



ZERO-G

PILOT'S GUIDE

WELCOME TO ZERO-G

The Zero-G glides magically on the lightest air currents, defying gravity with featherweight materials and the lift of a high-performance sailplane. We created the Zero-G out of a need to fly in urban settings and small spaces where good winds can be hard to find. It's also ideal for flying indoors during those long winter months when the weather keeps you stuck indoors. Toss it as a glider with no string attached, or soar through the air with precise control just by pulling and releasing the line. The Zero-G is a true canard-style aircraft that flies "backwards" with the smaller wings in front. Unlike traditional kites, it will glide like an airplane when you release the line, making it incredibly forgiving in light and turbulent winds because it can't stall and fall out of the sky. Pull it up over your head and then slack the line to watch it glide as far as you dare.

Traditional kites require wind and constant tension on the line to fly. But

flying the Zero-G is all about letting go, even in zero wind. Draw in some line to gain some altitude...then the magic begins when you release the line and let it glide as far as space allows. With a little practice you can work it ever higher and farther, turning, diving and gliding it like a pro while using almost no energy.

If the wind comes up, no problem. The Zero-G is perfectly at home in winds up to 10mph and can be tuned to park stable in the sky like a traditional kite if you wish.

Conceived in collaboration with celebrated Malaysian designer Ceewan, the Zero-G's design goes all the way back to the early 20th century and Reinhold Platz, chief designer for the Fokker Aircraft Company after World War 1. Decades before the modern hang glider, he built and flew a full-

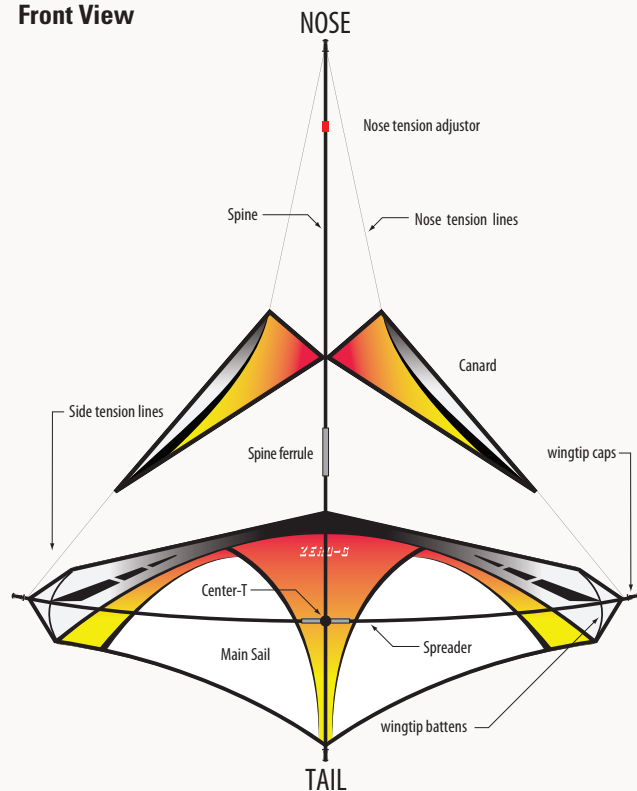
scale canard-winged craft that folded up to carry on a bicycle. With small wings in front, the canard configuration allows a virtually stall-proof glider that will float eerily in a level attitude even when it's barely flying forward. On the Zero-G, a clever dynamic bridle adjusts the angle of the forward wings in flight according to the tension on the line, allowing it to fly as a kite under tension and a glider whenever the line is released.

With its tensioned fabric wing and minimalist structure, the Zero-G is high-tech flying art that looks as good as it performs. Hang it on the wall when you're not flying and watch form and function dance together in this remarkable flying machine.



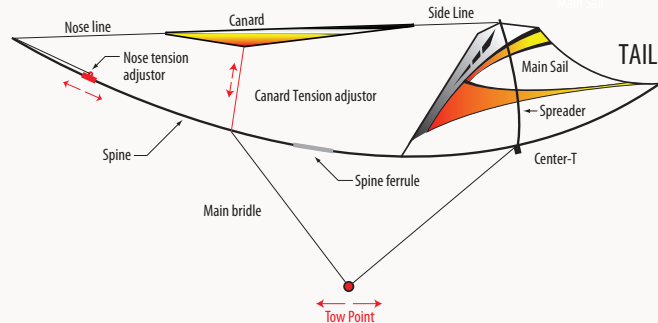
ZERO-G ANATOMY

Front View



Side View

NOSE: This end forward



NOTE: Your Zero-G is comes from the factory in two separate parts to make it easy to assemble without tangling up the bridle lines. But once you're familiar with it you may prefer to leave the three bridles clipped in place when you fold it up for storage.

Some day you will likely lose one of your tiny wingtip battens in the grass. We include two extras with every kite, just in case...

PUTTING IT TOGETHER

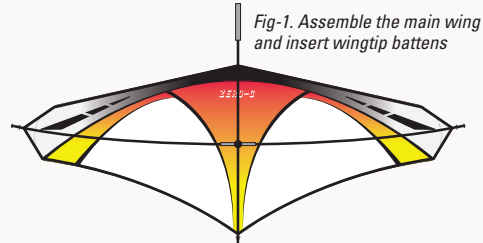
Step 1: Assemble the main wing (Fig-1)

Unfold the main sail. Flex and insert the free end of each thin wingtip batten into the wingtip corner pocket to flatten each wingtip. Battens go on the back side of the sail (the side without the printed logo).

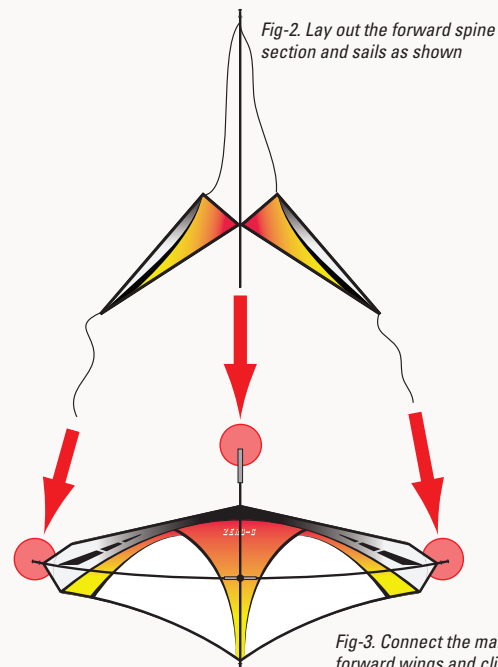
Rotate the aluminum "T" fitting on the spine till it is perpendicular to the spine. Insert the collared end of each spreader rod into the "T."

Tension the main wing by slowly and carefully flexing each spreader until you can fit the wingtip cap onto the spreader end.

Twist the spreaders in the center T so that the small holes in the plastic collars against the center T are aligned. The holes have been matched to the individual flex of each rod at the factory so this step ensures that your frame will flex symmetrically.



Step 2: Lay out the forward wings and bridle (Fig-2)



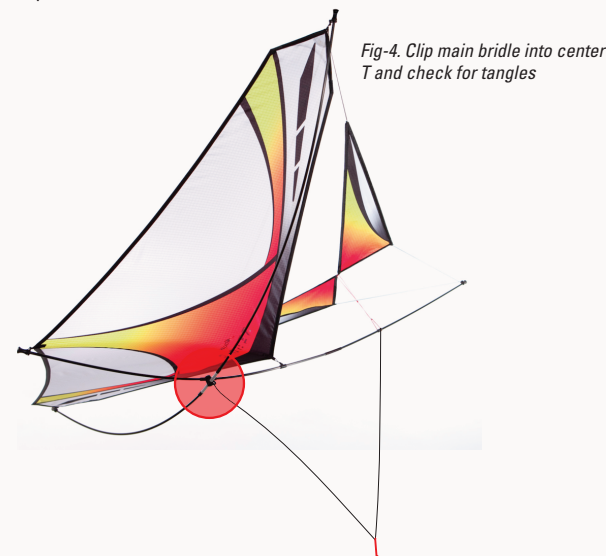
Step 3: Connect the forward wings and main wing (Fig-3)

Slide the forward spine section into the aluminum ferrule on the main wing spine. Hook the small metal clips on the side tension lines into the holes in the wingtip caps.

Step 4: Connect the main bridle (Fig-4)

Hook the larger silver clip on the main bridle into the eye on the forward side of the center T fitting.

Check that the main bridle, nose lines, and side tension lines aren't tangled around parts of the kite.



Video: To see a video showing how to assemble your Zero-G, visit the Prism website at www.prismkites.com and click on "Support"



BEFORE YOU FLY

Get to know the unique personality of your Zero-G by throwing it gently as a glider with no string attached. This is also a good way to check that it is tuned and gliding properly.

Let it glide from overhead by holding at the center T with the forward canard wings parallel to the ground. Push the kite away gently and it should glide as far as 30 feet (See Fig-6). Most people throw too hard at first, causing it to swoop up then dive towards the ground (See Fig-5). Push it out gently enough and it will glide smoothly to a landing. Or glide it to a partner and have her glide it back.

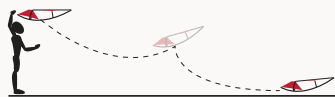


Fig-5. This throw is too hard



Fig-6. This throw is very gentle

TIP: Once you have some experience flying the Zero-G, play around with the position of the nose tension adjuster and watch the effect on how far you can throw the kite as a glider.



FIRST FLIGHT

Very light wind (1-4 mph) is best for your first outdoor flights. Look for a day when when flags and leaves are barely moving and water shows only tiny ripples. Most kites will be grounded in these conditions but your Zero-G will be eager to go up.

Find a helper who doesn't think you're nuts for trying to fly a kite on a calm day.

Attach your flying line to the red pigtail on the main bridle with a Lark's Head knot.

To launch, have a helper stand 15-20 paces away and hold the kite pointed upward (See Fig-7).

With a tiny bit of wind the kite will climb upwards naturally if the nose is pointed up. Help it if necessary by pulling line in smoothly, hand over hand and letting the line pile at your feet (See Fig-8).

Once the kite is overhead, release the line to let it turn and glide away. Manage the line on the ground so you can let it out smoothly without pulling on the kite at all. Move forward with the kite to keep the line completely slack so the kite is free to glide (See Fig-9).

To turn, slack the line smoothly and the nose will turn away. Take up tension again once it's pointed in the direction you want to glide next.

Repeat the climb, turn, and glide process to gain altitude and distance on every glide (See Fig-10).



Fig-7.



Fig-8.

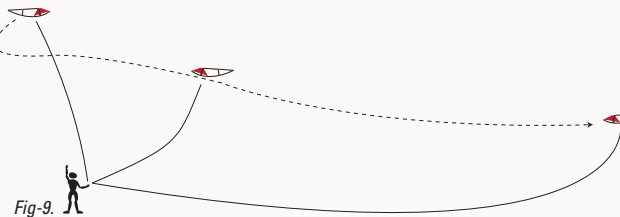


Fig-9.

TIP: When the nose is pointed up, pull line in. When it's pointed down or away, let lots of line out so it can glide. In experienced hands the kite will spend most of its time gliding with the line hanging slack underneath.

ZERO WIND & INDOORS

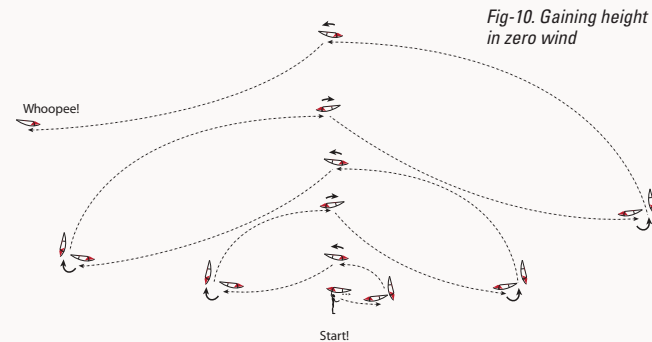


Fig-10. Gaining height in zero wind

Flying in perfectly still air can be one of the purest experiences you can have with your Zero-G. If you live in a windy place or the weather is lousy, a large indoor space such as a basketball court, gymnasium, hangar, etc. can be a great place to explore your kite's amazing abilities and develop finesse and style.

Flying indoors takes a bit of practice but there's no better way to master your kite. Here are a few tips that can help:

- 1) Practice pulling in 10-20 feet of line quickly and smoothly, using a hand over hand motion. Any time the nose of the kite points above horizontal, you can reel in line this way to make the kite climb upwards.
- 2) Practice letting lots of line out just as quickly and smoothly. Often you can just let it slip through your fingers, but sometimes a hand over hand motion to let line out works better. Any time the nose is pointed downwards, release lots of line to let the kite glide away from you as far as it will go. Your goal should be to glide the kite farther and higher with every pass.
- 3) The first few times you launch the kite indoors, have a helper stand 10-15 paces away and hold the kite pointed upward. Pull in line smoothly and continuously to drive the kite upward until it's over your head. Then let out lots of line smoothly and quickly to glide over and past you as far as it will go. Try not to let the line at your feet snag on shoes or clothing so you can let it out without affecting the kite.
- 4) Remember: When the nose is pointed up, pull line in. When it's pointed down or away, let line out so it can glide. In experienced hands the kite will spend most of its time gliding with the line hanging slack underneath.

STRONGER WINDS

The Zero-G can be flown in wind as strong as 8-10mph. If the kite starts to shudder as it climbs you are approaching the safe upper wind limit. If you fly regularly in stronger winds the sail and bridle lines will stretch slightly over time. This will change the glide performance slightly, making it faster and less forgiving in light winds. But adjusting the nose tension slider will allow you to compensate for any change and tune it to your liking. See the Tuning section for tips on tuning your kite specifically for stronger winds.

FLYING TIPS

Fly the Zero-G the same way a fly fisherman casts his fly, working the line and lure further out into the stream on each cast: Keep a pile of free line on the ground in front of you and then progressively work the kite higher and farther away every time you let it glide.

Because it's happy to glide with slack in the line, the Zero-G loves flying in unusual places where a regular kite would be impossible due to light winds and turbulence. What's the most remarkable place you've flown yours?

Experienced kite pilots sometime take longer than novices to get used to the Zero-G's unique flying style because traditional kites require constant pull on the line to keep them from falling out of the sky. With the Zero-G, let it glide freely with completely slack line for as much of the time as possible.

When pulling in line to make the kite climb, use many short, hand-over-hand pulls rather than a few long hard ones. Pull in smoothly and just fast enough to get the kite moving upward. The Zero-G is magical to watch when it's gliding smoothly and slowly without any interference from the pilot.

If the kite starts to buck and shudder as you pull in the line then the wind is stronger than 10mph and you are beyond its useful wind range.

To stabilize the Zero-G in stronger winds (6-10mph), loosen the canard tension adjustor all the way, and slide the bridle tow point towards the tail. This will allow it to hover in one spot overhead like a traditional single-line kite.

If you're teaching a friend or novice to fly, give her a "high start" launch by walking the kite downwind 15-20 paces and holding it pointed upwards. Let her pull it out of your hand to launch, and show her how to pull in line hand-over-hand to gain altitude. When the kite is overhead, tell her to let go altogether and watch how it glides.

If your kite has a tendency to turn in one direction more easily than the other (counterclockwise rather than clockwise, for instance), fine-tune it by tying one or two overhand knots in a side tension line to shorten it on one side very slightly. The kite will turn more easily towards the side you shorten, and even a millimeter makes a difference.

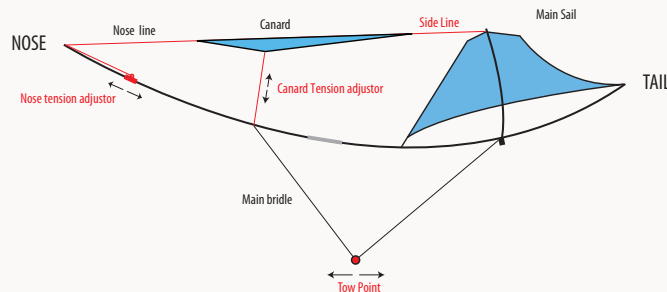
VIDEOS & MORE INFORMATION

Go to www.prismkites.com/support for video tips on assembling, tuning, and flying your Zero-G.

ZERO-G SPECIFICATIONS

Skill Level	Beginner - Expert
Kite Size	42" x 47" (106 x 119 cm)
Wind Range	Indoors - 10 mph (Indoors - 16 kmh)
Pull	Light
Frame	Pultruded Carbon
Sail	Ripstop Polyester
Flying Line	100' x 20 lbs Polyester (30 m x 9 kg)

TUNING



The Zero-G is a finely balanced flying machine built to incredibly precise tolerances that would be unnecessary in normal kites. Small changes in flex, balance and geometry will affect how it flies and we balance and tune every kite individually at the factory. But because even temperature and humidity will affect the sail shape and performance we have designed several adjustments to custom-tune your kite for your local conditions and flying style. Don't be afraid to experiment!

For additional details and videos on tuning your Zero-G visit www.prismkites.com/support

NOSE TENSION ADJUSTOR: Changes how fast the kite flies and how far it glides. Slide away from the nose (tighten) to slow the kite down and make it easier to turn. Slide away (loosen) to glide farther and faster as you gain experience. Make adjustments 1/4" at a time.

NOTE: Two small silver marks on the noseline where it enters the nose fitting indicate the original factory setting.

TOW POINT: Move away from the nose for stability and wider turns, especially in stronger wind. Move towards the nose for quicker, tighter turns as you gain experience.

SIDE LINES: If your kite has a tendency to turn in one direction more easily than the other (counterclockwise rather than clockwise, for instance), fine-tune it by tying one or two overhand knots in a side line to shorten it on one side very slightly. The kite will turn more easily towards the side you shorten, and even a millimeter makes a difference.

CANARD TENSION ADJUSTOR: Changes the aerodynamic drag at the nose of the kite. Loosen it all the way for stability in the strongest winds (8-10mph). Experiment with small changes from the factory setting to make subtle changes in the way the kite floats and turns. A tighter canard tension makes the kite slower and easier to re-launch, but harder to glide a long distance.

TIP: If your kite just doesn't seem to be flying right it may have gone out of adjustment. Slide the nose slider until the two silver marks on the nose tension lines are right at the nose fitting to return it to the original factory setting.

CARE AND REPAIR

The materials in your Zero-G are durable and designed for a long life with minimal maintenance. Here are few tips to keep it healthy:

Give your kite a pre-flight inspection before you launch to be sure everything is properly assembled, your frame is intact, and your bridle and lines aren't tangled.

Learn to read the wind and don't fly your Zero-G above its wind range. If the trees are swaying or there are whitecaps on the water, fly a different kite or pack it up for another day.

Keep the sail out of the sun when not in use to keep the colors from fading. Beach sand is abrasive and will wear on bridles and fittings, so do what you can to dust off the sand after a session at the beach. A freshwater rinse is a good idea if your kite has been swimming in salt water.

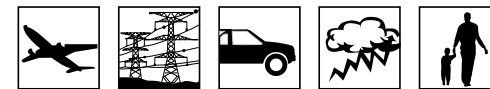
Keep your kite out of hot car trunks and avoid using solvents to clean the sail as they can dissolve the adhesives in the seams.

TIP: The Zero-G makes a beautiful decoration on the wall of your home or office. It will not harm the kite to leave it assembled when you're not flying. Over time the bridles and sail will stretch slightly, but you can easily re-tune by adjusting the nose slider slightly.

WARRANTY

At Prism our warranty is pretty simple: if you're not happy, we're not happy, and we'll do what it takes to make things right. If the retailer from whom you purchased is unable to help, drop us a line and we'll get things sorted out. Damage due to normal wear and tear (or the occasional unplanned landing) can almost always be repaired for a reasonable charge.

CAUTION! NEVER FLY NEAR:



Your Zero-G can move fast and unpredictably. The kite or lines could seriously injure anyone in their path. Be absolutely sure your flying area is clear before launching.

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