



# Category B Training Aid

All training to be conducted by instructors of the:



---

## **Freefall Priorities**

1. Pull, Pull, Pull.
2. Pull at the proper altitude.
3. Pull at the proper altitude while stable.

## **Landing Priorities**

1. Land with your wing level and flying in a straight line.
2. Land in a clear and open area, avoiding obstacles.
3. Flare to at least half brakes.
4. Perform a parachute landing fall (PLF).

## **Other Good Advice**

Be altitude aware. It will save your life.

If you are unsure about something, ask an instructor.

Don't get discouraged. Take it one jump at a time.

Plan the dive, dive the plan and always have a backup.

Seek professional coaching when learning new skills whenever possible.

Know when to say NO. Use good judgment to avoid dangerous situations outside of your comfort/skill level (i.e. jumping in high winds, borrowing equipment, large formation jumps, free flying, CRW, high performance landings, etc., etc.).

Have fun. ☺



---

## Mental Relaxation: The Key to Body Flight

In the early Categories, you'll hear the following phrase over and over again from your instructors: "Altitude, arch, legs, relax." Managing all four points at once is the key to controlled freefall.

After altitude awareness, relaxing is your key goal. It takes only a little push from the hips to get an effective arch, and you usually need to extend your legs only a little to get use of them in the wind. But you need to relax your other muscles at the same time.

So how can a brand-new skydiver relax in such an adrenaline-charged, exciting, and new environment?

Sports psychologists all recognize the value of staying loose and mentally relaxed for peak performance. Many describe ways to achieve a state of prepared relaxation. Each athlete learns to develop one technique to achieve a relaxed state and maintain it during every performance.

Almost all the techniques begin with slower, deeper, controlled breathing. Learn to breathe from deep in your lungs, using the muscles of your diaphragm. Practice breathing in slowly until your lungs are full and then emptying your lungs completely when you breathe out.

While you practice controlled breathing, you can use one of several suggested devices to relax your mind and your body:

- Imagine yourself in a familiar, comfortable place, trying to visualize every sensual experience that you can associate with it: sight, sound, odor, taste, and touch. Picture the colors of the background and the details, try to smell the air as it would be, imagine you hear the sounds, and feel the air on your face. Imagine you just took a sip of your favorite drink.
- Relax your body part by part, starting with your toes, then your ankles, calves, thighs, hips, abdomen, etc., spending five to ten seconds in each place while continuing your controlled breathing.
- Count up to ten with each breath and then backward to zero.

There are many other relaxation techniques you can borrow or develop, but choose one and practice it until you perfect it, even when you're not skydiving. That way, you can relax yourself quickly and effectively whenever the need arises—such as just before a skydive.

You should continue controlling your breathing as you're getting ready to jump. Move slowly and deliberately in the aircraft as you approach the door and get into position, not only for safety but to help you maintain your relaxed, prepared state for the jump.

Take another breath just before you actually launch from the aircraft and again to help you settle into freefall as soon as you let go. Make breathing part of every sequence, especially as you go through your "altitude, arch, legs, relax" sequence.

While skydiving is inherently a high-speed sport, you'll notice that the best skydivers never do anything in a hurry.



## Category B

### One Jump

In Category B, you learn to be more comfortable in the skydiving environment. Training in this category reviews and expands your understanding of the canopy landing pattern and the airport environment, with attention to avoiding aircraft on or approaching the runways. You help with pre-flight planning and the use of the written flight plan, including opening point, the projected wind line and the landing pattern. Also, you learn to use the runway as a reference for direction and distance when observing the drop zone from the aircraft or under canopy. You also become more responsible for your equipment, particularly while moving around and inside the aircraft. Study topics introduce USPA Basic Safety Requirements (BSRs) for student jumps.

### **Learning and Performance Objectives**

- Relaxing in the skydiving environment
- Heading awareness
- Parachute deployment
- More on the landing patterns
- Written flight plan
- Airport orientation
- Protecting handles
- Equipment emergency review

### **Rules and Recommendations**

**Review the USPA Basic Safety Requirements (BSRs) on supervision and progression requirements for students.**

1. All student training programs must be conducted under the direction and oversight of an appropriately rated USPA Instructor until the student is issued a USPA A license.
2. A person conducting, training, or supervising student jumps must hold a USPA instructional rating according to the requirements that follow.
3. First jump course:
  - a. All first-jump non-method-specific training must be conducted by a USPA Instructor or a USPA Coach under the supervision of a USPA Instructor.
  - b. All method-specific training must be conducted by a USPA Instructor rated in the method for which the student is being trained.
4. All students must be trained in the following areas:
  - a. Equipment
  - b. Aircraft and exit procedures
  - c. Freefall procedures
  - d. Deployment procedures and parachute emergencies
  - e. Canopy flight procedures
  - f. Landing procedures and emergencies



5. Advancement criteria for AFF students:

- a. All students must jump with two USPA AFF rating holders until demonstrating the ability to reliably deploy in the belly-to-earth orientation at the correct altitude with assistance.
- b. All students must jump with one USPA AFF rating holder, exit safely, maintain stability, and deploy at the planned altitude without assistance prior to attempting disorienting maneuvers.
- c. All students must jump under the direct supervision of an appropriately rated USPA instructor until demonstrating stability and heading control prior to and within five seconds after initiating two intentional disorienting maneuvers involving a back-to-earth presentation.

6. Student training for group freefall (Coach or AFF):

- a. Student freefall training for group freefall jumps must be conducted by either a USPA Coach under the supervision of a USPA Instructor or USPA D license holders provided there is a minimum ratio of one D license holder to one student with a maximum of a 4-way.

7. No skydiver will simultaneously perform the duties of a USPA instructional rating holder and pilot-in-command of an aircraft in flight.

8. All student jumps must be completed between official sunrise and sunset.

### **Review the BSRs on wind limits for students**

1. For solo students, maximum ground winds are:

- a. 14 mph for ram-air-canopies
- b. 10 mph for round reserves

*Note: StartSkydiving.com is waived to 16mph for ram-air-canopies at Middletown Regional Airport.*

2. For licensed skydivers, there are no wind limitations.

### **Review the BSRs on minimum required deployment altitudes**

1. Minimum container opening altitudes above the ground for skydivers are:

- a. Tandem jumps: 4,500 feet AGL (Above Ground Level)
- b. All students and A-license holders: 3,000 feet AGL
- c. B-license holders: 2,500 feet AGL
- d. C and D-license holders: 2,000 feet AGL

### **Review the BSRs on drop zone requirements for students and what is considered a landing hazard**

1. Areas used for skydiving should be unobstructed, with the following minimum radial distances to the nearest hazard:

- a. Solo students and A-license holders: 100 meters
- b. B and C-license holders: 50 meters
- c. D-license holders: unlimited



2. Hazards are defined as telephone and power lines, towers, buildings, open bodies of water, highways, automobiles, and clusters of trees covering more than 3,000 square meters.
3. Manned ground-to-air communications (e.g., radios, panels, smoke, lights) are to be present on the drop zone during skydiving operations.

## **Equipment**

1. Parachute deployment with opportunities for malfunctions explained:
  - a. Lost or unrecoverable deployment handle
  - b. Impossible deployment handle extraction
  - c. Pack closure (closing sequence, bridal routing, pin orientation, etc.)
  - d. Pilot chute hesitation
  - e. Pilot chute in tow
  - f. Premature deployment (hand deploy)
  - g. Pilot chute entanglement.
  - h. Horseshoe
  - i. Bag lock
  - j. Streamer
  - k. Line-over
  - l. Fabric or line failure sufficient to interfere with control and flare.
  - m. Slider hang-up
  - n. Control-line entanglement

2. Review parachute retrieval after landing.

## **Spotting and Aircraft**

1. Minimum, careful movement in the aircraft helps prevent premature activation.
2. Winds are described by their direction of origin, said as a compass heading (for example, "The winds are two-seventy," means the winds are blowing from the west).
3. Runway lengths and headings (use of a compass):
  - a. The runway heading provides a reference for direction (north, south, east, and west).
  - b. The runway length provides a reference for judging distance from the air.

*Note: The Middletown Regional Airport runway is oriented 005°-230° (NE-SW) and is 6100 ft. in length.*

4. Avoid runways and approaches, including getting clear of a runway after landing on or near one.
5. Crossing the runway:
  - a. Know the airport and drop zone rules about crossing a runway.
  - b. If allowed, look both ways and minimize the time spent on the runway.



6. Discuss local aircraft traffic approach altitudes and landing patterns and their relationship canopy approach and landing patterns (see Illustration B.1).

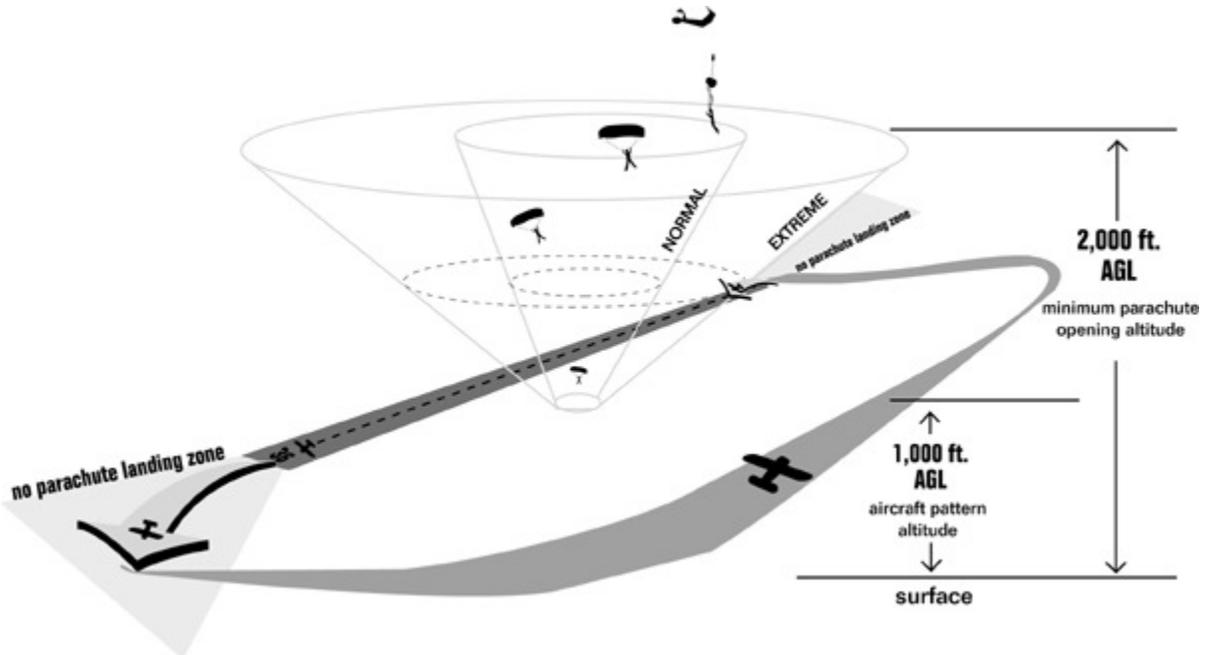


Illustration B.1 - Normal flight practices separate aircraft and parachutes at airports, but jumpers need to respect the runways and approaches.

## Exit and Freefall

1. Student-led exit (all students):
  - a. Review the exit set-up from Category A.
2. "Altitude, arch, legs, relax," Repeat to establish and maintain awareness, stability, and control:
  - a. Know your altitude.
  - b. Check your arch (hips forward a little).
  - c. Check your legs (most beginners need to extend their legs a little and point their toes).
  - d. Relax.
    - (1) Breathe consciously to release tension.
    - (2) Use this technique just before and after releasing from the aircraft.
3. Maintaining a heading:
  - a. First, relax into a comfortable neutral body position.
  - b. Find a point ahead on the horizon as a heading reference.
  - c. If turns are performed:
    - (1) Check the altitude.
    - (2) Turn head to the side and pick new heading 90° to current heading.
    - (3) Initiate turn by changing the level of your upper arms to deflect air to one side.
    - (5) Stop turn by returning to a neutral body position.
    - (4) Repeat in the opposite direction if time permits.



4. Altitude awareness to recognize and act at the assigned pull altitude is the most important task in freefall.
5. Leg awareness:
  - a. Practice leg awareness by extending legs while arms remain in a neutral position.
    - (1) Extending the legs from the neutral position adds more drag in the back, lifting your lower body.
    - (2) The off-level attitude causes you to slide forward on the deflected air.
    - (3) Hold the position for three seconds and return to neutral to cancel the effect.
    - (4) Finish all maneuvers 1,000 feet above wave-off altitude or 6,000 feet, whichever comes first.
6. Deployment:
  - a. Perform at least three practice touches or until comfortable with locating the deployment handle in freefall.
  - b. Wave-off to signal deployment.
  - c. Pull at the correct altitude without prompting from the instructor.

## **Emergency Procedure Review**

1. Deploy at the correct altitude, regardless of stability.
2. Review common problems in the training harness:
  - a. Correct response to line twist:
    - (1) Spread the risers and kick to untwist, but release the brakes only after clearing the twist.
    - (2) If spinning, twist the risers to untwist the lines and stabilize canopy, then kick to untwist the risers.
    - (3) By 2,500 feet, be sure line twist can be corrected at a safe altitude, or initiate emergency procedures.
  - b. The correct response to slider up:
    - (1) Bring both toggles to the bottom of the stroke to slow the canopy and pump at the bottom of the control range.
    - (2) Alternatively, pump the back risers.
    - (3) The slider needs to be at least halfway down for landing.
    - (4) Repeat remedial procedures twice or until reaching the decide-and-act altitude of 2,500 feet.
  - c. End-cell closure:
    - (1) Pull both toggles to the bottom of the stroke and hold them until the end cells open, then release them smoothly.
    - (2) Alternatively, hold down both back risers.
    - (3) If the end cells can't be cleared, evaluate controllability and flare before reaching the decide-and-act altitude of 2,500 feet.
  - d. If the canopy has opened normally but turns on its own, be sure both brakes are released.
  - e. Evaluate controllability and flare before reaching the decide-and-act altitude of 2,500 feet for:
    - (1) Broken steering line: Use back risers.
    - (2) Broken suspension line(s).
    - (3) Pilot chute entangles with canopy or lines.
    - (4) Damage: Canopy rips or tears.



3. Review deployment problems for manual activation:

- a. Make only two attempts to correct the problem before initiating reserve procedures.
- b. Lost deployment handle:
  - (1) Hip or chest handle location: Follow harness webbing for two seconds only.
  - (2) Bottom of container location: Sweep bottom of container, then side of container to corner for two seconds only.

*Note: StartSkydiving.com only uses bottom-of-container (BOC) main deployment handles.*

- c. Hard pull:
  - (1) Hip or chest handle location: Try again with two hands.
  - (2) Bottom of container: Place elbow against container for leverage.
- d. Pilot chute hesitation:
  - (1) Twist while looking over the right shoulder to modify the airflow.
  - (2) Repeat over the left shoulder.

4. Practice for deployment handle problems and pilot chute hesitation.

5. Review premature container opening in freefall for hand deployment:

- a. Attempt to locate and deploy the pilot chute first.
- b. If the pilot chute can't be located after two tries or if deploying the pilot chute results in a partial malfunction, cut away and deploy the reserve.

6. Practice for recognizing and responding to total and partial malfunctions (from Category A procedures).

7. Review minimum cutaway altitude and reserve deployment without cutaway if necessary:

- a. Decide to cut away by 2,500 feet and act.
- b. If below 1,000 feet without a functioning canopy, deploy the reserve. (Do NOT cutaway)
- c. If in a canopy entanglement with another jumper below 1,000 feet and it appears the canopies cannot be separated in time for a safe landing, deploy the reserve.
- d. Both parachutes deployed:
  - (1) Biplane--do not cutaway; steer the front canopy gently using toggles or leave the brakes stowed and steer by pulling on the rear risers; leave brakes stowed on the back canopy; PLF.
  - (2) Side-by-side—do not cutaway; steer the dominant (larger) canopy gently using toggles or leave the brakes stowed and steer by pulling on the rear risers; Leave the brakes stowed on the other canopy; PLF.
  - (3) Downplane--cutaway the main canopy, regardless of altitude.
- e. Premature deployment in aircraft:
  - (1) Attempt to contain the open parachute and inform the instructor.
  - (2) If your parachute goes out the door, follow it immediately, before being extracted.



---

## Canopy

1. Using a DZ photo (Page 98) or taking a walk in the field, you'll preview with an instructor the expected opening point and prepare a written flight plan together.
2. Review the descent strategy:
  - a. Determine position and altitude upon opening.
  - b. Locate the target and establish a line to the pre-planned 1,000-foot pattern entry point.
  - c. Divide the line logically according to the remaining altitude (halfway down, halfway back); for example, if open at 4,000 feet:
    - (1) Divide the line in thirds and fly over the first third of the line until 3,000 feet.
    - (2) Fly over the second third of the line until 2,000 feet.
    - (3) Fly over the remaining third of the line until reaching the pre-planned pattern entry point at 1,000 feet.
3. Look first in the direction of a turn under canopy.
4. Fly to the instructor-assigned pattern entry at 1,000 feet, as identified on the written flight plan.
5. Fly the pre-planned pattern using downwind, base, and final approach legs, with specific points to fly over at specified altitudes.
6. Fly a straight-in final approach without S-turns (S-turns present a hazard to other traffic).
7. Flare at 10-12 feet, based on Category A experience.

*Note: Flaring is covered in more detail in Categories C and F.*
8. Review the PLF and its value to protect against a hard landing.



## Category B Quiz

(Must be passed before Category B jump)

**1. Who must directly supervise your student training jumps?**

- a) USPA Instructor rated for my discipline.
- b) The local Safety and Training Advisor.
- c) Drop zone owner/operator.

**2. What is your most important task when in freefall?**

- a) Correctly complete planned dive flow.
- b) Altitude awareness to recognize and act at the assigned pull altitude.
- c) Fall stable and on heading.

**3. What are the maximum winds in which any student may jump?**

- a) 15 mph
- b) 10-15 mph, depending on conditions and individual student ability.
- c) 10 mph for a round reserve canopy; 14 mph for a ram-air reserve, waivable by an S&TA.

**4. How would you clear a pilot chute hesitation?**

- a) Pull harder.
- b) Wait for the AAD to fire.
- c) Change body position to modify the air flow over my back.

**5. In the event of a canopy problem, students should decide and act about executing emergency procedures by what altitude?**

- a) 2,000 feet
- b) 2,500 feet
- c) 3,000 feet

**6. How would you address the following routine opening problem: Twisted lines?**

- a) Before releasing the brakes, spread risers or twist risers to transfer line twist to risers, kick in opposite direction, watch altitude to 2,500 feet.
- b) Cut away and deploy the reserve.
- c) Pump rear risers or steering controls at the bottom of the stroke while watching altitude to 2,500 feet.

**7. How would you address the following routine opening problem: Slider stops halfway down?**

- a) Pull toggles to flare position and hold (or pull down rear risers and hold) and watch altitude. If stubborn, determine controllability with turn and flare by 2,500 feet.
- b) Pump rear risers or steering controls at the bottom of the stroke while watching altitude to 2,500 feet.
- c) Cut away and deploy the reserve.

**8. How would you address the following routine opening problem: Closed end cells?**

- a) Make hard left and right turns in rapid succession to inflate each cell individually.
- b) Pump rear risers or steering controls at the bottom of the stroke while watching altitude to 2,500 feet.
- c) Pull toggles to flare position and hold (or pull down rear risers and hold) and watch altitude. If stubborn, determine controllability with turn and flare by 2,500 feet.



**9. How would you address the following routine opening problem: Broken lines or other damage?**

- a) Determine controllability and ability to flare by 2,500 feet.
- b) Cut away and deploy the reserve.
- c) Pump rear risers or steering controls at the bottom of the stroke while watching altitude to 2,500 feet.

**10. How would you address the following routine opening problem: Good canopy that is turning?**

- a) Be sure both brakes are released.
- b) Pump rear risers or steering controls at the bottom of the stroke while watching altitude to 2,500 feet.
- c) Cut away and deploy the reserve.

**11. What is the appropriate action if below 1,000 feet without a landable parachute?**

- a) Cut away and deploy the reserve.
- b) Do not cutaway, immediately deploy the reserve parachute.
- c) Wait for AAD to fire.

**12. If the pilot chute goes over the front of the canopy after it has opened, how can you tell if it's a malfunction?**

- a) If the canopy flares and turns correctly, it is probably safe to land.
- b) If the pilot chute is fully inflated, it is a malfunction.
- c) If the pilot chute is not fully inflated, it is a malfunction.

**13. What is the correct response to an open container in freefall using a hand-deployed system?**

- a) No more than two tries or two seconds to locate and deploy the main pilot chute; if no success, cut away and deploy the reserve.
- b) Cut away and deploy the reserve.
- c) Immediately deploy the reserve parachute, but not below 1,000 feet with an SOS system.

**14. If the pilot chute extracts the deployment bag from the parachute container (backpack) but the deployment bag fails to release the parachute canopy for inflation, what is the correct response?**

- a) Determine controllability and ability to flare by 2,500 feet.
- b) Do not cut away, immediately deploy the reserve parachute.
- c) Cut away and deploy the reserve.

**15. If part of the deployed parachute is caught on the jumper or the equipment (horseshoe), what is the correct response?**

- a) Immediately deploy the reserve parachute.
- b) Cut away and deploy the reserve.
- c) No more than two tries or two seconds to locate and deploy the main pilot chute; if no success, cut away and deploy the reserve.



- 16. What are the three legs of the canopy landing pattern with relation to the wind direction**
- a) Downwind (with the wind), base (across the wind but downwind of the target), and final (with the wind).
  - b) Downwind (with the wind), base (across the wind but downwind of the target), and final (into the wind)
  - c) Downwind (against the wind), base (across the wind but upwind of the target), and final (into the wind).
- 17. Why is it undesirable to land at the end of a runway?**
- a) Approaching and departing aircraft
  - b) Turbulent winds
  - c) FAA regulations



## Category B Dive Flow

Two AFF Instructors

### Freefall Dive Flow

- Exit in a relaxed arch.
- Circle of Awareness.
- 3 Practice deployments.
- Altitude, arch, legs, relax.
- Extend legs for three seconds and hold.
- Altitude, arch, legs, relax.
- Team turns.  
(L 90° turn, Altitude, R 90° turn, Altitude)
- Repeat as altitude permits.
- Lock on to Altimeter at 6,000 feet.
- Begin wave off at 5,500 feet.
- Pull by 4,500 feet.

### Canopy Dive Flow

- Correct common opening problems and release brakes.
- Look left, turn left. (At least 90°)
- Look right, turn right. (At least 90°)
- Flare.
- Check altitude, position, and traffic.
- Find landing area and pattern entry point.
- Divide flight path by thousands of feet.
- Look at runway and determine compass heading.
- Steer over correct portion of flight path until 1,000 feet.
- Follow planned pattern over landing area or alternate.
- Prepare to PLF and flare to land.

## Advancement Criteria

### **Freefall and Exit**

- Stability within ten seconds of exiting the aircraft.
- Maintain correct body position for stability throughout, including leg awareness and control.
- Initiate deployment procedures within 500 feet of the assigned altitude.

### **Canopy**

- Understanding and planning descent strategy from opening to pattern entry and pattern principles.
- Steering with clearance procedures without prompting (self-evaluated).
- Assisted flare for a safe landing within 30° of heading into the wind.

### **Equipment**

- Understanding routine canopy problems and the correct responses.

