UNIT 10 – TRAINING JUMPS

RAM-AIR PARACHUTE TRAINING MANUAL

BLM SMOKEJUMPERS

Chapter 10 – TRAINING JUMPS

Prerequisites

Prior to Actual Training Jumps all students must have demonstrated an understanding of all the concepts involved with smokejumper parachute jumping and operations.

Overview

The actual parachute jumps begin with skill building jumps and progresses to scenarios that are found during the course of operational jumps. It typically takes a minimum of 15 and up to 20+ jumps to achieve satisfactory performance in all areas. The students should demonstrate a steady progression of skills. Care should be taken to not introduce too many concepts simultaneously. Safe jump operations are the highest priority and should be focused on during all jumps. Feedback between instructors and students is extremely important. Good and bad performance should be noted and presented to students in a constructive manner. Instructors should present objectives for each jump and complete a jump debriefing following each jump. Based on the instructor's assessment each student should progress through all 3 phases outlined here.

The unit is divided into 3 phases:
1. Canopy Control Jumps
2. Accuracy Jumps
3. Advanced Operational Jumps

At the conclusion of the training jumps, the students should be capable of satisfactory performance on operational jumps.

I. Canopy Control Phase Overview

The Canopy Control Phase consists of an optional observation flight and approximately 5 jumps. At the conclusion of this phase the student should demonstrate a mastery of basic parachuting skills and procedures. The observation flight was first utilized in 1996 rookie training. Its purpose was to reduce student overload on the first jump. The flight also provides a good opportunity to work on pre-jump planning and an excellent preview of the first jump spot. Jump spots used during this phase should be large with minimal hazards present. Typically, AADs are used for the first 5 jumps. AADs should be used until trainers are confident in students' ability to flawlessly execute the jump count. Jump altitudes for this phase should begin at 4000' AGL and be lowered to 3500' AGL by the end of the Canopy Control Phase. The extra altitude allows for an added safety margin and additional time to learn canopy control without compromising timing to a great extent. Students should jump with radios so instructors can correct mistakes that could potentially result in injury or extreme inaccuracy. Radio contact provides extra safety and gives students an extra degree of confidence but shouldn't be overused by instructors. Jump stick size should be limited to

single man sticks to allow focus on canopy controls and mastery of basic pattern. A high altitude jump has been used at the end of this phase but instructors may want to postpone it until later in the jump training. The high altitude jump provides a good opportunity to cover a variety of flight techniques but risks throwing off the student's sense of timing.

Canopy Control Phase Objectives

1. Demonstrate ability to develop jump plan prior to leaving aircraft
2. Demonstrate proper aircraft procedures
3. Demonstrate proper ram-air exits
4. Demonstrate satisfactory jump counts
5. Demonstrate satisfactory after-canopy-opening checks
6. Demonstrate ability to fly a standard pattern
7. Demonstrate competency of canopy flight controls
8. Demonstrate satisfactory ½ brake landings
9. Demonstrate satisfactory PLFs

II. Accuracy Jump Phase Overview

The Accuracy Jump Phase consists of approximately 6 jumps. At the conclusion of this phase jumpers should be able to perform basic operational jumps. 2- Man sticks are introduced during this phase. Jump altitude for this phase begins at 3500' AGL and ends at the normal operational AGL of 3000'. The extra altitude allows additional time for jumpers to develop vertical separation but shouldn't be used too long. It is important that the students get a feel for the timing that they will be faced with on operational jumps. Jump spots should become more challenging and realistic. Jump spots should feature alleyways and lend itself to pattern modification. At least one jump should feature a side hill landing. Accuracy techniques should be stressed during this phase but students should be reminded that accuracy should be sacrificed for safety every time. Tight spots with plentiful alternates allow students to fine-tune their accuracy while providing a safe margin for the inevitable mistake or bad jump. Non standard patterns are scheduled for the next phase but instructors should take advantage of windy conditions if they present themselves and the students are capable of performing them. Instructors should review students' buddy checks until instructors are confident of student ability. Buddy checks are done during this phase due to AAD harnesses being used in the previous phase.

Accuracy Jump Phase Objectives

1. Demonstrate competency in 2- man sticks
2. Demonstrate satisfactory performance at 3000' AGL jump altitudes
3. Demonstrate satisfactory performance with jump ship utilizing a crosswind downwind pattern
4. Demonstrate ability to modify pattern to minimize flight over hazards or adjust to changing wind conditions
5. Demonstrate ability to achieve accuracy through the use of high/steep finals and alleyways.

6. Demonstrate ability to perform side-hill landings.
7. Demonstrate competency in completing buddy checks

III. Advanced Operational Jump Phase Overview

The Advanced Operational Jump Phase consists of approximately 4 jumps. This final phase should expose students to the more challenging type of operational jumps they are likely to face as smokejumpers. 3 and 4-man sticks preclude the use of tight jump spots but provide a good opportunity for students to work on staged and dynamic flares. Instructors may consider raising the jump altitude slightly to give students extra time to work on developing separation but it is generally best to remain at 3000' AGL. If windy conditions don't present themselves during this phase instructors need to cover the concept in a different manner. Crabbing finals are often appropriate to avoid flight over hazards and jump spots can be situated with this in mind.

Advanced Operational Jump Phase Objectives

1. Demonstrate competency in 3 and 4 jumper sticks
2. Demonstrate ability to perform staged and dynamic flares
3. Demonstrate ability to fly non- standard pattern

Student Performance Standards

Students are expected to fly their canopies in a safe manner throughout jump training. Mistakes will be made but instructors should not tolerate dangerous practices. The vast majority of students are capable of satisfactory performance. The decision to pull an individual from training should be based on the criteria listed in the Parachute Performance Standards. Instructors should withdraw a student from training if the individual demonstrates a trend of unsafe parachuting. An individual should also be pulled from training if he/she performs so poorly on a single jump that the instructors believe additional jumps would likely result in injury or death to the individual or other jumpers.

Providing Feedback

Appropriate and timely feedback is critical for student performance. The use of multiple evaluators increases the level of observation and provides additional perspectives but care needs to be exercised in the presentation of information. Multiple instructors should get together before presenting feedback to ensure consistent messages are being delivered. It is generally preferable to have a single instructor present evaluations and critiques of jumps.

Unit Lesson Plans

Lesson plans presented in this unit are based on the objectives outlined for each phase. Each class has its own strengths and weaknesses which an instructor needs to recognize. Instructors may need to adjust the number and sequence of jumps devoted to each phase. Instructors should fine-tune each lesson to maximize the effectiveness of each jump for a given class.

Lesson I PARACHUTE PERFORMANCE STANDARDS

The following is a guide to help define parachute handling performance. Emphasis will be place on providing extra instruction to those individuals involved in marginal of sub-par performance. It will also serve to identify trends in unacceptable performances and help prevent injuries caused by a lack of technical skill.

LESSON OBJECTIVE:

At the completion of this Lesson, the students must verbally list the five categories of the jump evaluation criteria and identify the instructor responses associated with each evaluation.

EQUIPMENT NEEDS:

1 ea. – copy of the jump evaluation criteria for each student.

During training jumps and computerized simulated jumps, the lead parachute instructor will evaluate exit, pattern, and landing using these five ratings:

(5) **Exceptional**- The exit, pattern and landing are all preformed in a flawless manner exceeding set performance standards under challenging wind and/or terrain conditions. Accuracy is excellent and jump objectives are met.

(4) **Superior**- Exit consists of a tight body position and accurate jump count. Pattern is performed maximizing jumper safety and providing the best chance for overall jump success. Final approach and landing are both safe and well executed. Accuracy is good and jump objectives are met.

(3) **Fully Successful**- The individual utilized good parachute handling techniques, i.e. performed necessary procedures and maneuver, and a good landing. Accuracy is acceptable and jump objectives are met.

(2) **Minimally Successful**--the individual erred in one or more areas (exit, pattern or landing). i.e. pulled drogue release early; had to fly to alternate spot due to poor parachute manipulation, but salvaged the jump with a good landing; failed to get vertical separation from JP; cut off JP on final; poor PLF; hard landing induced by improper controls. Jump objectives not met.

(1) Unsatisfactory-- Standard procedures disobeyed which resulted in a serious problem or potential problem, i.e. collision or near collision with JP; failed emergency procedures during malfunction; severe downwind landing; landing so far off the spot that it becomes a hazard; low radical turns; forced or intended stand-up landing, stalling or sink during landing.

Jump scoring criteria

Jump scoring will be assessed using an average of the scores received in the three categories identified on a standard jump critique form. The exit, pattern and landing are the three areas evaluated. Scores will be given and averaged for a jump. This overall number will be the final jump score given. However, if a score of 1 (unsatisfactory) is given in any category the entire jump score will be lowed to this level so that corrective action can be taken.

A category **3,4** or **5** evaluation will indicate solid parachuting skills and require no additional action.

A category **2** jump would precipitate one-on-one "counseling" with the individual and parachute trainer; using video review or discussion of the error, the individual would receive information on how to improve in an honest, non-confrontational setting.

A category **1** jump would be reviewed by the individual and more than one parachute trainer and the incident would be documented. A case history would be established, and, if a trend toward unacceptable jumping develops, it could be grounds for removal from the program.

Lesson II OBSERVATION JUMP

Observation Jump Lesson Objectives:

1. **Demonstrate competency in aircraft procedures.**
2. **Familiarization with developing jump plan.**
3. **Familiarization with altimeters.**

Observation Jump Parameters

Jump Spot: Large DZ (i.e. Murphy, Farmer Brown's)

Jump Altitude: 4000' AGL

Stick Size: 1 jumper sticks for instructors

Special Equipment: Student harnesses with AADs, Altimeters

Student Limitations: Buddy checks must be double checked by an instructor

Instructor Pre Jump To Do List.

1. Intersperse instructors on load to provide input to students on hazard identification, jump plan development, etc.
2. Inspect and hook up canopies to AAD harnesses. Double check.
3. Brief spotter on stick size and exit altitude.
4. Use same jump spot that will be used on first jump.
5. Identify which instructors will jump and which ones will remain on board.

Pre jump Briefing

Cover the objectives of the observation flight. Altimeter use and procedures should be explained.

Instructor Observations

Instructors should monitor students' aircraft procedures and setting of altimeters, Encourage question but students should try to develop their jump plan without significant assistance. Instructors can provide insight to streamer behavior and particular watch ours for the jump spot and jump conditions.

Observation Debrief

Inquire on functionality of altimeters. Problems with aircraft procedures should be addressed. Have students explain their individual jump plan. Instructors should provide a comparison with their own jump plan.

Training Jump # 1: Toggle Setting Identification

Jump #1 Lesson Objectives:

1. **Demonstrate competency in aircraft procedures, the jump count, and after canopy opening check.**
2. **Identify stall point of canopy.**
3. **Identify ½ brake setting.**
4. **Fly pattern utilizing off-hand turns.**
5. **Perform safe landing into the wind using the ½ brake setting.**

Jump Parameters

Jump Spot:	Large DZ, (i.e. Murphy, Farm Brown's)
Jump Altitude:	4000' AGL
Stick Size:	1 jumper sticks
Special Equipment:	Student harness with AADs, Radios in PG bag or leg pocket, altimeters
Student Limitations:	Buddy checks must be double checked by an instructor; 400' limit on sinks or mushing; 100'limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect student's jump gear to ensure no damage incurred during unit training.
2. Inspect and hook up canopies to AAD harnesses. Double check
3. Program rookie and trainer radios to appropriate frequencies for use on jumps. Typically, require at least 4 separate frequencies to avoid conflict.
4. Set-up camera on aircraft to video exit if available.
5. Intersperse experienced jumpers on load to reduce anxiety level and provide input to jump plan.
6. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
7. Make sure instructors at jump spot have stop watches to time jump counts.

Prejump Briefing

Briefing should be kept fairly short. Cover the key points and express confidence in student's ability to perform well. Identifying the stall point is probably the most critical skill of the canopy controls. Performing jump count prior to boarding the aircraft is effective at alleviating pre-jump anxiety.

Instructor Observations

Ensure that each student has a designated instructor with the appropriate radio frequency assigned. Using at least two instructors as evaluators will allow for better monitoring of students. Jump counts should be timed by instructors at the jump spot. Times won't be exact but large deviances from average can be noted. It is important to evaluate and provide feedback on all areas of the jump. Instructors are used to focusing on lower half of jump with refreshers. Observing the early portions of rookie ram-air jumps provide valuable feedback on whether or not students are accomplishing canopy control objectives. Tendencies of staying too far up or down wind can also be noted and corrected for by observing the upper portion of jumps.

Jump Critique

Have spotter provide feedback on procedures in aircraft. Exit video is the best devise for critiquing exits but spotter can also provide feedback in this area. Students will be excited after their first jump, but they are also very receptive. Keep critique short, discuss main items only: i.e., no pattern, low turn, did not go down wind. On the same note, praise should be given for a job well done. Show the video of the landing, stopping only when necessary to make a point. Show the video of the exits. Exits are often a weak area on early jumps as students are uniformly surprised by wind blast encountered while seated in the door. Keep questions focused on basic concepts and ask group if anyone had problems locating drogue release handle. This is an excellent time to review proper procedures for bagging jump gear and parachutes.

Training Jump # 2: Sink Recovery Familiarization

Jump #2 Lesson Objectives:

1. **Demonstrate competency in aircraft procedures, the count, and after canopy opening checks.**
2. **Practice sinks/stalls with slow recovery.**
3. **Fly Pattern utilizing off-hand turns.**
4. **Perform safe landing into the wind using the ½ brake setting.**

Jump #2 Parameters

Jump Spot:	Large DZ, (i.e. Murphy, Farmer Brown's)
Jump Altitude:	4000' AGL
Stick Size:	1 jumper sticks
Special Equipment:	Student harness with AADs, Radios in PG bag or leg pocket, altimeters
Student Limitations:	Buddy checks must be double checked by an instructor; 400' limit on sinks of mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect and hook up canopies to AAD harnesses. Double check.
2. Program rookie and trainer radios to appropriate frequencies for use on jumps
3. Set up camera on aircraft to video exits if available
4. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
5. Make sure instructors at the jump spot have stop watches to time jump counts.

Prejump Briefing

Students are often more anxious on this jump than the first. They know what to expect. Exits will be an area of concern for students after their first experience with Mr. Wind Blast. Incorporating practice exits along with the jump counts prior to the jump can help improve the student's performance. Objectives remain largely unchanged with added emphasis on identifying the stall point and practice recoveries. Remind students that jump conditions may or may not be similar to what was experienced on the first jump.

Instructor Evaluations

Jump counts should continue to be timed until times are consistent. Focus observations on given objectives. Avoid over use of radio instruction. Make sure students will land in a safe area and keep safe toggle settings, but don't correct every minor mistake.

Jump Critique

Continue getting spotter feedback on procedures in aircraft and use exit video of available. Ask group if anyone had problems locating drogue release handle and whether they noticed a different stall point on their second canopy. Measure student performance against specified objectives.

Training Jump #3: Riser Flight Controls

Jump #3 Lesson Objectives:

1. **Familiarization with riser controls: front and rear riser turns, planing, bomb turns**
2. **Keep good orientation to spot and maintain altitude awareness**
3. **Fly pattern utilizing off hand turns.**

Jump #3 Parameters

Jump Spot:	Large DZ, (i.e. Murphy, Farmer Brown's)
Jump Altitude:	4000' AGL
Stick Size:	1 jumper sticks
Special Equipment:	Student harness with AADs, Radio in PG bag or leg pocket, altimeter
Student Limitations:	Buddy checks must be double checked by an Instructor; 300' limit on sinks or mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect and hook up canopies to AAD harnesses. Double check.
2. Program rookie and trainer radios to appropriate frequencies for use on jumps.
3. Set up camera on aircraft to video exits if available
4. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
5. Make sure instructors at jump spot have stop watches to time jump counts
6. Have instructors exit as a 2 jumper stick
7. Avoid putting heavier jumpers behind lighter jumpers in stick.

Prejump Briefing

Cover the objectives for this jump. Instructors should review techniques for utilizing riser turns and planing.

Instructor Evaluations

Jump Critique

Ask students if they have any questions on the misc. maneuvers.

Training Jump #4: High Final Sinks

Jump #4 Lesson Objectives:

1. **Practice sinking the canopy and slow recoveries**
2. **Set up for a high final, 500' AGL minimum**
3. **Use sinks and recovery on high final to fine tune sight picture prior to 300' AGL**
4. **Punch out canopy from ½ brakes for landing. Time flare so feet are touching the ground as toggles hit stall point**

Jump #4 Parameters

Jump Spot:	Large DZ, (i.e. Murphy, Farmer Brown's)
Jump Altitude:	4000' AGL
Stick Size:	1 jumper sticks
Special Equipment:	Student harness with AADs, Radios in PG bag of leg pocket, altimeters
Student Limitations:	Buddy checks must be double checked by an instructor; 300' limit on sinks of mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect and hook up canopies to AAD harnesses. Double check.
2. Program rookie and trainer radios to appropriate frequencies for use on jump.
3. Set up camera on aircraft to video exits if available
4. Brief spotter on stick size, exit altitude, and observing aircraft procedures
5. Make sure instructors at jump spot have stop watches to time jump counts
6. Have instructors exit in 2 jumper sticks

Prejump Briefing

Review the objectives for this jump. Stress the point that developing tools for accuracy and not accuracy itself is the point of this jump. Remind jumpers that previous performance standards still apply (i.e. procedures in A/C, jump count, checks, etc)

Instructor Evaluations

Instructors need to pay close attention to student toggle settings on high final. Instructors should not hesitate to use the radio to get students out of deep brake settings on final lower thank 300'.

Jump Critique

Continue getting spotter feedback on procedures in aircraft and use exit video if available. Ask group if anyone had problems locating drogue release handle. Measure student performance against specified objectives. Use video to illustrate examples of good and bad recoveries from sinks.

Training Jump # 5: Full Glide Turn Familiarization

Jump # 5 Lesson Objectives:

1. **Perform 3 full glide turns either direction**
2. **Set up for a high final, 500' AGL minimum**
3. **Use sinks and recovery on high final to fine tune sight picture to 300'AGL**

Jump #5 Parameters

Jump Spot:	Large DZ, (i.e. Murphy, Farmer Brown's, River Rd.)
Jump Altitude:	3500' AGL
Stick Size:	1 jumper sticks
Special Equipment:	Student harness with AADs, Radios in PG bag of leg pocket, altimeters
Student Limitations:	Buddy checks must be double checked by an instructor; 300' limit on sinks of mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect and hook up canopies to AAD harnesses. Double check.
2. Program rookie and trainer radios to appropriate frequencies for use on jump.
3. Set up camera on aircraft to video exits if available
4. Brief spotter on stick size, exit altitude, and observing aircraft procedures
5. Make sure instructors at jump spot have stop watches to time jump counts
6. Have instructors exit in 2 jumper sticks

Prejump Briefing

Review the objectives for this jump. Make the point that the jump altitude has been decreased by 500' and less time will be available to arrive at the key point. Caution students about punching out canopy too early. Punching out from ½ brakes will help the student's timing for executing flares.

Instructor Evaluations

Instructors need to pay close attention to student toggle settings on high final. Instructors should not be hesitant to use the radio to get students out of deep brake settings on final lower than 300'.

Jump Critique

Continue getting spotter feedback on procedures in aircraft and use exit video if available. Ask group if anyone had problems locating drogue release handle and comfort level on

moving to regular harness. Measure student performance against specified objectives. Use video to illustrate examples of good and bad recoveries from sinks.

Training Jump #6: Two Man Stick introduction

Jump # 6 Lesson Objectives:

1. **Good plan with jump partner with positive identification of alternate spots.**
2. **Develop good vertical separation prior to entering pattern.**

Jump # 6 Parameters

Jump Spot:	Large DZ, (i.e. Murphy, River Road)
Jump Altitude:	3500' AGL
Stick Size:	2 jumper sticks
Special Equipment:	Student harness with AADs, Radios in PG bag of leg pocket, altimeters
Student Limitations:	Buddy checks must be double checked by an instructor; 300' limit on sinks of mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Set up camera on aircraft to video exits if available
2. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
3. Make sure instructors at jump spot have stop watches to time jump counts
4. Have instructors exit as 2 jumper stick
5. Avoid putting heavier jumpers behind lighter jumpers in stick.

Prejump Briefing

Cover the objectives for this jump. Review elements of jump plan and vertical separation techniques. Stress need to identify alternate spots early and splitting the spot. Review canopy collision avoidance SOPs.

Instructor Evaluations

Instructors need to pay close attention to student toggle settings on high final.

Jump Critique

Continue getting spotter feedback on procedures in aircraft and use exit video if available. Use video to illustrate examples of good and bad recoveries from sinks.

Training Jump # 7: Two Man Stick/ Moderate Size Spot

Jump # 7 Lesson Objectives:

1. **Good plan with jump partner in aircraft**
2. **Develop good vertical separation prior to entering pattern**
3. **Punch out canopy from ½ brakes for landing. Time flare so feet are touching the ground as toggles hit stall point.**

Jump # 7 Parameters

Jump Spot:	Moderate sized jump spot (i.e. Big Spot East, Murphy Flats, Murphy Ridge, Bear Run)
Jump Altitude:	3300'AGL
Stick Size:	2 jumper sticks (Use 1 man sticks if overload potential with new spot is significant)
Special Equipment:	Altimeters
Student Limitations:	Buddy checks must be double checked by an Instructor; 200' limit on sinks or mushing; 50' limit on ½ brakes

Instructor Pre Jump To Do List

1. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
2. Make sure instructors at jump spot have stop watches to time jump counts.
3. Have instructors exit as a 2 jumper stick
4. Avoid putting heavier jumpers behind lighter jumpers in stick
5. Ensure regular harnesses have been inspected prior to usage

Prejump Briefing

Cover the objectives for this jump. Provide a thorough brief of new jump spot. Stress need to identify alternate spots early and splitting the spot. Review letdown procedures if timber is a significant hazard in area. Jump altitude has been lowered to 3300' AGL. Limits have been lowered for sinks and flight at ½ brakes. Remind students of consequences of executing maneuver too low.

Instructor Evaluation

Accuracy should improve with tighter spot.

Jump Critique

Training Jump # 8: 3000' AGL/ Hazard Avoidance

Jump # 8 Lesson Objectives:

1. **Develop good vertical separation**
2. **Utilize gentle off hand turns to avoid hazards in jump spot**
3. **Punch out ½ brake landing**

Jump # 8 Parameters

Jump Spot:	Moderate sized jump spot (i.e. Big Spot East, Murphy Ridge, Otter spot, Bear Run)
Jump Altitude:	3000'AGL
Stick Size:	2 jumper sticks (Use 1 man sticks if class is having difficulty with accuracy)
Special Equipment:	None
Student Limitations:	Buddy checks must be double checked by an Instructor.

Instructor Prejump To Do List

- Brief spotter on stick size, exit altitude and observing aircraft procedures.

Prejump Briefing

Cover the objectives for this jump. Jump altitude has been lowered to 3000' AGL.

Instructor Evaluations

Don't ignore upper portion of jump. Students who are late moving into the pattern will often have problems in lower portion of jump.

Jump Critique

Training Jump # 9: Alleyway Utilization Into Small Spots

Jump # 9 Lesson Objectives:

1. **Develop good vertical separation**
2. **Utilize gentle off hand turns to avoid hazards**
3. **Punch out ½ brake landing**

Jump # 9 Parameters

Jump Spot:	Small sized jump spot with alleyways leading into spot (i.e. Big Spot East, Road Kill, Stink Pond East, Murphy Ridge, Fire Bird, Mt. Home)
Jump Altitude:	3000'AGL
Stick Size:	2 jumper sticks
Special Equipment:	None
Student Limitations:	Buddy checks must be double checked by an Instructor.

Instructor Prejump To Do List

- Brief spotter on stick size, exit altitude and observing aircraft procedures.

Prejump Briefing

Cover the objectives for this jump. Review techniques fro getting into small spots: alleyways, sinking, etc. Show "Marquez/ Acosta" video if group has been getting too brave with sink.

Instructor Evaluations

Jump Critique

Training Jump # 10: Crosswind Aircraft Pattern

Jump #10 Lesson Objectives:

1. **Fly pattern to minimize flight over hazards.**
2. **Work on accuracy but don't let it take precedence over airspace awareness or a safe landing.**
3. **Perform jump with aircraft utilizing a cross wind pattern.**

Jump #10 Parameters

Jump Spot:	Small sized jump spot with alleyways leading into spot (i.e. Big Spot East, Road Kill, Stink Pond East, Knife Ridge, Tire Spot)
Jump Altitude:	3000'AGL
Stick Size:	2 jumper sticks
Special Equipment:	None
Student Limitations:	Buddy checks must be double checked by an Instructor.

Instructor Prejump To Do List

- Brief spotter on desire to have jump ship utilize a crosswind pattern.

Prejump Briefing

Cover the objectives for this jump. Review expected exit points when jump ship fly's a crosswind pattern.

Instructor Evaluations

Note students flight in early part of jump to see if they make proper adjustments for crosswind pattern.

Jump Critique

Training Jump # 11: Sidehill Landing

Jump #11 Lesson Objectives:

1. **Fly pattern to minimize flight over hazards.**
2. **Work on accuracy but don't let it take precedence over airspace awareness or a safe landing.**
3. **Flight on final should contour the slope.**
4. **Execute PLF downhill with ½ brake landing.**

Jump #11 Parameters

Jump Spot:	Small sized jump spot with side hill component (i.e. Picea Mariana, Roadkill, Rattlesnake, Murphy Ridge, Tire Spot, Knife Ridge, Mt. Home, Bear Run)
Jump Altitude:	3000'AGL
Stick Size:	2 jumper sticks
Special Equipment:	None
Student Limitations:	Buddy checks must be double checked by an Instructor.

Instructor Prejump To Do List

Prejump Briefing

Cover the objectives for this jump. Review pros/cons of flying downwind leg uphill/downhill of spot. Review need to contour slope on final and caution students of difficulty in performing a flare with a sidehill landing. Flying a low base leg downhill from the spot can allow for an easier approach into timbered jump spots but care must be exercised to avoid landing into the hill.

Instructor Evaluations

Note student altitude when turning final.

Jump Critique

Training Jump # 12: Non-Standard Pattern Prep

Jump # 12 Lesson Objectives:

1. **Fly final without going downwind of jumpspot.**
2. **Demonstrate crabbing technique on final.**
3. **Maintain positive airspace awareness, communicate during flight if necessary.**

Jump # 12 Parameters

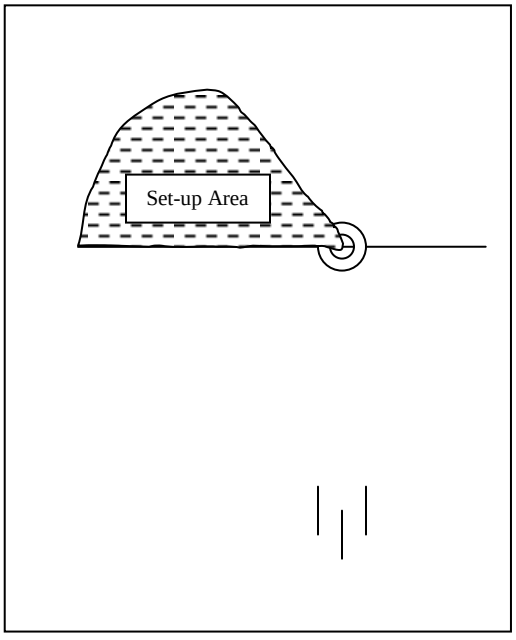
Jump Spot:	Moderate to large jump spot (i.e. Big Spot, River Road, Farmer Brown's, Nordale, Murphy Ridge, Tire Spot, Knife Ridge, Mt. Home, Bear Run)
Jump Altitude:	3000'AGL
Stick Size:	1 or 2 jumper sticks
Special Equipment:	None
Student Limitations:	None

Instructor Prejump To Do List
Bring toilet paper to bisect the jumpspot if intent is to simulate a ridge line. Alternate is to lay out a set-up point target.

Prejump Briefing
Review situations that would preclude a jumper from going downwind of jumpspot. Give both high-wind and terrain examples. Review airspace issues.

Instructor Evaluations
Note student set-up points and appropriateness for conditions.

Jump Critique
Discuss student performance but expand discussion to include how set-up points would change in different conditions.



Training Jump # 13: Non-Standard Pattern

Jump # 13 Lesson Objectives:

1. **Demonstrate good separation from JPs**
2. **Fly a nonstandard pattern**
3. **Perform staged flare or ½ brake landing if necessary.**

Jump # 13 Parameters

Jump Spot:	Moderate to large jump spot (i.e. Big Spot, River Road, Farmer Brown's, Nordale, Murphy Ridge, Tire Spot, Knife Ridge, Mt. Home, Bear Run)
Jump Altitude:	3000'AGL
Stick Size:	2 or 1 jumper sticks depending on wind conditions
Special Equipment:	None
Student Limitations:	None

Instructor Prejump To Do List

- Order a 15 mph wind event

Prejump Briefing

Cover the objectives for this jump. Review techniques and watch outs for nonstandard patterns

Instructor Evaluations

Jump Critique

Training Jump # 14: Three Man Stick/ Staged Flare

Jump # 14 Lesson Objectives:

1. **Make a good jump plan with jump partners.**
2. **Establish good vertical and horizontal separation.**
3. **Perform staged flare or 1/2 brake landing if necessary.**

Jump # 14 Parameters

Jump Spot:	Moderate to large jump spot (i.e. Big Spot, River Road, Murphy, Otter Spot, Fire Bird, Mt. Home)
Jump Altitude:	3000'AGL
Stick Size:	3 jumper sticks
Special Equipment:	None
Student Limitations:	None

Instructor Prejump To Do List

- Brief spotter on desire to have jump ship utilize a crosswind pattern, avoid putting lighter jumpers out in early portion of the stick.

Prejump Briefing

Cover the objectives for this jump. Review expected exit points with 3 jumper sticks. Stress importance of not modifying jump counts or after canopy opening checks to gain separation. Review use of lanes to minimize airspace conflicts on final.

Instructor Evaluations

Note student performance in early portion of jump. 1st jumper in stick needs to get good separation. 3rd jumper can't spend so much time upwind that he has to race back to the spot.

Jump Critique

Training Jump # 15: Four Man Stick

Jump # 15 Lesson Objectives:

1. **Demonstrate good separation from JP's**
2. **Maintain positive airspace awareness, communicate during flight if necessary.**
3. **Perform staged flare from 1/4 brakes**

Jump # 15 Parameters

Jump Spot:	Moderate to large jump spot (i.e. Big Spot, River Road, Farmer Brown's, Nordale, Murphy, Fire Bird, Mt. Home)
Jump Altitude:	3000'AGL
Stick Size:	4 jumper sticks
Special Equipment:	None
Student Limitations:	None

Instructor Prejump To Do List

- Utilize an experienced jumper as 1st man if group is having difficulty in achieving adequate separation

Prejump Briefing

Cover the objectives for this jump. Review expected exit points with 4 jumper sticks.

Instructor Evaluations

Note student flight in early part of jump.

Jump Critique

Training Jump # 16: Four Man Stick

Jump # 16 Lesson Objectives:

1. **Demonstrate good separation from JP's**
2. **Maintain positive airspace awareness, communicate during flight if necessary.**
3. **Perform staged flare from 1/4 brakes**

Jump # 14 Parameters

Jump Spot:	Moderate to large jump spot (i.e. Big Spot, River Road, Farmer Brown's, Nordale, Murphy, Fire Bird, Mt. Home)
Jump Altitude:	3000'AGL
Stick Size:	4 jumper sticks
Special Equipment:	None
Student Limitations:	None

Instructor Prejump To Do List

Prejump Briefing
Cover the objectives for this jump.

Instructor Evaluations

Jump Critique

Optional Training Jump: High Altitude

-This jump has been done both early and late in the jump sequence. Done early, the high altitude jump can create problems with the students' timing and the potential exists for significant inaccuracy. The primary advantage of doing it early is to provide a greater opportunity to practice canopy maneuvers.

Jump Lesson Objectives:

1. **Familiarization with riser controls: front and rear riser turns, planing, bomb turns**
2. **Keep good orientation to spot and maintain attitude awareness.**
3. **Punch out canopy from ½ brakes for landing or utilize stage flare. Time flare so feet are touching the ground as toggles hit stall point.**

Jump Parameters

Jump Spot:	Large DZ, (i.e. Murphy or Farmer Brown's)
Jump Altitude:	6000-8000'AGL (depends on wind conditions)
Stick Size:	2 jumper sticks
Special Equipment:	Student harness with AADs. Radio in PG bag or leg pockets.
Student Limitations:	Buddy checks must be double checked by an instructor; 300' limit on sinks of mushing; 100' limit on ½ brakes

Instructor Pre Jump To Do List

1. Inspect and hook up canopies to AAD harnesses if students haven't been weaned. Double check AADs
2. Program rookie and trainer radios to appropriate frequencies for use on jumps
3. Set up camera on aircraft to video exits if available
4. Brief spotter on stick size, exit altitude, and observing aircraft procedures.
5. Make sure instructors at jump spot have stop watches to time jump counts
6. Have instructors exit as 2 jumper stick
7. Avoid putting heavier jumpers behind lighter jumpers in load.

Prejump Briefing

Cover the objectives for this jump. Review elements of jump plan and vertical separation techniques and how high altitude will affect them. Review canopy collision avoidance SOPs. Remind students that they need to make sure airspace is clear prior to initiating a maneuver. High altitude increases the likelihood of catching up with preceding sticks. Instructors should review techniques for utilizing riser turns and planing.

Instructor Evaluations

Instructors should use the radio to keep students from flying too far from the spot. Flares should be monitored for timing. Instructors need to keep a sharp eye out for intruding aircraft

Jump Critique

Ask students if they have any questions on the misc. maneuvers.