World Cableski Technical Rules
Edition 1998
List of changes for 1999

Rule 9.1. Installation

The installation shall be a 10 mm cable with a competition area between two deflection pulleys with a minimum distance of 300 m,shall turn counterclockwise and shall have the power necessary to attain and maintain the required speeds.
At least half of the carriers should be prepared for the competition. Should a carrier disconnect twice, the tension should be retensioned immediately or another carrier should be tensioned for competition conditions. Either the even or odd carriers should be trimmed.
From the organising committee at least 1 person should be present who knows the installation and is responsible for it. The installation must be in optimal technical condition, in order to guarantee a smooth running of the competition.
The installation must have a speedometer calibrated between 25 km/h and 60 km/h~~at least at the speeds of 28 km/h, 43 km/h and 58 km/h~~.

Rule 9.3. Tow lines

This rules mention two type of lengths of tow lines; the effective and the horizontal length. The effective length is calculated, based on the given horizontal length and the measured average height of the cable.
Calculation of the average height of the main running cable „AB“ = (Height of the entry wheel „H1“ + height of the main running cable in the middle „H2“ + height of the exit wheel „H3“) : 3.

$$AB = \frac{H1 + H2 + H3}{3}$$

When „H2“ is measured with a loading of 70 kg on the cable (see Diagram 1).

Diagram 2 shows the relations between the horizontal length of a line, the effective length and the height of the cable. The distance AB is the height of the cable. The corner ABC is a 90^0 angle. Point A is the end of the line which is fastened to the main running cable. Point C is the handle. The distance AC is the effective length of the line. The distance BC is the horizontal length of the line.
When the height AB of the cable and the horizontal length BC is given, the effective length shall be calculated with the help of the next formula:

$$AC = \sqrt{AB^2 + BC^2}$$

All line lengths given in this rules are the horizontal lengths.
The organizer shall furnish single-handle tow lines as in (d) below, made of 6 mm, single braided, monofilament line of plastic material, with the handles and line meeting the following specifications:
a) Number of strands = 12.
Number of yarns each strand = 60.
Diameter at 5,5 kg load = 6,3 mm.
Weight per meter = 16,0 g to 23,0 g.
Breaking load, minimum = 590 kg.
Elongation at 115 kg tensile load = 3,2 % maximum.
All measurements of tow lines shall be made at 20 kg tension and shall be made between the centre line of handle at the point furthest from the end of the trimball.
b) The handle shall be made of 2,50 to 2,80 cm outside diameter material with no sharp edges or projections, with a non-slip surface or coating. The attaching ropes must in all cases go throught the handle and must be attached so there is no possibility of movement between the rope and the handle when in use. The minimum certified breaking load of the handle shall be 270 kg applied at the rate of 290 kg for a minute at two load points 9 cm apart at the centre of the handle with the ends supported at the rope holes.
c) Tow lines should be prepared as follows: 6 lines of 18,25 m, 5~~3~~ of 16,00 m and 14,25 m and 2 of

the shorter lengths. A tolerance of ± 15 cm on the distance from the end of the trimball to the middle of the handle is allowed for ropes till 14,25 m. From the 13,0 m rope on the tolerance is reduced to ± 7,5 cm.
d) The tow rope shall consist of the following three parts:
- the handle with a length of 1,50 m
- the tow rope
- the trimball and cable
e) Dimensions shall be as in Diagram 3.

Rule 9.5. Tow lines and handles for the Trick event

~~The skier has the choice to use his own line (with trimball) of any length he desires or to use the competitions supplied 18,25 m lines~~The tow lines in the trick event are the 16 m lines without the handle portion. The skier must furnish his own handle for the trick event of any length, dimension or material.

Rule 9.8. ~~Not~~Non competition supplied equipment

The use of such~~any not competition supplied~~ equipment is at the skiers own risk, and any failure of such equipment shall not be considered as the basis for any requests for reride.

Rule 9.9 Tow lines for the Jump event

The horizontal length for the tow lines in the jump event is 18,25 m.

Rule 9.10. Tow lines for the Slalom event

Tow lines for the Slalom event may be color coded. If the lines are color coded, the following sequence must be used:
18,25 m red
16,0 m orange
14,25 m yellow
13,0 m green
12,0 m blue
11,25 m violet (blue/white)
11,75 m white

Rule 10.1. Tolerances

All average speeds in Slalom, Tricks and Jumping shall be accurate to ± 0,5 km/h. For a speed to be considered accurate in any event, the average speeds recorded in the course, as noted by the official, must be within the tolerances allowed. The speed may vary a maximum of ± 0,5 km/h for a distance before entering the competition area and has to be maintained until the skier is out of the competition area, except for~~the exception~~ of Rule 12.5.

Rule 10.4. Position of Timers

There shall be two officials for timing in Slalom and Jumping. The Offical Timer shall be located at the most appropriate position. The Backup Timer may~~shall~~ be located on one of the judges towers and shall govern in the event that the Official Timer fails to get an accurate time for some reason. The timer shall observe and record all timings, and deviations, on each pass, and shall inform the responsible official about any deviations which exceed the tolerances in Rule 10.1.

Rule 11.2. Definition of a fall

A fall in any event is defined as accomplished at the moment any one of the following occurs:
a) The skier loses possession of the tow line.

b) The skier does not have at least one ski on one foot.
d) The weight of the skier is not supported by his ski or skis; and in addition, the skier is ultimately unable to regain skiing position.The skier may not recover by making a tumble turn. A fall and recovery by making a tumbleturn BEFORE the course shall not be considered as a fall.

Rule 12.1. General Jump Event Conditions

Each skier shall be entitled to two registered jumps or passes or falls in the preliminary round and three registered jumps or passes or falls in the final round.
The jumps must be done singly. The skier is not allowed to take the jumps one after the other, unless there is only one skier on that jump height.
Women will have the option of choosing an average height of either 1,50 m or 1,65 m. Skiers jumping at 1,50 m will be drawn together and will ski before those jumping at 1,65 m in both the preliminary and final rounds.
Men will have the option of choosing an average height of either 1,65 m or 1,80 m. Skiers jumping at 1,65 m will be drawn together and will ski before those jumping at 1,80 m in both the preliminary and final rounds.
A skier may not change his chosen height of the ramp for the final round if he qualifies.
Only the length of the jump will be considered no matter what ramp height is chosen by the skier.
A fall shall not eliminate the skier from the following pass provided that fall is a result of a jump.

Rule 12.3. Jump course

The jump course begins at the last deflection pulley before the ramp and finishes at the next deflection pulley after the ramp (see Diagram 4).
The ramp must be situated between 180 m and 190 m after the first deflection pulley of the jump course. There shall be a buoy at 140 m and one at 160 m before the ramp. These buoys will act as guide buoys for the skiers, to start their cut.
If the jump course and the slalom course are incorporated into each other, the 140 m and the 160 m buoys shall be in a different color than the slalom buoys.

Rule 12.14. Use of a video jump measurement system

If video jump measurement is used, the distance shall be measured to the skier's point of impact in the water closest to the ramp (first point of impact) and then an adjustment offset of 2,1 m shall be added.
For the video system, there shall be two designated officials operating the system who shall jointly agree on the impact point. The calculated distance shall not be displayed until the impact point is decided upon.
~~If video jump measurement is used, v~~Video methods ~~(video taping)~~or a standard meter system may be used as backup.

Rule 12.15. Scoring

Jump distance shall~~may not~~ be scored in increments of~~less than~~ 10 cm only.
The longest jump of each round will be the only one counted. The skier's result from the final round will determine his placement in the event.
The better result obtained by the skier, in either the preliminary or the final round, shall count towards the overall.
To be considered for placement and receive overall points, skiers must have at least one successful jump on their credit.

Rule 13.1. General

The skier shall follow the main running cable around the deflection pulley before the slalom course, pass around the outside of all 6 buoys at his discretion, and after rounding the 6th buoy, proceed throught the end gate, and ski until the carrier has passed the deflection pulley after the slalom course.

The following speeds and tow lengths shall be used for Slalom:

		Men	Women
1st pass	18,25 m rope	58 km/h	55 km/h
2nd pass	16,00 m rope	58 km/h	55 km/h
3rd pass	14,25 m rope	58 km/h	55 km/h
4th pass	13,00 m rope	58 km/h	55 km/h
5th pass	12,00 m rope	58 km/h	55 km/h
6th pass	11,25 m rope	58 km/h	55 km/h

In any further passes, the rope shall be shortened by half a meter. If, in the opinion of the majority of the Event Judges, the water or weather conditions require it, the first speed may be lowered to 55 km/h or 52 km/h for men and 52 km/h or 49 km/h for women, and then proceed upward in speed in 3 km/h increments. The skier has to do one pass after another without falling until the maximum speed has been achieved. Then the skier will proceed as shown in the table.
The finals shall start one pass higher than in the preliminary round unless changed by the Event Judges.
~~The skier may choose rope lenght (or speed) any time before he starts his run. A skier wishing to start on a shorter rope, shall inform the Technical Officer of his wishes at least three skiers before. Except in the case of the first and second skier on the startlist who shall give notice 5 minutes before.~~The skier or his repesentative shall announce the rope length at which he elects to start on a puplished time close before the estimated start of that series or event. A skier who fails to announce the rope length at which he wants to start, shall have to start at the published start rope and speed.
Further the skier has to inform the Technical Officer at which speed he desires to leave the starting jetty.

Rule 13.4. Buoys

~~Color of buoys shall be selected for maximum visibility. A fluorescent yellow or red paint is recommended~~Slalom and gate buoys shall have a fluorescent red color.
Middle buoys within the slalom course shall be a different color from the gate and slalom buoys ~~and shall be a minimum of 22 cm in diameter~~. White or yellow is recommened.
Slalom and gate buoys shall be 22 to 28 cm in diameter. 23 cm is recommended. Middlebuoys shall be a minimum of 22 cm in diameter.
All buoys shall be of a lightweight, pliable material with smooth exposed surface.
Each buoy shall have a strong loop for attaching anchor lines. The buoys must be attached to the anchor line by the use of a system that will tighten the buoy in such a way as to ensure that it does not move around from its position.
Slalom buoys shall be fastened so that they have 11 to 17 cm of height out of the water. 11,5 cm is recommended. The exit gate and middle line buoys shall be fastened so that they have 16 to 22 cm of height out of the water. 17 cm is recommended.

Rule 17. Additional Rules

	World Record	Ranking List	National
Prior Announcement	YES	YES	YES
Region Approved Panel	YES	YES	NO
Number of Rounds	3	3	3
Conflict of Interest Rule	YES	YES	National Federation Rule
Chief Judge	1st Class	1st Class	2nd Class
Homologator	International	International	International
Calculator	International	International	National
JUMP			
Course Check	SURVEY	SURVEY	SURVEY
Tolerances	Per Rule Book	Per Rule Book	Region Rules
Video measurement	Mandatory	Mandatory	Optional
Timing	Automatic	Automatic	Region Rules
Judges	3 1st class	1 1st class / 2 2nd class minimum	Region standard
SLALOM			
Course Check	SURVEY	SURVEY	SURVEY
Tolerances	Per Rule Book	Per Rule Book	Region Rules
Buoys	Measured	Measured	Region Rules
Colour coded ropes	Mandatory	Optional	Optional
Timing	Automatic	Automatic	Region Rules
End course video	Required	Required	Region Rules
Judging Towers	Both sides	Both sides	Region Rules
Judges	5 1st class	3 1st class/ 2 2nd class minimum	Region standard
TRICKS			
Course Check	Visual	Visual	Visiual
Tolerances	Per Rule Book	Per Rule Book	Per Rule Book
Timing	Automatic	Automatic	Region Rules

Diagram 4 / Jump Course