



EUROPEAN DIVISION

ALPINE SNOWBOARD & TOBOGGAN INSTRUCTOR HANDBOOK

23 Dec 2010



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General sections adapted and fitted to suit snowboarding from the
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EUROPEAN DIVISION
SNOWBOARD & TOBOGGAN HANDBOOK
for the SNOWBOARD PATROLLER INSTRUCTOR
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I. CANDIDATE SCREENING

A. PURPOSE

1. To provide the candidate and future trainers with an evaluation of the candidate's snowboarding skills and ability to learn in order to determine readiness for formal on-the-hill (OTH) training.
2. To estimate the amount and intensity of training needed for the candidate to meet the standards for Basic Patroller status.

B. CONCEPT

1. Screening is an "I show you, you show me" type of evaluation. Guided training is not provided, and performance feedback is not normally given.
3. A candidate should pass screening when he/she is able to demonstrate snowboarding skills that are workable into the level of a Basic Patroller. If a candidate passes the screening process, it will not guarantee that he/she will pass a Basic Patroller validation. It only permits the candidate to participate in formal ski and toboggan OTH training.
4. Candidates not passing screening are encouraged to enroll in a snowboard school for lessons and to screen again at a later date. As an option, candidates are also encouraged to focus on the Outdoor Emergency Care OTH training. This gives them the opportunity to validate as an auxiliary patroller and then have more time to concentrate on their snowboarding skills.

C. EXECUTION (Only Examiners and Examiners Provisional may screen a new candidate) As the screener, you will:

1. Explain and demonstrate all basic skills.
2. Observe the candidate's performance of each skill.
3. Grade each skill on an On-the-Hill (OTH) training card with written comments on the back if needed. The grade assigned to each ski skill during the evaluation will be based on a "Go" or "No Go" criteria.
 - **"G"** = **Go**.....Candidate is trainable and has skills that can be refined.
 - **No Go**.....Candidate is not at a trainable stage and/or does not have required skills at this point; should be encouraged to take snowboard lessons.
 - **"X"** = Skill not Rated
4. Provide feedback to the candidate on their performance after completion of screening.
5. Indicate to the candidate whether or not he/she has passed screening.
6. Report screening results to the respective patrol director via email. Scan and email the evaluation card(s) or snail mail them to the Division OET Supervisor for input into the OTH Training Database.



II. INSTRUCTOR RESPONSIBILITIES

A. INTRODUCING THE LESSON & CLASS ORGANIZATION

Whether you line your candidates up in the traditional way facing them or bring them in a huddle, make sure you are able to get your message across and achieve the goal of a training session. As the instructor and patroller in charge you should remember the following rules of thumb:

- Establish a rapport between you and the candidates, and between the candidates themselves.
 - Introduce yourself at the beginning of the session. Take off your sunglasses and goggles so they can see what you look like.
 - Make sure everybody knows everybody else. Chances are they know everyone but do it again anyway.
 - Get to know everyone's name before the first hour is over.
 - Ask your candidates what has motivated them to train for the National Ski Patrol.
- Create an open, friendly and supportive training environment.
 - Candidates should be in an intensive training mode but also in a socially relaxed atmosphere.
 - Face candidates away from the sun and wind. Remind everyone about sunscreen and sunglasses or goggles with UV protection.

B. WARM-UP and STRETCHING

Warm-up and stretching are important throughout the OTH training sessions. Before you start any training session be sure to lead your group into a short but effective warm-up and stretch. Use your imagination and make it fun. Keep the candidates' hearts pumping, for example, by making a couple of hundred meters of short turns. When stretching, it's best to start either at the head or the feet and work your way up or down. Some suggested exercises are:

- Run in place, moving your arms forward and then backwards in a circular motion.
- While sitting in snow raise right leg and write out the alphabet with right foot into the air. Repeat with left leg and foot.
- Make circular motion with wrists only, first towards you then away from you.
- Raise one knee into the chest, then the other.
- Crouch low and then reach for the sky with arms extended overhead.
- Stretch the lumbar area by holding arms out to your side. Twist to the left and right to see what's behind you.
- Kneel down with right leg and raise heel to buttocks. Hold for 15 second. Repeat with left leg.
- Stand with feet parallel to your hips. Lower upper body and arms towards your feet. Hold for 20 seconds.
- Stretch your neck by holding your chin against the top of your sternum for 15 seconds. Look straight ahead, then try to place right ear on right shoulder without raising your shoulder but rather pushing your shoulders down. Repeat with left ear and left shoulder.



C. SAFETY

During a training session, you, the instructor, are responsible for the safety of your candidates. Therefore, you should:

- NEVER stop the in the middle of a "traffic zone" or in a "blind spot" where the group cannot be seen from above. Rather, choose a spot to the side of the slope.
- Be aware that candidates might try to impress you and often go beyond their limits. You must recognize this energy and find positive ways to make the candidate get the most out of the training session without wearing him/her out.
- MUST NOT take your class into unsafe areas, or snowboard under barrier ropes. DO NOT leave your class.
- ALWAYS know where you are going and what to do when you get there.
- Make sure you select an appropriate terrain and snow conditions for the training you are about to provide.
- Perform all skills yourself that you expect your students to perform. This way you can best judge physical effort and snow conditions. Demo skills to the level you would expect to see in a validation scenario.

D. FATIGUE and COLD

When training your candidates, be very alert for signs of fatigue. Keep in mind that candidates will try to hide their discomfort. Therefore, you must watch your candidates carefully for any such signs. Fatigue will cause shorter attention spans, the chills set in sooner and accidents become more frequent. DON'T PUSH them beyond their limits, there will be other training sessions. If one candidate shows signs of being tired, look at the rest of the group and determine if a break is in order.

E. COMMUNICATION: Teaching and Feedback

This is the heart of the training session. You should present the information in a clear and concise manner, but more importantly, you should give the exercise meaning. To the candidate, this answers the "why" do we have to know this particular skill. Teaching "how to" is done by sight and sound. Be enthusiastic in your presentation. Show that you know what you're talking about and that you like what you're doing. When you are presenting and practicing the skills with your group, you should:

- Demonstrate from a variety of perspectives (front, back, side).
- Demonstrate the skill, keeping in mind both regular and goofy footers.
- Demonstrate the technique for the snow conditions and the skill level of the candidates.
- Concentrate only on one skill at a time and ask the students to focus on the appropriate maneuver.
- Demonstrate a mix of skills (pressure, edging, turning, and balance) for the task at hand.
- Set a practice task at an appropriate level of difficulty.
- Design short practice periods so that candidates do not lose focus.
- Provide specific and IMMEDIATE FEEDBACK. If it's good, tell them it's good. If it's not up to the standard, be honest and "DON'T SUGARCOAT IT" for the candidate. He/She will thank you later.
- Apply principles of positive reinforcement. Tell them something good before you criticize. Tell them up front it's not up to the standard and be prepared to suggest improvements. It's your job as an instructor.



- Only criticize one fault at a time. Do not list all faults at once. The candidate may become intimidated and demoralized.
- Use “I” statements instead of “you” when providing feedback. For example, “I notice that the back of your board skids out on your toe-side turns...” is far better than “You are swinging your arms.” “You” statements often put a student on the defensive and soon tune out the instructor.
- Verify that the candidate understands you by asking him/her questions about the techniques.
- Set up group or individual practices focusing only on one skill and correction at a time.
- Provide each candidate with independent training guidelines for practicing on own time.
- Last but not least, keep three things in mind when observing common mistakes and developing corrective actions:
 1. What do you see?
 2. Why do you see it?
 3. How do you fix it?

In order to provide effective feedback,

YOU MUST OBSERVE EFFECTIVELY!



III. GRADING SYSTEM

A. MINUS: " - "

- POOR

The candidate cannot or will not safely perform the required skills or tasks. He/she fails to meet

the minimal snowboarding or toboggan handling standards. The candidate displays lack of stability or control, poor route selection, improper speed for terrain or snow conditions, improper or unsafe use of equipment or inappropriate communication. In general, the candidate's lack of skill, ability or technique endangers self, toboggan passenger and/or other toboggan handler.

- SUBSTANDARD

The candidate is inconsistent in meeting the minimal snowboarding or toboggan standards. The candidate displays frequent errors in speed, control, stability, route selection and communication or equipment usage.

- MARGINAL

The candidate displays occasional errors in speed, control, stability, route selection, communications or equipment usage. His/her maneuvers are fairly consistent, rhythmical and smooth. The candidate needs polish in specific areas to bring up to standard.

B. EQUAL: " = " (The letter "E" is used in lieu of the "=" sign if Excel spreadsheet processing is used)

- MEETS THE STANDARD

The candidate demonstrates the ability to snowboard or operate a toboggan safely and consistently. He/she displays good stability and control, but makes minor errors in speed, route selection or equipment usage. Generally, the candidate demonstrates all skills with confidence as well as proving stability and control in all terrain and snow conditions, resulting in safe and consistent runs.

C. PLUS: " + "

- ABOVE THE STANDARD

The candidate is stable, strong and smooth throughout the maneuver. He/she demonstrates exceptional control and stability in all conditions and terrain providing for an expedient, safe, smooth and consistent run. The candidate appears at ease even under the most difficult conditions. He/she has excellent execution of maneuvers and should be considered for SENIOR training.



IV. SNOWBOARD MANEUVERS

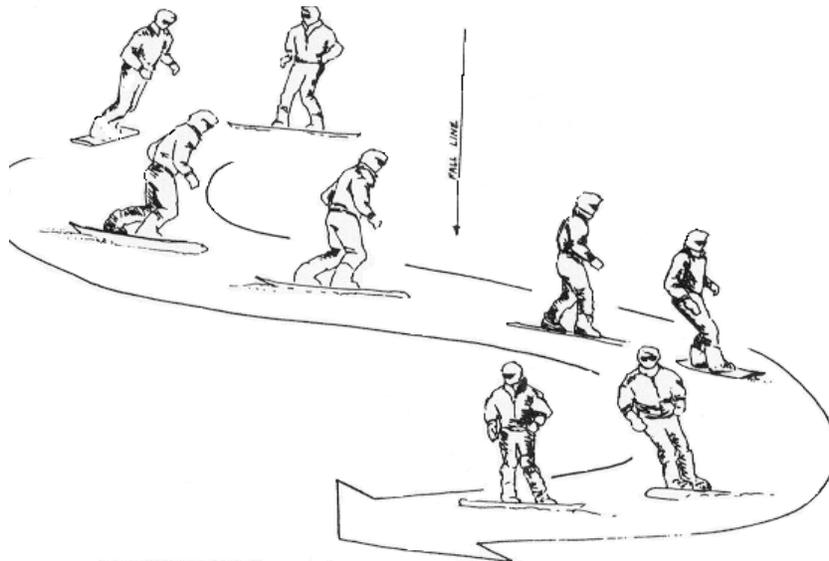


Diagram from PSIA Handbook

A. THE VERY BASIC

1. Carrying your board

A snowboard should be carried under the arm with one binding resting on top of the hand. A person may also carry their board on a leash, in the same way one would carry a handbag or purse.

2. Setting down the board and putting it on correctly

A snowboard should always have a leash that attaches to the user's front leg. This leash should be held until the boarder can safely put one foot (usually the front foot) onto the board and the leash can be safely fastened to the leg.

3. Skating

The board is kept flat and pointed in direction of travel. In an athletic, tall stance with the front foot in the binding, the rider pushes the board along with the back, like a skateboard.

4. Climbing

The board is placed perpendicular to the fall-line. The back leg is out of its binding and in front of the board. With the toe-side edge pressured deeply into the slope by the front foot, the boarder raises his back leg up the slope places it firmly into snow, then lifts the board off snow with his front foot in direction up hill and places it down behind the back foot.

5. Hop Climb

From a kneeling toe-side edge position, the rider reaches forward with his hands and extends his legs, then springing or hopping forward like a frog towards the planted hands.

6. Sitting Rollover

From a seated position the boarder raises the front of the board and rolls body in the direction of the rear foot. Given a bit of momentum, the board will rotate 180° over the tail of the board. The boarder then finishes in a kneeling toe-side position. From a kneeling position, the boarder will roll the body in the direction of the rear foot. Given some momentum, the board will rotate 180° over the tail and the boarder then finishes in a seated



heel-side position. **Note:** Don't try to rotate the board over the front/tip of the board. It won't work!!!

7. Basic Position or Traverse Stance

A natural athletic stance, fairly tall, with ankles, knees and hips slightly flexed and in line with shoulders, hands to the side, head up, and looking in the direction of travel.

Like the title, the very basic, is just that. A candidate must be able to carry out the above skills in a confident and controlled manner. **Remember people are watching you train, don't represent the "out of control boarder" stereotype!**

B. SIDE SLIP – Fall-line - Toe-side and Heel-side (TS & HS)

1. Purpose - Maneuver is used to control speed on an edged board and can safely bring a boarder down the mountain in any condition. It is also the beginning phase of the emergency stop, the falling leaf and braking on the slope.

2. Brief Description - This basic maneuver is a skidded descent at a constant speed directly down the fall-line with weight evenly distributed on the board. The speed is controlled by releasing and engaging the edge.

3. Execution

a. From the basic snowboard position, descend smoothly by progressively increasing the edge angle (TS or HS) and decreasing the edge angle.

b. Edge pressure should be combined with subtle steering and weight shifting to cause the boarder move down the fall-line whether TS or HS while controlling his/her speed and sustaining fluid momentum.

4. Terrain Choice - Moderate terrain, even fall-line.

5. Training

a. Starting on flat terrain, practice standing up from kneeling position on toe edge to get a feel for edging. And practice standing up from seated position on heel edge.

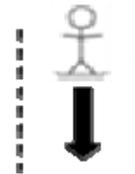
b. On moderate terrain with an even fall-line, practice moving down the hill in a straight side slip on toe edge. Then switch to heel edge.

6. What examiners look for:

- A smooth controlled glide in a relaxed stance and quiet upper body directly down the fall-line maintaining a no wider than a 1-½ board length corridor

7. Common mistakes and corrective actions

- Tense, contrived stance
Cause: Steep terrain, nervousness
Correction: Choose flatter terrain. Practice rhythmic breathing and relaxing.
- Jerking movement, motion not fluid.
Cause: Steep terrain, loss of control over weighting and balancing, tense stance, straight legs.





Correction: Choose flatter terrain. Practice athletic stance. Encourage a gradual pressure on edge, like the brakes of a car. Encourage a lower, softer stance (knees flexed)

C. EMERGENCY STOP - Toe-side and Heel-side

1. **Purpose** - This maneuver is used to quickly stop the board when needed. It is especially useful with toboggan handling.
2. **Brief Description** - A rapid but controlled brake coming to a complete stop.
3. **Execution** - You are snowboarding:
 - a. Upon hearing the command to halt, bring the board into a position perpendicular to the direction of travel, either TS or HS.
 - b. Toe-side: in a tall stance provide maximum edge pressure, slowly flexing knees and ankles like a shock absorber throughout the stop. Once completely stopped with edge set in the snow, bring knees and at least one hand to ground, to indicate stability.
 - c. Heel-side: in a tall stance provide maximum edge pressure, slowly flexing knees and ankles like a shock absorber throughout the stop. You may increase pressure on heel-side edge by lifting toes in the boot. Once completely stopped with back edge set in the snow, come to a seated position.
4. **Terrain Choice** - Shallow at start, becoming steeper.
5. **Training**
 - Starting on a shallow slope, point board directly down the fall-line.
 - Increase speed.
 - Upon command to halt, bring board across the fall-line, and stop. To increase difficulty of exercise, you can change the angle of decent. Instead of riding down the fall-line, demonstrate moving across the slope. Also, you may choose steeper terrain.
6. **What examiners look for:**
 - A controlled and quick stop without continuing to slide down the hill.
 - A quiet upper body facing directly down the fall-line
7. **Common mistakes and corrective actions**
 - Sliding back and forwards across the fall-line.
Cause: Not giving equal pressure on both feet.
Correction: Focus on lifting/pressing down toes equally. Focus on athletic stance.
 - Sliding down the fall line and failing to make a quick stop.
Cause: Not providing enough edge pressure.
Correction: Focus on body lean and lifting or pressing of toes. Go to gym, get stronger.
 - Jerky stop:
Cause: Legs are too straight.
Correction: Focus on a powerful edge set with considerable knee flex.



D. FALLING LEAF – Toe-side and Heel-side

1. **Purpose** - When moving down crud, moguls, or any tough terrain, the falling leaf enables the boarder to avoid problem areas in the snow. This maneuver is especially helpful and important in toboggan training.

2. **Brief Description** - The falling leaf is a smooth and controlled side slipping descent moving laterally left and right across the fall-line.

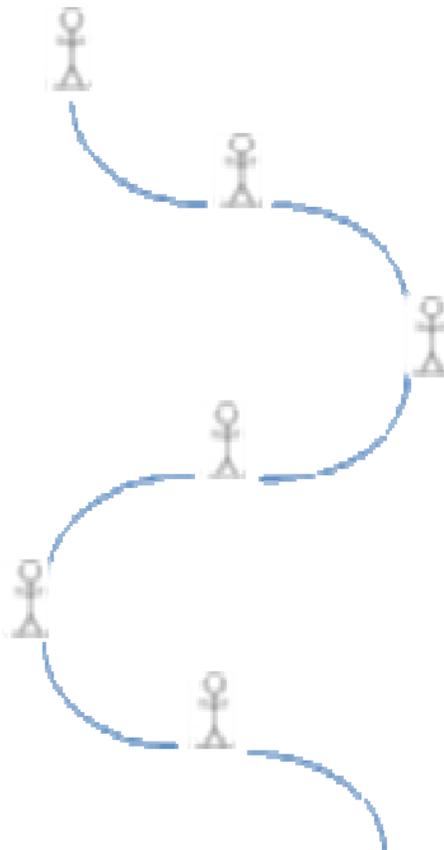
3. **Execution** - The same movements apply to TS and HS.

a. Move down the hill in the side slip position.

b. Subtly place more weight on your front foot than on your back foot. Body mass/weight on the board is now shifted toward the tip, causing it to move forward and laterally across the fall line, yet still slipping at a downhill angle.

c. Subtly place more weight on your back foot than on your front foot. Body mass/weight on the board is now shifted toward the tail, causing it to move backward and laterally across the fall line, yet still slipping at a downhill angle.

d. The desired board track in the snow should look like an "S" series not a "Z".
A "Z" track indicates more of an undesired traverse motion. Board motion **down** the fall-line is still desired even though lateral motion across the fall-line is engaged.





4. Terrain Choice - Moderate slope, even fall-line.

5. Training

- On moderate slope move down the fall-line, weighting front and back leg alternately.
- Practice straight side slip on TS and HS
- Practice forward side slip on TS and HS
- Practice fakie side slip on TS and HS

6. What examiners look for:

- An even skidded pattern, forwards and backwards down the fall-line. At no time should one be able to see a cut in the slope.
- Constant speed.

7. Common mistakes and corrective action

- Cutting the slope
Cause: Too much edge pressure combined with too much weight on front or rear foot.
Correction: Build confidence of boarder to make more subtle weight shifts.
- Not enough speed to continue down the hill
Cause: Too much edge pressure
Correction: Start on easier terrain to build confidence
- Boarder falls into hill and jerky movements
Cause: Major upper body movement.
Correction: Work on keeping upper body neutral. Hands in a sled handle position. On flat surface, get boarder to slide the board back to front and side to side to get a feel for weighting.



E. TRAVERSE – Toe-side and Heel-side (and Fakie)

1. **Purpose** - Allows the rider to cut across the slope without unnecessary loss of height.

2. **Brief Description** - The traverse is an even and controlled movement across the fall-line or slope without compromising height.

3. **Execution** - Applicable to TS and HS riding

a. From the basic snowboard position, apply firm toe-side or heel-side edge pressure.

b. Utilize constant speed. If the rider goes too fast, he/she may lose control. If the rider goes too slow, he/she is likely to stall and lose height when restarting the traverse.

c. Direct a subtle weight shift along the long axis of the board.

d. When riding **regular**, the weight shift favors the **front** foot.

e. When riding **fakie**, the weight shift favors the **back** foot.

4. **Terrain Choice** - Moderate to steeper, less traffic.

5. Training

- Review fall-line concepts.
- From a forward side slip on toe edge, angle the nose of the board no more than 15° downhill.
- With total awareness of traffic on slope, practice cutting across slopes of differing difficulty with minimal height loss.
- Repeat fakie toe edge.
- Repeat on heel edge and fakie heel edge.

6. What examiners look for:

- A cut into the slope as perpendicular (no more than 15°) as possible to the fall line losing minimal height or speed.
- The boarder should be in an athletic stance and confident.

7. Common mistakes and corrective actions

- Slowing down and not having enough speed to make it across the slope.
Cause: Angle of descent is not great enough, and, therefore, inability to read fall-line.
Correction: Check terrain selection, check for proper body position for traverse. Review fall-line concepts, and repeat steering exercises.

- Losing major height

Cause 1: Nose of board points more than 15° downhill

Correction: Check terrain selection. Work on slight upper body movement and slow, unforced lower body movements. Work on edge pressure.

Cause 2: Side slips down instead of cutting the slope

Correction: Focus on strong edge pressure – lifting heels (toe-side traverse), lifting toes (heel-side traverse)



F. TRANSITION TURN

1. Purpose - A maneuver especially designed for toboggan handling, it is also extremely useful on steep off piste terrain to be able to make controlled turns. This maneuver will allow a smooth change of edge while running the sled mainly to relieve muscle fatigue.

2. Brief Description - Using upward unweighting and pre-rotation of the upper body, the rider turns through 180° onto a new edge while moving directly down the fall-line in a controlled manner with consistent, maintainable speed or momentum.

3. Execution

- a. From a side slip position, a stable athletic stance with hands positioned as if in the sled handles, move down the fall-line on heel-side edge.
- b. Pre-rotate the upper body (as if moving one hand back toward the sled's center bar) and strongly unweight with a forward (rise toward the fall-line) motion. This will break the edge set.
- c. Pivoting around the front foot, the lower body and the board should unwind & quickly turn the board through 180°.
- d. Settle onto the toe-side edge to control descent.
- e. Repeat steps to bring you back to heel-side.

4. Terrain Choice - Shallow to moderate slope, even fall line.

5. Training

- Start on flatter terrain, practice pre-rotating upper body by reaching behind you as if you were reaching for the sled.
- When in a tall athletic stance, you will virtually swing around like a spring unwinding.
- Don't think of it as a turn but rather as a side slip transition.

6. What examiners look for:

- Quickly changing from toe-side to heel-side and vice versa while moving directly down the fall-line with constant, consistent speed in a controlled manner.

7. Common mistakes and corrective action

- Making small radius turn instead of transition
Cause 1: Low confidence in own ability. Lack of unweighting.
Correction: Practice jumping up to gain confidence in unweighting.

Cause 2: Boarder catches edge or starts to carve.
Correction: Practice waltzing on snow, i.e. doing 360° on snow clockwise and counterclockwise.



G. SKIDDED TURN (short, medium and long radius)

1. **Purpose** - This maneuver controls the speed of the rider during descent and is the foundation of all advanced snowboarding maneuvers.

2. **Brief Description** - The boarder rhythmically links skidded, even S shape turns down the fall-line without exaggerated prerotation of the upper body.

3. Execution

a. From a basic snowboarding position, break the edge set with a rising and forward unweighting motion, simultaneously rotating upper body and hips in direction of the new turn and slightly weighting front foot.

b. Center your weight throughout the turn. The board will skid with you around the turn.

d. Evenly pressure the uphill edge, maintaining a dynamic stance and an even skid. Repeat on other edge.

4. **Terrain Choice** - Moderate to steeper slopes, even fall-lines to progressively more difficult.

5. Training

- Start linking turns on flatter terrain to pronounce the skidded action of a turn.
- Move to steeper terrain to add traverse to maintain and control speed.
- Count 1, 2, 3; 1, 2, 3 between turns to encourage rhythm and flow.
- Encourage exaggerated upper body movements to avoid counter rotation.
- Practice small radius turns.
- Practice medium radius turns.
- Practice large radius turns.

6. What examiners look for:

- A smooth, fluid turn with consistent turn shapes.
- A skidded arc to traverse when turn is finished.
- Controlled and consistent speed.
- Refined up and down movements that flow from start to finish.

7. Common mistakes and corrective action

- Uneven turn shapes
Cause: Stronger on one edge than the other. Loss of confidence.
Correction: Count with the turns.
- Difficulty releasing edge to enter fall-line
Cause: Terrain could be too steep. Not initiating the rise of body at beginning of turn.
Correction: Practice upward unweighting on flat terrain.
- Counter-rotation
Cause: Not confident to turn. Swings board around by moving upper body in opposite direction. Bad habit!
Correction: Go over basic turn with over emphasis on turning upper body in direction of the turn. Make candidate hold hands in front of body.
- Board carves instead of skidding
Cause: Too much edge angle and weight too far forward.
Correction: Keep board flatter. Apply edge pressure slowly.



H. BASIC CARVING

1. Purpose - Carving is the most stylish form of advanced riding combining higher speeds with more edge engagement.

2. Brief Description - Using a lot of edge angle to maintain a carve, the boarder links his turns dynamically.

3. Execution

a. From a carved traverse, break the edge set with a rising forward unweighting in the direction of the new turn.

b. Weighting front foot, powerfully engage new edge to continue the carve.

c. Center the weight throughout the arc of the turn.

d. Shift your weight to the rear of the board at the end of big carved turns.

e. Repeat on other edge.

4. Terrain Choice - Flatter to moderate wide slopes.

5. Training

- Terrain choice and suitable snow conditions are vital for teaching and practicing carving!
- Practice rocking to new edge without unweighting to get a feel for the edges (carving).
- Practice vigorous upward unweighting by landing on new edge set.
- Try using small bumps in the snow to help with unweighting and landing in new edge set.
- Practice on moguls to keep board in contact with snow.
- Play "follow the leader" varying carved turn sizes.
- Practice carved garlands, turning up the hill as far as possible. Aim for a "Vitelli turn".

6. What examiners look for:

- Advanced carving skills are a SENIOR level skill. A basic carving ability on easy slopes is the requirement for the Basic patroller status.
- A consistent carve in the snow (minimal skidding) with even turn shape.
- A quiet upper body.

7. Common mistakes and corrective action

- Skidding after edge change
Cause: Slow edge change and not engaging new edge with enough power.
Correction: More powerful unweight allows a cleaner edge change. Edge angle must be increased at the start of the new turn. The front leg should be weighted slightly more to help the board bite into the snow.
- Skidding in the middle of the turn
Cause 1: Not enough edge angle.
Correction: Practice on easier terrain to build confidence for full commitment to carve.

Cause 2: Weight not centered on board.
Correction: Have boarder first weight front foot completely then rear foot completely throughout carved turns to discover correct weight distribution for himself.



- Skidding at the end of the turn
Cause 1: Not enough edge angle.
Correction: Practice on easier terrain to build confidence for full commitment to carve.

Cause 2: Not enough speed.
Correction: Find a faster slope or reduce turn size.

Cause 3: Weight too far forward or centered.
Correction: Have boarder move weight to back of the board at the end of turn.
- Whole turn is skidded going into carved traverse
Cause: Boarder is trying to force the board to turn.
Correction: On a flatter slope, build the confidence of the boarder to allow the board to turn itself through the carve.

I. FAKIE (Switch)

1. Purpose - Riding fakie enables the boarder to change direction when no turn is possible. It allows the tail rope boarder to stay in a heel-side stance at all times. It also enables new trick combinations –landing and taking off fakie (switch).

2. Brief Description - Riding fakie – switch – means riding backwards, i.e. with the rear foot leading.

3. Execution - All snowboarding maneuvers can be carried out fakie.

4. Terrain Choice - Flatter to moderate slopes.

5. Training

- 180° jump turns to fakie
- 360° waltzes.
- falling leaf fakie
- traverse fakie

6. What examiners look for:

- Confident and controlled traversing and slowly linked turns.

7. Common mistakes and corrective action

- Falls on turns
Cause: Carves and not breaking edge set
Correction: Build confidence on easy terrain. Reduce the edge pressure and allow the back foot to drift down the fall-line. Emphasize rotation of upper body, see Basic Turn.



TOBOGGAN TRAINING

A. MAIN GOAL OF SLED WORK

To train a candidate to:

- Inspect, assemble and disassemble the sled.
- Safely transport a sled by means of various lift systems.
- Control speed and direction of travel of the sled.
- Deliver the sled to an accident site.
- Prepare and load the patient for transport.
- Safely transport a patient down the hill without causing further injury to the patient.

B. GENERAL SLED INSPECTION FOR ALL TYPES OF SLEDS (including CASCADE)

The candidate should learn to check for the following before the use of a sled:

- Loose rivets, bolts, nuts or any other fastener
- Cracks or chip in the fiberglass (inside and out). Pay attention to stress points where fiberglass meets metal. (CASCADE specific)
- Metal runners
 - a. Not bent or broken.
 - b. No attached ice and/or snow
 - c. Remove any burrs by filing gently
- Lynchpins connecting handles (horns) to the sled are secure. (CASCADE specific)
- Integrity of horn locks (CASCADE specific)
 - a. Working
 - b. Move easy
- Good chain
 - a. Solid attachment
 - b. Bungee cord retainer or "D ring" is in good shape. (CASCADE specific)
- Intact safety rope across the front handles
 - a. Rope is not frayed or cut
 - b. Latch clip is not broken
- Secure tail/safety rope
 - a. Rope is not frayed or cut
 - b. A secure loop is on the end
- Secure carry handles with good knots
- Good condition of patient retaining straps
 - a. Buckles hold under tension
 - b. No rust or broken parts
- Good condition of protective over bag
 - a. Not ripped excessively
 - b. Not torn



- Good supply of blankets, splints and other first aid equipment.

C. GENERAL LIFT TRANSPORTATION FOR ALL TYPES OF SLEDS

As the instructor you will:

- Coordinate with area management/lift operators before getting on the lift with a sled. Some areas will not allow repeated use of chair lifts. You should ask to utilize any special transporting devices to take the sled up the hill.
- Ensure that candidates ride ahead of the sled to assist in unloading and behind in order to avoid runaway sleds.
- Never put yourself or the candidates into an unsafe situation.
- Always be present to supervise, direct and assist in sled loading during all lift transportation methods. NO EXCEPTIONS!!
- Maintain good rapport with area management. Smooth sled loading is, therefore, imperative.

D. GENERAL TRANSPORTATION ON SPECIFIC LIFTS (including CASCADE)

1. T-Bar, J-Bar, and Poma Lift - The following is the easiest and least strenuous method for the transporter. It is, however, not the only method of transport. Be open to other techniques. As the instructor demonstrate as follows:

- a. Work in pairs. Get a candidate or another patroller to help you prepare the sled for transport.
- b. Make sure that the handles are not locked.
- c. With back foot out of binding, position yourself between the handles.
- d. Secure safety rope across the handles in front of you.
- e. If there is no safety rope, loop a rope/strap through one handle. Tie it off and put a karabiner in the loop. Place the karabiner securely on other handle.
- f. The rope should ride on your waist or upper legs in order to keep your hands free.
- g. With the help of a candidate, position the sled parallel to the lift track.
- h. When the lift operator signals, quickly move sled and yourself into the track.
- i. Ride the lift as you would without a sled, back foot out of binding on stomp pad, with bar/handle between your legs.

2. Gondolas and Cable Cars - Instruct the candidates to load the sled in the following manner:

Work in pairs. Sleds are heavy.

- a. Before loading a sled into a large gondola, retract and strap the handles to the sled.
- b. Secure the tail rope to the handles.
- c. In a large gondola, situate the sled in one piece standing on its side.
- d. Before loading a sled into a smaller cable car (4-6 persons), remove the handles if possible and disassemble a two-piece sled.
- e. Place handles either outside the ski rack or carry them inside with you.
- f. Position separate halves of the sled into the cable car.
- g. One piece cascades must be transported via special carriers. Notify your area management beforehand.

3. Chairlift (single & double) - Explain and demonstrate loading/unloading the sled in the following manner:

- a. Always work in pairs.



- b. Retract and strap the handles to the sled.
- c. Secure the tail rope to the handles.
- d. For CASCADE transport, secure a carry bar, an apparatus specially designed for chair lift travel.
- e. Ask a patroller/candidate to ride ahead of you in order to notify the uphill lift operator of the approaching toboggan and to assist with unloading at the top if necessary.
- f. Ask another patroller/candidate to move along the other side of the chair path with you.
- g. The type of chairlift will determine whether the lift is slowed or stopped for loading/unloading.
- h. After the signal from the lift operator, move into position to receive the sled and sit in the chair. The person on the opposite side of you helps to place the sled onto the chair via chair arms.
- i. For CASCADE transport, as the chair approaches, lift the sled with the carry bar and allow the chairlift seat to slide into the bar. The second person may assist you in securing the sled.
- j. Be sure to close the chairlift safety bars as much as possible when transporting the sled.
- k. Be aware of the effects wind may have on the sled and secure the sled's position.
- l. When transporting a CASCADE, maintain a strong hold on the carry bar.
- m. When unloading a CASCADE, lift the carry bar off the seat only once the chair has past the apex of the lift station.
- n. Some chairlifts may require sled disassembly. The loading and unloading principles are the same.

4. Chairlift (triple or quad)

- a. Two patrollers may take the sled/CASCADE up.
- b. If a carry bar is not used and chair design allows, the sled/CASCADE may be placed lengthwise in-between both patrollers. This eliminates the "sail" effect associated with the wind.
- c. Same preparation as above

E. INCIDENT SITE MANAGEMENT

1. Approach, Securing the Sled, and Anchoring your Board - Explain and demonstrate how to approach a patient on the hill. Here are your guidelines:

- a. After choosing the most appropriate route toward the incident site, steer the sled under the injured person across the fall line or as indicated by patroller on site (lead patroller).
- b. Let down the chain and move the sled towards you to get chain under the sled.
- c. While still in handles, a second patroller/candidate who has approached the site with you will snowboard below the sled and begin to secure it.
- d. That person should pile snow below the bottom side of the sled until it is sufficiently stable.
- e. He/She may also use cut off ski poles, the patient's skis or snowboard or another patroller's skis to secure the sled.
- f. He or she will then take up the tail rope again and belay the sled while you remove your board.
- g. Check stability of sled before moving out of the handles.
- h. Place your board upside down, with binding facing the slope, into the snow. Place extra snow below board for extra security.



2. Loading the Patient

Because loading the patient is trained and practiced in the OTH OEC training, you will not teach this extensively. However, following are general guidelines that you should stress to the candidates:

- a. The patient is always loaded in the sled according to the injury.
- b. Ask the patient if he/she is able to "help" in loading themselves.
- c. The patient is secured in the sled with enough padding, support and protection from the elements. (This may not be necessary during training sessions. It will be up to you).
- d. A patroller must always have a hold of an assembled sled. It is best if a patroller is in the handles as well as a patroller belaying on the tail rope, while another patroller is loading the patient into the sled.

F. GENERAL SLED AND CASCADE HANDLING

1. Communication

a. Simple, defined communication is essential to a smooth running sled team. Although any type of dialogue can be used, keep in mind that it should be:

- Clearly understood.
- Short and simple.
- Professional in nature.
- Agreed upon by both Patrollers.

b. Primary communications established by the front patroller should include at least:

- 1) "**STOP**, if I need to stop."
- 2) "**SLOW DOWN**, if I go too fast."
- 3) "**TRAVERSE**, left or right so you can get the same position before we traverse."
- 4) "**LET IT RUN**, when we need to run it for speed."
- 5) "**SLINGSHOT**, when I want you to give a slingshot on the uphill side of the sled only.
NOTE: Boarders WILL NOT slingshot!
- 6) Any other communications as needed between both patrollers.

2. **Training procedure** - Never lose sight of our objectives:

- Train patrollers to handle a loaded sled with safety, control and confidence.
 - Train to snowboard the fall-line using sideslips, traverse and transition turns as primary snowboarding techniques.
- a. Each candidate will run the sled empty in both front and rear positions before running it loaded.
 - b. Candidates should make their first loaded sled run on easier terrain.



- c. When the sled is being run by candidates, an instructor WILL ALWAYS BE DOWNHILL of the sled to stop it in cases of control loss. Positioning one or more candidates downhill is also recommended for safety and running interference for crowd control.

3. Patient Transportation - Route Selection is critical to patient comfort but also for the patroller stamina and safety of the skiing public. In addition, keep in mind the following points when instructing candidates on safe patient transport:

- a. Care and comfort of the patient is the primary concern. An exception is only appropriate if delays may result in severe disability and/or death.
- b. Recognize the importance of route planning in terms of safety, hazard avoidance, equipment and travel concerns, and time and effort expectations.
- c. A general rule of thumb is: Unless it is a life-threatening situation, a loaded sled will not exceed the speed of the surrounding skiing public.

G. SPECIFIC SLED AND CASCADE HANDLING

1. Snowboarder in the Handles: Responsibilities and Skills

a. **Responsibilities:**

- Speed Control
- Route Selection
- Verify handles are locked for loaded running.
- Establish what communications/commands are to be used with rear patroller.
- Execute transitions with stability and control.

b. **Skills:**

- Before any sled movement, the front boarder MUST ask the boarder on the tail rope if he/she is ready to proceed.
- The person in the handles should be in a neutral, athletic stance. Train the front patroller in proper route selection with the final objective of skiing the fall-line.
- The best sled running position is with the patroller's hands around **waist level**. Shorter people may move farther back in the handles to bring them to waist level. Many have found their best comfort/control zone by pressing down on the handles, softening their stance, and using whatever part of the front chain that touches the snow for braking. This also provides for lots of extending pressure in case of an emergency stop.

- c. As the instructor, train candidates thoroughly on the following skills:

1. Traverse - An even, stable and controlled movement across the fall line or slope without compromising height. Consider this in training:

- Make sure the candidate does not traverse over a slope where the sled cannot be seen from above.
- Instruct the candidate to always watch for traffic coming down before traversing.
- Make sure the candidate makes the person on the tail rope aware of the maneuver and gives the boarder on the tail enough room to stay above the sled.



2. **Transition turn** – Upward unweighting and pre-rotation of the upper body in the handles, thereby changing from toe-side to heel-side and vice versa while moving down the fall-line with constant speed in a controlled manner. Consider this in training:

- In practice, a candidate should be able to transition on command. When transporting a patient, it should not be done unnecessarily.
- This maneuver will allow a smooth change of edge during travel to reduce muscle fatigue.
- The boarder may also facilitate a change in direction.

3. **Emergency Stop** - A rapid but controlled brake coming to a complete stop. Consider this in training:

- Make sure the candidate announces it to the person on the tail rope.
- Encourage the candidate to make this stop out of the traffic area on a slope.
- Check for stance and flexed knees if the candidate makes a jerky stop.
- Candidates will try to stop "on a dime". This may not be the safest to stop for the patient or the sled crew, but may be an effective training exercise. Candidates should be held responsible for stopping where they choose. Ask them why they stopped where they did. If called for, give them options to make it better.

4. **Running the sled** – Approaching the end of a slope or flat area, a rider points the board down the fall line to maintain speed and momentum over flats and bumps.

Consider this in training:

- Be certain a candidate always announces this maneuver!
- Teach the candidate to choose the best route to make it past a flat area.
- Build the confidence of the boarder to "run the sled".
- The candidate needs to learn how much speed he/she needs to get over a flat area. Practice, practice, practice.
- Stress that patient's safety always comes before saving a bit of muscle power.

2. Snowboarder on Tail Rope: Responsibilities and Skills

a. **Responsibilities:**

- Serve as a reserve brake.
- Prevent rear of Cascade from sliding or swinging downhill.
- Secure the Cascade until the front operator is ready.
- Monitor patient condition.
- Monitor uphill skier traffic and any other conditions the front patroller may not be aware of.
- Communicate with front patroller as needed.
- Maintain control of the tail rope (tension as required for safe operation). Act as the primary brake if the front patroller runs the Cascade outside of the handles.

b. **Skills:**

- **Snowboard patrollers on the tail rope will be predominantly heel-side.** To date, no known instance exists where a tail rope boarder should be toe-side.

c. As the instructor, train candidates thoroughly on the following skills:

1. **Traverse** - An even, stable and controlled movement across the fall line or slope without compromising height. Consider this in training for tail ropers:

- Make sure the candidate announces to the person in handles if traffic is coming down he/she cannot see.



- Instruct the candidate to always watch for traffic coming down before traversing.
- Encourage the candidates to anticipate direction changes and to be able to react to the changes.
- Keep an eye on the tail boarder to ensure he/she always remains above the sled in the fall line.
- Practice riding fakie at high speeds.

2. Emergency Stop - A rapid but controlled break coming to a complete stop. Consider this in training:

- Make sure the candidate maintains a good grip on the tail rope.
- Check to ensure the boarder is providing plenty of edge pressure to make a controlled stop.
- Check for stance and flexed knees if the candidate makes a jerky stop.
- Candidates will try to stop "on a dime". This may not be the safest to stop for the patient or the sled crew, but may be an effective training exercise. Candidates should be held responsible for stopping where they choose. Ask them why they stopped where they did. If called for, give them options to make it better.

3. Belaying the sled - In a seated position with the heel-side edge firmly set in the snow, the boarder holds the end of tail rope firmly with one hand in front of body and other hand firmly behind the back so the rope to the sled is taut.

4. Running the sled – Approaching the end of a slope or flat area, pointing the board down the fall line to maintain speed and momentum to continue movement of the sled over flats and bumps. Consider this in training:

- Work on small radius turns.
- Build the confidence of the boarder to point board and make quick cat walk turns while holding onto the rope.
- The candidate needs to learn how much speed he/she needs to get over a flat area. Practice, practice, practice.
- Stress that patient's safety always comes before saving a bit of muscle power.

5. Sling Shot – When flat area approaches and front man has little momentum and speed left, rear boarder moves past sled and front person bringing with him/her strength and momentum to "sling shot" the sled over flatter part. Consider this in training:

- Stress that patient's safety always comes before saving a bit of muscle power.
- Build candidate confidence to keep up speed at flatter parts.
- Have boarder work on a lower stance.
- Make sure tail roper knows not to come to a complete stop when doing this maneuver or he will be either left behind while the sled passes by.

3. Change-Over (both Front and Tail rope boarders) Above all, SAFETY is the number one priority. There are three "in the fall-line" methods (described in the "NSPS PHASE II Ski and Toboggan Manual") and one "traverse" method of changeover. Basic candidates will be taught all methods of change-over. Of the three fall-line changeovers, the European Division favors the one described below and is the preferred method by the snowboard instructor-trainers. The other change-over detailed below is known as a "traverse" change-over and is most commonly used by the European Division. ****NOTE: The Snowboard change-over differs here from Skier change-over because a boarder needs "hands free" to traverse effectively.**



a. In the Fall-line Change-Over

Front - Patroller A (initiating):

1. Calls for a "fall-line" change-over. Determines which side of the sled the rear patroller will move down into the front handles.
2. Commands the rear patroller to go "on belay".
3. Moves within handles to a toe-side edge position.
4. Releases the chain and if necessary, directs the rear patroller to give slack in order to move the sled forward over chain.
5. Assumes a sled securing position to prevent sled movement and leaves plenty of space between the body and the center cross bar of the handles.
6. Then announces: "SLED SECURE".

Rear – Patroller B (responding):

1. Coils the tail rope while side slipping down to the appropriate side of the sled. Avoid tugging on the tail rope while coiling.
2. Checks on patient.
3. Completes a sitting rollover maneuver from heel-side to toe-side. This is done far enough downhill to avoid disturbing the stability of the sled.
4. A transition turn may also be done, but only if the patroller is confident and experienced in this maneuver.
5. Side slips and traverses under handles (still TS) in front of Patroller A.
6. Hands the coiled tail rope to Patroller A.
7. Firmly edges the board and assumes a position of stability and sled security.
8. Then announces "SLED SECURE."

Front – Patroller A (responding):

1. Releases the front handles, testing for sled stability, then announces: "COMING OUT OF THE HANDLES".
2. Moves away from the sled with tail rope.
3. Performs a sitting roll-over to heel-side and assume a seated belay position.

Rear – Patroller B (responding):

1. Establishes commands and communication to be used between the two patrollers.
2. Moves the sled downhill until tail snowboarder is in position above the sled.
3. Releases chain if necessary and moves on.

b. Across the Fall-line (Traverse) Change-Over

Front - Patroller A (initiating):

1. Calls for a traverse change-over.
2. Maneuvers the sled into a safe (toe-side) position across the fall-line.
3. Assumes a sled securing position to prevent sled movement and announces: "SLED SECURE".

Rear – Patroller B (responding):

1. Coils the tail rope while side-slipping down to the rear of the sled. Avoid tugging on the tail rope while coiling.
2. Places the coiled tail rope near the back of the sled, but not above it.
3. Completes a sitting rollover maneuver from heel-side to toe-side. This is done far enough downhill to avoid disturbing the stability of the sled.



4. Performs a "hands free" lateral traverse shuffle to the center of the sled. With one hand on the uphill side of the sled and one hand on the downhill side on the sled, sets the toe-side edge and assumes a position of stability (which may include being on the knees) and announces: "SLED SECURE".
5. Monitors patient condition. SITTING OR RESTING ON THE SLED IS NOT PERMITTED.

Front – Patroller A (responding):

1. Releases the front handles, testing for sled stability, then announces: "COMING OUT OF THE HANDLES".
2. Moves DOWNHILL of the sled, in a lateral traverse towards the rear.
3. Climbs towards the rope, picks it up and moves far enough behind the sled in order to complete a sitting rollover from toe-side to heel side and firmly sets the heel-side edge into the snow while belaying the sled with the tail rope taut but not pulled.
4. Announces: "SLED SECURE".

Rear – Patroller B (responding):

1. With "hands off" the sled: Staying just below the sled and ready to act if necessary, moves toe-side carefully into the handles, not disturbing the sled stability.
2. Assumes a position of stability, tests for stability and announces: "SLED SECURE".
3. Establishes commands and communication to be used between the two patrollers.