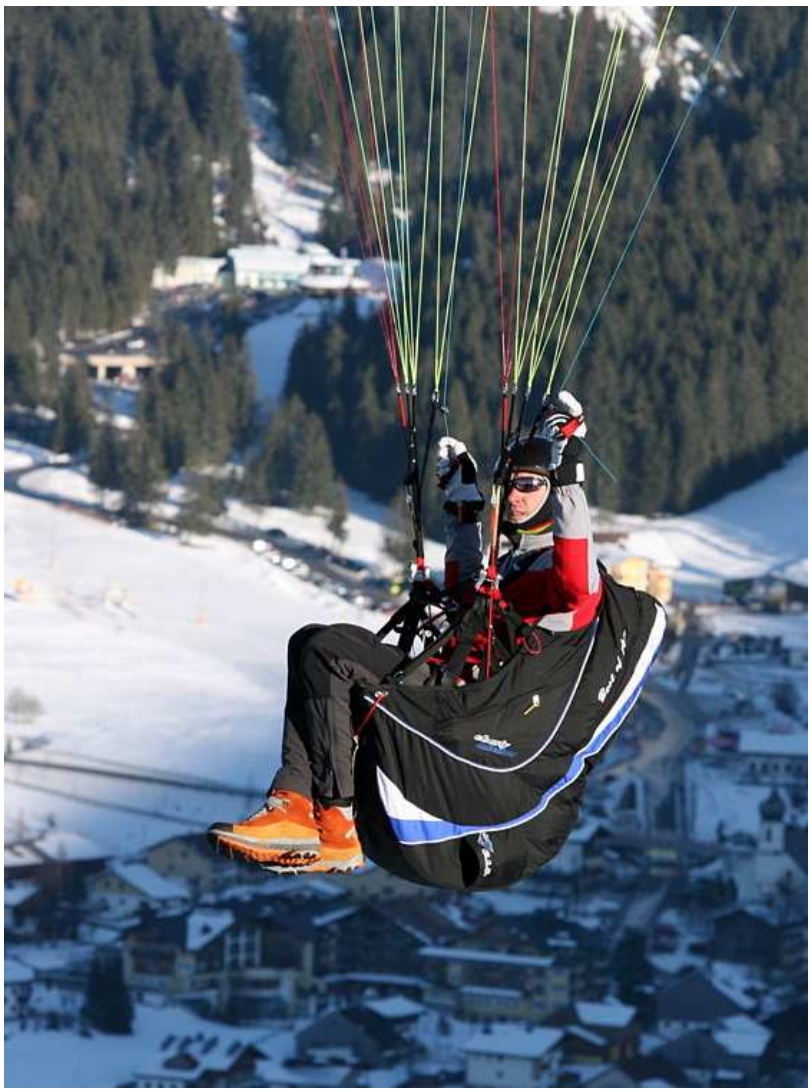
CHARLY MISSION

Owners manual

Version. 1.0 from 11.3.2009

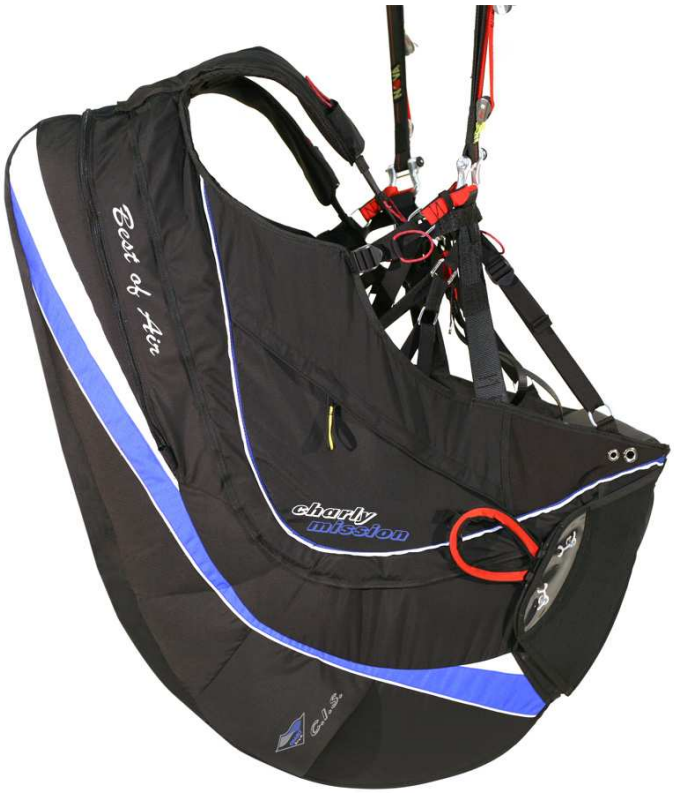


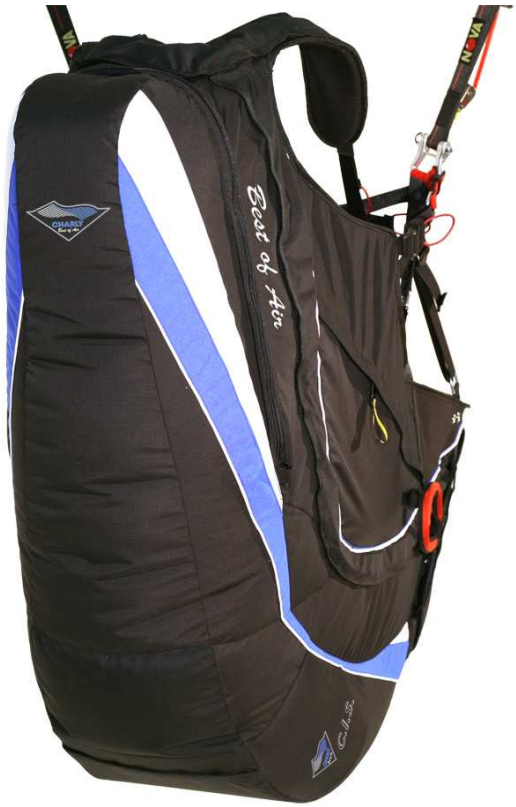
Please read this owners manual before your first flight with the Charly MISSION !

It has been written to inform you comprehensively about the correct use of your paraglider harness. Should any questions arise relating to the use of this product, then please contact CHARLY PRODUCTS directly.

CHARLY-PRODUKTE - AM OSTERÖSCH 3 - 87637 SEEG

Tel.: 0049 (0) 8364/1286 - mail: info@charly-produkte.de - web: www.charly-produkte.de





Thank you very much for choosing the Charly MISSION for your paragliding harness. You have selected one of the most innovative harnesses available at present. We are very proud of our product, and we are convinced that it will give you much pleasure.

Please read this manual carefully.

If you sell your Charly MISSION, please hand this manual over to the next owner..

Happy flights and safe landings,
your Charly-Team

Important safety advice:
When purchasing this equipment, you accept complete responsibility and all risks associated with the use of this equipment to paraglide, including injury and death. Inappropriate use of paragliding equipment makes for additional risks. To be able to paraglide you must possess the necessary qualification (rating) for that particular country. Neither Finsterwalder Charly Products nor the seller or importer of this product can be held liable in the case of personal damage, or damage to a third party. If you are unsure of any aspect involved with the use of this product, then please contact your Charly retailer, or Charly importer for your country.

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1.1 TECHNICAL DESCRIPTION

- The double **C**harly **I**nflate **S**ystem for increased pilot safety – tested in accordance with the new certification norm. Rapid inflation in all seating positions due to the asymmetrical arrangement of the bilateral valve systems, with integrated flaps for optimised inner pressure and record-breaking shock absorption values even when the system is only half inflated.
- Innovative and technical design of the harness geometry, compatible with all classes of paraglider.
- Perfect seating comfort and support in all pilot positions with many adjustment possibilities.
- Integrated rescue reserve container, can be individually suited to the various packing volumes of prevalent rescue systems.
- Complete serial fitting with Finsterwalder P-Lock automatic light weight components.

Intended purpose	Paraglider harness
Maximum certified launch weight:	100 kg
weight:	4,3 kg (size. L without karabiners)
Suspension height:	44 cm (Gr .L)
Protector:	Charly impact pressure protector
	Optional a 7cm foam protector
LTF- certification	
Rescue reserve:	Integrated container below the seating board
	Side deployment handle

1.2 SAFETY

Charly presents the world novelty **C.I.S.** in the field of protectors.

The intake and outlet valves are problematic by almost all impact pressure protectors. Many protectors have good findings as long as they are fully inflated, but lose pressure too quickly (the intake openings have insufficient valve control) when a collision occurs.

We have given a great deal of thought as to how the airbag protector could be improved. After many trials with various prototypes we have come up with a completely new type of valve control. These valves function essentially like heart valves, they let the air through excellently in one direction, yet close automatically in the opposite direction, preventing pressure release from within the protector. We have now utilised this know-how in the Charly-Mission.

The results from the test centre have corroborated our work..

With the new valves we have been able to achieve great results independent of the airflow!
The loading values are identical even after a 5 second interruption of the airflow.

For you as a pilot this great advance in safety has the advantage that the airbag retains its full protective properties even when the airflow is interrupted, as in the case of a stall just before landing.

With the Charly MISSION, two valves that are arranged at different angles are utilised. Independent of the preferred seating position of the pilot, at least one valve is perfectly aligned with the airflow.

2.0 THE PROTECTOR

The Charly MISSION is a harness with an integrated airbag. The airbag is divided into several chambers so that in the case of a hard collision, not all of the air can escape at once. The MISSION has been developed to absorb the impact energy as much as possible and to give the pilot maximum protection in the case of a crash. It cannot completely eliminate the risk of injury however.

2.1 PROTECTOR INSERTION

The impact pressure protector is connected solidly to the harness. It can be neither removed nor installed. When packing up the equipment, care must be taken that the polyethylene plate in the area of the protector is not bent.

Optionally a 7cm foam protector can be inserted into the Charly MISSION. This should be undertaken by your flight instructor, Charly importer or a Charly employee.

3.0 FLIGHT PREPARATION

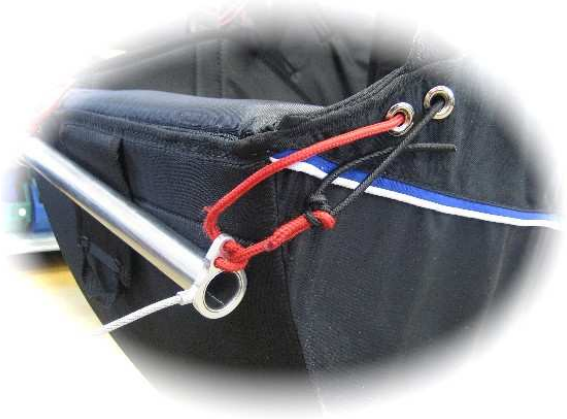
The Charly MISSION must be put together by an expert. Especially the first installation of the rescue reserve must be undertaken by a compatibility tester and requires the utmost care.
The basic adjustments of the harness should be undertaken by the pilot himself whilst seated in a harness simulator.

Assembly :
Charly Products recommends assembling the harness in the following order. If in doubt, you should ask for competent advice from a flight instructor, the staff at Charly, or a Charly dealer.

3.1 ACCELERATOR

All of the usual speed systems (accelerators) delivered with your paraglider can be mounted to the Charly MISSION. Charly recommends the use of the FINSTERWALDER speed pedals made from steel cable and aluminium, as these can be engaged in flight without the necessity of using the hands.

Normally the accelerator is mounted from top to bottom. The accelerator cords are threaded through the rollers behind the side pockets and then through the eyelets in the lower front corners of the harness. Connect the elastic retainer to the accelerator in order to avoid getting it entangled in an emergency reserve deployment.



elastic accelerator retainer

4.0 RESCUE RESERVE / CONTAINER

The integrated rescue reserve container below the seating board has been redesigned with a large conical reserve container to guarantee the fastest & easiest deployment. The bottom position was chosen because the centre of gravity of the harness is not influenced, resulting in better comfort and a more pleasanter flight feeling. The deployment handle is positioned on the right hand side and is easy to reach.
The elastic accelerator retainer system prevents the accelerator becoming entangled in the rescue reserve when the latter is deployed..

Charly-Products recommend the use of Charly rescue reserves such as the EXPERT 120. Rescue reserves from other manufacturers can also be used.
As mentioned above, every first installation of the rescue reserve, (& every new combination of rescue reserve & harness), must be undertaken by qualified trained personnel. The pilot himself must undertake a test deployment of the rescue reserve whilst sitting in the harness in a harness simulator, by releasing the inner container from the harness outer container.
This check must be carried out every time the reserve is repacked and reinstalled.

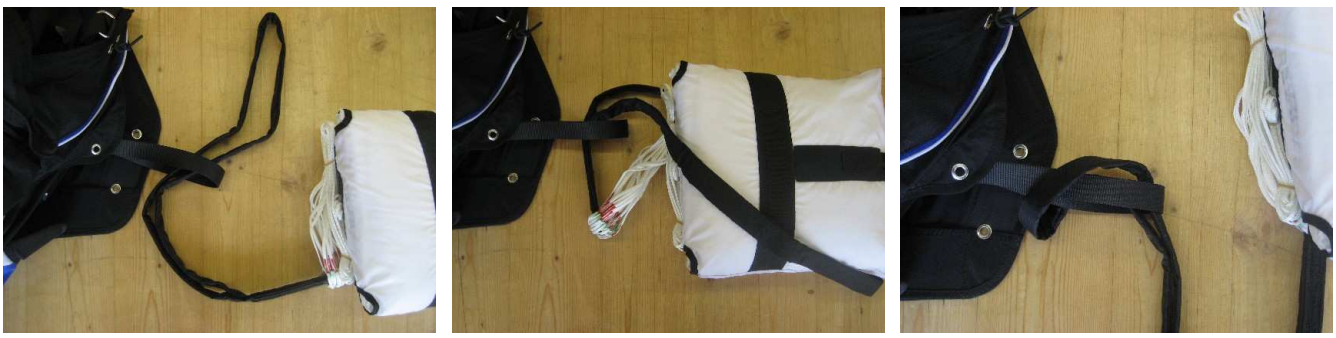
4.1 RESCUE RESERVE INSERTION

CONECTING THE RESERVE BRIDLE LINE TO THE HARNESS

A screw-lock link with a minimum strength of 2400daN is recommended,
Eg. Maillon Rapid 6mm screw lock link. The karabiner should have a strength of at least 9 times the maximum launch weight.
The webbing straps on both sides of the screw-lock link should be fastened with rubber rings, retention bands, or shrinkage tubing.

By bridle line / webbing connections, great care must be taken to ensure that the fastening is not asymmetrical. By an asymmetrical connection, the webbing straps can slip, causing considerable frictional warmth and possible tearing in the case of a reserve deployment.

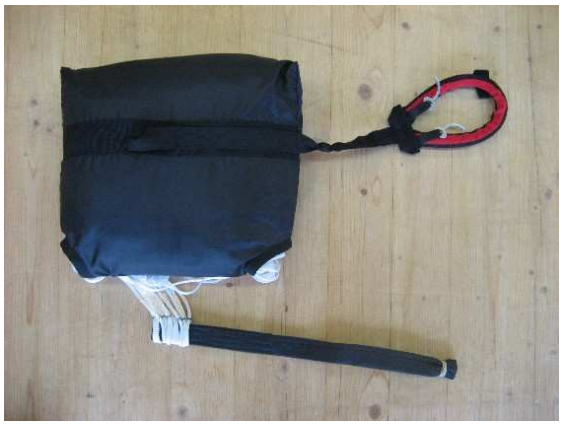
Connection using screw-lock link



Connection harness strap / bridle line

CONNECTING THE DEPLOYMENT HANDLE TO THE INNER CONTAINER

The deployment handle of the integrated rescue reserve is a part of the Charly-MISSION harness. Only this deployment handle may be used. It is connected to the inner container by looping the band on the deployment handle through the side band of the inner container. Should there be no possibility of attachment on your inner container, then such must be sewn on by qualified specialist staff.



Always attach the deployment handle on the side

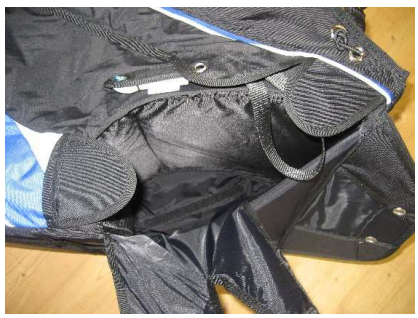
4.2 ALTERING THE CONTAINER-VOLUME

As rescue reserves are tending to become smaller and lighter, we have developed a special “spacer” to assist.
Using the spacer you can reduce or enlarge the volume of the container as required. When using a smaller reserve, fasten the spacer to the rear container wall using the Velcro strips.

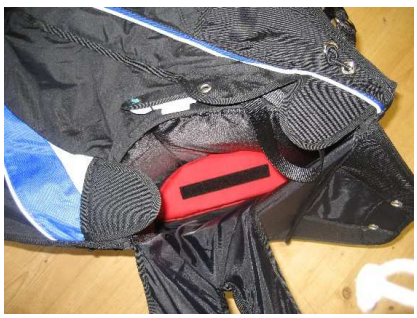
IMPORTANT : THE FLEECE SIDE ALWAYS FACES TOWARDS THE RESERVE !!!

By larger reserves you simply omit the spacer.

„spacer“



container without spacer



container with spacer

Important：Fleece facing the reserve!!

Using additional spacers, the container can be adapted very well to the rescue reserve in use.

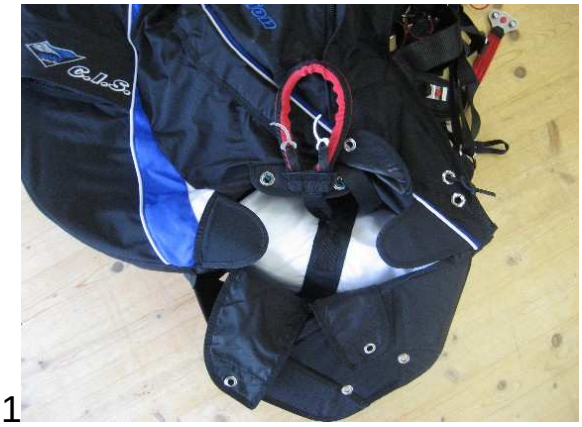
Container volume without spacer	**12000 cm²**
Container volume with 1 spacer	**9000 cm²**
Container volume with 2 spacers	**6000 cm²**
Container volume with 3 spacers	**3000 cm²**

TheCharly MISSION comes in size L with one spacer, and in sizes M and S with 2 spacers, if you require additional spacers, these can be ordered by Charly-Products!

4.3 INSERTION INSTRUCTIONS FOR RESCUE RESERVE

By installation of the rescue reserve into the Charly MISSION, special attention must be paid to ensure that the deployment handle is looped through the band on the side of the inner container, and not through the middle band. Make sure that the deployment handle is attached as high up as possible at the seating board.

FOLLOW THE ORDER AS SHOWN IN THE PICTURES

1 

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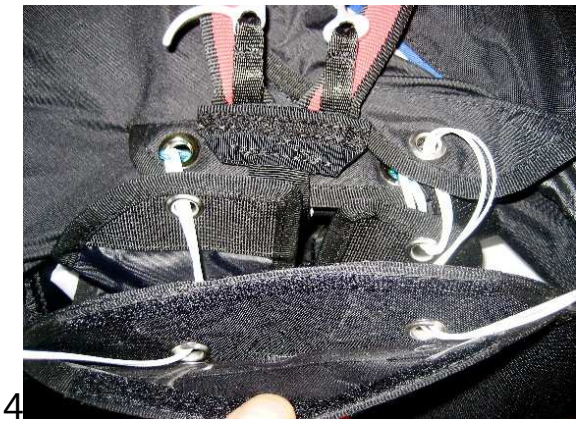
4 

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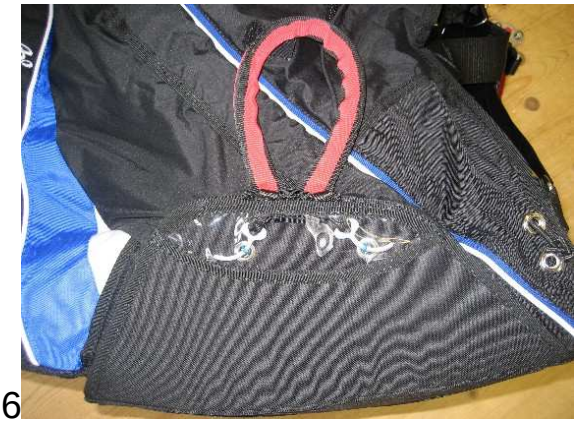
6 

Charly employs a <u>Loop-tensioner</u>, hence you should <u>not</u> secure the release pins with a weak-link thread!

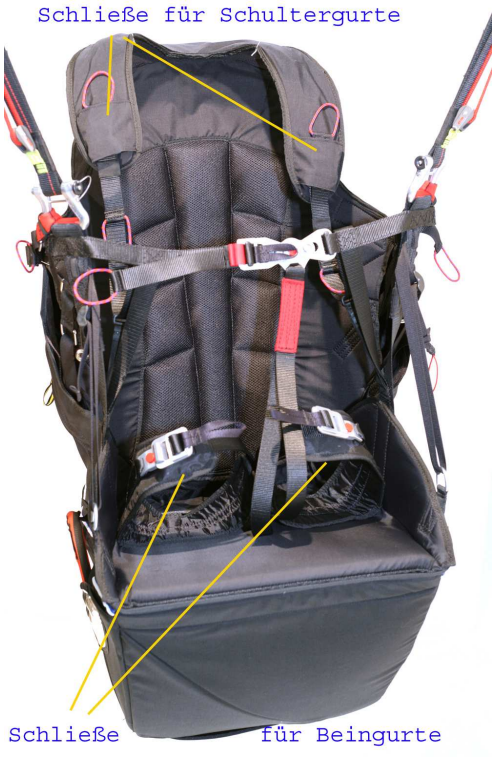
Carry out a test deployment after the first installation of the rescue reserve (in the flight position, seated in the harness) to see that everything functions properly.

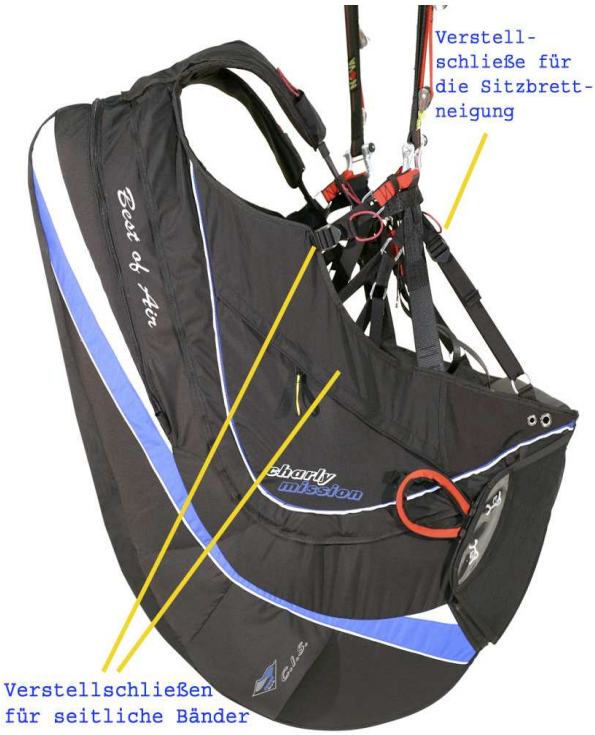
The deployment strength must lie between 2 and 7 kp!

You should check that the container is properly fastened before every launch!

As of 01.01.98 every new combination of rescue reserve and harness / outer container has to be retested by the manufacturer of the harness or of the rescue reserve or someone schooled and instructed by the manufacturer (dealer, flight instructor) after the initial packing. The operation of the rescue reserve must be carried out in the in-flight position, and perfect functioning must be possible according to the instruction specifications. The re-examination must be entered in the packing & inspection

5.0 HARNESS OVERVIEW





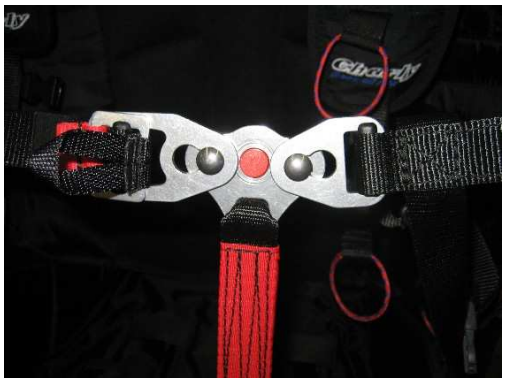
5.1 ADJUSTMENTS

The Charly MISSION paragliding harness in the appropriate size , can be individually adjusted to suit all body shapes.
Adjustment can be carried out using the shoulder straps, the chest strap, and the side straps.

Individual adjustment:
In order to ensure optimum seating comfort, various adjustment possibilities should be tried in a simulator before the initial flight is made, to suit the size of the pilot.

SETTING OF THE CHEST STRAP:

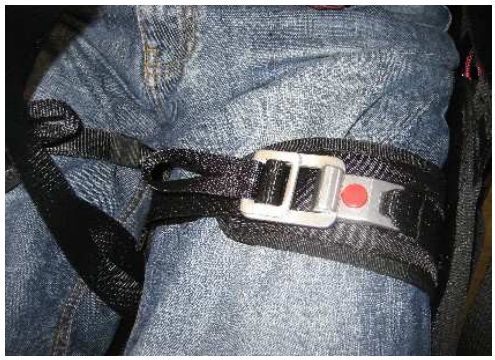
The chest strap is fastened by pressing the chest straps clasps onto the plastic button and drawing them outwards. The plastic button in the middle prevents opening. To release, press the plastic button, only then can the clasps be pushed towards the centre and lifted.



The chest strap correctly closed

SETTING OF THE LEG STRAPS:

The leg straps are closed by pulling the clasp into the groove. The plastic button prevents the clasp from opening. To release the clasp, press the plastic button and push the clasp out of the groove.



The leg strap fastener correctly closed.

Due to the special leg strap construction by the Charly Mission it is easy to be ready to run and slipping into and out of the harness when launching and landing is very easy.

Check to see that you can adopt a seated position after launch WITHOUT the additional use of the hands. This must be tested in a simulator. Should you require the use of your hands, then the seating angle must be checked again and the leg straps adjusted accordingly. The correct setting is achieved when the seating position can be adopted without the use of the hands. The leg straps are adjusted using the ends of the trimmers.

The leg straps and the chest strap have been fitted with the so called “T-Lock-Safety-System”. This prevents the pilot from falling out of the harness should he forget to fasten the leg straps.

SETTING OF THE SIDE STRAPS:

Use the side straps to set the angle between the thighs and the trunk. This angle can be adjusted to between 100° and 120°. By tightening the straps the pilot sits more upright, by loosening the straps the pilot sits more laid back. It is easiest to adjust these straps during a calm flight. Consider that when flying in a more laid back position, the harness stability is lessened, and the danger of twisting up increases if a large part of the paraglider collapses.

SETTING OF THE SEATING BOARD STRAPS:

These straps set the seating depth. In the loosened position the transfer from hanging to the seated position after launch is eased, drawn tighter they ease the hanging position when landing. In the seated position, loosen the straps completely and then draw them gradually tighter until you achieve a comfortable position in which your back is well supported.

SETTING OF THE SHOULDER STRAPS:

When correctly adjusted, light pressure from the shoulder straps should be felt on the shoulders. The shoulder straps are used to adjust the harness to the body size, and also for then attitude of the seating position, from seated to prone.

6.0 STORAGE IN BACKPACK

The Charly MISSION has been designed to function as an airbag. Air flows through the side vents & into the chambers. Pilots should always ensure that the vents are open so that the air can flow unhindered into the chambers.

The storage compartment has been designed to provide complete protection even when the zipper is not closed.

After storing the backpack and other equipment, make sure that the zipper is closed!

7.0 FLYING WITH THE CHARLY-MISSION

PRE-FLIGHT CHECK

Maximum safety is achieved when the pre-flight check is always carried out in the same sequence!

CHECK THAT :

- There is no visible damage to the harness or karabiners that could be detrimental to the airworthiness.
- The rescue reserve container is properly fastened and the release pins are completely inserted in the loops.
- The deployment handle is securely attached to the corresponding Velcro strip.
- All buckles, straps, zippers are securely fastened. When closed, the clasps should engage lightly. Make sure that they are engaged by pulling lightly on the straps. Special care must be taken in the presence of snow or sand.
- Polyethylene plate on the underside of the protector must be curved.
  (not an S-shape!!!! – otherwise the protector is ineffective)
- The paraglider is properly connected with the harness, and both karabiners arte properly closed and secured.
- The accelerator is correctly connected on the risers.
- All pockets are closed and nothing loose is hanging about.
- Check again that the leg and chest straps are closed before you launch!

PROCEDURE BY RESCUE RESERVE DEPLOYMENT

It is very important to repeatedly reach down to the deployment handle in flight in order to note the position, in this way you will instinctively find the reserve in an emergency.
In an emergency situation the pilot should be aware of how much ground clearance he has & how serious the situation really is. To deploy the reserve unnecessarily can increase the chance of a landing injury. If the paraglider is in a spinning motion then it is better to try and stop this motion first (eg. with a full stall), in order to minimise the risk of the reserve becoming entangled. On the other hand, if the ground clearance is minimal then every second can make the difference between life and death.

If you have to deploy the reserve, proceed in the following manner :

Search for the deployment handle and grab it tight with one hand. Pull hard upwards and outwards thus drawing the reserve out of the harness container. Take care to throw the reserve in the inner container into free air space. If possible throw in the opposite direction to the spin, and let go of the handle!
When the reserve has opened, you must try to avoid swaying movements and tangling up. The best thing would be to draw in the paraglider symmetrically using the B-, C- or D-lines or using the steering lines. Before you touch down, adopt an upright position and try to land using the technique of a parachutist in order to minimise the risk of injuries.

LANDING WITH YOUR CHARLY GLOBE

Upright yourself before touch down, transferring from the seated to the hanging position. NEVER land seated. This is dangerous in spite of the airbag because the spine can be injured. In all situations it is safer to land actively in an upright attitude than passively in a seated attitude.

8.0 MISCELLANEOUS

TOWING

The Charly MISSION is very suitable for stationary towing. The tow release should be hung into the karabiners. The best method is to mount the tow release onto towing adapters that are slipped over the ends of the risers before these are connected to the karabiners. Stick to the instructions for your tow release & towing adapters or ask the advice of a flight instructor with paraglider towing experience.

BI-PLACE FLYING

The Charly MISSION is not recommended for Bi-place flying!

SAFETY TRAINING AND FLYING OVER WATER

We do NOT recommend the use of the Charly MISSION for flying over water or for use in safety training courses. It is possible that the buoyancy of the harness submerges the pilot under water. Take care when flying over water!

BEHAVIOUR RECONCILABLE WITH NATURE AND THE LANDSCAPE

Stick to the rules of each individual flying site. Do not discredit our fantastic sport.

9.0 CARE AND MAINTENANCE

The materials used for the Charly MISSION guarantee a maximum service life. In spite of this, you should always take care to keep your harness clean and to protect it, in order that it remains airworthy for as long as possible.

Avoid dragging your harness over stony ground. Try to land standing. Avoid leaving your harness unnecessarily in the sun. UV-ray are very damaging for the material.
Dry your harness if it has become wet.
Store your paragliding equipment loosely in a dry and cool place. If your equipment has become wet, then dry it before you pack it away.

If possible, use only water and a soft brush or cloth for cleaning purposes. Only use mild soap to clean the harness if absolutely necessary. In this case remove all parts such as the protector, rescue reserve and seating board.
If your reserve has become wet (eg. After touching down in water), then it must be opened, dried, and repacked.
Inspect your protector for damage after a hard landing. A tear or a burst seam greatly reduce the effectiveness of the protector!
Zippers and buckles can be sprayed with silicon spray annually.

CONTROL

Before every launch, inspect the carrying harness apparatus for abrasion. Critical places are where the hip and leg straps join the seating board. Avoid abrasion to the hip straps by unburdening the straps before adjusting, and by not pulling diagonally to the strap direction.

Karabiners can corrode after contact with aggressive substances such as salt water. If necessary, rinse, oil, and / or replace. Karabiners must be replaced every 2 years due to the danger of breakage from metal fatigue. Both Pin Lock Karabiners must be replaced at the latest after 8 years. Hard knocks to the karabiners can lead to unseen damage and breakage during use. Aluminium karabiners with cross scratches or cracks on the surface must be replaced immediately. Since Velcro fasteners become matted and difficult to open with time, they must be inspected twice a year to ensure that the reserve deployment strength does not exceed 10Kg.

The Charly MISSION rescue reserve container is fitted with a loop-tensioner system. The release pins should not be secured with weak-link threads!

To avoid mildew and corrosion, damp harnesses must be opened up, aired and dried. Never store harnesses compressed and / or in airtight bags for longer periods of time!

MAINTENANCE CHECK LIST

Depending upon usage, harnesses must be thoroughly checked following the list given below after 2 or at the latest after 5 years. Man-made fibres are sensitive to ultraviolet rays. Therefore avoid unnecessary sunlight. The airworthiness certification expires 10 years after the date of purchase (invoice date) unless extended by an inspection from the manufacturer.

Back part: ☐ visual inspection of material for damage to seams,, holes, tears ☐ Inspection of zippers for damage and smooth running ☐ Inspection of Velcro fastenings **Webbing straps:** Inspected for damage, wear & tear, aging ☐ Main hang-in ☐ chest strap ☐ hip straps ☐ leg straps ☐ Shoulder straps & V-lines	**Hardware:** ☐ visual inspection for damage, distortion, corrosion ☐ functionality test **Protector:** ☐ inspected for damage ☐ impermeability test carried out	**Rescue reserve:** ☐ control the course of the suspension lines ☐ visual inspection of the deployment handle, release pins, loops ☐ deployment of rescue reserve, functionality test

REPAIRS

All repairs to the load bearing parts of the harness must be carried out by the manufacturer or an authorised service centre, in order to ensure that the correct materials and processing techniques are utilised.

ENVIRONMENT-FRIENDLY DISPOSAL

After the end of a long service life, the Charly MISSION should be disposed of in an environment-friendly manner in accordance with prevailing laws.

We wish you many beautiful flights and happy landings with your Charly MISSION !

The information in this instruction manual is as accurate as possible., however, it should serve the user only as a guideline. This manual can be changed at any time if necessary. Before every flight you should ensure that no current safety notification has been issued for the Charly MISSION harness. Safety notifications are issued uner www.charly-produkte.de .

You will find the most up to date information about the Charly MISSION and all other products from FINSTERWALDER / CHARLY-PRODUKTE under www.finsterwalder-charly.de