# Uninsured United Parachute Technologies, LLC.









TANDEM STUDENT HARNESS ADJUSTMENT GUIDE

## Engineering Department

#### Introduction

The Sigma/Vector Student Harness is quite a departure from previous tandem student harnesses. It was designed, with the help of a cardiologist, to safely contain the human body without cutting off normal blood flow. Disrupted blood flow is why almost all students on older student harnesses were uncomfortable, and why many got sick or even passed out.

A Hip-hugging horizontal back and belt strap combination allows the main lift webs to be positioned, and held, more toward the front of the upper body than on older designs. This prevents the "Squeezing" of the upper body and the inside of the upper legs, which can cut off blood flow. It also automatically lifts the legs up and forward after opening, putting them in a safer position for landing.

The Student Harness was designed to comfortably and safely fit a wide range of body sizes and types. To accomplish this, it has "Thirteen" points of adjustment. This wide range of adjustment means that it is possible to give a tandem student a truly comfortable experience on their tandem skydive. However, the harness must still be adjusted securely to fit the student's body to prevent them from falling out in extreme situations and unusual body positions.

While fitting this harness on a tandem student is not difficult, it is different from other harnesses you may have used in the past. The most important point to consider is the security of the student. You must insure that all straps are comfortable snug against the student's body.

Please use the following guide to keep your student safe and comfortable.

### Adjustment Guide

- I. Loosen the harness before donning.
- 2. Hook up the Chest Strap loosely.
- 3. Adjust the Belt Strap and Horizontal Back Strap so the Main Lift Webs are positioned as shown (Fig. 1). The Horizontal Back and Belt Straps should be tightened <u>firmly</u> around the hips.
- 4. Tighten the Leg Straps.
- 5. Adjust the Main Lift Webs to position the Attachment Snaps on top of the shoulders.
- 6. Slide the Chest Strap into the correct position and tighten.
- 7. Snug up the diagonals.
- 8. Adjust the Y-Strap (Fig 5 and 10) so it is snugly fastened.

Fig 1

#### Tip;

It is recommended to hook up and pre-hang your student so the harness conforms to the student's body. Release the student and check all adjustment points. You may find it necessary to tighten the harness a bit more.



Fig 2



Fig 3





Fig 5



The Horizontal Back Strap must be positioned low and securely tightened.

The Y-Strap be must be fastened taught as shown. NOTE: Make sure Back Strap is routed over Y-Strap.

This is what keeps the student from falling out of the harness on a hard opening.



On anyone with a larger body frame, the Main Lift Webs should be positioned further apart than on a smaller person.

There is no single right way to fit every possible size or shape of the human body.

The harness has 13 points of adjustment. Use them to completely surround and contain the student's body.

Fig 7

Notice how the Main Lift Web is positioned more toward the side of the body than it would be on a smaller person.



Fig 8



From this position, six straps, going in every direction totally contains the pelvic area.

This containment would not be so complete on this person if the Main Lift Webs were further forward.



The Horizontal Back Strap must be positioned low and securely tightened.

Don't forget to snug the diagonals.

After preliminary adjustments, step back and look at your student from every angle.

Make sure there are no "gaps" that anyone could squeeze out of, especially in the back.

The Y-Strap be must be fastened taught as shown. NOTE: Make sure Back Strap is routed over Y-Strap.