

Kansas State University Parachute Club

Jump number: ~7 (Category C)
Maneuver: 10 second delay
Altitude: 5,000-5,500ft
Price: \$24 (+ Packer fee if needed)

You are now being introduced to more freefall time and will become accustomed to the shift in direction of the relative wind from ahead to below. This jump will also introduce you to the speed of a near-terminal-velocity freefall. You need to establish confidence and relaxed freefall control. A controlled freefall in Category C may include some random heading drift, which can be controlled by relaxing and focusing on the basics: altitude, arch, legs, and relax.

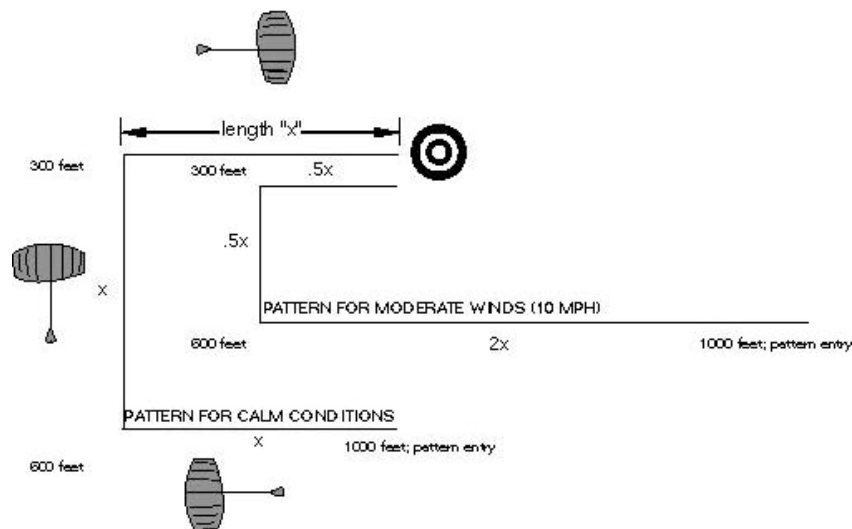
On this jump we are focusing on what we call the relative wind, getting you accustomed to how it works, and heading. To control heading you will pick an object on the horizon after exiting and throughout your dive you should be able to see that object. The count will be to 10 instead of 5:

Arch-thousand- 2,000 - 3,000 - 4,000 - 5,000 - 6,000 - 7,000 - Arch- Reach - Pull 10,000

Yes it does seem like a lot of counting, but the purpose is to allow you to freefall. What will happen is you will begin to feel your body shift from a slanted position like so \ to a more "belly to earth" like so . This happens as your body accelerates towards terminal velocity +/- 120mph. The time that your body is slanted is what we call the hill. If it were to be graphed out it would look as if it were a downward sloping hill as we accelerate and move towards earth. The faster our body travels, the more responsive it becomes making turning and maneuvering possible.

As you fall, if you were to find yourself unstable ARCH as hard as you can putting your arms above your head, belly and hips out, and legs behind you pointing your toes. This will return you belly to earth.

For canopy control and landings, you should be comfortable with your flight patterns by now. An instructor will review with you landing patterns in higher wind days. Below is a diagram for higher wind day landings:



Category C - Jump 7 - 1st 10 second delay

Wing loading

Wing loading is an equation used to determine the number of pounds per square foot of canopy. The higher the wing loading (Exit weight of jumper / square footage of canopy), the faster the descent, turns and less margin of error.

Ex: 250lbs/Sabre 170 = 1.5:1 wing load

Although 2 jumpers may have the same wing loading, a Sabre 120 at 1.5:1 will react much differently than a Sabre 170 at 1.5:1

We highly recommend reading this article at: www.performancedesigns.com/docs/wingload.pdf

Canopy performance changes with wing loading.

(1) With a heavier wing loading, expect:

- (i) faster forward speed
- (ii) faster descent rate
- (iii) quicker turns
- (iv) steeper and longer dive from a turn
- (v) more violent malfunctions
- (vi) more skill to flare correctly

(2) With a lighter wing loading, expect

- (i) less drive against a strong wind
- (ii) slower turns
- (iii) more forgiveness of landing errors
- (iv) less predictable in turbulence

Use the example to calculate the wing loading for the canopy the student is about to jump (one of the Category C advancement criteria).