



G I N

## Gingo Airlite harness Owner's Manual



Please read this manual before flying with the Gingo Airlite for the first time.

## Thank You...

Thank you for choosing the Gingo Airlite harness. We are confident that this harness will provide you with enhanced comfort, control, performance and fun in flight. This manual contains all the information you need to set up, trim, fly and maintain your harness. A thorough knowledge of your equipment will keep you safe and enable you to maximize your full potential.

Please pass on this manual to the new owner if you do resell your harness.

Happy Flights and Safe Landings,

The GIN Team

## Safety Notice

By the purchase of our equipment, you are responsible for being a certified paraglider pilot and you accept all risks inherent with paragliding activities including injury and death. Improper use or misuse of GIN equipment greatly increases these risks. Neither Gin Gliders Inc nor the seller of GIN equipment shall be held liable for personal or third party injuries or damages under any circumstances. If any aspect of the use of our equipment remains unclear, please contact your local GIN reseller or importer in your country.

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# 1. Gin Gliders

Gin Gliders was formed in 1998 by paraglider designer and competition pilot Gin Seok Song and his team of engineers and test pilots.

Gin's philosophy is simple: to design paragliding equipment that he and any other pilot love to fly. This philosophy applies equally for a harness such as the Gingo Airlite, as for the world-beating competition glider, the Boomerang. No product is released to the market without Gin's complete satisfaction. Gin Gliders produce a complete range of accessories and can provide you with many useful items for flying which are all manufactured in Gin Gliders own production facility to guarantee highest quality standards.

Gin has over 20 years' experience of designing and manufacturing paragliders and is backed up by an equally experienced team, both within the company in Korea and throughout a worldwide network of distributors and dealers. The "GIN Team" has won the Paragliding World Cup overall several times and has had countless other competition successes in World Cups, World and National Championships. This high level of expertise provided by dedicated professionals ensures that you get the best possible product support and after sales service.



## 2. Introducing the Gingo Airlite

The Gingo Airlite was developed by the R&D team of Gin Gliders to meet the highest standards of the most demanding pilots who are tired of a heavy harness and want to travel lighter. The Gingo Airlite is one of the harnesses used by GIN test pilots during the development of new paragliders. The Gingo Airlite is suitable for a wide range of pilots, from the occasional club pilot to the experienced cross country pilot.



The Gingo Airlite can be flown with all types of paragliders unless the manufacturer of your paraglider requires a specific harness to be used with his paraglider. Please refer to the manual of your paraglider to find out if this might be the case.

The Gingo Airlite is a sleek and easy harness, designed for maximum comfort and ease of use. The elegant design focuses on simplicity, eliminating the need for complicated adjustments.

The overall geometry of the harness enables the pilot to feel the feedback from the glider sensitively, whilst retaining a secure feeling in flight. This increases the precision of turns while thermalling and aids active flying. On long flights, the comfort of the Gingo Airlite is second to none.

Leg and chest straps are integrated into the “T-bar system” to prevent the pilot from falling out of the harness if he forgets to fasten the leg straps.

The safety has also been improved by incorporating an airbag into the harness helping to protect the pilot in case he falls on his back. The new Gingo Airlite features a foam pre-inflation system to ensure that the airbag is almost always fully inflated, e.g. when ground handling on take-off.

The bottom rescue container has a wide entrance, designed to enable a fast and easy deployment of the parachute. The bottom position is ideal because the weight of the rescue stays near the centre of gravity and therefore provides you with the most balanced comfort and feeling in flight.

The new elastic speed bar retainer prevents the bridle of your rescue becoming entangled in case of a rescue deployment.

# Gingo Airlite Components



1	Shoulder strap adjustment
2	Elastic to hold drink system tube
3	Shoulder strap connection
4	Whistle
5	Suspension Point
6	Chest strap
7	ABS Strap
8	Leg Strap
9	Safe-T-Band
10	Buckle
11	Seat Board
12	Air inlet
13	Hole for drink sysytem tube
14	Lateral Strap adjustment
15	Back Pocket (Inside)
16	Seat Strap
17	Velcro for Side protector (Inside)
18	Side Pocket
19	Pulley for Accelerator Line
20	Hole for Accelerator Line
21	Elastic line for automatic retraction of Speed bar
22	Guide Loop for Foot Stirrup
23	Rescue handle
24	Rescue Outer Container
25	Rescue Bridle



## Features of the Gingo Airlite

Rescue attachment bridle

Carabiners

Large dorsal storage pocket and numerous small pockets for long flights

The Gingo Airlite has been certified by LTF, and is available in sizes XS, S, M and L.

Weight: 3.1 Kg (M size with Carbon seat plate).

## Airbag for back protection (substitution for back protector)

The Gingo Airlite is a harness with a built-in airbag. Since the air bag is divided into compartments, it can help prevent air being dissipated too rapidly in the event of hard impact. The Gingo Airlite is designed to reduce the energy of an impact and to help to protect the pilot as much as possible in an accident, but it cannot completely eliminate the risk of injury. The Gingo Airlite back protection with an airbag has received certification from LTF.

## Optional Items

The following items are available as optional extras.

### *Carbon seat plate*

The Gingo Airlite can be installed with a Gin Carbon Seat plate, which weighs less than half the weight of a wooden seat.

### *Side protection*

The Gingo Airlite is compatible with GIN side protection.

### *Rescue parachute*

The Gingo Airlite is designed for use with a GIN rescue parachute, such as the ONE G or Yeti rescue. Other manufacturers' rescue systems may also be used. Every first installation of a rescue system into the harness (that means every new combination of harness and rescue system) must be checked by a qualified paragliding professional. This is called a "compatibility check". In this compatibility check the pilot himself, who will be flying with this harness, must always sit in the harness hanging from a simulator and deploy the rescue from the harness container. This check must also be done each time after the rescue has been repacked and re-installed.



### *Speed bar*

The Gingo Airlite is compatible with all common types of speed systems. We recommend the GIN aluminium speed bar.

### *Flight deck*

The Gingo Airlite may be fitted with a flight deck, allowing easier viewing of instruments and and/or carrying of ballast.



### *Stirrup (Foot bar)*

The pilot can attach an optional stirrup (foot bar) to the main carabiners, running the stirrup lines through the guides above each side of the seat plate.

### **Other Accessories**

For up-to-date information on additional accessories, visit [www.gingliders.com](http://www.gingliders.com) or contact your local GIN dealer or the distributor in your country.

### 3. Before you fly

The Gingo Airlite must be assembled by a suitably qualified paragliding professional, for example your instructor. In particular great care and attention must be paid to the fitting of the rescue parachute in the harness. The pilot should then adjust the harness for comfort.

#### Assembly

Gin Gliders recommend that assembly be carried out in the order below. If there is any doubt whatsoever about this procedure, please seek professional advice from your instructor, GIN dealer or importer.

#### *Side Protection*

The Gingo Airlite can be fitted with GIN side protection plates into the side pockets these are held in place with Velcro.

#### *Speed System*

The speed system is assembled from top to bottom. Pass the cord of the speed bar through the pair of pulleys near the side pocket and route it out through the eyelet near the front corners at each side of the seat. Attach the elastic cord to the speed bar to prevent tangling in case of a parachute deployment.



#### *Rescue Installation and Check of Compatibility*

The Gingo Airlite is compatible with GIN rescue parachutes. Other manufacturer's rescues may be used as well, but as already mentioned earlier in this manual:

Every first installation of a rescue system into the harness (that means every new combination of harness and rescue system) must be checked for compatibility by a qualified paragliding professional. Prior to the installation, you should also ensure that you have the necessary materials to complete the procedure, for example, suitable maillons and thread.

Rescue parachutes should be repacked at least every 6 Months; so installing your rescue in a new harness may also provide a good opportunity for a repack. A compatibility check always must be executed by the pilot itself who will fly with the harness. The pilot must sit in the harness which is hanging in a simulator and release the rescue from the rescue container to be sure this is possible in an emergency situation. A compatibility check (check if the rescue

parachute can be released from the integrated container of a harness) must be executed after each repacking of the rescue parachute.

### Check list when repacking the rescue parachute

Item	Check	Item	Check
Validation of date of rescue packing		Certification (LTF, EN)	
Correct size of deployment bag of the rescue?		Condition of rescue deployment bag?	
Rescue handle attachment at deployment bag correct?		Check strength of rescue handle attachment	
Original rescue handle of harness?		Check if the handle connected at the correct position of deployment bag	
When the rescue handle is pulled, is the pin released before the connection becomes tight?		The rubber band tension of rescue inner container must be less than 30N	
Is the rescue pin engaged?		Check attachment of rescue handle to the harness	
Force to open the rescue less than 70N?		Check the Velcro works	
Has the correct method been used to connect the rescue and bridle?		Check if there is any object interfering with the opening of the rescue	
Is the maillon connecting the rescue with harness bridle locked tightly?		Check if the bridle and rescue riser secured to the maillons with a suitable material (e.g. tape, rubber bands etc.) to prevent friction	

*Check your rescue manual for further details.*

When you attach the rescue bridles to the harness webbing, a Maillon Rapid type 7mm Stainless Steel carre (square) is recommended. But in any case, the connector should be rated at least 9 times the maximum weight, for example, a 7mm, 3125kg stainless connector that has an EN certificate of conformity.

The Maillon should be held in place with rubber bands, tape or plastic heat shrink tube. **Webbing to webbing connections are not recommended, due to the danger of getting the knot the wrong way round, which significantly weakens the connection** and also difficult to disconnect the rescue parachute if you land in trees.

### *Attaching rescue deployment bag to the harness deployment handle*

The rescue container of the Gingo Airlite comes with its own deployment handle. This handle and its strap must be connected to the deployment bag of the parachute. If your parachute's deployment bag does not have the proper loop, please contact your parachute dealer or a qualified professional to attach the deployment handle by sewing it or adding a new loop in the correct position on the deployment bag.



In any case a qualified professional must check the compatibility of the system; harness and rescue parachute, when a rescue parachute is installed for the first time. After every repack of the rescue parachute you can do a compatibility check yourself. Please observe carefully how the professional installs the rescue system, so that you can remember the procedure if you have to do it yourself the next time.

This compatibility check requires that you test to make sure that the rescue parachute can be released from the rescue container in the harness – it must be done by the pilot himself, sitting in the harness hanging from a simulator. It must be done after every repack of the rescue parachute to be sure that the rescue can be released without problems in the case of an emergency.

### Rescue installation guide

Take special care: The deployment handle must be attached to the side loop on the deployment bag, not to the centre loop. When fitting the rescue to the harness ensure the loop/handle attachment is positioned uppermost, close to the seat plate.



## Adjusting the volume of the rescue container

The volume of the rescue container of the Gingo Airlite can be adjusted with velcros in between 5L and 10L to accommodate different sizes of rescue parachutes. Attach both sides of the velcros to each other to make it smaller in volume when you want to use the rescue container for small rescues.

If you install a lightweight rescue such as the Yeti rescue, the container should be made smaller as shown in the photos below. We recommend to use the small size of the rescue container for rescues up to 1.8 kg.



## Adjustments

The Gingo Airlite should be adjusted to suit your physique and flying style. It is important to adjust it correctly to ensure you can easily slide into the sitting position after take off.

Adjustments should ideally be tested before your first flight by hanging in a simulator. Additional fine-tuning can be done during your first few flights.

Ensure that the rescue system, back and side protection have been installed before making adjustments.

### *Shoulder Straps*

The optimum setting for the shoulder straps depends on the height of the pilot. Stand upright with the chest/leg straps closed and symmetrically adjust the shoulder straps until they are just tight. During flight, these straps should be a little slack. You will find the adjustable buckles either side of the seat.

### *Lateral Straps*

The lateral straps adjust the angle between the thighs and the back. This angle can be set between 100° and 130°. Lengthening the straps increases the angle and vice-versa. The easiest way to adjust them correctly is during a flight in calm air. Remember that flying in the "supine position" that means leaning back, reduces the stability of the harness and increases the risk of twisting after an asymmetric deflation.

### *Leg Straps*

The correct adjustment of the leg straps allows the pilot to easily reach the sitting position after take-off without using his hands. In the standing position, use the buckles under the chest strap to adjust the leg straps so that they fit comfortably without being tight; make sure you do it symmetrically. If it is necessary to lengthen the leg straps, first check that the shoulder straps are not too tight. It is not normally necessary to make large adjustments from the default leg strap setting.

### *Chest Strap*

The adjustment of the chest strap controls the distance between the carabiners and affects the handling and stability of the glider. Widening the distance between the carabiners increases feedback from the wing and allows for easier weight shifting. Closing the strap gives you a more stable feeling in turbulence but increases the risk of stable spiral and also the risk of twisting!

We advise pilots of GIN paragliders to fly with a distance between the carabiners of approximately 44 to 48 cm.

The chest strap may also be adjusted in flight according to the conditions; for example, it may be tightened in turbulent air 9 (within the manufacturer's recommended range) and flown at a looser setting in weak conditions.

### *Seat Straps*

The seat straps change the depth of the seat. Adjust to find a comfortable position. In the sitting position, lengthen the straps to their maximum at first and then use the plastic buckles to shorten the straps to find a comfortable position with good back support. Lengthening the straps also helps you to slide easily into the harness at take off, while shortening the straps helps you to be in the standing position for landing.

### *Speed Bar*

Hanging in the simulator, adjust the length of the speed bar cord so that the bar hangs at least 15cm below the front of the harness. Making the cord too short could result in the speed system being constantly or unintentionally engaged during flight. It is safer to start with the speed bar

a little long and shorten it following your first flights. Test the speed bar in flight only after you are comfortable with your new harness, and always do so in calm conditions with ample clearance above the ground.

## Storage

One of the special features of Gingo Airlite is that it is designed to function as an airbag. Air is scooped into the airbag chambers through a channel on the side of the harness. **Pilots should make sure that this channel and the airways are open and that air is free to flow through and into the air chambers in the back of Gingo Airlite.**

There are two pockets inside the airbag. Put bags and other stuff for stowage inside these pockets and zip them closed. Otherwise, the airbag won't work properly.



## 4. Flying with the Gingo Airlite

### Pre-flight checks

For maximum safety, use a complete and consistent system of pre-flight checks and repeat the same mental sequence *every* flight.

Check that:

There is no visible damage to the harness or carabiners that could affect its airworthiness.

The rescue parachute container is closed correctly and the pins are in the right position.

The deployment handle is completely inserted into the elastic pockets.

All buckles, belts, zips are securely fastened. Buckles should click into place as you close them, and a gentle pull on the fastened buckle verifies this. Secure any zips *after* fastening the buckles. Take extra care in snowy or sandy environments.

The paraglider is connected correctly to the harness and both carabiners are secured by their locking mechanisms.

The speed bar is attached correctly to the glider.

All pockets are closed properly and any loose items are tied down safely.

Part of air chamber is closed with Velcro along the bottom, this allows you to check inside the air chamber for damage, etc. It is important to check that this Velcro is fully closed before each use; otherwise it could lead to malfunction of the airbag.

Check again that you have closed your leg and chest straps before you take off!

### Rescue Deployment

It is vital to periodically feel the position of the rescue handle in normal flight, so that the action of reaching for the rescue handle is instinctive in an emergency.

In the event of an emergency, the pilot must quickly evaluate his or her height and the seriousness of the incident. Deploying the rescue when the glider is recoverable may increase the danger of injury. If you have sufficient height and the glider is in a flat spin, it is preferable to first try to stop the spin (e.g. full stall), due to the risk of entanglement. On the other hand, a second's hesitation in deploying the reserve could prove costly if there is insufficient height.



**If the rescue is to be deployed, the procedure is as follows:**

- Look for the rescue handle and grasp it firmly with one hand

- Pull sideward and upwards on the handle to release the deployment bag from the harness container

- Look for a clear area, and in a continuous motion, throw (and RELEASE!) the rescue away from yourself and the glider, preferably into the air stream and against the direction of spin

- After deployment, avoid entanglement and pendulum motions by pulling in the glider as symmetrically as possible with the B, C, D or brake lines

- On landing take an upright body position and be sure to do a PLF (Parachute Landing Fall) to minimize the risk of injury

## **Pockets**

There are large pockets inside the airbag at the back of the harness and 2 smaller side pockets. These are positioned to prevent contents from falling out during flight if the pocket is opened. There is also a radio compartment inside the back pocket and a buttonhole to pass the cable through for a handheld speaker-microphone or a Camel Back.

## **Landing with the Gingo Airlite**

Before landing, slide your legs forward in the harness so that you adopt the standing position. NEVER land in the seated position; it is very dangerous for your back even if you have an airbag. Standing up before landing is an active safety precaution, and is much more effective than the passive system of any back protection.

## 5. Miscellaneous

### Towing

The Gingo Airlite is also excellent for towing. The tow release can be connected to the main carabiners. The best position to attach a tow release is to use a towing adapter, which slides over the lower ends of the risers of the paraglider. For further details refer to the documentation provided with your tow release or towing adaptor or ask a qualified towing instructor at your tow site.

### Tandem Flying

The Gingo Airlite is not recommended for tandem flying.

### Flying over water

It is not recommended to use the Gingo Airlite on any flights over water, especially extreme manoeuvres training, due to the possibility that the airbag could keep the pilot under water in the event of a water landing. So, if you do fly over water, you must take extreme care.

### Act responsibly and help preserve your flying sites

Please observe all local rules at the flying sites you use. It is important not to endanger the preservation of flying sites that are a vital necessity to the enjoyment of our beautiful sport.

## 6. Maintenance and Repair

The materials used in the Gingo Airlite have been carefully selected for maximum durability. Nevertheless, keeping your harness clean and airworthy will ensure a long period of continuous safe operation.

### Maintenance

The Gingo Airlite paraglider harness has to be transported inside a paraglider rucksack, so that it is protected against damage.

Keep it away from sharp objects which could damage the harness.

During storage, make sure the harness is protected from animals such as rodents or insects.

Avoid dragging your harness over rough or rocky ground.

Unnecessary exposure to UV radiation, heat, humidity and chemicals should be always avoided.

Keep the harness in your rucksack when not in use.

Store all your paragliding equipment in a cool, dry place, and never put it away while damp or wet.

Keep your harness as clean as possible by regularly cleaning off dirt with a plastic bristled brush and/or a damp cloth. If the harness gets exceptionally dirty, wash it with water and a mild soap. Make sure you first remove all the sub-components: seat board, back plate, back protection, rescue parachute etc. Allow the harness to dry naturally in a well ventilated area away from direct sunlight.

If your rescue parachute ever gets wet (e.g. in a water landing) you must remove it from the harness, dry it and repack it before putting it back in the container.

After a hard landing you must check your back protection for damage. A tear in the airbag could significantly no efficiency of the protection it.

The zips and buckles may be occasionally lubricated with silicone spray, no more than once a year.

### Inspection checklist

In addition to regular pre-flight checks, the Gingo Airlite should be inspected thoroughly on every rescue repack, normally every 6 months. Additional inspections should be performed after any crash, bad landing or take off, or if there are any signs of damage or undue wear. Always seek professional advice whenever in doubt. The following preflight checks should be carried out:

- Check all webbing, straps and buckles for wear and damage, especially the areas that are not easily seen, such as the inside of the carabiner hook-in points.
- All sewing must be intact and any anomalies attended to immediately to avoid exacerbation of the problem.
- Special attention should be paid to the rescue installation, particularly the elastic and Velcro parts.

- Check that the airbag protector does not have any holes. The function could be in question if the airbag has been perforated.
- The seat and back plates must be free from cracks.
- **The main aluminium carabiners must be replaced at least every 5 years or after 500 hours, whatever comes first.** Impacts may create undetectable cracks that could result in structural failure under continuous load.

## Repair

The manufacturer or an approved specialist should carry out any repair that involves critical parts of the harness. This will ensure that the correct materials and repair techniques are used.

## Environmentally friendly disposal of the harness

When this paragliding harness cannot be used any longer after an extended period of life time, then you must ensure that it will be disposed in an environmentally friendly way. Please observe the existing regulations and laws in your country.

## 7. Technical Data

### Specification

Description	Paragliding harness			
Size	XS	S	M	L
Height of main attachment points above seat plate	39cm	41cm	43 cm	45cm
Carabiner Distance	36-50 cm	36-51 cm	36-52 cm	36-54 cm
Weight (with Carbon seat)	2.7 Kg	3 Kg	3.1 Kg	3.3 Kg
Parachute Container	Integrated container underneath the seat plate			
Volume of Parachute Container	5L – 10L			
EN, LTF certified max. load	120 Kg			
Options	Flight deck, Stirrup (foot bar), Carbon Seat plate, Side protector			

### Certification

Gingo Airlite harness

LTF & EN Nr... EAPR-GZ-7536/12

### Description

FABRIC OF HARNESS

OUTSIDE: 420D HD N/OXFORD(100% NYLON F.YARN WOVEN FABRIC), N/160D ATY PU R/S(100% NYLON codura)

INSIDE: Oxford 210D PU

WEBBING: DYNEEMA 25mm / Nylon66-30mm

BUCKLES/RING: T-LOOK SAFETY BUCKLE "LIGHT" BUCKLE AUTOMATIQUE LIGHT 30MM,

Passant MALE 26.5mm + Cadre Female 27.5mm

THREAD: P/F 210 D/9 Bonded, P/F 210 D/4 & 210 D/6 Bonded POLYESTER

Every effort has been made to ensure that the information in this manual is correct, but please remember that it has been produced for guidance only.

This owner's manual is subject to changes without prior notice. Please check with [www.gingliders.com](http://www.gingliders.com) for the latest information regarding the Gingo Airlite and other GIN products.