

CHARLY TITAN³

OWNERS MANUAL

Version. 1.0 from 16.3.2009



Please read this owners manual before your first flight with the Charly TITAN3 !

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.

Thank you very much and congratulations for choosing the Charly TITAN 3 for your paragliding harness, you have chosen a top quality product. We are very proud of our top of the range model, and are convinced that you will enjoy many unforgettable hours in the air with it.



Please read this manual carefully. Should questions or problems arise then get in touch with your retailer or Charly-Products directly.



If you sell your Charly TITAN 3, 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 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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The following symbols in the Charly TITAN3 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 advise could lead to injury or even death.





1.0 TECHNICAL DESCRIPTION

General

The Charly TITAN3 is an aerodynamic optimised harness of the newest generation. It has been developed for performance oriented cross country pilots, or for those pilots not wishing to do without a comfortably warm leg and foot sack.

Special construction features of the Charly TITAN3 include:

- Innovative and technical design of the geometry, compatible with all LTF categories of glider
- Perfect seating comfort and support in all pilot positions with manifold adjustment possibilities
- Optimised, wide cone-shaped 3D rescue reserve container, compatible for all prevalent rescue reserves
- Highly effective Charly-foam protector approved according to LTF – guidelines 2009
- Hollow chamber foam padding on the back for improved seating comfort
- Side storage pockets
- Fitted for the accommodation of a drinking tube system
- Supplied with original Finsterwalder Pin Lock karabiners
- Complete serial fitting with Finsterwalder P-Lock automatic light weight components
- LTF and EN certification up to 120kg

Intended purpose	Paraglider harness
Maximum certified launch weight:	120 kg
Weight:	8,5 kg (size M without karabiners)
Suspension height:	42 cm (size M)
Protector:	Charly – Moussebag CG-1
EN 1651/1999 and LTF 35/03 certification	EAPR-GZ-7171/09
Rescue reserve container volume	12000 – 4000 ccm
Rescue reserve:	Integrated container below the seating board, side deployment handle

CONFIGURATION OF THE TITAN3

- Polycarbonate laminate to protect the back protector
- integrated rescue reserve bridle line
- Pin - Lock karabiners / tested according to the Sincotec method
- large storage pocket behind, and several smaller pockets for longer flights.
- leg bag with adjustable inner upholstery
- Cockpit with storage capacity up to 10l of ballast
- Three stepped accelerator with brummel hooks
- roller bearings for smooth acceleration
- Aerodynamic rear spoiler for even better glide
- innovative 17cm Charly – soft protector certified according to LTF – certification guidelines 2009

THE COCKPIT

The Charly TITAN3 is equipped with a cockpit for the flight instruments & for ballast. The perspective of the instruments is automatically adjusted and remains optimal in all flight positions.



COCKPIT – ATTACHMENT



The cockpit is attached on either side using buckles. A buckle directly below the karabiner and the cockpit can be connected to the shoulder strap with the upper buckle. The angle is adjusted using the connection to the shoulder straps. This is especially important when flying with ballast.



THE ACCELERATOR

The Charly TITAN3 has been fitted with a new three stepped accelerator, which can be operated with only one leg. Thanks to the three steps, the paraglider can always be flown at an optimal speed.



SAFETY

The safety of the pilot is ensured by the Charly TITAN3 due to the optimal hang-in point and to the excellent integration of the protector. The hang-in point has been chosen to give the pilot the best possible feeling for the glider, yet without giving a wobbly impression. By the integration of the protector in the harness, care has been taken to ensure that both components make up a unit, and that no weak links arise.

2.0 THE PROTECTOR

The foam protector supplied by Charly is an important element for the optimal seating comfort and simultaneously supports relaxed flying.

In the Charly TITAN3 a polycarbonate laminate has been integrated to protect the foam protector from sharp objects. The protector is divided into several chambers, causing the air to escape only slowly in the case of a hard impact. It has been developed to absorb the impact energy and protect the pilot as much as possible in the case of a collision, it cannot however eliminate the risk of injury completely.

The protector is an integral part of the LTF type inspection. The harness may not be legally used without a protector.

PROTECTOR INSERTION

The Charly TITAN3 comes supplied with a built in Charly – Soft protector.

If the Charly-Moussebag-Protector has been delivered rolled up, then it should be unrolled and left for at least 24 hours before being inserted into the harness and flown with.

To insert into the harness, the protector must be pushed through a special retention pocket on the rear side of the harness. Make sure that the protector is pushed under the cross straps. The Velcro attachments on the rear of the protector must be connected to the cross straps. The Velcro attachment at the very front of the protector must be attached to the velcro on the under side of the interior sack of the leg fairing. After the insertion, the protector should not be compressed. The rescue reserve compartment must not be indented, and in normal flight should not impair the seating comfort.



It is important after insertion, that the rescue reserve be tested to ensure a perfect deployment is possible. If in doubt, always seek competent advice from a flight instructor, Charly dealer, or Charly employee.



3.0 ACCELERATOR SYSTEM

The accelerator comes already mounted. If you ever need to exchange it or mount a different accelerator, then proceed as follows:



The accelerator is mounted starting from the front end of the seating board. The accelerator cords are passed around the side rollers by seating board and then through the rollers near the hip adjustment, and upward through the leather reinforced openings in the neoprene.

In a simulator the length of the accelerator cords can be correctly positioned. Setting up the system too short, there is the danger that the paraglider flies unintentionally accelerated, which can induce dangerous flight conditions. It is better to have the accelerator adjusted too long initially, and to shorten the cords bit by bit, ultimately achieving an optimal position so that the maximum distance is used when the legs are fully stretched. (Pay attention to the operating limits of the glider !)



Ensure before every launch that the accelerator is positioned **under** the seating board. If not then an undesired acceleration could occur, inducing a dangerous flight situation.

Tip:
Slip the accelerator into the side pocket after every flight, in this way you know just where to find it for the next flight.



4.0 FLIGHT PREPARATION

The Charly TITAN3 must be assembled 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.



Tipp: You will come much closer to the real situation if you carry out the test seating with the rescue reserve installed and the back compartment packed.

Choose good weather for the first test flight. If necessary repeat the adjustment procedure until the optimum flight position is achieved.

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.

5.0 RESCUE RESERVE / CONTAINER

The integrated rescue reserve below the seating board has been redesigned with a large conical reserve container to guarantee the fastest and easiest deployment. The bottom position was chosen the centre of gravity of the harness is not influenced, resulting in better comfort & a more pleasant 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.

5.1 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 strength of the screw-lock link must at least correspond to the strength of the main bridle line. The screw lock link must at least correspond to the strength of the suspension lines.

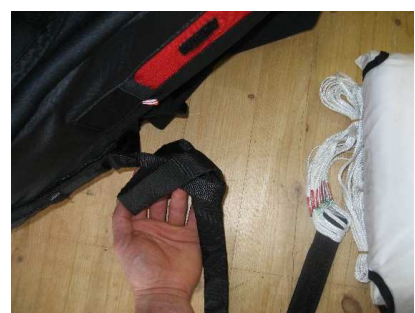
The webbing straps on both sides of the screw-lock link should be fastened with rubber rings, retention bands, or shrinkage tubing.



Connection using screw-lock link



By **webbing to webbing connections** care must be taken that the connection is in no way asymmetrical . By an asymmetrical connections the webbing bands can slip and in the case of a reserve deployment, the resulting heat can cause breakage.



Connection webbing / webbing

CONNECTING THE DEPLOYMENT HANDLE TO THE INNER CONTAINER



Always attach the deployment handle to the side

The deployment handle of the integrated rescue reserve container is a part of the Charly TITAN3 harness. **Only this deployment handle** may be used. It is connected to the inner container by looping the band of the deployment handle through the **side loop of the inner container**..

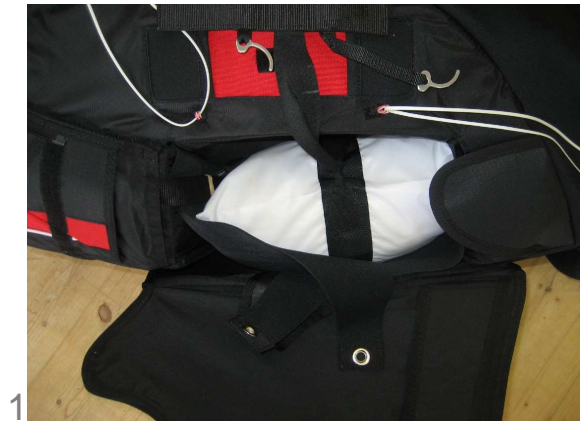


5.2 RESCUE RESERVE INSERTION INSTRUCTIONS

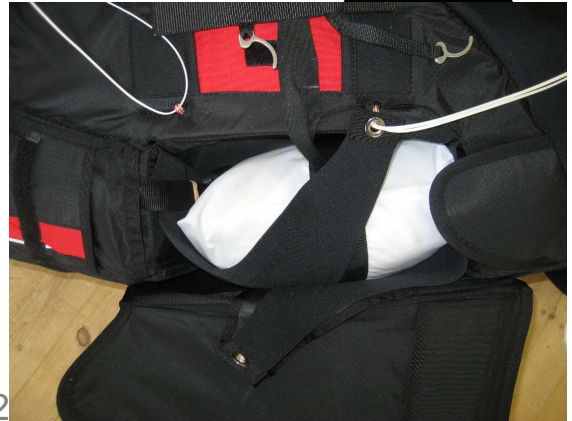
When installing the rescue reserve into the Charly TITAN3 special care must always be taken that the deployment handle is attached to the side band of the inner container and not to the middle band. When inserting the rescue reserve into the harness, make sure that the deployment handle is positioned as high as possible close to the seating board.

The rescue reserve container has been fitted with two extra flaps, these are used to retain the reserve in the correct position and to correspond the container volume to the size of the reserve.

FOLLOW THE ORDER SHOWN IN THE PICTURES!



1 thread packing cords through both loops



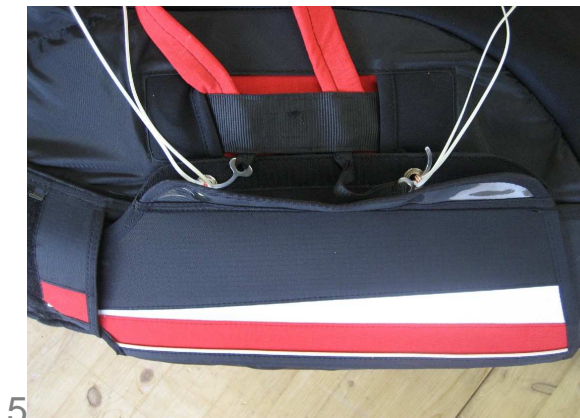
2 connect the rear flap with the front loop as shown



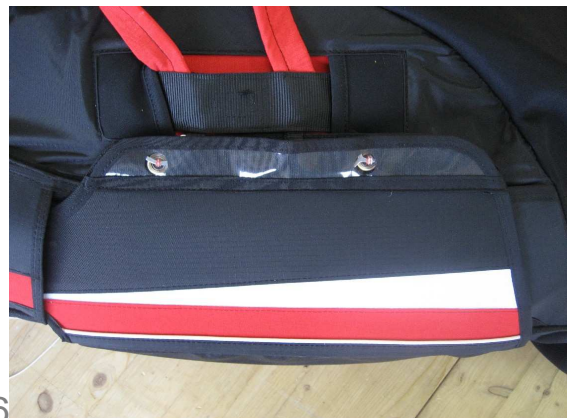
3 connect the front flap with the rear loop as shown



4 draw the packing cords through the eyelets of the large flap



5 insert the right and left release pins into the loops & attach the deployment handle as shown.
Insert all flaps into their intended pockets!



6 Remove packing cord and finally check that the container is correctly closed



The rear release pin , (short connection) **must** be secured with a 2kg weak-link thread!

After the first installation it is essential that a test deployment of the rescue reserve is carried out (whilst seated in the flight position in the harness) to ensure correct functioning.

The deployment strength must lie between 2 and 7 kg



Check that the container is correctly fastened before every launch.

As of 01.01.98 every new combination or rescue reserve and harness / outer container must be re-inspected by the harness manufacturer or the rescue reserve manufacturer or by a person authorised by one of these manufacturers (retailer or flight instructor) after the initial packing. The operation of the rescue reserve must be possible and perfect in accordance with the construction regulations from the seated position adopted in flight. The re-inspection must be noted in the packing document of the rescue reserve.

6.0 ADJUSTMENTS

The Charly TITAN3 in the appropriate size, can be individually adjusted to suit all body shapes. Adjustments can be undertaken to the shoulder straps, the chest strap, and the side straps.

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 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 fastened 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 correctly fastened leg strap

Due to the special leg strap construction of the Charly TITAN3 it is easy to be ready to run, and slipping in and out when launching and landing is very simple.

The correct seating position after launch should be achieved **WITHOUT** the additional use of the hands. This should be tested in the simulator. If use of the hands is necessary, then the seating angle must be controlled again, and the leg straps adjusted accordingly. The adjustment is correct when the seating position can be achieved without using the hands. The adjustment of the leg straps is carried out using the trimmer on their ends.

The leg straps and the chest strap are equipped with the so-called "T-Lock-Safety-System". This ensures that the pilot cannot fall out of the harness in the unlikely event of the leg straps not being fastened.

SETTING 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 the 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 the attitude of the seating position, from seated to prone.

ADJUSTING THE LEG FAIRING

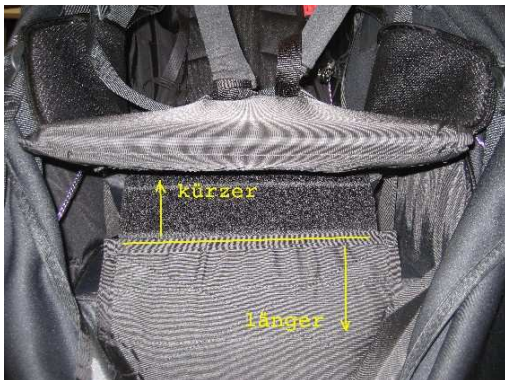
By the Charly TITAN3 within the neoprene leg fairing there is a special inner sack that can be set to the length of the pilots legs.

For this purpose there are two bands with adjusting fasteners on either side, and a large surface of Velcro below the seating board.

Charly recommends the following order



1. Firstly adjust the Velcro underneath the seating board so that the inner sack is taut.
2. Now use the two straps on the side, to adjust the preferred position of the leg fairing. Pay attention that both straps have the same length.



7.0 STORAGE SPACE

There is sufficient storage space in the Charly TITAN3 for everything that is required in flight. There are two additional compartments within the storage room that can be used for example for a drinking system or maps, packing documents etc.

8.0 FLYING WITH THE CHARLY-TITAN3

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 loops.
- The deployment handle is securely inserted into the pockets and secured with velcro
- 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 paraglider is properly connected with the harness and both karabiners are properly closed and secured.
- The accelerator is correctly connected on the risers, and is positioned below the seating board!
- All pockets are closed and nothing loose is hanging about.
- Check again that the leg straps 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 on the handle, 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 injury.





LANDING WITH YOUR CHARLY TITAN3

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 position than passively in a seated position.

9.0 MISCELLANEOUS

WINCH TOWING

The Charly TITAN3 does not have its own towing provision. For this reason the tow release must be attached to 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.

BI-PLACE FLYING

The Charly TITAN3 is **not** suitable for flying bi-place!

SAFETY TRAINING AND FLYING OVER WATER

We do **not** recommend the use of the Charly TITAN3 for flying over water or for use in safety training courses. There is increased danger that the pilot drowns when landing in water.



BEHAVIOUR RECONCILABLE WITH NATURE AND THE LANDSCAPE

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

10.0 CARE AND MAINTENANCE

The materials used for the Charly TITAN3 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 paraglider 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 them, and by not pulling diagonally to the strap direction.

Karabiners and SIL 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 (ca. 7Kg).

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.

<p>Back part:</p> <ul style="list-style-type: none"> <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 <p>Webbing straps: Inspected for damage, wear & tear, aging</p> <ul style="list-style-type: none"> <input type="checkbox"/> Main hang-in <input type="checkbox"/> chest strap <input type="checkbox"/> hip straps <input type="checkbox"/> leg straps <input type="checkbox"/> shoulder straps & V-lines 	<p>Hardware:</p> <ul style="list-style-type: none"> <input type="checkbox"/> visual inspection for damage, distortion, corrosion. <input type="checkbox"/> functionality test <p>Protector:</p> <ul style="list-style-type: none"> <input type="checkbox"/> inspected for damage <input type="checkbox"/> impermeability test carried out 	<p>Rescue reserve:</p> <ul style="list-style-type: none"> <input type="checkbox"/> control the course of the suspension lines <input type="checkbox"/> visual inspection of the deployment handle, release pins, loop <input type="checkbox"/> deployment of rescue reserve, functionality 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 Titan3 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 TITAN3!**

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 TITAN3 harness. Safety notifications are issued under www.charly-produkte.de.

You will find the most up to date information about the Charly-TITAN3 and all other products from FINSTERWALDER / CHARLY-PRODUKTE under www.finsterwalder-charly.de

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