



RIGGING INNOVATIONS, INC.

# Telesis 3.0

***OWNER'S MANUAL  
AND PACKING INSTRUCTIONS***

**PN 1313-()**

**\$10.00**

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# **WARNING!**

**1. Training and/or experience are required to lower the risk of serious bodily injury or death.**

**NEVER use this equipment unless you have:**

**A. Read the warning label and completed a “controlled program of instruction” in the use of this parachute assembly.**

**- OR -**

**B. Read the warning label and all appropriate owners / flight manuals, packing instructions and completed at least 100 ram-air parachute jumps.**

**2. Lower the risk of death, serious injury, canopy damage and hard openings by never exceeding the limits shown on the warning label.**

**Warning labels may be found in the following locations:**

**Ram-Air parachute- center cell top skin at trailing edge.**

**Harness/Container System- backpad.**

## **WARNING – BODY FLYING ATTITUDES (FREEFLYERS)**

Some body positions (i.e. head down, stand up, and long dives) may enable the user to reach speeds and attitudes, beyond those for which your equipment has been designed and tested.

**Premature or unintentional deployments in these body positions, even if you are below the maximum placarded deployment speed, are extremely dangerous.**

Parachute systems are designed to operate within specific weight and speed parameters, while oriented in a body position ranging from “belly to earth” to a slightly “head high” attitude.

Deployments outside of these parameters could cause one or all of the following:

- Extremely hard openings resulting in equipment failure
- Severe bodily injury
- Possible harness failure or ejection from the harness
- Canopy damage, malfunction or death!

## DISCLAIMER - NO WARRANTY

Because of the unavoidable danger associated with the use of the TELESIS 3.0 parachute system, the manufacturer makes NO WARRANTY, either expressed or implied. The system is sold with all faults and without any warranty of fitness for any purpose. Manufacturer also disclaims any liability in tort of damages, direct or consequential, including personal injuries resulting from a defect in design, material or workmanship or manufacturing whether caused by negligence on the part of the manufacturer or otherwise. By using this system, or allowing it to be used by others, the buyer WAIVES any liability of or the manufacturer for personal injuries or other damages arising from such use.

If the buyer declines to waive liability on the part of the manufacturer, buyer may obtain a full refund of the purchase price by returning the system, **before it is used**, to the manufacturer within 15 days of the date of the original purchase with a letter stating why it was returned.

**!!! WARNING !!!**

You can substantially reduce risk by ensuring that each component of the system has been assembled and packed in strict compliance with the manufacturer's instructions, by obtaining proper instruction in the use of this system, and by operating each component of the system in strict compliance with owner's manual. However, parachute systems sometimes fail to operate properly even when properly assembled, packed and operated so that you risk serious injury or death each time you use the system.

DANGER

**Each time you use this parachute system you risk serious bodily injury or death.**

DANGER

**TELESIS 3.0 P/N 6113 - (3) S/N** \_\_\_\_\_

**DATE OF MANUFACTURE:** \_\_\_\_\_

**REVISION DATE: 0**

**Manufactured by:**

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This manual designed and produced by  
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## ***Section 1.0***

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# ***General Information***

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## 1.1 TELESIS 3.0 CERTIFICATION

The **TELESIS 3.0** harness and container system is approved as a minor design change under the original Talon TSO and approved under FAA TSO-C23c, Category B: limited to use by persons up to 116 kg (254 lb.) fully equipped, and up to 150 knots.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**NORTHWEST MOUNTAIN REGION  
TRANSPORT AIRPLANE DIRECTORATE  
AIRCRAFT CERTIFICATION SERVICE  
LOS ANGELES AIRCRAFT CERTIFICATION OFFICE  
3229 E SPRING ST.  
LONG BEACH, CA 90806-2425**

AUG. 7, 1989

Rigging Innovations Inc.  
Mr. Sandy R. Reid, President  
236-A E. Third St.  
Perris, CA 92370

Gentlemen:

**Rigging Innovations Inc., Telesis Dual Parachute Harness & Container Assembly,  
Part Number 6113-( ); Series; Technical Standard Order C23c**

Your application of June 14, 1989, requesting the issuance of a Technical Standard Order (TSO) authorization in accordance with the procedural requirements of Federal Aviation Regulation (FAR) Part 21, Subpart O, has been reviewed. Based upon your data and statement of conformance certifying your article has met the requirements of FAR Part 21, Subpart O, and the minimum performance standards of TSO-C23c (Ref. FAR 21.305(b)) authorization is hereby granted.

The following technical data are considered to fulfill the requirements for TSO authorization and are being retained in our files:

1. Qualification Test Report SAE8015A - Test Summary Per AS8015A
2. Marking Requirements dated May, 1989
3. Owners Manual P/N 6113-( ) dated May, 1989

The quality control procedures contained in your quality control manual currently on file at the Manufacturing Inspection District Office and your statement that those procedures will be applied to the manufacture of subject articles at the above address, are considered adequate in accordance with FAR 21.143.

Effective this date you are authorized to use TSO procedures is extended to include the subject Telesis Dual Parachute Harness and Container Assembly and you may identify this article with the applicable TSO markings as required by TSO-C23c.

In accordance with the provisions of FAR 21.3, you are required to report to the FAA any failure, malfunction, of defect related to your TSO authorization. As required by 21.613(b), you must also notify the FAA when you no longer manufacture a TSO approved article.

This authorization pertains only to manufacturing operations at the above address and this office must be notified in advance of any proposed relocation to preclude interruption while awaiting quality control approval of your new facility.

Sincerely,

A handwritten signature in cursive script that reads "Frederick Lee".

Frederick Lee  
Manager, Los Angeles Aircraft  
Certification Office



## **1.2 RIGGER QUALIFICATIONS**

To pack and maintain this parachute system, the FAA Senior or Master Rigger or foreign equivalent - must possess a BACK rating endorsement to his or her certificate.

**Since these systems are certified only with square reserve parachutes** the rigger must be trained to pack ram-air parachutes prior to certifying the **TELESIS 3.0** system for emergency use.

*14 CFR Part 65.127( ) No certificated parachute rigger may –*

- (e) Pack, maintain, or alter a parachute in any manner that deviates from the procedures approved by the administrator OR the manufacturer of the parachute;  
or*
- (f) Exercise the privileges of his certificate and type rating unless he understands the current manufacturer's instructions for the operation involved.*

**ANYONE** who circumvents **Rigging Innovations, Inc. instructions** is in violation of

**14 CFR Part 65.127 and is, therefore, performing an illegal procedure.**

### **1.3 "Am I Qualified to Use this Equipment?"**

As the new owner of a Rigging Innovations, Inc. **TELESIS 3.0** parachute system, before you use it, it is very important that you can answer yes to several questions. Only by doing so can you be assured that you have the necessary training and/or experience to safely utilize modern parachute equipment of this type.

**Question 1:** *Does my experience level and /or training qualify me for using this equipment?*

Advanced equipment such as the **TELESIS 3.0** may have features requiring a certain level of experience and training in order to be used safely.

**Question 2:** *Have I been briefed or trained in the operation of this equipment by qualified personnel such as an instructor or licensed rigger?*

If you have progressed to the level where you are qualified to jump advanced equipment, or if you have been trained on other types, there may be certain features of this system that you are unfamiliar with. Make sure that you have received a thorough briefing from a certified instructor or rigger for the type of equipment you are about to jump.

**Question 3:** *Does the equipment fit properly?*

Can you see and / or reach the main deployment handle(s), 3-ring release handle, reserve ripcord and RSL? This equipment is built in a variety of container sizes, lengths, and widths, and may have a custom pre-sized harness. These configurations along with options such as BOC main deployment, make compatible sizing to the individual extremely important to the safe operation of the system. If the system does not fit properly, the handles may be inaccessible or may move during the jump thereby causing problems in the air.

The above questions have dealt with your ability to safely jump this **RIGGING INNOVATIONS** product only. If you have answered "Yes" to all the questions, you should feel comfortable using R.I. equipment. However, there are additional factors that may influence your decision and ability that do not relate to R.I. products. If you have any questions or feel uneasy about using this harness and container system, do not hesitate to ask a qualified Parachute Instructor, FAA certified parachute rigger for any further information or training you feel necessary.

Or contact Rigging Innovations at:

Telephone: (520)-466-2655 or  
[tech@rigginginnovations.com](mailto:tech@rigginginnovations.com)

## 1.4 CUSTOMER SERVICE

### **RIGGING INNOVATIONS INC.**

#### **Customer Service Policy and Limits**

##### **Harness and Containers**

RI will provide no charge repair service for repairs that RIGGING INNOVATIONS INC. has determined to result from defects in material or workmanship for a period of **six months from the date of purchase**. Date of purchase and proof of purchase must be supplied to RI by the customer with the item in order to be repaired free of charge.

##### **Unauthorized Modifications/Alterations**

RI will charge for repair service when the damage is caused by unauthorized modification or alteration of the product. RI reserves the right to refuse to repair any product so modified or altered.

##### **Improper Use**

RI will charge for repairs that results from improper use or from abuse such as exposure to chemicals, saltwater, improper washing, improper packing, excessive exposure to sunlight, or negligence on the part of the user (i.e. jumping already damaged equipment).

##### **Limits**

RI reserves the right to refuse service on equipment for which materials and / or manufacturing patterns and specifications no longer exist.

##### **Configuration**

Articles sent in for repair should be sent in with all parts. RI may request and require additional information pertaining to the product.

##### **Accessory Part - Replacement**

RI will recommend replacement of component parts based on inspection when safety is a factor due to normal wear and tear or maintenance of the product.

##### **Product Improvement**

Product improvements will be available as an option and cost to the customer.

##### **Service Request Form**

Any equipment returned for service, **MUST** be accompanied by a Service Request Form before it will be processed by Rigging Innovations.

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## 1.6 PARTS LIST

### TABLE I

QUANTITY	DESCRIPTION	Part Number
1	HARNESS/CONTAINER ASSEMBLY	6113-(3)
	CONTAINER ASSEMBLY	4113-(3)
	HARNESS ASSEMBLY (STANDARD)	5113-(3)
	HARNESS ASSEMBLY (MULTI-FLEX)	5113-(6)
	HARNESS ASSEMBLY (RAPA)	5113-(7)
1	STEALTH RESERVE PILOT CHUTE	2237-(3 )
1	SQUARE RESERVE FREEBAG AND BRIDLE	2132-( )
1	SAFETY STOW LOOP	2911-(2)
1	RESERVE RIPCORD -TAS	2511-(8)
1	RESERVE RIPCORD-SOS	2513-(3 )
1	MAIN RIPCORD- PINLESS	2531-(1)B
1	MAIN RIPCORD- USAFA- FXC MAIN	2531-(4)
2	RESERVE STEERING TOGGLES	2611-(2)
1	RESERVE CONTAINER CLOSING LOOP	2913-(7)
1	MAIN CONTAINER CLOSING LOOP	2913-(5)
2	MAIN RISERS- TY-8 STD	2431-(2 )
2	MAIN RISERS- TY-8 SOS	2431-(2)A
2	MAIN TOGGLES-VELCROLESS	2621-(2)
1	3-RING RELEASE HANDLE	2521-(1 )
1	MAIN DEPLOYMENT BAG	2125-( )
1	MAIN PILOT CHUTE- T.O.P.- 33" ZP	2241-(1 )
	MAIN PILOTCHUTE- 357 MAGNUM	2239-(2)
1	M.O.D. HANDLE- BOC RIPCORD	2532-(4)
1	AFF/BOC HANDLE	2532-(5)
1	MAIN BRIDLE- BOC	2321-(11)A
	MAIN BRIDLE- RIPCORD	2321-(3)A
1	RSL LANYARD	2811-(13)
1	OWNER'S MANUAL AND OPERATING INSTRUCTIONS	1313-(3)

**NO SUBSTITUTION OF COMPONENT PARTS IS AUTHORIZED!**

## ***Section 2.0***

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# ***Component Compatibility***

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## **2.1 CANOPY COMPATIBILITY**

### **IMPORTANT!**

It is imperative that the rigger and the owner understand what canopies are compatible with a particular model of Rigging Innovations, Inc. harness/container assembly.

**IF INCOMPATIBLE CANOPIES ARE USED WITH THIS TELESIS 3.0 SYSTEM, IT COULD FAIL TO OPERATE AS DESIGNED RESULTING IN SERIOUS INJURY OR EVEN DEATH TO THE USER**

## **2.2 RESERVE COMPATIBILITY**

To determine whether a particular reserve canopy is compatible with a TELESIS 3.0 harness/container assembly, there are several requirements that must be met. They are pack volume, deployment type, TSO certification, and placard limitations.

## **2.3 VOLUME**

The pack volume of a canopy is determined by using the standard Parachute Industry Association (PIA) volume measurement as determined by PIA Technical Standard TS-104 in its most current edition. By cross referencing this measurement to the Rigging Innovations, Inc. Main/Reserve Container Volume, Table II, the volume compatibility may be determined.

### ***IMPORTANT NOTES ON VOLUME REFERENCES***

Rigging Innovations maintains the PIA canopy volume measurement study. If R.I. has not tested a particular make and model canopy in our volume chamber we cannot be responsible for its fit in a given size container. We will accept orders for specific size rigs if no reference to canopy make or model is made. However, if canopy sizes are stated on an order form then R.I. will determine what is the best container size for those canopies.

Proper container sizing is one of the more difficult processes in determining the correct size of main to reserve canopy compatibility. Volume testing by the Parachute Industry Association has shown a volume variable of up to 20% for a given canopy model.

The PIA canopy volume may be based on a single sample and should serve only as a rough guide in selecting the correct size of container to canopy. Factors such as temperature, humidity, age, number of jumps and packing technique affect the volume of a given canopy.

R.I. generally takes a conservative approach when selecting the appropriate container size for a given canopy combination. R.I. sizes containers a little on the soft side to ease packing, while making the **TELESIS 3.0** more comfortable and durable.

**TABLE II**  
**TELESIS 3.0 Main/Reserve Container Volumes**  
 All numbers refer to the cubic inch volume of the containers.

Container size	Volume/Reserve/Main
TS1	400/500
TS2	450/625
TS3	500/700
TS4	550/750
TS5	600/800
TS6	700/950

## **2.4 DEPLOYMENT BAG AND BRIDLE**

Only a Rigging Innovations reserve deployment bag and bridle assembly of the correct size and properly labeled with P/N 2132 - ( ) is compatible with the **TELESIS 3.0**. **No other deployment bag is approved for use with the TELESIS 3.0 system.**

### **SAFETY STOW**

Only a Rigging Innovations safety stow of the correct size with P/N 2911 - (3) is compatible with the TELESIS 3.0. No other safety stow is approved for use with the TELESIS 3.0 system.

### **DEPLOYMENT TYPE**

There are 5 different canopy deployment methods in common use. Of these, only TYPE 5 is approved for use in the Rigging Innovations, Inc., **TELESIS 3.0** harness/container assembly.

The description and example is as follows:

Type 5: Free Bag: Canopy stowed in bag and lines stowed on/in bag.

*Examples: PD reserve canopies, Precision R-Max series reserves, and Aerodyne Smart reserves.*



## **2.5 ORANGE WARNING LABEL PLACARD DATA**

As part of the manufacturer's requirements, the ORANGE WARNING LABEL located on the back pad must be filled in by the rigger assembling and packing the **TELESIS 3.0**.

**FAILURE TO COMPLETE THE ORANGE WARNING LABEL  
 WILL RESULT IN THE TSO BEING NULL AND VOID!**

The data required for the warning label is obtained from the canopy manufacturer and should be found on the canopy warning label or data panel.

## 2.6 INDUSTRY SPEED AND WEIGHT LIMITATIONS

 <b>WARNING</b>		
<p>1. TRAINING AND/OR EXPERIENCE ARE REQUIRED TO LOWER THE RISK OF SERIOUS INJURY OR DEATH</p> <p>NEVER USE THIS EQUIPMENT UNLESS YOU HAVE:</p> <p>A. READ THIS WARNING LABEL AND COMPLETED A "CONTROLLED" PROGRAM OF INSTRUCTION IN THE USE OF THIS PARACHUTE ASSEMBLY</p> <p>OR</p> <p>B. READ THIS WARNING LABEL AND ALL APPROPRIATE OWNERS/FLIGHT MANUALS, PACKING INSTRUCTIONS AND COMPLETED AT LEAST 100 RAM AIR PARACHUTE JUMPS</p> <p>2. LOWER THE RISK OF DEATH, SERIOUS INJURY, CANOPY DAMAGE AND HARD OPENINGS BY NEVER EXCEEDING THE LIMITS SHOWN BELOW.</p>		
	MAIN	RESERVE
MAXIMUM DEPLOYMENT SPEED	KTS.	KTS.
MAXIMUM GROSS WEIGHT (JUMPER + CLOTHING + EQUIPMENT)	LBS.	LBS.
MANUFACTURER:		
MODEL:		
<p>ATTENTION RIGGER: • REFER TO OWNERS MANUAL FOR PLACARD INFORMATION AND COMPATIBILITY LIMITATIONS</p> <ul style="list-style-type: none"> <li>• FILL IN DATA WITH WATERPROOF INK</li> <li>• CHANGE DATA ON LABEL IF A DIFFERENT CANOPY IS INSTALLED</li> </ul> <p>REMOVAL OF THIS LABEL VOIDS THE TSO. MANUFACTURED UNDER TSO C23c BY RIGGING INNOVATIONS INC. 4900 N. Tumbleweed Rd. Bldg. 1, ELOY AZ 85231, USA.</p>		
		



## ***Section 3.0***

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# ***User Information***

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### 3.1 MAIN CONTAINER PACKING INSTRUCTIONS

#### Assembly

**Step 1:** Lay out main parachute, flake canopy, and check lines for straightness and continuity.

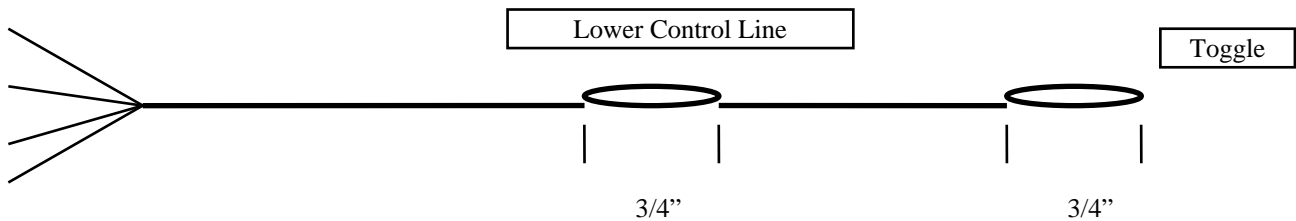
**Step 2:** With line check complete, attach connector links to main risers (nose of canopy on front riser, tail on rear riser). Note that risers are marked on back with an L or R to designate left and right. Double check that you have the proper riser on the appropriate side of canopy.

**Step 3:** Route steering lines through guide rings on rear risers. Attach steering toggles to lower control lines in accordance with canopy manufacturer's instructions or standard practice. Double check that toggle is secure and knot will not slip.

**CAUTION:** Some canopies have brake-setting loops large enough that they can pass over and below the toggle loop where the control line attaches, or over and below the knot which forms the loop for attaching the toggle. Either occurrence may cause difficulty releasing the brakes.

**Step 4:** Check that elongated diameter of canopy brake-setting loop and toggle-attach loop is 3/4" max. Zigzag, hand stitch, or re-tie loops as needed to reduce the loop length to 3/4 inch. (Fig 3-1)

**Step 5:** Attach the risers to harness making sure you have left on left and right on right.



**Fig 3-1**

### **Main Deployment Bag attachment**

**Step 7:** Install rubber bands provided onto main deployment bag. The main parachute is now ready to pack according to canopy manufacturer's instructions.

**Step 8:** Set deployment brakes by pulling steering lines down until locking loops are just below guide rings on main risers. Insert main toggle upper end into locking loop on steering line and into keeper sleeve above the guide ring. The steering line should be outboard of the toggle and pocket. Lower end of toggle is inserted into fabric loop below the guide ring (*Fig 3-2*) and stow excess steering line in the Velcro keeper mate toggle Velcro to risers (*Fig 3-3*)



*Fig 3-2*



*Fig 3-3*

### **Main Packing**

**Step 1:** When packing the main canopy, dress it approximately 4" wider than bag (2" each side) to fill out sides and not concentrate bulk in the center. For best appearance, bulk must be distributed evenly in the bag. Route lines out center and lock the center locking stow. Lock the two outer locking stows and finish stowing lines to within 18" of the connector links.

Press the air out of bag at this time to flatten bag prior to placing it in container. Place the bag at the bottom of main container.



*Fig 3-4*



*Fig 3-5*

**Step 2:** Route the main risers over the shoulders. Stow the main

risers according to the instructions on the orange tabs (Figs 3-4 thru 3-8). Close the main riser covers. Route the main risers down along side the reserve container with the main toggles facing inboard.



*Fig 3-6*



*Fig 3-7*



*Fig 3-8*

**Step 3:** Place bag into main container with the lines to bottom of container (Fig 3-9).



*Fig 3-9*

Push the top of the bag down into the container while pulling up on the center flap to seat the bag in the container (Fig 3-10).



*Fig 3-10*

### **Main Container Closing - B.O.C. and AFF/BOC**

**Step 1.** Route the main bridle across top of bag and out the right side of container. (*Fig 3-11*)



*Fig 3-11*

**Step 2.** Close main flaps in the order shown in the diagram on the inside of the main container pin protector flap (*Fig 3-12*). Pull flaps into place and lock with curved pin.



*Fig 3-12*

**Step 3.** Tuck the bridle under the bottom of the top flap and then right under the side flap and under the bottom bridle cover until the bridle exits near the mouth of the BOC pocket. (*Fig 3-13*)



*Fig 3-13*

### **Folding the BOC Throw-out Pilotchute**

**Step 1.** Place pilotchute on a flat surface with the handle down and spread to its full size. (*Fig 3-14*)



*Fig 3-14*

**Step 2.** Fold pilotchute in half. (*Fig 3-15*)



*Fig 3-15*

**Step 3.** Fold the bottom edge upward towards and even with the handle. (Fig 3-16) This should be approximately the length of the pocket.



*Fig 3-16*

**Step 4.** Fold pilot chute into thirds. “S” fold the bridle in the center and then fold the sides of the pilot chute over the bridle so the result is a flat package about the same width as the spandex pocket. (Fig 3-17)



*Fig 3-17*

**Step 5.** Slide pilot chute into spandex pocket including the handle. Pat the pocket flat with the hand from the closed end towards the mouth of the pocket until the handle is exposed. (Fig 3-18)



*Fig 3-18*

#### **Main Closing- 357L PC and MOD Handle**

**Step 1.** “S” fold the 357L pilot chute bridle and place on top of the main bag. Place the base of the spring pilot chute on top of the bridle.

**Step 2.** Collapse the pilot chute while stuffing the material in between the coils. (Fig 3-19)



*Fig 3-19*

**Step 3.** Close the container in the numbered sequence. #1- Bottom; #2- Top; #3- Right; #4- Left. Insert the plastic coated ripcord cable through the M.O.D. ring, if so equipped (*Fig 3-20*) then through the main closing loop. Stow the excess cable just under the top edge of the left main side flap.



*Fig 3-20*

Close the main pin protector flap (*Fig 3-21*).

**Note:** If the Telesis 3.0 is set up for operation with an FXC AAD on the main, the closing sequence for the last two flaps will be reversed. That is, the right flap will close last.



*Fig 3-21*

## **3.2 3-RING™ RELEASE ASSEMBLY**

### ***Threading 3-Ring™ Release Housings***

The **TELESIS 3.0** 3-Ring™ system utilizes flexible metal housings. This ensures smooth, consistent release forces. Threading the release cables is easily done without special tools.

**Step 1.** Thread the long cable into the long metal housing on right side until it comes out left end.

**Step 2.** Thread the short cable into the short housing until it comes out the right end.

### ***Assembling 3-RING™ Release***

**Step 1.** With riser rings and loop facing away from harness, pass larger riser ring through harness ring from the rear and fold riser ring upward. (*Fig 3-22*)



*Fig 3-22*

**Step 2.** Pass small riser ring through middle ring and fold small ring upward. (Fig 3-23)



Fig 3-23

**Step 3.** Pass loop from top to bottom around small ring and through riser grommet. Double-check that loop goes only around the small ring and not second ring also. Do not twist the loop. (Fig 3-24)



Fig 3-24

**Step 4.** Place grommet on end of release cable housing over loop and hold it in place while pushing yellow cable through loop. Stow loose end of yellow cable in channel on back of rear riser. (Fig 3-25)



Fig 3-25

**Step 5.** Repeat Steps 1 through 4 with the other riser.

**Step 6.** Connect the RSL snap shackle to left main riser. Double check the risers for correct assembly. Inspect from side. (Fig 3-26) Only 1 item through each ring, all rings lay parallel, and white loop routed through only small ring and then thru terminal end of housing.



Fig 3-26

### **3.3 Reserve Static Line Lanyard (RSL)**

The Reserve Static-line Lanyard or RSL system is a lanyard attached from the left main riser to a ring around the reserve ripcord cable. Upon jettisoning a malfunctioned main canopy, the lanyard automatically pulls the cable, which then pulls the pin on the reserve ripcord. This results in activation of the reserve with a minimum loss of altitude. Through the use of the RSL system, a greater degree of safety is realized. It must be stressed however, that the RSL is simply a backup to manual activation of the reserve ripcord.



**In the event of a malfunction, the jumper must pull the reserve ripcord manually even though the RSL may activate the reserve faster. There have been fatal cases where the RSL has been disconnected but the jumper waited for the RSL activation.**

**Assembly of the RSL:**

The **TELESIS 3.0** RSL System must be installed when the reserve is packed since the reserve ripcord **MUST** pass through the ring as the ripcord is installed.

**Step 1.** Install the stiffened section of the lanyard into the pockets on the yoke under the left rear reserve riser. The ring end goes towards the Reserve Canopy and the snap shackle goes towards the harness 3-ring (*Fig 3-27*)



*Fig 3-27*

**Step 2.** Route the reserve ripcord through the housing and out the top. Fold the ends of the lanyard inboard of the riser. Lay the riser over the shoulder and place the lanyard ring between the guide rings. Make sure the rings are folded back towards the reserve container. Route the ripcord through the rings and into the short housing under the top reserve top flap (*Fig 3-28*) Route the ripcord between the inner and outer reserve flaps. The ripcord is now in place and ready to close the container.



*Fig 3-28*

**Step 3.** Fold the excess lanyard above the snap shackle and stow in the yellow loop as shown (*Fig -29*). Attach the RSL snap shackle to ring on left riser. (*Fig 3-30*).



*Fig 3-29*



*Fig 3-30*

**It is important that lanyard is routed directly from the cable to left riser without passing under, around or through any housing or other attachments.**

**INCORRECT RSL ROUTING WILL RESULT IN POTENTIALLY FATAL CONSEQUENCES!**

**If you have any doubts or questions about routing or the installation of the Reserve Static-line Lanyard System, the TELESIS 3.0 should not be jumped until it has been inspected by a competent rigger, familiar with the system.**

**3.4 FXC MAIN INSTALLATION**

Parts List: (Figure 3-31)

1. Telesis 3.0 P/N 6113-(3) with applicable FXC installation,
2. FXC Model 12000 AAD.
3. FXC Model 12000 Ripcord Pin Terminal P/N 811-00042-( )
4. RI FXC housing clamp P/N 9111-(1)

Repairman: FAA Master or Senior Rigger or foreign equivalent.

Tools:

1. Medium size Phillips screwdriver
2. 11/32 wrench or adjustable wrench.

Step 1: Remove all accessory parts from the Telesis 3.0 such as bags, risers, 3-ring release handle, reserve ripcord, etc.

Step 2: Install the ripcord pin terminal securely to the cable end of the FXC. Arm the FXC while pulling the housing in a straight line as in Figure 3-32.



*Fig 3-31*



*Fig 3-32*

Step 3: Install the FXC into the pocket on the right side of the main container. Make sure the power cable is routed out towards the right side flap and the sensor unit out towards the harness.

Step 4. Route the sensor UNDER the main ripcord housing (Figure 3-33).

Step 5: Route the sensor housing through the Velcro channel on the bottom of the backpad and mount the sensor on the left side of the container on the mounting strap (Figure 3-34).

Step 6: Attach the power housing end to the ripcord housing using the FXC housing clamp provided. Make sure to route the clamp UNDER the Ty-4 tape. Position the nut and bolt facing to the inboard side and NOT to the outside. Tighten the nut securely making sure the housings cannot move in relation to each other (Figure 3-35).

Step 7: Install the main ripcord into the housing and then through the eye of the ripcord pin terminal. Make sure the terminal lays along side of the ripcord cable and not out at an angle (Figure 3-36).

Step 8: Insert the ripcord pin into the main closing loop. Close the main pin protector flap and then the side cable cover flap as well as the side cover for the FXC power unit (Figure 3-37).

If there are any questions concerning the installation of the FXC Model 12000 into the Telesis 3.0, do not hesitate to contact Rigging Innovations before proceeding.



*Fig 3-33*



*Fig 3-34*



*Fig 3-35*



*Fig 3-36*



*Fig 3-37*

### 3.5 Harness Adjustments and Fitting

**Note:**

The Telesis 3.0 is designed to have multiple points of adjustment. They are the chest strap, the two main lift webs (MLW), the two leg straps, the two lateral back straps, and the belly band.

**Step 1.** The adjustable main lift webs must be adjusted prior to donning the harness. Open the MLW cover/ripcord pocket assembly (Fig 3-38) on the main lift webs below the chest strap.



Fig 3-38

The ends of the MLWs are stowed in the webbing pockets (Fig 3-39).



Fig 3-39

Adjust the MLW to fit the appropriate size required and then take the slack out of the MLW (Fig 3-40), Re-close the MLW covers.



Fig 3-40

**Step 2.** Put rig on and fasten chest strap. Fasten and tighten leg straps to snug but not tight. Note that if your TELESIS 3.0 has the “V-flex” leg strap configuration (Fig 3-41), it is different than other designs. When fitted correctly, the leg strap does a reverse twist as it passes from the upper leg strap to the lower leg strap. (Fig 3-42) It may seem strange at first but the resultant comfort of the design is far superior than any other.



Fig 3-41



*Fig 3-42*

**Step 3.** Bend forward at your waist and hoist your rig from the bottom so it sits high on your back. (*Fig 3-43*). Tighten the leg straps so that they're tight but not uncomfortable or restrictive.



*Fig 3-43*

**Step 4.** Straighten up and tighten the chest strap. Grasp the belly band straps at the side and pull forward to tighten the side lateral straps (*Fig 3-44*).



*Fig 3-44*

**Step 6.** Stow the loose ends of leg straps in elastic keepers and in the opening at end of the leg pad so they will not come out and flap in free fall or be mistaken for pilot chute, release or ripcord handles. Keeping elastic keepers up against the hardware will prevent leg strap tension changes, which sometimes occur during your ride to altitude.

Locate the following and familiarize yourself with their visual and physical locations:

- a) Main ripcord handle or pilot chute handle. (BOC)
- b) 3-Ring release handle.
- c) Reserve ripcord handle.

Release and ripcord handles should be far enough forward that they are easy to see and grab.

**Step 7.** For BOC, practice pulling the pilot chute out of pouch while lying on your stomach to ensure that you can pull it. Make sure that you are satisfied with pull force needed to extract pilot chute from spandex pocket.

**Step 8.** For BOC ripcord, practice pulling the handle while lying on your stomach. Make sure handle is accessible and that pull force is not too great.

**Step 9.** For most people, the hip junction rings should be near the top of your pelvis but, this may not be ideal for all individuals. When suspended, a 2 or 3 inch gap is normal between your shoulder and shoulder pad. You should be able to reach the toggles easily while hanging under canopy.

**Note: If you have any questions about these instructions, you should seek the help of a certified Rigger or contact *Rigging Innovations, Inc.* at 520-466-2655**

### 3.6 Main Static Line (MSL) Installation.

The Telesis 3.0 main static line activates a direct bag system. With ram-air canopies, the canopy is *free stowed* in the bag. That is, there is no assist device or connection between the canopy and the bag. Regulations requiring canopy assists are intended for round parachutes.

The Telesis 3.0 is designed to be easily converted from freefall to static line and back without having to unpack the canopy. We do this by using a canopy attachment loop you installed as in Figure 3-45 on page on page 11. Whenever you pack the canopy, always pack it with the canopy attachment loop exposed through the grommet at the top of the bag. In freefall mode, you attach the pilotchute and bridle to the canopy attachment loop. For static line, the static line is looped directly to the yoke on the top of the bag. To make it even simpler, we color coded the canopy attachment loop and the freefall pilotchute bridle the same color (normally RED). We made the mating loops the same size so that they can be attached with a #5 Rapide link. These loops for the Rapide link are too small for the static line to be inadvertently attached to the canopy. The static line and the yoke on the bag are also color coded (yellow) for proper mating.

#### To convert from freefall to static line:

**Step 1:** Disconnect the freefall pilotchute and bridle from the canopy attachment loop.

**Step 2:** Loop the end of the Main Static Line over the yoke on the top of the main bag and tighten securely. (*Fig 3-46*)

**Step 3:** Place the main bag in the main container with the static line exiting the upper left (or right) hand corner of the container. (*Fig 3-47*)

**Step 4:** Close the container in the numbered sequence. #1 - Bottom; #2 - Top; #3 - Right side; #4 - Left side. Insert the static line Flexpin through the main closing loop.



*Fig 3-45*



*Fig 3-46*



*Fig 3-47*



*Fig 3-48*

**Step 5:** Fold the static line above the Flexpin attachment point and double stow it in a rubber band on the static line stow loop on the left or right side main flap. This is for shortest routing to the aircraft door and so that the Flexpin is not accidentally dislodged by the drag of the static line during use. (Fig 3-48)

**Step 6:** Close the main protector flap and finish stowing the static line left to right in rubber bands attached to stow loops. (Fig 3-49)



Fig 4-49

### 3.7.1 AFF M.O.D. and AFF/BOC Installation

The Telesis 3.0 AFF M.O.D. or Manual Over-ride Deployment handle was first introduced on the Telesis system. The MOD is a backup main ripcord mounted on the lower left corner of the main container. This allows the reserve side jumpmaster on an AFF jump to easily deploy the main parachute. Because the AFF/M.O.D. handle is a completely separate component, it may be left off the assembly when the Telesis 3.0 is used in a normal freefall or static line mode.

To install the handle:

**Step 1:** Mate the ring end of the handle lanyard with the small piece of Velcro located just below the grommet on the left main flap. (Fig 3-50)



Fig 3-50

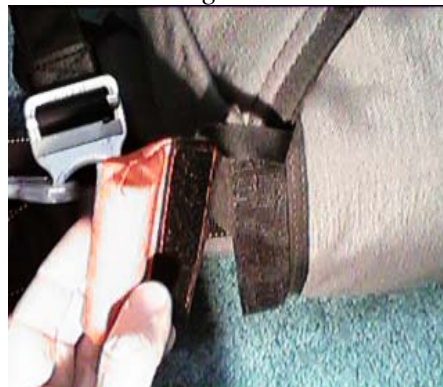
**Step 2:** Make a full twist in the lanyard between the two sections of Velcro and mate the long piece of hook to the corresponding piece of loop Velcro on the underside edge of the left main flap. (Fig 3-51)



Fig 3-51

**Step 3:** Reach into the pocket on the left corner of the main container and pull out the handle mounting flap with the hook Velcro on it. (Fig3-52) Mate the handle to the mounting flap and then tuck the handle into the pocket so it is held securely. (Fig 3-53)

**Step 4:** Close the container in the numbered sequence. #1 - Bottom; #2 - Top; #3 - Right side; #4 - Left side. Insert black coated ripcord cable through M.O.D. ring, if so equipped, then through the main closing loop. Tuck the excess cable under the left side container flap.



*Fig 3-52*



*Fig 3-53*

### **3.8 Reserve SOS (Single Operating System)**

The Telesis 3.0 S.O.S. (Single Operating System) utilizes one handle and one operation for both the breakaway and reserve ripcord pin pull. A loop style handle is placed below the three ring on the wearers left hand side. Peeling outward and then pulling downward will cause a staged, breakaway then reserve pin extraction. The RSL operates normally with this system as it does the normal two handle system.

The risers for the S.O.S. system are unique. The excess cable keeper is located closer to the grommet which the 3-Ring™ loop passes through. Be sure you use the correct risers.

#### **SOS Handle Installation:**

**Step 1:** Insert ripcord cable into housing. Pull excess cable down between flaps. Turn the loop handle Velcro side up and place stainless steel grommet on left hand loop of the ripcord cable. (*Fig 3-54*)



*Fig 3-54*



**Step 2:** Rotate the handle counterclockwise (left) allowing the unstiffened fabric to turn the corner and fold down behind the handle and left hand flap. Mate Velcro between the handle and the left-hand flap. (*Fig 3-55*)



*Fig 3-55*

**Step 3:** Route the breakaway cables in their appropriate housings and mate the right side handle Velcro to the flap. (*Fig 3-56*)



*Fig 3-56*

### **3.9 Maintenance Procedures**

The **TELESIS 3.0** begins its life as one of the finest pieces of parachute equipment you can buy. It is up to the owner to maintain it in top condition. Below are certain areas that you and your rigger should check on a regular basis to ensure proper operation and long life of your equipment.

#### ***Before Each Jump You Should Check:***

1. All ripcord and 3-Ring™ housings for loose tacking, damage or obstructions.
2. Reserve ripcord pins, cables, handles and pockets for proper seating, wear and/or damage.
3. Main deployment activation devices (BOC and ripcord) for wear and placement. Also check routing of bridles for twists, etc.
4. Main risers routed smoothly over shoulders and riser covers closed properly.
5. 3-Ring™ release mechanism assembled properly and excess cable stowed properly.
6. All harness webbing and hardware for wear or damage.
7. All flaps closed in proper sequence and tucked in.

**Note:**

**IF ANY WEAR OR UNUSUAL CONDITION IS FOUND, CONSULT RIGGING INNOVATIONS, INC. OR A QUALIFIED PARACHUTE RIGGER IMMEDIATELY! 520-466-2655**

***After Putting Your Rig On, Check:***

1. Reserve ripcord handle secure in its pocket.
2. Chest strap is properly threaded and free end secured.
3. Leg straps are properly threaded and free ends are stowed.
4. Belly band threaded correctly and excess webbing stowed.

***3-Ring™ Release Maintenance***

The following procedure should be done weekly, or every 25 jumps, whichever comes first. If the rig is subjected to unusual abuse, such as exposure to excessive dust or sand, or if it is dragged, it should be inspected immediately.

**Step 1.** OPERATE RELEASE SYSTEM ON THE GROUND. Pull release cable completely out and disconnect risers.

**Step 2.** While the system is disassembled, closely inspect it for wear.

- a. Check nylon loops on risers to be sure they are not frayed.
- b. Check Velcro on release handle and harness to insure that it will adequately hold handle.
- c. Check stitching that holds harness hardware to main lift web and hand tackings that hold cable housings in place.
- d. Check metal housing ends for sharp edges or deformation.

**Step 3.** VIGOROUSLY TWIST AND FLEX riser webbing on each side where it passes through the big ring to remove any set or deformation in webbing. Failure to do this might result in a hesitation when the release is activated with a low-drag malfunction such as a streamer or bag-lock.

**Step 4.** Check inside of release housing for gravel or other obstructions. Use the cable to dislodge gravel. Inspect housing/channels for dents or cuts or other damage.

**Step 5.** Clean and lubricate release cable with a silicone spray. Spray on a paper towel and firmly wipe the cable a few times. A THIN invisible film should remain - too much will attract grit or dirt. Failure to clean release cables could result in higher than normal pull force during breakaway.

**Step 6.** Re-assemble system properly, in accordance with instructions given in this manual. Double check it. Perform a continuity check to make sure canopy is straight and risers are not reversed or twisted.

Regular, careful and thorough compliance with this maintenance procedure will prolong the life of the 3-Ring™ release system, and help to ensure its operation during breakaways.

**Note:**

**IF ANY WEAR OR UNUSUAL CONDITION IS FOUND, CONSULT RIGGING INNOVATIONS, INC OR A QUALIFIED PARACHUTE RIGGER IMMEDIATELY!**

## ***120 Day Maintenance***

Your Rigger should thoroughly inspect your **TELESIS 3.0** at every repack cycle to insure that all components are in airworthy condition. These areas should include the following:

1. Reserve pilotchute, bridle, deployment bag, housing, and ripcord.
2. Reserve canopy fabric and lines.
3. Reserve connector links.
4. Ripcord pocket.
5. Main bridle and pilot chute.
6. Harness and container in good airworthy condition.
7. Flex-Ring buffers. Inspect inside of buffers for excessive wear. (*Fig 3-57*).



*Fig 3-57*

Buffers are designed to absorb wear before the harness webbing. The inside should look shiny and smooth and may be discolored from hardware finish. If buffers are cut or frayed, it may be caused by damaged hardware or foreign matter (dirt) imbedded in the material. If wear is excessive, rig should be grounded and returned to Rigging Innovations for inspection and repair.

### ***Major Repairs and Alterations***

**Rigging Innovations, Inc.** does **NOT** authorize alterations to the **TELESIS 3.0** harness and container systems. Any alteration must be made by the manufacturer, a designated R.I. Service Center, or an **AUTHORIZED** master parachute rigger or foreign equivalent.

Major repairs should be made in accordance with Rigging Innovations Procedures or standard rigging practices by appropriately certificated and rated FAA riggers or foreign equivalent.

Contact **Rigging Innovations, Inc.**, at 520-466-2655, if you have any questions concerning the above.

### 3.6 Rig Cleaning - CORDURA®

**Table III** CORDURA® Recommended Stain Removal Methods \*

STAIN	REMOVAL METHOD
Coffee, Fruit Juice, Milk, Soft Drinks, Tea, Tabasco Sauce, Wine, Urine	Detergent <sup>1</sup> /blot/water/blot
Catsup, Chocolate, Blood	Detergent/blot/ammonia <sup>2</sup> /blot/water/blot
Mustard	Detergent/blot/vinegar <sup>3</sup> /blot/water/blot
Spicy mustard (turmeric), Kool- Aid®	Solvent <sup>4</sup> /blot/detergent/blot/vinegar/blot/water/blot
Cooking oil, Crayon, Lipstick, Mayonnaise, Motor oil, Show polish	Solvent <sup>4</sup> /blot/detergent/blot/water/blot
Chewing gum	Freeze with ice cube/ scrape/solvent/blot/ detergent/blot/ water/blot
Furniture polish, Ink (Permanent)	Paint remover <sup>5</sup> /blot/solvent/blot/detergent/blot/ ammonia/blot/vinegar/blot/water/blot
Furniture polish, Shoe polish	Seek the help of a professional upholstery cleaner
<p><b>Notes on Cleaning Agents</b>            The following procedures should be used with all cleaning agents. A clean, white cloth dampened with the recommended cleaning agent should be used in an inconspicuous place to test for color-fastness. Optimum cleaning will be achieved by not over-wetting the cloth and by turning it frequently to keep it clean. Rings can be avoided by working from the outer edge of the spot toward the center. This process should be repeated until the spot is removed or there is no further transfer to the cloth.</p> <p><sup>1</sup>Detergent.....One teaspoon neutral powder detergent (e.g. Tide or All) in 1 pint warm water.</p> <p><sup>2</sup>Ammonia.....A 3% solution.</p> <p><sup>3</sup>Vinegar.....White vinegar or a 10% acetic acid solution</p> <p><sup>4</sup>Solvent.....Dry cleaning fluid - preferably 1.1.1 trichlorethane</p> <p><sup>5</sup>Paint remover.....Paint remover with no oil in it.</p>	
<p>NOTE: Oily and greasy stains --- In addition to the recommended method, some stains (e.g. perspiration/body oils) respond well to dry cleaners such as "HOST" (Racine Industries), "CAPTURE" (Milliken) and "K2R" (Texize). Carefully follow directions on the label.</p>	

\* Recommendations based on fabrics finished with Du Pont Teflon® WBC Soil and Stain Repellent for CORDURA®. The methods were effective on stains that were allowed to sit untreated overnight. Removal is usually easier when stains are cleaned immediately.

### ***Washing the harness and container***

Regular care and cleaning of your **TELESIS 3.0** will prolong its life and enhance the resale value should you decide to sell it. It is recommended that you have your rigger wash your **TELESIS 3.0** at least once a year. The following techniques of washing Rigging Innovations harness and containers have been utilized successfully for many years.

**CAUTION!** Some colors, such as red, may bleed and contaminate lighter colors like white. Rigging Innovations therefore does not guarantee any results or accept any responsibility for color changes resulting from following these washing instructions.

Remove all canopies, AADs, and component parts such as toggles, RSL, ripcords, bags, and elastic keepers as well as the packing data card.

### ***Hand Washing***

Materials required:

1. Wash tub
2. Medium stiffness brush
3. Woolite™ or similar mild liquid soap.
4. LOTS of fresh water.

**Step 1.** Soak rig in lukewarm water. Apply straight Woolite™ or soap onto dirtiest areas and scrub with the brush. Soak in lukewarm water for 20 minutes.

**Step 2.** Scrub the entire rig vigorously all over. Soak for another 20 minutes

**Step 3.** Repeat step 2. For particularly dirty rigs, you may want to empty the first batch of soapy water and wash in a fresh batch of soapy water.

**Step 4.** Squeeze out as much soapy water as possible. Immerse in fresh, clean, cool water and rinse several times until no further soap comes out.

**Step 5.** Hang to dry out of direct sunlight. Use of a fan directly onto the rig greatly speeds up the drying process.

### ***Machine Washing***

Materials required:

1. Jumbo tumbler type commercial washing machine. It is not recommended to do this in your home washing machine.
2. Medium stiffness brush.
3. Woolite™ or similar mild liquid soap.
4. Large pillowcase or laundry bag.
5. Assortment of rags
6. Extra laundry.

**Step 1.** Wrap the hardware of the rig with the rags to pad them so they don't beat the inside of the washing machine.

**Step 2.** Soak the rig in lukewarm water and apply Woolite™ or other soap directly onto the dirtiest parts. Scrub these parts vigorously. Allow these parts to absorb the Woolite™ during the time you're traveling to the Laundromat.

**Step 3.** Place the rig into the pillowcase and add extra padding such as some of your regular laundry! Tie off the pillowcase to hold everything in. Place into the washing machine and wash in warm water.

**Step 4.** Run through at least two rinse cycles or hand rinse several times until no further soap comes out.

**Step 5.** Hang to dry out of direct sunlight. Use of a fan directly onto the rig greatly speeds up the drying process.

### *Scotchgard*

The use of Scotchgard™ brand fabric protector has become commonplace in recent years. This fabric treatment seals the pores of the fabric against dirt and other stains. Scotchgard™ is not a magical “silver bullet” against dirt. However it has shown good results in keeping lighter color fabric cleaner longer under normal use. Grinding in on grass or asphalt or other heavy abuse will still stain and/or damage the rig materials.

Scotchgard™ is not harmful to today's container fabrics such as Para-pak and Cordura™. There are currently several Scotchgard™ formulas. The standard fabric and upholstery formula in the **RED CAN** has proven the most successful. Do not use the rug and carpet formula in the blue can.

After the rig is completely dry, hang it in a well ventilated location. **FOLLOWING THE DIRECTIONS ON THE CAN**, apply the protector to the entire **OUTER SURFACE** of the rig. For those areas such as the inside of the leg pads, backpad, and bottom of the main container, and light colored panels such as white, etc, apply a second coat after the first has dried. Do not intentionally spray the hardware, housings, and clear vinyl Cypres window. After the rig has dried, it may then be re-assembled and placed back into service.

## ***Section 4.0***

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# ***Rigger Information***

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#### 4.1 Orange Warning Label Placard Data

As Part of the manufacturer's requirements, the ORANGE WARNING LABEL, located on the back pad, must be filled in by the Rigger assembling canopies to the **TELESIS 3.0**. The data required for the warning label is obtained from the canopy manufacturer and should be found on the canopy warning label or data panel, as well as in the Owner's Manual.

**FAILURE TO COMPLETE ORANGE WARNING LABEL WILL  
RESULT IN THE TSO BEING NULL AND VOID!**

	MAIN	RESERVE
<b>MAXIMUM DEPLOYMENT SPEED:</b>		
<b>MAXIMUM GROSS WEIGHT (JUMPER + CLOTHING + EQUIPMENT):</b>		
<b>MANUFACTURER:</b>		
<b>MODEL:</b>		
<b>ATTENTION RIGGERS:</b>	<ul style="list-style-type: none"><li>• REFER TO OWNERS MANUAL FOR PLACARD INFORMATION AND COMPATIBILITY LIMITATIONS.</li><li>• FILL IN DATA WITH WATERPROOF PEN.</li><li>• CHANGE DATA ON LABEL IF A DIFFERENT CANOPY IS INSTALLED</li></ul>	



## 4.2 Parachute Assembly Inspection Form

<b>Parachute Assembly Inspection Form</b>		
<b>! Note: Count all Tools Before Starting Assembly</b>		<b>Qty:</b>
<b>A</b> <b>Harness and Container</b>	Manufacturer:	
	Model:	
	Date of manufacture:	
	Serial no:	
<b>Initial After Each Item If No Discrepancies Are Found</b>		
<b>Initials</b>		
1.	Main lift web	
2.	Chest and leg straps	
3.	Harness hardware and Flex-rings	
4.	3-ring release	
5.	Pilotchute pocket	
6.	Reserve ripcord, handle pocket, cable housing	
7.	Cutaway handle, attachment point, cable housing and channels	
8.	Container flaps and grommets	
9.	Closing loop length and condition (main and reserve)	
10.	Comments:	
<b>B</b> <b>Main Canopy and Pilotchute</b>	Manufacturer:	
	Model:	
	Date of manufacture:	
	Serial no.:	
<b>Initial After Each Item If No Discrepancies Are Found</b>		
<b>Initials</b>		
1.	Risers and 3-Ring	
2.	Connector links and slider bumpers	
3.	Slider grommets, tapes, fabric	
4.	A-lines and attachment points	
5.	B-lines and attachment points	
6.	C-lines and attachment points	
7.	D-lines and attachment points	
8.	Steering lines and toggles	
9.	Canopy cells and cross-ports	
10.	Slider stops ( on canopy )	
11.	Bridle line, d-bag stop, pin	
12.	Pilotchute and handle	
13.	Deployment bag	
14.	Comments:	

<b>C</b>		Manufacturer:
		Model:
Square Reserve Canopy		Date of manufacture:
and Pilotchute		Serial no:
Initial After Each Item If No Discrepancies Are Found		Initials
1.	Risers	
2.	Connector links	
3.	Sliders & Grommets	
4.	A-lines and attachment points	
5.	B-lines and attachment points	
6.	C-lines and attachment points	
7.	D-lines and attachment points	
8.	Steering lines and toggles	
9.	Canopy cells and cross ports	
10.	Slider stops (on canopy)	
11.	Deployment bag and safety stow	
12..	Bridle line	
13.	Pilotchute	
14.	Packing card and information	
15.	Comments:	

<b>D</b>		
Assembly of		
Square Reserve Canopy		
Initial After Each Item If No Discrepancies Are Found		Initials
1.	Inspection of canopy and Container completed (parts A & C )	
2.	Line Continuity correct including steering lines thru slider grommets	
3.	Slider on correctly	
4.	Rapide™ links tightened or Slinks™ assembled correctly.	
5.	Steering lines tied to toggles on mark	
6.	Steering line length equal to each other	
7.	Safety stow on deployment bag installed	
8.	Packing data card filled out	
9.	Packed according to manufacturers instructions	
10.	Reserve pin sealed	
11.	Fill out warning label	
12.	Comments:	

# E

Assembly of

Main Canopy to Container

Initial After Each Item If No Discrepancies Are Found

Initials

1.	Inspection of canopy and Container completed (parts A & B )	
2.	Line continuity correct including steering lines thru slider grommets.	
3.	Slider on correctly	
4.	Release handle cables are proper lengths	
5.	Rapide™ links tightened or Slinks™ assembled correctly	
6.	Steering lines tied to toggles on mark	
7.	Steering line length equal to each other	
8.	D-bag, bridle and pilotchute are attached properly	
9.	Fill out warning label	
10.	Comments:	

! Note: Count all tools after assembly and packing is completed to ensure that none were left in the canopy or container.

Qty:

Signature of Rigger(s) Inspection

Signature:

Date:

Print Name and Seal Symbol:

Signature:

Date:

Print name and Seal Symbol:

General Comments:

## 4.3 Ram-Air Reserve Packing Instructions

**Prior to assembling and packing a square reserve into a TELESIS 3.0, the rigger must thoroughly read and understand these instructions.** The rigger must determine reserve and container compatibility based upon volume, deployment type and placard information. Only reserve canopies that have been assigned weight and speed limits by the canopy manufacturer are approved for use in the TELESIS 3.0. The rigger who assembles the reserve is responsible for completing the Orange Warning Label. Refer to the Rigging Innovations Warning Label Placard Data Sheet for proper information.

***NOTE: Minimum qualification; FAA Senior or Master Parachute Rigger with a BACK rating or foreign equivalent.***

### 4.3.1 Assembling The Reserve System

*The canopy/rig combination shown in the following photographs is a TS4 size **TELESIS 3.0** with a PR-253 reserve canopy.*

**Step 1.** Assemble an appropriate size reserve parachute to the **TELESIS 3.0** harness and container system ensuring the following:

- 1.2 Line continuity is correct.
- 1.3 Connector link bumpers installed and tied per canopy manufacturer's instructions.
- 1.4 Connector links are tightened finger tight plus one quarter turn of the barrel. **WARNING:** If Maillon rapide links are too tight, barrels will crack.
- 1.5 Mark connector links with a fine line from a permanent Marker.
- 1.6 Steering lines are routed through rear grommets on slider.
- 1.7 Steering lines are routed through guide rings on rear risers.
- 1.8 Steering toggles are securely attached.
- 1.9 Automatic Activation Device correctly installed.
- 1.10 Closing loop length is checked. (See Table IV for approximate length).
- 1.11 Completely inspect the canopy.

**NOTE:** Rigging Innovations has tested and evaluated the Slink™ brand of Soft Link manufactured by Performance Designs Inc. **RI HIGHLY RECOMMENDS** the use of this product in conjunction with the **TELESIS 3.0** harness and container system. The use of this product results in a stronger assembly that is easier to pack and more comfortable to the wearer as it eliminates the metal links and the corresponding slider bumper bulk.

### 4.3.2 Table IV -Approximate Closing Loop Lengths

**NOTE:** The loop length recommended in this chart is an **approximation** based on packing experience in our facility. Variables such as canopy size, temperature, humidity, and packing

technique will affect the best loop length. In addition, these lengths include the additional length necessary for the AAD cutter.

**IT IS THE RIGGER’S RESPONSIBILITY TO ENSURE THE RIPCORDER PULL FORCE DOES NOT EXCEED 22 Lb. (10 Kg.).**

The loop length is measured from the washer to end of the loop.

**TABLE IV**

<b>CONTAINER SIZE</b>	<b>LENGTH</b>
TS1	0”/0mm
TS2	0”/0mm
TS3	0”/0mm
TS4	0”/0mm
TS5	0”/0mm
TS6	0”/0mm

**NOTE: Only CYPRES™ type closing loops are approved for use with “loop-cutter” Automatic Activation Devices. Thicker loops made from other materials are dangerous because they may slow pack opening and reserve deployment.**

**4.3.3 AAD Reserve Installation**

Only modern, electronic “loop cutter” type AADs have been tested and approved for use with the TELESIS 3.0 system. The very small container volumes and closing configuration of TELESIS 3.0 prevent the use of older style AADs.

Currently the following AADs are approved for use with the Telesis 3.0 system:

- Airtec Cypres and Cypres 2™
- Advanced Aerospace Designs Vigil 1 and Vigil 2
- Aviacom Argus

The TELESIS 3.0 is built “AAD-ready” from the factory with all the pockets, channels and other parts necessary for direct assembly of the AAD to the containers without further modification.

The following instructions tell the rigger how to assemble a CYPRES™ to the TELESIS 3.0. However, it is important that the rigger also have a current copy of the CYPRES™ Rigger’s Guide to familiarize him or her with the total CYPRES™ concept. Also, the rigger should have a CYPRES™ Rigger’s Kit containing several useful tools when assembling a CYPRES™ to the Telesis 3.0 system.

When assembling other brands of AADs to the Telesis 3.0 system, it is imperative that the rigger has all necessary instructions and any special tools if required.

**Step 1:** The reserve locking loop supplied with the CYPRES™ MUST be used. Special discs supplied with CYPRES™ must also be used to make knots for locking loop.

**Step 2:** Adjust locking loop to appropriate length in accordance with Table IV. Install locking loop into container.

**Step 3:** Install CYPRES™ processing unit into spandex pocket on divider wall at bottom of reserve container. (*Fig 4-1*)



*Fig 4-1*

**Step 4:** Thread the cutter unit up through grommet and then through the spandex channel on inside of right reserve side flap. Push the cutter through the elastic keeper next to the grommet and align hole in cutter with grommet. (*Fig 4-2*)



*Fig 4-2*

**Step 5:** Carefully coil excess cutter cable under Velcro closure flap located on right end of CYPRES™ installation pocket. DO NOT bend or kink excess cable. (*Fig 4-3*)



*Fig 4-3*

**Step 6:** Carefully push control unit through channel on bottom of reserve container from bottom to top. (*Fig 4-4*)



*Fig 4-4*

**Step 7:** Gently slide control unit out through the upper right corner of reserve pack tray (*Fig 4-5*) and into the spandex pocket at the yoke area. Double check that control button, display, and red light are visible in pocket window. (*Fig 4-6*)



*Fig 4-5*



*Fig 4-6*

**Step 8:** Pull slack in control cable back down into pack tray, leaving about 1/2" (1 cm) slack where cable curves into the container. Coil excess cable neatly without kinks or sharp bends into the tunnel pocket on pack tray at the right side of the stiffener plate. (*Fig 4-7*)



*Fig 4-7*

#### 4.3.4 Folding the Reserve Parachute

**Before you start!** Check for recent updates or R.I. Service Bulletins

**Telephone:** (520) 466.2655

**FAX:** (520) 466.2656

**Website:** [www.rigginginnovations.com](http://www.rigginginnovations.com)

**Note:**

*Pro packing of Ram-Air reserves has progressed significantly in recent years. Experience has shown that there are several distinctive techniques currently being used with great success and no discernable problems identified. If the intent of the procedure is followed, and the resultant configuration of the canopy is compatible with the shape and configuration of the reserve deployment bag, the actual technique used to accomplish it may be flexible, as long as it does not contradict any specific requirements from the canopy manufacturer.*

*Rigging Innovations mandates **PRO (Proper Ram-air Orientation)** packing for packing ram-air reserves into **TELESIS 3.0** reserve containers. PRO packing results in the best bulk distribution and greatest comfort for the wearer. The molar method is used to insert the parachute into the deployment bag.*

*Since 1985 and the first generation Talon, Rigging Innovations has tested and sanctioned 3 different packing methods for packing ram-air reserves into their container systems. The following procedure is one method that Rigging Innovations currently uses.*

*The process of shaping the canopy stack and the molar ears is very much subject to individual technique. The shape of the TELESIS 3.0 reserve container and bag is more rounded at the top as opposed to other more tapered designs such as the Talon 2. This is in keeping with the aerodynamic convex curve of the TELESIS 3.0 profile. The ears of the molar bag are designed to accept more bulk to create the “TELESIS 3.0” curve.*



### ***List of Recommended Tools:***

- 2- Packing weights, 4 Lb. (2 Kg)
- 1- Packing weight, 22 Lb. (10 Kg)
- 1- Packing Paddle 18" (50cm) or longer
- 1- Pull-up cord (microline), 72" (1.82m)
- 1- Gun Cleaning Rod, .22 CALIBER (5.56mm)
- 1- Knee-board or V-type Closing Plate
- 1- Temporary pin, flagged
- 5- Plastic or rubber tipped packing clamps (pony Size 3202)



Fig 4-8

### ***!! WARNING !!***

***If T-Bars or "Positive Leverage Closing Devices" are used to close TELESIS 3.0 containers, use them with caution ! These tools can damage containers and cause impossible ripcord pull forces!***

## **Reserve Parachute Pro Packing Instructions**

### **1-Basic layout and setting up packing clamps**

Anchor the risers at the connector links including the steering lines. (Fig.4-9)

Place packing weight on top of it.



Fig 4-9

Pull the slider down to the connector links. Make sure the tapes face upwards towards the canopy. (Fig 4-10)



Fig 4-10

Lay the canopy on its right side. (Note: A mirror image of the layout is permissible).

Flake the canopy so that the top seams are even. Place a clamp on the top of the canopy in line with each line attachment point as in the photo. (Fig 4-11)

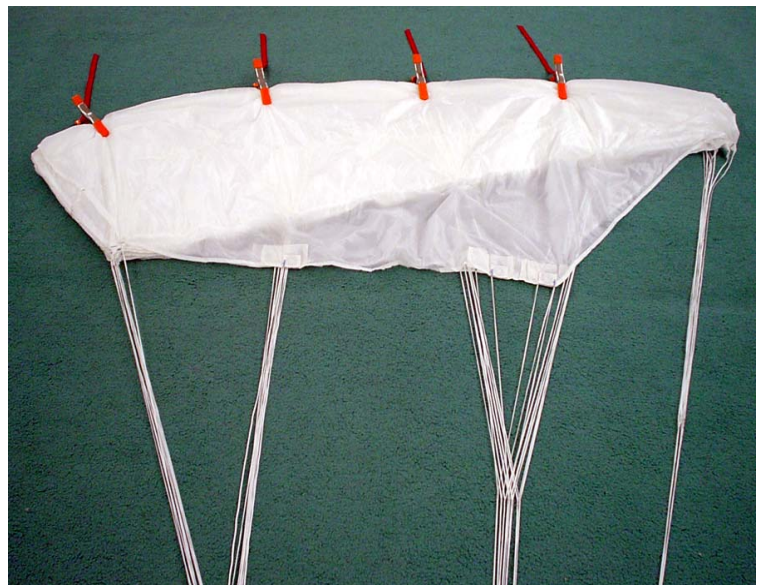


Fig 4-11

**2-Stacking and folding the reserve canopy**

The finished configuration for the canopy stack should look like Fig 4-12 when completed.

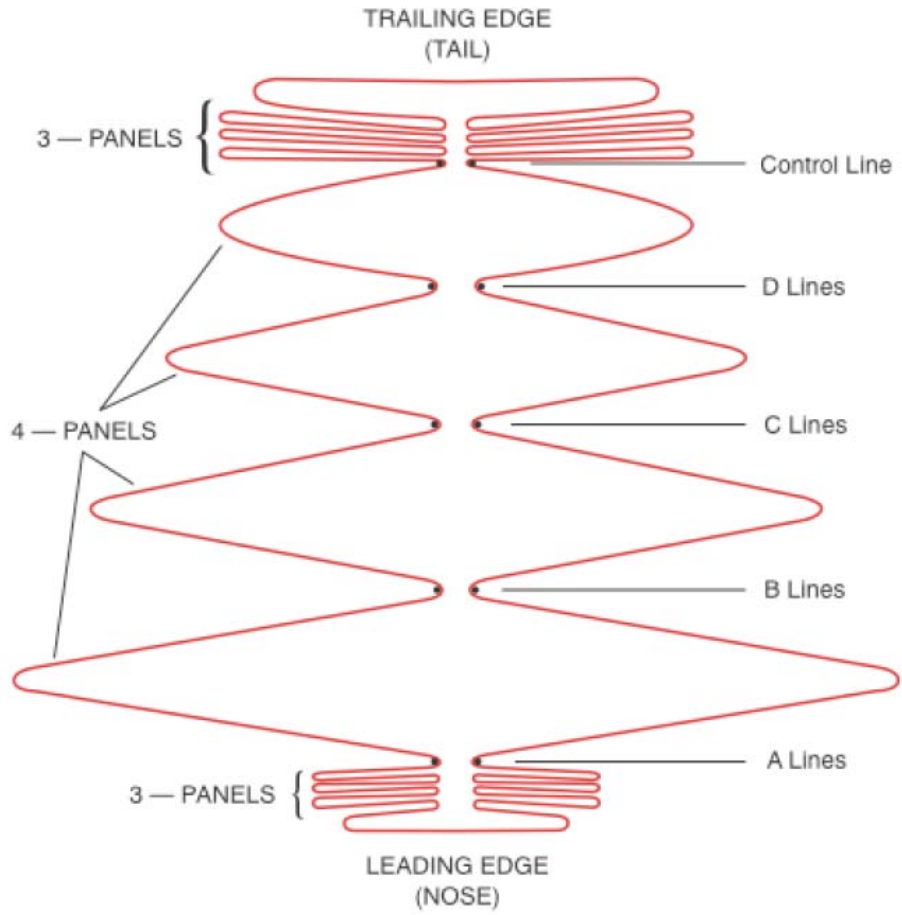


Fig 4-12

Pull tension on the “A” lines. Split the leading edge in half (Fig 4-13).



Fig-4-13

Fold half under "A"-lines (Figs 4-14 and 4-15)



Fig 4-14



Fig 4-15

Pick up the "B" lines by the clamp and hold vertically over the "A" clamp (Fig 4-16)  
Note the spread of the leading edge panels.



Fig 4-16

Next stack the “B” lines on top of the “A” lines while distributing the cells equally to both sides. (Fig 4-17)

Keep the center cell in the middle.



Fig 4-17

Repeat this step with the “C” (Fig 4-18)



Fig 4-18

and “D” line groups (Fig 4-19)



Fig 4-19

Split the trailing edge and separate the control lines into right and left groups (Fig 4-20).



Fig 4-20

Remove the clamp from “D” line group.

Hold down the “D” lines at the line attachment points and pull down the control lines. (Fig 4-21)

Do not disturb the center of the canopy stack.



Fig 4-21

Set the deployment brakes and stow the excess line in the Velcro keepers. (Fig. 4-22).



Fig 4-22

The finished toggles should look like Fig. 4-23



Fig 4-23

Fold all the trailing edge to one side then pull the stabilizer panel taut (Fig 4-24).



Fig 4-24

Flake the trailing edge of the canopy starting with the outboard control lines. Fold each cell in half on top of the “D” line group (Fig. 4-25) until you get to the center.

Repeat with the opposite side.



Fig 4-25



### **3- Place canopy into the deployment bag and stowing the lines**

Make sure all suspension lines are taut and towards the center of the pack job.  
(Fig 4-26)



Fig 4-26

Pull slider up to the slider stops.

Fold the center of the trailing edge back to expose the center of the “wind channel”. (Fig. 4-27)



Fig 4-27

Create an “S” fold in the stack. (Fig. 4-28)

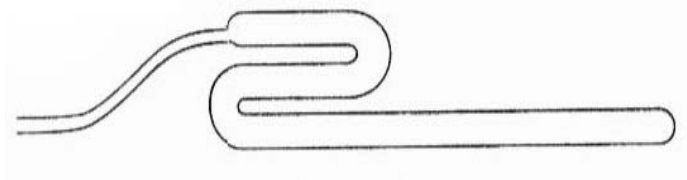


Fig 4-28

Position a packing paddle at a third of the way up from the bottom of the canopy length on top of the stack. Place a gun cleaning rod at half the distance between the bottom and the packing paddle under the stack. (Fig. 4-29)



Fig 4-29

Pull the rod up and move the canopy with paddle towards container.

Pull the top center cell panel down to the bottom of the stack.

Wrap the center cell around the folded canopy with the left and right about halfway to the center, then secure with clamps, starting at the bottom (Fig. 4-30 ).

The width of the folded canopy needs to be the width of the freebag plus 2 in (5cm).



Fig 4-30

Continue to wrap the center cell around the canopy stack and secure with additional clamps (Fig. 4-31).



Fig 4-31

Lift the base of the folded canopy and slide the reserve bag underneath. The grommets in the tongue of the bag should be even with the bottom of the stack (Fig. 4-32).



Fig 4-32

Make a second “S” fold to match Fig. 4-33.



Fig 4-33

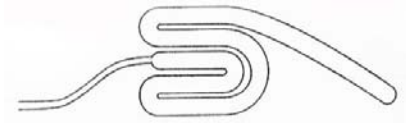


Fig 4-34A

Split the loose fabric at the top to form two “ears” (Fig 4-35).



Fig 4-34

Gather the center cell material along the middle seam until you reach the bottom along the middle seam. (Fig. 4-36)



Fig 4-35



Fig 4-36

Roll the material under but do not cover the center cell (Fig. 4-37).



Fig 4-37

Hold down the center cell material and then shape the molar folds (Fig. 4-38).



Fig 4-38

Fold the ends of the molar folds under to create the bulk necessary to fill the top of the reserve bag (Fig. 4-39).



Fig 4-39

When placing the canopy in the bag, allow the folded canopy to stick out 2-3 inches at the mouth of the bag to fill the corners of the reserve container (Fig. 4-40).



Fig 4-40

Close bag and secure with the locking stows (Fig. 4-41).



Fig 4-41

Shape the bag. The shape of the bag should reflect the desired shape of the reserve container.

Cover any exposed hook Velcro™ to avoid contact with the lines. (Fig. 4-42)



Fig 4-42

Now make clean line stows the same width as the line stow pocket.

Stow the lines neatly leaving sufficient line between the bag and riser ends (Fig 4-43).



Fig 4-43

## 5-Closing the Container

Place reserve risers into the pack tray. (Fig. 4-44)

Spread the risers with the rear riser to the outside to minimize the bulk against the back pad.



Fig 4-44

Place freebag into the container and S-fold the bridle on top between the molar shaped canopy ears. (Fig. 4-45)



Fig 4-45

Fold the top yoke portion of the bag over the bridle. (Fig. 4-46)



Fig 4-46

Secure in place with a clamp. (Fig. 4-47)



Fig 4-47

Use the gun cleaning rod to thread the pull-up cord through Stealth pilotchute from bottom to top. (Fig. 4-48).



Fig 4-48

Center the base of the pilot chute on center grommet of freebag.

Compress pilot chute while stuffing fabric and mesh between the spring coils.

Position the cap of the pilot chute with the arrow facing toward top or bottom of container. (Fig. 4-49).



Fig 4-49

Secure with temporary pin.

**WARNING! Do not leave fabric outside of spring coils as a coil lock could occur and pilotchute launch may be inhibited!**

If an AAD such as a Cypres™ is installed, route the pull-up cord through the cutter first then through the right (#1) side flap grommet. (Fig. 4-50)



Fig 4-50



Next thread the left (#2) side flap grommet. Simultaneously close the side flaps (Fig. 4-51). Secure with temporary pin.



Fig 4-51

Close bottom flap #3 and secure with temporary pin. (Fig 4-52).

Note: At this point, you should only be able to pull ¼” – ½” of loop through the first three flaps. If you can pull more, the loop is too long. Open container and shorten loop.



Fig 4-52

**Check that the reserve ripcord passes through RSL ring before continuing!**

Close flap #4 and insert ripcord pin (Fig. 4-53).



Fig 4-53

**CAUTION:** Place closing plate on bottom edge of inner top flap. Placing closing plate or kneeling on pin protector flap will kink or break the flap. The rigger should determine how tight the closing loop is and decide whether to perform a pull test.

**WARNING: MAXIMUM ALLOWABLE PULL FORCE ON RESERVE RIPCORD IS 22 POUNDS (10 KG).**

Once the rigger is satisfied that pull force is less than **22 pounds (10 Kg)** seal ripcord and log pack job in your logbook and in the Packing data card.

Place the data card in the data card pocket (Fig 4-54).



Fig 4-54

## **COUNT YOUR TOOLS!**

**COMPLETE PLACARD DATA ON ORANGE WARNING LABEL.**

**FAILURE TO COMPLETE ORANGE WARNING LABEL WILL**

**VOID THE TSO.**

**RIGGING INNOVATIONS INC.**

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