attach the BLACK larks head on your STEERING LINE over the BLACK knot on the BRIDLE.
8. Make sure that the bridle knots are secure by pulling on each of them to double check.
9. Check each PULLEY to make sure each one is turned upward (each pulley will face downward once the kite is flying). (Image)
10. Also, check each PULLEY to make sure the bridle lines are not trapped between the strut and the back part of the pulley and the kite material.

Your kite is now ready to fly. Please see the sections of this manual that relate to safety and make sure you are familiar with the conditions before getting on the water. Kite tuning tips are located in this manual under the 2-Line Tuning.

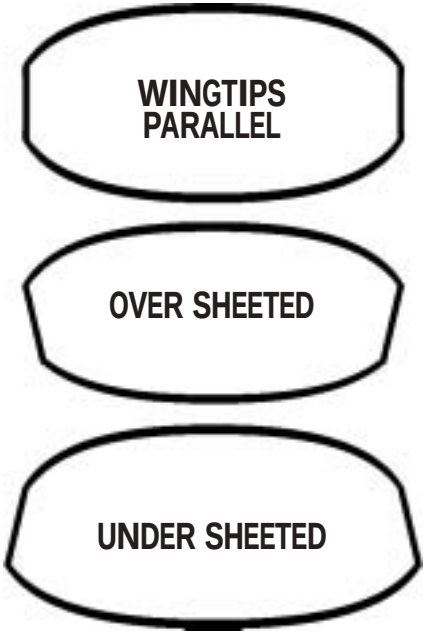
4 LINE TUNING TIPS

When the BLACK TIP, CO2 and ACCESS kites are in 4-line mode, proper tuning is essential for best performance. A properly tuned kite increases its efficiency, speed, and allows the kite to depower correctly. The following guidelines will help you to properly tune the kite to suit your style of riding.

1. All models have their desired sweet spot that is achieved by the correct tension of the steering (back) and depower (front) lines. Fine-tuning of the kite is done by making small adjustments to the centerline adjustment strap (C.A.S.).
2. Do not 'over sheet' the kite. The first objective is to set the kite's maximum power while allowing it to fly efficiently across the sky. More power and quicker turning is achieved by tensioning the steering (back) lines (sheeting in the kite). There is however, a point of diminishing returns. Too much back line tension will cause the kite to fly slowly across the sky and not allow it to fly to the edge of the power window.

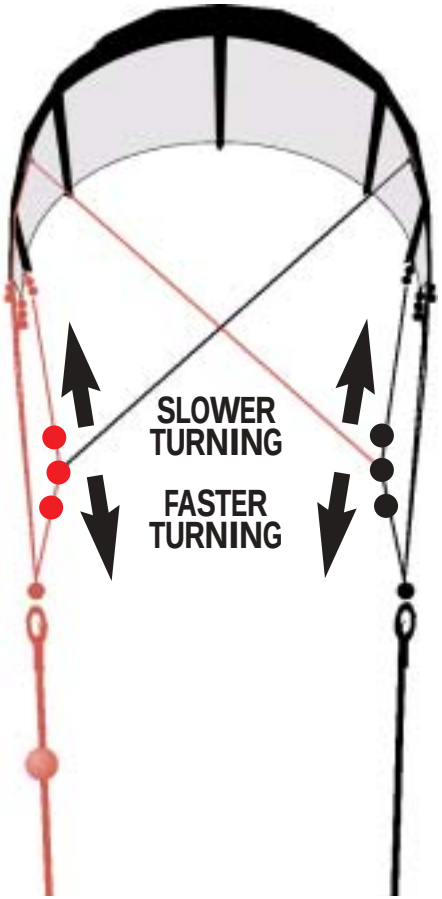
CONTINUED

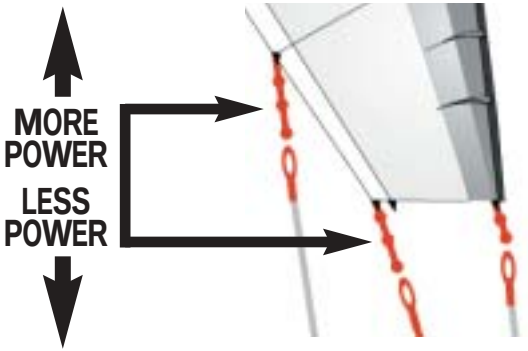
4 LINE TUNING TIPS (CONTINUED)



3. With the kite directly overhead, hook into the fixed harness loop and observe the angle of the wingtips in relation to the other inflated battens. A common tuning is achieved when the wingtips are parallel to the inflated battens and the steering (back) lines are taught. If the wingtips are flared outward at the leading edge the kite will be over sheeted.
4. Unsheet and depower the kite by pulling on the C.A.S. until the desired effect is achieved. The more you pull on the C.A.S. the less power the kite will have. Keep in mind that you will still be able to depower the kite through the PowerDrive or PowerLock loop, so do not depower too much with the C.A.S. To increase power, lift up with the plastic loop on the C.A.S.

2 LINE TUNING TIPS





When the CO2 and ACCESS kites are in 2-line mode, proper tuning is essential for best performance. A properly tuned kite has increased efficiency and speed.

The CO2 and ACCESS in 2-Line mode can be tuned for Turning Speed and Power.

TUNING TURNING SPEED

Utilizing the knots on the bridle, move both larks heads away from the rider for slower turning response or towards the rider for faster response.

TUNING POWER

Utilizing the knots on the REAR Multiple Hang Points, move both pairs of larks heads away from the rider for greater power and towards the rider for less power.

CONVERTING THE CO2 AND ACCESS TO 4 LINE KITES

The conversion of the CO2 and ACCESS Kites from 2 to 4 lines is a simple process of removing the bridle.

YOU WILL NEED A 4-LINE CONTROL SYSTEM SUCH AS:

- The Powerlock Control System
- The Powerdrive Control System
- The Ergonomic Control System with Powersteering Kit

REMOVING THE BRIDLE

1) Remove each rear line from attachment points.

2) Loosen the larks head where the front (cross bridle line) attaches to the rear line. Slide the cross bridle off of the rear line on each side.

3) Detach V1 and V2 from the attachment points on each side.

The kite is now ready to be flown as a 4-line kite. The attachment points for V1 and V2 are now the hang points for the front lines and back lines respectively. See the 4-Line section of this manual for help with bar setup and tuning in 4-line mode. (NOTE: You may remove the rear line attachment point bridles when flying the kite as a 4-line.)

CONVERTING THE CO2 AND ACCESS TO 2 LINE KITES

The conversion of the CO2 and ACCESS Kites from 4 to 2 lines is a simple process of installing the bridle.

INSTALLING THE BRIDLE

You will need a large area to lay out the kite and bridle lines, preferably out of the wind.

1. Lay the lines out so that the bridle cluster is away from the kite and the lines are pointing toward the kite. The red bridle goes on the left side of the kite, but when you are attaching it, the kite will be upside down (leading edge on the ground). Therefore the red bridle will be on your right (the kite's left).
2. Lay out the lines so that the front (cross bridle) line is on the outside, the main is next, and the rear line is on the inside.
3. Attach the pulleys.
4. Attach the shackles.
5. Be sure that the cluster is not tangled or twisted.
6. Utilizing the larks head, attach V1 (front) and V2 (rear) lines to the wingtip bridles. Connect to knot #2 (middle).
7. Do this on each side.

3. Attaching the pulleys

4. Attaching the shackles

6. Attaching lines

CONTINUED

CONVERTING THE CO2 AND ACCESS TO 2 LINE KITES (CONTINUED)

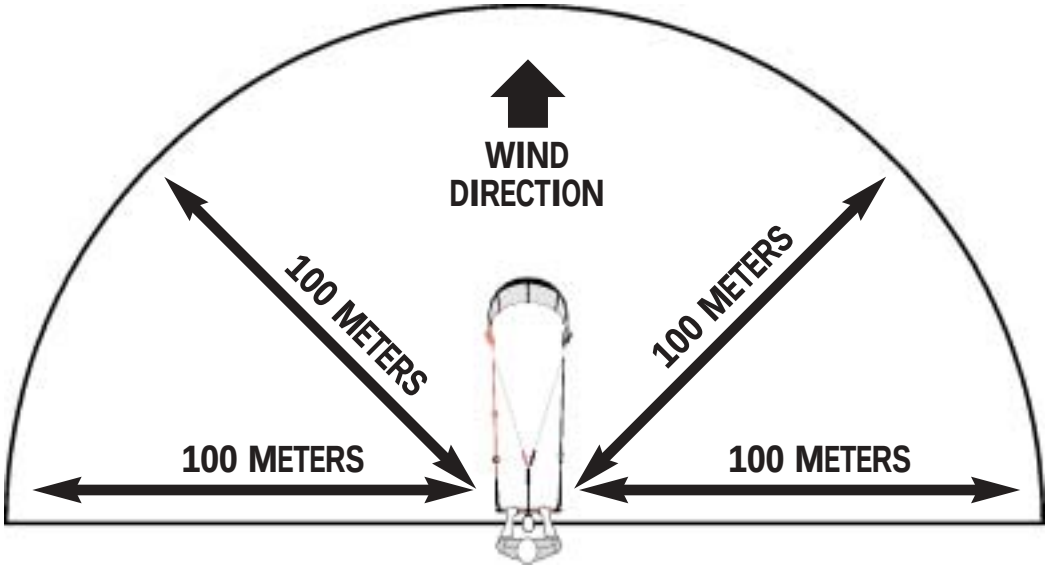
8. Thread bridle lines through pulleys

8. Thread the front (cross bridle) lines through the 3 pulleys located on the leading edge of the kite. Start at the wing tip and move toward the center of the kite.
9. Do this on each side.
10. Take the black cross bridle line and using the larks head at the end, slide it onto the red rear line until you reach the 3 knots in the middle of the red line.

11. Tighten the larks head behind knot 2 from the cluster end.
12. Do this on the other side.
13. Utilizing the larks head, attach the rear line to the rear line hang point (near the inflated strut). Make sure that the black rear line is on the kite's right rear hang point and the red rear line is on the kite's left.
14. Your CO2 / ACCESS is now ready to be flown as a 2-line kite.

AREA OF OPERATION

This is the 100 meters of area to each side and downwind of the pilot . Do not launch your kite if you do not have this safe distance between yourself and other people, or obstructions.



KITE POSITIONS, ZONES and POWER

NEUTRAL POSITION

This is the position just above the pilot's head in the sky). If the pilot keeps the control bar steady and parallel to his / her shoulders, the kite will naturally "park" itself in this position. It is a position in which the kite will have the least amount of pull and is most steady. When in the neutral position, if the kite luffs, it will move slightly away from the user, in a downwind direction. If kept steady, when the kite receives a gust, it will pull and again fly back into the neutral position. The neutral position is also where you may "park" the kite in order to rest, reel in your board, etc. In this position, the kite still has power, so keep in mind that although it is relatively stable in this position, it may still pull you. This is the safest position in which to keep the kite when learning.

NEUTRAL ZONE

This is the area that includes the neutral position and the area to the left and right of the pilot. It encompasses the most upwind or windward positions in which to fly the kite. When flown here, the kite has the least amount of power or pull. This is one of the safer zones in which to fly the kite.

POWER ZONE

This is the area in front and to the sides of the pilot, but excluding the neutral position and

zones. It is the area in which the kite has the most power and pull. When flown in this area, the kite can be powerful and dangerous, so avoid flying your kite in this zone when learning.

GENERATING POWER

One way to generate power from your kite is by steering your kite from low to high or from high to low in the sky. The movement of your kite in the sky creates lift, which creates power. Keep this in mind, especially when learning. When bringing the kite from a low position up to the neutral position, the movement of the kite actually creates power and generates speed, so be prepared. When underpowered, you may use this ability of the kite to your advantage by creating power and speed to get planning.

STEERING

KEY POINTS TO REMEMBER

- When practicing steering a kite on land, always remember that your kite has extreme power. Be prepared and be safe.
- When first learning to fly your kite, always keep your eyes on the kite.
- Steer slowly. Do not make any abrupt motions with the control bar.
- Keep in mind the power of the kite.
- Never turn the control bar like a car steering wheel. It is ineffective for steering the kite and may actually cause the kite to become out of control.

STEERING THE KITE TO THE LEFT

1) Hold the bar with both hands, shoulder distance apart.
2) With your eyes on the kite, slightly pull on the control bar with your left hand, pulling it toward your body.
3) This will allow your left arm to bend and your right arm to extend.
4) Pull slowly. The quicker your movements, the faster the kite will turn and the more power it will create.
5) Once the kite starts to turn, it will continue to turn left unless you tell it otherwise.
6) Be ready to steer the kite back into the neutral position.

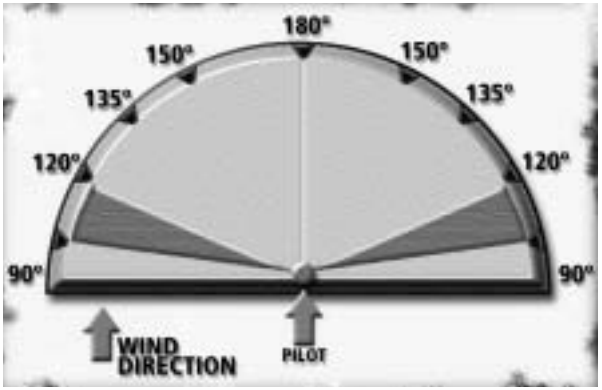
STEERING THE KITE TO THE RIGHT

1) Hold the bar with both hands, shoulder distance apart.
2) With your eyes on the kite, slightly pull on the control bar with your right hand, pulling it toward your body.
3) This will allow your right arm to bend and your left arm to extend.
4) Pull slowly. The quicker your movements, the faster the kite will turn and the more power it will create.
5) Once the kite starts to turn, it will continue to turn right unless you tell it otherwise.
6) Be ready to steer the kite back into the neutral position.

LAUNCHING

PLANNING YOUR LAUNCH

- Choose an area where you have at least 100 meters of space to your left and right and especially downwind of you.
- Set up your equipment so that your kite is downwind of where you will be launching, but most importantly, so that it is at an angle off of the wind.
- DO NOT SET UP YOUR KITE FOR A STRAIGHT DOWNWIND LAUNCH! The kite will launch with too much power and you will endanger the lives of yourself and those around you if you launch in this manner.
- Basically, if the wind is at your back, and straight downwind is at a 180-degree angle, then you will want to set your kite at about a 100-degree angle off the wind, either to the left or to the right of you .
- The more the kite is positioned into the wind when you launch, the less power it will have when it goes up, and the safer your launch will be.



- Your partner will stand with the kite while you will stand 30 meters away at your control bar.
- Make sure you launch slowly and safely, and launch the kite at an angle, NOT STRAIGHT DOWNWIND!

LAUNCHING WITH A PARTNER

1) Once you have thoroughly checked your lines, your gear, and your launching and landing sites, you are ready to launch your kite.

2) First, attach the QRS harness leash.

3) Organize a clearly defined release signal that you both understand.

4) Have your partner stand with the kite at 100 degrees off of the wind.

5) Your partner should hold the kite in the middle of the leading edge, with the leading edge vertical and pointing into the wind.

6) Your partner should stand behind the kite and not to the side or in front of the kite.

7) Also, your partner should NOT touch the bridle or flying lines.

8) With the control bar in your hands, take a few steps back to take the slack out of the flying lines.

9) Signal your partner to let go of your kite. It is important that your partner lets you steer the kite out of his or her hands.

10) Your partner should NOT throw the kite into the air. Instruct him / her against doing this BEFORE you launch. When the kite is thrown into the air, it hinders the ability of the kite to launch properly. The kite may either launch too abruptly and powerfully or it may not launch at all. It is a very dangerous way to launch.

11) Once your partner lets go of the kite, have him / her move upwind of you and out of your way.

12) With both arms extended, SLOWLY steer the kite up into the neutral position. Do this by slowly pulling toward you on the side of the bar attached to high side of kite. DO NOT make any abrupt motions. The slower you steer the kite into the neutral position, the safer and the more in control you will be.

13) Your arms will remain extended above your head, with the bar even, while the kite is in the neutral position.

14) Walk slowly to the water's edge, keeping in constant check with the kite. You should know what it is doing at all times.

15) DO NOT HOOK INTO THE HARNESS LINE WHEN LAUNCHING! If you do, you will not be able to safely and quickly utilize your QRS harness leash system if necessary.

16) If anything goes wrong with the launch, you should be ready to let go of the bar and utilize the QRS harness leash. o WARNING: the more wind there is during your launch, the faster everything will happen. That's why it is important that you launch the kite slowly and safely.

SELF LAUNCHING

1) First set your kite face down, with the leading edge into the wind, at 100 to 110 degrees off of the wind.

2) Secure the kite with sand or with sandbags.

3) Next, wind your lines out from the kite to the place from where you will launch the kite.

4) Check to make sure your lines are connected properly.

5) Once you have thoroughly checked your lines, your gear, and your launching and landing sites, you are ready to set your kite up for self-launch. Turn the kite on its side, with the leading edge facing into the wind.

6) Fold the bottom wing tip (the one closest to the ground) over onto the kite. Make the fold at the first strut..

7) Weigh this wing tip down heavily with sand or sand bags.

8) Make sure that the flying lines and bridle (if applicable) are free and will not catch on the struts when you self-launch.

9) Quickly walk back to your bar.

10) Attach the QRS harness leash to your harness bar.

CONTINUED

5)

6)

7)

SELF LAUNCHING (CONTINUED)

11) With the control bar in both hands and at chest height, take a few steps back to take the slack out of the flying lines.

12) This will release the sand or sand bags from the wing tip of the kite.

13) Next, SLOWLY steer the kite into the sky by pulling toward you on the side of the bar attached to high side of kite. DO NOT make any abrupt motions. The slower you steer the kite into the neutral position, the safer and the better.

14) As you take a few steps backward and steer the kite up into the sky, the kite will fill with wind and continue to rise.

15) Continue to steer the kite into the neutral position–SLOWLY.

16) Your arms will remain extended above your head, with the bar even, while the kite is in the neutral position.

17) With your back to the wind, walk slowly to the water's edge, keeping in constant check with the kite. You should know what it is doing at all times.

18) DO NOT HOOK INTO THE HARNESS LINE WHEN LAUNCHING! If you do, you will not be able to safely and quickly utilize your QRS harness leash system if necessary.

19) If anything goes wrong with the launch, you should be ready to let go of the bar and utilize the QRS harness leash system.

20) WARNING: the more wind there is during your launch, the faster everything will happen. That's why it is important that you launch the kite slowly and safely.

21) WARNING: DO NOT set your kite up for self launch and then wind out your lines. Make sure your lines are laid out and are correct before you set your kite in self-launch position. The kite may launch accidentally while you are winding out your lines.

LANDING

LANDING A KITE TO YOUR PARTNER

1) You should always determine adequate landing spots before you launch your kite.

2) Having done that, make sure that when you are heading toward shore, that your landing location is still safe uncrowded and unobstructed.

3) Never land your kite over, on top of, or near others, especially if they are downwind of you. You should have an area clear of people, pets, power lines, trees, and other obstructions.

4) Make sure your partner has been instructed on how to land your kite properly.

5) As you approach shore, keep your kite low near the water, at the edge of the power window.

6) Drop down (or step) off your board and body drag the final distance to shore. Do not approach the shoreline with speed.

7) Slowly steer your kite into the wind and to your partner.

8) Your partner should be on the windward side of your kite as he / she approaches it.

9) Once the kite is nearly touching the ground, your partner should grab the kite at the middle of the leading edge strut. He she should grab the kite in the same location on the kite as when it was launched.

10) Your partner should NOT grab the kite bridle or flying lines.

11) Your partner should AVOID grabbing the kite by either wing tip. Grabbing the kite by the wing tip will often cause it to flip or spin; the kite will also be hard to manage.

12) Once your partner has the kite's leading edge, he / she should walk the kite away from the water's edge.

13) Your partner may either continue to hold the kite or he / she may secure the kite by turning it over, with the struts down and the leading edge pointed into the wind, and securing it with sand or a smooth

14) Once on land, with your kite secured, you may wind up your lines.

RELAUNCHING

IMPORTANT NOTE

proper inflation of the struts, especially the leading edge, is imperative for water re-launchability of your kite. Make sure your kite struts are properly inflated before entering the water.

1) When your kite goes down on the water, know that the kite may re-launch on its own, often when you do not expect it to, so be prepared.

2) If your kite goes down on its face, with the leading edge and struts facing the water, you must steer the kite onto its side.

3) Do this by pulling toward yourself on one side of the bar and pushing on the other. Basically, you will be pulling on the bottom line of the kite and creating slack in the top line.

4) Be patient. Your kite will respond to your instructions, but sometimes you must be patient, especially in light wind.

5) Your kite will slowly work its way to one side–to the edge of the window of wind.

6) Once it is at the edge of the window, pull on the top line by pulling on the opposite side of the bar. This will steer the kite up. Slowly steer your kite into neutral position and level out your bar.

7) Sometimes when you crash your kite, it will land on its side. When this happens, be prepared for a wind gust to re-launch your kite. It often does not take much to re-launch the kite, so be prepared. It may launch before you are ready.

KITE FABRIC REPAIRS

MAJOR TEARS

For a major tear in the kite fabric, consult your dealer for a reputable kite repair loft.

MINOR TEARS

For a minor tear in the kite fabric, you may repair the tear with kite repair tape.
Your kite has been supplied with an adhesive kite repair material.

1) Clean and dry your kite.
2) Lay the kite flat and on a clean, dry, smooth surface.
3) Cut two pieces of repair tape the same size, making sure they are each big enough to cover the entire tear.
4) Carefully cover one side of the tear with a piece of the repair tape. Gently rub the tape smoothly onto the surface of the kite.
5) Next, cover the opposite side of the tear with the second piece of repair tape, in the same manner as before.
6) Make sure the tape is secure.

STRUT and LEADING EDGE BLADDER REPAIRS

KEY POINTS TO REMEMBER:

- Before attempting to repair one of your kite bladders, make sure your kite is clean and dry. Always keep your kite pump, valves and bladders free of sand, water and other things that will dirty them.
- Make sure the bladders are deflated.
- Avoid repairing your kite on the beach or in dirty, dusty, windy areas. It is best to find a clean, dry spot out of the wind. A grassy spot is ideal.
- You will need a set of flying lines and a bladder repair kit (supplied with kite) before you begin to repair the bladder.

REPAIRING STRUT BLADDERS

1) First, lay the kite out with the struts facing up.

2) Detach the Velcro closure at the base of the damaged strut. This will open up the sleeve of the strut and will allow you access to the bladder. [fig. **RS1**]

3) Next, separate the valve plug from the Velcro closure so that the valve is free from the strut's sleeve. This will essentially disconnect the bladder from the sleeve. Keep track of the valve plug for later use.

4) Tie one flying line around the valve. Cinch it down well on the valve. Do not tie the knot through the hole on the valve or you may damage it

5) Gently insert the valve down into the strut sleeve.

6) Go to the base of the sleeve and gently pull the bladder out of the sleeve, leaving the flying line through the sleeve. Having the flying line through the sleeve will allow you to easily replace the bladder once it is repaired. [fig. **RS2**]

7) Inflate the bladder and plug the valve so that it maintains air.

8) Submerge the bladder in water to locate the hole. A bathtub or large sink full of water is best.

9) Look for bubbles to locate the hole.

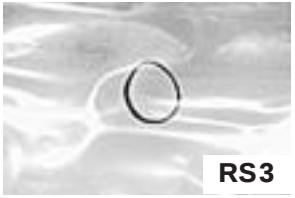
10) Once you have located the leak, dry the area and mark the hole with a circle. A permanent marker works best for this. [fig. **RS3**]

11) Dry and clean the rest of the bladder with a soft towel.

12) Again, deflate the bladder.

RS1

RS2


RS3

CONTINUED

REPAIRING STRUT BLADDERS (CONTINUED)

RS4

13) Decide whether to use the glue or a patch supplied in your bladder repair kit.

14) If the hole is on a seam, you will need to glue the area.

15) If the hole is on a flat area of the bladder, remove the backing on one of the patches and press it onto the bladder, covering the hole.

16) Set the bladder aside for approximately 20 minutes to dry.

17) Again, inflate the bladder and check to make sure it is now holding air.

18) If you have repaired the holes in the bladder, coat the entire bladder in talcum powder to assist insertion.

19) Deflate once again.

20) Tie the flying line from the end of the strut opening onto the valve.

21) Lay the bladder flat at the end of the strut, so that you may now feed it back into the sleeve.

22) Gently feed the valve into the sleeve, followed by the rest of the bladder.

23) From the valve opening of the sleeve, you will pull the flying line out of the sleeve, while pulling the bladder back into place.

24) Once the bladder is replaced, pull the valve back into the hole of the sleeve and remove the flying line from its base.

25) Re-attach the Velcro at the base end of the sleeve. [fig. **RS4**]

26) Re-attach the valve plug.

27) Inflate the strut partially to make sure the bladder fits into all four corners of the sleeve.

28) Inflate the strut entirely or deflate it if you are going to store the kite.

REPAIRING LEADING EDGE BLADDERS

RL1

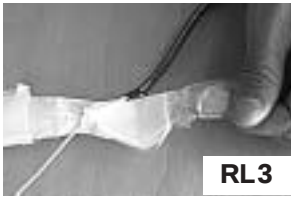
1) First, lay the kite out with the struts facing up.

2) Detach the Velcro closure at each end of the leading edge strut. This will open up the sleeve of the strut and will allow you access to the bladder. [fig. **RL1**]

3) Separate the Airlock valve assembly from the leading edge. Carefully lift the retainer ring from the bladder. Keep track of the assembly for later use. [fig. **RL2**]

RL2

4) For the next step, you will need two flying lines. Starting with one end of the leading edge, tie one line around the wing tip end of the bladder. Cinch the line down well. Follow the same procedure with the other end of the leading edge bladder. [fig. **RL3**]


RL3

5) Next, gently push the valve down into the strut sleeve.

6) Now, access the leading edge bladder through the Velcro access pocket near the leading edge valve. [fig. **RS4**]

7) Gently pull one side of the bladder out of the sleeve at a time, leaving the flying line through both sides of the sleeve. Having the flying line through the sleeve will allow you to easily replace the bladder once it is repaired.

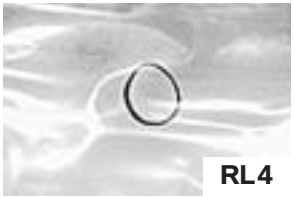
RL4

8) Inflate the bladder and plug the valve so that it maintains air.

9) Submerge the bladder in water to locate the hole. A bathtub or large sink full of water is best. You will need to submerge one section of the bladder at a time in order to locate the hole. Look for air bubbles to locate the hole.

CONTINUED

REPAIRING LEADING EDGE BLADDERS (CONTINUED)


RL4

10) Once you have located the leak, dry the area and mark the hole with a circle. A permanent marker works best for this. [fig. **RL4**]

11) Dry and clean the rest of the bladder with a soft towel.

12) Again, deflate the bladder.

13) Decide whether to use the glue or a patch supplied in your bladder repair kit.

14) If the hole is on a seam, you will need to glue the area.

15) If the hole is on a flat area of the bladder, remove the backing on one of the patches and press it onto the bladder, covering the hole.

16) Set the bladder aside for approximately 20 minutes to dry.

17) Again, inflate the bladder and check to make sure it is now holding air.

18) Deflate once again.

19) Tie each flying line to the corresponding ends of the bladder.

20) Lay the bladder flat near the access pocket and fold it, accordion style, so that you may feed each end back into the sleeve.

21) Starting with one end, feed the bladder into the access pocket.

22) Walk to one end of the leading edge and gently pull on the flying line, while holding the end of the sleeve. Slowly feed the bladder back into this side of the sleeve.

23) Next, follow the same instructions with the other side of the bladder, until the valve is near the hole and the bladder is fully inserted.

24) Once the bladder is replaced, pull the valve back into the hole of the sleeve.

25) Re-attach the Velcro closures at each end of the sleeve.

26) Re-attach the Airlock valve assembly.

27) Inflate the Leading Edge partially to make sure the bladder fits into all four corners of the sleeve.

28) Inflate the strut entirely or deflate it if you are going to store the kite.

KITE CARE

Due to the often extreme nature of kiteboarding, a thorough approach should be taken when caring for your kite and all its associated rigging.

A frequent inspection of the kite should be made in order to identify punctures, tears, or abrasions in the canopy or struts. It is also necessary to check the fly lines for wear and to untie knots which often reduce the breaking strength of the fly lines.

Between sessions.
Never leave an inflated kite unattended on the beach for a long period of time. Winds may shift or change and the kite may become unsecured and fly off.

Do not leave an inflated kite (secured or not), directly exposed to the wind for any length of time. This allows the trailing edge to flutter excessively, which can damage the kite. If you must leave the kite exposed to the wind on the beach, place sufficient amounts of sand between each batten and near the trailing edge to minimize or stop the fluttering.

Proper Storage.
It is recommended to wash your kite with fresh water and dry thoroughly before rolling and storing. Do not place heavy objects on the bag containing the kite because the carbon rods may be damaged.

Wash your control system with fresh water from time to time by placing the entire control system (with lines wound onto the bar) into a bucket of fresh water and let it sit for 5 minutes. Allow to dry thoroughly before storing in a dry location.

KITEBOARDING TERMINOLOGY

TRAINER KITE - a kite that may be used on land to simulate the motions used in kiteboarding. It is an excellent instructional and learning tool. Despite its small size, this kite still has power, so be alert.

INFLATABLE KITE - a kite with inflatable tubes designed to float the kite and to facilitate water re-launchability.

TWO-LINE INFLATABLE KITE - a water re-launchable kite with two flying lines and inflatable tubes. This kite usually has a bridle system.

FOUR-LINE INFLATABLE KITE - a water-re-launchable kite with four flying lines and inflatable tubes. This kite does not usually have a bridle system.

STRUTS - the outer fabric tubes found on your kite. They house the inner inflatable bladders, which are filled with air to give structure to the kite.

FANGS – Metal teeth that engage / disengage the depower loop on the Powerlock.

BLADDER - the inner inflatable tube found within the leading edge and the struts of the kite. (Imagine a bike–it has both a tire on the outside and an inner tube which holds air).

LAUNCHING - the motion in which the pilot steers the kite from their partner's hands into the sky.

SELF LAUNCHING - a technique in which the pilot launches the kite without assistance, usually by weighting down a wing tip with sand until he / she is ready to launch.

RE-LAUNCHING - the motion in which the pilot steers the kite off of the water and back into the sky.

BODY DRAGGING - this is an instructional tactic / step in which the pilot flies the kite from the water, but without the board. The pilot will launch the walk to the water, and basically drag in the water, practicing flying, re-launching and self-rescue techniques.

BALL STOPPER - Small plastic ball That stops the QRS harness leash from sliding too far up your lines.

KITEBOARDING TERMINOLOGY

WATER STARTING - the motion of the pilot in which he / she goes from sitting or lying in the water to standing on the board.

GYBING - the motion in which the pilot changes the direction of the board he / she is riding. The pilot switches from a starboard tack to a port tack or vice versa.

PLANING - the point in time in which the pilot gets the board skimming on the water.

LANDING - the motion in which the pilot steers the kite into their partner's hands on shore.

QRS-QUICK RELEASE SAFETY- connection points on the control systems that release in emergencies. QRS -harness leash (Patent) that is attached to the rider and kite, designed to disconnect you in emergencies.

CONTROL BAR - the steering device the pilot uses to steer the kite.

HARNESS - a piece of equipment used to temporarily attach the rider to the control bar harness line. This enables the rider to save energy by utilizing their body weight and all of their muscles to hang on to the kite. Most common are the waist harness (attaches around the torso) and the seat harness (attaches to the waist and around the legs)

KITEBOARDING - the term in used to describe the sport of power kiting on water.

KITESURFING - another term used to describe the sport of power kiting on water, but in waves.

OVERPOWERED - a situation in which the pilot has a kite too powerful for his / her ability level, weight, strength, and / or wind conditions.

UNDERPOWERED - a situation in which the pilot has a kite not powerful enough for his / her, weight, strength, and / or wind conditions.

REACH - a direction of travel relative to the wind direction. Generally 90-160 degrees off the wind.

LULL - a term used to describe wind when it lessens in strength, for any amount of time. A term also used to describe the complete de-powering of a kite.

LUFF - a term used to describe what happens to the kite in a lull.

WIND TERMINOLOGY

ONSHORE - wind is blowing directly or to a great extent directly from the water toward the land. Utilize caution when operating your kite near water in this wind direction.

SIDESHORE - wind is blowing from the left or from the right, in a perpendicular direction to the shore. Ideal wind direction for kiteboarding.

OFFSHORE - wind is blowing from the shore, directly or to a great extent out to the water. Do not operate your kite near water in this wind direction.

SIDE OFFSHORE - wind is blowing from either the left or the right and from the shore out to the water. This is a combination of offshore and sideshore wind. Do not operate your kite near water in this wind direction.

SIDE ONSHORE - wind is blowing from either the left or the right and from the water toward the land. This is a combination of onshore and sideshore wind. Utilize caution when operating your kite near water in this wind direction.

GUSTY WIND - wind is inconsistent and varies considerably from one strength to another.

DOWNWIND - the direction in which the wind is traveling.

UPWIND - the direction from which the wind is blowing.

LEEWARD - the downwind side of the kiteboarder.

WINDWARD - the upwind side of the kiteboarder.

KNOTS - a measure of speed based on nautical miles. 1 knot = 1 nautical mile per hour.

1 knot = 1.15 miles per hour.

1 knot = 1.85 kilometers per hour.

MPH - Miles Per Hour. A measure of speed

1 mph = 1.6 kilometers per hour.

BEAUFORT SCALE - a system for estimating wind strength based on the effects wind has on the physical environment (eg. the behavior of waves, smoke, etc.). Instruments are not used to determine wind strengths in this point scale (0 = calm to 12 = hurricane).

BEACH ETTIQUETTE

Here are some basic things to consider when sharing beaches and water accesses with other users:

SAFETY

- Follow the safety instructions outlined in this manual.
- Follow the safety instructions posted at the beaches you use.
- Utilize common sense safety.
- Do not touch other people's gear, unless instructed to do so by the owner. Picking up their bars, kites, etc. may disrupt a set-up ritual they have.

SETTING UP

- Set up only the gear that you plan on using immediately.
- Set up in an area where you have plenty of room.
- Set up in a manner conducive to having multiple users in the area.
- Roll up your lines when not in use.
- Always keep other beach and water access users in mind when launching.
- Yield to other beach users. Be courteous and cooperative.
- Deflate and put away kites you will not be using immediately.
- Always be ready to lend assistance to other kiters. The favor may be returned sooner than you think.

CABRINHA LIMITED WARRANTY

(Cabrinha is a division of Neil Pryde Ltd.)

Every Cabrinha product is subjected to rigid pre-sales quality control tests and is backed by our comprehensive warranty policy below.

WHAT THIS WARRANTY COVERS

General

Neil Pryde Ltd. ("Cabrinha") warrants this Product to be free of major defects in materials and workmanship when this Product is used for ordinary recreational activities by the original purchaser for a period of 90 Days from the original date of purchase (as evidenced by the relevant purchase receipt) subject to the following terms and conditions.

Specific product warranties

This Warranty is valid only when the warranty card accompanying this Product is properly filled out and returned to Cabrinha within seven (7) days from the original date of purchase.

IMPORTANT NOTICE: This Product is designed for, and is intended to be used by ordinary purchaser for recreational purpose or use only. This Product is not designed for commercial use where it is subject to continuous or high volume repetitive usage over an extended period of time.

WHAT THIS WARRANTY DOES NOT COVER

This Warranty does not cover the following:

1. Costs of return shipments to Cabrinha
2. Damage caused by alterations, modifications or changes not authorized or approved by Cabrinha in writing, or due to service and / or repairs done by anyone other than Cabrinha or an Cabrinha authorized repair facility, or due to accident, abuse, misuse or improper use, neglect, or failure to perform normal maintenance in accordance with the instructions set out below or in the user's guide accompanying this Product.
3. Damage caused by extended or excessive exposure to sunlight (or ultra-violet radiation), improper handling or storage, or failure to follow instructions provided with this Product;
4. Damage caused by anything other than defects in materials or workmanship.
5. This Product when being used in commercial, rental, teaching or instructional programs or activities, or in competition of any kind.
6. This Product when being classified as second-hand.
7. Consequential and incidental damages or expenses, including damages to property or for personal injury; and
8. Damage caused by any use of this Product as a toy.
9. Normal wear and tear, including scratches and fading;]
10. Damage caused by the use of this Product in waves or shore break.
11. Damage caused by the over-inflation of the bladders
12. Normal wear and tear, including scratches, punctures, rigging with components other than Cabrinha components.

CONTINUED

WARRANTY

HOW TO MAKE WARRANTY CLAIM

Cabrinha will make the final and conclusive determination in relation to each claim under this Warranty on a case-by-case basis, which may require inspection and / or photos of this Product, which clearly show the defect(s), if any. This information must be sent to the Cabrinha Distributor of this Product in your country, postage prepaid [or via your local authorized Cabrinha dealer]. This Product can be returned only if the Cabrinha distributor in advance of returning this Product gives a return authorization number (RA). The RA number must be clearly labeled on the outside of the package, failing which such package will be refused. Any product must be shipped CLEAN and DRY.

If this Product is considered to be defective by Cabrinha, this Warranty covers the repair or replacement (by the same or similar model) or refund of all or part of the purchase price of this Product only (which alternative and / or the appropriate amount, if any, shall be decided by Cabrinha at its sole and absolute discretion). Cabrinha will not be responsible for any costs, losses, or damages incurred as a result of loss of use of this Product.

THE ORIGINAL PURCHASE RECEIPT MUST ACCOMPANY ALL WARRANTY CLAIMS. THE NAME OF THE RETAILER AND DATE OF PURCHASE MUST BE CLEAR AND ELIGIBLE ON SUCH RECEIPT.

WHAT TO DO TO KEEP THIS WARRANTY IN EFFECT

This Warranty is voided if any unauthorized repair, change, alteration or modification has been made to any part of this Product. The warranty for any repaired or replacement product (as the case may be) is good from the date of the original purchase only.

There are no warranties, which extend beyond the warranty specified herein.

ADDITIONAL RIGHTS

This Warranty does not affect, and is in addition to, any statutory rights that you may have under or by virtue of any applicable law.

HOW TO OBTAIN WARRANTY SERVICES

To obtain warranty service of this Product, or if you have any questions about any products of Cabrinha or their respective user's instructions, please contact:

For Information e-mail: support@cabrinhakites.com
or your local Cabrinha Distributor.

W A R N I N G

IT IS THE USER'S RESPONSIBILITY TO CAREFULLY READ THE ATTACHED USER'S GUIDE AND INSTRUCT ALL USERS ON THE PROPER USAGE AND MAINTENANCE OF THIS PRODUCT.

For USA purchasers only:

All warranties implied by State law, including the implied warranties of merchantability and fitness for a particular purpose, are hereby limited to the duration of this Warranty. Some States do not allow limitations on how long an implied warranty lasts, so the foregoing limitation may not apply to you. With the exception of any warranties implied by State law (as hereby limited), this Warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or reseller. This Warranty gives you specific legal rights, which vary from State to State.