Owners Manual

Skylark[tm] Student Canopy

WARNING

THE USER ASSUMES ALL RISK !!!
PARACHUTE SYSTEMS SOMETIMES FAIL CAUSING DEATH OR SERIOUS INJURY REGARDLESS OF HOW IT IS MAINTAINED, PACKED, DEPLOYED OR OPERATED. TRAINING AND/OR EXPERIENCE ARE REQUIRED TO LOWER THE RISK OF SERIOUS INJURY OR DEATH.

Dear customer!

Thank you for choosing Commodore Student Canopy!
Our young professional team is dedicated to equip you with the gear of highest quality and performance. We are confident you will like your new Commodore Student Canopy as your student equipment
Regardless if you purchased new or used canopy, it shall be thoroughly inspected and assembled to by authorized rigger.
This manual will provide you with important information that will help you better use this product.

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DESCRIPTION

Commodore is a student 9 cell ram-air canopy.

Commodore is a is a low aspect ratio 9 -cell ram-air canopy designed for skydives at the max exit speed 240km/t and max hight 6000m above the sea level.

Due to the specific design, Commodore has consistently stable openings and is very predictable!
It has on-heading performance, consistent deployment altitude and inflation time, excellent speed range, superior glide in full flight while stable and controllable in steep deep brake flight.
Commodore has good flare power from full flight and also from deep brakes and performs flat turns efficiently without diving.

Commodore top skin and the airfoil section is produced of ZP fabric, the bottom skin is manufactured from F-111 fabric. This improves sufficiently the canopy live-time and makes packing easy.

Recommended wing loading for the Commodore is between 0.65 - 0,9 lbs/sqft.

Commodore is available in six precisely scaled sizes: 190, 210, 230, 250, 160, 270 and 290 sq.ft. The canopy is equipped with Dacron-525 lines, Dacron-1000 steering lines, standard brake settings, slider with stainless grommets and the set of 4 soft links. Recommended packing nethod — Propack.

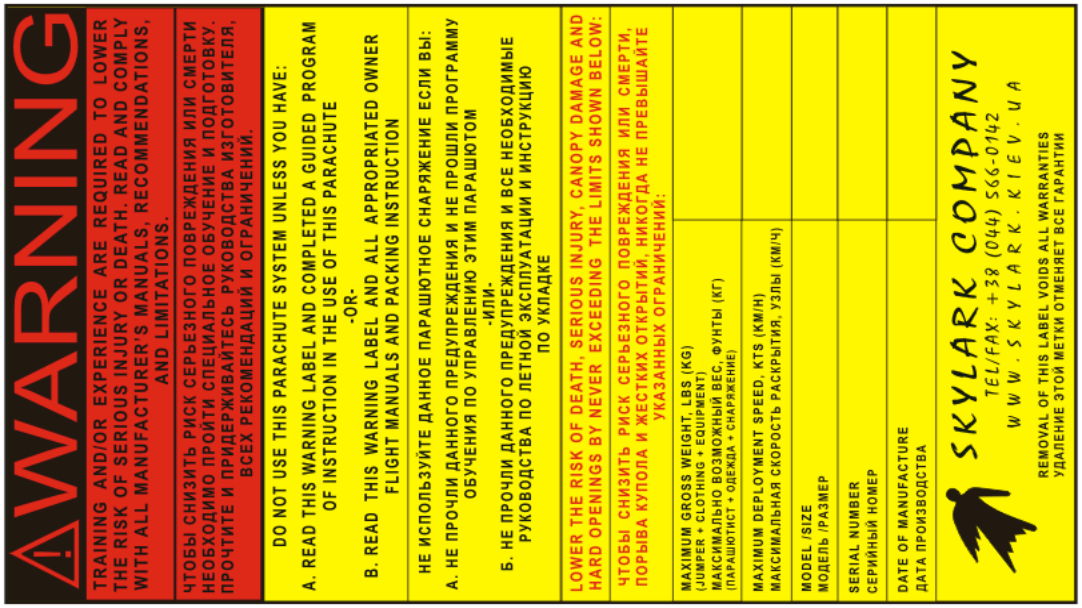
TECHNICAL DATA AND LIMITATIONS

In this manual we provide the following calculated technical data

- canopy size in sq.ft. measured at the lower surface
- approximate packing volume in cu.in., when the canopy is packed using ProPack
- weight of the canopy in lbs (kg)
- minimum recommended exit weight* in lbs (kg)
- maximum recommended exit weight* in lbs (kg)
- geometric aspect ratio
- span

* Exit weight – total weight of pilot incl gear and other equipment
I

Each Commodore canopy has the operating limitations of the maximum exit weight and the maximum deployment speed indicated on the warning label attached to the top of the upper skin of the canopy:



Modell	Pack Volume in3	Canopy Weight lbs (kg)	Min body weight lbs (kg)	Max body weight lbs (kg)	Max deployment speed knot (km/t)	Aspect Ratio	Span
CO-190	476	10 (4)	113 (51)	238 (108)	130 (240)	3,14	2,49
CO-210	520	10 (4)	125 (57)	263 (119)	130 (240)	3,15	2,49
CO-230	564	11 (5)	138 (63)	288 (130)	130 (240)	3,16	2,49
CO-250	608	11 (5)	153 (70)	313 (142)	130 (240)	3,17	2,49
CO-270	652	12 (6)	171 (78)	330 (150)	130 (240)	3,18	2,49
CO-290	696	12 (6)	192 (87)	330 (150)	130 (240)	3,19	2,49

OPERATION

The canopy should be inspected and assembled only by the certified rigger.

Before assembling the canopy to your system, inspect the canopy, lines and soft links.
Make sure, that particular canopy can be used with the given container and deployment system.

Recommended assembly sequence:

1. Lay down container with the risers next to the canopy. Place the Canopy with the bottom skin – up, facing container with its leading edge.
2. Bring the pack of lines to the container and spread the lines straight with the steering lines on top.
3. Fix each group of lines to the respective riser with the soft link. Do not tighten the connectors up at this moment.
4. Ensure the correct assembling of the slider – the reinforcement tape should be facing the canopy should be facing the trailing edge of the canopy.
5. Spread the steering lines so that they pass directly from the trailing edge of the canopy through the slider grommets and guiding rings of the back risers without twisting the other lines.
6. Connect the toggles to the steering lines (please refer to the manufacturer's manual of your container).

7. Recheck the order of lines connection and the orientation of the canopy. Make sure that after the opening canopy will fly forward! Fix errors if any.
8. Tight up the soft links* and fix them inside the risers to the special tapes with the thread (or tight up the rapid-links with help of the wrench and cover them with protective slider bumpers.)

* Soft links setup (shipped with the Skylark® canopies):

Make the first loop, letting the end of the soft link through the riser and then through the respective lines group.

A. Make the second loop in the same order
B. Let the end of the soft link under its restrictive tab and then put it on its top.
C. Rotate the soft link to hide its tab inside the riser.

PACKING

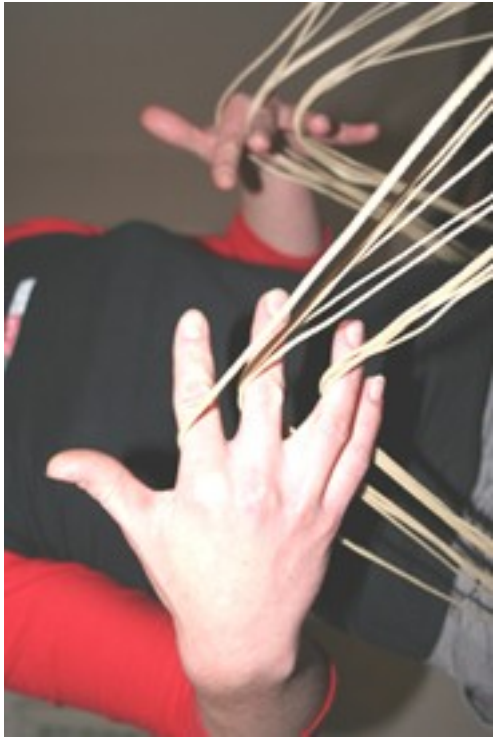
Before packing your canopy, thoroughly inspect upper and lower surface, ribs, seams on the skin and on the lines, inspect lines, slider and grommets. In case you detect any damage – i.e. tears, burns, worn-out, rusty or incorrectly assembled parts, please do the necessary maintenance on the canopy first.

Packing with the ProPack:

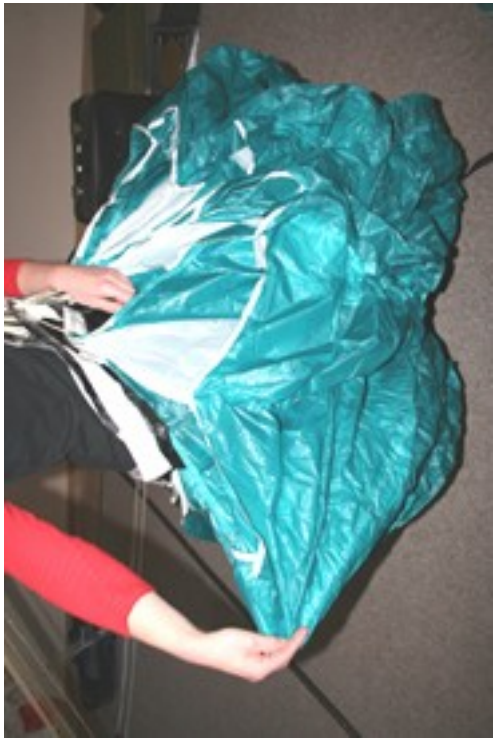
1. Stretch the rig on the flat, level surface and fix the container from the movement
2. Set the deployment brakes according to the instructions of your container's manufacturer
3. Check that slider is not collapsed and pull tubs are hidden and not entangled with the lines (pic. 1)
4. Take lines where they are attached to the risers and divide them by the groups (control lines, rear risers group, front risers group). Walk to the canopy while letting the lines slide between your fingers (pic. 2)
5. Put the canopy on your shoulder so that it freely hangs and keeps the lines tense (move the slider behind your back at this time)
6. Straighten and flake 7 (or 9) air intakes (pic. 3)
7. Holding tightly the bundle, shake it well in order to straighten the folds (pic. 4)
8. Turn the canopy tail-away and grasp the air intakes between your knees (be cautious not to rotate the canopy full turn)
9. Separate the groups of lines AB, BC and CD on one side of the canopy and straighten fabric between them (pic. 5 and 6)
10. Repeat the step 9 with the other part of the canopy (pic. 7)
11. Straighten the slider between 4 groups of lines and move the grommets tightly to the slider stops (pic. 8)

12. Separate the control lines, straighten the fabric between them and turn them towards the center of the canopy under the slider (pic. 9 and 10)
13. Take the trailing edge of the canopy in your hand at central part (where the warning label is attached) and put it on the lines right below the slider, press it hard along with the lines and the slider (pic. 11)
14. Straighten the tail to the sides and coat with it the canopy towards the nose so that the control lines stay at the center of the canopy (pic. 12)
15. While holding the lines and the slider tight, connect the ends of the trailing edge and roll the tail. Be cautious not to capture into the roll the other parts of the canopy left inside. (pic. 13 and 14)
16. Keep eye on the slider position and lines tense, slightly swing the bundle, lay it down on the floor and carefully squeeze the air out (pic. 15)
17. Make an S-fold of the required size and push it into the deployment bag.
18. Close the deployment bag and stow the lines, leaving 60 – 70 cm unstowed to prevent line twists (pic. 18)

Pict 1



Pict 2



Pict 3

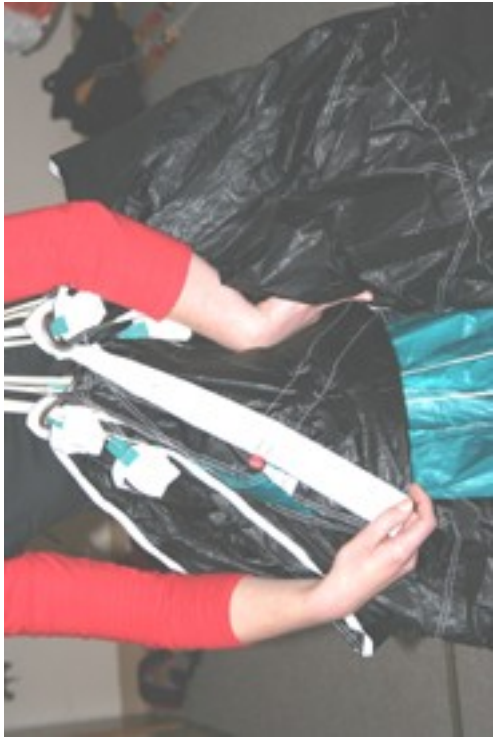
Pict 4

Pict 5

Pict 6

Pict 7

Pict 8



Pict 9

Pict 10

Pict 11

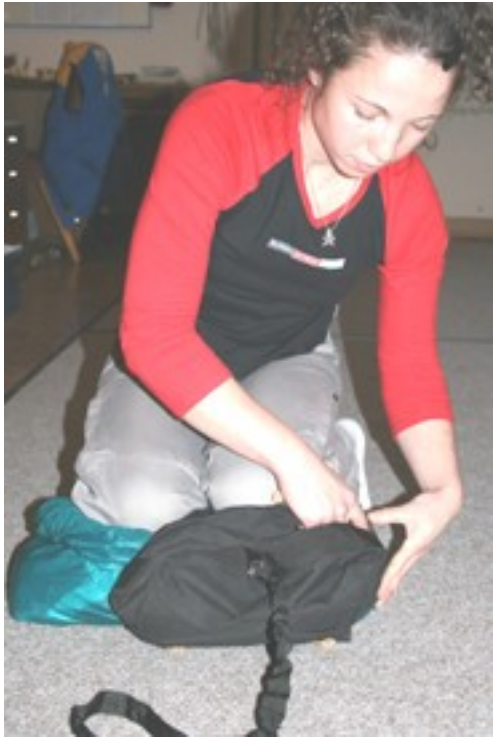
Pict 12

Pict 13

Pict 14

Pict 15

Pict 16



Pict 17

Pict 18

STORAGE AND MAINTENANCE

STORAGE

Fabric and other materials, used in the canopy construction are very sensitive to the environmental influence, especially to the UV rays. It is recommenced to use big bag or other cover material to protect the canopy from the direct sunlight on the ground.

When the canopy is not used, it should be stored in a dark dry place with the temperature 15-30℃ and 15-70% of humidity.

Canopy should also be kept away from:
- high temperatures
- acids and other chemically aggressive agents
- pests
- chloral
- smoke

TECHNICAL MAINTENANCE

Reparation and maintenance of the canopy should be done only by the manufacturer or experienced rigger.

Maintenance of the main canopy consists of the periodical inspection, line change, and timely repair of detected damages. If you have detected damages or anything suspicious, please contact your dealer or rigger before making the next jump.

Recommended control frequency is once in 3 months or 50 jumps, whatever comes first. If canopy is not stored properly it should be inspected more often.

During the inspection pay attention to the following:

1. Visually check the canopy for damages or defects of fabric, tapes and seams. Any burn or tear should be patched (use of self-adhesive fabric is not acceptable). Large damages, requiring replacement of entire part of design shall be fixed only by manufacturer.
2. Check if all Slider Stops are in place and their pockets are not damaged. There are four of them – for each group of lines.
3. Check tapes on the canopy, where the lines are attached and respective seams.
4. Check order of the main and control lines and ensure that all connection points are stitched. If lines are worn-out or have torn threads shall be replaced. Depending on the general condition of the lines the whole lines set replacement may be required. Normally lines should be replaced 1 – 2 times during the service life of the canopy. The main control lines are normally replaced more often.
5. Check the condition of the connectors. Ensure they are tightened well. In case of soft links – ensure their integrity.
6. Ensure the slider is correctly installed (reinforcement tape facing the canopy, pull-tabs towards trailing edge). Check the inner surface of the grommets for the notches, sharp edges or rust. Check condition of the slider fabric and reinforcement tapes.
7. Check the condition of the container following the instructions of manufacturer. Ensure integrity of all the seams, check conditions of the metal parts for damages and rust.

8. Inspect deployment chute, bridle and deployment bag. Check connection of the bridle to the canopy and to the deployment bag.
9. Follow the manufacturer's manual for your container to correctly connect the toggles to the control lines.
10. To minimize the wear of your gear do not pack the canopy on asphalt or concrete. Perform packing job only on the special packing matt.

WARRANTIES

Skydiving is a high risk activity. If you have made the decision to go for it, nothing will eliminate the risk of injuries or death. Your participation in the sport confirms that regardless of your skill / knowledge level as well as your experience, regardless of the equipment in use you take personal responsibility for potential injuries or death.

Based on the above, SKYLARK® does not give any warranties related to the use of the SKYLARK® Parachutes. While using your canopy or giving it to somebody else for use, the owner acknowledges that no claims can be made towards SKYLARK® for the damages or other harm.