



# **independence**

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## **Owner's manual**

### **Rescue system**

### **Sevenup**

20.04.2005

**Fly market GmbH & Co. KG**  
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## Warning

### **This emergency system should not be used for skydiving.**

Emergency systems are not required to be registered by the Department of Aviation in Germany (Luftfahrt Bundesamt LBA). Any injuries or damage occurring in connection with this emergency system cannot be held the responsibility of the manufacturer.

Paragliding is an extremely dangerous activity that can and often does result in serious injury or death. The designer, manufacturer, distributor, wholesaler and retailer cannot and will not guarantee your safety when using this rescue system. You alone must judge the flying conditions, including weather, wind, congestion, launching areas, and landing area before you fly. Rescue systems require careful and consistent care. Overtime, solar radiation, dirt, dust, grease, water, wind, stress, and other variables will degrade the performance and safety of the system, thereby increasing the risk of injury or death. Read the owner's manual of the rescue system before you fly. Always wear a helmet and protective clothing when flying a paraglider.

## 1. TECHNICAL DETAILS

**Parachute type:** Paragliding rescue system      SevenUp Medium

**Manufacturer:** **Fly market GmbH & Co. KG**  
Am Schönebach 3  
D-87637 Eisenberg  
Tel. +49-8364-9833-0

	<b>SevenUp M</b>
Weight (kg):	2,3
Sink Rate (m/s):	6,8
Surface (m <sup>2</sup> ):	33
Max. Load (kg):	100
Rec. max. load (kg):	100

## **2. Purpose**

The emergency parachutes are manually-released parachutes for paragliding pilots in an emergency situation while flying.

## **3. Conditions of use**

Operational lifespan of parachute: 10 years with an inspection every 2 years. For the next three years thereafter, the parachute must be inspected annually.

## **4. Necessary documentation**

- A) Handbook
- b) Inspection records

## **5. Mode of operation**

During an emergency in the air, the reserve is deployed by giving the release handle a firm tug. This action will remove the fastening pins from their securing loops. The pilot should then throw the inner container to the rear, either to the left or to the right. The air current stretches the lines and subsequently opens the inner container. The canopy releases, stretches and fills with air.

## **6. Inspecting the parachute**

A parachute must be inspected by a registered packer before it is packed. After being opened during an emergency rescue, the parachute must be inspected. A packed parachute which is to be repacked, should undergo a release test. This establishes whether the power of the release is between 2 kp and 7 kp.

It is recommended that the SevenUp be opened, aired and repacked after being closed for a period of four months.

## **7. Storage**

Oil, grease, acid and paint should not be stored near the parachute. The storage space should be dry. Parachutes which have not been used for a long period of time should be opened and the canopy loosely rolled and stored in a bag.

## **8. Cleaning and drying**

A dirty canopy and container can be washed with clean tapwater. If the rescue system comes in contact with salt water, it should be washed with fresh water and hung up to drip dry in the shade. Grease and mould can affect the strength of parachute components and when evident, the parachute should be sent to the manufacturer for cleaning and inspection.

## **9. In the event of damage**

It is established during an inspection that the airworthiness of the canopy is impaired, then it must be sent to the manufacturer for repair. This is also advisable if the parachute is damaged and the pilot is unsure whether the airworthiness is affected. All repairs should be carried out by the manufacturer.

## **10. The parachute, lines and bridles**

The canopy consists of 7 connected canopies. The material is manufactured from air-permeable, tear-resistant nylon fabrics. On the main seams run tapes, which strengthen the firmness of the cap. Base and edge of apex are also reinforced with tapes. The apex is pulled in and secured with an elastic line. When sewn the main bridle has a strength of 2750 kp.

## **11. Inner/Outer Container**

The inner container is made from tear-resistant nylon fabric. If the rescue system is delivered with outer container it includes a release handle and two pins. The outer container is made from strong, water-resistant nylon. It consists of a base section, two side flaps and an upper and lower flap.



## 12. Packing the parachute

The SevenUp is in contrast to conventional rescue parachutes packed differently. Out of this reason it is absolutely necessary to do the packing step by step as follows. Packing accessories: 2 points of hanging up or weights; 3 cords, packing weights



1. Attach main bridle and separate the lines left and right from the centre line up to the canopy.



2. Separate the canopy and the lines in a left and right half, so that the stamped segments No.1 are upside, and the stamped segments No.11 are down. Now there are unsorted 3 canopies on the left, 3 canopies on the right and the longest one in the centre. Fix the centre canopy now.



3. Attach the apex of segment No.11 into the second packing-cord and pull segment No.11 to the side.



4. Put segment No.10 on segment No.11



5. Put segment No.09 on segment No.10.



6. Attach the apex of the next canopy and put the between-segment No.08 on segment No.09



7. Put segment No.07 on segment No.08, No.06 on No.07, and No.05 on No.06.



8. Attach apex of the third and last canopy, and put the between-segment No.04 on segment No.05.



9. Put all further segments until segment No.1 on each other. Fix the segments with a packing-weight



10. Attach the apex of segment No.11 (left side!) into the third packing-cord and pull segment No.11 to the side.



11. Put the left segments, according to point 3-6, on the left side now.



12. Put segment No.07 on segment No.08 until the between-segment No.04 appears.



13. Attach the apex of the third and last canopy and put between-segment No.04 on segment No.05.



14. Put the further segments over each other and fix it with a packing-weight.



15. In the middle there is one between-segment left over now. This segment is smoothed upward and put between the segments No.01.



16. Check that none of the lines are twisted.



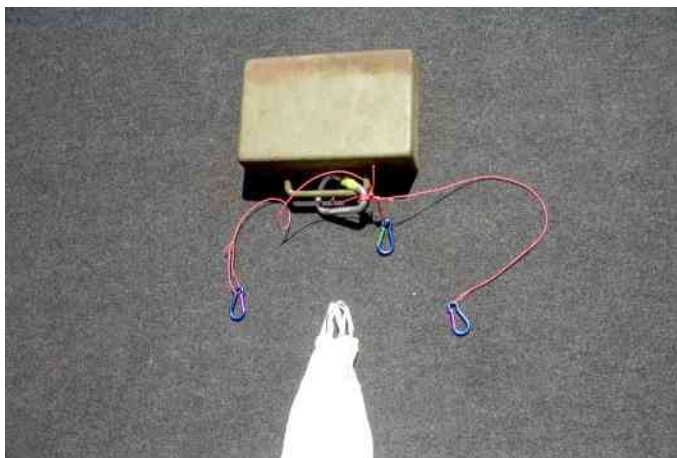
17. Fold the canopy in form of a "S". Approximate 1/3 of the right side is put under the lines.



18. Folding in form of a "S":

Approximate 1/3 of the left side is put above the lines.

The "S"-folded parachute is fixed by packing-weights.



19. Untie the packing-cords and make sure that you don't forget one!



20. Put the upper end of the canopy in the inner container.



21. Put the canopy in small "S"-foldings in front of the container.



22. Put the "S"-folded canopy in the inner container now.



23. About 30 cm of the canopy's base are still outside the container. Bring the lines in 3x3 bundles in form of a "8".



24. The rest of the canopy's base is put in "S"-foldings into the container. Also the line bundles are put in the container.



25. Close the inner container with the last 50cm of the lines. First close the centre, than the sides.

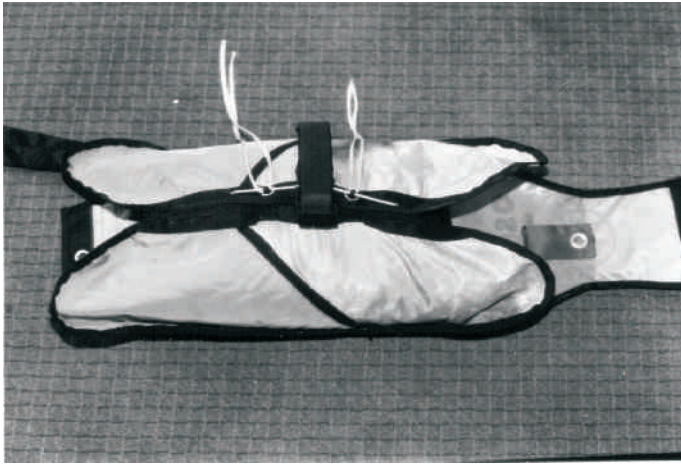


26. Arrange the bridle on the left or right side, depending on the needs of the pilot.

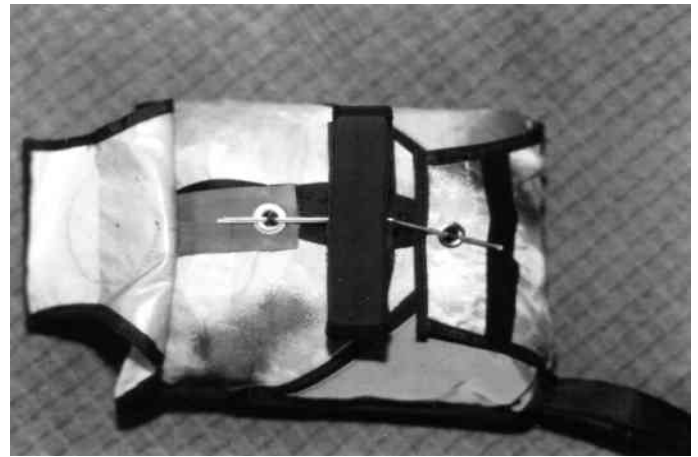
The packing itself is finished now.  
If the rescue is mounted in a outer container please notice the following points 26-29!

If the rescue parachute is mounted in a integrated rescue-container, check out the manual of the harness.

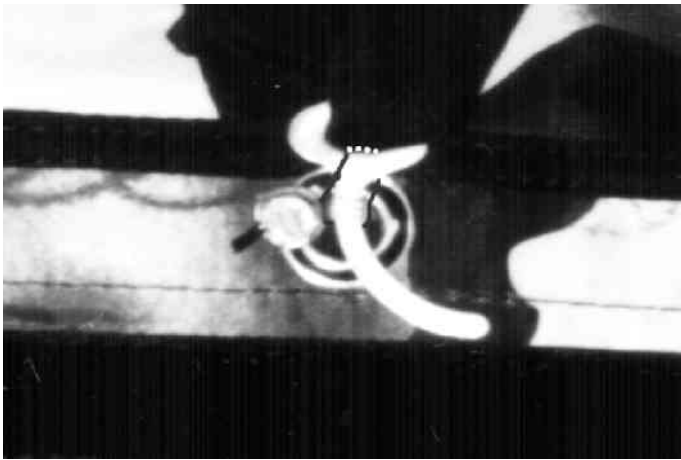
**Generally you have to notice the points 29-31!**



27. At first close the side flaps.



28. Finish by closing the lower fastening flap and finally the covering flap.



29. To avoid an unintentional opening the DHV prescribe to use a special thread to secure the pins. This defines a minium opening force of at least 5 daN. This special thread must be put through the hole of the pin and around the loop as shown in the picture.

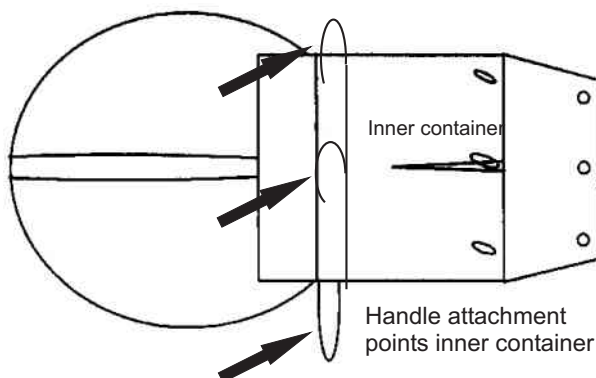
To secure the pin it is only allowed to use certified material because if the strength of this material is too high the save operation of the rescue system is not guaranteed. This thread is supplied by Fly market GmbH & Co. KG! **Do not use** other threads which may look the same!

30. Enter the packing details in the record book, including the name of the packer.

### 31. Installation in harnesses with integrated rescue system container (Compatibility Check):

With the installation of the rescue system in a harness the compatibility of harness and rescue system is to be checked. This check has to be carried out only by authorized persons. This check is to be noted in the record book of the rescue system. In this check must be paid attention to the fact that length is minimized between the release handle and the inner container. Therefore different loops are attached on the inner container for the best result. The shortest possible setting should be chosen always to allow a good throwing of the system. Make sure that a reliable opening of the harness container is guaranteed and the pin is not blocked!!!

Attachment points handle:



Deutscher Hängegleiterverband e.V. im DAeC  
 DHV/OeAeC-Technikreferat  
 LBA-anerkannte Prüfstelle für Hängegleiter und Gleitsegel  
 Beauftragter der österreichischen Luftfahrtbehörde

**DHV**

Luftsportgeräte-Kennblatt  
 Rettungsgerät für Gleitsegel

Geräte-Kennblatt Nr.: DHV GS-02-0119-04 Ausgabe: 0 Datum: 11.08.2004

I. Musterprüfung

1. Gerätemuster: Seven UP M  
 2. Hersteller: Fly market Flugsport-Zubehör GmbH & Co. KG  
 3. Datum der Musterprüfbescheinigung: 11.08.2004

II. Merkmale und Betriebsgrenzen

1. Gerätegewicht (ohne Außencontainer, kg): 2,3  
 2. Maximal zulässiges Gewicht (kg): 100  
 4. Empfohlenes Gewicht (kg):  
 5. Mitteleinen-Schirm: Ja  
 6. Sonstige Besonderheiten:

III. Betriebsanweisungen

Betriebsanleitung in der genehmigten Fassung vom 21.05.2004  
 Packnachweisheft in der genehmigten Fassung vom 21.05.2004

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