



FIS FREESTYLE SKIING JUDGING HANDBOOK

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6000 AERIALS

6001 Definition

Aerial competition shall consist of one, or multiple different acrobatic leaps from a prepared jump(s), stressing take-off, height and distance (referred to as "air"), proper style, execution and precision of movement (referred to as "form") and landing. Refer to ICR 3060.2.8, and 4009 concerning competition formats.

6002 Scoring

The competitor's acrobatic skiing will be judged on three basic components as follows:

6002.1 Air:

Consisting of 20% of the score. 0.0 - 2.0

6002.2 Form:

Consisting of 50% of the score. 0.0 - 5.0

6002.3 Landing:

Consisting of 30% of the score. 0.0 - 3.0

6003 Scoring Procedures

6003.1 5 Judge Format

Judges shall independently evaluate the competitor's performance based upon the Air and Form Criteria as stated in JH 6004.1, 6004.2 and the Landing Criteria in 6004.3 to create a single overall score per judge. The high and low scores of each component will be discarded and the remaining three scores in each component will be added together.

6003.3.1 Total Score

The total Judges' Score is calculated by adding the three counting scores in each component. This total is then multiplied by the appropriate Degree of Difficulty (DD) factor to determine the total score for each jump. The total will be truncated to two decimal places.

In a two jump Phase, the competitor's final score for both jumps is determined by adding together the total scores from each jump.

Example:

Judges Scores						
Take Off & Air	4.6	1.7	4.9	1.7	1.8	5.2
Form	4.5	4.2	4.3	4.4	4.6	13.2
Landing	2.4	2.3	2.4	2.2	2.5	<u>7.1</u>

Total Score (Maximum 30 points x Degree of Difficulty)

Total Judges' Score: = 25.5
 Total Score: = 25.5 x DD

6004 Judging Criteria**6004.1 Air (20% of the Score) Min. = 0.0 / Max. = 2.0**

Air shall be evaluated based upon the take-off, height and distance of the competitor's jump. Take-off involves an evaluation of how the jump is initiated. Height and distance are a product of speed into the jump and the force of the take-off. Take-off, height and distance shall also be evaluated in relation to the length and steepness of the landing hill. The competitor should not land too short (knoll) or too long (beyond the transition area of the landing hill).

Air consists of 20% of the score (maximum 2 points per judge) and will be broken down into two parts:

10% Technical Take-Off

10% Height and Distance

6004.1.1 Technical Take-Off Min. = 0.0 / Max. = 1.0

Technical take-off refers to the manner in which the competitor initiates the jump by extending the body *at* the right moment while leaving the kicker.

Take-off is judged from the moment the competitor enters the transition, until the feet leave the kicker.

6004.1.1.1 Good Take-Off 0.7 - 1.0

Just before the competitor leaves the kicker the body must be fully extended - the arms must lead the motion. The jump is initiated through "popping" from the kicker. The actual position in the jump (tuck, twist, spread, etc.) should not begin before the feet have left the kicker.

6004.1.1.2 Non-optimal Take-Off 0.4 - 0.6

There are different types of mistake:

The competitor does not pop at the right moment (too early or too late), the form starts too early (twisting on the kicker), i.e. the arms are behind the body; shoulders are pushed backward too much; bent in the knees.

Points are deducted according to the number and severity of these mistakes.

6004.1.1.3 Bad Take-Off 0.0 - 0.3

Take-off is completely missed, causing an uncontrolled jump in most cases.

6004.1.2 Height and Distance Min. = 0.0 / Max = 1.0

Height and distance are a product of speed into the jump and the force of the take-off. It shall be evaluated according to the trajectory through the air and the optimum landing point of the kicker (Refer to 6004.1.2.1).

6004.1.2.1 Good Height and Distance 0.7 - 1.0

The trajectory through the air begins at an angle that is continuing the curve of the kicker.

i.e.: Small Jumps	- about 55°
Medium Jump	- about 60°
Large Jumps	- about 71°

The *optimum* landing point should be the range from 2 m to 4 m, including 1 or 2 m plus or minus adjustments away from the knoll.

6004.1.2.2 Non-optimal Height and Distance 0.4 - 0.6

The trajectory through the air is too high or too low. The landing is in the transition area from the knoll to the optimum landing point.

6004.1.2.3 Bad Height and Distance 0.0 - 0.3

The jump is landed on the knoll or on the outrun.

6004.2 Form (50% of the Score) Min. = 0.0 / Max. = 5.0

Form consists of 50% of the score (maximum 5 points per judge).

Form denotes the position of the body, skis, arms, hands, and/or poles while in the air. It is the manner in which the competitor executes each maneuver. Form shall be evaluated based upon competitor's precision of performance (i.e. Tightness of body, economy of motion), balance, mechanics, stability (or control) in the air, separation and the timing of the maneuver in relation to the apex of the jump. Form is judged from when the competitor's ski tips start to leave the jump until the competitor touches the snow.

All judges will deduct 0.5 from their score for a violation of the balk rule ICR 3057.11.

6004.2.1 Positions in the Form

6004.2.1.1 Planned maneuvers

If the number of planned maneuvers is not fulfilled (somersaults, twists, 360's, upright positions) resulting in too many or not enough maneuvers, the competitor receives DNF. →Refer to ICR 3058

Example:

<u>Flight Plan:</u>	<u>Jump Performed:</u>	
Tuck-Tuck	Tuck-Tuck-Tuck	<u>DNF (ICR 3058).</u>
Full-Double Full	Full-Full	<u>DNF (ICR 3058).</u>

6004.2.1.2 Breakdown of Form deductions

A judge breaks down the form points to the number of maneuvers (somersaults, 360's, twists, upright positions), and takes off the percentage accordingly if the form in one, two, three, or more parts is missed completely or partially.

Example:

<u>Flight Plan:</u>	<u>Jump Performed:</u>	<u>Value</u>
Lay-Tuck	Lay-Tuck	max. 5.0
Lay-Tuck	Tuck-Tuck	max. 2.5
Lay-Tuck	Tuck-Lay	max. 0.0
Lay-Tuck	Lay-Lay	max. 2.5
Twister-Twister	Twister-Twister	max. 5.0
Twister-Twister	Twister-Spread	max. 2.5

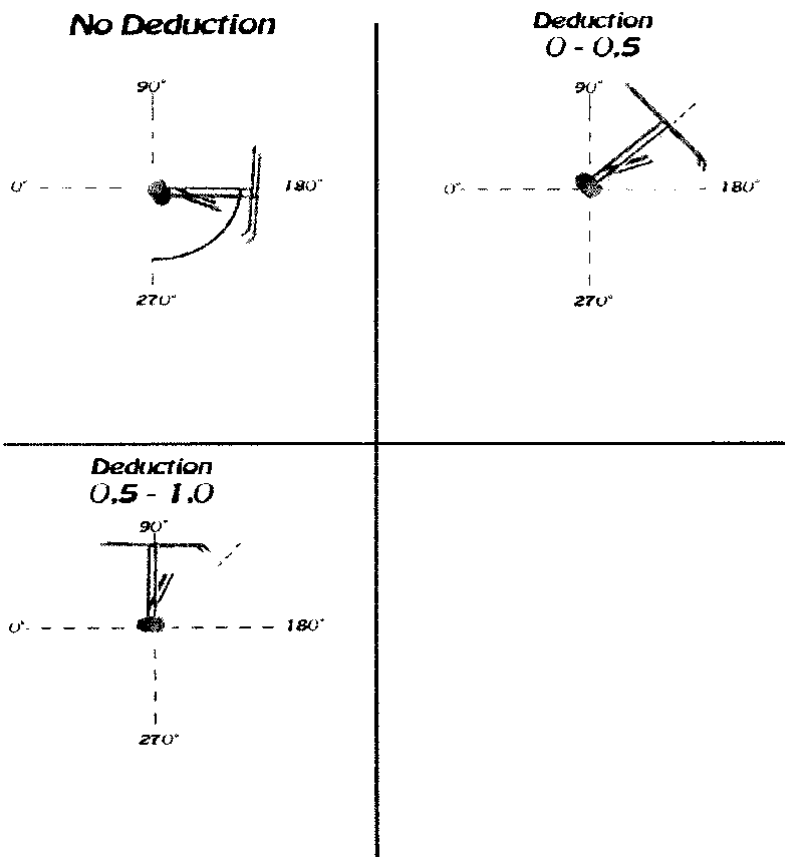
6004.2.2 Form score

Form is evaluated according to two criteria:

Timing; and the quality of execution as modified by Form breaks.

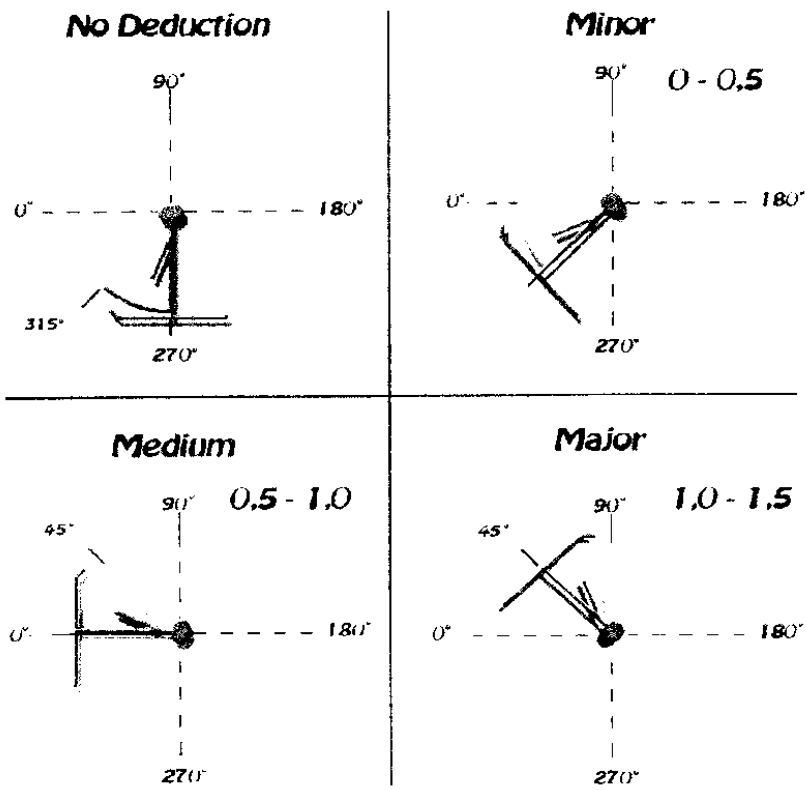
6004.2.2.1 Timing

6004.2.2.1.1 Early Twist Start

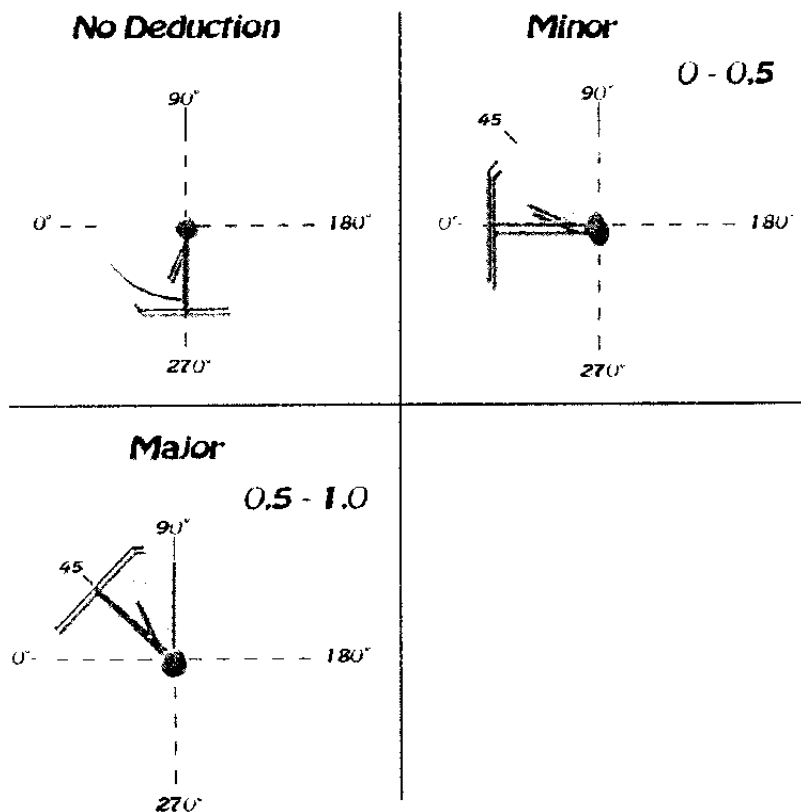


Early twist start (about a 1/4 turn at 12:00) is acceptable (means no deduction) i.e.: a layout to a full or double-full will start about 1/4 turn at 12:00

6004.2.2.1.2 Late conclusion of twists in double somersaults (late finish)



6004.2.2.1.3 Late conclusion of twists in triple somersaults (Twist finish)



6004.2.2.2 Form Breaks

The following is a guide to use when assessing form breaks:

- Minor form breaks deduct up to 25% of possible form points
- Medium form breaks deduct up to 50% of possible form points
- Major form breaks deduct up to 100% of possible form points

As in take-off, the body should be extended, not only at take-off, but also prior to landing. The amount of deduction depends on whether the form is bad throughout the whole jump or only in parts of the maneuver.

For example, Jumps performed with a minor form break in one somersault:

	Single Twist	Double Twist	Triple Twist
Form	2.5 - 5.0	1.7 - 2.5	0.9 - 1.7/ 1.6
Deduction	<u>1.2</u>	<u>0.6</u>	<u>0.4</u>
Total	3.8	4.4	4.6

Jump	Form Break / per flip		
	minor	medium	major
single	0.1 - 1.2	1.3 - 2.5	2.6 - 5.0
double	0.1 - 0.6	0.7 - 1.2	1.3 - 2.5
triple	0.1 - 0.4	0.5 - 0.8	0.9 - 1.7

A guideline to differentiate between minor, medium and major form breaks is as follows:

All definitions of form are based on body positions. All positions have to be in the layout (straight body, no bending, 0°), or tuck or pike (90° bending at the knees, hip) position. The only exception is the puck position (only allowed for half-in and twisting front flips).

Anything with a variation of less than 45° off the required position should be considered minor. Anything with a variation of approximately 45° off the required position should be considered medium. Anything with a variation of clearly more than 45° off the required position should be considered major.

Deductions are cumulative. Multiple minor form breaks in the same movement can result in a major form break.

6004.2.2.2.1 Separation

Separation means the competitor is able to clearly demonstrate the beginning and the end of each maneuver, i.e. the declared number of twists within each flip. Separation means showing the start of a twist and the end of a twist. The work of the arms has a lot to do with separation. In an open position the hands help to identify when a twisting maneuver is completed.

Presence of separation, or lack thereof, should not have any significant impact on the criterion of timing. Any particular jump may have clear separation of maneuvers without proper timing and vice versa: timing criteria can conceivably be satisfied without clear separation.

6004.2.2.2.2 Points to Assess Form Breaks

6004.2.2.2.3 General Body Position (as defined above)

Leg Position	Ski Position	Body Position
<ul style="list-style-type: none"> • Legs apart • Scissoring • Knee bend 	<ul style="list-style-type: none"> • Skis splayed • Skis apart (tips or tails) 	<ul style="list-style-type: none"> • Pucking • Spiral segmentation • Separation • Arch • Hollow

6004.2.2.2.4 Control In Air

Excessive motion to control speed can be pulling and stretching as defined below, and the relative over or under rotation of the flip. Excessive motion can also be exhibited in upright jumps mostly with the arms being used for balance, or to increase or decrease rotational speed and to prevent landing too far forward, backwards or not square to the fall line.

In the case of a Layout position, flipping speed can be increased by pulling the body inward and bending at the knees and waist and neck, or decreased by stretching the body and the arms parallel to the head, both of which could be form breaks.

NOTE:

In the last quarter of flip rotation, just prior to landing, it is acceptable for the athlete to make minor adjustments in the body position and leg position in order to square the skis and body to the landing hill. During this “preparation for landing” the athlete may have a slight bend at the waist (to 45°) and open the legs (to shoulder width) without being assessed form break deductions.

6004.3 Landing (30% of the Score) Min. = 0.0 / Max. = 3.0

A proper landing involves a balanced, stable and controlled body position throughout. The competitor should demonstrate precision and grace with minimal interruption upon contact with the landing surface. Absorption should be made primarily with the knees and lower body with only a slight bend at the waist. The evaluation of a landing starts immediately when the competitor touches the snow and continues until the competitor has exhibited sufficient skiing control.

Landing consists of 30% of the total score (maximum 3.0 points per judge).

Landing consists of two parts

1. Landing - body position in relation to the landing hill following preparation for landing, ski snow contact on impact as well as absorption of the body to come back to the neutral body position - Max. 2.0 points
2. Exit from the landing following the snow contact, impact and absorption. - Max. points 1.0

NOTE:

Preparation for landing is considered in Form.

6004.3.1 Landing Min. = 0.0 / Max. = 3.0**6004.3.1.1 Applicable Ranges for landing**

0.0	No weight on skis
0.1 – 0.5	Minimal weight on skis, sliding on back or side; immediate crash
0.6 – 1.0	Landing with immediate body contact; hard back slap or punch front back to skis; severe over or under rotation
1.1 – 1.5	Light back slap, severe turn to 45 degrees or more to landing hill, turn around no fall or touch, severe imbalance
1.6 – 2.0	No body contact but hand or hands dragging with hard compression, heavy imbalance
2.1 – 2.5	No touch of hand(s) but some imbalance on landing or ski away; hard compression with no touch
2.6 – 3.0	Excellent landing, good balance with little or no compression

NOTE:

If an athlete has any hand contact, the maximum score is 2.0.

If an athlete has any body contact, the maximum score is 1.5.

An athlete that doesn't touch can receive a score lower than 2.0 for severe imbalance, skiing sideways, circling or backwards.

Landing will stopped being judged when the athlete shows control and at least 4 meters after making contact with the snow.

6200 MOGULS**6201 Definition**

Mogul competition shall consist of one run of free skiing on a steep, heavily moguled course, stressing technical turns, aerial maneuvers and speed.

Refer to ICR 3060.2.1 concerning Qualification and Finals.

6202 Scoring**6202.1 Turns:**

Consisting of 60% of the score. → max 60.0 points

6202.2 Air:

Consisting of 20% of the score. → max. 20.0 points

6202.3 Speed:

Consisting of 20% of the score. → max. 20.0 points

6203 Scoring Procedures**6203.1 7 Judge Format**

The Judges will evaluate the competitor's performance using a split scoring system as follows:

6203.1.1 Turn Judges

Five Judges shall independently evaluate the competitor's performance based upon the criteria as stated in JH 6204.1. The high and low scores shall be discarded and the remaining three scores added together.

6203.1.2 Air Judges

Two Judges shall independently evaluate the competitors aerial maneuver(s) based upon the criteria as stated in JH 6204.3. The scores will be averaged for a total air score and truncated to two decimal places.

Total Air Score = 10.0 (max) x 2 jumps = 20.0 (max) per run

6203.1.3 Time

The speed score shall be calculated according to JH 6204.4.

6203.1.4 Total Score

The average of the two air scores is added to the total of the three counting turn scores to get the competitors total Judges score. The speed score shall be added to the total Judges score to determine the competitor's complete Mogul score.

6203.2 5 Judge Format

The Judges will evaluate the competitor's performance using a split scoring system as follows:

6203.2.1 Turn Judges

Three Judges shall independently evaluate the competitor's performance based upon the criteria as stated in JH 6204.1. The three scores shall be added together.

Total Turns Score = 20.0 x 3 judges = max. 60.0 points

6203.2.2 Air Judges

Two Judges shall independently evaluate the competitor's aerial maneuver(s) based upon the criteria as stated in JH 6204.3. The scores will be averaged for a total air score and truncated to two decimal places.

Total Air Score = 10.0 (max) x 2 jumps = 20.0 (max).

6203.2.3 Time

The speed score shall be calculated according to JH 6204.4.

6203.2.4 Total Score

The average of the two air scores is added to the total of the three counting turn scores to get the competitors total Judges score. The speed score shall be added to the total Judges' score to determine the competitor's complete Mogul score.

6204 Judging Criteria

6204.1 Turns (60% of the Score) Min. = 0.1 / Max. = 20.0

Turns, in terms of judging criteria, refers to a technical evaluation of how well a competitor turns through the moguls. They refer to rhythmic changes in direction of travel to either side of the fall line, utilizing an aggressive, controlled technique. The competitor shall be judged from crossing the start line until crossing the finish line.

Technical considerations

Full control must be gained after every jump, resulting in controlled turns. It is important to register the direction of the landing. Air is scored until return to control; turns begin scoring when the initial landing direction has been changed, so the changeover between the scoring of airs and turns judges is when the skis change their initial direction into a turn.

6204.1.1 Fall Line

Skiing in the fall line is considered the shortest way from the Start to the Finish. To avoid deductions for fall line deviations, the competitor must stay in the selected fall line out of the start gate. Competitors will receive score deductions for fall line deviations as noted in JH 6204.2 including drifting in Air maneuvers. Landing on the center of the mogul is a deviation from the fall line.

6204.1.2 Carving

6204.1.2.1 General

A pure carved turn is one in which the tail of the ski follows precisely the track made by the ski tip. The upper ski is edged inward at the entrance to the turn, with the competitor's weight placed well forward on that ski. This maneuver flexes the ski into a curve whose radius is determined by the angulation of the ski, by its side cut and by the size of the bending moment acting on the ski. The other ski needs to move in the same fashion to produce a similar curve with the weight on its outer edge. Reverse camber of the ski (flex) can also be increased by flexion of the edged ski tip into the face of the mogul or rut.

As shown in the figure below, in a purely carved turn there is no skidding/lateral sliding, and the only snow resistance present is the very small gliding friction between ski base, edge and snow. As a result of this minimal level of friction between ski and snow, the speed reduction of the competitor is optimized and fully under the control of the competitor.

Turn radius should reflect the deflection required in relation to the gradient of the slope. Excessive deflection across the hill impacting the face of a mogul is a form break as it results in excessive braking and poor ski line. Turn shape and deflection should vary according to the spacing between the moguls.

6204.1.2.2 Body Position for Carved Turns

- A properly carved ski requires less effort to work, and gives higher levels of control and stability.
- The turn is initiated with pressure as the knees and ankles/feet roll the skis onto edge and extension begins.
- At the middle of the turn (when the ski is edged and the tip is pointing down the fall-line) the ski tips contact the face of the mogul.
- Absorption is used to maintain balance and control pressure in the skis and should match the shape and size of mogul to optimize snow to ski contact.
- Rotations in the upper legs are minimal, feet remain under the body (shoulders and hips) in both fore-and-aft and lateral planes, and knees remain flexed.
- Legs should be together or in a consistent position throughout the run.
- Breaks in balance and separations in position are inefficient turns.
- Angulation of the lower leg controls the radius of the turn. Timing of the initiation dictates how deep the feet go into the rut.
- Movements should be symmetrical and equal side to side, specifically:
- Timing and placement of pole plants (double pole plant is a deduction)
- Arm movements (little movement is preferred but if there is movement it should be equal)
- Shape of turns: do the turns adjust to the gradient of the slope and the size and disposition of the moguls
- Position of the feet in relation to the body (do the feet move further outside the body's midpoint on one turn)

- Specifically movements should be symmetrical and equal side to side.
- Timing and placement of pole plants is a significant factor (double pole plant is a deduction)

6204.1.2.3 Illustrations / References

Illustration of a purely carved turn

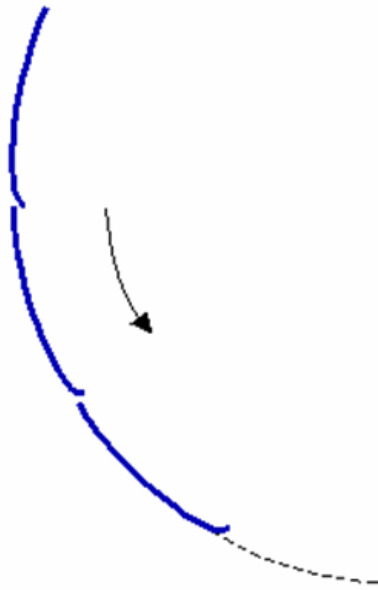
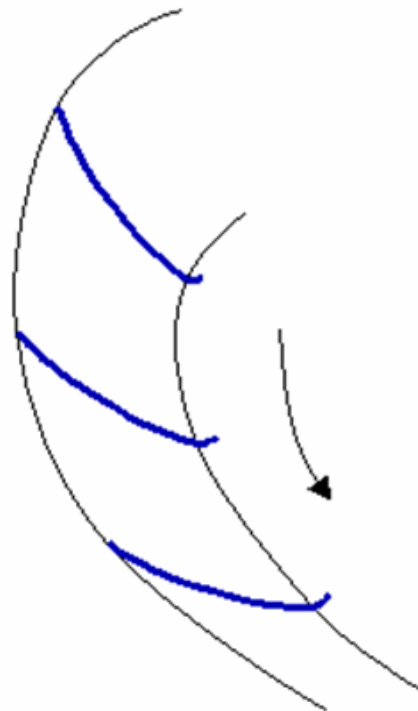


Illustration of a skidded turn by contrast ; the figure below illustrates a turn that is executed while skidding or sliding laterally.



The path "swept" by the skis is the result of ploughing the base of the skis through the snow at the face of the mogul. This happens when the competitor turns his skis too sharply into the turn and the ski impacts the face of the mogul on the sidewall and base of the ski, as opposed to the tip of the ski on edge. A skidding ski pivots across the path of the turn.

However, in some cases, a degree of steering or skidding during initiation is unavoidable, but the key is to minimize snow resistance from skidding during the remainder of the turn. This is in order to maintain correct speed control and balance during an accurate carved turn.

6204.1.3 Absorption and Extension

The competitor should follow the shape of the mogul through absorption from the start until the top of the mogul. Extension starts right after the top of the mogul. Extension also follows the shape of the mogul. Pressure between skis and snow should remain the same during absorption and extension, absorbing as the competitor moves up and extending as the competitor moves down.

Additionally, the competitor should aggressively utilize the moguls to assist initiation of turns, rather than waiting for the moguls.

6204.1.4 Upper Body

The head should remain still, facing downhill. The chest should also stay straight and natural. Hands stay in front of the body in a natural position. Pole plants should be light and wrist movement goes forward.

6204.1.5 Mogul ranges

Excellent	18.1 – 20.0
Very good	16.1 – 18.0
Good	14.1 – 16.0
Above Average	12.1 – 14.0
Competent	10.1 – 12.0
Below average	8.1 – 10.0
Poor	4.1 – 8.0
Very poor	0.1 – 4.0

6204.1.6 Mogul course

At a course with 11 control gates including start and finish gate (each control gate counts 1/10 of the course)

6204.2 Deductions of Turns Points

The “Deductions” category is used for all errors

6.0	Any complete stop
4.1 – 5.9	Complete fall without stop or interruption/significant sliding down fall line or across hill to nearly a complete stop
2.9 – 4.0	Hard touchdown or front roll without stop or interruption/sliding significantly reducing downhill momentum
2.1 – 2.8	Medium touchdown without stop
0.5 – 2.0	Light touchdown without interruption, small stumbles, fall line deviations, speed check, double pole plant, shooting

Definitions

- Small stumbles,
- Fall line deviations refer to JH 6204.2.1
- Speed check
- Significant sliding Sections of course with no turns or not skied (max 2.0 points per gate)
- Shooting Sections of course with no turns or not skied (max 2.0 points per gate)
- Light Touchdown: Momentary touch with one or both hands.
- Medium Touchdown: Touch with hips or arm(s).
- Hard Touchdown: Back or side slap, or front roll.
- Complete fall: Full body contact, no weight on skis.
- Complete Stop: A complete stop for any reason.

Notes

1. A competitor loses control and rides the tails of her skis with no turns for 2 full control gates. A competitor may get partial deductions for turning minimally within a section vs making no turns at all in a section (“shooting”)

Deduction= 4.0 (2.0 x control gates for shooting)

2. A competitor loses his balance after a jump and does a back slap then immediately continues skiing with no fall line break.

Deductions = 2.9 – 4.0

3. A competitor has a complete fall and slides two control gates then comes to a full stop, and then continues skiing.

Deductions = 5.3 + 4.0 (2.0 x control gates for not skiing) +6.0

6204.2.1 Other deductions

Deductions in turns points are for specific errors on the course.

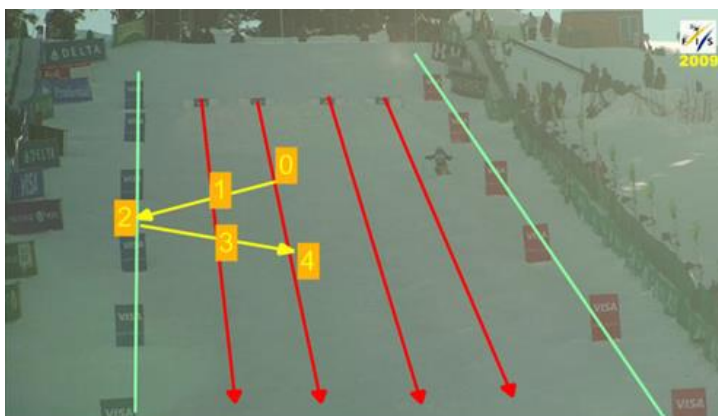
Deductions will also be used for deviations from a fall line as noted below:

Fall line deviations (leaving the fall line) are based on the guidelines of a 1.6 deduction for any complete line deviation.

Other deductions may be taken for factors that caused the line deviation.

Fall line deviations may be more or less than a complete line change and will be scored accordingly. A competitor who returns to a fall line immediately after deviating will NOT receive a deduction for a second line deviation.

Deductions = 1.2 + 3.2 + 4.0 = 8.4 → 1.2 for stumble + (2 x 1.6 =) 3.2 (for each complete line deviation) + 4.0 (2.0 x2 control gates for not skiing)



6204.3 Air (20% of the Score) Min. = 0.0 / Max. = 10.0 (per jump)

The scoring of air is broken into two parts, Form and Difficulty. The maneuver will be evaluated for form out of 10.0 with a degree of difficulty multiplier, based on the maneuver(s) performed →Refer to 6204.4.5.

6204.3.1 Jump groups

Different jump groups in Moguls are listed below (with examples):

1. Flips (somersault) Inverted flips include all jump somersaults. Only single inverted flips are allowed.
2. Loop Include all loop jumps. Only single loops are allowed.
3. Straight Rotations (helicopters/360,720). Straight Rotations include all traditional single and multiple rotations (helicopters/360/540/720...). A straight rotation maneuver can also include up to three (3) positions and/or one (1) grab.
4. Off Axis (D-spin, Cork, Misty) Off Axis includes all traditional single and multiple off axis maneuvers (360/540/720...)

The Off Axis jumps are grouped in three categories:

- **A** = D-spin, Cork, and Loop full
 - **B** = Rodeo, Flat spin
 - **C** = Misty, Bio
5. Upright (Spread Eagle, Kosak, Zudnick, Daffy, Back Scratcher, Mule Kick, Iron Cross, Twister, etc.: Singles - Quints). Upright jumps include all jumps performed in the vertical axis without rotation. These include the traditional upright jumps (twister, spread, daffy etc.). A competitor can perform 1 (single) to 5 (Quint) upright maneuvers. Any more than 5 will not be counted. There is no bonus for any position modifiers (i.e. grabs etc.) in upright jumps.

6204.3.2 Form

Priorities to judge form and position of the jumps in mogul skiing are set as follows:

First	Quality (Form, Landing)
	NOTE: Air in moguls will be judged until the competitor is in full control.
Second	Air (Height and Distance)
Third	Spontaneity. (Speed check, etc.)
	Spontaneity is the ability of the competitor to maintain the rhythm of turns prior to the jump, including the initiation for take-off.

When judging form for all jump groups (uprights, flips, off-axis, etc.) the primary factor for evaluation is the "Purposeful Motion" utilized by the competitor.

Purposeful motion means:

- Athleticism displayed
- Control
- Balance, and
- Continuity of Motion

All jumps, including traditional jumps (such as uprights and vertical axis rotations) and new jumps (such as off-axis rotations), will be evaluated using the Purposeful Motion criteria.

Maximum raw point allotment: 10.0 for form, with DD max. 10.0 / jump.

Note: Jumps must receive at least 0.1 form points to receive difficulty multiplier.

The height of the jumps should be related to the weight point of the body (not to the head, or top or body).

6204.3.3 POINT GUIDELINE

Excellent Jump	8.1 – 10.0
Good Jump	6.1 – 8.0
Average Jump	4.1 – 6.0
Poor Jump	2.1 – 4.0
Very Poor Jump	0.1 – 2.0

6204.3.4 Full control

Full control must be gained after every jump, resulting in controlled turns. It is important to register the direction in the landing. Air is scored until return to control; turns begin scoring when the initial landing direction has been changed, so the changeover between judges occurs when the skis make their initial change of direction into a turn.

6204.3.4.1 Falls after Jumps / Deep Landings

- The jump is judged up to a controlled landing.
- If the landing is very poor or completely missed the jump score is affected.
The jump may only receive a maximum score of 5.0.
- Falls and touchdowns also affect the turn score.

6204.3.5 Difficulty

Jumps will be identified by a specific code. This code will identify the basic jump group and additional difficulty components that make up the difficulty formula.

The difficulty of the upright maneuver will be established in accordance with the Difficulty table, using a 'Base DD', enhanced by the values established for the jump components. The table of jump codes and Degree of Difficulty values is maintained and published on the FIS web site.

6204.3.6 Jump Codes

Moguls jump codes are created by adding individual codes together to form a jump. Each letter code represents a value and these values are added together to calculate the Degree of Difficulty (DD). The table of jump codes and Degree of Difficulty values is maintained and published on the FIS web site.

6204.3.7 Position Modifiers

<u>Modifier</u>	<u>Code</u>	
• Position	p	→ add 0.03
For 2 positions	pp	→ add 0.06
For 3 positions	ppp	→ add 0.09
• Grab	G / g	→ see notes below
• Layout position	L	→ add 0.02

NOTES:

- Up to three positions and one grab can be added to a jump. All positions (p) are to be listed first, then the grab (g) or (G) (e.g. bLpg, bLpG or bPpppg not bLgp or bPpppp).
- The layout position modifier is only used after a half twist if performed in the layout position e.g. bHlw for a Back/Half (layout) with switch landing
- Switch Take-off and Landing
A competitor can take-off and/or land in either direction (i.e. forwards or backwards). If a take-off or landing is backwards it is known as switch. Switch take-off or landing is notated using sign “w” at the beginning of the jump code for a switch take-off and/or at the end for a switch landing.
The switch “w” modifier has a value of 0.06 each time it is used. So if a competitor performs a jump with a switch take-off and landing there would be a “w” at the beginning and end of the jump code and you would add a value of 0.12 to the maneuver.
- A “g” shall be assigned to any grab that is from mid ski to the boot (except for cross body grabs).
- • A “G” shall be assigned to any grab from beyond mid ski to the tail or tip, including cross body grabs (i.e., mute, japan, critical).

NOTE: Grabs cannot be performed as a single maneuver. They can only be incorporated within a rotational maneuver like inverted flip, straight rotations and off axis maneuvers. Grabs performed must be identifiable as a Grab. A grab should be held, at a minimum, so it is presented clearly to the judges.

An attempted grab will be considered as a grab in the coding of the jump. A poor or missed grab will be counted as a grab but the fact that it may have been missed or not presented clearly to the judges will affect the overall package of the jump and scored accordingly. When one element of a jump is very poor or barely done, the whole score will reflect the combined effort and substantially

reflect the missed grab. An attempted grab will be coded according to the way it was attempted.

For example:

Imperfectly executed grabs will result in deductions as follows;

1. If the grab is not properly held but the hand makes positive contact with the ski, deduct 0.5 to 1.0
2. If the hand barely makes contact or misses but the correct position is held, deduct up to 1.5.
3. If the grab and the position is missed completely, deduct up to 3.0.

6204.3.8 Repeats

Every competitor must perform two different jumps in order for two jumps to count. If a jump is repeated, only the better scoring jump of the two will count.

Only identically performed jumps will be considered repeated jumps, with the exceptions noted below. "Two different jumps" are defined as:

Inverted Flips: Allow only one (1) jump in this category per run unless there is a different direction in initiation (front vs back) or rotation added (straight over jump vs full twisting).

	<u>Can do</u>	<u>Can't do</u>
First Jump	back full	back full
Second Jump	front tuck	back half

Loop: Allow only one (1) jump in this category per run.

	<u>Can do</u>	<u>Can't do</u>
First Jump	loop pike	loop pike
Second Jump	back full	loop pike with grab

Off Axis: Allow the same jump from the same category if there is a different primary axis of rotation, front or back, or there is a different secondary axis of rotation by 180 degrees or more (same system as with straight rotations).

	<u>Can do</u>	<u>Can't do</u>
First Jump	7o 7oA/B	7opA
Second Jump	3o 7oC	7ogB

Straight Rotations: If two (2) jumps are done from this category they must differ by 180 degrees or more.

	<u>Can do</u>	<u>Can't do</u>
First Jump	360	720 pp
Second Jump	720	720 pg

Upright : Must have a different number of moves (i.e. double spread, triple twister)

	<u>Can do</u>	<u>Can't do</u>
First Jump	TST	DTS
Second Jump	TS	TTT

6204.3.9 Exceptions and Notes:

1. When grabs are performed in jumps, all grabs are considered to be the same for purposes of the repeat rule. For example, a 360 mute grab is a repeat of a 360 tail grab. Also there is no difference between grabs made as "g" or "G". All Grabs are classified as the same maneuver : a 720 off axis with 2 grabs is a repeat of another 720 off axis with 2 different grabs, and is also a repeat if the grabs are merely reversed in order or done once as "g" and then as "G".
2. When positions are performed in flips, loops, or vertical or off axis rotational maneuvers, the location of the position within the jump does not change the jump
3. Two off-axis jumps are considered to be repeats unless there is a different primary axis of rotation, front or back, or there is a different secondary axis of rotations by at least 180 degrees. Competitors can do A and C or B and C combinations.
4. Positions with grabs or any attempt to grab are considered to be grabs for the purpose of this rule.

6204.4 Speed (20% of the Score) Min. = 0.0 / Max. = 20.0

Speed is simply the amount of time taken to complete the run. Time shall be taken from the moment that the competitor leaves the starting gate until they cross the finish line. The points awarded for speed will be called time points and calculated. →Refer to ICR 4203.3

6300 DUAL MOGULS**6301 Definition**

The Dual Mogul competition shall consist of elimination rounds where pairs of competitors compete against each other. Each loser is eliminated and each winner advances to the next round until a final result is achieved. The competition will take place on a steep, heavily moguled course, stressing technical turns, aerial maneuvers and speed.

6302 Pairings

Refer to ICR 4305

6303 Scoring Procedures

In Dual Mogul Format, each judge shall determine which competitor more fully exhibits the requirements set forth in Rule JH 6204, Judging Criteria for Moguls, and indicate such selection by the Dual Mogul system, corresponding to the course on which such competitor competed.

The loser shall be eliminated and the winners move on to the next round until the final placing is determined. See JH 6304 for additional event procedures.

6304 Judging Procedure, Dual Mogul Format**6304.1 Dual Moguls**

The judging criteria used in the dual mogul elimination format shall be the same as set forth in Rule JH 6204.1 "Turns" and Rule JH 6204.3 "Air". Speed is a comparison of relative time as per rule JH 6304.4.

6304.1.1 5 Judges Format

A panel of five (5) judges shall administer scores based upon specific duties for each judge as follows:

AIR	- One (1) Judge
SPEED	- One (1) Judges
TURNS	- Two (2) Judges
OVERALL PERFORMANCE	- One (1) Judge

J1	J2	J3	J4	J5
Turns	Turns	Speed	Air	Overall

Speed is a comparison of relative time as per rule JH 6304.4.

6304.1.2 7 Judge Format

A panel of seven (7) judges shall administer scores based upon specific duties for each judge as follows:

AIR	- Two (2) Judges
SPEED (Turns tie break)	- One (1) Judge
TURNS	- Four (4) Judges

J1	J2	J3	J4	J5	J6	J7
Turns	Turns	Turns	Turns	Air	Air	Speed*

* *Speed is a comparison of relative time as per rule 6304.4. The Turns score delivered by the Speed Judge shall be used only for the purpose of tie breaking within the provisions of JH 6304.3.2.*

6304.2 Dual Mogul System**6304.2.1 Scoring**

Each judge will have a total of six possible votes to cast, with possible combinations of 5-0, 4-1, 3-2, 2-3, 1-4, or 0-5, for the red course vs. the blue course. This results in 25 or 35 possible votes to be cast as follows:

7 Judges

Turns #1:	5 votes
Turns #2:	5 votes
Turns #3:	5 votes
Turns #4:	5 votes
Air #1:	5 votes
Air #2:	5 votes
Speed:	5 votes
Total:	35 votes

5 Judges

Turns #1	5 votes
Turns #2	5 votes
Air	5 votes
Speed	5 votes
Overall	3 votes Turns
	1 vote air, 1 vote speed
Total:	25 votes

A scorekeeper will be on the Judges' stand assisting the Head Judge to add up all the votes. The result will be written in the protocol and announced immediately. The winner of each match will be the competitor who received the simple majority of votes.

The scorekeeper is also responsible for recording all decisions of each judge on a protocol form.

6305 Special Procedures: Dual Moguls**6305.1 Number of Aerial Maneuvers**

All courses will be two jump courses for international competitions. The recommended number of aerial maneuvers shall not restrict the competitor to the stated amount, but represents the number of aerial maneuvers that will receive an evaluation.

6305.2 Scoring Air in Dual Moguls**6305.2.1 Jumps evaluation**

Air Judges evaluate jumps based on the scoring criteria from single moguls (Quality, Air and Spontaneity), as well as difficulty and variety. Competitors may repeat jumps but judges will consider variety in comparing the two competitors. Variety reflects a different number of maneuvers and different types of maneuvers. A competitor who repeats (identically) the same manoeuvre during a run will receive a deduction of two (2) votes per Air Judge; A competitor who performs two different manoeuvres from the same scoring Category will receive a deduction of one (1) vote per Air Judge. Scoring category as defined in 6204.3.8 – single moguls repeat rule.

Appendix A: General Description of Jump Definitions

1. Basic Jump Definitions

Center of Balance	Is located at the center of mass, where the three axes intersect.
Balance Point	Is where the forces on the body are equal to the forces created by the dynamic body actions.
Body Segments	The body is divided into several sections; the upper body and lower body are two of the major segments.
Vertical Axis	Runs from the top of the body to the feet, through the balance point.
Horizontal Axis	Runs from side to side, through the balance point.
Lateral Axis	Runs from the front of the body to back of the body, through the balance point.
Tilted	One or more of the axes of rotation are less than 90 degrees to the direction of the rotation.
Off Axis	The rotation around the primary axis is tilted off of the axis.
Direction of Travel	The primary direction of travel is in the horizontal plane and through the balance point. There are lateral movements around the body segments during flexion and extension.
Plane	There are three planes which the body passes through during dynamic movement: the vertical plane, lateral plane and horizontal plane.
Flexion	decreasing the angle between the joint or body segments.
Extension	increasing the angle between the joint or body segments.
Rotation	increasing or decreasing the different angles between the body segments.
Degrees of Rotation	The number of rotations or part of rotations around an axis expressed in degree of rotation.
Primary Axis	the body actions to rotation on the first axis.
Secondary Axis	the body actions to rotation on an additional axis.
Grabs	With the body action of a flexion, a section or part of the ski is grabbed by the hand or hands.
Holds	With the body action of a flexion, a section or part of the ski or skis are grabbed by one or more hands and then held for a duration.

2. **Back Flip:** One complete rotation in the backwards direction around the horizontal axis.

Back Tuck: The take-off is initiated both upwards and backwards which starts a primary rotation on the horizontal axis. The upper and lower body then extends. There is a flexion at the waist between the upper body and lower body to the tuck position. The body rotates backwards a total of 360 Degrees, then the skiers extend and prepares for the landing.

Back Layout: The take-off is initiated both upwards and backwards which starts a primary rotation on the horizontal axis. The upper and the lower body extends. The body rotates backwards a total of 360 degrees, then the skier flexes and prepares for the landing.

Pike: A body action that starts from an extended position then there is a flexion at the waist, with legs being kept straight.

Free Position: Could also be called the 'puck' position which is in-between a layout and a tuck position, mainly seen in off axis rotations.

Half Twist: A 180° rotation of the body around its vertical axis in a "free" position, except in the half out movement the body must be laid out.

Twisting: Rotation around the primary and or the secondary axis. All twists (including multiple twists in one somersault) are performed in a layout position.

Back Full: The take-off is initiated both upwards and backwards which starts a primary rotation on the horizontal axis. An additional axis of rotation on the vertical axis is initiated with the rotation of the upper body. The upper and lower body then extends straight. There is a full extension at the waist between the upper body and lower body continues on both axes.

The body rotates backwards a total of 360 degrees on the primary axis and rotates 360 degrees on the secondary axis, then the skiers extends and prepares for the landing.

Double Full: The take-off is initiated both upwards and backwards which starts a primary rotation on the horizontal axis. An additional rotation on the vertical axis is initiated with the rotation of the upper body. The upper and lower body then extends straight. There is a full extension at the waist between the upper body and lower body continues on both axes.

The body rotates backwards a total of 360 degrees on the horizontal axis and 720 degrees on the vertical secondary axis, then the skiers extends and prepares for the landing.

3. **Front Flip:** One complete rotation in the forward direction around the horizontal axis.

Front Tuck: The takeoff is initiated both upwards and forwards which starts a primary rotation on the horizontal axis. The upper and lower body then flexes. There is a flexion at the waist between the upper body and lower body to the tuck position. The body rotates forwards a total of 360 degrees, then the skier extends and prepares for the landing.

4. **Side Flip:** One complete rotation, in the sideways direction around the lateral axis.

Loop: The takeoff is initiated both upwards and sideways which starts a primary rotation in the lateral axis. The upper and lower body then extends either straight on into the free position and rotates. The body rotates a total of 360 degrees, then the skier flexes and prepares for the landing.

Loop Full: The take-off is initiated both upwards and sideways which starts a primary rotation in the lateral axis. The upper then also starts to rotate on the secondary vertical axis, then extends into the free position. The body rotates a total of 360 degrees in the lateral axis and 360 degrees in the vertical axis. Then the skier flexes and prepares for the landing.

5. **360:** One complete rotation around the vertical axis with a straight body position.

360: The takeoff is initiated both upwards and vertically which starts a primary rotation in the vertical axis. The upper and lower body then fully extends straight and rotates. The body rotates a total of 360 degrees, then the skier flexes and prepares for the landing.

720: The takeoff is initiated both upwards and vertically which starts a primary rotation in the vertical axis. The upper and lower body then fully extends straight and rotates. The body rotates a total of 720 degrees then the skier flexes and prepares for the landing.

1080: The takeoff is initiated both upwards and vertically which starts a primary rotation in the vertical axis. The upper and lower body then extends and rotates. The body rotates a total of 1080 degrees the skier then flexes and prepares for the landing.

6. **7o (general):** The takeoff is initiated both vertically and upwards or vertically and downwards which starts a tilted primary rotation off of the vertical axis. The upper body rotates in the direction of travel and lower body follows. Then the body flexes into the free position and continues to rotate. The body rotates and rolls a total of 720 degrees. The skier then flexes and prepares for the landing.

Cork7: The takeoff is initiated both vertically, upwards and to the side which starts a tilted primary rotation off of the vertical axis. The upper body leads and lower body follows then flexes into the free position and continues to rotate. The

body rotates and rolls a total of 720 degrees. The skier then flexes and prepares for the landing.

Misty 7: It starts with forward rotation on the horizontal/ diagonal axis (where the horizontal axis is primary axis and the vertical axis is secondary axis) there is a full twist and half completed. Look for the rotation so that the head goes down and under while the hips go over the horizon.

Rodeo 7: The takeoff is initiated both vertically, upwards and to the side which starts a tilted primary rotation off of the vertical axis to 180 degrees and moves into the free position (back is facing downhill). The upper body leads and lower body follows then continues to rotate 540 degrees. The skier then flexes and prepares for the landing.

7.

Grabs:

1st Category of GRABS ('g') shall be assigned to any grabs that are from Mid ski to the boot (except for cross body grabs). (Bonus = + 0.05)

Safety: The body in Puck Position, a hand come and holds the same side ski, just under the boot.

Liu Kan: It's a safety grab with the free leg straight. One hand holds the same side of the ski, just under the boot. At the same time the other leg is straight.

2nd Category of GRABS ('G') shall be assigned to any grab from beyond mid ski to the tail or tip, including cross body grabs. (Bonus = +0.10). This 2nd category is more difficult because of the location of the grab. The skier loses time to execute the grab because the grab location is farther from the boot or across the body.

Japan: A hand goes from the back to take the opposite ski by its inside just behind the boot.

Mute: In a cross skis position, a hand takes the opposite ski near the front binding and pulls it up. At the same time the back of the skier is in an extended position.

Tail: In a cross skis position, a hand takes a ski behind the binding and pushes it to the external side.

Truck Driver: The body is in a Pike position with legs straight. Both hands pull the two ski tips with one tip in each hand. It's like the skier has a wheel in one's hands.

8. Upright Maneuvers

Spread Eagle: After take-off the outstretched arms and legs are extended out to the sides away from the body. The legs should be spread to form a minimal angle of 90° when viewed from the front. The skis should be parallel to each other (tails and tips equally spread) and 90° to the body. The upper body should remain straight and upright without any noticeable forward bend at the waist.

Zudnik: A Nordic type jump in which the upper body is bent roughly 90° at the waist by bringing the upper body forward and down and the lower body forward and up. The toes rise up towards and in the vicinity of the competitor's chin. The skis should remain close together and parallel and the head remains upright.

Twister: The skis are twisted a minimum of 90° to the fall line. The skis should remain parallel to each other, together and 90° to the body. The hands and arms may move to counter the twisting of the skis.

Daffy: After take-off, one leg should be brought up and forward while the other leg is simultaneously brought backwards and up, resulting in a 180° split position in which the front ski is parallel to the back ski, skis pointing straight up and down.

Back Scratcher: The skis' tails are brought back and up to a minimum angle of 90° to the horizontal when viewed from the side, knees bent, hips forward and a slight backwards counter motion of the upper body (shoulders). Legs must be together and skis parallel.

Mule Kick: The Mule Kick is a Back Scratcher with a 45° twist of the hip to the side.

Iron Cross: This is a combination of the back scratcher and the tip cross. The skis are crossed in a 90° angle while pointing to the ground at a 90° angle. The maneuver is held with the upper body in the neutral position until the skis are extended to the landing hill.

Kosak: A Kosak is a combination of a Spread Eagle and a Zudnik. Arms can be held in different ways; in front, between the skis, at the side, or a competitor may grab the ski tips. Legs are simultaneously raised and spread in front and to the side of the body. Legs should approach the horizontal level and upper body is brought forward to counter inertial forces of legs being raised. Skis should achieve a vertical position and be symmetrical.

*Multiple Maneuvers:

Any combination of the above maneuvers. These must exhibit the full requirements of each of the individual maneuvers included in the combination. For multiple uprights the body must pass through the standard upright position (legs straight and together, skis parallel) before performing the next maneuver.