



GIN



# *Fuse*

***Pilot***

**pilot manual**

v1.2, 05/2015





Tandem Pilot



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# Thank you...

...for choosing Gin Gliders. We are confident you'll enjoy many rewarding experiences in the air with your GIN harness.

This manual contains important safety, performance and maintenance information. Read it before your first flight, keep it for reference, and please pass it on to the new owner if you ever re-sell your harness.

Any updates to this manual, or relevant safety information, will be published on our website: [www.gingliders.com](http://www.gingliders.com). You can also register for e-mail updates via our website.

GIN team  
Happy flying and safe landings,

# Warning

Like any extreme sport, paragliding involves unpredictable risks which may lead to injury or death. By choosing to fly, you assume the sole responsibility for those risks. You can minimize the risks by having the appropriate attitude, training and experience and by properly understanding, using and maintaining your equipment. Always seek to expand your knowledge and to develop self-reliance. If there is anything you do not understand, consult with your local dealer as a first point of contact, with the GIN importer in your country or with Gin Gliders directly.

Because it is impossible to anticipate every situation or condition that can occur while paragliding, this manual makes no representation about the safe use of the paragliding equipment under all conditions. Neither Gin Gliders nor the seller of GIN equipment can guarantee, or be held responsible for, the safety of yourself or anyone else.

Many countries have specific regulations or laws regarding paragliding activity. It's your responsibility to know and observe the regulations of the region where you fly.

# About Gin Gliders

## *Dream*

In forming Gin Gliders, designer and competition pilot Gin Seok Song had one simple dream: to make the best possible paragliding equipment that pilots all over the world would love to fly—whatever their ambitions.

At Gin Gliders, we bring together consultant aerodynamists, world cup pilots, engineers and paragliding school instructors, all dedicated to fulfilling this dream.

## *Touch*

We're a "hands-on" company that puts continuous innovation and development at the centre of everything we do.

At our purpose-built R&D workshop at head office in Korea, we are able to design, manufacture, test-fly and modify prototypes all in a matter of hours. Our international R&D team is on hand both in Korea and at locations worldwide. This guarantees that your equipment has been thoroughly tested to cope with the toughest flying conditions.

Our own production facilities in East Asia ensure the quality of the finished product and also the well-being of our production staff.

## *Believe*

We believe that the product should speak for itself. Only by flying can the pilots understand their equipment and develop trust and confidence in it. From this feeling comes safety, comfort, performance and fun. The grin when you land should say it all!

# Introducing the Fuse Pilot

The Fuse Pilot has been developed to meet the needs of both professional and leisure pilots. We have redesigned several key features of the harness to provide a more comfortable and safer flying experience with the addition of a triplex seat-plate and a newly designed back support and back pocket.

We have integrated the Getup System for a safer and easier buckle system. This reduces the buckles and prevents the pilot from forgetting to close the leg straps before launch. The Gin soft fuse foam back protector has been reshaped for increased safety and a new foam insert was created for the rescue system. After installing your reserve parachute into the harness you can place an engineered foam pad on the opposite side to maintain the optimum shape of the harness in flight.

A larger back pocket has been added to the Fuse Pilot harness for greater convenience. Now the pilot can store more items out of the way while in flight. Moving storage from the Passenger harness pocket to the pilot harness will provide for a more comfortable flight. In the event of a hard landing it is safer for both the pilot and passenger to have these items stored in the rear. Features like the bilateral rescue option have become staples of our tandem line and have been carried into the new Fuse Pilot harness. This allows the pilot the choice of the most convenient side for rescue deployment and the handle is positioned for easy access and rapid deployment.

## Specifications

The Fuse Pilot has EN and LTF certification.

### Size

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Harness size	one size fits all
Weight (kg)	3.8

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## Delivery package

- Gin soft fuse foam mousse bag protector
- 2 carabiners
- 1 Rescue handle
- Triplex seat plate

## Optional Extras

Yeti rescue #50 or #60



Tandem rescue bridle



Fuse Passenger harness



Spreader bar



For up-to-date information on additional accessories, visit [www.gingliders.com](http://www.gingliders.com).

## Components of the Fuse Pilot

Optional left and right side rescue deployment handle



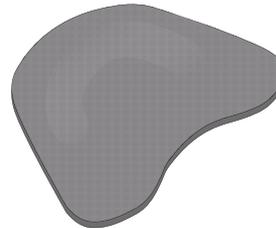
14cm Gin Soft Fuse foam back protector (p.12)



GIN carabiners



Triplex seat plate



### **Rescue handle**

The Rescue parachute handle supplied with the Fuse Pilot is designed for easy and rapid deployment of your rescue. This harness must only be used with the supplied rescue handle. Using other designs of rescue handle may make it impossible to deploy the rescue parachute.

### **Back protection**

The Fuse Pilot is equipped with the Gin soft fuse foam mousse bag. This effectively offers protection equivalent to a 17cm mousse bag in a more compact package. Like the GINSOFT14T in the Safari, the Gin soft fuse has multiple compartments and a dual layer structure. This offers better shock absorption by preventing air escaping from the foam in case of impact.

The Gin soft fuse provides protection which will reduce the energy of the impact as much as possible, but it cannot completely eliminate the risk of injury.

### **Wooden seat plate**

To add comfort and stability to the Fuse Pilot harness we incorporated a custom shaped wooden seat plate. The seat plate is moulded to the shape of the passenger harness to maximize the passengers comfort.

## **Storage**

### **Back Pocket**

The Fuse Pilot contains a new even larger back pocket to allow the pilot to store more items in flight. The back pocket contains a compartment for a small radio and there is a hole that can be used for a hydration tube and/or radio cable, with access to attachments points on the pilots shoulder straps.

### **Accessory Pockets**

Located on sides of the harness are two zippered pockets to keep your belongings safe while allowing easy access in flight. These pockets are ideal for quick access to small items.

# Before you fly

Make sure your dealer has checked the harness for completeness and basic settings. Your harness must be assembled by a suitably qualified paragliding professional, for example, your instructor.

## **Rescue Installation and compatibility check**

Gin Gliders recommend that rescue installation is performed properly by a competent person. The Fuse pilot is compatible with the GIN Yeti tandem rescue. Other manufacturer's rescues may be used as well but must be checked for compatibility by a professional.

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 for compatibility. To verify the installation, you must perform a test deployment by sitting in a simulator.

Rescue parachutes should be repacked at least every 150 days; so installing your rescue in a new harness may also provide a good opportunity for a repack. After every repack of the rescue parachute you should also do a compatibility check. Make sure that the rescue parachute can be released from the rescue container in the harness—it must be done by you, the pilot, sitting in the harness hanging from a simulator.

**WARNING:** If you are in any doubt about any aspect of rescue installation, seek professional advice.

**IMPORTANT:** You must perform a test deployment from a simulator to verify the installation.

## **Rescue Installation and compatibility check**

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

The rescue container of the Fuse Pilot comes with its own deployment handle. This handle and its strap must be connected to the deployment bag of the parachute. In particular, check the length of the strap connecting the rescue deployment handle to the rescue inner container. It should be long enough that the reserve can be extracted without the danger of the pins not being pulled before the strap tightens on the reserve, but not so long that there is excessive slack that extends the movement required for deployment.

The deployment bag of other manufacturers' rescue systems (i.e. non-GIN rescue systems) may have different loop positions which may cause a deployment failure. Be sure to contact your parachute dealer or a qualified professional to check the connection, position and secure deployment, and refer to the rescue manual for details.

### **Rescue container volume**

The rescue should fit comfortably in the container. The rescue should be held so that it can't move around, but not too tightly that extraction becomes difficult. If necessary, place a piece of foam behind the rescue to reduce the depth of the container.

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



Handle attachment



Pass the handle through the center loop



Pass the handle through itself

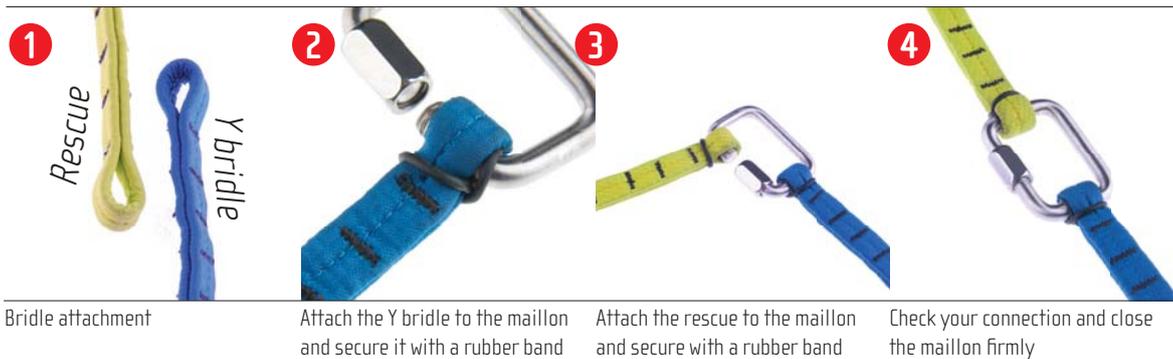


Pull to make a clean knot

## Bridle to rescue attachment

### Maillon connection

A Maillon Rapide type connector is recommended. The connector should be rated at least 9 times the maximum weight, for example, a correctly fitted 8mm Stainless Steel square Maillon.



**CAUTION:** The bridle webbing must be held securely in place to avoid excess friction during rescue deployment. The bridle must be held firmly in place with rubber bands, tape or plastic heat shrink tube.

## Rescue Installation Guide

The Fuse Pilot rescue is located behind the pilots seat. The handle can be placed on the left or right side with a velcro bridle tunnel running along both sides of the harness to allow the pilot to customize the harness to their needs. It is very important to properly install the rescue parachute. If the parachute is not folded correctly or the lines are not placed properly then a serious if not fatal accident could result. If you have any doubts speak with your instructor or GIN dealer.

Using the extra para line provided with your harness, pull the built in loops through the grommets of the rescue container flaps. Close the rescue container flaps in the order shown in the photos below. Secure the rescue container flaps by placing the metal release pins through the loops as shown. Insert each side of the rescue handle into its neoprene sleeve and secure with the attached Velcro.

**WARNING:** When installing the reserve make sure the reserve handle attachment is facing out away from the harness and the reserve lines are facing in.



1 Place the rescue attachment line in a "zig-zag" pattern at the bottom of the pouch

2 Place the rescue into the pouch with the rescue handle facing out

4



Insert the string through the flap eyelets

5



Pass the string through the bottom flap grommets

6



Pass the string through the top flap grommets

7



Insert the rescue handle hooks into the eyelets

8



Close the velcro cover to protect the rescue hooks

9



Connect the rescue handle and close the velcro cover

## Rescue bridle installation

### Bridle tunnel

After installing the rescue into your harness run the rescue bridle along the bridle tunnel in the following order.



Run the bridle from the rescue container to the velcro bridle tunnel



Connect the bridle to the harness using the built-in velcro loops



Run the bridle along the shoulder strap, then cover

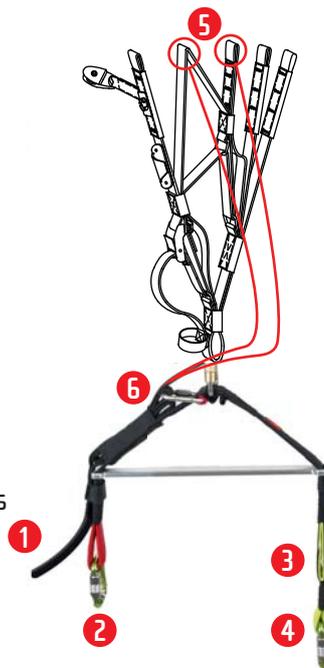


Use the velcro on the bridle to secure it to the shoulder strap

## Spreader bar

The tandem spreader bars have been designed with a safety feature that prevents the main canopy from re-inflating after the reserve parachute has been deployed. By connecting the rescue bridle to the "B" and "C" risers the main canopy will be stalled into a more stable position for descent.

- 1 Rescue bridle
- 2 Pilot attachment (RED LOOP)
- 3 Small passenger attachment (LYME LOOP)
- 4 Large passenger attachment (LYME LOOP)
- 5 "B" & "C" attachment points
- 6 Rescue carabiner (RED LOOP)



- 1 Rescue carabiner (RED LOOP)
- 2 Main carabiner (Small passenger)
- 3 Main carabiner (Larger passenger)

### Bridle to spreader bar connection

Connect the rescue bridle in the following order. If you are not certain of the proper connection procedure then see your GIN dealer. If not connected properly then the bridle may fail, causing serious injury or death.



Connect the rescue bridle to the rescue carabiner



Fold the extra bridle webbing neatly and secure with the velcro cover followed by the main line velcro



Pass the riser connections through the main carabiner



Attach bridle to the B & C riser carabiners and secure with the velcro straps

## Adjustments

Adjust your harness 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. A poorly adjusted harness can adversely affect the flying characteristics of your paraglider.

Perform adjustments before your first flight by hanging in a simulator and fine-tune the settings if necessary during your first few flights.

### 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 a snug fit, but not tight. To tighten, pull up on the black and green rope loop (red dotted line). To loosen, pull down on the black webbing loop at the bottom of the shoulder strap (white dotted line).



**NOTE:** Make sure that the rescue system has been installed before making adjustments.

**WARNING:** Always maintain chest strap adjustments within the paraglider manufacturer's recommended range

### 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! The chest strap may also be adjusted in flight according to the conditions; for example, it may be tightened in turbulent air and flown at a looser setting in less turbulent or weak conditions.

To tighten, pull the black and green rope loop to the right. To loosen, pull the smaller black webbing loop to the left.

### 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 you need 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.

To tighten, pull down on the black and green rope loop. To loosen pull up on the double buckle.



### Lateral Straps (1)

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 (i.e. leaning back), reduces the stability of the harness and increases the risk of riser twists after a deflation.

### Seat Straps (2)

The seat straps change the depth of the seat. Adjust to find a comfortable position. To decrease the depth of the seat pull up on the black and green seat strap loop. Lengthening the straps 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.

Adjustments should be made while hanging in a simulator or while flying in calm air.

### Side Straps (control angle of seat) (3)

The seat adjustment straps allow you to adjust the angle of the front of the seat. You can control the angle of the seat and the seat position with the straps beside the seat. To get the optimum setting you can loosen these straps to the maximum in the sitting position and start pulling the straps until you get the comfort from the leg support depending on the flying style of the pilot.



1 Lateral strap

2 Seat strap

3 Side strap

# Flying with the Fuse Pilot

## General warnings and advice

Before every flight, check the following:

Are you in good physical and mental condition?

Are you familiar and compliant with all applicable laws and regulations in your area?

Are you within the certified weight range of your paraglider?

Do you have the necessary valid insurance cover (e.g. liability, medical, life)?

Are you briefed thoroughly about the site, airspace and expected weather conditions of the day?

Is your equipment and choice of site suitable for your level of experience?

Do you have a suitable helmet, gloves, boots, eye-wear and adequate clothing?

Are you carrying some form of identification, so that people know who you are in case of an accident? Take along a radio and mobile phone if possible.

Do you fully understand how to safely use your new equipment? If not, have your instructor or dealer explain anything you are not sure about.

When you go for your first flight on your new harness, be sure to pick a day and site that does not present you with any unfamiliar challenges. During your first flight, familiarize yourself with the in-flight characteristics of your new harness.

## Pre-flight checks

As part of your normal pre-flight check routine, check that:

Is there any damage to the harness or carabiners that could affect its airworthiness?

Is the rescue parachute container closed correctly with the pins in the right position?

**IMPORTANT:** Use a complete and consistent system of pre-flight checks and repeat the same sequence every flight.

Is the deployment handle correctly inserted or attached?

Are all buckles, belts, zips 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.

Is the paraglider connected correctly to the harness with both carabiners secured by their locking mechanisms?

Are all pockets closed properly and any loose items tied down safely?

Have you closed your leg and chest straps? Double check before you take off!

## Rescue Deployment

In the event of an emergency, you must quickly evaluate your height and the seriousness of the incident. A seconds hesitation in deploying the reserve could prove fatal if there is insufficient height. On the other hand, deploying the rescue when the glider is recoverable may result in needless injury.

If you decide to deploy the rescue:

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

Pull sideways 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 or against the direction of spin. After deployment, avoid entanglement and pendulum motions by promptly pulling in the glider as symmetrically as possible with the B, C, D or brake lines.

**IMPORTANT:** In normal flight, periodically feel the position of the rescue handle so that the action of reaching for the rescue handle is instinctive in an emergency.

**WARNING:** During any incident in flight, always monitor your altitude. If you have any doubt that you have sufficient height for recovery, deploy your reserve without hesitation. "If low, then throw".

## **Landing with the Fuse Pilot**

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 even if you have back protection. Standing up before landing is an active effective safety precaution.

## **Miscellaneous**

### **Towing**

The Fuse Pilot is not recommended for towing.

### **Tandem Flying**

The Fuse Pilot is designed for tandem flying. We recommend flying with the Fuse Passenger harness. See [www.gingliders.com](http://www.gingliders.com) for details of our harnesses specifically designed for tandem flying.

### **Flying over water**

The Fuse Pilot is not recommended for the extreme manoeuvres. Flying over water is not recommended with the Fuse Pilot because exiting a tandem harness with a passenger has an increased possibility of drowning after a water landing.

# Maintenance and repairs

The materials used in this harness have been carefully selected for maximum durability. Nevertheless, keep your harness clean and airworthy to ensure the longest possible period of safe operation.

## Care and maintenance

Don't drag your harness over rough or rocky ground. Avoid unnecessary exposure to UV rays, heat and humidity. Keep the folded harness in your rucksack when not in use.

Store all your equipment in a cool, dry place, and never put it away while damp or wet. Regularly clean 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 the entire sub-components for example, 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 separate it from the harness, dry it and repack it before putting it back in its separate outer container. Occasionally lubricate the zips and buckles with silicone spray, no more than once a year.

After a hard landing you must check your harness for damage, pay close attention to the rescue container and verify all of the attachments are secure.

## **Inspection checklist**

In addition to regular pre-flight checks, your harness should be inspected thoroughly on every rescue repack of 150 days. 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 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.

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.

## **Repairs**

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.

### **GIN quality and service**

We take pride in the quality of our products and are committed to putting right any problems affecting the safety or function of your equipment and which are attributable to manufacturing faults. Your GIN dealer is your first point of contact if you have any problems with your equipment. If you are unable to contact your dealer or GIN importer, contact Gin Gliders directly via our website.

### **Care of the environment**

We are privileged to fly in areas of outstanding natural beauty. Respect and preserve nature by minimizing your impact on the environment. When visiting an area, contact the local club for details of environmentally sensitive areas and local restrictions.

When your paraglider eventually reaches the end of its useful life, dispose of it with consideration and follow any local regulations.

# Final words...

Most of us today live in a dependent society where we are regulated and protected. There are few opportunities for individuals to develop the self-responsibility that is the foundation of safety in extreme sports such as paragliding.

Most accidents are caused by getting into situations that are too demanding for your level of experience. This happens if you lack fundamental understanding, are incapable of assessing the risk or simply do not pay sufficient attention to your surroundings or your own state of mind.

To stay safe, the best you can do is to increase your understanding, skill and experience at a rate you can manage safely. There is no substitute for self-responsibility and good judgement.

In the end, paragliding offers a unique opportunity to learn to take control of your own destiny. Memento mori, carpe diem!

Fly safely, and...E N J O Y!

GIN team

# Technical data

## Size

Pilot height (cm)	One size fits all		
Height of attachment points (cm)	41	42	43
Carabiner distance (cm)	42		
Weight (kg)	3.8		

## Certification

The Fuse Pilot has EN and LTF certification, max load 120kg

Fuse Pilot harness: [EN] PH 096.2013, [LTF] GZ 096.2013

## Parachute container

Integrated container behind the seat

## Back protection

14cm Mousse bag

# Materials

## Harness fabric

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Outer	210D Oxford PU 60" N100D JR honeycome PU 58" black, grey
Inner	Oxford 210D PU 60"

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## Webbing

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Nylon 66 25mm / 30mm

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## Buckles

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FC24B Cobra fix -28mm, 3mm Slider buckle /3mm loop

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## Thread

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P/F 630 D/9 Bonded, P/F 280 D/3 & 420 D /3 Bonded 100% POLYESTER

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[www.gingliders.com](http://www.gingliders.com)

GIN

*Dream. Touch. Believe.*