

# Manual

**Category:**  
**Model:**  
**Valid from:**  
**Version:**

**Rescue Systems**  
**PROTECT 38 / 42**  
**2004**  
**Version 1.04**

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## ***Introduction:***

Welcome to the U-Turn team and Thank you for the purchase of your new rescue-system. The U-TURN rescue-systems family "PROTECT", utilizing new technology materials, in careful combination with sound aerodynamic principles, represents a new state of the art in rescue-systems design. The U-TURN PROTECT will provide outstanding performance if you really have to use it.

Please read and be sure you thoroughly understand this manual before flying the U-TURN PROTECT. It contains information critical to the safe operation of the system.

If there is any terminology, or anything else, in this manual which you do not completely understand, please contact your dealer or the manufacturer before flying with the U-TURN PROTECT as your rescue.

Paragliding and Hanggliding are extremely demanding sports requiring exceptional levels of attention, judgment, maturity, and self discipline. It is unlikely that you will be able to participate in it safely unless you make a conscious and continual commitment to your own safety.

Due to the inherent risks in flying, no warranty of any kind can be made against accidents, bodily injury, equipment failure, and/or death.

If any questions about the PROTECT occur, please ask your U-Turn Competence-Center. If they cannot help, please don't hesitate to contact us. We will be pleased if we can satisfy you completely.

BE CAREFUL !

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## **!!! Warning !!!**

### **This emergency system should not be used for sky diving**

Emergency systems are not required to be registered by the Department of Aviation in Germany  
(Luftfahrtbundesamtes LBA)

Any injuries or damage occurring in connection with this emergency system cannot be held the  
responsibility of the manufacturer.

## 1. Technical details

Parachute types:  
Paragliding emergency system PROTECT 38, PROTECT 42

Manufacturer:

 **U-TURN** GmbH  
Paraglider & Kites  
Esslingerstr.23  
78054 Villingen - Schwenningen

	<u>PROTECT 38</u>	<u>PROTECT 42</u>
Weight in kg:	2,1kg	2,4kg
Max. Load:	100kg	120kg
Sink rate m/s max. Load:	4,3m/s	4,1m/s
Area in m <sup>2</sup> :	38m <sup>2</sup>	42m <sup>2</sup>

At the time of delivery the PROTECT conforms to DHV requirements (see certification information as part of this manual). Changes made to the rescue by the purchaser invalidate its certification. Use this rescue at your own risk. Each pilot is responsible for his/her own safety. Do a careful pre-flight check of the glider and of your rescue before each flight.

## 1. TECHNICAL DESCRIPTION

The U-TURN R & D Team relies on strong experience in personal glider development and accessories. Due to the most innovative approach in design, the U-TURN R & D-Team is at the cutting-edge of technology in flying sports.

New products are developed at U-TURN based on our new concepts and requirements which we receive from our customers. In combination with the latest computer-aided R&D tools along with the most experienced test pilots world-wide we deliver best of breed solutions in personal glider technology, rescue-systems and accessories

## 2. USAGE

These Rescue Systems are for manual use by Paragliding- and Hanggliding pilots who are getting in an emergency situation during a paraglider or hangglider flight. Any other use has not been tested and certified and is therefore not allowed. Especially this Rescue System is not dedicated for skydiving.

## 3. LICENSING TIME

Your PROTECT' lifetime is 10 years if it is treaded and cared properly. Every two years a check and inspection by the manufacturer or a licensed service agent is mandatory. After ten years, it can be used another two years but requires a yearly inspection then.

## 4. STRUCTURE

- Parachute with lines and riser
- Parachute-opening-device with pulling grip
- Outer container

## 5. NECESSARY PAPERS

- Handbook
- packing book with registration of the checks, repacks

## **6. WAY OF FUNCTION**

In the case of an emergency situation take the grip and pull it powerful. The both lock bolts give the way free for the closing loops. After this, pull the packet and throw it very powerful behind to the left or right side. The airflow and the little helping parachute are stretching the lines and open thereby the parachute-opening device. The parachute gets out of the parachute-opening device and is filling.

We recommend to test the pulling of your parachute. In the case of an emergency situation you will be safer and faster. You can try the system if you are visiting a safety course or by a dry training which are often in the program of flying schools or clubs.

## **7. CONTROLLING**

Before packing the PROTECT, it has to be checked by authorized service people. In the case of throwing, the rescue has to be checked from the manufacturer or the authorized person. If the parachute has to be packed, the pulling power has to be checked. This has to be between 6 and 12 kg.

## **8. DAMAGES**

If there are some damages while checking the parachute, the parachute has to be send to the manufacturer or the authorized person.

## **9. CANOPY, LINES AND RAISERS**

The canopy differs from model to model by the number of lanes. The PROTECT is made out of two different types of material. The lower part is made of very air-tight material, the upper part of non air-tight material. Both materials are stretch resistant. The lines are tight with loops from the base. The raisers are made out of very stress resistant material. These raisers have a special loop to connect the pilots harness with the rescue-system.

## **10. PARACHUTE-OPENING-DEVICE**

The Parachute opening device is built from nylon cloth which is particularly stretch-stable and durable. At the Parachute opening device you see the pulling-grip with the pulling-loops and the small helping-parachute.

## PACKING DIRECTIONS

### MAIN PREPARATIONS

The packing should be done mostly on a table. The minimum requirement is a clean surface. The parachute has to be stretched on his overall length.

Afterwards one line will be pulled through the packing loops and fixed at the top of the table (see pic.1). On the lower end of the table the raiser will be fixed and the parachute tightened. The lines will be checked on straight and parallel course. Take line one and the last of the lines and check there course U-Turn to the raiser. If there are twisted lines remove them.

(Pic. 1)



(Pic. 2)



### PANEL ADJUSTMENT

In this example we are assuming parachute type "PROTECT 20" which has 20 panels. The adjustment other parachutes differs only in the number of panels, but is done always in the same way. Take panel 1 and count to the half of the panels (for example PROTECT 20-count to 10) and put the divided lines to the left and to the right (see.pic 2). Now the panels 1-10 are on the right side and on the left side you have panels 11-20. To lay out the panels start with number 10. This is done with following procedure: Take panel 10 and pull the panels towards you. Place panel by panel, beginning by 10 counting to 1 in that way that the lines are be placed between your thumb and your forefinger of your right hand. Be sure that lines 10-1, while retaking, are between your forefinger and middle finger of your right hand. After that, panel 20-11 will be placed between thumb and forefinger.

(Pic. 3)



(Pic. 4)



If you are using a special packing device, looking like a comb, this device will now be put on top of the lines.

The canopy now will be divided in that way that the stamped panel (in this case no. 20) lays on the top left. Align the top of the chute which is presently held with the packing loops.

The canopy will be folded in a 'S' shape. Take care that all lines are in the centre (see pic. 3). Now try attaching the canopy with some weight. (Books, etc)

**ATTENTION:** Be sure to remove the line which was pulled through the packing loops.  
**In case of not removing this, the parachute will NOT open!**

(Pic. 5)



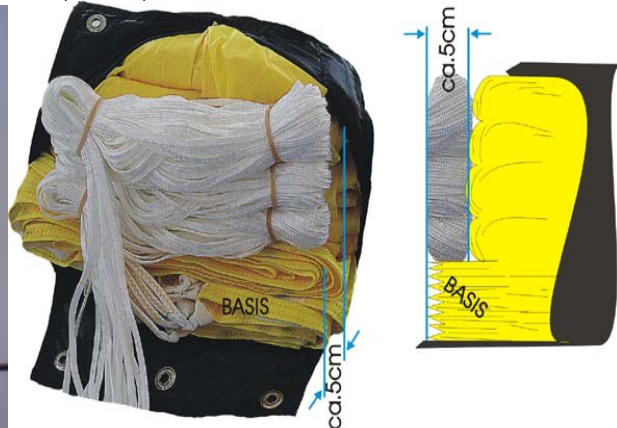
(Pic. 6)



(Pic. 7)



(Pic. 7a)



## REASSEMBLING

Loosen the raisers from table. Go behind the top part of the parachute, and place the canopy to the back part of the parachute-opening-device (see pic. 4).

(Pic. 8)



(Pic. 9)



(Pic. 10)



(Pic. 11)



Put the canopy in a 'S' shape into the parachute-opening-device (see pic. 5). The lines will be placed with 3 by 3 aft on top of the closing-claps and secured with rubber band (see pic. 6). These 3 line packages will be placed firmly near the parachute.

(Pic. 12)



(Pic. 13)



(Pic. 14)



(Pic. 15)



## **CLOSING THE PARACHUTE-OPENING-DEVICE**

The front lid of the parachute-opening-device is secured by rubber band. This rubber band is pulled through the centre holes and holding the outer line package (see pic. 7).

With the remains of the lines, secure first the right side of the lid with rubber band, and then the left side lid (front view, see pic. 8).

## **PACKING AND CHECKING BOOK**

At least, be sure to enter the date, name of the person who packed the parachute, what was done. The same person packing has to sign the book.

## **MAINTENANCE AND REPAIRS**

U-TURN Rescue Systems will retain their performance and handling characteristics best if routine care and maintenance are performed. If cleaning is necessary, use warm water and a soft sponge. If you must use a soft cleaning fluid, then rinse the fabric extensively. Always store your rescue parachute in a dry, safe place away from chemicals.

Return your rescue to the manufacturer/dealer after no more than two years for a careful check or even if you used your parachute in an emergency condition. Repairs should be performed by authorized personnel only.

**If the parachute got wet, be sure to re-pack it. Otherwise malfunction is possible! Be sure to check the correct lock of the parachute before every take off. U-TURN Rescue Systems recommends a packing period of not more than 4 months.**

## **FINAL WORDS**

The PROTECT is at the pole in Rescue Systems research and development. We wish you that you will never have to use your PROTECT. Remember to treat your canopy properly and always fly with respect for conditions and your capabilities. Remember that all flying is potentially dangerous and that you must take responsibility for your own safety. Fly conservatively with respect to conditions and use ample altitude for maneuvering. We also strongly recommend that you use a certified harness with a back protection, a certified glider, a certified Rescue System and a helmet.