OWNER'S MANUAL

Quasar II

Harness/Container assembly
P/N 115100

THE STELLAR RESERVE

Reserve Canopy
P/N 436000

STRONG ENTERPRISES
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THE PARACHUTE COMPANY WITH IMAGINATION

Rev. C 11/2000

P/N 510050
Price $5.00

WARNING

Parachuting is a hazardous activity that can result in serious injury or death. Failure to follow all warnings, instructions and required procedures may result in serious injury or death. Parachutes sometimes malfunction even when they are properly designed, built, assembled, packed, maintained and used. The results of such malfunctions are sometimes serious injury or death. There are so many factors, both human and natural beyond our control, that we want you to clearly understand that by using or letting someone else use your Quasar II or its components, you are accepting the fact that they may malfunction causing serious injury or death. If you are not willing to accept these risks, you may return your Quasar II, unused, to the dealer where it was purchased for a full refund.

DISCLAIMER - NO WARRANTY

Due to the inherent dangers associated with sport parachuting, the Quasar II and all of its components are sold as is with all faults and no warranty of fitness for any purpose is either expressed or implied. The manufacturer also disclaims any liability in tort for damages, direct or consequential, including personal injury and property damage, resulting from a malfunction of the Quasar II or from a defect in its design, material, workmanship, or manufacturing process whether caused by negligence on the part of the manufacturer or otherwise.

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INTRODUCTION

Thank you for purchasing your new **Quasar II** harness/container system from Strong Enterprises. You are now the owner of the most attractive, state of the art, quality rig available on the market today.

The **Quasar** was originally developed in 1993 with the design intent to build a sport rig possessing all of the qualities of today's discriminating skydivers expect and demand from their gear. Strong Enterprises has met those demands while continuing to incorporate our high standards of the past 40 years to build reliable, durable and safe gear.

Just as sport skydiving is forever changing, so has the **Quasar**, evolving into the **Quasar II**. New and faster skydiving techniques require new designs to match higher speeds and distinct body positions. The **Quasar II** has risen to all skydiving demands while retaining its high quality and attractive appearance. The **Quasar II** is now available to hold from the smallest to the largest of canopies. The **Quasar II "Shorty"** was introduced to accommodate the smallest of skydivers, and the **Quasar Trainer** model can be built to handle what ever student training you may use.

PRODUCT DESCRIPTION

The **Quasar II** is a single harness, dual parachute pack designed for the discriminating skydiver. Built Cypress ready, the **Quasar II** features single pin closure for the main and reserve containers. It is characterized by the main and reserve pin protector flaps which securely tuck down into a pocket on the opposed flaps. A wide variety of main and reserve container sizes are available which allow the **Quasar II** to accept main and reserve canopies from the smallest to the largest, including round or ram-air reserves. The **Quasar II** has been tested in accordance with SAE Aeronautical Standard AS-8015A and is approved under FAA TSO C-23c, category B.

Strong Enterprisesis continuously working to provide jumpers with reliable, durable and safe products, as well as being comfortable and great looking. We have dedicated ourselves to improving our products and to making skydiving a safe and enjoyable sport.

Take care of your rig and you can expect years of safe and carefree jumping. We welcome your comments so that we may continue to improve our products and keep skydiving a safe and enjoyable sport.

FEATURES

- Single pin reserve closure with internal pilot chute.
- Reserve static line with quick release (RSL).
- CYPRES AAD ready (Easy 5 minute installation).
- “Molar” type reserve free bag prevents closing loop from contacting canopy.
- **NO VELCRO®** in areas of high wear such as riser covers, main and reserve pin protector flaps, and RSL attachment.
- Reserve container is extremely clean with *no* protrusions to snag suspension lines (No Skysurf, Freefly or CRW mods necessary).
- Custom harness sizing for a superior fit.
- Shipped with 1” mini risers which feature Kevlar reinforcement (Pull tested to over 3300 lbs). Type 8 risers also available.
- Step-in harness.
- 1” type 17 or 1.75” type 8 chest strap.
- Hand deploy pilot chute, bottom of main container (BOC).
- 16 different reserve container sizes to fit canopies from 265 to 700 cu. in.
- 60 different main container sizes to fit canopies from 225 to 800 cu. in.
- Regular, Shorty and Xtra Large container lengths available. The shorter version is designated QIIS”.
- 85 possible container combinations.
- Metal release housing.
- Nickel plated hardware.

OPTIONS

The following Quasar II options are available for either no charge or a minimal extra charge. Please consult order form for prices.

- Type 8 main risers
- Type 17, 1” chest strap
- Articulated ring harness
- Custom embroidery
- B-12 snaps
- Collapsible main pilot chute, 27”, 30” and 33”. (U.S. Patent #4,399,969)
- Matching kit bag (U.S. Team Bag)
- Matching Pak Mat
- Hackey handle on pilot chute.
- Hook Knife on main lift web
- Pilot chute on leg pad (ROL)
- Single width leg straps for Skysurfers

LIST OF COMPONENTS

Your new Quasar II is shipped with the following components:

Qty	Description	Part Number
1 ea	Harness / Container assembly, CYPRES ready	115100
1 ea	Reserve pilot chute*	790145
1 ea	Molar type reserve free bag with 13' bridle (Square Reserve Only)**	730400
1 ea	alt. PN for "Shorty" version	730500
1 ea	40" Reserve bridle (Round Reserve Only)	810150
1 pr	Toggles, reserve, Red	866037
1 ea	Reserve closing loop, Dyneema for Cypres	861018
1 ea	Reserve ripcord	611274
1 ea	Reserve static line with quick release	780627
1 ea	Hand-deploy main pilot chute with bridle	790400
1 ea	Main deployment bag, Standard version	720600
1 ea	Main deployment bag, Shorty version	720800
1 pr	Main risers, T 17, 1"	834509
1 pr	Toggles, main, Gold	866036
1 ea	Single point release handle (Cutaway Handle)	862017
1 ea	alt.Single point release handle (Cutaway Handle for Q8-Q9	862027
2 ea	Main closing loop	861013
10 ea	Rubber bands	971011
1 ea	Pull up cord	984119
1 ea	Reserve packing data card	570500
1 ea	Quasar II Owner's Manual	510050
OPTIONS		
1 pr	Risers, Type 8, 1 3/4" w/mini rings	834101
1 ea	Collapsible pilot chute	790200

* Only the Quasar II reserve pilot chute is approved for use with this system. Do not substitute any other pilot chute.

** Only the Quasar II molar type reserve free bag is approved for use when packing a ram air reserve into this system. Do not substitute any other free bag.

All components listed above are also available separately from:

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STELLAR RESERVE CANOPY DESCRIPTION

A low pack volume, 7-cell canopy manufactured with 1.1 oz/0-3 CFM ripstop Nylon. Spectra 725 lbs lines attached to stainless steel Rapide links are standard.

The Stellar line of reserves was tested with the Quasar II harness/container assembly, and is approved by the FAA to TSO C23c, Category B.

PN	Model	Area Sq.Ft.	Cord Ft/m	Span Ft/m	Max. Susp Weight lbs/kg	Pack.Vol. Cu. In.	Canopy Weight lbs/kg
430120	Stellar 120	120	7.50/2,29	15.96/4,86	144/65	265	4.2/1,9
430140	Stellar 140	140	8.08/2,46	17.13/5,22	168/76	305	4.6/2,1
430160	Stellar 160	160	8.81/2,69	18.70/5,17	192/87	345	5.1/2,3
430180	Stellar 180	180	9.24/2,82	19.46/5,93	216/98	385	5.6/2,5
430200	Stellar 200	200	9.75/2,97	20.52/6,25	240/108	425	6.6/3,0
430220	Stellar 220	220	10.22/3,12	21.50/6,55	254/115	465	7.6/3,
430240	Stellar 240	240	10.73/3,27	22.60/6,89	254/115	505	8.1/3,7

CANOPY COMPATIBILITY CHART

To determine the pack volume of the Quasar II's main and reserve containers, consult the TSO tag on the inside of the right front riser. It will be stamped with a Q number followed by a second number. Look up your rig's Q number on the chart below to determine its reserve container size. The second number will be a 1, 2, 3, or 4. Follow straight down the column from your reserve size to determine the volume of your main container. For example: If your TSO tag read Q3/2, your container sizes would be 345 cu. in. for the reserve, and 325 cu. in. for the main.

Quasar II Standard Container

Reserve Q#	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Reserve Vol.	265	325	345	385	425	465	505	560	700
Main #1	225	265	305	345	385	425	465	625	N/A
Main #2	245	285	325	365	405	445	485	700	700
Main #3	265	305	345	385	425	465	505	800	N/A
Main #4	285	325	365	405	445	485	525	N/A	N/A
Main #5	N/A	N/A	N/A	N/A	N/A	N/A	550	N/A	N/A

Quasar II Shorty Container

Reserve Q#	Q1S	Q2S	Q3S	Q4S	Q5S	Q6S	Q7S	Q8S	Q9S
Reserve Vol.	305	325	345	385	425	465	505	N/A	N/A
Main #0	200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Main #1	245	265	305	345	385	425	465	625	N/A
Main #2	265	285	325	365	405	445	485	N/A	N/A
Main #3	285	305	345	385	425	465	505	N/A	N/A
Main #4	305	325	365	405	445	485	525	N/A	N/A
Main #5	N/A	N/A	N/A	N/A	N/A	525	550	N/A	N/A
Main #6	N/A	N/A	N/A	475	N/A	640	550	N/A	N/A

REQUIRED TRAINING

Caution!! This manual is not a course of instruction on parachute jumping. No one should use this equipment to make a parachute jump, or allow it to be used by others, if they have not first completed a controlled program of instruction on the use of this type of equipment by a certified instructor.

Furthermore, it is the sole responsibility of the user to ensure that the Quasar II has been assembled and packed correctly by a person who is qualified to do so.

BEFORE JUMPING

After receiving your new Quasar II, inspect its contents to ensure that no components are missing. A detailed list of components can be found on page 5 of the Quasar II Owner's Manual. Then thoroughly inspect the rig before beginning assembly. Is it the same color pattern that you ordered? Are the main and reserve containers sized properly to fit your canopies? To check this, consult the canopy compatibility chart on page 8. Look at all of the stitching, especially at the harness junctions. In the unlikely event that you find anything out of the ordinary, please contact Strong Enterprises immediately. Your business is important to us and we want you to be satisfied with your purchase.

USING THE QUASAR II

The following information is provided as a general guideline and is not intended to be used as a first jump course. No one should use this equipment to make a parachute jump unless he or she has first completed a controlled program of instruction in the use of this harness/container system and the canopies contained therein.

DONNING AND ADJUSTING

1. If the rig is equipped with step-in style leg strap adapters, first ensure that the straps are adjusted all the way out and not twisted, then step through the leg straps.
If equipped with B-12 snaps,unhook them and let them hang free.

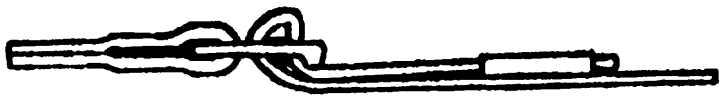
2. Now lift the rig up by its main lift web and put it on as you would a coat.

3. Thread the chest strap through its friction adapter and tighten until both main lift webs are parallel with each other. Be sure it **is not** routed through the reserve ripcord handle.

4. Stow the excess chest strap in the supplied elastic keeper.

5. **B-12 SNAPS ONLY.** Route the leg straps between your legs, removing all twists and fasten the snaps to their V-rings.

6. Tighten the leg straps evenly until they are snug but not uncomfortable and stow their excess webbing in the pocket at the end of each leg pad. You are now ready for a pre-jump equipment check.



Note: *Be sure that the straps are threaded through the adapters exactly as shown or they may not hold.*

PRE-JUMP CHECK

You should always check your gear before putting it on, and get a full gear check before boarding and again before exiting the airplane. However, many skydivers don't like others opening and closing their flaps, etc. The Quasar II allows you to receive a full gear check with a minimum of handling and fuss.
The reserve pin can be checked without opening the pin protector flap by looking under the side of the flap. The main pin can be checked the same way as the reserve. (It is also very easy to open and close either pin protector flap without disturbing the pin.)

1. Starting at the top of the rig, check the 3-ring release for proper hook-up.

2. Check the RSL for proper routing. It should exit from under the wearer's right hand side of the reserve pin protector flap, then travel down the front side of the right front reserve riser where it is secured by tucking its plastic stiffener into the provided pockets. Finally, it should be hooked to the rear of the right riser using its stainless steel snap shackle.

3. Make sure the release handle's velcro is mated securely and that there is no more than one half inch of yellow release cable exposed between the handle and the chest strap.

4. Make sure the reserve ripcord handle is seated completely into its pocket and that the cable moves freely in its housing.

5. Check for proper routing of the chest strap through its adapter and that it **is not** routed through the reserve ripcord handle.

6. Check the routing of the leg straps through their hardware and ensure that the free ends are secured inside the leg pad's channel or with an elastic keeper.

7. The reserve pin should be seated completely into the closing loop and should not be bent or contain any nicks. The closing loop should not be worn or frayed. The pin protector flap should be closed by tucking its tip into the pocket on the bottom reserve flap.

8.The main pin should be seated at least half way into the closing loop, and should not contain any nicks. The closing loop should not be worn or frayed.

9. The bridle should be routed correctly, straight down from the pin, tucked under the right side flap, and then entering the spandex pocket under the pilot chute.

10. The main pin protector flap should be closed by inserting the end of the tab into the pocket located under the mid flap.

11. The AAD, if equipped, should be properly calibrated and armed.

MAIN DEPLOYMENT

1. While in a stable face-to-earth position, after waving off and clearing the air above you, reach back and grasp the pilot chute's deployment handle.

2. With one smooth motion, pull the pilot chute out of its pouch and throw it vigorously straight out to the side deploying it into clean air.

Note: *Do not simply pull the pilot chute from its pouch and release it. It **must** be thrown to the side to deploy it into clean air away from the jumper's burble.*

MALFUNCTIONS

This section is only to be used as a general guideline for identifying and dealing with malfunctions. It is not a course of instruction. Only professional training from a qualified instructor using a suspended harness can prepare you for dealing with a malfunction.

Malfunctions are divided into two categories, total malfunctions and partial malfunctions. Of these, the latter is divided into High Speed and Low Speed.

A total malfunction is defined as when you are for some reason unable to initiate deployment of the main parachute. This can occur because of a number of reasons including a lost or floating ripcord handle, a hard ripcord pull (Student version), or a lost pilot chute handle. Because you will still be at or near terminal velocity, a total malfunction requires **immediate** action. The proper procedure is to promptly activate the reserve while remaining in a stable, face-to-earth position.

A partial malfunction is when you have initiated deployment of the main parachute, but for some reason it did not deploy fully. Examples of partial malfunctions include pilot chute in tow, bag lock, streamer, hung slider, line over, broken lines, torn cells and any spinning malfunction. Of these, the the first three are considered high speed malfunctions, and require **immediate** action. The others, considered low speed generally slow the jumper to a speed which allows more time to evaluate the situation. In either case, the proper procedure is to first look at and grasp the cutaway handle located on the inside of the right main lift web with your right hand. Then look at and grasp the reserve ripcord handle located on the inside of the left main lift web with your left hand. Now peel away the velcro that attaches the cutaway handle to the main lift web and in one smooth motion pull the cut-away handle vigorously to full arm extension. Immediately upon reaching full arm extension with your right hand, pull the reserve ripcord handle vigorously with your left until it also reaches full arm extension. Throw away both handles and assume a hard arch position.

RESERVE DEPLOYMENT

This section is not intended to be a course in dealing with skydiving emergencies. It is simply a general description of how the Quasar II emergency parachute is deployed.

In order for the reserve container to preform as designed, it is recommended that the jumper be in a stable face to earth position when deploying the reserve. However, there are some instances that require use of the reserve now, and in these situations simply pulling the reserve should take precedence over pulling with stability.

1. First, look at and grasp the reserve ripcord handle with both hands.

2. In one motion, vigorously pull the reserve ripcord handle to full arm's length.

3. Arch hard into a stable, student type freefall position.

AAD INSTALLATION

Currently the CYPRES AAD is the only unit that is approved for use with the Quasar II harness/container system. All CYPRES channels and pockets are factory-stitched into the rig and no modifications are necessary. Installation requires no tools and can be accomplished by a senior or master rigger in under five minutes using the following technique.

1. Slide the processing unit into its spandex pocket located inside the reserve container on the bottom flap. Ensure that the unit is oriented so that the exiting wires lie adjacent to the bottom wall of the container.

2. First route the release unit (cutter) up through the grommet located near the base of the bottom sub flap, and then through the channel, sewn to the left side flap and seat it into the elastic pocket. The hole in the end of the release unit should be aligned with the flap's grommet.

3. Now route the control unit up through the supplied channel located on the bottom of the reserve container. After exiting the end of the channel the control unit is then inserted through the slot to the channel's immediate right and seated into its pocket inside the backpad. A short section of Type III tape is stitched into the pocket to aid in installation.

4. Coil all excess cables in front of the processing unit and cover them with the supplied flap by mating its Velcro. Coils should not be smaller than 1" diameter.

Note: *Use only special CYPRES closing loop with washer when installing this AAD.*

All batteries, which are 2 years or longer in a CYPRES, must be replaced. CYPRES needs to be returned four years from the original date of manufacture as stated on the unit label. A "window" of plus/minus three months is allowed. **CYPRES News 12/95.**

RESERVE PACKING INSTRUCTIONS

Please read these instructions fully to gain a thorough understanding of the Quasar II and its components before starting to pack. If the rig is to be fitted with an AAD, refer to page 12 of this manual for detailed installation instructions before continuing.

RIGGER QUALIFICATIONS

FAR Part 105.43 (2) states that only a certificated and appropriately rated senior or master parachute rigger may pack a reserve parachute that will be carried for use aboard an aircraft in the U.S. By following the instructions in this manual, any current, appropriately rated rigger should be able to assemble and pack the Quasar II reserve.

REQUIRED TOOLS

1 ea. temporary locking pin
1 ea. 60” pull up cord
1 ea. packing paddle
2 ea. 1.5” x 6” pile Velcro® (Ram Air Reserve Only)

ROUND RESERVE

Note: *Only round reserves with a full stow diaper may be packed into the Quasar II. No provisions are provided for stowing the lines in the container.*

Follow the packing instructions provided by the manufacturer of the particular canopy you are installing for assembly, flaking, and line stowage.

ASSEMBLY

1. Attach the 40" reserve bridle to the pilot chute with a lark’s head knot that passes through all three of the pilot chute's dacron line loops.

2. Attach the bridle to the canopy’s apex with a lark’s head knot as well.

FOLDING THE CANOPY

3. Lines should be stowed to within 12-18" of the links. Spread the connector links and reserve risers evenly across the bottom of the container so as not to create a lump in the wearer's back.

4. Place the diaper into the lower left corner of the container with the canopy extending out to the right side. If the lines are stowed parallel with the canopy's radial seams as on the Strong 26' Lite, then position the canopy so that the lines face toward the main container.

5. Continue S-folding the canopy toward the top of the container, keeping the folds slightly wider than the side flaps. The closing loop should extend between the fourth and fifth fold from the bottom.

6. Position the apex of the canopy under the center of the top sub-flap with the bridle exiting to the right side.

SEE PAGE 23 FOR "CLOSING THE CONTAINER"

RAM AIR RESERVE

Note: *The following canopy packing instructions are only for use with Strong Enterprises **Stellar** series reserve canopies. If you are installing another manufacturer's ram air reserve into the Quasar II you should refer to that manufacturer's instructions for canopy packing and go directly to the section entitled Folding the Canopy into the Free Bag for further instructions.*

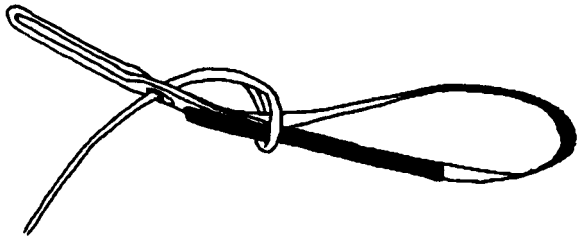
ASSEMBLY

1. Attach the 13' bridle/free-bag assembly to the pilot chute with a lark's head knot that passes through all three of the pilot chute's dacron line loops.

2. Attach the canopy to the reserve risers using the supplied #5 stainless steel rapid links.

3. Tighten the links securely.

4. Route the control lines down through the rear slider grommets and their corresponding guide rings on the risers.



5. Attach the toggles by passing the loop at the end of the control line up through the toggle's grommet, and then around the end of the toggle.

6. Once complete, perform a thorough continuity check. This may include inflating the canopy to be absolutely sure it is oriented properly.

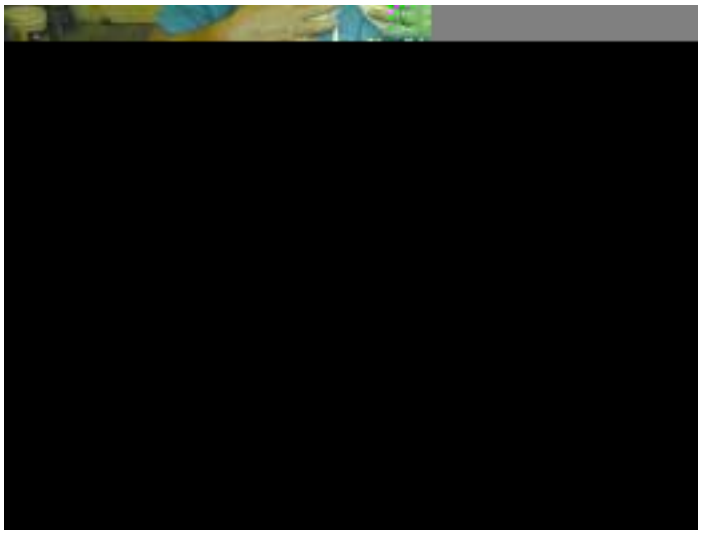
PACKING THE STELLAR RESERVE

7. Layout the harness/container assembly as though the wearer was lying face down, head towards canopy. Anchor the rig so that it cannot slide forward by weighting its pack tray or by hooking the leg straps to a secure fixture.
Insert the ripcord cable into its housing and route the pin out of the yoke through the reinforced slot located just beneath the reserve top flap.

8. Set the right and the left deployment brakes by pulling the brake loop through the guide ring and then inserting the end of the toggle through the loop. Stow the excess control line under the toggle.

9. Standing near the rig, reach down and pick up the canopy's lines near the connector links. Use your fingers to separate the front riser lines, the rear riser lines, and the control lines.

10. Walk toward the canopy pushing the slider ahead of you as you go. Continue until the slider is completely seated against its stops and cannot move any further. Ensure that the lines are tensioned evenly and that all are taut.



11. Flake out all seven cells of the nose and place them between your knees.

12. Reach down into the center of the canopy and pleat all excess material outward from between each set of line attachment points. Clear out the stabilizers as well.

13. Flake the tail neatly with all line tabs to the inside and resting on top of the other suspension lines.

14. Ensure that the slider is still seated completely against its stops and push it down into the canopy between the right and left line groups. It should be folded in such a way so as to instantly catch air the moment its four corners are spread.

15. Locate the center of the tail next to the warning label and pull it up so that it covers the slider.

16. Now release the nose from between your knees and hold the canopy up with one hand.

17. Swing the tail seams around to the front of the canopy and join the two with the entire nose protruding from between them.

18. Grasp the tail seams and the entire nose with your free hand and very gently, with one smooth motion, swing the canopy out and lay it down flat.

FOLDING THE CANOPY INTO THE FREEBAG

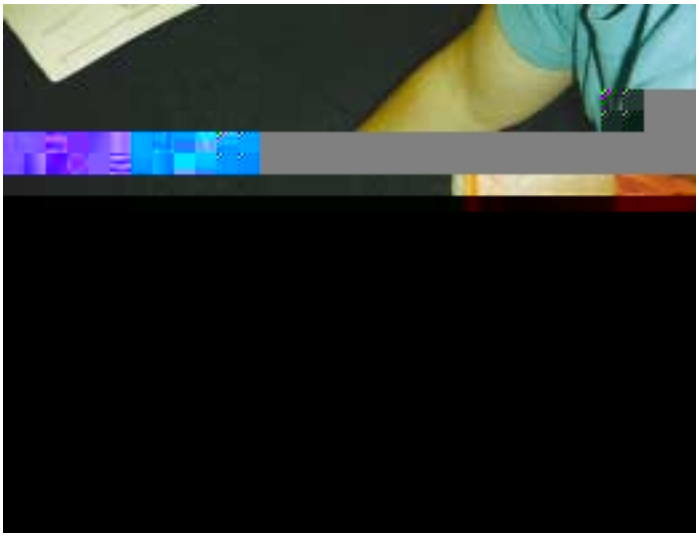
19. Place your knees on the base of the canopy to maintain control and keep the lines taut.

20. Follow the center seam forward from the warning label towards the nose, spreading the canopy into two halves as you go until you reach the nose opening of the center cell.

21. Fold the entire center cell straight under the base of the canopy and again kneel on it to maintain control. The canopy is now divided evenly into three sections, the center cell you are kneeling on, and the two ears which contain the outer three cells from each side of the canopy.

22. Find the three nose openings on the inside edge of each ear and pleat them out neatly on top of each other.

23. Now dress the ears to approximately the same width as the ear pockets in the top of the molar bag.



24. Fold the ends of the ears under about eight inches and slide them into the molar bag, inserting each into its respective pocket.

25. Grasp the entire bag and fold it back on top of the canopy.

26. Now pull the bag towards you while folding it under the canopy to create an S-fold deep enough to fill the bottom of the bag below the ears.

27. The remainder of the canopy should be S-folded between the previous fold and the bag mouth.

LINE STOWS

28. Lock the bag closed with two bights of suspension line through the elastic safety stow. Make the bight between 1.25 and 1.5 inches in length beyond the elastics.

29. Rotate the bag onto its ears so that it is upside down and open the pouch on the bottom of the bag. Use the 1.5 X 6 inch pile Velcro®, mentioned in the *Required Tools* section, to cover the hook Velcro® on the bag side of the pouch so it will not snag the lines. S-fold the remainder of the suspension line into the pouch leaving about twelve inches from the bag to the links, then remove the pile Velcro® strips and mate the bag's Velcro® securely, being careful not to capture any lines.

BAG PLACEMENT

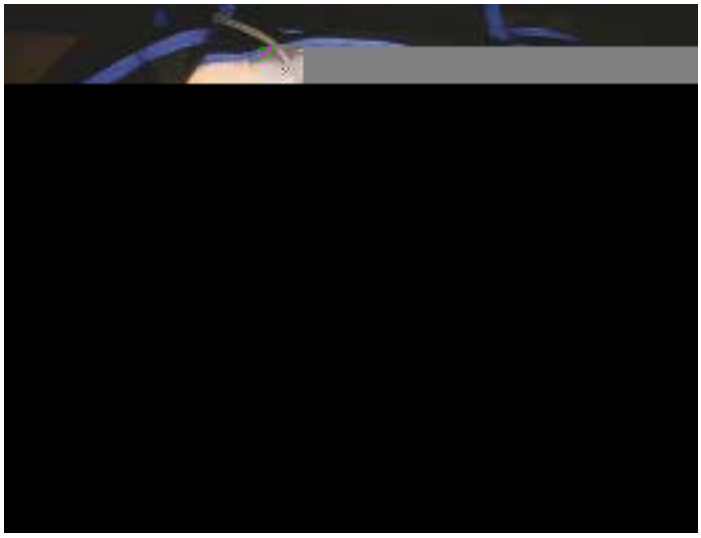
30. Spread the rapid links and reserve risers evenly across the bottom of the container so as not to create a lump in the wearer's back.

31. Place the bag into the container with the line pouch facing down against the pack tray.

32. Route the pull up cord up through the grommet in the free bag.

31. S-fold the bridle up and down in the center of the bag between the grommet and the top of the ears approximately five feet from the pilot chute. Bridle should exit towards either bottom corner of reserve container.

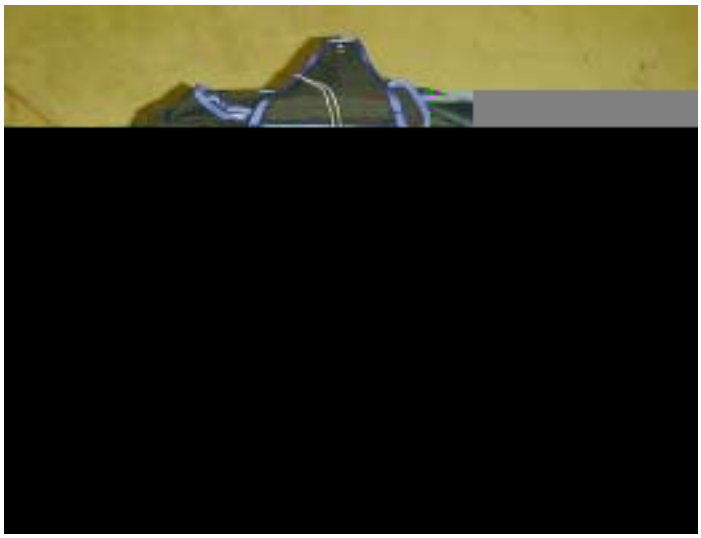
CLOSING THE RESERVE CONTAINER



34. Close the top sub-flap and lock it with the temporary pin. Now S-fold the bridle just below center of grommet.

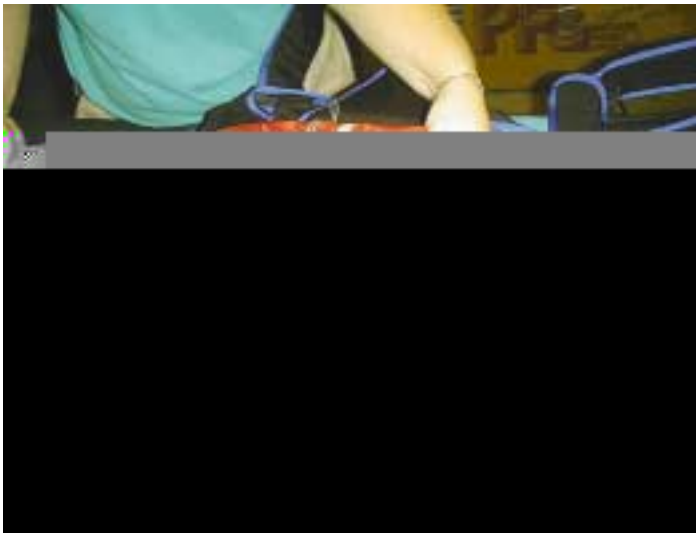
35. Route the pull up cord through the pilot chute and out of its #0 grommet in the top plate.

36. With the pilot chute centered, compress it fully and lock it with the temporary pin ensuring that no mesh or fabric is caught

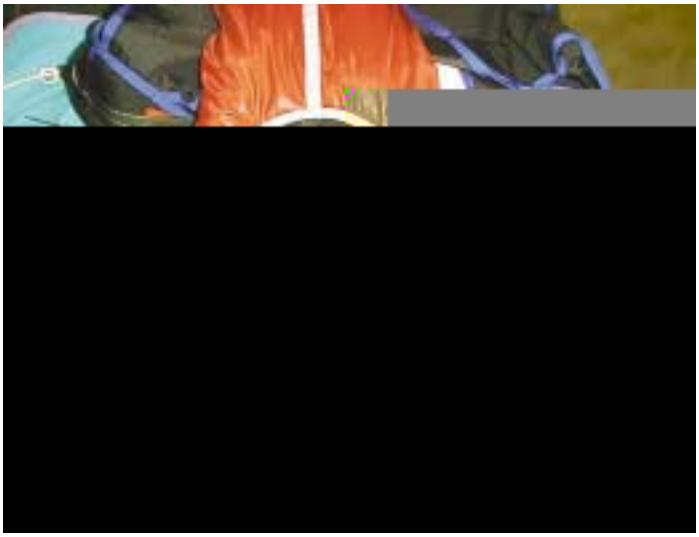


37. Spread the pilot chute's canopy so that it lies flat. Starting at the top, roll the fabric down to the base of the pilot chute and tuck it under the cap.

38. Next fold the bottom of the canopy up but don't tuck it under the cap like the top, instead let it rest next to the cap to serve as a cushion to help hide its edge.

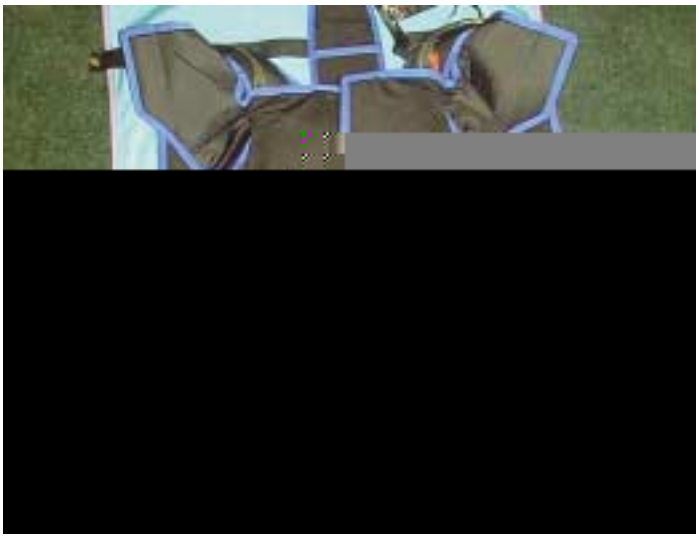


39. Likewise, fold the sides in the same manner as the bottom, letting all of the folded material lie in a 1.5 to 2 inch space beside the cap.
Next, close the left side flap over the pilot chute and lock it closed with the temporary pin.

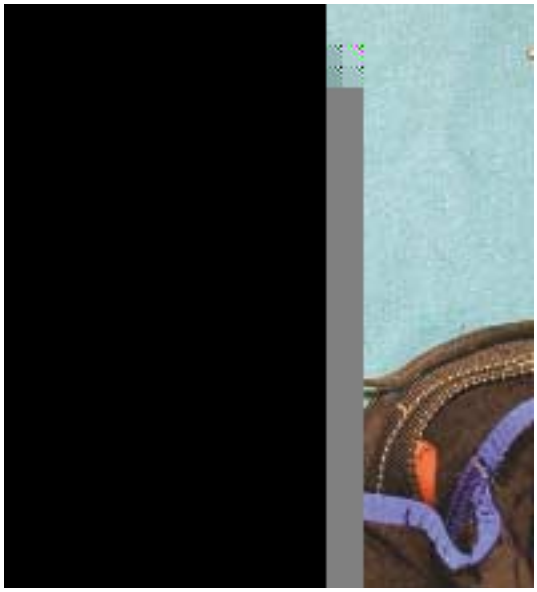


40. Now close the remaining right side flap and lock it closed with the temporary pin.

Using a packing paddle, insert the top sub-flap tuck-in tabs into the container under the reserve canopy.



41. Slide the RSL onto the cable and then route the pin through the channel on the bottom of the reserve top flap until it is protruding from the end of the flap.



42. Close the top reserve flap and lock it closed with the temporary pin.
Close the bottom reserve flap, remove the temporary pin and lock it closed with the ripcord pin.

43. Seal the ripcord pin and record your work on the packing data card.

44. **COUNT YOUR TOOLS!**

MAIN PACKING INSTRUCTIONS

Due to the wide variety of canopies currently available on the sport market we have elected not to cover main canopy packing. For this, you should follow the packing instructions provided by the manufacturer of the particular canopy you are going to use.

ATTACHING THE RISERS

1. Attach your canopy to the main risers using the rapid links supplied by its manufacturer.

2. Tighten the links securely.

3. Route the control lines down through the rear slider grommets and their corresponding guide rings on the main risers.

4. Attach the toggles by passing the loop at the end of the control line up through the grommet, and then around the end of the toggle. Refer to page 15, step 5.

PROPER 3-RING ASSEMBLY

Inspecting the 3-Ring release. Riser releases should be inspected prior to every jump. They should be disassembled and cleaned at the beginning of every jump day. but at least once a month. It should be done more often in humid, muddy or freezing conditions or after dragging or water landing. Any mud or dirt must be removed. Use soap and water and then dry throughly. Any rusted parts must be replaced.

ATTACHING THE PILOT CHUTE AND DEPLOYMENT BAG

1. To attach, pass the loop at the end of the pilot chute bridle through the bag's grommet. The loop should extend out of the grommet on the inside of the bag.

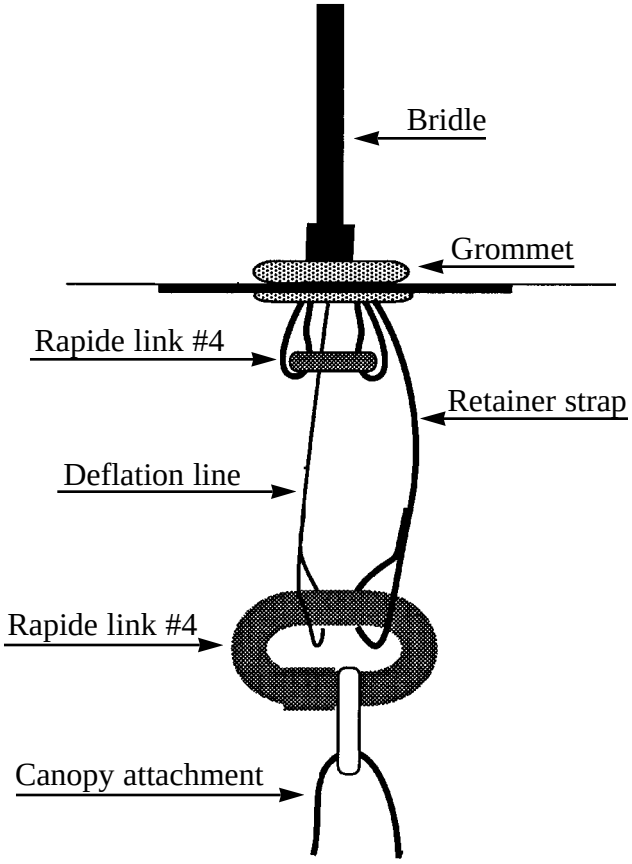
2. Now pass the loop through the metal ring, which is sewn to the top of your canopy, and then pass the entire pilot chute and deployment bag back through the loop and pull tight

Note:: *If your canopy does not have a metal ring but simply a loop made of nylon webbing, then the use of a rapid link is necessary for attachment.* ***DO NOT*** *tie the bridle directly to the canopy without a ring or rapid link. This will cause canopy fabric to be pulled through the bag's grommet upon deployment causing canopy damage.*

ATTACHING THE OPTIONAL COLLAPSIBLE PILOT CHUTE/BAG ASSEMBLY

Assembly

1. Insert free end of bridle with deflation line and retainer into grommet in top of bag (minimum grommet size #4).
2. Insert #4 Rapide link in bridle loops on inside of bag. Make sure deflation line (white Spectra) is in the center of link.
3. Attach deflation line and retainer strap (Type I 9/16") to canopy attachment point with #4 Rapide link.



Operation

1. Pack the canopy per manufacturer's instruction
2. S-fold the canopy into the D-bag.
3. Pull all the excess line out of the D-bag through the grommet. The connector link at the canopy should lay against the bag grommet without pinching any material.
4. Lock the bag and stow the remainder of the lines in the normal manner.
5. Place the bag in the pack tray so that it will not slide.
6. Grasp the pilot chute handle and pull it until all slack line is inside the bridle. Check window to see P/C is cocked.
7. Close the container in the normal manner.

THE DEPLOYMENT BAG

The Quasar II deployment bag is constructed of para-pak and contains no Velcro® closures to wear out. It utilizes two locking stows and can be fitted with either rubber bands or *'Tube Stoes'*.

1. After packing your canopy according to its manufacturer's instructions, S-fold it and place it into the bag. Ensure that all excess bridle or deflation line is pulled out through the bag's grommet and the ring located on the canopy is seated against the grommet.

2. Lock the bag closed with two bights of suspension line, then stow the remainder of the lines across the bottom of the bag. Leave approximately 18" of line free between the last line stow and the top of the risers.

Note: *If you have installed a Strong Enterprises collapsible pilot chute, it must now be "Inflated". First ensure that the canopy's bridle attachment ring (or Link) is seated firmly against the bag's grommet without capturing any canopy fabric. Now pull the pilot chute handle away from the bag until all of the deflation line rests inside of the hollow bridle. Check window in bridle to make sure pilot chute is cocked.*
Failure to do so may result in a pilot chute in tow malfunction.

CLOSING THE CONTAINER

1. Thread a pull up cord through the main container closing loop.

2. Place the bag into the pack tray with the lines oriented toward the bottom of the container and route the risers neatly down both sides of the rig and into the pack tray.

3. Lift up on the pull up cord while you rotate the bag downward and seat it firmly into the container.

4. Close the bottom flap first.Then the top flap. With the bridle exiting to the right, temporarily inserting the bridle's curved ripcord pin.

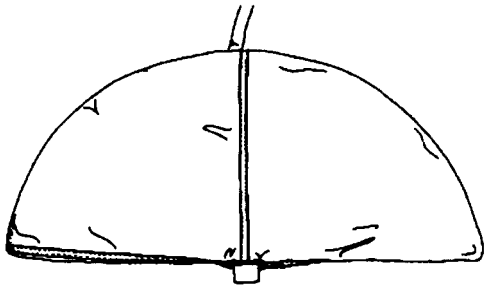
5. Stand the rig up vertically and close the riser covers by folding their plastic tongues into the riser cover pockets located on the inside of the yoke.

6. Lay the rig flat once again and close the left side flap next, followed by the right side flap and secure them with the bridle's curved ripcord pin.
Safety Tip! *Pin should point up, so that shifting prior to the jump will be to keep the pin secure.*

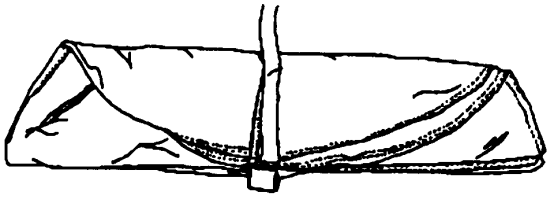
7. Tuck the bridle under the right side flap into the bridle flap of the container and then close the pin protector flap by folding it up over the side flaps and inserting it into the slot in the center flap.

FOLDING THE PILOT CHUTE

8. Spread the pilot chute out adjacent to the main container with the mesh side facing up and fold it in half.

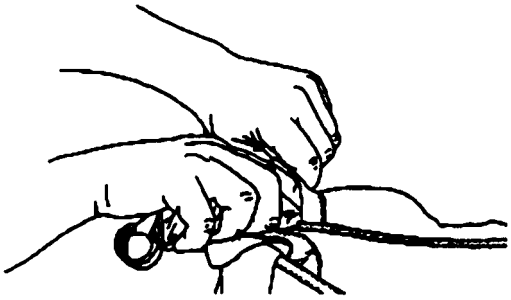


9. Now fold its curved side and the bridle back to the handle.



10. Fold the pilot chute in thirds and then roll it into a tight cylindrical shape.

11. Slide the folded pilot chute and all excess bridle into the Spandex pouch located on the bottom of the container.



MAINTENANCE AND CARE

The Quasar II is manufactured under strict quality control standards from the finest materials available, however your care will determine the useful service life of the system. Always use a drag mat under the container when packing to avoid damage. Keep the rig out of direct sunlight as much as possible to prevent the colors from fading. Never pack canopies of improper size into the container. If they are too small, the pins will be loose and the likelihood of a premature container opening is greatly increased. On the other hand if the canopies are too big, the pins will fit very tight which may cause a hard pull on the reserve or a pilot chute in tow malfunction on the main. Also, the container flaps will be stretched and their plastic stiffeners distorted, seriously shortening the container's life.

INSPECTION

The Quasar II and its components should be inspected for signs of wear or damage every fifty jumps or at each reserve repack, whichever comes first. The closing loop, deployment bag, and pilot chute of the main container will receive the majority of the wear and these items should be checked each time the main is packed. The reserve closing loop should be replaced at each reserve repack.

Cleaning

When cleaning any of the rig's closing flaps, the canopies should be removed first. To remove minor soiled areas use a clean cloth dampened with warm soapy water. Grease and other petroleum can be removed with lighter fluid. If the rig is severely soiled it may be washed in warm soapy water after removing both canopies and all handles, AADs, etc. Use a mild soap such as Ivory Snow and a soft brush.

U.S. Department of Transportation
Federal Aviation Administration

Small Airplane Directorate
1669 Phoenix Parkway, Suite 210C
Atlanta Aircraft Certification Office
Atlanta, GA 30349

OCT 27 1993

Mr. Gerald Kopp
General Manager
Strong Enterprises
A Division of S.E. Inc.
11236 Satellite Boulevard
Orlando, FL 32837

Dear Mr. Kopp:

This is in response to your October 7, 1993, request for Federal Aviation Administration authorization to identify Quasar Series parachute harness/container system, Part No. 104000-( ), in accordance with the requirements of Federal Aviation Regulation (FAR) Part 21, Subpart O, Technical Standard Order (TSO) C23c, and SAE Aeronautical Standard AS-8015A, Category B.

We find your October 7, 1993, Statement of Conformance submitted with your request and your Qualitly Control Manual, Revision 6, dated December 6, 1988, acceptable.

The following data as submitted by your letter will be retained on file for this authorization:

a. Strong Enterprises Test Summary dated December 8, 1992.

b. Strong Enterprises Drawings for the Quasar Series P/N 104000-( ) submitted with your October 7, 1993, request.

c. Strong Enterprises Owner's Manual which includes maintenance procedures and instructions was submitted on October 7, 1993.

Effective this date, you are authorized to identify the Quasar Series, Part No. 104000-( ) parachute system with the appropriate TSO markings required by the applicable TSO and FAR 21.607(d).

This authorization is not transferable to another person or location and is effective until surrendered, withdrawn, or otherwise terminated by the Administrator.

Your responsibilities as a holder of a TSO authorization are outlined in FAR 21.3 and FAR 21, Subpart O.

The Airframe Engineer for this authorization is Cindy Lorenzen, telephone number (404) 991-2910. The Technical Support Specialist is Lorraine Bush, telephone (404) 991-6137.

Sincerely,

Donald T. Buckley
Manager, Airframe Branch

Quasar II Order Information

The **QUASAR II** comes CYPRES ready, and includes risers with toggles, deployment bags, reserve ripcord, reserve pilot chute, main throw-out pilot chute, and Owner's manual.

Features:
Equipped for square reserve with your choice of the following:

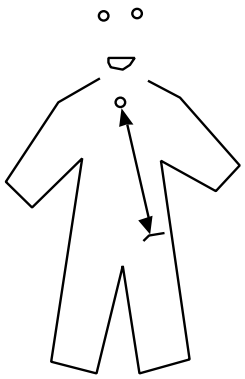
Risers:	Type 8 or Type 17
3 ring release:	Mini or Standard rings
Chest strap:	Type 8 or Type 17
Leg strap:	Standard 3 1/2 or Single wide
Pilot chute:	Standard or Collapsible
Main P/C location:	BOC or ROL

Options:
Embroidery (ten letters)
Hackey handle: custom color
stock color
Hook knife on right MLW
B12 Snaps on Leg Straps
Ringed harness (@ leg strap)
Matching Gear Bag
Matching Pak Mat
CYPRES AAD (Installed)

Spare Parts:
Free Bag with Bridle
Reserve Pilot Chute
Reserve Ripcord
Cutaway handle (pillow)
Main Deployment Bag
Throw-Out Pilot Chute
Collapsible Pilot Chute
Main Risers, Type 17, (1")
Main Risers, Type 8 (1.75")
RSL w/ stainless steel snap shackle
Steering Toggles (Main or Reserve)
Closing Loop (Main)
Closing Loop (Reserve)
Owner's Manual

The **QUASAR II** container is manufactured with 1000 denier Cordura for durability. Parapak (420 denier) is also available.
The Strong Enterprises gear bag has been the choice of the U.S. Style/ Accuracy and Para Ski Teams for several years. It is made out of 1000 denier Cordura in your custom colors, has four pockets, and shoulder straps
The Pak Mat comes in your custom colors, and has pockets for rubber bands and pull-up cords.

Measuring Guide
Inseam: Without shoes, from crotch to floor. This is not necessarily the same as your pants inseam.
Thigh: Horizontally around your leg at the crotch.
Height: Without shoes
Weight: Fully dressed
Waist: At belly button
Torso: From the top of the hipbone, to the bottom of the hollow spot at the base of your neck. (See illustration)



STRONG ENTERPRISES
6448 Pinecastle Blvd Ste.104 Orlando, FL 32809
Tel (407) 859-9317
Fax (407) 850-6978
E-mail: Sales@strongparachutes.com
www.strongparachutes.com
THE PARACHUTE COMPANY WITH IMAGINATION

Quasar order form 580119 Rev. J 10/12/00

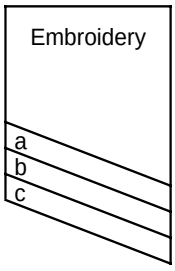
Quasar II, and IIS Order Form

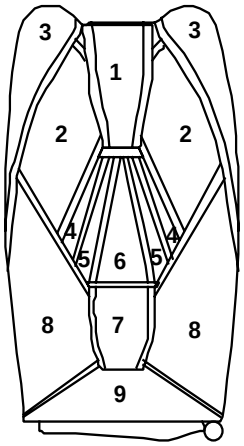
Left main lift web Stripe Colors

a _____

b _____

c _____





Monogram _____

Monogram color _____

1 _____ **6** _____

2 _____ **7** _____

3 _____ **8** _____

4 _____ **9** _____

5 _____

Leg Pad Color _____

Back Pad _____

Rel. Handle _____

Harness Color _____

Trim Color _____

Type of Quasar

☐ **Quasar II**

☐ **Quasar IIS**

You may choose between Quasar II or Quasar II Shorty, or we will decide based on your canopy sizes and your body measurements.

☐ **You choose, based on my body and canopy sizes.**

Standard features/Check one

Risers:	☐ **Type 17, 1"**	☐ **Type 8, 1 3/4**
3 Ring:	☐ **Mini Rings**	☐ **Large rings**
Chest strap	☐ **Type 17**	☐ **Type 8**
Leg straps:	☐ **Standard 3 1/2**	☐ **Single width**
Main Pilot Chute:	☐ **BOC**	☐ **ROL**
Pilot Chute:	☐ **Standard**	☐ **Collapsible**

Quasar order form 580119 Rev. J 10/12/00

STRONG ENTERPRISES
6448 Pinecastle Blvd Ste.104 Orlando, FL 32809
Tel (407) 859-9317
Fax (407) 850-6978
E-mail: Sales@strongparachutes.com
www.strongparachutes.com
THE PARACHUTE COMPANY WITH IMAGINATION

The Quasar II is CYPRES ready and comes complete with reserve pilot chute, molar type free bag, reserve static line, reserve ripcord, release handle, main risers, main D-bag, hand deploy pilot chute, main and reserve toggles, loops, rubber bands, and owners manual

Date Order received _____ **+ 2 weeks!=** _____

Office use only

Customer _____

Address _____

City _____

State _____ **Zip** _____

Country _____

Telephone _____

Email _____

Main Canopy _____ **Pack Vol** _____

Reserve Canopy _____ **Pack Vol** _____

Measurements

Height _____

Weight _____

Waist _____
At your belly button

Inseam _____
Crotch to floor

Thigh _____
Horizontally around leg at crotch

Torso _____
From top of breast bone, diagonally to top of hip bone

Options

☐ **Monogram**

☐ **Hackey Handle, Color:** _____

☐ **Hook knife on Right MLW**

☐ **Ring Harness**

☐ **B-12 Snaps**

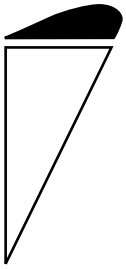
☐ **Matching Kit Bag**

☐ **Matching Pak Mat**

☐ **Install CYPRES**

If you have any question about rigging and packing your Quasar II parachute system, do not hesitate to call
Strong Enterprises: 800-344-6319
or
fax: 407-850-6978
or
email: Sales@strongparachutes.com

This manual is available in color on our website
www.strongparachutes.com/manuals.html



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