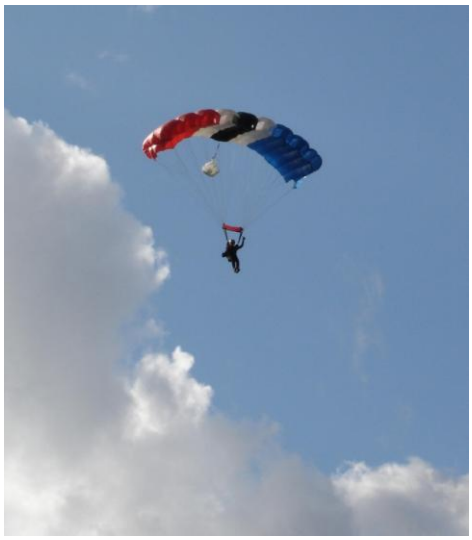

SKYDIVE SNOHOMISH

STUDENT MANUAL

Rev. 0 June 6, 2012

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INTRODUCTION

Welcome to skydiving! You have chosen to embark on an exciting adventure presenting many new mental and physical challenges yielding growth. The sport of skydiving has endless possibilities to offer you in fulfilling your desire to fly. This progressive sport is constantly evolving, and allows for limitless achievement in all of its disciplines. Our community welcomes you, admires your commitment to explore the sport we love, and look forward to assisting you on your way to becoming a licensed skydiver.

Now that you have made the commitment to become a skydiver, you will need to become a member of USPA (United States Parachute Association) and purchase a few items.

- Join USPA (the governing body for Skydiving)

By Joining USPA you will be covered by 3rd party liability insurance and you will receive Parachutist, skydiving's monthly magazine.

- Purchase the SIM (Skydivers information Manual)

This book is a wealth of information that will supplement your training as a student and as a licensed jumper exploring the sport. This book contains the USPA BSR's (Basic Safety Requirements) and FAA (Federal Aviation Administration) FAR's (Federal Aviation Regulations) that you agree to follow as a skydiver. It also includes recommendations for all of the major skydiving topics and disciplines.

- Purchase a Logbook

This book is your official permanent record used to keep track of license requirements, currency, and details of each skydive.

This student manual will help outline and guide your progression towards achieving an "A" license. It gives you guidelines for each jump in terms of objectives and preparation. All jumps have specific objectives designed to develop the skill and knowledge required in each phase of the jump. Your preparation will include both reading and physical practice of the concepts and skills described. There will be minimum requirements you must demonstrate both physically and mentally on each jump in order to advance. Do not get discouraged if you are required to make additional jumps at a particular level. All skydivers have had some area of difficulty to overcome along the way. Upon completion of each jump, you will be expected to commit all new material to memory and apply it to future jumps. Throughout your training remember to stay positive, take it one step at a time, and realize that your progression will not be the same as others going through the course.

There is a high degree of personal responsibility required of us in skydiving. There are no "time-outs" once exiting the airplane. For your safety, it is your responsibility to ensure you have been adequately trained and are prepared for your skydive. In order to maximize your learning, and to be fully prepared and trained for your jump you must:

- Show up on time or early for your appointment.
- Read the assigned reading material prior to training
  - on-line
  - by purchasing a student manual
  - arriving 30 minutes early to read the manual at the dz.
- Ask questions so you fully understand the material and objectives.
- Arrive well rested and eager to learn/practice the new material.

If you arrive late or un-prepared, causing inadequate preparation time for your skydive, you will be subject to a late/no-show fee of $25.00 or have the option of repeating your last passed skydive. If you cancel or reschedule less than 24 hours prior to your appointment time, you will be charged a $25.00 no-show fee per jump.

If at any time during your student progression, you are unclear about a concept, skill, or piece of information found in this student manual, it is imperative that you ask an instructor for clarification and/or demonstration.

At Skydive Snohomish we are committed to providing excellent training to our students. By choosing to do your student training here, you will use state of the art equipment, be trained by an experienced and knowledgeable staff, and enjoy a comfortable atmosphere in which to learn. We look forward to assisting you through each and every step of your student training, sharing your successes, and welcoming you into the community of skydiving! It is our hope that you will develop a great sense of pride knowing that Skydive Snohomish is your home drop zone.

Blue skies!

If at any point you have questions, comments, concerns, or feedback about your training please contact Tyson at tysonharvey@harveyfield.com

SECTION 1

SUPERVISED STUDENT JUMPS

SUPERVISED STUDENT JUMPS

Static Line #1

Objectives:
1.) Climb out of the plane
2.) Perform a hanging exit
3.) Present body to relative wind in an arched position
4.) Let go of the plane
5.) Follow the instructions of the ground instructor

New Skills:

Climb Out

Scoot as far forward toward your instructor in the plane when the instructor signals you to do so. The instructor will then open the door of the plane and give the command, "sit in the door". (Wait for the command. Do not sit in the door just because the door is open.) To sit in the door, swing both legs out and place them on the step then scoot forward until you are sitting on the edge of the doorframe. This will allow you to grasp the strut much more easily. The instructor will then give the command to "climb out and hang". Grasp the strut and pull yourself forward until you are in a crouched standing position on the step. Slide your feet to the far right edge of the step and slide your hands as far out as you can on the strut. Once your hands are in place, gently step off the step with your right foot and then left foot. Once hanging, look back at your instructor and wait for the command to "go". Remember you are the one that must initiate climbing out of the plane. We will not force you to jump. After you have started climbing out, you will be going on a skydive. For your safety, you will not be allowed to climb back in the plane once your body is outside of the plane.

The speed of your climb out should be at a moderate pace taking approximately 10 seconds from the time you start to climb out on the instructor's command until you are hanging and looking over your left shoulder at the instructor. This is important as the instructor is trying to have you exit the plane and let go in an appropriate area that will allow you to easily return to the target field. If you climb out too fast you may end up hanging from the strut longer, until the plane is over the proper area for you to exit. If you are too slow, you may end up getting too far away from the target. Either way, it may cause difficulties in landing you in the correct field and will cause the pilot to work harder keeping the plane lined up correctly for your jump. The first couple of times you climb out expect that you will be a little slow, as this is a new experience for you.

Hanging Exit

Start the hanging exit by following the instructions for the climb out. Once you are hanging from the strut of the plane, look over your left shoulder at the instructor. The instructor will then signal to let go by gesturing up with their index finger. Look up then release the strut with both hands simultaneously, arch hard, and begin counting to 5. We use a hanging exit at this drop zone initially as it puts you in a good arch position

before letting go. The hanging exit also helps reduce the potential of getting entangled with the static line.

Canopy Check

Once you have let go of the plane and counted to five, you will need to perform a canopy check. The purpose of the canopy check is to determine if you have a parachute over your head that is square, stable and steerable or if there is some kind of problem that you will need to address. When you first look up, the canopy should be fully inflated or just finishing inflating. It should be rectangular in shape, flying forward, all the lines should be straight with even tension, the slider should be down to the top of the risers and things should be fairly quiet. If everything looks good, reach up and unstow your brakes/steering loops/toggles by putting your hands through the yellow loops and pulling them down at the same time to free them from the velcro. Next, check the stability by smoothly performing two practice flares. A flare is initiated by starting with your arms in a full extension above your head and smoothly pulling both hands down into your crotch area. Because these are simply practice flares, hold for a second and slowly raise your arms back up over your head to let the canopy fly. Next, check that you can steer the canopy by pulling down on the right brake/steering loop to turn right and then turn left by pulling on the left brake/steering loop. Make sure you pull all of the way down to full arm extension.

Mentally prepare yourself for potentially minor problems that will need to be fixed after the canopy is open. The first potential minor problem is **line twists**. As a result of the normal canopy opening sequence or due to body position at the time of opening, the suspension lines may become twisted. Fixing normal line twists will require you to reach above your head, grab the risers with your hands and pull them apart. At the same time you will need to do a circular kick with your legs in the opposite direction of the twists. After the lines are untwisted, unstow the brakes and continue with a normal canopy check. Do not attempt to unstow your brakes until the lines are untwisted as this can cause a more severe problem. If for any reason you are twisting up faster than you can kick out of the line twists, initiate your emergency procedures. The second minor problem is a **slider stuck ½ way down**. The slider may not slide all of the way down the suspension lines to the top of the risers. The higher the slider is stuck on the suspension lines, the more it will restrict the canopy from fully inflating. To fix a slider up, start with full arm extension above your head, pull the brakes down to your hips and repeat (flaring). If the slider does not come down to the risers, repeat the flaring action again. If this still does not work, check to make sure the canopy is stable and steerable. As long as you can control the canopy, it is safe to land. If you cannot control the canopy, you will need to initiate your emergency procedures. The third minor problem is **collapsed end cells**. This is a situation in which the material of the end cells (the far right and left cells) is folded over the front of the cells preventing them from opening. To fix collapsed end cells, follow the same instructions for fixing a slider up.

There are several potential parachute malfunctions in which you will need to immediately execute your emergency procedures. The first malfunction is a **streamer**. A streamer happens when the parachute has deployed, but does not completely inflate

after your 5-second count. The second malfunction is a **bag lock**. In this situation, the last two line stows do not come undone preventing the bag from opening and the parachute from deploying. The third malfunction is a **line over**. A line over is when one or more lines are crossed over the top of the canopy causing it to spin. The fourth malfunction is a **horseshoe**. A horseshoe occurs when you have a second point of connection to any part of the parachute assembly in addition to the risers. An example of a second point of connection is the pilot chute or lines caught on any part of your body. A horseshoe is most likely caused by poor body position at the time of deployment. Make an attempt to free the second point of connection, but do not take more than a few seconds. If you are unable to clear the horseshoe or if the parachute malfunctions after you have cleared the horseshoe, initiate your emergency procedures.

You may at some time experience having two canopies open at the same time. There are three canopy formations that are possible. The first is a **biplane** where one canopy is in front of the other. If you experience a biplane, do not cut away the main parachute. Keep both canopies and make very mild turns using the steering loops of the canopy in front. Making harder turns may cause entanglement of the two canopies or cause the canopies to change formations. Try to stay over the target area while making the mild turns. If you are unable to stay over the target area, locate a safe alternate landing area. Do not flare either canopy for landing. Perform a parachute-landing fall (PLF). The second formation is a **side-by-side** where the canopies are flying next to each other. If the canopies are not entangled and are separated by 5ft or less, keep both canopies over your head and steer with the canopy in front making very mild turns. Just like the biplane, making harder turns may cause entanglement or the two canopies to change formation creating a much larger problem. Do not flare either canopy for landing and perform a PLF. If the canopies are not tangled and are separated by more than 5ft, pull your emergency handle to release the main parachute and fly the reserve to the ground. Fly the reserve parachute just as you would the main parachute. If the parachutes are entangled, do not cut away; keep them both as it is better to have as much over your head as possible to slow you down. The third formation is a **down plane** where the canopies start in a side-by-side and separate downward on either side. Immediately pull the emergency handle. Fly the reserve parachute the same as you would the main parachute.

Equipment Emergency Procedures

Emergency procedures are the steps you take to release a malfunctioning main parachute and activate your reserve parachute. If you decide that it is necessary to initiate your emergency procedures, you must do so by 2500ft above ground level. The first step in an emergency is to look down the left side of your body and locate the silver emergency handle. The second step is to grab the handle with both hands by inserting your thumbs through the handle and grasping the handle tightly looking at the handle the entire time. Third, pull slightly down and out to full arm extension in front of the body. The fourth step is to clear the cables. Do this by continuing to hold the emergency handle in your left hand and reach down with your right hand to clear the cables completely out of the harness. (At this point you can throw the handle away, or if you remember to hold onto it, shove it down your shirt after the reserve opens.) The

fifth and final step is to arch and count to five while the reserve parachute opens. If for some reason you did not have a good grasp on the handle and managed to dislodge it from the velcro pouch but did not pull it out enough to activate the reserve, you will have a floating emergency handle and must react very quickly. To regain your grasp on the handle, gently wrap both hands around the left vertical strap of the harness just above the chest strap. Slide your hands down until you reach the top of the handle. Grasp the top of the handle and cables and pull. Continue to follow the fourth and fifth steps above. When trying to re-locate a floating emergency handle, do not try to directly grasp the handle while it is moving around. Most often this approach will tend to be futile and fatal.

Remember, your decision altitude for using your emergency procedures is 2500ft above ground level. DO NOT cut away your main parachute below 1000 feet.

Aircraft Emergency Procedures

Emergency landing procedures – Make sure your helmet and seatbelt are on, bring your knees to your chest, interlock your fingers and put them behind your neck, remain still until landing, and quickly but orderly exit the aircraft. If you are exiting a compromised aircraft, go immediately to the nearest exit and get at least 100ft away from the plane.

Emergency during flight – The pilot is in command of the aircraft and will communicate to the instructor to exit or stay in the aircraft. The instructor will then give you one of four commands. First, if you are told to land in the plane, everyone will land with the plane. Second, you may be told to exit on your reserve. If you are given this command, dive out and deploy the reserve parachute. Do this by firmly grasping the emergency handle with your left hand and extending the right hand above your head as you dive, count ARCH thousand, PULL thousand. Third, you may be told to exit on your main. If you are given this command, dive out and deploy the main parachute. If you are on a static line, dive out with both arms extended over your head. The static line will automatically deploy the parachute for you. If you are a freefall student, grasp the main ripcord with your right hand prior to leaving the plane and extend your left hand over your head as you dive out. Count ARCH thousand, PULL thousand. Fourth, you may perform a routine exit if directed to do so by your instructor. While on solo status, you will take instructions from the pilot about whether to stay or exit. If you are told to exit below 4k deploy your reserve and if 4k or higher deploy your main.

After an emergency exit – Look for the instructor's parachute, if possible, and fly to a clear, open landing area. Select any clear area for landing if you cannot locate the instructor's canopy.

Parachute Landing Fall (PLF)

A PLF is used upon landing to help prevent and/or minimize injuries. To perform a PLF, start by keeping your feet and knees tightly together with the knees slightly bent just before landing. There are five points of contact when doing a PLF. The balls of your feet should be the first point of contact followed by the side of your calf, side of your thigh, butt and your back on a diagonal from your butt to the opposite shoulder.

Static Line #2

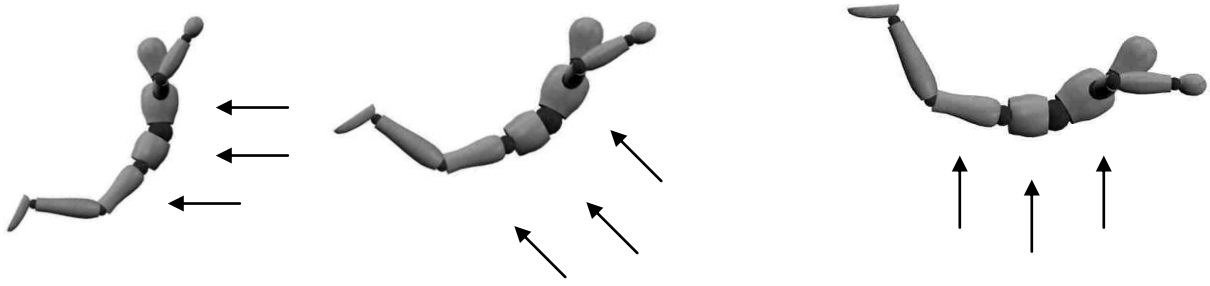
Reading Assignment/Skills Practice:
1.) Review pages 9-12 on Static Line #1.
2.) Read page 13 on Relative Wind Concept.
3.) Practice arch with 5-second count (10 times standing and 10 times on a creeper).

Objectives:
1.) Recall equipment emergency procedures from first jump class
2.) Climb out and hang within 10 seconds from the time the instructor gives the command
3.) Simultaneous release of hands while presenting chest and hips to the relative wind
4.) Understand relative wind concepts: the hill, first 10 seconds of freefall and stability regardless of your body's orientation to the relative wind
5.) Follow radio instructions during talk down
6.) Accurately describe exit, jump and canopy flight to the instructor after the jump is finished.

New Skills:

Relative Wind Concept

The relative wind is the airflow coming from the direction you are going. Upon your release from the airplane the relative wind is coming from the direction that the plane is flying. Once you have reached terminal velocity (constant freefall speed), the direction of the relative wind is now coming from the ground. The directional transition between the relative wind on exit and the relative wind at terminal velocity is referred to as "the hill" and takes approximately 7-10 seconds. For now, your goal on each exit is to initially present and maintain your hips and chest directly into the relative wind in order to establish and maintain stability whether you are performing a hanging, step, or diving exit. When you put yourself in a position to present your hips and chest to the relative wind while arching, you will be able to establish and maintain stability regardless of your body's orientation to the ground.



Exit **5 Seconds** **10 Seconds**

Arrows represent the direction of the relative wind in relation to the ground.

Static Line #3 (PRCP #1)

Reading Assignment/Skills Practice:

1.) Review page 13 on Static Line #2.
2.) Read page 14 on Practice Ripcord Pulls (PRCP's).
3.) Practice arch with 5-second count and PRCP (minimum 10 times standing and 10 times on a creeper while arching).

Objectives:

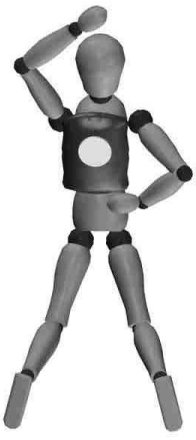
1.) Understand gear check demonstration given by instructor
2.) Climb out and hang within 10 seconds
3.) Pull ripcord on time (within 5 seconds) while keeping chest and hips facing the relative wind
4.) Understand the final approach in relation to the wind
5.) Follow radio instructions (full talk down with an explanation)

New Skills:

Practice Ripcord Pull (PRCP)

To perform a PRCP, begin by presenting your body to the relative wind as you let go of the plane. As you do this, simultaneously bring your left hand above your head and reach your right hand to the lower right corner of the container. Locate the ripcord handle with your right hand and pull it as you return both hands back to their original position. If you have difficulty finding the handle, continue arching while reaching back to locate your right leg strap with your right hand and slide it up under the flaps of the main container to locate the handle. After you pull, hold onto the handle and continue to arch. Pull the handle even though the canopy will be inflating. After checking the canopy, stow the ripcord down the front of your shirt or jumpsuit so your hands are free to fly the parachute. If you happen to toss the ripcord when you pull, you will have to pay a $20.00 replacement fee.

PRCP Side View



PRCP Top View

Static Line #4 (PRCP #2)

Reading Assignment/Skills Practice:

1.) Review page 12 on Aircraft Emergency Procedures and page 14 on Static Line #3 (PRCP #1).
2.) Read pages 15-18 on Gear Checks for the Front Side of the Rig, Altimeter Use, Federal Aviation Regulation part 91 regarding Seatbelt Use, Standby Radio and Landing Patterns.
3.) Practice PRCP a minimum of 10 times standing and 10 times laying on creeper with arch.

Objectives:

1.) Explain the front side of the gear check
2.) Explain altimeter use
3.) Recite FAR's regarding seatbelt use
4.) Climb out and hang within 10 seconds
5.) Keep chest and hips facing relative wind
6.) Perform a PRCP while counting
7.) Fly proper landing pattern and land on standby radio status
8.) Know correct response to aircraft emergency procedures

New Skills:

Gear Checks (front)

The most important rule of gear checks is to perform the check in the same order every time so that nothing is missed. The following items should be inspected prior to every jump:

Emergency Handle – Check to make sure that the handle is properly stowed in the left vertical harness strap and that the velcro is functional.

Reserve Cable – Check to make sure there is a silver ball attached to the end of the silver cable and that the cable passes through the emergency handle. Open the flap that covers the reserve pin and make sure that the pin is securely in place at least ¾ of the way past the closing loop. The reserve cable should be routed through the small silver ring at the top left of the container and through the ring of the Reserve Static Line (RSL) system. Hold the section of the reserve cable inside the emergency handle just above the silver ball and slide the cable back and forth in the housing. The cable should freely slide. If it snags, have it inspected before jumping the rig.

Canopy Release System –Check both three-ring systems to make sure the small ring only passes through the medium ring and that the medium ring only passes through the large ring. Make sure nothing else is routed through or wrapped around the rings that could prevent them from coming undone and releasing the main. To gear check the cutaway cable, look for the cable start on the upper left side of the rig passing through the white locking loop holding the left 3-ring

system in place, through the emergency handle, back around to the right side of the rig, through the loop holding the right 3-ring system in place, and ends on the upper right portion of the rig. Each end of the cable should have approximately 5 inches extending past the 3-ring loops. Finally, check the cable that there are no nicks our gouges that could potentially catch on the 3-ring loops preventing the release of the main.

Reserve Static Line (RSL) – The RSL should be hooked up to the small silver ring on the right rear riser of the main parachute. Make sure that the RSL is routed over the right shoulder and that the reserve cable passes through the small silver loop at the end of the RSL lanyard. Also check that the small silver coil that the red tab is attached to on the right rear riser is not bent in any way that could cause it to catch on something and disconnect the RSL.

Chest Strap – Make sure that the chest strap is securely fastened to the vertical straps of the harness. Check for two extra rubber bands on the right hand side of the chest strap to fasten the radio if you are still on full talk downs or stand-by radio status.

Leg Straps – Check that the ends of the leg straps are folded over a securely sewed in place. Also make sure that the straps are properly routed through the metal hardware and that the friction adapter prevents the straps from coming loose. Unhook the clips from the leg straps and re-connect them ensuring that the clips easily snap back into place. The clips should not stick or remain in an open position.

Stitching/Material – Check over the entire rig to make sure that all stitching is secure and there is no fraying of the stitching or holes in any of the material of the container.

Reserve Data Card – Each rig has a reserve data card located on the back of the left main lift web. Each repack and any other maintenance performed on the reserve parachute are documented on this card by a certified FAA rigger. The reserve must be inspected and repacked every 180 days. Pull the card out and check that it is in date. If it is not, bring it to the attention of your instructor or manifest.

Altimeter Use

An altimeter is a device that registers the elevation above the surface from where you started. In skydiving, the altimeter is specifically used for altitude above the surface of where you intend to land. To use an altimeter, turn the dial on the side of the altimeter so that the needle is on the zero. Do this while you are on the ground so the altimeter will read accurately during your jump. Each number on the altimeter represents 1000ft. As the plane climbs, you will see the needle turn clockwise indicating an increase in altitude. You may check the altimeter you are using with the altimeter located on the instrument panel in front of the pilot. Ask the pilot to show you which gauge it is. Always check your altitude prior to exiting. During your skydive, the needle will go

down. When it reaches zero, you should be on the ground. There are many styles of altimeters. Make sure you are familiar with the proper way to wear and read the one your are using. If you break or lose an altimeter during any of your skydives that does not belong to you, you will have to pay a replacement fee of $150.00. It only takes banging it or dropping it once to break it. Treat it very carefully and make sure you turn it in immediately to manifest when you return to the drop zone following your skydive.

Seatbelt Use

The primary Federal Aviation Regulation (FAR) that covers seatbelt use is FAR Part 91 section 91.107 (SIM pg. 177). According to this regulation, all passengers must be briefed on how to fasten and unfasten the seatbelt they will be using. Seatbelts are required to be fastened while the plane is taxiing out or in, take-off and landing. The pilot is responsible for making sure that the jumpers adhere to this regulation. (You should keep your seatbelt fastened until 1000ft above ground level.)

Standby Radio

Now that you have become accustomed to flying your canopy under full radio instructions, it is time to work toward no longer needing a ground instructor to assist you in flying and landing your canopy. We refer to this process as putting you on "standby" radio. Once you have exited the plane and your canopy has inflated, the ground instructor will come on the radio and give one or two commands to make sure the radio works. The ground instructor will then stop giving instructions unless corrections are necessary. The first two jumps on standby usually require some assistance from the ground instructor, but by the third jump on standby you should be able to fly and land the canopy without any assistance from the ground instructor. Once you have achieved this, you will no longer be on radio command under canopy.

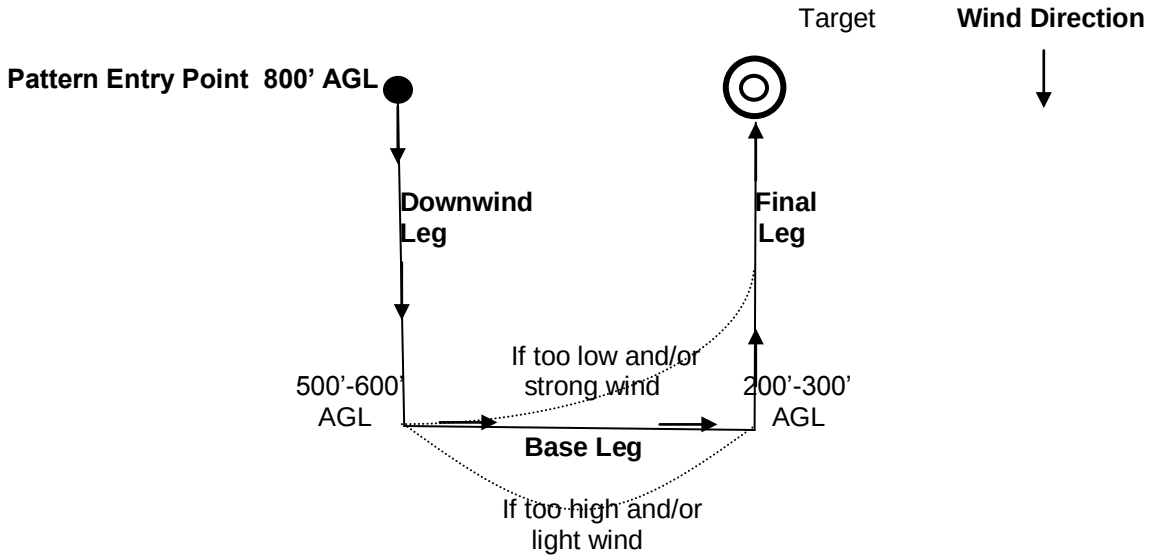
Landing Pattern

Before you go to the plane, plan out your anticipated landing pattern with your instructor including your Pattern Entry Point, Downwind Leg, Base Leg, and Final Leg. Be aware that it is likely you may have to adjust your plan for the actual wind conditions under canopy. Adjusting a good plan is usually much easier than coming up with a whole new plan. After performing your canopy check, it is time to locate the target ("X") and ensure you are on the upwind side of the target. This "should" be the same side of the target that you exited the plane from but fly back towards the target to verify you are in fact flying with the wind (running) and will be able to make it back to the planned landing area in time to fly a normal landing pattern. **By 1,500ft** you should be close enough to landing area so you can clearly read the wind indicator (Windsock/Flag) on the ground. Map out your landing pattern based on the wind indication and determine the location of your pattern entry point.

No-wind or light wind scenario: (See diagram on page 19)

Fly to an area that is slightly upwind of your chosen pattern entry point so you are in position to start your landing pattern at the **correct altitude**. To begin your landing pattern on time you need to plan ahead so that you are crossing over the top of your pattern entry point at 800ft and flying in the same direction the wind is blowing. Upon

crossing over the pattern entry point you are now on the **Downwind Leg** of the landing pattern. At approximately 500-600ft, make a 90-degree turn in the direction of the target to fly the **Base leg** of the landing pattern. The base leg is where you do your major adjustments for accuracy. At approximately 200-300ft, make a turn onto your **Final leg** of the landing pattern. On this leg you should be flying directly into the wind and for accuracy, make smooth turns to line yourself up with the wind and the target as traffic and altitude permit. Above 50ft, make smooth but effective heading corrections to keep your parachute flying into the wind. Heading adjustments should stop at 50ft to shift focus from accuracy to the **landing priorities**; **flying in a straight line**, **having the canopy flying level to the ground**, and **flaring to <u>at least</u> half brakes** on landing.



Downwind or Crosswind landings:

Even with the best intentions, you may find yourself in a situation requiring you to land downwind or crosswind. If it is a light wind day or bad weather is approaching, the winds may shift after you have already entered your landing pattern. If you find yourself in this situation, **DO <u>NOT</u> PANIC OR MAKE ANY DRASTIC TURNS CLOSE TO THE GROUND.** To land downwind or crosswind, flare at the same height above the ground as you would have if you landed into the wind. Do not try to run out the landing as you will be going too fast and may risk serious injury. On a crosswind landing you may have to flare more on one side vs. the other to keep the canopy flying level to the ground. Stay calm, fly your parachute all the way to the ground and plan on performing a PLF.

Static Line #5 (PRCP #3)

Reading Assignment/Skills Practice:

1.) Review pages 15-18 on Static Line #4 (PRCP #2).
2.) Read pages 19-22 on Gear Checks for the Backside of the Rig, Step Exit Footwork and on Local Runway Information.
3.) Practice PRCP a minimum of 10 times standing and 10 times laying on creeper with arch.

Objectives:

1.) Explain the back side of a gear check
2.) Know local runway information and the value of that information
3.) Know how and when to initiate emergency procedures
4.) Accurately draw out landing pattern for current winds
5.) Climb out and hang within 10 seconds with step exit foot work
6.) Keep chest and hips into the relative wind
7.) Perform a PRCP while counting
8.) Fly proper landing pattern and land on standby radio

New Skills:

Gear Checks (back)

The most important rule of gear checks is to perform the check in the same order every time so that nothing is missed. The following items should be inspected prior to every jump:

Cypres – Make sure it is turned on. If it is not already on, turn it on by pressing the yellow button once and releasing. When the red light comes on, quickly press and release the yellow button again. Repeat this step two more times. After the fourth push numbers will appear and begin to count backwards from 9999. The first pause in the countdown sequence will show the remaining battery charge. The charge should be between 5960 and 6400. It will pause again at 5000ft and 100ft. The final reading should be a single 0 with the arrow pointing down. If any other numbers or letters appear instead of a single 0, a rigger should inspect the cypres and the gear should not be jumped.

Rigger's Seal – Check to make sure that the red thread is fastened above the flatter end of the reserve pin and below the closing loop. The red thread should have some slack so that it does not break too easily, but not so much that you can slip it off the end of the pin. The thread should pass through the gray seal of the rigger. The seal must have an identifiable mark on it that let's you know which rigger packed the reserve.

Reserve Closing Loop – Check that the loop does not have any fraying and that the reserve pin is the only item passing through it.

Ripcord Cable – Make sure the ripcord cable is routed properly from the lower right of the container through the soft housing and then through the closing loop. Check for any nicks our gouges in the cable especially the portion that passes through the closing loop.

Main Closing Loop – Check to make sure the ripcord cable passes through the loop. Also check the loop for any fraying. If there is mild fraying, have an instructor check it to make sure it is okay. In case of severe fraying, the rig should not be jumped until the closing loop is replaced.

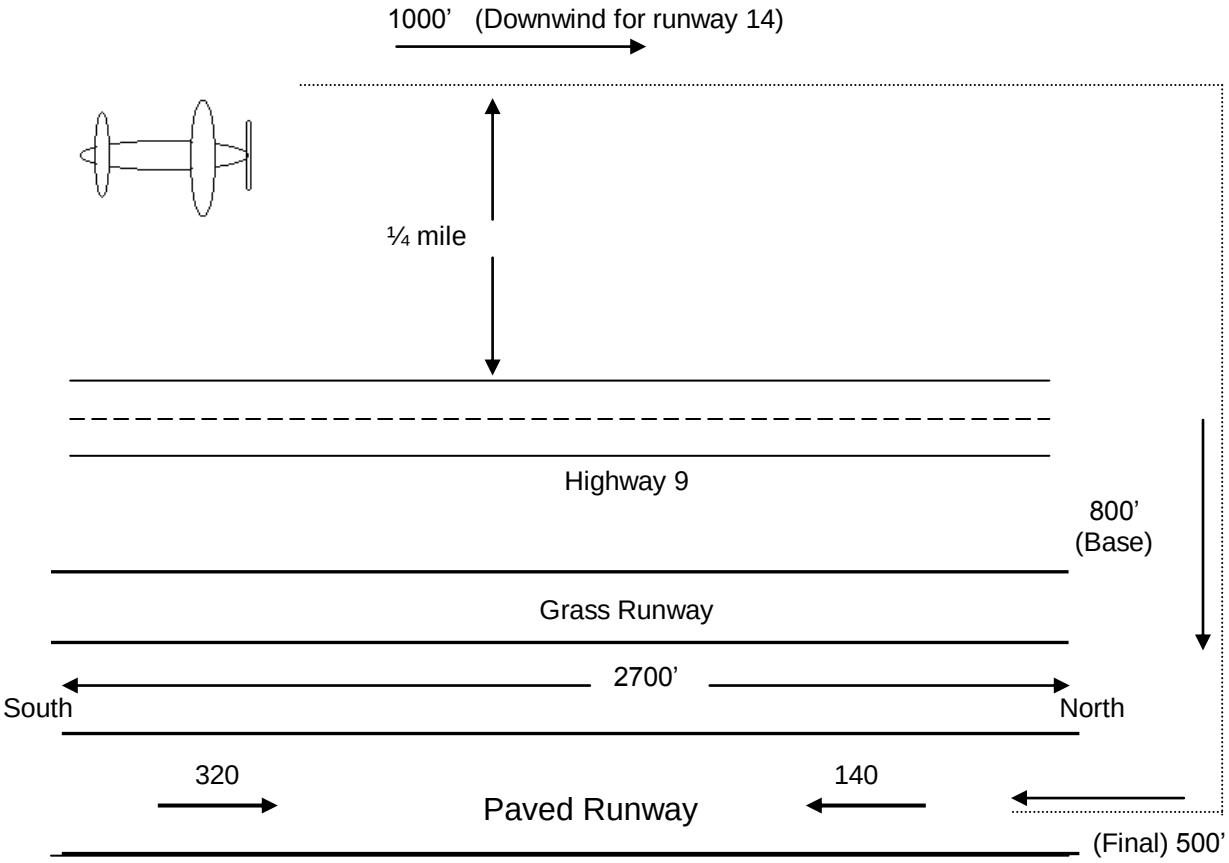
Static Line – If you are still on static line status, make sure that a static line is hooked up to the rig. The static line should have the cable portion routed through the closing loop with the excess tucked into the soft housing on the lower right of the container. The static line should have a few inches folded over into a loop on the left side of the container secured by a rubber band wrapped around it three times. If the static line is not secured in this manner, the static line cable can be pulled prematurely when climbing out or exiting the plane.

Local Runway Information

There are two runways at Harvey Field. The first is a paved runway that runs generally north and south on the west side of the airport and the second is a grass runway that runs parallel to and just west of the paved runway. The paved runway when landing or departing to the north is “runway 32”, standing for it’s compass heading of 320 degrees. When taking off or landing to the south it is called “runway 14”, referring to it’s compass heading of 140 degrees. The same identification numbers are used if a plane is landing on the grass runway. The length of each runway is 2650 feet or approximately a half-mile. The runways may be used as a scale for estimating distances from the air.

The traffic pattern for airplanes is very similar to the landing pattern you fly under your canopy. Airplanes set up in a right hand pattern for landing on runway 14 and a left hand pattern for the 32. Their downwind leg is flown parallel to the runway approximately ¼ mile west of highway 9. Airplanes enter the traffic pattern on the downwind leg at an altitude of 1000ft AGL (Above Ground Level). The plane will then turn on a base leg at approximately 800ft and onto final at approximately 500ft. Watch out for beginning pilots, as they will take the downwind leg out for some distance. If you are jumping at or near the airport, you must stay out of the landing pattern. Also, when landing at the airport, you must cross the runway above 1000ft to ensure that you are not an obstacle disrupting the flow of traffic in the air traffic patterns.

The take-off pattern is the same as the landing pattern except that the planes are climbing in altitude. Regardless of taking off or landing, all planes climb and descend to the west.



There are other reminders that we need to give you for jumping at this drop zone. The first is the airport relationship with the neighbors and airport tenants. It is very important to maintain friendly working relationships with the people that live under the take-off and landing patterns as well as the tenants at the airport. To help maintain these relationships, our jump planes need to make sure that they fly a very specific pattern as to minimize the noise level. As you have probably noticed, our planes tend to be louder due to having a full load of jumpers on board. As skydivers, we need to make sure that we are also following all USPA, FAA, and airport rules so that we do not interfere with normal flight operations at the airport. Remember that Harvey Field is an airport first, and skydiving is only one of the aviation activities in operation here. The second reminder is that many pilots are not aware of or overlook the fact that Harvey Field has a drop zone designated as continuous use. The airport and student fields are both marked for skydiving activity on flight maps but you should never count on pilots to be aware of this designation. It is small and almost always overlooked by pilots when planning their routes. Make certain when spotting that you scan very carefully for other

air traffic in the vicinity of jump operations. The third reminder is that there are a lot of student pilots at our airport working on getting their license and different ratings. Student pilots are learning just like you and may make mistakes in their flying. Also, a pilot working on obtaining their instrument rating will most likely have a shield covering the window in front of them so they cannot see out and must rely on the instrument panel. The danger in doing this is they will not be able to see you. There will be an instructor in the plane with them, but the instructor may be paying attention to the student versus looking out of the plane for any potential collision hazards.

Step Exit Footwork w/ Hanging Exit

Start by standing on the step when given the climb out and hang command by the instructor. After you are standing on the step, cross the left foot over the right foot so that you are standing on the outer edge of the step on the left foot. Finish sliding your hands out as far as you can on the strut and then hang. Remember to step off with your left foot when you hang.

5-Second Delay

Reading Assignment/Skills practice:

1.) Review pages 19-22 on Static Line #5 (PRCP #3).
2.) Read pages 23-24 on 5-Second Delay, Three Rules of Pulling, Pilot Chute Hesitation, Hard Pulls, Total Malfunction, Exit Point and Opening Point.
3.) Join USPA (see pg. 77).
4.) Sign up for packing class.
5.) Practice pulling a minimum of 10 times standing and 10 times laying on creeper arching with new count.

Objectives:

1.) Understand and be able to perform a complete gear check
2.) Good climb out using step exit footing
3.) Follow new count and pull on 5 seconds. The new count is arch thousand, two thousand, three thousand, reach thousand, pull thousand, check, arch thousand, two thousand, three thousand, four thousand, five thousand, check canopy
4.) Maintain arch and presentation to the relative wind on exit
5.) Know three rules of pulling
6.) Understand pilot chute hesitation and hard pull and know correct responses
7.) Correctly explain a total malfunction and demonstrate proper response
8.) Determine with the instructor the exit/opening point and anticipated landing pattern
9.) Fly proper landing pattern and land without radio assistance

New Skills:

5-Second Delay

The count for a 5 second delay will be arch thousand, two thousand, three thousand, reach thousand, pull thousand, check, arch thousand, two thousand, three thousand, four thousand, five thousand, check canopy. To perform a 5 second delay, look up and let go of the plane on the instructors command, arch hard for three seconds and then simultaneously bring your left hand above the top of your head and grab your handle with the right hand. As you pull the ripcord, simultaneously return both arms to your initial arch position. Remember to arch hard while pulling to maintain stability. If you go unstable, pull immediately. You do not have the luxury of wasting time and altitude trying to get stable. Make sure you hold onto the ripcord until the canopy is inflated and you are able to stuff it down the front of your shirt or jumpsuit. If you let go of the handle and it is lost you will have to pay an additional $20.00 for the replacement cost.

3 Rules of Pulling

The first and most important rule of skydiving is to pull. If you go unstable and are not able to regain stability, PULL! Do not waste valuable time trying to fix a problem that you cannot fix within a couple seconds. The second rule is to pull on time whether you are stable or unstable. The third rule of pulling is to pull on time and stable. Pulling on time and stable is your goal for each jump.

Pilot Chute Hesitation

Pilot chute hesitation occurs when the pilot chute gets stuck in the jumpers' burble immediately after pulling. This is caused by a very stable body position at pull time. The easiest way to prevent and/or fix pilot chute hesitation is to look over one shoulder after pulling. This will allow the airflow into the burble to help the pilot chute create sufficient drag to deploy your main parachute.

Hard Pull

A hard pull is when it is very difficult or impossible to pull the ripcord. A hard pull may be caused by a misrouted ripcord, a gouge in the ripcord cable that catches on the closing loop, or foreign debris located in the housing for the ripcord. To prevent a hard pull, make sure you complete a thorough gear check before putting on the gear and receive a pin-check in the plane prior to exit. If you do experience a hard pull, try pulling a second time, and if you are not successful, initiate emergency procedures.

Total Malfunction

A total malfunction is when you attempt to activate deployment and the container does not open. Quickly check over your shoulder, making sure you are not experiencing pilot chute hesitation. If your parachute does not deploy, initiate emergency procedures.

Exit Point

The exit point is the pre-determined location where you let go of the aircraft. To determine the exit point you must know where you want your opening point to be. Once you have determined the opening point, you will then need to estimate your drift in freefall from the time you let go of the plane until the time you deploy your parachute. Now decide where you should exit the plane, accounting for drift, so that you will be under canopy in the area of your pre-planned opening point. (Remember, your drift is directly related to the direction and speed of the winds at your freefall altitudes.) **Please note that for freefall delays of 15 seconds or less, the exit point and opening point will be synonymous.**

Opening Point

The point at which you deploy the parachute and are no longer in freefall is called the opening point. Prior to jumping, you will need to determine where you want to activate deployment in relation to the target area based on the current wind conditions. Your opening point should always be on the upwind side of the target.

10-Second Delay #1

Reading Assignment/Skills Practice:

1.) Review pages 23-24 on 5-Second Delay, Relative Wind Concept and PLF's.
2.) Read pages 25-27 on the Cypres AAD, FAA Regulations regarding Packing Intervals for the Main and Reserve, Getting Ready in Plane (In-plane Preparation), Spotting (including Go-Around), 10-Second Delay #1, Box Position and basics to Correcting Stability Problems in Free-fall.
3.) Practice arch and count with transition into "Box" position 5 times on a creeper.
4.) Practice 5 PLF's to each side.

Objectives:

1.) Perform proper gear check without help (but under instructor supervision) and demonstrate knowledge of purpose and use of AAD
2.) Know and understand FAA regulations regarding packing intervals for the main and reserve
3.) Be ready – seatbelt stowed, helmet on with strap stowed, wearing goggles and altimeter, on knees and looking for aircraft nearby 1000ft prior to exit altitude
4.) Observe the instructor's interaction and communication with the pilot and the instructor's movements regarding spotting
5.) Perform climb out for hanging exit using step exit footwork
6.) Perform a stable exit on heading (less than 360 degrees of rotation) with freefall awareness and a smooth and symmetrical transition to the "box" pulling on time (at 10 seconds) while stable.
7.) Fly proper landing pattern with PLF on landing

New Skills:

Cypres AAD

The basic function of the student Cypres, is to open the reserve parachute if you are going too fast through approximately 1000ft above ground level (AGL). The setting for an expert Cypres is 750ft AGL and a tandem Cypres is 2000ft AGL. The Cypres is a back-up device only. See the instructions under gear checks for turning on the unit. To turn off the Cypres, you will repeat the same steps you used to turn it on. Quickly press the yellow button and release. When the red light comes on, very quickly press the yellow button again. After the fourth time of pressing the yellow button, the zero and carat (small triangle) on the display will disappear. If anything shows in the display, you have not succeeded in turning the unit off.

For future reference, it is very important to follow the manufacturer guidelines regarding maintenance of your Cypres unit. The batteries need to be changed every two to four years depending on the model or sooner if the battery charge becomes too low. The life span of the Cypres is 12 years if it has been properly maintained. Every 4 years the unit should be sent in for inspection. A certified rigger should install the Cypres and new batteries. It is your responsibility when you have your own gear to make sure that new batteries are purchased for the rigger to install as well as sending the unit to the manufacturer for inspection.

Packing (Main/Reserve)

FAA regulation part 105 covers all skydiving activity. Packing is specifically covered under Advisory Circular 105-2c #7 which states the main must be repacked by the jumper that will be jumping it, a certified rigger or a packer under the supervision of a rigger within 180 days before the date of its use. It further states that the reserve is required to be inspected and repacked every 180 days by a certified FAA rigger.

You will be required to take a packing class prior to being cleared for solo status. Sign up for the packing class at manifest. You must pack a main parachute without assistance to meet your "A" license requirement.

In-plane Preparation

Being properly prepared in the plane is just as important as the skydive. You should begin your in-plane preparations 1000ft prior to your exit altitude so that you will not be rushed. These preparations include making sure your seatbelt is stowed properly under the pad of the plane, your helmet is on with the excess chin strap securely stowed, goggles are on and secure, altimeter is on (check altitude before exiting), gear has been rechecked, clothing is secure and you are checking for aircraft in the area by looking out the windows. You should also mentally and verbally review the skydive prior to exit. With proper preparation, many problems can be avoided.

Spotting

Spotting is a critical skill that you need to develop to open your parachute in the correct area, minimizing the chance of landing in an unfamiliar or potentially hazardous area. Plan on getting onto your knees 1000ft before your exit altitude. Once you are on your knees, begin looking out of the aircraft checking for any other planes in the air and locating the landing area. Planes that may be a hazard are those that are at or near the same altitude as the plane you are in and those approaching the airspace above the drop zone. The planes approaching the target may be in the way by the time you plan on exiting. Point out planes that you see in the immediate area and around the same altitude as you to the pilot.

As you are coming onto jump run, the pilot will either nod at you or call out "door!" Make sure you hold the door handle securely so you can close the door quickly, if necessary. Yell "door" release the latch and open it just a few inches to allow air into the cabin. Check the interior of the plane for pilot chutes or any visible canopy material. Open the door completely by latching it to the under-side of the wing. To accurately spot, you must put your head outside the door in an effort to locate the landing area. Look forward through the prop and then down the side of the plane at the ground to verify the line-of-flight across the ground. In other words, you are double-checking that you are headed in the correct direction for your jump run. Next, look out at the horizon and then follow a straight line down to the ground directly below the step. This will let you know the exact point on the line-of-flight the plane is flying over.

You may need to give corrections to the pilot to help direct the plane to your chosen exit point. When giving a correction tell the pilot "5 right" or "5 left" depending on the desired correction. He/she will then change the line-of-flight by five degrees in the direction you requested. You may also give a hand signal to the pilot by holding up all five fingers of your left hand and then make a fist pointing your thumb to the left or right. The pilot will not give you more than 5 degrees direction change at a time. When the plane is lined up to cross the target exit point, start climbing out so you are ready to leave when you reach the exit point. Don't start your climb out at the exit point. If you wait until the exit point is below you to climb out, you will be late and increase your risk of landing out.

Go-Around

Occasionally you may need to ask for a go-around. Asking for a go-around is acceptable in the following situations: the airplane is too far past your exit point for you to make it back to the landing area under canopy, the jump run is incorrect, air traffic prevents you from leaving the airplane, you are unable to locate the landing area. Go-Arounds should be kept to a minimum.

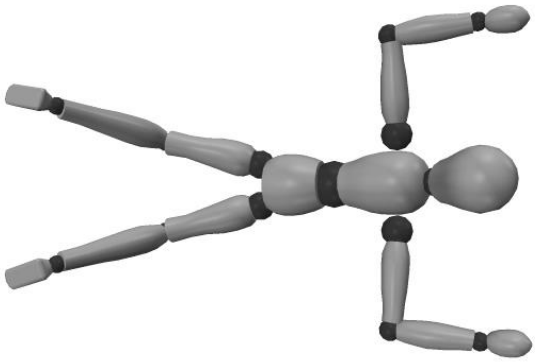
10-Second Delay

Your count for all 10 second delays will be arch thousand, two thousand, three thousand, four thousand, five thousand, six thousand, seven thousand, eight thousand, reach thousand, pull thousand, check, arch thousand, two thousand, three thousand, four thousand, five thousand, check canopy. To perform your first 10-second delay, start with a hanging exit using step exit footwork and immediately arch hard. At approximately 6-7 seconds, transition into a "box" position and hold until pull time. The transition needs to be done gradually and not as a sudden movement. Sudden movements increase your chances of losing stability. If you begin to turn, make sure your arms and legs are symmetrical. If at any time you lose stability and are not able to regain it, or you are near your pull altitude of 3.5k, pull immediately! Look over one shoulder immediately after pulling to prevent pilot chute hesitation. Remember to re-arch, count to five and perform a canopy check after pulling.

Neutral Freefall Body Position or "Box" Position

The neutral freefall body position is performed in a belly-to-earth position. As the name implies, this is your neutral freefall body position where you are not moving forward, back, right, or left. It is the foundation from which you will learn to maneuver around the sky. Your body should be in an arched position with 90-degree angles at the shoulders and elbows. You should be able to see your hands in your peripheral vision. Your legs should be slightly apart so that the knees are in line with the shoulders and the knees should have a 45-degree bend. The two most important factors for successfully performing this position are to have a good arch and to keep your body symmetrical.

“Box” Position Side View



“Box” Position Top View

In studying these illustrations take note of the body’s symmetry in this position in both height and width.

Correcting Stability Problems

New jumpers may experience some stability problems now that they are falling for longer periods of time and reaching terminal velocity. The two most basic problems are losing stability (tumbling) and uncontrolled turns/spins. If you find that you are losing stability, press your hips down and lift your knees up to achieve a better arch position. A good arch will stop you from tumbling through the sky. If you find that you are in an unintentional turn or spin, there are three basic things you can do to help stop the turn. First is to check the position of your arms. Make sure they are in the correct “box” position. Second, click your heels together to make sure the legs are symmetrical. It is very easy to let one leg drop slightly below the other causing a turn. Third, try to turn in the opposite direction you are currently turning. A good body position will allow you to have more success and a lot less frustration. Make sure you practice your skills on the ground prior to jumping.

10-Second Delay #2

Reading Assignment/Skills Practice:

1.) Review pages 25-28 on 10-Second Delay #1.
2.) Read pages 29-30 on use of RSL, Step Exit, Wave-off and Turbulence in the Landing Area.
3.) Practice step exit a minimum of 10 times at plane or mock-up
4.) Practice box position, count, wave-off and pull a minimum of 5 times on creeper.

Objectives:

1.) Know purpose and use of RSL
2.) Determine exit point with instructor's assistance
3.) Get on knees in plane and ready 1000ft prior to exit altitude, open door for spotting and begin to spot
4.) Perform climb out for step exit and step exit
5.) Increase awareness and stability, achieve box position prior to wave-off, wave-off and pull on time while stable
6.) Identify areas of turbulence in the landing area including the effects of the turbulence and how to fly your canopy in turbulence

New Skills:

Reserve Static Line (RSL)

The RSL is a back-up device that automatically pulls your reserve ripcord when you jettison (cut-away) your main parachute. If you only pulled your emergency handle far enough to initiate a cut away of your main parachute, but not far enough to pull the reserve ripcord, the RSL would initiate reserve activation. The RSL is a lanyard (small strip of black ribbon) having a brass fitting and red tab on one end and a silver ring on the opposite end. A properly connected RSL has the brass colored fitting attached to the small silver ring located on the back of the right riser group just above the 3-ring system. It is then routed over the right shoulder without being routed around anything, over the Cypres control unit cable, under the reserve flap, and has the reserve cable passing through the silver ring at the end of it.

To disconnect the RSL, pull on the red tab thereby releasing the brass fitting from the silver ring on the back of the right riser group. To re-connect the RSL, place one end of the hook through the ring, pull on the red tab with one hand while you squeeze the two parts of the hook together and then release the red tab. Make sure the hook is locked in place. Feel free to try this on your own.

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Step Exit

To perform a step exit, start from a kneeling position inside the plane. Place your right hand on the rear section of the doorframe and the left hand on the front section of the doorframe. Step out onto the step with the right foot and grab the strut with the right hand. Finish stepping out onto the step with the left foot and grab the strut with the left hand. Slide your hands further out on the strut while crossing the left foot over the right foot so that you end up standing on the outer edge of the step on your left foot. Your

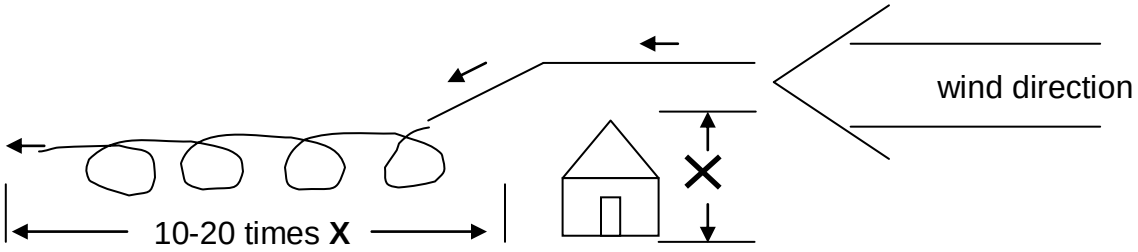
hands should be in front of you about shoulder width apart on the strut. Your right leg should be relaxed, trailing in the wind slightly behind you. Step gently straight out to the right as you let go and arch. Transitioning to the proper arch position immediately will help ensure stability. The key is to perform the step exit in a gentle and relaxed manner.

Wave-off

The wave-off is a critical skill to learn. Whenever you are in the air with one or more jumpers, you must signal when you plan to initiate deployment as to avoid any possible collisions. Skydivers can drift in the air and unintentionally fly into the airspace of another jumper. It important to notify other jumpers around you before you initiate deployment. The signal jumpers use to let others know that they are pulling is the wave-off. To perform the wave-off, at approximately 500ft before you plan on pulling, wave both arms by quickly pulling the hands in front of the face and then back out a little wider than their normal position for the box. Repeat this once more to make sure that all jumpers in the area are able to see the signal. Make sure that you also look around to ensure that your airspace is clear of other jumpers. After you have done your wave-off and checked the area, you can pull.

Turbulence in the Landing Area

Turbulence is the disruption of airflow. Generally turbulence is caused by the wind blowing and hitting an obstacle, resulting in the air on the other side of the obstacle becoming unstable. Turbulence often occurs near runways, alongside roads, where two areas of different textures meet (such as grass and a paved runway), behind other canopies, over irregular terrain and downwind of the propeller wash of a taxiing aircraft. Remember the stronger the winds, the stronger the effects of turbulence will be. Flying your canopy in turbulence presents a challenge when landing as the turbulence can cause extra lift or a sudden loss of altitude in your landing pattern. When flying in turbulence, maintain the desired heading using smooth but effective toggle input, fly full speed or as directed in the canopy owner's manual and prepare to PLF. It is always better to land in an open area away from obstacles in steady winds allowing for a safer landing. Expect turbulence for a distance of 10-20 times the height of an obstacle on the down wind side.



10-Second Delay #3

Reading Assignment/Skills Practice:

1.) Review pages 29-30 on 10-Second Delay #2.
2.) Read pages 31-33 on Wing Loading for the Main and Reserve, Rear Riser Turns and Obstacle Avoidance and Landings.
3.) Practice box position, count and pull a minimum of 5 times on a creeper.

Objectives:

1.) Understand wing loading and how to calculate wing loading for the main and reserve canopies
2.) With instructor, select climb out and exit points on aerial photograph
3.) Get on knees in plane and ready 1000ft prior to exit altitude, open the door and spot with minimal help
4.) Perform proper climb out and step exit
5.) Heading awareness and maintain stability, wave-off and pull on time while stable
6.) Perform rear riser turns and flares with brakes stowed and unstowed above 2000ft
7.) Know how to locate and avoid obstacles and proper procedures for obstacle landings including power lines, trees, buildings/fixed objects and water

New Skills:

Wing Loading

Wing loading is the weight load being supported by the canopy. To calculate the wing loading of the main or reserve, divide the jumper weight by the square footage of the canopy. The jumper's weight is the combined total of body and equipment weight. For example, if you were jumping a medium or large student rig, you would divide your body weight plus 20lbs. by 290 square feet. Each manufacturer provides a maximum recommended wing loading for a canopy. This guideline should be followed to allow the canopy to perform properly, according to its design.

Wing loading examples

Jumper's exit weight	215lbs	Jumper's exit weight	215lbs
Divided by canopy size	290 sq. ft.	Divided by canopy size	195 sq. ft.
Wing loading	.74:1	Wing loading	1.1:1

Wing loading for the canopies you are jumping	Main	Reserve
Exit weight (your weight plus the weight of the rig)	_____	_____
Divided by canopy size	_____	_____
Wing loading	_____	_____

Rear Riser Turns
Pulling down on the rear riser on the side in which you wish to turn performs a rear riser turn. Rear riser turns should be used immediately after your canopy is open to avoid any possible canopy collisions with another jumper. After you are sure the area near you is clear, unstow your brakes and continue flying your canopy. Rear riser turns may also be used in case of a broken steering line or an injured arm. Rear riser turns with the brakes stowed and unstowed are required for your "A" license.

Obstacle Avoidance – The first rule of obstacle avoidance is to look away then turn away. If there is no way to avoid hitting an obstacle, follow the procedures below.

Power Line Landings – When landing in power lines, bring the steering toggles down into half brakes to minimize the speed in which you will hit the lines. Keep your legs tightly together and your arms tightly into your chest. Try to fly parallel with the power lines. The goal is to be as narrow as you can to prevent getting hung up on the lines or touching more than one power line at a time. In the event that you become suspended in the power lines, do not allow anyone to touch you. Wait for the fire department to arrive and determine that the utility company has turned off the power to the lines. Do not try to get down to the ground on your own. If you land in power lines at this drop zone, you will be billed by the PUD for the cost of turning the power off and back on again.

Tree Landings – When landing in trees is your only option, aim for the center of a large tree. Bring the steering toggles down into half brakes to minimize the speed in which you will hit the tree. Keep your legs tightly together and pull your knees up as high as you can in front of your mid-section. While holding the steering toggles, pull your hands and forearms close together in front of your chest and tuck your face behind them. Grab the tree and hang on once you have stopped traveling forward. Do not try to get down on your own. Most jumpers that land in trees do not get hurt from hitting the tree. They injure themselves by trying to get down on their own and falling to the ground.

Building Landings – If it looks like you will be landing on top of a building, stop any turns in time to make sure you are ready for a PLF. Make sure your feet are the first thing to make contact. On high-wind days, be ready to pull your emergency handle to cut away your main parachute and prevent being dragged off the roof. If it looks like you will hit the side of a building, try to make minor turn so that you glance off the side of the building at a 45 degree angle versus impacting it head on. Make sure you are in a half flare and hit the object feet first. Be prepared to hit the ground hard and PLF.

Water Landings – Avoid the water if at all possible. Once you have determined that a water landing is inevitable, unthread your chest strap and fly into the wind. You will not fall out of the equipment. If you have goggles on over your eyes, take them off or get them propped up on your helmet. They will fill with water and make it very difficult for you to see. As you approach the water, bring the steering toggles down into half brakes and be ready to PLF. Your depth perception will be off over water so do not try to flare completely or cut away your main. Take a big breath of air as you hit the water, let go of the toggles and remove the top half of the rig – similar to removing a school

backpack. Unsnap the leg straps and swim down and away from the equipment, or using a gentle leg kick, swim free of the leg straps. Be sure to swim completely clear of the canopy before surfacing. If you become disoriented and do not know which way is up, blow a few bubbles and swim the direction the bubbles travel. They will travel up to the surface. The other thing you can do is note which direction the suspension lines are going. They will also go up to the canopy at the surface. Do not try to save the gear. Save yourself.

15-Second Delay #1

Reading Assignment/Skills Practice:

1.) Review pages 31-33 on 10-Second Delay #3.
2.) Read pages 34-36 on Sport Rig Gear Check, 15-Second Delay, Upper Body Turns, Freefall Altimeter Use and Mid-Braked Canopy Turns.
3.) Using an Alti Trainer, practice turns with altitude checks, wave-off and pull on a creeper a minimum of 5 times.

Objectives:

1.) Understand how to gear check a sport rig understanding the differences between student and other sport rigs
2.) With instructor, determine exit and opening points
3.) Prepare for jump at the proper altitude with minimal instructor help (removing seatbelt, getting on knees, looking for aircraft, handles check, etc.)
4.) Perform spotting duties; open the door and spot with minimal help from the instructor
5.) Perform proper climb out and step exit
6.) Good box position with a controlled 3-second right turn
7.) Wave-off at 4k and pull by 3.5k
8.) Perform mid-brake turns above 2k
9.) Verify USPA membership with manifest

New Skills:

Sport Rig Gear Check

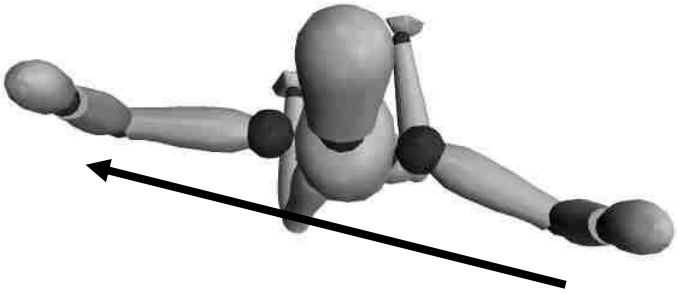
When you gear-check a sport rig, you may and will encounter several differences from student gear. First, a sport rig may or may not have an AAD. If there is an AAD, it may not be a Cypres. You will need to find out from the jumper if they have an AAD, what type it is, and how to properly check the power and calibration. Second, there may or may not be an RSL. If there is an RSL, it could be on the right or left side of the rig and the jumper may have opted to disconnect it. Third, there may be one or two closing pins for the reserve. Ask the jumper how many pins should be there. If the answer is two, make sure the rigger's seal is on the bottom pin. Fourth, a curved pin closes the container for the main. You will need to check to see that the pin extends ¾ of the way past the closing loop. Fifth, the pilot chute is no longer inside of the container. Most jumpers have their pilot chute located at the bottom of the container, but you may occasionally find one mounted on the leg strap. Make sure that the bridle is not "exposed" (hanging out where it could be snagged) and that the pilot chute is completely in it's pouch with the handle out. Next, there are two handles for emergency procedures on a sport rig. The right handle is for cutting away and the left handle is for deploying the reserve. Check that the cables for both are routed correctly and the handles are secured in velcro. The final difference is that the leg straps are "step throughs" (they no longer have clips). Other than the clips, check the leg straps the same as you would for student gear. All other parts of the gear check will be the same as your student gear. If you find something you are not sure about, or you know is wrong, bring it to the jumper's attention.

15-Second Delay

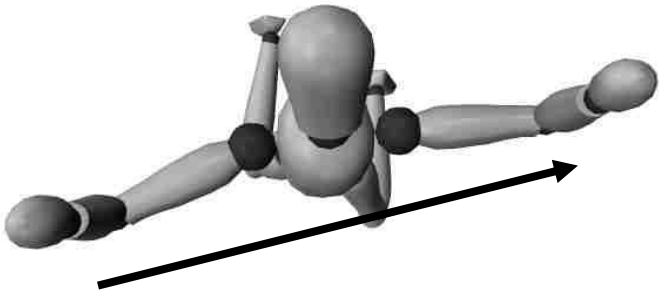
On this jump, you no longer count to establish pull time. Therefore, it will be necessary to check your altimeter regularly during the jump. To perform your first 15-second delay, start with a step exit and immediately arch hard. At approximately 6-7 seconds, transition into a "box" position and check altitude. If you are stable and above 4.5k, initiate a 90-degree turn to the right and check altitude, (if you are still above 4.5k, then you may do a 90-degree turn to the left and check altitude). Only perform the turns if you are stable and are above 4.5k. Wave-off at 4k and pull by 3.5k. Remember to check over your shoulder, count to five and perform a canopy check.

Turns

Upper-body turns: Only use shoulders and arms. Do not use legs….yet.



Left Turn



Right Turn

Arrows illustrate the direction in which air is being deflected by the arms and shoulders only. This deflection of air causes a rotation in the opposite direction.

Using the Altimeter in Freefall

Instead of counting as you have done on previous jumps, you will now use your altimeter to determine your altitude and when to pull. Check your altitude every 5 seconds, after each maneuver, and if you experience difficulty with a maneuver. At 4000ft wave-off, and then pull.

Mid-Brake Canopy Turns

To perform mid-brake turns, start by flying the canopy in half brakes. Then either pull down further with one steering loop or let up on one steering loop to turn. Pulling down will cause you to turn in the same direction as the loop you are pulling down on. Letting up will cause you to turn in the opposite direction.

15-Second Delay #2

Reading Assignment/Skills Practice:

1.) Review pages 34-36 on 15-Second Delay #1.
2.) Read pages 37-39 on Inspecting and Maintaining the Canopy Release System (3-ring), how to use Winds Aloft Chart and 15-Second Delay #2.
3.) Practice and demonstrate 90 degree turns on a creeper with eye contact a minimum of 10 times.
4.) Using an Alti Trainer, practice the dive flow sequence with turns, altitude checks, wave-off and pull a minimum of 5 times. Practice until perfect.
5.) With a sample winds aloft forecast, determine the spot, climb out point, exit point and landing pattern for a minimum of 5 different wind conditions.

Objectives:

1.) Verbalize and demonstrate the inspection and maintenance procedures for the canopy release system (3-ring)
2.) Understand and properly use the winds aloft chart to determine climb out, exit, and opening points on the skydive
3.) Perform in-plane preparations without help from the instructor
4.) Maintain stability on exit
5.) Perform altitude checks, 2 controlled 90 degree turns, wave-off at 4k and pull.
6.) Perform deep braked turns above 2k
7.) Fly a proper landing pattern and perform a stand-up landing

New Skills:

Canopy Release System (3-ring) Operation and Maintenance

Check the webbing to make sure that the largest of the 3 rings is anchored securely to the harness. Check all three rings for any nicks or deformities that may not allow them to release properly. Check the loop that the cut-away cable passes through for any fraying. Check both cables for any nicks or gouges that could get hung up on the loops preventing the 3-ring from releasing. When it is time for the reserve to be repacked, pull the cut away and remove the cut-away cables. Clean the cables lightly with 3 and 1 oil or silicone and inspect for kinks, nicks, or any exposed cable.

You will need to learn to disconnect and re-connect the 3-ring release system. To disconnect the 3-ring, pull the cut away handle/cables until the ends of the cable pass through the locking loop that secures the 3-ring. Make sure that the rings can easily come undone. To re-connect, place the risers and container on the ground with the rings facing up. Starting on one side, slip the medium ring at the end of the riser through the large ring on the container. Next, slip the small ring through the medium ring. Finally, slip the loop through the small ring and push it through the riser grommet and then through the fitting on the end of the cut away cable housing then slide the cut-away cable through the loop. It may take a few tries before you are successful in getting it hooked up. Repeat the same steps for the other side. (This is only a guide.

Always ask a rigger or instructor to ensure that you have assembled the canopy release system correctly.)

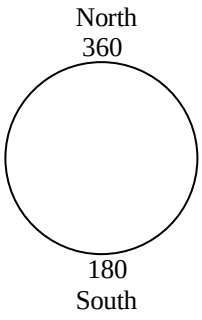
Winds Aloft Chart

A winds aloft chart is a chart showing forecasted wind conditions in direction and speed at 3000ft, 6000ft, 9000ft and 12000ft. The chart also gives the current temperatures at the same altitudes. The chart is normally updated in the morning and again in the afternoon, or as conditions change. The winds aloft chart is a valuable source in helping you to determine an ideal spot for exiting the airplane that will easily allow you to return to the target. This chart will help you estimate distance and direction of your drift in freefall so you can determine an exit point that will allow you to drift to your chosen opening point. Your opening point should be somewhere on the upwind side of the target and the winds at 3000 feet will help you decide where the opening point should be. The chart will also allow you to better plan your landing pattern.

In order to use the chart in helping determine the spot for your jump, start by looking at the speed of the winds. The higher the winds, the farther the spot should be from the target. Next read what direction the winds are "out of" (or coming from). Let's say the wind chart says 270 under the direction column. This means the winds are out of the west and headed east. You will want to plan your jump run so that you are headed west (into the wind) and exit on the west side of the target.

To use the wind chart in determining the point you wish to open your parachute, read the information at 3,000ft. This information will help you figure out which side of the target is the upwind side of the target. The upwind side of the target is the side you want to open your parachute. The speed will help you determine how far up wind you should open. The next variable you will need to consider is your exit point. Your exit point is the point over the ground where you leave the airplane. In order to estimate where this point should be, you must consider the drift you will experience in freefall in relation to your selected opening point. Estimate your freefall drift using the wind direction and speeds in freefall at 6,000, 9,000, and 12,000ft. (To convert knots to mph, multiply the knots by 1.15 to get mph. Example: 12 knots x 1.15 = 13.8mph or rounded 14mph.)

Date _____



Altitude	Direction in Degrees	Speed in knots	Temp. in Celsius
3000	330	10	Not reported
6000	270	10	10
9000	270	10	9
12000	270	20	6

15-Second Delay #2

To perform your second 15-second delay, start with a step exit and immediately go to your arch. At approximately 6-7 seconds, transition into a “box” position and check altitude. As long as you are stable and above 4.5k, initiate a 90-degree turn to the right and check altitude, then a 90-degree turn to the left and check altitude. Only perform the turns if you are stable and altitude aware. Wave-off at 4k and pull, hold arch, check deployment, count to five and perform a canopy controllability check.

45-Second Delay #1

Reading Assignment/Skills Practice:

1.) Review page 24 on Exit Point and pages 37-39 on 15-Second Delay #2.
2.) Read pages 40-44 on Rules Regarding Cloud Clearance and Visibility above and below 10k msl, Pilot Briefing, The Count, Door Dive Exit, Center Turns, Back Loop, and Mid-Braked Approach to Landing and pages 75-76 on Large Plane Briefing.
3.) Practice 360 degree turns a minimum of 10 times each direction on a creeper.
4.) *If possible*, go to a swimming pool and practice forward and backward somersaults in the water a minimum of 20 times each.
5.) Practice altitude checks after each skill or every 5 seconds.

Objectives:

1.) Learn FAR's regarding cloud clearance and visibility above and below 10k msl
2.) Brief the pilot on jump run direction, altitudes and passes
3.) Accurately spot the plane and exit at the proper time
4.) Perform a stable door dive exit while maintaining heading
5.) Perform back loop, a 360 degree right center turn, 360 degree left center turn, wave-off at 4k and pull by 3.5k
6.) Fly a braked approach in the landing pattern until 100ft and make a normal landing

New Skills:

Cloud Clearance

At no time may a skydiver jump into or through a cloud or come closer to clouds than the information listed below.

The minimum cloud clearance for below 10,000ft MSL is 3 statute miles for flight visibility, 500ft below, 1000ft above and 2000ft horizontal distance from clouds.

The minimum cloud clearance at or above 10,000ft MSL is 5 statute miles for flight visibility, 1000ft below, 1000ft above and 1 mile horizontal distance from clouds.

FAR part 105 section 105.17 (SIM pg. 178) covers this information. It is covered again in circular 14 part I (SIM pg. 191).

Pilot Briefing

Before you take off for fun in the sky, you must first inform the pilot about your intended plans. Briefing the pilot must be done each time jumpers board the plane. You need to let the pilot know at what altitudes jumpers wish to exit, if they plan on jumping at the airport or east field, the direction of jump run, how many jumpers will be jumping on each pass, and the number of passes at each altitude. Make sure that you are seated in the plane with the jumpers exiting at the lowest altitude, closest to the door. If there are jumpers exiting at the airport and east field at the same altitude, the direction of jump run will determine if jumpers exit at the airport or east field first. Jump runs to the

north or west will drop over the east field and then airport. Jump runs to the east or south will drop over the airport first and then east field.

The Count

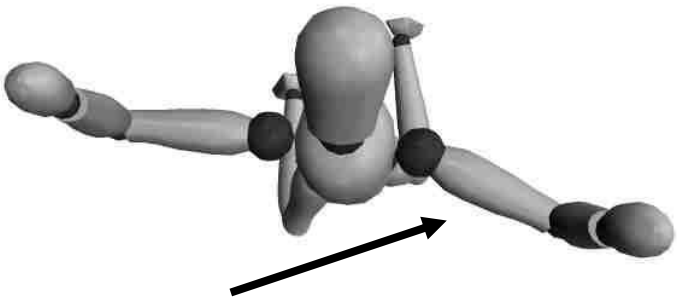
When more than one jumper will be leaving the aircraft at the same time, a count is necessary so that the jumpers can leave as close to the same time as possible. A typical count is ready, set, go. To perform the count, make eye contact with the other jumper(s). Once you have done so, yell "ready" while rocking your upper body/head towards the tail, yell "set" while rocking towards the front of the aircraft, and then yell "go" as you rock toward the tail again and let go. Always begin the count by rocking in the direction you will be exiting when you yell "ready".

Door Dive

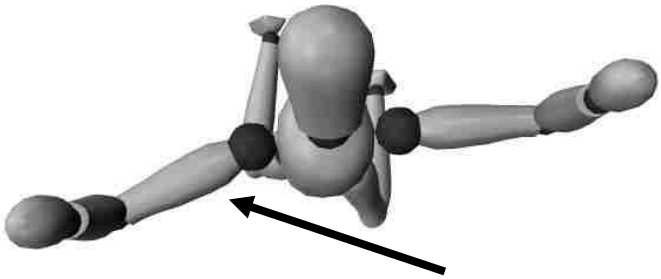
To perform a basic door dive, start from a kneeling position in the plane. Place each hand on the vertical sides of the doorframe as you did on the step exit climb out. Step onto the step with your right foot, turning your body to face the tail of the aircraft. Dive out of the plane with your head up and arms extending above your head similar to "Superman" flying. As you reach out with both arms, tuck your heels up towards your backside. If you go unstable (which is common when you are learning), continue to arch until you regain a stable belly-to-earth body position. Remember to check and protect all handles prior to exit.

Center Turns

The goal of a **center turn** is to pivot around your center axis, which should be your belly button area. Center turns are more efficient than upper-body turns and help make relative work more successful. Center turns are accomplished by causing your upper body to deflect air in one direction and causing your lower body to deflect air in the opposite direction, much like a propeller. To perform a center turn, start in a stable box position, initiate the turn by pressing down with an opposite elbow and knee. By pressing down with the right elbow and left knee, you will perform a right hand turn and by pressing down with the left elbow and right knee you will perform a left turn. As either knee is being pressed down for a turn, the foot on the same leg should lean towards the other leg. If you find that you have a slower fall rate, you can perform center turns by lifting opposing arms and legs to initiate a turn while maintaining a faster fall rate. Always make sure that you maintain a good arch when performing center turns.



Left Center Turn



Right Center Turn

Arrows indicate the **deflection** of air generated by the position of **the lower body**.

Back Loop

To perform a back loop, throw your head straight back while you tuck your knees to your chest and grab them with your arms. This all needs to be done simultaneously. To stop a back loop, simply arch again. Do not begin to re-arch until you have almost fully completed the loop. Remember that while performing loops, you will lose a lot of altitude. Check your altimeter after each attempt or every 5 seconds. If you lose stability or stop on your back, ensure you are above your pull altitude, relax, and go to your arch to regain stability.

If you are having trouble mastering them, try starting the back loop from the step of the plane. Stand on the step of the plane with both feet, as you let go of the strut lean back and grab both knees with your arms. This will initiate your back loops. You may also go to a swimming pool or lake and practice doing backward somersaults in the water.

Initiating Back Loop

Mid Back Loop

Stopping Back Loop

Mid-Braked Approach and Landing

As you enter the landing pattern, bring both steering toggles down to just below your chest level. From this position, make turns in the landing pattern to 100ft, and then proceed with a normal landing. A braked approach allows for flatter turns and minimal altitude loss during the turns. A braked approach to landing is required for your "A" license.

45-Second Delay #2

Reading Assignment/Skills Practice:

1.) Review pages 40-43 on 45-Second Delay #1 and pages 32-33 on Obstacle Avoidance and Landings.
2.) Read pages 44-46 on Front Loops, Break-off Sequence and Delta.
3.) Practice 360's a minimum of 10 times both directions on a creeper.
4.) Practice the break-off sequence a minimum of 10 times.
5.) Practice transition from box position to delta and hold delta for at least 5 seconds a minimum of 10 times.

Objectives:

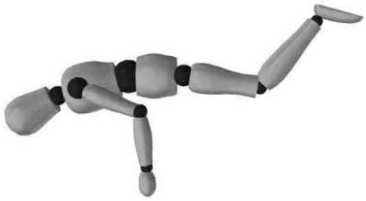
1.) Pack a main parachute
2.) Brief the pilot on jump run direction, altitudes and passes
3.) Spot the plane, give the count and exit at the proper time without help
4.) Perform a stable door dive exit while maintaining heading
5.) Perform a front loop, one 360 degree center turn right, at 6k initiate the break-off sequence (180 degree turn, delta, wave-off and pull) and demonstrate altitude awareness
6.) Perform braked turns in landing pattern to 100ft then perform a normal landing within 20 meters of the target
7.) Know how to avoid obstacles and how to land into/on obstacles
8.) Begin preparing for solo briefing

New Skills:

Front Loop

To perform a front loop, you will need to throw your upper body forward by tucking your head down to your chest, quickly pressing both arms down and pulling them into the center of the body, and tucking your knees to your mid-section at the same time. Keep the head tucked down with the arms and legs pulled in tight until you have almost fully completed the loop before you re-arch. If you re-arch before you have completed at least ¾ of the loop, you will not make it over. If you lose stability or stop on your back, verify you are above your pull altitude, relax, and go into your arch position to regain stability.

If you are having problems mastering the front loops, try by starting the front loop from the step of the plane. When you are ready, door dive, tuck your head down and tuck your knees up to your mid-section grabbing them with your hands. Just like back loops, try going to a swimming pool or lake and practice.



Initiating Front Loop

Mid Front Loop

Stopping Front Loop

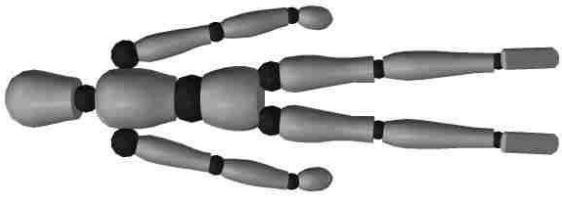
Break-off Sequence

The break-off sequence consists of performing one 180-degree turn, a track (delta), wave-off, and pull. It is critical to develop a good break-off sequence, as it will help to minimize the chance of mid-air and canopy collisions by giving you horizontal separation from other jumpers. The purpose of the 180-degree turn is to have you facing the opposite direction from the **center of the formation**. This helps to ensure that all jumpers are headed away from each other while they track. A good track should stay **within 10 degrees of initial heading** and give you and the other jumpers **at least 100ft** of horizontal separation. When you begin practicing the break-off sequence, it will be necessary to start at a higher altitude to allow ample time to complete the skills prior to pulling. Start the sequence at 6K with a 180-degree turn, delta/track for 5 seconds, wave-off at 4k and then pull by 3.5k.

Delta

A delta is the beginning stage of learning to track. You will learn this skill first before learning a flat track, as the delta will still allow you to achieve separation from other jumpers and maintain a greater degree of stability.

Start in a box position then straighten the legs and point the toes keeping 1-1 ½ft of separation between them. At the same time, smoothly move your arms to your sides and straighten them. Your palms should be faced down and approximately 1ft away from the body. This is the delta position. Keep your head up during the delta and look out 45 degrees below the horizon to stay aware of your heading and other jumper traffic. To stop the delta, return to a box position.



Delta Top View

Delta Side View

Solo Briefing Preparation

In preparation for your Solo Student Jumps, you will be expected to have reviewed all information to this point. You must be fully prepared for a solo briefing following successful completion of your 45-second delay #3. This should be an extensive self-review. For a detailed list of items to review, see pages 49-50 on Solo Briefing. You need to come prepared with any questions or ask for clarification regarding any and all topics covered in your training. Your Solo Briefing will take place immediately following your 45-second delay #3.

45-Second Delay #3

Reading Assignment/Skills Practice:

1.) Review pages 44-46 on 45-Second Delay #2.
2.) Read pages 47-48 on Barrel Rolls and Promoting a Smooth Flow of Traffic in the Landing Pattern and pages 49-51 on Solo Briefing.
3.) Practice the transition from the box to a barrel roll a minimum of 10 times on a creeper.
4.) Practice giving pilot briefing for your load.

Objectives:

1.) Give pilot briefing (jump run direction, altitude, passes) and accurately spot without assistance
2.) Give count and perform a stable door dive exit while maintaining heading
3.) Perform a barrel roll right, barrel roll left, 360 degree center turn left and break-off sequence
4.) Fly and promote a smooth flow of traffic in the landing pattern
5.) Fly a braked approach in the landing pattern until 100ft then perform a normal landing within 20 meters of the target
6.) Perform emergency procedures in a hanging harness
7.) Be prepared for and get full solo briefing from the instructor

New Skills:

Barrel Roll

Start in your neutral freefall body position ("box" position). For a right barrel roll: extend your right arm out in front of your head and dip your right shoulder into the direction of the roll. At the same time, extend the right leg and dip your right hip into the direction of the roll. Once the rotation begins, align your left arm and leg with the right arm and leg. As your rotation brings you back belly-to-earth, return to your neutral freefall position to stop the roll.

Initiating Right Barrel Roll **Mid Barrel Roll** **Stopping Right Barrel Roll**

(To perform a Left Barrel Roll, reverse the steps for a Right Barrel Roll.)

Promoting a Smooth Flow of Traffic in the Landing Pattern

It will be necessary for you to promote a smooth flow of traffic in the landing pattern. This is especially important when you have multiple jumpers planning to land in the same area. There are a few things you must do to create separation under canopy and minimize the chance of a canopy collision. Upon opening, your first task is to establish and maintain adequate horizontal separation from other jumper(s). Look before you turn to make sure you are turning into clear airspace. If you do find yourself flying directly head-on into someone, the rule is for both jumpers to turn to the right. Otherwise, fly toward open airspace. Next, evaluate the decent rate of the other jumpers in relation to your decent rate. If for instance you have a jumper who opened higher than you but has a faster decent rate you will want to fly your parachute in brakes to let them pass you. If you open higher but have a faster decent rate than a jumper below you it is your job to spiral down below them. Establishing vertical separation will help to create an evenly spaced flow of traffic when you enter the landing pattern. Third, draw an imaginary line down the center of the target (in the same direction as the wind line or your final approach) and stay on the right side if you are flying a right-hand pattern, or the left side if flying a left hand pattern. Do not cross the centerline as this may result in a canopy collision or another jumper having to take evasive procedures to miss hitting you. Lastly, the first jumper down establishes the landing direction for everyone else. If you do not like the direction they have chosen you may take issue with them after you have flown the established pattern and are on the ground. Waiting until you are under your canopy before you start thinking about how you are going to create a smooth flow for the landing pattern is too late. Before you enter the aircraft, find out who is jumping at the east field with you, how high they are going to open and what size canopy they are jumping. Take all of this information into consideration when deciding the exit order to help achieve separation at opening and in the landing pattern. The in-air portion of the skydive may be done, but the skydive is not over until all jumpers are on the ground. Remember, it is your responsibility to fly your canopy and to land safely on the ground.

SOLO BRIEFING

Emergency Reviews

1.) Equipment Emergencies
    a.) Line over
    b.) Bag lock
    c.) Streamer
    d.) Horseshoe
    e.) Pilot chute hesitation, PC over the nose
    f.) Total
    g.) Unusual fast (injured arm)
    h.) Unusual slow (broken lines, damaged canopy)
    i.) Dual out
        1.) Side-by-side
        2.) Biplane
        3.) Down plane
    j.) Equipment Emergency Procedures
        1.) Hanging Harness #1 (physically demonstrate until correct three times)

2.) Obstacle Avoidance and Landings
    a.) Power lines
    b.) Trees
    c.) Buildings/Fixed Obstacles
    d.) Water
    e.) Hazardous areas (Junk Yard)
    f.) PLF (physically demonstrate until correct)

3.) Aircraft Emergency Procedures (at the plane)
    a.) Parachute open in plane
    b.) Landing in plane
    c.) Altitudes to stay or leave and which procedures to use
    d.) Location of fuel switch, altimeter, etc.
    e.) Large plane briefing – see appendix for procedures

4.) Jump Pilot Briefing (if not completed at the time of your solo briefing, it is your responsibility to schedule this with a pilot)
    a.) As per “A” license proficiency card for Aircraft and Spotting #5

General Information

1.) Manifesting
    a.) No longer need an appointment (except for the checkout dive)
    b.) Make sure student gear is available
    c.) Have gear check completed prior to manifesting
    d.) How many/How high – 2 to 3k, 3 to 6k, 4 to 10k (for C182)
    e.) Instructor sign-off prior to manifesting (Student Jump Worksheet)

2.) Winds
   a.) Review use of Winds Aloft Chart
   b.) Wind limits

3.) Spotting
   a.) Splitting the spot (page 54)
   b.) Exit separation – as a general rule, wait until the previous jumpers or group is at a 45 degree angle behind and below the airplane (more wind, more separation)
   c.) Determining Exit and Opening Points

4.) Freefall Safety
   a.) Gear checks (prior to boarding and prior to exit)
   b.) 3 rules of pulling
   c.) Tracking safety (No more than 5 sec up or down line of flight, potential risks)

5.) Landing Pattern
   a.) Promoting a smooth flow of traffic
   b.) Areas not to be over (obstacles, center line on final)
   c.) Landing off-target (call DZ if way out)

6.) Goals to be met prior to receiving your "A" license
   a.) Completion of proficiency card
   b.) Check-out dive
   c.) Relative work jumps
   d.) Hanging Harness #2 (dual handle until correct three times)
   e.) Oral quiz (see SIM quizzes for category A-H)

7.) Gear/Rigging
   a.) Gear sales – rigs, canopies, jumpsuits, etc.
   b.) Rigging – current riggers, repack requirements, etc.

Prior to Solo Jumps:

Reading Assignment, Requirements:
1.) Review all information covered in your training to this point.
2.) Receive a solo briefing from an instructor (see pages 49-50).
3.) Review all skills required for the checkout dive (see below).
4.) Must have completed or be signed up for a packing class
5.) Must have signed up for or already have a USPA Membership.

Checkout Dive

A primary goal of your Solo Jumps is to become proficient in the skills required for your checkout dive.

You are required to perform a checkout dive in order to advance on to the relative work jumps and to meet your "A" license requirement. A checkout dive consists of performing a stable door dive, front loop, back loop, barrel roll, 360 degree turn to the right, 360 degree turn to the left, initiate break-off sequence at 6k. All skills must be done within 60 degrees of initial heading and you must achieve at least 100ft of separation from your coach/instructor during the break-off sequence. A USPA coach or instructor will exit the plane with you to observe the dive and either advance you or require you to repeat the checkout dive.

SECTION 2

SOLO STUDENT JUMPS

SOLO STUDENT JUMPS

Solo Jump #1

Reading Assignment/Skills Practice:

1.) Read pages 53-55 on Gear Checks, Solo Jump #1, Splitting the Spot, Outside Step Exit Position and Flat Track.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Perform a gear check on the gear you are jumping and get a gear check from an instructor
4.) Inform manifest about the type of jump you are making (solo) and exit altitude
5.) Determine the spot including climb out, exit and opening points using the winds aloft chart and aerial map
6.) Gear up at the 10-minute call for your load
7.) Give the pilot briefing and split the spot
8.) Perform an outside step exit maintaining stability and heading, relax during jump while maintaining altitude awareness, perform one 360 degree center turn to the right and one 360 degree turn to the left, attempt flat track for 5 seconds, if above 7k turn 180 degrees and repeat, initiate the break-off sequence at 6k, wave-off at 4k and pull
9.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, and land within 20 meters of the target

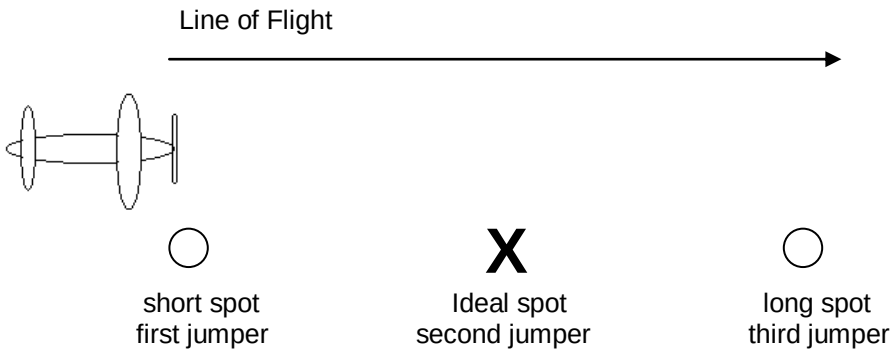
New Skills:

Gear Checks

Even though you are on solo status, it is still necessary to receive a gear check prior to boarding the plane. If possible, you should also receive a pin check prior to exiting the aircraft. Do not assume that everyone is qualified to check student gear. As long as you are jumping student gear, it is best to receive a gear check from an instructor, coach or packer familiar with the equipment. In the future when you are jumping your own gear, it is up to you who you ask. Just make sure that if there are any quirks about your gear that you point them out to the person performing the check.

Splitting the Spot

Splitting the spot is done when more than one jumper/group will exit the airplane on the same jump pass. While still on the ground, pick the ideal exit point. If there are two jumpers planning on exiting on the same pass the first jumper should exit just prior to the ideal spot and the other just past the ideal spot. For three jumpers, the first jumper will exit early (short), the second over the ideal spot and the third a little late (long). Splitting the spot allows everyone to exit in an area that will still let them get back to the target area. Watch the jumper exiting before you and give plenty of separation between each jumper/group to avoid any freefall or canopy collisions and to take a look before you leap. If the jumper(s) ahead of you took too long, you may find yourself too far away from the spot and it may be necessary for you to ask for a go-around.



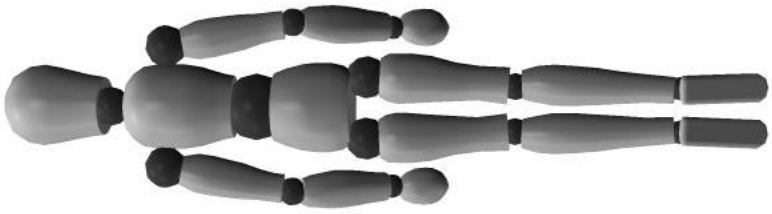
Outside Step Exit Position

Performing this exit is no different than a regular step exit. On a group skydive, begin climbing out a little earlier than you would for just yourself. You need to allow time for any additional jumpers to get into position without going past your exit point. Position your left foot out to the far edge of the step so that there is room for the other jumper(s) to get into position as well.

Flat Track

When performed correctly, a flat track will let you achieve maximum horizontal separation from other jumpers with minimal loss of altitude. Start in a delta; bring both legs together and your arms to your sides. Your hands should be facing down while your shoulders are rounded forward causing a slight cupping action in the chest area. The legs should be straight with toes pointed and you should contract the lower abdominal area of your torso causing a slight cupping position. Keeping the body streamlined in a cupped position with the head up will help to ensure minimal altitude loss in the track. The flat track is less stable than the delta and will take some practice to master. Experiment when you jump by yourself with pressing down or spilling with one arm or one leg. By pressing down or spilling with an arm or leg, you will cause a turn while you track. This will be a skill you want to develop in case another jumper is too close to you when gaining separation from the center of the formation.

Flat Track – Side View



Flat Track – Top View

Solo Jump #2

Reading Assignment/Skills Practice:

1.) Review pages 53-55 on Solo Jump #1, pages 42-43 on Back Loops and page 12 on Aircraft Emergency Procedures.
2.) Read page 56 on Solo Jump #2 and Inside Step Exit Position.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit, and opening points using the winds aloft chart and aerial map
4.) Inform manifest about the type of jump you are making (solo) and your exit altitude
5.) Gear up at the 10-minute call for your load
6.) Give the pilot briefing and split the spot, if necessary
7.) Exit from the inside step position while maintaining stability and heading, maintain altitude awareness, perform back loops, initiate the break-off sequence at 6k, wave off at 4k and pull

8.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, landing within 20 meters from the target

New Skills:

Inside Step Exit Position

To perform an inside step exit, wait until the jumpers in the outside step or crotch position are out and getting ready. Climb out just as you would for normal step exit except that you will position your left foot next to the foot of the person on the outside step, and allow the right foot to be trailing just behind the step. Do not leave both feet on the step because if you have three or four jumpers exiting together, not everyone will be able to get a foot on the step as needed.

Solo Jump #3

Reading Assignment/Skills Practice:

1.) Review page 56 on Solo Jump #2, pages 44-45 on Front Loops and pages 11-12 on Equipment Emergency Procedures.
2.) Read page 57 on Solo Jump #3.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit, and opening points using the winds aloft chart and aerial map
4.) Inform manifest about the type of jump you are making (solo) and your exit altitude
5.) Gear up at the 10-minute call for your load
6.) Give the pilot briefing and split the spot, if necessary
7.) Perform a door dive exit while maintaining stability and heading, maintain altitude awareness, perform front loops, initiate the break-off sequence at 6k, wave off at 4k and pull

8.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, landing within 20 meters from the target

Solo Jump #4

Reading Assignment/Skills Practice:

1.) Review page 57 on Solo Jump #3, pages 32-33 on Obstacle Avoidance and Landings and page 47 on Barrel Rolls.
2.) Read page 58 on Solo Jump #4.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit, and opening points using the winds aloft chart and aerial map
4.) Inform manifest about the type of jump you are making (solo) and your exit altitude
5.) Gear up at the 10-minute call for your load
6.) Give the pilot briefing and split the spot, if necessary
7.) Perform a door dive exit while maintaining stability and heading, maintain altitude awareness, perform barrel rolls, initiate the break-off sequence at 6k, wave off at 4k and pull

8.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, landing within 20 meters from the target

Solo Jump #5

Reading Assignment/Skills Practice:

1.) Review page 58 on Solo Jump #4 and pages 50-51 on Checkout Dive and discuss any questions with instructor.
2.) Read page 59 on Solo Jump #5.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit, and opening points using the winds aloft chart and aerial map
4.) Inform manifest about the type of jump you are making (solo) and your exit altitude
5.) Gear up at the 10-minute call for your load
6.) Give the pilot briefing and split the spot, if necessary
7.) Perform a door dive exit maintaining stability and heading, maintain altitude awareness and perform the following maneuvers within 60 degrees of initial heading; front loop, back loop, barrel roll, 360 degree center turns to the right and left, initiate the break-off sequence at 6k, wave-off at 4k and pull.

8.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, landing within 20 meters from the target

Solo Jump #6

Reading Assignment/Skills Practice:
1.) Review page 59 on Solo Jump #5.
2.) Read page 60 on Solo Jump #6.
3.) Schedule Checkout Dive with Manifest.

Objectives:
1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump.
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit and opening points using the winds aloft chart and aerial map
4.) Perform a gear check on the gear you are jumping and get a gear check from an instructor
5.) Inform manifest about the type of jump you are making (solo) and exit altitude
6.) Gear up at the 10-minute call for your load
7.) Give the pilot briefing and split the spot, if necessary
8.) Perform a door dive exit maintaining stability and heading, maintain altitude

awareness and perform the following maneuvers within 60 degrees of initial heading; front loop, back loop, barrel roll, 360 degree center turns to the right and left, initiate the break-off sequence at 6k, wave-off at 4k and pull.

9.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, land within 20 meters of the target

Checkout Dive

Reading Assignment/Skills Practice:

1.) Review page 60 on Solo Jump #6.
2.) Read page 61 on Checkout Dive.

Objectives:

1.) Complete a student jump worksheet and have an instructor review and sign it prior to manifesting your jump
2.) Pack the rig you are jumping
3.) Determine the spot including climb out, exit and opening points using the winds aloft chart and aerial map
4.) Perform a gear check on the gear you are jumping and get a gear check from an instructor
5.) Inform manifest about the type of jump you are making (checkout dive) and exit altitude
6.) Gear up at the 10-minute call for your load
7.) Give the pilot briefing and split the spot, if necessary
8.) Perform a door dive exit maintaining stability and heading, maintain altitude

awareness and perform the following maneuvers within 60 degrees of initial heading; front loop, back loop, barrel roll, 360 degree center turns to the right and left, initiate the break-off sequence at 6k, wave-off at 4k and pull.

9.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from other jumpers and staying on the proper side of the target in the pattern, land within 20 meters of the target

10.) Schedule Relative Work Jump #1 (RW #1) with Manifest

SECTION 3

RELATIVE WORK JUMPS

RELATIVE WORK JUMPS

RW Jump #1

Reading Assignment/Skills Practice

1.) Review page 56 on the inside step exit and page 48 on promoting a smooth flow of traffic in the landing pattern.
2.) Read pages 63-65 on RW Jump #1, Spotting for a Group Jump, Eye Contact, Forward and Backward Movement, Docking and Maximum Performance Canopy Turns.
3.) Practice the dive verbally 3-5 times (at least 2 times perfectly) prior to your appointment.
4.) Practice Forward and Backward Movements and Break-off Sequence on creeper a minimum of 5 times with the Alti Trainer.

Objectives:

1.) Complete student jump worksheet and have coach review and sign it prior to manifesting
2.) Brief the pilot
3.) Spot for a group jump, give the count and exit from the Inside Step Position taking grips with the coach

4.) Maintain altitude awareness while performing the following skills: break grips once stable, move backward 5ft from the coach using techniques for Backward Movement and stop. Then move forward towards the coach using techniques for Forward Movement and dock with the coach. Repeat until break-off altitude
5.) Initiate break-off sequence at 5.5k (see page 43)
6.) Perform Maximum Performance Turns above 2k
7.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from the other jumpers and staying on the proper side of the target in the pattern landing within 20 meters of the target
8.) Schedule remaining RW jumps with Manifest

New Skills:

Spotting for a Group Jump

When you jump with one or more jumpers, you will need to adjust your climbout point accordingly. The more jumpers that will be exiting the aircraft with you, the more time it will take to get everyone ready and in their position for exit. This means that you will have to start your climb out earlier. If you do not make this adjustment, you will find yourself with a very long spot and may have difficulty making it back to the target area as a result.

Eye Contact

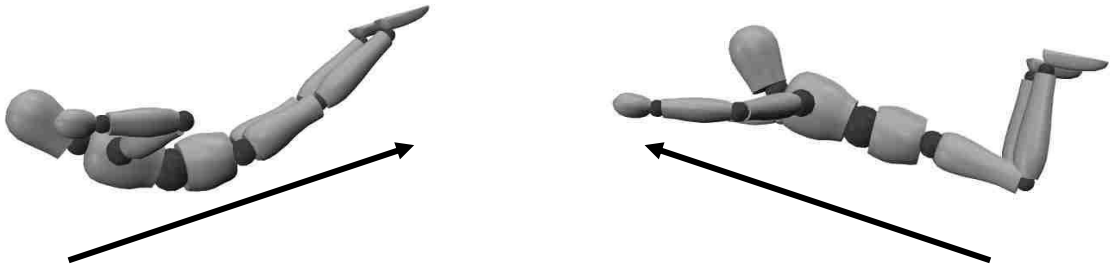
After you have climbed out of the plane, make eye contact with your coach and give the count. As you let go of the plane, keep looking directly at your coach while maintaining presentation to the relative wind. This skill is very important for maintaining close proximity to others in your group and facilitates important non-verbal freefall communication.

Forward and Backward Movement

In order to dock with another jumper in the air, it will be necessary for you to move forward in a controlled manner. Start in a “box” position and then extend your legs to move forward. Keep your arms in a box position and head up looking at the person you are approaching. To stop moving forward, apply the techniques for backward movement described below and return to the box position. Make sure you slow down in enough time to avoid a collision with another jumper. Collisions are very dangerous and can result in serious injury.

At times, you may have quite a bit of separation from the jumper you are trying to dock with. It may be necessary to transition into a delta by bringing your arms back to close the gap. Remember to slow down prior to coming in contact with the other jumper. The best method of approach initially is a staged approach where you perform a delta until you are a short distance from the other jumper then use the above procedure where your arms are in a box position.

Backward movement is used to slow down your forward movement, or to avoid a collision from someone approaching you too fast. To move backward in the air, start in a box position and extend your arms out in front of you. If you need to move backward at a faster rate, you may also bend your knees pulling your lower legs (from the knee down) out of the relative wind and lower your knees. Stopping the backward movement is accomplished by returning to a box position. You may extend your legs if you need to stop faster.



Forward **Backward**

Arrows illustrate the **deflection of air**. This is what causes forward and backward movement.

Docking

Docking is the art of making and keeping contact with one or more jumpers in the air. There are a few challenges when you are first learning to dock with another jumper. The first challenge is breaking through the "burble". When a jumper is falling, they are displacing air around them. This displaced air creates what we call a burble. The first time you approach and try to make contact with another jumper, you may feel air resistance making it difficult to make contact. Breaking through the burble is done by extending your legs creating forward momentum to counter that resistance. Do not reach forward with your arms, as this will cause you to travel backwards and lose momentum. The second challenge is to anticipate putting on the brakes as soon as you break through the burble. If you are having difficulty docking, the tendency is to drive forward too hard and possibly collide with the other jumper. To prevent a collision when breaking through the burble, slowly extend the legs until you break through. Also, be ready to retract your legs to stop the forward movement. Once you have made contact a few times, it will become much easier, and you will learn to carry enough momentum from your approach to break through the burble. The third challenge to docking is to approach from straight on and not from an angle. A straight in approach is much easier and is accomplished much more quickly. If you try to approach at an angle, you will find that you end up sliding all over trying to get lined up or if you try grabbing another jumper before you are in the correct position, you may cause the skydive to be "funneled". Make any necessary adjustments prior to contact so that you are lined up properly on the approach.

Maximum Performance Canopy Turns

Before practicing turns or maneuvers of any kind under canopy you must clear your airspace. Clearing your airspace means performing a thorough scan of the entire

airspace you intend to use and see that it is clear of other traffic. A maximum performance turn is accomplished by doing a 90-degree turn to one direction followed immediately by a turn of at least 180 degrees to the opposite direction. The turns should be performed above 2000ft on two separate jumps to meet the “A” license requirement.

RW Jump #2

Reading Assignment/Skills Practice:

1.) Review pages 63-65 on RW #1.
2.) Read pages 66-67 on Diving to the Coach and Cupping and Spilling.
3.) Practice the dive verbally 3-5 times.
4.) On the ground or a creeper, practice Cupping and Spilling a minimum of 10 times each.
5.) Practice full dive a minimum of 5 times with the Alti Trainer.

Objectives:

1.) Complete student jump worksheet and have coach review and sign it prior to manifesting
2.) Brief the pilot and spot. Give the count and perform a stable door dive exit
3.) Maintain altitude awareness while performing the following skills: dive 100ft and dock with the coach, adjust fall rate to match the coach by using Cupping and Spilling techniques, dock with the coach after each skill until break-off
4.) Initiate Break-off Sequence at 5.5k
5.) Perform Maximum Performance Turns above 2k

6.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from the other jumpers and staying on the proper side of the target in the pattern landing within 20 meters of the target

New Skills:

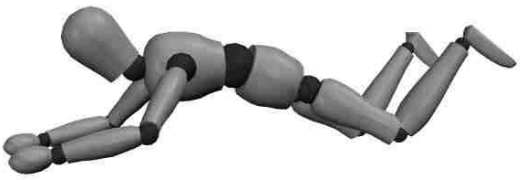
Diving to the Coach

You are required to dive a minimum of 100ft after another jumper and dock safely without assistance from the other jumper on two different skydives in order to meet your "A" license requirements. To accomplish diving to and docking with your coach, start by maintaining eye contact. Transition to a delta to begin diving down toward the coach. Return to a normal freefall position when you are approximately 20ft from the coach and extend your legs to finish driving in to dock. If you find that you are above or below the level of the coach, use cupping and spilling techniques to match the fall rate of the coach before driving in to dock. Always dive in a straight line and be prepared to slow down quickly to help prevent a collision. (See page 93 in your SIM for further information.)

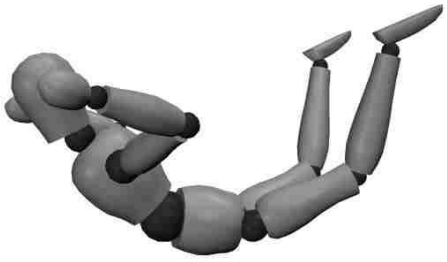
Cupping and Spilling: Moving up and down in relation to others

Cupping air is a technique used to slow down your Fall Rate or speed in freefall. To cup air, start in your "box" position then de-arch by pressing down with both forearms and elbows, press down the same with your knees, slightly extend the legs and suck in your stomach. In this position you will be less stable because you are de-arching but will allow you to slow down your rate of descent. With practice you will discover even though you are de-arched you can remain stable by using your arms and legs.

Spilling air is the opposite of cupping. It is a technique used to accelerate your freefall speed. You may find that when you are jumping with others that you need to speed up to match the other jumper(s) fall rate. To spill air, start in a "box" position and perform an exaggerated arch.



Cupping



Spilling

RW Jump #3

Reading Assignment/Skills Practice:

1.) Review pages 66-67 on RW #2 and pages 41-42 on Center Turns.
2.) Read pages 68-69 on the Crotch Exit, Head Switch and Front Riser Dives and Turns.
3.) Practice climbing out and getting into position for the crotch exit a minimum of 5 times.
4.) Practice giving ready, set, go count from crotch position a minimum of 5 times.
5.) On a creeper, practice a delta position with a transition into the box a minimum of 10 times.
6.) Practice the dive verbally 3-5 times.
7.) Practice a minimum of 6 – 90 degree center turns to the left and right
8.) Practice a minimum of 6 – 360 degree center turns to the left and right with head switch
9.) Practice the full dive a minimum of 5 times with the Alti Trainer.

Objectives:

1.) Complete the student jump worksheet and have the coach review and sign it prior to manifesting

2.) Brief the pilot and spot for a group jump
3.) Give the count and perform a stable exit from the Crotch position.
4.) Maintain altitude awareness while performing the following skills: dive 100ft and dock with the coach, 2-90 degree center turns, 2-360 degree enter turns with a head switch, dock after each skill
5.) Initiate Break-off Sequence at 5.5k
6.) Perform Front Riser Dives and Turns above 2k
7.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from the other jumpers and staying on the proper side of the target in the pattern landing within 20 meters of the target

New Skills:

Crotch Exit

To perform a crotch exit, you should be sitting in the jumpmaster position in the plane. From your knees, step out onto the step with your left foot facing the tail of the aircraft. Grab the strut with your left hand and hold the doorframe with your right. Position the right foot at the base of the strut where it meets the body of the airplane. Shift your weight back so you are sitting on your heel. Your left foot should be the only foot on the step so that there is room for the other jumpers to stand on the step. To give the count from this position, lean forward as you yell “ready”, lean back as you yell “set” and lean forward again as you yell “go” and dive off the plane.

Head Switch

It is easy to slide away from the coach when performing 360-degree center turns. To help stay in close proximity and on the same level, you will need to perform a head switch. Begin your turn while holding eye contact with the coach. Keep eye contact only as long as you can keep your shoulders square (not allowing the shoulder you are looking over to dip). At that point, turn your head and pick up eye contact as soon as comfortable (without turning your head too far or too quickly as to become unbalanced in the other direction). You do not have to have actual eye contact. Peripheral eye contact is fine. Remember, the point of a head switch is to maintain proximity and keep on level.

The average person cannot maintain balanced shoulders much beyond a 75-degree turn of their head (it will feel more like 90 degrees because one eye will be over the shoulder). Try turning your head in a standing position. Slowly turn your head to one side – it should feel as if your head is moving but nothing else is. You will reach a point where the feeling changes and your shoulder and chin feel as if they are moving towards each other. You do not want to reach that point while doing a turn.

Front Riser Dives/Turns

Pulling down on both front risers at the same time performs a front riser dive. This allows the canopy to obtain more forward drive by lowering the front of the canopy to penetrate winds more efficiently. Pulling down on the front riser on the side in which you wish to turn performs front riser turns. All front riser dives and turns must be performed above 2000ft. The dives and turns are required for your "A" license.

RW Jump #4

Reading Assignment/Skill Practice:

1.) Review pages 68-69 on RW #3.
2.) Read pages 70-71 on Side Slides, Emergency Procedures for a Dual Handle System and Final Assignments.
3.) On a creeper, practice side slides a minimum of 10 times to the right and left.
4.) Practice dive verbally 3-5 times.
5.) Practice full dive a minimum of 5 times with Alti Trainer.

Objectives:

1.) Completely fill out student jump worksheet and have coach review and sign it prior to manifesting
2.) Brief the pilot and spot for a group
3.) Give the count and perform a stable door dive exit
4.) Maintain altitude awareness while performing the following skills: dive 100ft and dock with the coach, perform 2-5ft side slides to the left and 2-5ft side slides to the right, dock with the coach after each skill
5.) Initiate the Break-off sequence at 5.5k

6.) Fly and promote a smooth flow of traffic in the landing pattern keeping horizontal/vertical separation from the other jumpers and staying on the proper side of the target in the pattern landing within 20 meters of the target
7.) Understand and demonstrate emergency procedures for a dual handle system in the hanging harness
8.) Complete final assignments

New Skills:

Side Slides: Sideways movement

To perform a side slide, press down with the elbow and knee on the same side of the body. The more you press down, the faster and farther you will travel during the slide. To stop a side slide, return to the box position and if necessary do a counter slide by pressing down with the elbow and knee on the opposite side of the body. You are using the same concept as forward and backward movement except you are now deflecting air to the side. It is important that you deflect the same amount of air with your lower body as you do with the upper body to prevent turning.

Left Side Slide

Right Side Slide

Emergency Procedures for Dual-Handle System with Throw-Out Pilot Chute

Until this point, you have been using student gear with a single handle to pull in the event of a parachute malfunction. You will now (or very soon) start using a dual handle system. On a dual handle system, one handle cuts away your main parachute, and a second handle initiates deployment of your reserve. We strongly recommend that you watch the "Break Away" video and decide what your emergency procedures will be prior to practicing them in the hanging harness. There are a few malfunction scenarios that have more than one possible and acceptable response. Each individual in skydiving makes a personal decision about such scenarios.

On a dual handle system, your new procedures will be **look, reach, look, pull, pull**. You will **look** at the cutaway handle on your right side, **reach** and grasp it with both hands, then **look** at the reserve handle on your left side (to keep it in view in the event of a spinning malfunction). **Pull** the cutaway handle and throw (while continuing to look at the reserve handle); grasp the reserve handle and **Pull**. By following these procedures, you will cutaway and deploy the reserve in the correct order and you will have more physical strength in case you experience a hard pull with either handle.

Final Assignments:

1.) Schedule a meeting with an instructor to make sure all “A” license requirements have been met
2.) Study for and take the oral quiz to be given by an Instructor or Instructor/Examiner
3.) Obtain an “A” stamp on the back of the proficiency card
4.) Turn in your completed “A” license proficiency card to Manifest to be faxed or mailed to USPA including the $20.00 licensing fee.
5.) Fill out licensed jumper contract.

SECTION 4

APPENDICES

Equipment Knowledge and Maintenance

Changing/Adjusting Main Closing Loop

You will need to adjust and change the main closing loop of the main container to meet your “A” license requirement. Remove the worn closing loop from the container. Place it next to the new closing loop so you can measure it to be the same length as the old. Mark the new closing loop the same distance down from the top of the loop to where it goes into the knot on the old loop. Tie the knot on the new closing loop to match the knot on the worn closing loop. (The purpose of the knot is to keep the closing loop from slipping through the grommet.) Thread the top of the loop through the washer and then through the grommet in the keeper (part of the rig) for the main closing loop.

Occasionally you may find that your closing loop has stretched out slightly (due to the knot tightening over time), and no longer securely holds the pin/ripcord in place, or that you did not make the closing loop short enough when you replaced it. To fix a closing loop that is too long, open the container and re-tie the knot up closer to the loop.

Repeat this step until the pin/ripcord is securely held in place when you close the container.

Large Plane Briefing

Caravan Briefing

The Caravan is a turbine aircraft that will hold up to 19 jumpers. Jumping out of this plane is considerably different than jumping out of a Cessna 182. Make sure you receive a briefing about the plane from an experienced jumper who is familiar with the plane and procedures. If you are not sure who to talk to, ask manifest. Also, make sure you practice entering and exiting the plane at the mock-up prior to jumping.

Loading the plane

Approach the plane from the rear and left side of the plane as the door is near the tail of the aircraft on the left side. The loading order is as follows: High pulls (above 5500ft), tandems, solos, "freeflyers" (smallest to largest groups), "relative workers" (smallest to largest groups). This is the loading order, not the exit order. You will be sitting on the floor of the plane. There will be one row of three jumpers with their back to the pilot and

facing the rear of the aircraft. The remaining jumpers sit in two single file rows with one row on the left and the other on the right facing the rear of the plane. Each jumper needs to sit with their legs apart so that the jumper in front of them can sit between their legs. As you sit down in your spot, use the seatbelt farthest back so that everyone will have a seatbelt to use. If possible, fasten the seatbelt around your waist. If you are not able to do this, make sure the seatbelt is routed through the vertical lift web at your midsection. Fasten the seatbelt securely, removing any slack. Once your seatbelt is securely fastened, get the next seatbelt ready for the jumper sitting in front of you. All equipment must be on or secured prior to take-off. Seatbelts should be taken off and stowed at 1000ft.

Climb to Altitude

Since the Caravan climbs at a faster rate, you should start making final preparations for your jump approximately 2500ft before the plane reaches altitude. In larger planes, lights are used to signal when you can open the door and exit. Each plane varies on the number of lights they use (1 or 2), the color of the light(s), and whether they use a solid or flashing light. Check with another jumper who is familiar with the plane or with the pilot to learn how to follow the light signals. When the signal to open the door is given, one jumper near the light should yell ”door!” Another jumper located at the door should grab the base of the door and push up to slide it open. If you are the person responsible for opening or closing the door, do not slam the door. In some planes there is a latch to secure the door in an open position. If jumpers are exiting at both the east field and airport, the door should be closed between drop areas and only secured when it is opened the second time.

Spotting

Each group and individual exiting the plane is responsible for looking out and checking the spot. If corrections need to be given to the pilot, do this by pressing and holding one of the two buttons to the right of the door. The pilot will continue to turn the plane until you release the button you are holding. If the spot is off, and making corrections will not help, ask for a go-around. Remember that splitting the spot becomes more critical with multiple groups and individuals jumping on the same pass. When the light comes on, quickly check the spot and leave the airplane.

Exiting the plane

When planning a jump from any aircraft that is unfamiliar to you, spend extra time practicing your exit at the mock up to adequately prepare. The maximum number of jumpers that can exit from outside of the plane at one time is 5. More than 5 jumpers makes it difficult for the pilot to fly the plane. The positions outside of the plane are 1 jumper on the front step, 1 jumper on the camera step and 3 in the door. The remaining jumpers exiting on a larger formation will exit from the interior of the plane. When it is your turn to exit, wait until the jumper/group before you leaves, and then quickly move forward into your exit position. Too many jumpers at the rear of the plane when the plane is full may cause the plane to be unbalanced and potentially cause an emergency. Allow 5-10 seconds separation between groups/individuals depending on

wind conditions for that day. A good rule of thumb is to wait for the jumper/group before you is 45 degrees diagonally down and away before you exit.

Freefall

Stick to your dive plan and communicate with other jumpers on your load about what you will be doing on your jump. Deciding to do a tracking dive, pulling high, etc. after exiting the plane puts everyone at risk for mid-air collisions.

Canopy Control/Landing Pattern

Fly and promote a smooth flow of traffic in the landing pattern, keeping horizontal and vertical separation from other jumpers. More canopies in the air means you need to be much more aware, and always clear your airspace before making any turn. Do not fixate on the landing target. Keep your eyes open for all canopies in the area and be prepared to take split-second evasive actions to avoid a collision.

Split the target landing area (right and left half) and do not cross the line. The side you are on will determine if you need to do a left or right landing pattern. The first jumper on the ground establishes the landing direction. If you are flying a left pattern, land on the left side of the target and vice versa for the right. It is best to discuss the landing direction and pattern prior to boarding the plane, but always be sure to follow the landing direction of the first person down.

Landing with the Plane

If for some reason you will not be exiting the plane, make sure the pilot knows as early as possible. Fasten your seatbelt prior to the last jumper exiting, as the plane will go into a dive as soon as the last jumper has left the plane. You are required to keep your seatbelt fastened until the plane has come to a stop on the ground.

Aircraft Emergency

In the event of an aircraft emergency, the pilot is in charge. Follow any directions given immediately.

Twin Otter Briefing

The only differences between the Caravan and Twin Otter is that the Otter holds 22 jumpers, a maximum of 7 jumpers can be outside of the plane for exit, there are bench seats and the seatbelts all go around the waist.