

## **POWER KITE TIPS & ADJUSTMENTS...Important notes on getting a power kite ready to launch:**

**STEP BY STEP INSTRUCTIONS on preparing to launch a Quad line power kite of which the line set is attached to the handles and ready to fly:**

**NOTE about Kite Safety System for wrist (also known as Kite Killers):** It is best to detach Kite Safety System when unwinding and winding line set, as they tend to get in the way while winding and unwinding lines. When getting ready to launch, unwind line set, separate Kite Safety System from kite and line set. Once ready to launch Attach Kite Safety System SEE # 9)

- 1) Leave the kite in the bag, pull the handles with the line set attached out of the bag.
- 2) Unwind the line set completely, walking upwind (into the wind) **VERY IMPORTANT:** Make sure you take the lines off of the handles while holding the bottom of the handles and unwinding off of the top of the handles. As you do this look at the lines, to make sure that the lines look like they are not twisted around each other. After unwrapping about 15 times or so check again to make sure the lines are not twisted. You be able to run your fingers between all the lines fairly easily.
- 3) Once the lines are completely unwound, place handles on the ground
- 4) Secure the handles to the ground by inserting a ground stake through the small loops on the bottom of the handles. **If handles do not have loops on bottom**, simply take bottom pigtails and wrap several times around the ground stake, so that the bottom of the handles are tight against the stake and top of handles are pointing toward the kite.
- 5) Walk back to the bag and carefully take the kite out of the bag (stow the bag, with backpack type bag, simply place it on your back)
- 6) Open the kite and lay it out so that the leading edge is face up, furthest away from the handles (with a foil the leading edge is vented) **Note:** If there is sufficient wind the kite will almost immediately inflate. In higher winds you must be very careful that the kite is properly staked, and so that the kite will not self-launch. The kite is ready to launch as soon as the cells are inflated.
- 7) Walk back to the handles, when removing handles, keep the top of the handles pointing towards the kite, and bottom
- 8) Remove handles from ground stake and make sure that the lines are not twisted. If the lines are twisted, then put both handles together and spin the handles until lines are not twisted.
- 9) Place the safety straps (**KITE KILLERS**) on your wrists (easiest done while handles are staked), remove the handles from the ground stake. To Attach KITE KILLERS, make sure they are attached at the very last knot on the end of each of the bottom pigtails on the handles. Note: If there is only one knot on each pigtail, and lines are attached at these knots, slide lines up a few inches on the pigtails, tie another knot, leaving about a once inch space from bottom knot on the pigtails. Then make sure KITE KILLERS are attached below the lines (line at upper knot), with KITE KILLERS attached at end knot on pigtails.
- 10) You are now ready to launch!

Please note that when winding and unwinding the line set, always put on and take off of the top of the handles with one hand while the other hand holds the bottom of the handles.

When **Packing up your quad kite foil**, simply reverse the procedure for set up.

- 1) Land the kite and stake the handles, make sure that there are no line wraps before packing up the kite.
- 2) Go to the kite, fold the kite from wing tip to center of the kite (concealing the bridle completely as you do so). Keep folding until the kite is folded to about 16" in width. Roll the kite from trailing edge to the leading edge. Place the kite in the bag. **NOTE: In heavier winds** it can be difficult to fold the kite, with the kite in launch ready position. **Helpful Hint:** Pull one wing tip into the wind, giving slack in the line set, and start folding from wing tip to center, making sure to conceal bridle completely.
- 3) Put kite in the bag, close bag tight to line set
- 4) Walk back to handles. **Pull the top lines down to middle of grip, and bottom lines up** to middle of grip. Start winding line set around handles. Hold bottom of handles with one hand while winding around top with the other, wrap line in the middle of handle grips. For Flexifoil handles with safety straps, place straps over handles from bottom, to middle of grips, and wrap line set as instructed in Flexifoil manual. When you get to the kite, cinch the lines tightly between the handles. The lines can also be cinched completely around the line wrap by continuing to go from between top of handles, down through the bottom of the handles, and back up around the handles, and can be done several times to insure that the lines stay in place (so that you do not end up with a birds nest of a mess). With Flexifoil safety straps on the handles, if done properly, it is not necessary to cinch more than once at the top of the handles.
- 5) Open kite bag and place handles in the bag, making sure that the handles are not near the bridle. If kite is folded as instructed above the bridle will be folded within the kite. NOTE: With Flexifoil Power Foils (Blade & Bullet) the kite bag is a backpack style with an outside pocket built into it to place you handles

Flexifoil kites have very detailed instructions in their manuals for setting up, flight control adjustments and for packing up the kites.

Follow the instructions for the field card, and/or video that come with the kite. These will show you the basics of set up and flight of your kite.

**Adjustment for quad line flight** is most commonly made at the Quad Handles, with the **use of longer pigtails with adjustments knots on the pigtails**. Once you have the lines laid out and attached to the kite, you start by attaching the lines on the end knots of the pigtails (furthest knots from the handles). With all four lines attached at end knots, you should be able to launch the kite and learn to maintain control (both in forward and reverse flight). If not, see below for adjustments for lift and for brake.

### **Not enough Lift (ability to take off, and maintain forward speed):**

Then if you need less brake and more lift, you pull in on the top lines (adjusting to the next knots on the top pigtails of the handles). If you still need more lift, then you adjust again to the next knot on the top pigtails.

### **Not enough Brake (ability to stop and reverse the kite):**

Then if you need more brake, you pull in on the bottom lines (adjusting to the next knots on the bottom pigtails of the handles). If you still need more brake, then you adjust again to the next knot on the bottom pigtails.

Keep in mind that you need enough wind for the kite to fly. If the wind is on the lighter side (at or below the lowest rated wind speed for the kite), you may need to work the kite to keep it flying. This can be very difficult or impossible for a flier who does not have enough flight experience in lighter winds. It is also more difficult to fly in lighter winds if you are flying on the standard line length of approximately 75'. Also, keep in mind that the longer the line set the more drag on the line, and the more weight the kite will be lifting. For lighter winds, many experienced fliers switch to a shorter line set. For the beginner, shorter lines usually do not help. It is simply a matter of having enough wind for the kite to maintain flight on it's own, without having to work the kite to keep it flying. Once the flier has some fly time on the kite, and gets used to controlling the kite, it is much easier to then learn to work the kite to fly in light winds.

Just some tips for handle pigtail adjustments! I hope you find this helpful. Remember, that depending on wind conditions, the first few times out can be rather frustrating, until you start to get the hang of it.

Any other questions, please feel free to call or e-mail me. I'm glad to lend a hand in the learning process.

**Good Winds & Great Flying, Con Engels**

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