# **OWNER'S MANUAL**



# Harness / Container - System



Paratec Fallschirmbau – Technik – Service – Vertrieb GmbH Flugplatz 

66798 Wallerfangen Phone: 06837 – 7375 Fax: 0683 Issue 04-2009



# 1. Letter from Paratec

# Dear Customer!

Thank you for choosing a NEXT harness/container system. This rig has been designed, tested and built not only to EASA and FAA minimum performance standards but mostly with our passion for the utmost quality workmanship, system functionality and longevity. We strongly recommend that you and your rigger thoroughly inspect your new rig and carefully read this manual. Should you find anything, that does not look right to you or your rigger, please contact us immediately.

Again, thank you for choosing a Paratec Product. We are very confident it will be dependably at your service, anytime you skydive.

Sincerely

Eva Schumann Stefan Ertler Managing Directors Paratec GmbH

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# 3. **Operation Limitations**

The NEXT Family of Harness / Container-System has been certified under ETSO C23d issued by the Luftfahrt Bundesamt LBA as a member of the EU-ROPEAN Aviation and Safety Authority and under the FAA TSO C23d

CERTIFICATION NR.: LBA.O.40.014/06 JTSO

FAA design approval No: CB/vk/04/03:0056-03

# **!! Attention !!**

This Harness is limited to be used up to a pack opening speed of 150 KTS at a maximum operating weight of 115 Kg.

# 4. About this manual

This manual cannot substitute fort he knowledge and training you get in a proper riggers course. The scope of this manual is also not to enable you to pack this reserve container without any basic skills.

#### 5. Read before assembling

Inspect the entire parachute system, reserve, harness / container, main parachute and all other components, before you begin to assemble, pack or use this parachute system.

Your NEXT should be assembled by a properly certified Rigger (or equivalent rated person in your country).

Before assembling, be sure that the parachutes are compatible with this rig. Should the pack volume of your parachute not fall under the figures in this chart, then contact us immediately for further assistance.

Assemble this harness / container also in accordance with the reserve parachute manufacturer's manual and the AADs manufacturers' manual.

# 6. Inspection procedures

#### **6.1.** Schedule of inspections

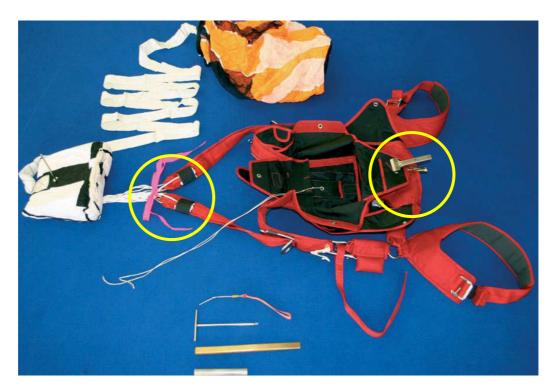
Carry out inspection procedures at assembly, before every repack and after emergency use.

According to the manufacturer's regulation, every NEXT rig must be inspected by qualified personnel, before it is used for the first time, before every repack, no matter if it was used or not after it was handled in an improper way such as after water jumps etc.. The periodic inspection and repack cycle for this Harness Container-System is 12 months. Other countries may have different regulations, so please check with your responsible organisation. Read the instructions in this manual completely before you begin.

Points of inspection	inspect for:		
Main lift web	damaged edges, Velcro damage, broken stitches, ravelled stitches		
Reserve ripcord, ripcord pocket, cable housing	Tight fit in pocket, bent pin, enough excess cable, worn out Velcro, broken stitches, loose tacking on MLW and/or reserve flap		
Chest and leg straps	damaged edges, velcro damage, broken stitches, ravelled stitches, worn out elastic keepers		
Cutaway pad, cables, cutaway housing	velcro damage, nicks in cables, damaged cables, dirty cables		
Container flaps	broken plastic stiffeners		
Grommets	sharp edges, bad or improper setting		
AAD set up	according to manufacturers installation, damaged cables		
Main riser	velcro damage, bent rigs, damaged closing loop, hardened webbing on 3-ring, good toggle fit		
Free bag and pilot chute	grommets for sharp edges, all seams of bag, Velcro in good condition, safety stow, bridle seams, damages on pilot chute fab- ric, spring force sufficient		
Main deployment bag and pilot chute	damaged grommets, old rubber bands, re- tract system of P/C in good condition, pilot chute fabric for porosity		
Closing loops	proper length, not frayed, general condi- tion, proper type for AAD used		
Entire hardware	rust, sharp edges, cracks, correct installa- tion		



# 7. Closing the Reserve Container



#### Picture 1

Please follow the packing instructions of your reserve manufacturers manual to this stage.

This picture shows you the packing tools, recommended by us. Being a experienced rigger, you should not need more. Note the clamp (yellow circle), which keeps the  $1^{St}$  reserve flap from folding back, so you have easy access to the reserve tray, making it much easier to place the reserve riser and the free bag into the reserve container.

The reserve risers are still being tied together which makes the pro packing of the reserve (recommended) easier and will assure symmetry throughout the pack job.

<u>Important:</u> Please make sure to remove this tie after you have put the reserve risers into the pack tray. To assure that this is not being forgotten, use a long and bright colour tape as seen in the picture.



Please make sure that the reserve risers are being placed UNDER the covers of reserve flap # 2.



Picture 3 Close flap #1 and stow the x box stitch connection to the bridle under the free bag.





Stow the first section of bridle under flap # 1 using 2 complete S-folds, pinching them under flap one, just before the grommet, yet preparing the rest of the bridle to be folded up in S-folds as shown in the picture above.



Picture 5

Close flap # 2 and S-fold the rest of the bridle to one side. (Should give you circa 6 folds)



Count half of your folds and move them together to the other side, creating a V of S-folds this way.



#### Picture 7

Place the bottom rim of the spring pilot chute on the base of the V, to keep it in place. Using a gun cleaning rod or similar device with an eyelet on the end to pull the cord through makes things quite easy, assuring that your pack job doesn't shift.





After you have compressed the spring and secured it with your temporary pin, pull all the pilot chute fabric out of the spring completely. Make sure that no fabric is pinched between the coils or under the lower rim of the spring.



Picture 9 Begin to dress the pilot chute fabric by folding back the bottom section towards the compressed spring. The top plate offers sufficient room for your fold.

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Start folding back the sides of the fabric, also rolling it inward towards the top plate. The method complements the wedge shape of the reserve container and will enhance the volume distribution of the complete pack job. Done correctly, you should end up with a long rectangle, sticking out into the main container section.



Picture 11 Close the left side flap first. (holds the AAD cutter if used)

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Picture 12 Continue by closing the right side flap.



Picture 13 Close flap # 5





The long rectangle of pilot chute fabric is now being rolled forward, to rest under the 2 side flaps. If the container is tight, you might want to use a packing paddle. In this case, please be careful not to damage it, by pushing too hard.



Picture 15 Close flap # 6 as shown above, remove the pull up cord.

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Seal, and document your pack job. Close the pin cover flap by using the side tuck tabs. The NEXT is now ready to be assembled with a main parachute.

# 8. Closing the Main Container



Picture 17

As shown above, this way your NEXT is prepared to be connected with a main canopy.

Your NEXT offers a neat little feature to secure the main container flap together with your pull up cord. Just secure it, by sticking it into the reserve pin cover flap pocket, as shown in the picture above.





#### Picture 19

The above two pictures show from different perspectives, how the main deployment bag is set into the main tray vertically to begin with: Make sure that the main risers are stowed alongside the reserve container, showing no excess length and the main bag filling out the corners.

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Turn the main bag forward towards the reserve container, making sure that it comes to rest in a position where is resembles the given length/width/ height to match the main tray dimensions.

Note, that the bridle already points to the top right corner.



Picture 21 Close flap # 1. Make sure you pull enough closing loop length out of the grommet, since you will need loop length as you continue, proceeding through the other flaps.

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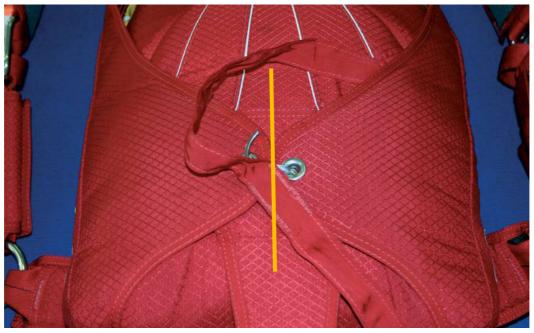
Picture 22 Close flap # 2.



Very important: Close the right flap first. This assures the symmetry of the side flaps with the pin cover flap.

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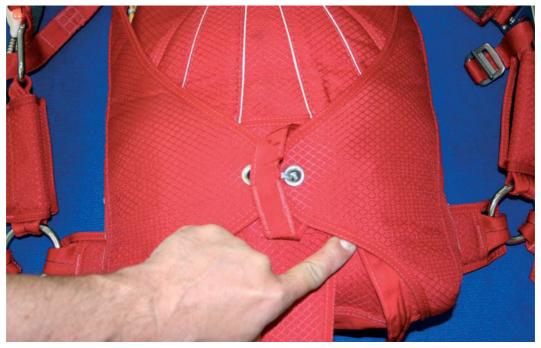




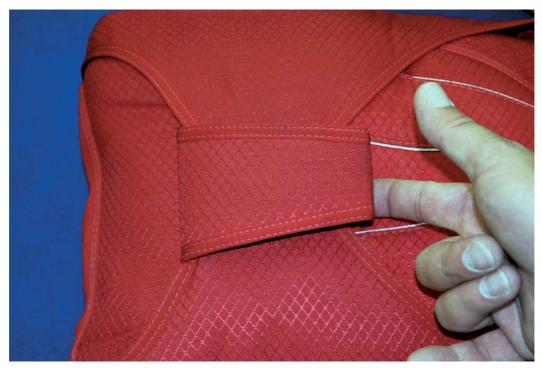
Close the left side flap and secure it with the closing pin. Ideally, the pin should be placed from bottom left to top right. The closing loop length is very crucial with the NEXT CONTAINER: Set at the right length, it assures that the symmetry of the 2 side flaps is given and the pin pressure is sufficient. The grommets should never be on top of each other. Please look at the yellow line in the above picture for a perfect loop length and a symmetric side flap setting.



Picture 25 Stow top end of bridle as shown above under the right side flap.



Picture 26 Stow the excess bridle under the bottom of the right side flap.



Your NEXT system is he only one on the market today, which features a pin cover flap which locks diametrical. Close it by just folding the upper stiffener piece 180° downward into it's designated pocket.

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# 9. Folding of the Pilot chute

Please read the following page as careful as the previous ones.

Folding your pilot chute is as important as folding your main parachute, since it will initiate it's opening.



Picture 28



Picture 29

The folding procedure shown here guarantees you an even volume distribution of the pilot chute fabric and efficient usage of the space offered by your BOC spandex pocket. The roll created by this method assures an easy slide-in and obviously an easy deployment of your pilot chute.





Picture 31

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Picture 33





Picture 35 Stow the last bit of bridle under the provided cover to protect it properly from being exposed to the air accidently.

The last step is to close your riser covers. To make this as easy as the previous steps, bring them in line with the container by lifting the yoke up. You can literally hear them falling into place.

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Picture 37

#### **10.** The Paratec Pull-Out-System

Paratec prefers the so called Apex Pull-Out-System over the "base" version, offered by most other manufacturers. It has significant additional advantages.

After deployment it becomes a throw out, meaning that it will not be projected by the air, forcing you to "let it go".

Pack volume is greatly reduced, since it gets by with just one piece of tape unlike the more complex construction of a base Pull-Out-System requiring T4 tapes and grommets.

Please note that this system is not necessarily suited for team jumpers, using third party packers or by skydivers who do not want deal with this rather uncommon deployment system today.

We do urge you, should you consider the Paratec Pull-Out-System, to get proper and thorough instruction from us, your Paratec Dealer or any Paratec representative, before you start using it.



Picture 38





Picture 39 Shows the pilot chute / bridle / pin / pad assembly



Picture 40 Fold the main bridle in S-folds under the loop keeper on top of your bag.



Picture 41 Close flap # 1. This will assure that the bridle will be kept safe in position.



Picture 42 This is a very important step: Hold the pad with your right hand and straighten out the pilot chute, by moving with your left hand down to the opposite end holding the pad Paratec Fallschirmbau – Technik – Service – Vertrieb GmbH Flugplatz · 66798 Wallerfangen Phone: 06837 – 7375 Fax: 0683 Issue 04-2009





Picture 43 Place the pilot chute on top of your main bag. Furthermore, it should be in line with the left side of your main container and not extending it. (see yellow line) The excess part with the pad and pin is now moved down towards you in a 90° orientation. Then, close the right side flap.



As you have closed the right side flap, make sure that there is enough slack to assure that the closing pin is not in the grommet area. This way you will definitely be able to open your container to deploy your pilot chute.

Note: The Pull-Out-System is probably the safest and most logical main deployment system, if used correctly.

This section is not meant to put you off, by being over specific. It rather is there to provide the enthusiast with tips and guidance for a problem free use of it.

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Picture 45 Close the left side flap, secure the closing pin and close the pin cover flap.



Picture 46 Push the access fabric of your pilot chute under the right side flap.



Picture 47 Fold back the cover piece and Velcro the pad onto the container. Then, fold the cover back ensuring that the pad is covered properly.

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Picture 48 This is how a properly packed Pull-Out-System NEXT should look.

#### 11. The NEXT – Student-System

The NEXT – Student – System has gradually gained popularity ever since it's introduction in 1997. We are proud to say that it is the leading system amongst Germany's most successful professional DZ as well as many club student training operations all over Europe.

It has succeeded because of it's versatility, robustness and upgradability and last but not least because of our back up service, understanding the importance of a student operation.

The following pages introduce the knowledgeable CCI and skydiving instructor to our current 2 versions. The classic AFF and the new Ambidex.



Picture 49



#### **11.1.** General

Both versions feature comprehensive, "everyday use capability".

Solutions, such as a visible AAD window, adjustable main lift webs where the emergency handles always stay in the same place, adjustable leg pads, stainless steel hardware are all standard. All sizes are kept very compact and clean looking. The following pictures show the vast capabilities of the NEXT-Student-System.



Picture 50



Picture 51

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Picture 53 Adjustable leg pads let you generate a proper fit, especially around the thighs.

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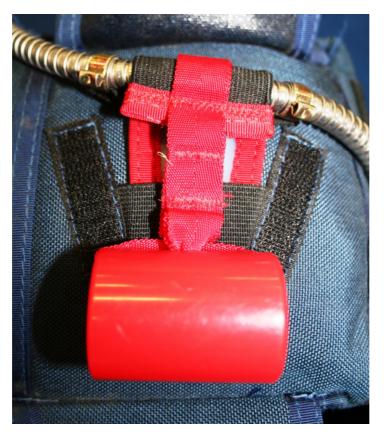
#### **11.2.** The Student-AFF-Classic Version

This classic AFF-Student-System, incorporating our powerful RSH II spring pilot chute, BOC ripcord and our innovative secondary release handle, show the great improvement in the area of emergency main release systems. It eliminates awkward angles for the secondary instructor, being able to stay level and at close proximity with the student. The following pictures show the function of this one of a kind release system.



Picture 54





Picture 56

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Picture 58

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#### **11.3.** The Student NEXT – Ambidex - Version

Ambidex means "both-handed". With this new variant of student instruction the student skydiver is being introduced to the throw away pilot chute from the first jump onward.

To give the secondary instructor the vital ability to generate an opening from his side, the BOC spandex pocket features a quick release system. The red emergency handle has grip pockets on the both sides for a positive grip, to be able to release the spandex pocket by just pulling the 2 yellow connection cables.

The following pictures show how easy this system is in operation and also how hassles free it is to reassemble it again.



Picture 59



Picture 60

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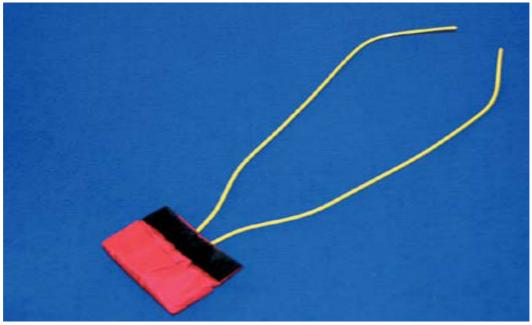


Picture 62



Picture 63

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Picture 65







Picture 67

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# 12. Taking proper care of your NEXT

Avoid direct exposure to sunlight, wherever you can, especially during packing and storage. UV is the major cause for aging of Nylon

if you think "the loop needs changing", then change it right away before the next jump

dirt and grass stains can be easily removed by using a sponge, neutral soap and a soft to medium brush. **Don't use any acid containing de-tergents**!

#### 13. Storing

Parachutes care for a dry environment, free of bugs and UV rays. Should you want to store your kit for a longer period of time, take the parachutes out of their containers, fluff them up and put them back with your rig into the carrying bag.

If you travel to hot and/or humid countries, like southern Europe, Asia or the south of the Americas, make sure you don't forget your kit in the boot of your rental car during the heat of the day. Should this occur, take both canopies out of the container and have the complete assembly inspected and repacked by a knowledgeable person such as a parachute rigger to make sure it is safe and airworthy.

#### 14. Maintenance

Follow the instructions and the procedures set forth in this manual by the manufacturer. The owner (not necessarily the user) is responsible to keep this equipment in a proper, safe and airworthy condition, by following the instructions in this manual and the national laws and regulations of the country in which he/she is using it.

The owner is responsible to report any problem he/she discovers to the manufacturer and has to make sure that all service and or safety bulletins are being followed.

- **14.1.** Types of maintenance (Actions to obtain and maintain airworthiness)
  - 1.1 Inspection of harness/container and reserve parachute including repack
  - 2.1 Minor repair
  - 2.2 Major repair
  - 3.1 Minor alteration (based on the manufacturers safety or technical bulletin)
  - 3.2 Major alteration (based on the manufacturers safety or technical bulletin)

Any kind of maintenance on this personal parachute system and it's components has to be carried out by trained and validly licensed technical personnel, or qualified person with valid certification by following the instructions in this manual.

The procedures, laws and regulations of the individual countries in which this personal parachute system is used, can supersede the will and the intention of the manufacturer.

Please check with your national parachuting organisation and/or your civil aviation authorities for potential legal collisions of the procedures set forth in this manual.



Type of maintenance	Manufacturer or certified loft	Senior rigger	Master rigger Without certified loft	Intervall
Assembling and computability check	yes	yes	yes	Before initial use ac- cording to manufactur- ers instructions
Inspections and reserve repacks	yes	yes	yes	- before use - within 12 months
Minor repair Minor alteration	yes	yes	yes	- after emergency use
Major repair Major alteration	yes	no	no	- after water landings - after improper use

#### **Minor repair**

"A repair any other than a major repair". Pointer manual, Volume I, Glossary / Index.

Such as: Replacing (assemble) canopies, harness/container systems (rigs), pack opening bands, cable housings, automatic actuation devices and harness hardware, where major stitching is not required.

Making repairs to containers, repair of stitching (re-stitch), patching holes in canopies.

#### Major repair

- 1. That, if improperly done, may affect weight, balance, structure strength, performance, flight characteristics or other qualities affecting airworthiness
- 2. That is not according to accepted practices or cannot be done by elementary operations
- 3. Which includes replacement of panels, ribs, lines, lateral bands, back straps, main liftwebs (Pointer Manual, Volume I, Chapter 7.01. and 7.02).

All numbers are in cubic inch (cui)							
Container size	P/N	Reserve Container	Main Container				
NENX	3101	200-220	200-260				
NENS	3102	220-240	240-310				
NEN	3103	220-240	310-350				
NV1	3104	240-300	350-380				
NV3	3105	300-370	350-380				
NV3.5	3106	300-370	380-400				
NV5	3107	300-370	400-440				
NV6	3108	300-370	440-500				
NV9	3109	370-450	600-650				
NV10	3110	370-450	650-700				

# **15.** Packvolume comparison chart

### **16.** Spare parts and part numbers (P/N)

One major reason for section is he fact that we have learned that many customers do not know which components belong to a harness/container system and had unknowingly given away their main deployment bag, pilot chute and/or risers, when selling the main parachute.

The list below tries to bring light into this matter.

A main parachute assembly consists of the connector links, the lines and the canopy. Everything else belongs to the ring and should stay with it.

Spare parts list of your NEXT harness /container system:				
Bezeichnung	Teile Nr.			
Main riser	50110			
Steering toggles	50107			
Pilot chute with bridle	50101			
Main deployment bag	50117			
Reserve deployment bag	50116			
Spring pilot chute	50118			
Reserve ripcord handle assembly	50114			
Reserve static line, RSL	50128			