

CHARLY/NOVA ONE

OWNERS MANUAL

Verion. 1.1 from 25.3.2009



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

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

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Thank you very much for choosing the Charly ONE 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.

We recommend that you read this manual carefully before making your first flight with the Charly ONE.

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

Happy flights and safe landings,
Dein Charly-Team

Important safety notice:

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 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 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.

The following symbols in the Charly ONE instructions draw attention to specially important contents.

IMPORTANT ADVICE

Here is a helpful tip or additional information.



CAUTION

This symbol is intended to make you aware of danger.



WARNING

caution, indication of danger, ignoring this advice could lead to injury or even death.





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1. TECHNICAL DESCRIPTION

- Patented Cygnus – Airbag protector
- Innovative and technical design of the geometry, compatible with all LTF categories of glider
- Good seating comfort and support in all pilot positions with manifold adjustment possibilities
- Complete serial fitting with Finsterwalder P-Lock automatic light weight components
- Practical mountaineering - and travel backpack, suitable for all prevalent paraglider sizes, integrated in the Charly ONE
- Very good compromise between minimalism, low weight, carrying comfort and removable hip strap for cable-car-only pilots.

Intended purpose	paraglider harness
Maximum certified launch weight	100kg
Weight	1,9 kg (size M without karabiners)
suspension height	43 cm
protector	AVA impact pressure protector
DHV - certification	DHV GS-03-0374-08
Rescue reserve:	Front-Container front deployment handle

Safety

The „Cygnus-Airbag“ forms a protective cushion underneath the pelvis and back of the pilot. It inflates itself within seconds at launch after a few steps and remains inflated until touch down. A valve ensures that the air remains in the Airbag.

2. THE PROTECTOR

The Charly ONE is a harness with integrated airbag. The airbag is divided into chambers so that in the case of a hard collision not all of the air can escape at once. The Charly ONE 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.

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 foam in the area of the protector is not bent.



3. FLIGHT PREPARATION

The Charly ONE 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 adjustment 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.



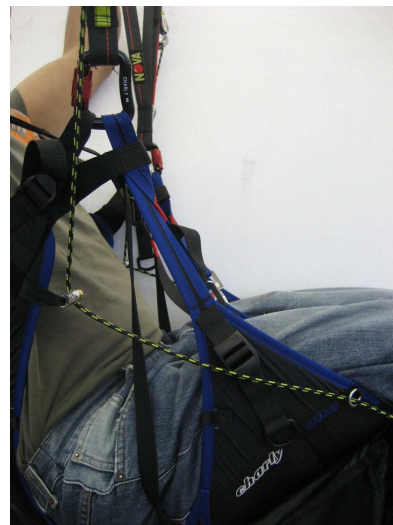
Mounting the accelerator

All of the usual speed-systems delivered with your paraglider can be mounted to the Charly ONE. 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 near to the side adjustment and then through the metal ring in the front lower corners of the leg straps.



Alternatively a slightly thicker continuous cord can be used. This saves weight and the accelerator functions perfectly .



4. RESCUE RESERVE / CONTAINER

Charly-Products recommend the use of Charly rescue reserves, eg. the EXPERT 120. Rescue reserves from other manufacturers can also be used.

As mentioned above, every first installation of the rescue reserve in the outer container, (& every new combination of rescue reserve & container), 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 outer container..

This check must be carried out every time the reserve is repacked and reinstalled.

Rescue reserve insertion

CONNECTING THE RESERVE BRIDLE LINE TO THE HARNESS

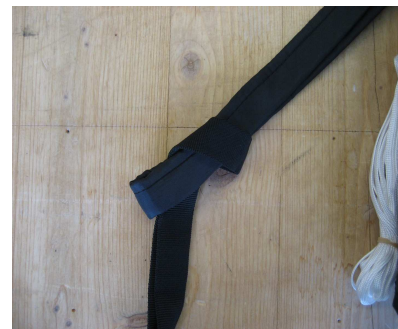
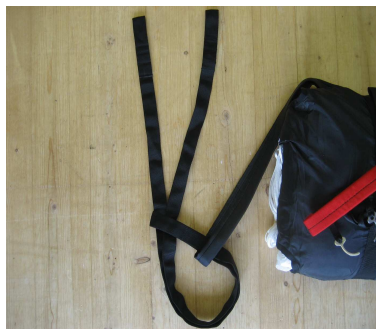
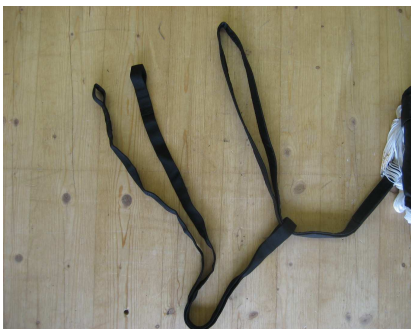
A screw-lock link with a minimum strength of 2400 daN is recommended, eg. Maillon Rapid 6mm screw-lock link. The karabiner should have a strength of at least 9- times the maximum launch weight. The screw-lock link should have at least the strength of the bridle line.

The webbing straps on both sides of the screw-lock link should be held in place with rubber rings.



Connection using screw-lock link

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 harness strap / bridle line

CONNECTING THE DEPLOYMENT HANDLE TO THE INNER CONTAINER

The deployment handle is a part of the outer container being used. Only this deployment handle may be used. If a Charly outer container is used, then care must be taken that the deployment handle is attached to the band in the MIDDLE of the container.



Deployment handle attached to the MIDDLE loop

Fitting into the outer container

Here follows a description of the insertion into the Charly light container (compressible) Art.# HFa187. By an insertion in a different suitable container or in a harness integrated container, it is essential that the respective operating manual is followed.



Deployment handle attached to the middle loop of the inner container. Bridle line exits the outer container at the desired corner.



Thread the two packing cords first through the loops and then through the eyelets of the container flaps according to the numbers illustrated



Pull the loops through all of the eyelets and secure with the release pins from the deployment handle. Poke the ends of the release pins into their intended pockets. Remove the packing cords !



Draw on the rubber cords attached to the sides and fix in place with the drawstring stopper .



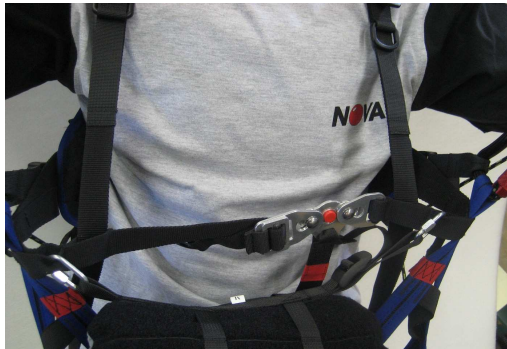
The container can be compressed using two straps on the rear side !



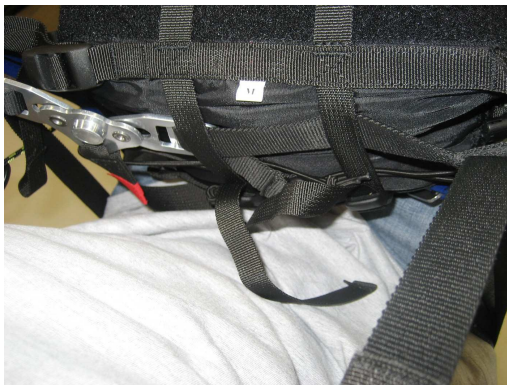
A Charly loop tensioner system is integrated in the container described here, **so that weak link threads should not be used to secure the release pins** verwendet werden !

Container attachment to the harness

Charly Products recommends the following possibilities for attaching the front container to the harness:



Attachment of the front container with screw-lock links



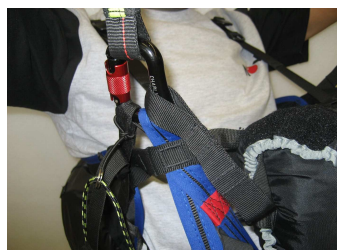
By the Charly light container there is the possibility of connecting the container directly to the chest strap. The chest strap is looped through the compression bands as illustrated



By both attachment methods it is essential that the container is attached securely and safely.. In addition, no movable parts such as accelerator, free-running straps etc. may be obstructed.



Front



Hang the V-lines in the karabiners



Container attachment - side

Tips for inserting into the rescue reserve container

The following advice for insertion must be followed at all times.



- Only the original deployment handle delivered with the container may be used.
Other deployment handle may not be used as perfect functioning cannot be guaranteed !
- The container volume must be appropriate.
- By inner containers with asymmetrical attachment loops, the container must be packed in such a way that the attachment loops are as near as possible to the deployment handle and that the rescue reserve is not twisted during the deployment procedure.
- By insertion of the rescue reserve into the reserve container, great care must be taken to ensure that the connection between deployment handle and release pins is shorter than the connection between deployment handle and inner container.
- The deployment handle is attached using Velcro fastener in its intended place so that the bridle line is not under tension and so that the release pins are not pulled out of the fastening loops.
- A test deployment must be carried out after the first installation of the rescue reserve (in the flight position, seated in the harness), to see that everything functions correctly.

The deployment strength must lie between 2 and 7 kg!



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 in accordance with the construction specifications. The re-examination must be entered in the packing and inspection document.

5. HARNESS OVERVIEW



Adjustments

The Charly ONE in the appropriate size, can be individually adjusted to suit all body shapes. Adjustments can be made to the shoulder straps, the chest strap and the side straps.

The individual adjustment

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

SETTING OF THE CHEST STRAP :

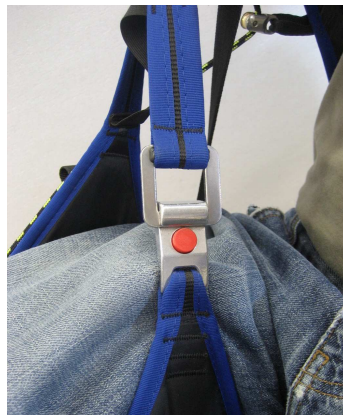
The chest strap is fastened by pressing the chest strap clasps onto the plastic button and drawing them outwards. The plastic button in the middle prevents opening. To release, press the plastic button, only then can the clasps be pushed towards the centre and lifted.



THE CORRECTLY CLOSED CHEST STRAP

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 properly closed leg strap fasteners

Due to the high suspension of the leg strap fastening, the pilots thighs have greter freedom of movement.

The pilot should be able to adopt a seated position after launch WITHOUT the additional use of the hands. This must be tested in a simulator. Should it be necessary to use the 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.

There is also the possibility of regulating the distance between the leg straps. For this purpose there is a clasp on the right hand leg strap.

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:

The side straps are used to set the angle between the thighs and the trunk. By tightening the straps the pilot sits more upright, by loosening them 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 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 the attitude of the seating position, from seated to prone.

6. IN-FLIGHT STORAGE

The storage space of the Charly ONE was conceived to function as an airbag. Air flows through the side valves into the chambers. Pilots should always ensure that the valves are open so that air can flow unhindered into the chambers.



It is essential that objects such as clothing, drinking bottle, paraglider stuff bag etc. be attached to the floor of the storage compartment using the special netting and elastic cord. The side pocket from netting material can also be used as storage space. In this way the air can flow unhindered through the three eyelets in the storage compartment. If this is not the case then the additional protector function of the storage compartment is not guaranteed.



Openings must not be blocked !

In addition, care must be taken to ensure that all compression bands are completely open before launch. Otherwise the storage and protector volume is considerably reduced.

It is imperative that the zipper is closed otherwise the protector is useless!



BACKPACK STORAGE SPACE

The Charly ONE has been constructed so that there is enough room for almost every current paraglider.

The Charly ONE is a fully fledged alpine backpack. The back section has excellent wicking properties and is very breathable. The helmet can be affixed to the top cover using the available net and elastic cords. Hiking sticks can be attached to the backpack as well as on the storage compartment..

The backpack can be pressed into a flat & pleasant to carry shape using the compression bands on either side. The back does not deform and the Charly ONE remains comfortable to carry. The hip strap has an anatomically fitting shape and can be removed.



Befestigung für Helm und Stöcke

7. FLYING WITH THE CHARLY ONE

PRE-FLIGHT CHECK

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



- 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 pools.
- The deployment handle is secured..
- 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 and sand.
- The compression bands from the backpack (inner side of the storage compartment) are completely opened.
- The paraglider is properly connected with the harness and both karabiners are 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 karabiners, leg straps and the chest strap are closed before you launch!

PROCEDURES 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 and how serious the situation 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 on the handle thus drawing the reserve out of the harness container (outer 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 THE CHARLY ONE



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 better to land actively in an upright attitude than passively in a seated attitude.

8. BACKPACK PACKING RECOMMENDATIONS:

These are general packing instructions, every paraglider requires a slightly different packing method depending on the size. Pack the equipment with care and do not use force. Do not forget to open all compression bands before packing the equipment.



Position the paraglider towards the top, and the remaining equipment towards the bottom. .
Attach the helmet to the top flap if not enough space remains inside

Pull on the compression bands ...and there you are, ready for the next flight / tour.....

9. MISCELLANEOUS

WINCH TOWING

The Charly ONE is very suitable for winch 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 with the karabiners. Stick to the instructions for your tow release & towing adapters or ask the advice of a flight instructor with paraglider towing experience.

FLYING BIPLACE

The Charly ONE is not recommended for Bi-place flying.

SAFETY TRAINING & FLYING OVER WATER

We do NOT recommend the use of the Charly ONE 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. Caution when flying over water!



BEHAVOIR RECONCILABLE WITH NATURE AND THE LANDSCAPE

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

10. CARE AND MAINTENANCE

The materials used for the Charly ONE 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-rays 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 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 after 8 years at the latest. 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 70 N.

The Charly front 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 section: <input type="checkbox"/> visual inspection of material for damage to seams, holes, tears <input type="checkbox"/> inspection of zippers for damage & smooth running <input type="checkbox"/> inspection of Velcro fastenings Webbing straps: Inspected for damage wear & tear, aging <input type="checkbox"/> Main hang-in <input type="checkbox"/> chest strap <input type="checkbox"/> hip strap <input type="checkbox"/> leg straps <input type="checkbox"/> shoulder straps & V-lines	Hardware: <input type="checkbox"/> visual inspection for damage , distortion, corrosion <input type="checkbox"/> functions test Protector: <input type="checkbox"/> inspected for damage <input type="checkbox"/> impermeability test carried out	Rescue reserve: <input type="checkbox"/> control the course of the suspension lines <input type="checkbox"/> visual inspection of the deployment, handle, release pins, loops <input type="checkbox"/> deployment of rescue reserve, functions test
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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 One 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 ONE !

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 ONE harness. Safety notifications are issued under www.charly-produkte.de

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

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