



We will start 17:00 CET

IOF Web Seminar

28 March 2026

IOF Seminar:
New Map Symbols in Ski
Orienteering

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New symbols in Ski Orienteering: What we have learnt from last two seasons



ISSkiOM 2019 – First Seasons Experience with the Revised Symbols

Starting from September 2024, the revised version of ISSkiOM 2019 – International Specification for Ski Orienteering Maps was approved and published by the International Orienteering Federation. As the 2025–2026 ski orienteering season comes to an end, we would like to reflect on the experiences , both positive and challenging , related to the use of the new symbols.

The revision was initiated by the previous IOF President Leho Haldna to enable Ski Orienteering to adapt to changing arenas and conditions. New symbols would allow standardised utilization of smaller ski stadiums and arenas in multi race events, ensure adherence to environmental and other regulations as well as introduce new ways of increasing course setter possibilities in introducing more route choice and navigational challenges on areas where these are naturally limited.

To achieve their full benefit, the symbols must be used consistently and purposefully. Close cooperation between mappers and course planners is essential to ensure that maps remain readable, technically meaningful and fair for all competitors.

New symbols in Ski Orienteering: Changes introduced in 2024



ISSkiOM 2019

International Specification for
Ski Orienteering Maps

Revision 3
September 2024

- **During winter 2024, Ski Orienteering Commission started the work in defining new map symbols to meet the new requirements in collaboration with the Map Commission**
- **Map Commission presented their proposals and provided final Map Symbols in their ISSkiOM 2019, Revision 3, September 2024**
- **Ski Orienteering Commission then collaborated with the Rules Commission to adjust the Ski Orienteering rules to accommodate the new map symbols**
- **During 2024-2025 season, new symbols were carefully used at FISU 2025 World University Winter Games in Torino Italy and at IOF Ski Orienteering World Cup Round 2 in Ruhpolding, Germany**

New symbols in Ski Orienteering: 801.2 Very wide track > 3.0 m, compulsory to stay on (L)



801.2 Very wide track > 3.0 m, compulsory to stay on (L)

Very fast, wide ski tracks in ski centres, made with a ski trail groomer or a track leveller. Forbidden to leave to the side, **cross** or join from the side. Monitoring required, either by cameras or personnel. Poles at crossings required to prevent corner cutting.

Colour: Orange for Ski-O, white (under lower purple)



0.85

New symbols in Ski Orienteering: 802.2 Wide track 1.5 - 3.0 m, compulsory to stay on (L)



802.2 Wide track 1.5 - 3.0 m, compulsory to stay on (L)

A fast, skateable track made by a snow mobile, width usually 1.5 - 3.0 m.



0.60

Skateable tracks are rougher and softer than the wide skateable tracks in the area. Forbidden to leave to the side, **cross** or join from the side. Monitoring required, either by cameras or personnel. Poles at crossings required to prevent corner cutting.

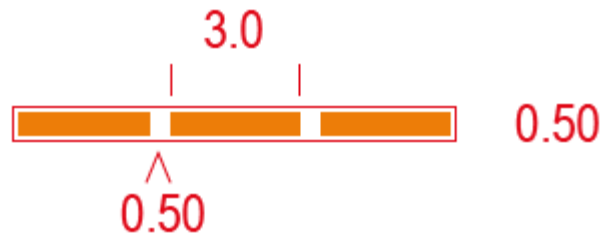
Colour: Orange for Ski-O, white (under lower purple)

New symbols in Ski Orienteering: 803.2 Track 0.8 - 1.2 m, compulsory to stay on (L)



803.2 Track 0.8 - 1.2 m, compulsory to stay on (L)

A good track made by a snow mobile, usually 0.8 - 1.2 m wide. In steep slopes, tracks may be made wider to reduce widening during competition. Forbidden to leave to the side, **cross** or join from the side. Monitoring required, either by cameras or personnel. Poles at crossings required to prevent corner cutting.



Colour: Orange for Ski-O, white (under lower purple)

New symbols in Ski Orienteering: 804.2 Track, slow 0.8 - 1.0 m, compulsory to stay on (L)



804.2 Track, slow 0.8 - 1.0 m, compulsory to stay on (L)

A rough, slow track with little snow or some brushwood. This symbol is not used on steep slopes, if the width of the track allows using herringbone steps for uphill, or snow ploughing technique for slowing and stopping.

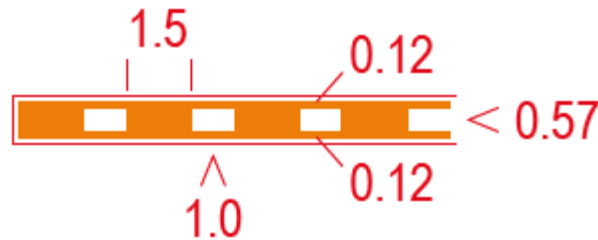


In order to clarify a junction, the beginning of a slow track is drawn with a short line. Forbidden to leave to the side, **cross** or join from the side. Monitoring required, either by cameras or personnel. Poles at crossings required to prevent corner cutting.

Colour: Orange for Ski-O, white (under lower purple)

New symbols in Ski Orienteering: 813.2 Public snow mobile route, compulsory to stay on (L)

813.2 Public snow mobile route, compulsory to stay on (L)

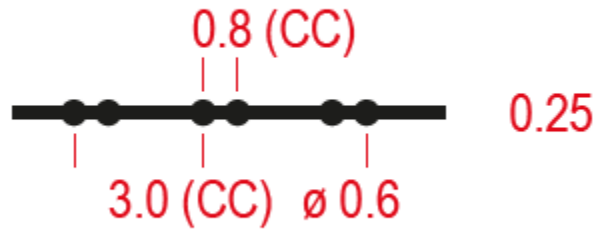


A public and marked route for snow mobiles that may be in use during the ski orienteering competition. These routes are often uneven and of varying width and quality. The organizers must inform competitors in the competition instructions about the quality of such routes (e.g. with photographs) and ensure the safety of the competitors by temporarily closing the route, manning the route or by other means informing any snow mobile drivers about the possibility of encountering ski orienteers on the route. If the safety of the competitors cannot be guaranteed, the route must be marked as forbidden and safe passages must be ensured. Forbidden to leave to the side, **cross or join from the side. Monitoring required, either by cameras or personnel. Poles at crossings required to prevent corner cutting.**

Colour: Orange for Ski-O, white (under lower purple)

New symbols in Ski Orienteering: 515 Impassable wall (barrier) (L)

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The symbol impassable wall shall be used to indicate temporary fences and obstacles, e.g. to create labyrinths.

Minimum length (isolated): 3 mm

Colour: black

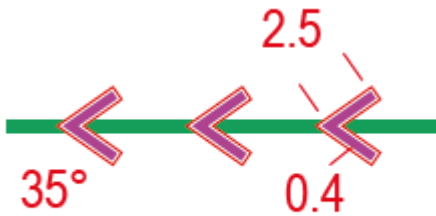
New symbols in Ski Orienteering: 841 One-way compulsory (P)



841 One-way compulsory (P)

For use on tracks where it is only allowed to go in one direction. The frequency of chevron arrows depends on the overall length of the track in question. At minimum, there should be one at the start, after each adjoining junction, and at the end.

Colour: purple (upper purple), white (under purple)



Ski Orienteering Rules: Restricted areas and routes

17. Restricted areas and routes

17.1

Rules set by the organising Federation to protect the environment and any related instructions from the organiser must be strictly observed by all persons connected with the event.

17.2

Out-of-bounds or dangerous areas, forbidden routes, line features that must not be crossed, etc must be marked on the map. Where they are not obvious to the competitor, they must also be marked on the ground. Competitors must not enter, follow or cross areas, routes or features drawn with the following symbols:

ISOM

ISOM 520 Area that shall not be entered

ISOM 708 Out-of-bounds boundary

ISOM 711 Out-of-bounds route Page 18 IOF Ski Orienteering Competition Rules 2025

ISSkiOM

ISSkiOM 301.2 Body of water that shall not be crossed

ISSkiOM 515 Impassable wall (barrier)

ISSkiOM 709 Out-of-bounds area

ISSkiOM 716 Forbidden route, forbidden to cross.

ISSkiOM 841 One-way compulsory. Skiing is only permitted in the direction of the arrows.

17.3

Compulsory routes, crossing points and passages must be marked clearly on the map and on the ground. Competitors must follow the entire length of any marked section of their course.

17.4

Tracks shown in orange with the following symbols are compulsory to stay on and it is forbidden to leave the track to the side or join the track from the side:

ISSkiOM 801.2 Very wide track, compulsory to stay on

ISSkiOM 802.2 Wide track, compulsory to stay on

ISSkiOM 803.2 Track, compulsory to stay on

ISSkiOM 804.2 Track, slow, compulsory to stay on

ISSkiOM 813.2 Public snow mobile route, compulsory to stay on

The organisers are obliged to monitor these sections by dedicated marshals through visual observation in the terrain, GPS monitoring, video monitoring or a combination of these.

COMPETITION RULES FOR INTERNATIONAL ORIENTEERING FEDERATION (IOF) SKI ORIENTEERING EVENTS

valid from 1 November 2025. Page 17 and 18.

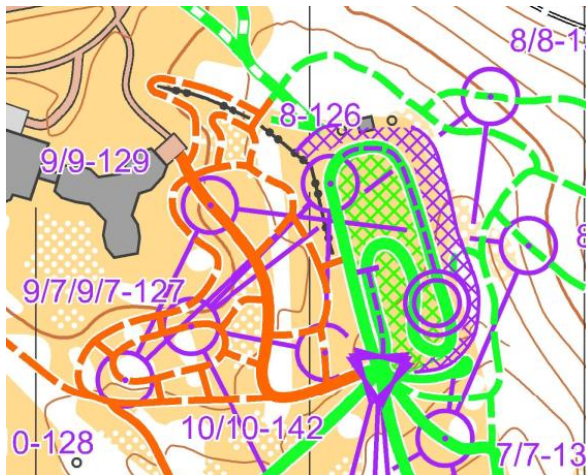
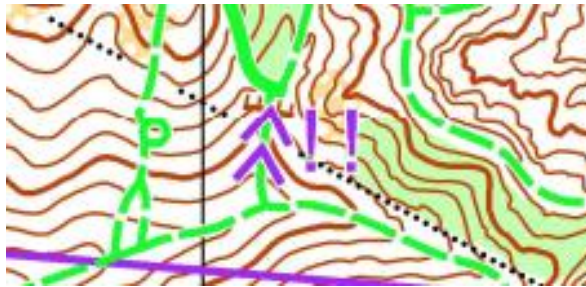
Ski Orienteering Rules: Principles for Course Planning

- **For the 2025 Ski Orienteering Season, three new map symbols – compulsory to stay on tracks, one-way compulsory track and impassable wall – have been added. These map symbols should be handled with care and their use always reviewed and approved by the Event Adviser.**
- **To access more areas for Ski Orienteering, it is sometimes necessary to guarantee to landowners and national nature interests that skiers will not leave the groomed tracks in specific protected areas. Also in areas within and near a ski stadium, there may be reasons why skiers should not shortcut between tracks. These could be various obstacles like artificial snow installations, TV equipment and spectators. The use of impassable walls and no-shortcut tracks provide a clear solution for the course setter to meet these requirements.**
- **One-way compulsory has been added to prevent accidents where fast ski orienteers need to share the trail area with tourists. It can also be used in steep areas where encounters could be dangerous. Also permission to organise events in some areas require that the organisers and competitors follow the local requirements.**
- **The organisers and Event Adviser must bear in mind that the use of these new symbols require always that dedicated marshals are monitoring the competitors' adherence to the rules. Either by marshals' visual observation, GPS or video monitoring or a combination of them. IOF Ski Orienteering Competition Rules 2025 Page 43**
- **At times, if an IOF multi-day event is organised on a limited area such as a ski stadium, the Event Adviser may grant the use of these map symbols for route choice and navigational reasons. This requires careful consideration and justified reasons; however, their use should always be kept to minimum.**

**COMPETITION RULES FOR INTERNATIONAL
ORIENTEERING FEDERATION (IOF) SKI ORIENTEERING
EVENTS**

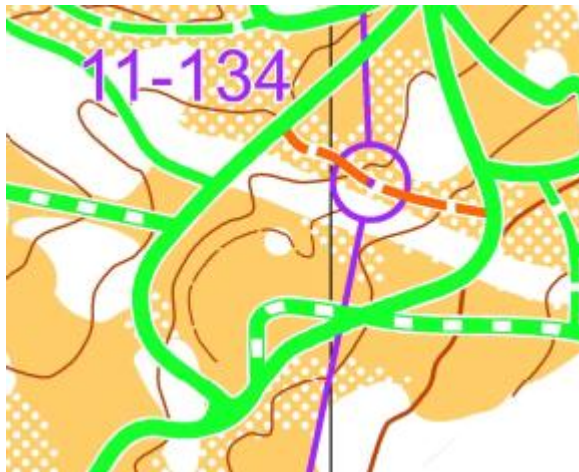
valid from 1 November 2025. Page 42.

Utilization of the new symbols at 2026 WSOC in Rusutsu, Japan



- **All new symbols were used in 2026 World Ski Orienteering Championships in Rusutsu, Japan**
- **The reasons for the use were:**
 - Safety
 - Forcing navigational route choices
 - Streaming/TV visibility
 - Creating navigational challenges for the fourth race at arena proximity

Utilization of the new symbols: Sprint



- **Orange compulsory tracks were used at two controls in Sprint Competition (Men and Women)**
- **Two athletes were disqualified in sprint due to orange track violation. About ten athletes (all men) were not disqualified because they corrected their mistake by returning, entering, following and exiting the track correctly.**

Utilization of the new symbols: Sprint



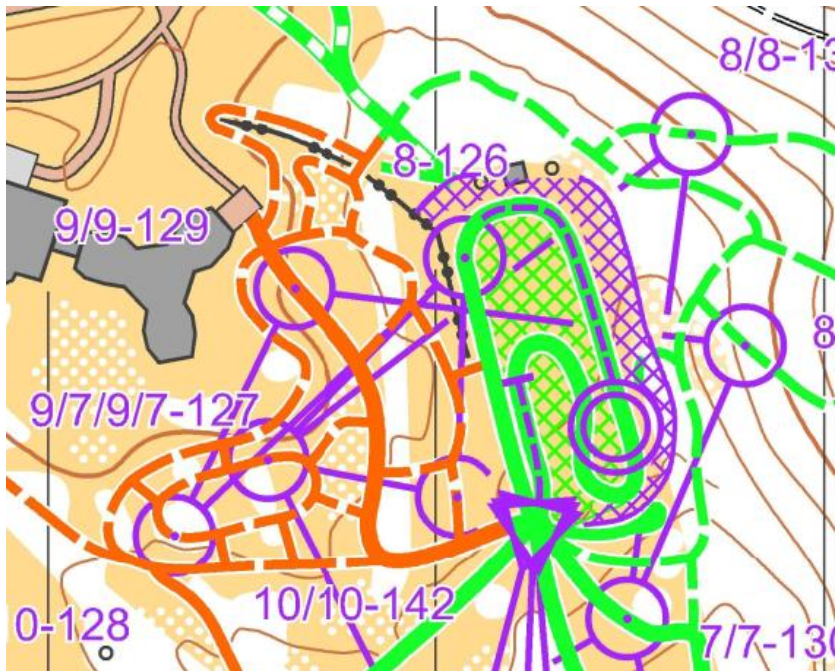
- **Marking of the correct entry and exit were marked with poles and clear marking tapes.**
- **Both controls and orange track sections were monitored by a race marshal.**

Utilization of the new symbols: Pursuit



- **One-direction compulsory tracks were used in Pursuit competition for safety reasons.**
- Due to very steep hills and icy/hard crust tracks, the course planners used the one-direction compulsory tracks to steer competitors away from route choices potentially leading to meeting traffic and danger.

Utilization of the new symbols: Sprint Relay



- **Orange, compulsory tracks were used in Sprint Relay in stead of building artificial maze with fences.**
- **The competition area had been used on three previous competitions and due to other terrain restrictions, the organizers wanted to provide additional navigational and route choice challenges on an open area next to the arena so that it was visible to the spectators.**
- **The area was monitored by marshals and all crossings were marked.**
- **The competitors had internalized the concept and the rules very well and obeyed the rules impeccably.**

Utilization of the new symbols: Sprint Relay



- **Orange, compulsory tracks were used in Sprint Relay instead of building artificial maze with fences.**
- **The competition area had been used on three previous competitions and due to other terrain restrictions, the organizers wanted to provide additional navigational and route choice challenges on an open area next to the arena so that it was visible to the spectators.**
- **The area was monitored by marshals and all crossings were marked.**
- **The competitors had internalized the concept and the rules very well and obeyed the rules impeccably.**

Feedback from the Senior Event Adviser Tapani Partanen



“This statement summarizes experiences and feedback regarding the use of new map symbols at the World Ski Orienteering Championships 2026 in Rusutsu, Japan.

In general, the implementation functioned well.

During the event in Japan, all newly introduced symbols were utilized. In the Sprint competition, two controls were located along orange compulsory tracks. Experience demonstrated that supervision must strictly follow the prescribed guidelines, as competitors will always test the limits.

In the Sprint Relay, the maze section performed exceptionally well. The method used to mark tracks in the terrain was effective: entry from green areas was clearly indicated, and within the maze itself, additional marking was unnecessary. The system could have been further improved by placing poles at intersections to indicate how much corner-cutting is permitted. It may also be advisable to clarify in the guidelines (IOF ISSkiOM 2019, revision 3) that entry onto an orange compulsory track is only permitted via another track symbol. Although the current wording (“Forbidden to leave to the side or join from the side”) implies this, it still allows room for interpretation.

The color orange presents certain challenges. It is almost always used in open terrain, typically over a yellow background, which reduces visibility. Consideration could be given to alternative colors. In Rusutsu, black was used for a color-blind athlete and proved effective. However, in Nordic countries this may be problematic due to the frequent presence of black roads on competition maps. One idea discussed was marking roads in brown and designating them as forbidden if necessary. Any alternative color should ideally also be suitable for red-green color-blind athletes.

The impassable wall symbol functions well and should not be changed, particularly as it is only now becoming familiar to users.

Similarly, the one-way compulsory track symbol works well. However, care must be taken to ensure that at least two arrows are always used and that they are clearly visible. This requires high-quality printing and accurate color reproduction.

Discussions with athletes after the competitions indicated overall satisfaction with how these symbols were applied in Rusutsu. It was also agreed that these symbols must be used in competitions in order for all stakeholders—athletes, organizers, and especially controllers responsible for international development—to become proficient with them. Therefore, although the guidance suggests they should be “handled with care,” it is important to use them actively in practice.”

Summary of learnings so far (1)



- **The new map symbols serve their purpose and provide additional means of developing our sport**
- **Adjustment to the ISSkiOM and Rules wording needed to clarify: “Forbidden to leave to the side, **cross** or join from the side.”**
- **Visibility of Orange colour especially on fields and open areas (yellow) is not sufficient. Map Commission should revise the colours.**
- **Impassable wall and one-way compulsory track symbols work well and are understood and internalized by athletes**

Summary of learnings so far (2)



- **Marking entry and exit and marshalling the rules is necessary**
- ***Climate change, lack of natural snow and access to terrains is pushing also Ski Orienteering more to existing ski stadions and arenas and relying existing, often artificial snow based track systems.***
- **Multisport, multievent games on arenas and terrains with limited possibility to make (additional) tracks require skillful utilization of the new map symbols in course planning. It will increase the quality of the events and make it more interesting.**
- ***Let's use the new map symbols more so that we become more accustomed using them in organising events and setting courses. It is still learning in progress, and let's accept that***

Thank you for your attention!
Now – share your views and
comments!
Use the “Raise your hand button”

