Tandem – How it works

General Instructions for a Tandem Passenger

You will need to follow the instructions of the Tandem Pilot. **Do not** grab the tow bridle at any time or any of the lines or webbing above your shoulders and head unless the Pilot is guiding you in flight lessons. Make sure you are clear on the instructions for how to transition from the launch position to the flying position and back to landing position for landing.

How a Paraglider Launches and Lands:

A Paraglider is a parafoil wing which requires acceleration through the air to achieve lift. It launches similar to how a kite is launched. In light winds, Pilots normally do a "Forward Launch", and in strong winds, pilots do a "Reverse Launch". In either launch technique, the pilot and passenger accelerate together to reach a good flying speed for take-off.

Forward Launch:

Forward launches are preferred in very light or no wind conditions. With the wing laid out behind them in a horseshoe shape, the Pilot and Passenger are centered in the wing and facing forward. When the wind is right and the Tandem Pilot decides to launch, both the Pilot and Passenger must run forward together in a coordinated fashion. At first, as the wing climbs overhead, the wing will not allow much forward progress. But, as the wing gets fully overhead, the Pilot and Passenger will be able to accelerate together. They must run efficiently together until the glider is well clear of the ground. Sometimes the wind can gust during the run and then calm slightly causing the Pilot and Passenger to settle back to the ground. This is why it is important to keep running until well clear of the ground. **It is extremely important to keep the legs moving and ready to move until at least 20 feet above the ground.**

During the launch, the tandem instructor will sometimes need to have the passenger move slightly to the left or right. During the entire process of the launch, the following definitions apply:

- "Move forward" is straight toward the intended launch direction;
- "Back up" means to keep your balance and step towards the wing;
- "Left", is to the left while facing away from the wing;
- "Right", is to the right while facing away from the wing.

It is imperative to maintain your balance and stay on your feet!

Reverse Launch:

When there is wind above 5 MPH, reverse launches are generally preferred. In a reverse launch, the pilot will turn to face the wing, but the passenger will be facing the intended direction of travel. The reason the pilot faces the wing is to have more leverage for pulling the wing overhead. When inflation begins, the passenger will aid the pilot, by bending-over at their waist, leaning forward and using their legs to drive forward. If the wind is stronger, as the wing comes up, both the Pilot and Passenger may get pulled a few steps backward - this is ok. Both must resist and maintain their position. Once the wing is overhead (in the flying position), the backwards pull will diminish. The Pilot will then rotate around to face forward. Both the Pilot

and Passenger can proceed to move forward together to progressively gain speed sufficient to fly. With the wing above, and helping support us, running is not difficult and take-off will normally occur at a fast trot. **It is extremely important to keep the legs moving and ready to move until at least 20 feet above the ground.**

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After Launch:

To do: There are two main things to do after getting in the air. First, tuck your arms beneath the spreader bar that will be just behind your elbow. This will allow you to lean back more comfortably and fully seat you in the harness. Often this will take care of itself; however, sometimes the harness' seat board will not be far enough beneath your thighs. If this is the case, grab the **RED** handles on the harness near your thighs and, while pulling your knees up, wiggle and pull the harness further beneath your thighs until you are comfortably seated in the harness.

NOT to do: Do not grab the tow bridles or any of the glider webbing above your shoulders unless you are being instructed to do so by the Tandem Instructor. Once clear of terrain, if the instructor believes it appropriate, the instructor may offer to have you fly the glider. The instructor will give guidance during this entire process. During the entire flight, the instructor retains the right to not let you pilot the paraglider.

Turns: Tandem gliders are large craft and it helps if the passenger assists with weight shift during turns. Leaning right or left with the hips is the goal. By adding weight in the direction of the turn, the glider will be more responsive. Rolling the hips is as simple as unweighting the other side and does not require the shoulder to lean. For example, to lean right lift your left thigh above the right and you will feel the right side of your butt take the weight. At the end of each turn, simply remove the weight shift by returning your leg to a neutral, forward position.

Airsickness: Please let the tandem pilot know before the flight if you are prone to airsickness and at any time during the flight if you feel at all queasy. Please take note when booking your reservation that early morning or late evening flying is the least turbulent and should be less likely to cause such feelings. If, however, you do feel any signs of airsickness, immediately tell the pilot so they can take steps to help you enjoy the flight.

How speed and steering is controlled in a Paraglider:

Both speed and steering of a Paraglider are controlled primarily through the brake lines. Brake lines are lines that go up from the control (aka. brake) handles and cascade up to the back edge of the wing. By pulling the brakes down, the speed of the Paraglider is reduced. If one brake is pulled down and the other is left up, the Paraglider will turn in the direction of the brake pulled down. Steering can be further enhanced by leaning the body in combination with use of the

brakes. When you go tandem, you should not grab or pull on any of the risers or lines. If you feel a need to "hold" onto anything, ensure it's the **RED** handles on your harness.

Landings:

Prior to landings, the passenger must move into launching position. This is the opposite of pulling the bottom of the harness under your seat. It is accomplished by simply straightening the legs and torso to a vertical position. This is necessary because in the normal seated position, running and landing are not possible. Move into this position only when the pilot instructs you to do so.

Your Pilot will land the paraglider into the wind. The pilot will pull the glider's *brakes* down to slow the descent and forward speed as much as needed to achieve landing. In light winds, running is necessary. In stronger winds, landing will likely require running so the Pilot and Passenger need to be prepared to absorb the transition from air to ground and RUN until forward movement of the wing has been reduced on every landing.

The Reserve Chute:

Paraglider pilots have reserve parachutes usually attached at the underside or rear of the harness. A reserve chute is used only if there is some form of failure that would make the Paraglider unflyable. A reserve chute is designed to save a pilot, or in a Tandem, the pilot and passenger's lives. The reserve parachute deployment handle is normally mounted on the side of the Pilot's harness near the hip. The reserve is deployed via a strong throw from the pilot. If the reserve was deployed in a Tandem Paraglider, both the pilot and passenger would descend together.

Paragliding, Glider Certification and the FAA:

The FAA does not normally allow dual place flying for crafts such as Hang Gliders and Paragliders. However, the FAA has granted the United States Hang Gliding and Paragliding Association (USHPA) an exemption to Federal Aviation Regulation 103.1(a) and 103.1(b) (Exemption #4721) to allow for this type of flight. Under this exemption, USHPA self regulates Tandem flights. Part of this exemption is that the FAA does not certify the airworthiness of Paragliders. Gliders are certified by the Hang Glider Manufacturers Association HGMA, CEN, ACPULS, DHV or SHV. Most of these are European based bodies that have a series of tests for glider certification. The wing you will be flying under, meets one or more of these certifications.