

COMPETITION RULES FOR NEW ZEALAND FOOT ORIENTEERING EVENTS

Sporting fairness by both competitors and organisers must be the guiding principle in the interpretation of these rules.

This version of the ONZ competition rules is valid from 1 February 2023.
Subsequent amendments will be published on the Orienteering New Zealand website at
<https://www.orienteeering.org.nz/resources/rules/>

These rules have been adapted from the Competition Rules for International Orienteering Federation (IOF) Foot Orienteering Events and follows its numbering system.

CHANGE LOG

DATE	RULE	DESCRIPTION
August 2020		Complete revision
Nov/Dec 2020		Further revision following submissions received
March 2021		ONZ Council approved
1 August 2022	5.1	Change wording from “Women” to “Anyone”
1 August 2022	19.4	Removal of reference to control proximity for sprint events
1 August 2022	19.5-19.11	Addition of new rule 19.5 referring to control proximity for sprint events. Subsequent clauses in Rule 19 change number by one.
1 August 2022	22.5	Addition of sentence regarding informing competitor of distance to triangle
1 August 2022	Appendix 2	Removed M21AS class from Course 8 in 12-course middle distance table
26 August 2022	17.2	Sprint restricted area symbols table updated to current mapping specs.
5 December 2022	15.2	Additional wording regarding Normal vs Alternative scales
5 December 2022	Appendix 2	Addition of M/W90 classes and additional course to course/class combination tables
27 January 2023	7.1	Remove wording regarding “fees to be kept as low as possible”

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1. Definitions

- 1.1. Orienteering is a sport in which the competitors navigate independently through the terrain. Competitors must visit a number of control points marked on the ground in the shortest possible time aided only by map and compass. The course, defined by the location of the controls, is not revealed to competitors until they start.
- 1.2. In individual interval start races the competitors navigate and run through the terrain independently.
- 1.3. In mass start and chasing start races, competitors may often be running in close proximity to each other, but the formats still demand independent navigation.
- 1.4. The term *competitor* means an individual or a team, as appropriate.
- 1.5. Types of orienteering competition may be distinguished by:
 - the time of the competition:
 - day (in daylight)
 - night (in the dark)
 - the nature of the competition:
 - *individual* (the individual performs independently)
 - *relay* (two or more team members run consecutive individual races)
 - *team* (two or more individuals collaborate)
 - the way of determining the competition result:
 - *single-race competition* (the result of one single race is the final result. The competitors may compete in different races: The A-race, the B-race and so on, with the placed competitors of the B-race placed after the placed competitors of the A-race and so on)
 - *multi-race competition* (the combined results of two or more races, held during one day or several days, form the final result)
 - *qualification race competition* (the competitors qualify for a final race through one or more qualification races in which they may be allocated to different heats. The results of the qualification races may also determine the starting order in the final. The competition's result is that of the final only. There may be A- and B-finals and so on, with the placed competitors of the B-final placed after the placed competitors of the A-final and so on. (Where there is a single heat and all competitors who are placed in the heat qualify for the final, the qualification race is called a *prologue*)
 - *knock-out sprint* (There are one or more heats with an interval start to qualify for the knock-out section. In the knock-out section, there are one or more rounds with several parallel heats and mass starts where the leading runners qualify for the next round. Finally, there is a single mass start race to determine the winner)
 - the order in which controls are to be visited:
 - *in a specific order* (the sequence is prescribed)
 - *in no specific order* (the competitor is free to choose the order)
 - the length (or format) of the race:
 - Long distance

- Middle distance
 - Sprint distance
 - Other distances
 - the starting method for the race:
 - *an interval start* (the race is a time trial; the competitor with the fastest time is the winner)
 - *a mass start* (the competitors start together; the first across the finish line is the winner)
 - *a chasing start* (the competitors start at intervals depending on results from previous race(s); the first across the finish line is the winner)
- 1.6. DNS denotes did not start; DNF denotes did not finish, where the competitor fails to complete a course. MP denotes missed punch. This is used when a competitor has one or more unrecorded punches, the control card has been lost, there is no electronic record of having visited one or more controls, or where the controls are recorded in the wrong order. DSQ denotes disqualified. This is when a competitor has made an incorrect or unidentifiable clip, or visited the controls in the wrong order ([see rule 20.5](#)), or has contravened any other rule or regulation.
- 1.7. The term *event* embraces all aspects of an orienteering meeting including organisational matters such as start draws, team officials' meetings and ceremonies. An event, e.g. the New Zealand Orienteering Championships, may include more than one competition such as Long Distance, Middle Distance, Sprint and Relay competitions. A competition may consist of more than one race where a series of races with times or points totalled to arrive at a winner.
- 1.8. Within these rules, the following conventions apply:
- *Must / Shall / Required* mean that the definition is an absolute requirement.
 - *Must not / Shall not* mean that the definition is an absolute prohibition.
 - *Should / Recommended* mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course of action.
 - *Should not / Not recommended* mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour/action described with this label.
 - *May / Optional* mean that an item is truly optional.

2. General provisions

- 2.1. If not otherwise mentioned these rules are valid for individual day orienteering competitions on foot.
- 2.2. These rules and any additional regulations are binding for all competitors, team officials, and other persons connected with the organisation or in contact with the competitors. Any additional regulations must be published in the final event bulletin.
- 2.3. Sporting fairness must be the guiding principle in the interpretation of these rules by competitors, organisers, and the jury.
- 2.4. In relays, the rules for individual competitions are valid unless otherwise stated.
- 2.5. On advice from the Technical Committee, the ONZ Council may allow deviations from these rules and norms. Requests for permission to deviate from them must be sent to the General Manager ONZ at least 6 months prior to the event unless there are exceptional circumstances.
- 2.6. ONZ Guidelines and relevant policies, as published on the ONZ website, should be followed for each event type. Significant deviations require the consent of the ONZ Technical Committee.

2.7. Events are classified as International, A-level, B-level, and other. These rules apply primarily to A-level events and are recommended for B-level events. For International events, in instances of difference between the IOF and ONZ Rules, the IOF Rules, or the rules particular to the event, take precedence. Clubs are encouraged to run events at the highest possible level. Conversely, events may be run at a lower level if unavoidable. National and International events must always be A-level events.

- INTERNATIONAL events include Oceania Championships and IOF events.
- A-LEVEL events must meet certain criteria set out in these rules e.g. the appointment of an ONZ approved Controller, suitable event areas, high quality maps, etc. They must be approved by the Technical Committee, thus ensuring the highest standard of course planning and organisation. Normally A-level events will include the following:
 - New Zealand Individual Championship events
 - New Zealand Interclub Relay Championships
 - New Zealand Secondary Schools Individual Championships
 - Northern Tuaraki Regional Individual Championship
 - Central Pokapu Regional Individual Championship
 - Southern Taitonga Regional Individual Championship
 - ONZ Trials
 - Australia/NZ Challenges and Test Matches including School Events

- B-LEVEL events have less strict criteria although maps and courses of a high standard are still expected. Normally B-level events will include the following:
 - Supporting events run in conjunction with A-level events
 - Canterbury Individual Championships
 - North Island Individual Championships
 - Otago Individual Championships
 - Southland Individual Championships
 - North Island Secondary Schools Champs*
 - South Island Secondary Schools Champs*
 - Long Weekend and other multi-day events
 - Miscellaneous events such as NZ Masters Games, Katoa Po All night relays, etc
 - Other Nationally promoted events

** A-Level controller recommended*

Variations to A-level criteria for a B-level event may include:

- Technical committee approval not required
 - A-grade controller not mandatory
 - Less stringent map embargoes if necessary
 - Formal bulletins not required
 - Course/class winning times more flexible
 - Course formats more flexible
- Other events are events of local significance e.g. OY's and low-key multi-days. For such events, these rules constitute guidelines only, and local rules and practices may apply.

3. Event Programme

- 3.1. For the New Zealand Orienteering Championships, the organisers must include in the programme: Long distance, Middle distance and Sprint Distance individual events, and the Club Relay championships.
- 3.2. For the New Zealand Secondary School Orienteering Championships, the organisers must include in the programme: a Long distance individual race, a Sprint individual race and a Team Relay race.
- 3.3. For the New Zealand Championship events mentioned in 3.1 and 3.2, organisers may include other competitions if they wish, for example a night event or a micro sprint, but not at the expense of the aforementioned competitions.

4. Event allocations

- 4.1. The ONZ website outlines the Major Events allocation system. The objective is to rotate major events across regions and to allocate major events a minimum of 2 years in advance.
- 4.2. For an A-Level event, preliminary details must be supplied to the Technical Committee using the on-line Major Events Form at least 10 months prior to the event.

5. Classes

- 5.1. Competitors are divided into classes according to their gender and age. Anyone may compete in men's classes.
- 5.2. Competitors aged 20 or younger are eligible to run in each class up to the end of the calendar year in which they reach the given age. They are entitled to compete in older classes up to and including 21.
- 5.3. Competitors aged 21 or older are eligible to run in each class from the beginning of the calendar year in which they reach the designated age. They are entitled to compete in younger classes down to and including 21.
- 5.4. The competition classes are called Wxx and Mxx, for women and men respectively. All age groups of competitors are eligible to enter the 21-year age class.
- 5.5. Classes to be contested at NZ Individual Championships; Men Women M-10, W-10, M-12, W-12, M-14, W-14, M-16, W-16, M-18, W-18, M-20, W-20, M21 (Open Class), W21 (Open Class), M35-, W35-, M40-, W40-, M45-, W45-, M50-, W50-, M55-, W55-, M60-, W60-, M65-, W65-, M70-, W70-, M75-, W75-, M80-, W80-, M85-, W85-, M90-, W90-
- 5.6. For other A-level events, 10-year age classes may be used for adult classes (21+) as outlined in Appendix 2.
- 5.7. These classes may further be subdivided on skill into E (Elite for 20 and 21 age classes only), A, or B categories which indicate the degree of difficulty. A further subdivision based on course length may be used (e.g A-Short). In addition, an open easy, or very easy should be offered.

- 5.8. National Interclub Relay classes - The National Interclub Relays will be contested between Club-based teams as shown in the table, and according to the rules below:

Classes	Allowed classes	Difficulty	Leg Win Time
Mixed Open	Open	Red	30-35 mins
Mixed Masters	MW40+	Red	25-30 mins
Mixed Veterans	MW60+	Red	20-25 mins
Mixed Short	1. Up to MW16, All B classes	Orange	25 mins
	2. Up to MW12, MW12B classes	White	15 mins
	3. Up to MW14, MW12B-14B classes	Yellow	20 mins
Open Short (use Mixed Veterans course)	Any age/gender/club	Red	20 mins

- Relays must consist of 3 legs with 3 person teams.
- All teams to contain at least 1 female, (except Open short), who may run any one of the legs.
- The length of leg 2 on red classes is shorter than legs 1 and 3, corresponding to the expected female winning time on leg 2.
- Small clubs with less than 30 members may combine with another club to form a composite team in any class. These composite teams will be an official entry.
- The Open Short class is intended for those unable to fit into a standard club team. The course run will be the same as Mixed Veterans.
- Unofficial teams may run in any class.

The criteria used to determine eligibility for relay legs is as follows:

- The eligible class for a competitor is their actual age class.
- A competitor who runs an E, A, or AS class in the long will not be eligible to run a B in the relay.
- The eligible race-class (E, A, AS, B) is the class the competitor contested for the long-distance (or the middle-distance if the long-distance was not contested).

6. Participation

- 6.1. Competitors participate at their own risk.
- 6.2. Entries to A-level competitions must be from persons affiliated to ONZ or an IOF member organisation, or who pay a one-event participation fee as set by ONZ Council. ([See ONZ Policy B12, Event Levies, and One-event participation fees.](#))

- 6.3. NZ Championship titles may be held only by individual members of ONZ-affiliated clubs who are also NZ citizens or permanent residents [as defined by the NZ Immigration Service]. Payment of a one-event participation levy does not grant eligibility.

7. Costs

- 7.1. The costs of organising an event are the responsibility of the organiser. To cover the costs of the competition(s), the organiser may charge an entry fee.
- 7.2. Each individual competitor is responsible for paying the entry fee as specified in the event information. Late payment may be subject to an additional fee.
- 7.3. Late entries and changes may be accepted at the organiser's discretion, and entrants may be charged an additional fee.
- 7.4. If the event (or part of the event) has to be cancelled due to reasons outside of the organiser's control e.g. weather conditions, destruction of terrain (force majeure), pandemics, the organiser is not obliged to refund entry fees.

8. Information about the Event

- 8.1. Official information must be given in writing or electronically.
- A preliminary listing must be listed on the ONZ events listing at least 12 months before the event. For A-level events, information from the organiser must be given in the form of bulletins. Bulletins must be published in PDF format via either the ONZ website or the event website and must provide essential event information.
- 8.2. Bulletin 1 Information advertised on the event website and available as a PDF download at least 6 months before the event and must include:
- dates and types of competitions with the event status (e.g. A-level for day 1, B-level for days 2 and 3)
 - event timetable including first start times
 - general map of the region
 - organiser and the names of the event director, event adviser (if applicable), controller(s) and planners
 - a contact telephone number and e-mail address
 - nature of terrain
 - classes offered
 - the punching system to be used
 - embargoed areas
 - a colour copy of the most recent version of any previous orienteering map(s) of the embargoed areas
 - method of entry, entry fees, closing date, details of any late entry penalties and details of a punch enquiry fee (for when a field SI control box readout is requested - [see Punching Systems, rule 20.5](#))
 - details of entry fee refund policy in the event of cancellation or postponement
 - details regarding single event affiliation (A-level events only) for persons not affiliated to ONZ, or other National orienteering body, through their Club (see rule 6)
 - information on any team competition
 - opportunities for training
 - facilities for those with young children
 - multi-day result calculations and awards
 - any other unusual information related to the event

- 8.3. Bulletin 2 - Information advertised on the event website and available as a PDF download no later than 5 days before the start of the event and must include:
- all information given in Bulletin 1
 - timetable, course closure time, and maximum on course times if applicable
 - start times of all competitors (this may be a separate document but must still be published no later than 5 days before the event)
 - notes on competition clothing, if necessary
 - special conditions, e.g. landowners' requirements, hazards, out of bounds
 - colour of streamers marking dangerous areas or marked routes
 - a recent sample map showing the type of terrain
 - map details, including contour interval, scale, and special symbols or interpretation
 - administrative information, e.g. directions to the event centre, parking, distance to starting areas, registration procedures
 - facilities at the event e.g. crèche, food for sale, etc.
 - any permitted deviations from the rules
 - complaints procedure, and jury members and their clubs
 - the length, total climb, number of controls on each course
 - special rules, e.g. wearing numbers, carrying whistles
 - any unusual aspects of start or finish procedures, particularly for relays
 - details of classes combined
 - any special safety instructions particular to the map or the terrain including safety bearing if applicable
 - the location of quarantine zones and the times when competitors and officials must be inside them

9. Entries

- 9.1. Entries must be submitted according to the instructions given in the Bulletin 1. At least the following details must be supplied for each competitor: family name and first name, gender, year of birth, club and entry class. Late entries may be accepted at the discretion of the organiser. ([see Costs, rule 7.3 for late entries](#)).
- 9.2. A competitor may only enter one class in any one competition.
- 9.3. The organiser may exclude competitors or teams from starting if their entry fee is not paid and no agreement has been reached about payment.
- 9.4. The final closing date for entries must be no earlier than 6 weeks before the start of the event.

10. Travel and transport

- 10.1. The use of official transport to a competition site may be declared mandatory by the organisers. If this is the case, the cost of the transport must be included in the entry fee.

11. Training and model event

- 11.1. Prior to an event, the organisers may put on a model event to demonstrate the terrain type, map quality, control features, and the set-up of the controls, refreshment points, and marked routes.

12. Starting order, heat allocation, and qualification

- 12.1. In an interval start, the competitors start singly at equal start intervals. In a mass start, all competitors in a class start simultaneously; in relays, this applies only to the team members running the first leg. In a chasing start, the competitors start singly at start times and intervals determined by their previous results.
- 12.2. The starting order must be approved by the Controller. The start draw may be public or private. It may be made by hand or by a computer.
- 12.3. The start list must be published in the final information ([refer Information about the event, rule 8.3](#)) except where there is a qualification race competition, or a chasing start when the start list must be published as soon as practicable, but at least one hour before the first start. Where it is clear to all competitors how to work out their own start time, there is no requirement to publish a start list. (e.g. "Your start time in the afternoon is 1 pm plus your running time in the morning").
- 12.4. The names of all competitors and teams correctly entered must be drawn, even if a competitor has not arrived. Entries without names (blanks) are not considered for the draw.
- 12.5. In qualification race competitions (other than Knock-Out Sprint), if two or more competitors tie for a place in a final, all of them must qualify for that final.
- 12.6. In qualification race competitions (other than Knock-Out Sprint), the starting order of the finals (other than chasing start finals) must be the reverse of the placings in the qualification race heats; the best competitors must start last. Ties must be decided by drawing lots. For example, if two competitors tie for 6th place in heat 1, a coin may be tossed to determine who has placed 6 and who has placed 7 in heat 1 for this rule. Competitors with the same placing in the different parallel heats must start in the sequence of the number of their heat, i.e. 1, 2, 3...; the winner of the highest numbered heat, therefore, starts last.
- 12.7. Before mass start draws, each of the various course combinations must be allocated to start numbers. The course combinations must remain secret until after the last competitor has started.
- 12.8. For an interval start, the normal start interval is 3 minutes or 2 minutes for Long distance, 2 minutes for Middle distance, and 1 minute for Sprint.
- 12.9. The start draw must be carried out in such a way that competitors of the same class start in blocks. Exceptions can be made at the discretion of the controller (e.g event officials and parents of young children).
- 12.10. For an interval start, competitors from the same Club should not start consecutively where at all possible. If they are drawn to start consecutively, the next competitor should be inserted between them.
- 12.11. Unofficial competitors may start at the controller's discretion and at such a time so that they will not influence the results of official competitors.
- 12.12. Providing that fairness is maintained, organisers may restrict start times (e.g. run 21Es after other classes have finished).
- 12.13. A chasing start (start times depend on previous results) may be used. (It is recommended that chasing starts should not be used in areas of high visibility where following may occur).

13. Team officials' meeting (blank)

14. Terrain

- 14.1. The terrain must be suitable for setting competitive orienteering courses and should match the criteria described in [Appendix 3](#). The objectives of the Leibnitz Convention, ([Appendix 7](#)), should be considered when choosing the terrain and event arena, and in designing the courses.
- 14.2. The competition terrain should not have been used for orienteering for as long as possible prior to the competition so that no competitor has an unfair advantage.
- 14.3. The competition terrain should normally be embargoed as soon as it is decided to hold an event there. If that is not possible, then arrangements for access to the terrain must be published as soon as possible. The organisers must give notice of embargoed areas to the ONZ Technical Committee, and publish on the ONZ website, the event website, and in bulletins.
- 14.4. Permission for access into embargoed terrain must be requested from the organiser if needed.
- 14.5. Any rights of nature conservation, forestry, hunting, etc. in the area must be respected.

15. Maps

- 15.1. Maps, course markings, and additional overprinting, must be drawn and printed according to the IOF *International Specification for Orienteering Maps* or the *IOF International Specification for Sprint Orienteering Maps*. In New Zealand, the following map symbols apply:



Blue asterisks represent water troughs



Blue squares represent water tanks

- 15.2. The map scales:

The map and courses **must be clear and legible at competition speed for all classes**. To achieve this;

- The map must be **surveyed and drawn to ISOM or ISSprOM specifications** which define the minimum sizes of features and the minimum distances between lines and symbols.
- For A-level events, **enlargements** must be used for older and younger age classes, as outlined in the table.

EVENT TYPE	AGE CLASS	NORMAL SCALE	ALTERNATIVE SCALE*
Long distance	Elite	1:10,000	1:15,000
	16-35	1:10,000	
	14, 40-55, B-classes, AS-classes	1:7,500	1:10,000
	10-12A, 10-12B, 60+	1:7,500	1:5,000

Middle distance	Elite, 16-35	1:10,000	
	14, 40-55, B-classes, AS-classes	1:7,500	1:10,000
	10-12A, 10-12B, 60+	1:7,500	1:5,000

Relay	Open	1:10,000	1:7,500
	Masters	1:7,500	1:10,000
	Veterans	1:7,500	1:5,000
	Short	1:7,500	1:5,000

Sprint	Elite, 14-35	1:4,000	
	40+, AS-classes	1:3,000	
	10-12, 60+	1:3,000	1:2,000

* The alternative scales should be used where the complexity or simplicity of the terrain justify them.

- **Alternative vs Normal scales** - It is common to use a combination of Normal and Alternative scales depending on the age class. For example, in very complex sand dune terrain the elite classes may have 1:10,000 (“normal”) while, to ensure legibility, the 60+ classes should have 1:5,000 (“alternative”), whereas at the same event, the 10 and 12 year age classes may have 1:7,500 (“normal”). If the detail is such that elites require 1:7,500 then 40+ must have 1:5,000. In contrast, in more bland terrain with little fine detail, the “normal” scale of 1:7,500 may be quite acceptable for the older classes.

In sprint terrain it is the small gaps that are hard to see with diminished eyesight. Given that sprint terrain is chosen for its complexity, 40+ classes must have an enlarged scale and 60+ may require further enlargement.

The controller is responsible for ensuring that the scale used is appropriate for each age class. The controller must act as an advocate for the competitors, not the organisers, and apply the principle that orienteering is not a test of eyesight.

- Where several age classes requiring different map scales run the same course, separate maps should be produced. If only one scale is used for a course (for events with low entry numbers for example), the larger scale must be used.

Deviation to 15.1 and 15.2 required approval by the ONZ Technical Committee.

- 15.3. Maps must be protected against moisture and damage. The map must be printed on good, possibly water-resistant, paper (80-120 g/m²). All non-water-resistant maps must be enclosed by sealed bags of at least 70-micron thickness.
- 15.4. If a previous orienteering map of the competition area exists, high-resolution colour copies of the most recent edition must be made available for all competitors prior to the competition ([see Information about the Event bulletin rule 8.1](#))

- 15.5. On the day of the competition, the use of any map of the competition area at the event site by competitors or team officials is prohibited until permitted by the organiser.
- 15.6. The competition map must not be significantly larger than required by a competitor to run the course.
- 15.7. Easily crossable fences, and power lines, may be omitted for red and orange difficulty courses but must be shown for yellow and white difficulty courses. (Deer fences, fences with outrigger wires and live electric fences are not considered easily crossable). A legend of all map symbols used must be available for all orange, yellow and white competitors, preferably on the map.
- 15.8. Competitors must be told of any condition of the terrain which may affect the competition and which is not apparent from the map. The information must be displayed at least one hour before the first start and/or announced at the start line.

16. Courses

- 16.1. For A-level events, the IOF Principles for Course Planning ([see Appendix 3](#)) and the competition format descriptions must be followed. The Leibnitz Convention ([see Appendix 7](#)) should be followed where possible. The standard of the courses must be worthy of an A-Level orienteering event. The navigational skill, concentration, and running ability of the competitors must be tested. All courses must call upon a range of different orienteering techniques.
- 16.2. The course lengths must be given as the length of the straight line from the start triangle (or map issue point if shown), via the controls to the finish deviating for, and only for, physically impassable obstructions (buildings, high fences, lakes, impassable cliffs, etc.), prohibited areas and marked routes.
- 16.3. The total climb must be given as the climb in metres along the shortest sensible route. (The total climb of a course should not exceed 4% of the length of the shortest sensible route).
- 16.4. For qualification races, the courses for the parallel heats must be as nearly as possible of the same length and standard.
- 16.5. In relay competitions, the controls must be combined differently for the teams, but all teams must run the same overall course. If the terrain and the concept of the courses permit it, the lengths of the legs may be significantly different. However, the sum of the winning times of the legs must be kept as prescribed. All teams must run the different length legs in the same sequence.

- 16.6. In individual competitions, the controls may be combined differently for the competitors, but all competitors must run the same overall course, except when “Course Choice” forking is used in Knock-Out Sprint (whereby each runner has 20 seconds, before the start, to choose one of three maps, each with a different course).
- 16.7. Courses must be set at the appropriate level of technical difficulty for the class or classes on the course, as specified and described in [Appendix 1](#). Course lengths are given below in terms of **target times**. For classes 14 and over the target times are for the top NZ competitor (whether they attend or not). For classes 12 and under, target times are for the median NZ competitor.

16.7.1 Target winning times for **Long Distance** events are:

Class Target Times in Minutes

Men	Time	Women	Time	Also covers	Notes
M10	35	W10	35	12B (open very easy)	median time
M12A	35	W12A	35	14B (open easy)	median time
M14A	45	W14A	45		
M16A	55	W16A	55		
M18A	60	W18A	60		
M20A	60	W20A	60		
M20E	85	W20E	70		
M21E (open)	100	W21E (open)	85		
M21A (open)	65	W21A (open)	65		
M21AS (open)	50	W21AS (open)	50		
M35A	65	W35A	65		
M40A	60	W40A	60		
M40AS	45	W40AS	45		
M45A	60	W45A	60		
M50A	60	W50A	60		
M55A	60	W55A	60		
M55AS	45	W55AS	45		
M60A	55	W60A	55		
M65A	55	W65A	55		
M70A	55	W70A	50		
M75A	50	W75A	40		
M80A	40	W80A	40		

M85A	40	W85A	40
M90A	40	W90A	40
M16B, M20B, M21B (open), M40B	60	W16B, W20B, W21B (open), W40B	60

A-Short Classes may be offered at 75% of the corresponding A-class target times.

B Classes may be offered (except M/W10) at the appropriate lower level of technical difficulty as prescribed in rule 16.6.

Easy and Very Easy classes may be offered.

M/W10 Novice may be offered as a non-competitive class where a child is shadowed by an adult. If the adult is also competing, they should run their own course prior to shadowing.

16.7.2 Target times for **Middle Distance** are:

- M/W20E – M/W21E 35 minutes
- M/W18A – M/W50A 30minutes
- M/W16A, M/W55A - M/W75A 25minutes
- M/W14A, M/W80+, A-Short classes 20 minutes
- B-Classes 20 minutes
- M/W10, M/W12A, M/W12B, M/W14B 20 minutes (median time)

16.7.3 Target times for **Sprint Distance** are:

- All classes 12-15 minutes

[Refer to appendix 2 for recommended Course/Class combinations](#)






- 16.8. Multi-day Events - where long-distance races are run on consecutive days, courses should be designed for 70-90% of the single-day times, depending on the number of days and rest opportunities (this does not apply to A-level championship competitions). The percentage does not need to be the same each day, but it must be stated in advance. (It is recommended that for 2-day events the 1st day is 100% and the 2nd day 90%. For the 3rd and more days without a rest day, the distance is 70%. The recommendation intends that times at the lower end of the range are only required when there are many event days with no rest days).
- 16.9. Night Events should be designed for no more than 75% of the single-day times.

17. Restricted areas and routes













- 17.1. Rules set by ONZ 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. If necessary, they should also be marked on the ground. Competitors must not

enter, follow or cross areas, routes, or features drawn with the symbols illustrated below on penalty of disqualification.

Forest (ISOM)

-  ISOM 520 - Area that shall not be entered
-  ISOM 520.002 - Alternative - area that shall not be entered
-  ISOM 709 - Out-of-bounds area
-  ISOM 708 - Out-of-bounds boundary
-  ISOM 711 - Out-of-bounds route
(Competitors are allowed to cross directly over an Out-of-bounds route)

Sprint (ISSprOM)

- | | | | |
|--|---|--|---|
|  | 201 Impassable cliff |  | 520 Area that shall not be entered (area) |
|  | 301 Uncrossable body of water (area & line) |  | 521 Building |
|  | 307 Uncrossable marsh (area & line) |  | 529 Prominent impassable line feature |
|  | 411 Uncrossable vegetation |  | 708 Out-of-bounds boundary |
|  | 515 Impassable wall |  | 709 Out-of-bounds area |
|  | 518 Impassable fence or railing |  | 714 Temporary construction or closed area |

NB: In Forest Orienteering using the ISOM symbols, “impassable” and “uncrossable” are used as qualifiers for some features/areas that are very *difficult* to pass - symbols 201 (impassable cliff), 301 (uncrossable water), 307 (uncrossable marsh), 410 (fence), 515 (impassable wall), 518 (impassable fence), and 529 (impassable line feature). You might be able to pass/cross these areas/features, and you will not be disqualified if you try and are successful.

In contrast, for Sprint Orienteering using the ISSprOM symbols if a feature is marked on the map as impassable or uncrossable using any of the symbols above, you may not pass or cross it even if it is physically possible to do so, and you will be disqualified if you try.

- 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.

 707 Marked route  710 Crossing point

- 17.4. The organisers should, where practical, erect notices and mark off areas to ensure that no unauthorised persons enter the competition area.

18. Control Descriptions

- 18.1. The precise location of the controls must be defined by control descriptions.
- 18.2. The control descriptions must be in the form of symbols and in accordance with the [IOF Control Descriptions](#). For Orange level difficulty non-sprint courses and Moderate level difficulty sprint courses, both IOF symbols and English written descriptions should be given, except where there is insufficient

space on the map to print both, then English written descriptions shall prevail. Both types of descriptions should be made available in loose form for those specific classes and courses. For Yellow and White difficulty non-sprint courses, and Easy sprint courses, English descriptions shall be provided.

- 18.3. The control descriptions, given in the right order for each competitor's course, must be fixed to or printed on the front side of the competition map.
- 18.4. The dimensions of the box size for IOF symbols should be as large as practicable within the 5-7mm range to maximise legibility, particularly for the loose descriptions. For classes M/W50 and above, a minimum of 6mm must be used for the loose descriptions.
- 18.5. For interval start competitions, separate control description lists for each competitor on each course must be available at the pre-start or in the start lanes but must not be available before that point.
- 18.6. For relay events separate loose control descriptions will not be provided.
- 18.7. Refreshment controls must be marked as such in the control descriptions or shown on the map as applicable.

19. Control set-up and Equipment

- 19.1. The control point shown on the map must be clearly marked on the ground and be equipped to enable the competitors to prove their passage.
- 19.2. Each control must be marked by a control flag consisting of three squares, about 30 cm x 30 cm, arranged in a triangular form. Each square must be divided diagonally, one half being white and the other orange (PMS 165).
For night events, a control may also have a red light, the flag may be lit from inside, or it may have a reflector attached.
- 19.3. The flag must be hung at the feature indicated on the map in accordance with the control description. The flag must be visible to competitors when they can see the described position.
- 19.4. For forest events, controls (including the start control flag) must not be sited within 30 metres of each other. Only when the control features are distinctly different in the terrain as well as on the map, should controls be placed closer than 60 metres. The distance between the controls is measured in a straight line.
- 19.5. For sprint events, the minimum running distance between controls is 25 metres and the minimum straight-line distance is 15 metres. Where similar features are used, the minimum straight-line distance is increased to 30 metres.
- 19.6. A control should be sited so that the presence of a person punching does not significantly help nearby competitors to find the control.
- 19.7. Each control must be identified with a code number, which must be fixed to the control so that a competitor using the marking device can clearly read the code. Numbers less than 31 must not be used. The figures should be black on white, between 3 and 10 cm in height, and have a line thickness of 5 to 10 mm. Horizontally-displayed codes must be underlined if they could be misinterpreted by being read upside down (e.g. 161).
- 19.8. To prove the passage of the competitors, there must be a sufficient number of punching devices in the immediate vicinity of each flag.
- 19.9. Water must be provided;
 - Where the estimated winning time is more than 40 minutes, refreshments must be available at least every 30 minutes at the estimated speed of the median runner.
 - At the finish
 - Disposable cups should be provided at refreshment stations remote from the event centre. (It is

recommended that water be available at the start especially if the start is at some distance from the event centre).

- Any exceptions to these rules must be notified in advance by publication in Bulletin 2.

19.10. At least pure water of suitable temperature must be offered as refreshment. If different refreshments are offered, they must be clearly marked.

19.11. All controls for which there are security concerns must be guarded.

20. Punching systems

- 20.1. Only IOF approved electronic punching systems may be used, as outlined in [Appendix 5a](#)
- 20.2. The ONZ Touch Free Punching policy ([Appendix 5b](#)) must be adhered to.
- 20.3. “Control card” refers to the device used to record a competitor’s passage through a control. It is almost exclusively electronic now although paper/card versions may be used for minor events.
- 20.4. Competitors must be responsible for punching their control card at each control using the punching device provided.
- 20.5. The control card must clearly show that all controls have been visited.
- 20.6. A competitor with a control punch missing or unidentifiable must be disqualified unless it can be established with certainty that the punch missing or unidentifiable is not the competitor’s fault. In this exceptional circumstance, other evidence may be used to prove that the competitor visited the control, such as evidence from control officials or cameras, or a read-out from the control unit (subject to the payment of a fee). In all other circumstances, such evidence is not acceptable and the competitor must be disqualified. In the case of SPORTident, this rule means that:
 - If one unit is not working or appears not to be working, a competitor must use the backup provided and will be disqualified if no punch is recorded.
 - If a competitor punches too fast and fails to receive the feedback signals, the card will not contain the punch and the competitor must be disqualified (even though the control unit may have recorded the competitor’s card number as an error punch).
 - It is permitted for the organiser to read the backup from any control. A competitor can request that the organiser read the backup from a control, subject to the payment of a fee to be determined and advertised by the organiser (recommend \$30). If the control is found to contain a complete (non-error) punch, the competitor must be recorded as having punched that control correctly and the fee will be returned; otherwise, the fee shall be retained by the organiser. Note that SIAC does not record a punch at the control unit.
- 20.7. Competitors who lose their control card, omit a control, or visit controls in the wrong order must be disqualified.
- 20.8. If two contactless control cards are used, then both must be carried on the same arm. The punches from the two cards must be merged to form the punching record.
- 20.9. A backup needle punch must be present at each control.

21. Equipment

- 21.1. If they are provided, start number bibs must be clearly visible and worn as prescribed by the organiser. The bibs must not be larger than 25 cm x 25 cm with figures at least 10 cm high. The number bibs may not be folded or cut.
- 21.2. During the competition, the only navigational aids that competitors may use or carry are the map and control descriptions provided by the organiser, and a compass.
- 21.3. Competitors must not use or carry telecommunication equipment between entering the pre-start area and reaching the finish in a race unless the equipment is approved by the organiser. GPS-enabled devices (watches etc.) can be carried provided that they have no map display and are not used for navigation purposes. However, the organiser has the right to specifically forbid the use of such equipment. The organiser may require competitors to carry a tracking device and/or a GPS data logger.

22. Start

- 22.1. In individual competitions, the start is normally an interval start. In relay competitions, the start is normally a mass start.
- 22.2. In qualification race competitions, the first start in the finals must be at least 2.5 hours after the last start in the qualification races.
- 22.3. The start may be organised with a pre-start before the time start. If there is a pre-start, a clock showing the call-up time to team officials and competitors must be displayed there, and the competitors' names must be called or displayed. Beyond the pre-start, only starting competitors and media representatives guided by the organiser are allowed.
- 22.4. At the start, a clock showing the competition time to the competitors must be displayed.
- 22.5. The start must be organised so that later competitors and other persons cannot see the map, courses, route choices, or the direction to the first control. If necessary, there must be a marked route from the time start to the point where orienteering begins. The distance from the map pick-up point to the start triangle must be communicated to the competitor *either* by the control descriptions *or* via a notice at the map pick-up point, *or both*.
- 22.6. Competitors take their map at or after their start time. The competitor is responsible for taking the right map. The competitor's start number or name or course must be indicated on or near the map to be visible to the competitor before he/she starts.
- 22.7. The point where orienteering begins must be shown on the map with the start triangle and marked in the terrain by a control flag but without a punching device. (It is recommended that courses are designed so that there is no temptation to bypass the start triangle).
- 22.8. Competitors who are late for their start time must be permitted to start. Their new start time must be recorded.
 - In a mass or chasing start, the competitor shall be started as soon as possible.
 - In an interval start, if the competitor is at the start line less than half the start interval after their start time, they shall start immediately.
 - In an interval start, if the competitor is at the start line more than half the start interval after their start time, they shall start at the next available half start interval.
- 22.9. Competitors who are late for their start time through their own fault must be timed as if they had started at their original start time. Competitors who are late for their start time through no fault of their own must be timed from their new start time. The controller determines which start time will apply.
- 22.10. The changeover between the members of each relay team takes place by touch. The changeover may be organised so that the incoming team member collects the map of the outgoing team member and hands it over as the changeover touch.
- 22.11. Correct and timely relay changeover is the responsibility of the competitors, even when the organiser arranges an advanced warning of incoming teams.
- 22.12. With the approval of the Controller, the Organiser may arrange mass starts for the later legs for relay teams that have not changed over.
- 22.13. Where possible, the start point for young children should not be too far away from registration, or the finish, to allow parents with split starts the opportunity to escort their young children to the start.

- 22.14. The Organiser may define one or more quarantine zones to prevent those who have not started gaining information about the courses. The organiser defines times when competitors and team officials must be inside the quarantine zone. The organiser must provide adequate facilities (toilets, refreshments, shelter, etc.) for those waiting in the quarantine zone. If a competitor or team official attempts to enter the quarantine zone after the deadline, they may be refused entry. Competitors and team officials are not allowed to use telecommunication devices within the quarantine zone.

23. Finish and time-keeping

- 23.1. The competition ends for a competitor when crossing the finishing line.
- 23.2. The run-in to the finish must be bounded by tape, by rope, or by a fence. The last 20 m must be straight. Any funnelling to keep competitors in single file must commence after the finish line. The distance from the last control to the finish line must be such that it allows a SIAC default feedback cycle to complete.
- 23.3. The finish line must be at least 1.5 m wide for interval start races and at least 3 m wide for mass or chasing start races. The line must be at right angles to the direction of the run-in. The exact position of the finish line must be obvious to approaching competitors.
- 23.4. After crossing the finish line, or completing the changeover, competitors must download recorded data. If required by the organiser, they must also hand in their competition map.
- 23.5. The finishing time must be measured at one of the following times:
- when the competitor's chest crosses the finish line
 - when the competitor punches at the finish line
- Times must be rounded down to whole seconds. Times must be given in hours, minutes, and seconds or in minutes and seconds only.
- 23.6. The timekeeping systems must measure times of competitors in the same class, relative to each other, with an accuracy of 0.5 seconds or better.
- 23.7. Two independent time-keeping systems, a primary and a secondary, should be used. All components of the timekeeping system must be synchronized.
- 23.8. There must be first-aid facilities and personnel at the finish, who are also equipped to work in the forest.
- 23.9. With the approval of an Event Controller maximum running times may be set for each class. Where a maximum running time is specified, competitors must be allowed this time to complete their course before any advertised course closure time. Suggested maximum running times are:
- Sprint, 50 minutes
 - Middle distance, 2 hours
 - Long distance, 3-4 hours
 - Relay, 3 hours
 - Sprint Relay 2 hours
 - Knock-Out Sprint qualification, 30 minutes
 - Knock-Out Sprint mass-start races, 15 minutes

24. Results

- 24.1. Provisional results must be published and displayed in the finish area or the assembly area during the competition.
- 24.2. The official results should be available no more than 4 hours after the latest allowable finishing time of the last starter.
- 24.3. If the finals of a qualification race competition take place on the same day as the qualification races, the results of the qualification races must be published no more than 30 minutes after the latest allowable finishing time of the last starter.
- 24.4. The official results must include all participating competitors. In relays, the results must include the competitors' names in running order and times for their legs as well as the course combinations that each ran.
- 24.5. If an interval start is used, two or more competitors having the same time are given the same placing in the results list. The position(s) following the tie shall remain vacant.
- 24.6. If a mass start or chasing start is used, the placings are determined by the order in which the competitors finish. In relays, this will be the team member running the last relay leg.
- 24.7. In relays where there are mass starts for later legs, the sum of the individual times of the team members shall determine the placings of the teams that have taken part in such mass starts.
- 24.8. If applicable, competitors or teams who exceed the maximum time are disqualified.
- 24.9. Results must be published on the internet as soon as practicable.
- 24.10. The results must be based on competitors' times for the whole course. It is forbidden to eliminate sections of the course on the basis of split times unless the section has been specified in advance (e.g. a short section containing a busy road crossing).

25. Prizes

- 25.1. For A-level events, it is recommended that the organisers arrange a suitable award ceremony.
- 25.2. Prizes for men and women must be equivalent.
- 25.3. If two or more competitors have the same placing, they shall each receive the appropriate medal and/or certificate.

26. Fair play

- 26.1. All persons taking part in an orienteering event must behave with fairness and honesty. They must have a sporting attitude and a spirit of friendship. Competitors must show respect for each other, for officials, journalists, spectators, and the inhabitants of the competition area. The competitors must be as quiet as possible in the terrain.
- 26.2. Except in the case of an accident, seeking to obtain or obtaining assistance from other runners or providing assistance to other competitors during a competition is forbidden. It is the duty of all competitors to help injured runners.
- 26.3. Doping is forbidden. The [ONZ Anti-Doping Policy](#) applies to all ONZ events and ONZ Council may require doping control procedures to be conducted. It is the responsibility of competitors to obtain any required TUE (therapeutic use exemption) certificate.
- 26.4. All officials must maintain strict secrecy about the competition area and terrain before they are published. Strict secrecy about the courses must be maintained.

- 26.5. Any attempt to survey or train in the competition terrain is forbidden unless explicitly permitted by the organiser. Attempts to gain any information related to the courses, beyond that provided by the organiser, is forbidden before and during the competition. This is publicised by way of an embargo notice.
- 26.6. The organiser must bar from the competition any competitor who is so well acquainted with the terrain or the map, that the competitor would have a substantial advantage over other competitors. Such cases must be discussed and decided after consultation with the Event Controller. For the first event on a new map, the fieldworkers and cartographers are not eligible to run officially at that event.
- 26.7. Team officials, competitors, media representatives, and spectators must remain in the areas assigned to them.
- 26.8. Control officials must neither disturb nor detain any competitor nor supply any information whatsoever. They must remain quiet, wear inconspicuous clothing, and must not help competitors approaching controls. This also applies to all other persons in the terrain, e.g. media representatives.
- 26.9. Having crossed the finish line, a competitor may not re-enter the competition terrain without the permission of the controller. A competitor who retires must announce this at the finish immediately and hand in the map. That competitor must in no way influence the competition nor help other competitors.
- 26.10. A competitor who breaks any rule, or who benefits from the breaking of any rule, may be disqualified.
- 26.11. Non-competitors who break any rule are liable to disciplinary action.
- 26.12. The organiser must stop, and postpone or cancel an event if;
- At any point it becomes clear that circumstances have arisen which makes the race dangerous for the competitors, officials, or spectators.
 - Where there has been a death, or the discovery of a body unrelated to the event. The Police must be informed immediately, and the organiser must comply with their instructions.
- 26.13. The organiser must void a race if circumstances have arisen which make the race significantly unfair.
- 26.14. Participation in betting relating to an orienteering event is prohibited for competitors in the event, the team officials, and the event officials. They are also prohibited from supporting or promoting betting relating to the event. Additionally, they must not participate in any corrupt practices related to betting. Such practices include fixing the result, manipulating any aspect of the results, failing to perform in order to benefit, accepting or offering bribes, and passing on inside information.

27. Complaints

- 27.1. A complaint may be made about infringement of these rules or the organiser's directions.
- 27.2. Complaints may only be made by team officials or competitors.
- 27.3. A complaint must be made in writing to the Controller as soon as possible, but within 60 minutes of the affected competitor finishing. A complaint is adjudicated by the Controller. The Controller's decision on a complaint must be advised to the complainant and displayed on the results board as soon as possible, but in any case, within 60 minutes of receiving the complaint.
- 27.4. The Controller must deal with all complaints in a manner that is felt necessary to ensure the fairest result for competitors.
- 27.5. If a complaint regarding an element of a course is upheld, only the class containing the complainant(s) is invalidated.
- 27.6. There is no fee for a complaint.

- 27.7. In the Knock-Out Sprint, any complaint must be made to the organiser not later than 3 minutes after the corresponding heat results are published. A complaint may initially be made orally but must subsequently be written down.

28. Protests

- 28.1. A protest may be made against the Controller's decision about a complaint.
- 28.2. Protests may only be made by team officials or competitors, or event officials.
- 28.3. Any protest must be made in writing to the Controller or a member of the jury within 30 minutes of the Controller's decision about a complaint being advised to the complainant and displayed on the result board. Protests received after this time limit may be considered at the discretion of the jury if there are valid exceptional circumstances which must be explained in the protest.
- 28.4. A fee equal to the entry fee for that day for the class in question must accompany any protest. This fee must be returned if the protest is upheld. The fee may also be returned if the Jury believes the protest was soundly based but of insufficient weight to justify upholding the protest.
- 28.5. In the Knock-Out Sprint, any protest must be made to the organiser no later than 2 minutes after the organiser has announced the decision about the Complaint. A protest may initially be made orally but must subsequently be written down.
- 28.6. If a protest regarding an element of a course is upheld, only the class containing the protestor(s) is invalidated.

29. Jury

- 29.1. A jury shall be appointed to rule on protests.
- 29.2. The Jury must deal with all protests in a manner that they feel is necessary to ensure the fairest result for competitors.
- 29.3. The jury panel shall consist of a panel of 3 controllers from clubs other than the organising club/s.
- 29.4. For A-level events, appointment of the jury panel shall be in advance of the event, and by the ONZ Technical Committee. 3 jury members and 2 reserve jury members shall be selected from the approved list of ONZ Controllers. At the same time, a chairperson shall be pre-selected from the panel of 3 by the Technical Committee.
- 29.5. The names and clubs of all jury panel members including reserves, must be published in the final event information.
- 29.6. The chairperson must ensure that no-one in the panel of 3 (including the chairperson) is prejudiced in any way by, for example, having a family association with the protestor, or having run the same course. In this case, the prejudiced jury member is replaced by one of the reserve jury members.
- 29.7. If the chairperson is unable to fill the jury from the published panel of 5, due to jury members declaring themselves prejudiced or unable to fulfil their task, the chairperson must nominate a substitute. For A-level events (except for the NZSSOC) the substitute must be selected from the list of Controllers as approved by the ONZ Technical Committee. For other events, the substitute must be an experienced orienteer without a personal interest in the protest.
- 29.8. If the chairperson is prejudiced, the final panel of 3 select another chairperson from amongst themselves.
- 29.9. The Jury is competent to rule only if all members are present. In urgent cases, preliminary decisions may be taken if a majority of the jury members agree on the decision.
- 29.10. The Jury must meet as soon as possible after receipt of a protest.

- 29.11. The decision of the Jury must be made on the day of the competition concerned and the decision of the Jury is final.
- 29.12. The Jury must prepare a written report for the Controller and the ONZ Technical Committee stating precisely why the protest was upheld or was unsuccessful. The organisers must publish both the protest and Jury's report on the event website and the ONZ website.

30. Appeals

- 30.1. An appeal may be made against infringements of these rules if a jury is not yet set up, or if the event is over and the jury has dispersed. An appeal may only be made against a jury decision if there has been a serious procedural error in the operation of the jury.
- 30.2. An appeal may only be made by clubs.
- 30.3. An appeal must be made in writing to the ONZ Technical Committee as soon as possible.
- 30.4. There is no fee for an appeal.
- 30.5. Decisions about an appeal are final.
- 30.6. The ONZ Technical Committee must deal with the appeal.

31. Event control

- 31.1. All events must have a designated Controller.
- 31.2. The following Controller status is required:
- IOF events – ONZ A-Grade with an IOF event adviser.
 - A-level events – ONZ A-Grade controller.
 - B-level events – No requirement (it is recommended that ONZ B-Grade Controllers be used to gain experience for promotion to A-Grade.)
 - Other events – No requirement (it is recommended that unlisted Controllers be used to gain experience for promotion.)
- 31.3. The controller must ensure that the event is safe for all concerned, rules are followed, mistakes are avoided and that the competition is fair. The Controller has the authority to require adjustments to be made if he or she deems them necessary to satisfy the requirements of the event.
- 31.4. The Controller must work in close collaboration with the organiser and must be given all relevant information. All official information published, such as bulletins, must be approved by the Controller.
- 31.5. As a minimum, for A-level events, the following tasks must be carried out under the authority of the Controller:
- to approve the venue and the terrain for the event
 - to approve and be responsible for the implementation of the Event Safety Management Plan
 - to approve the organisation and layout of start, finish, and changeover areas
 - to assess the reliability and accuracy of the time-keeping and results-producing systems
 - to check that the map conforms with the IOF standards
 - to approve the courses after assessing their quality, including the degree of difficulty, control siting and equipment, chance factors and map correctness
 - to check any course splitting method and course combinations
 - to assess arrangements and facilities for doping tests
 - approval of the official results.

- 31.6. The Controller must be present during the entire competition. In exceptional cases, the ONZ Technical Committee may permit someone well versed in the matter to take their place but this should be pre-arranged.
- 31.7. It is strongly recommended that the Controller not be directly involved with the fieldwork of the map to be used.
- 31.8. It is strongly recommended that a Controller does not control more than one day of a multi-day event.
- 31.9. For large events, the Controller may be assisted by a "Technical Adviser" or an "Overall Controller".

- A **Technical Adviser** must be an ONZ approved Controller, who will assist particularly in areas that need to be consistent for all of the days of a multi-day event such as;
 - the suitability of the terrain
 - the quality of any new mapping
 - systems to be used for error control
 - approval of preliminary and final event information before issue
 - assistance during the event for any problems

All this must be achieved in such a way that it is clear the responsibility remains with the Controller for the day concerned.

- An **Overall Controller** must be an ONZ approved Controller, who performs similar duties to a "Technical Adviser" but with a greater degree of double-checking which will be justified only for a very significant event. The Overall Controller accepts final responsibility for everything. While the division of work between Overall Controller and the Controllers for individual days is up to the Overall Controller, the Overall Controller must be careful to delegate enough to avoid being over-committed, while still retaining an overall view.

Any payments to cover the Controller's expenses must be agreed between the event organisers and the Controller and must be paid by the organising Club(s).

32. Event reports

- 32.1. A short report for A-Level events must be sent by the Controller to the ONZ Technical Committee within 4 weeks of the event. The minimum the report must contain is results lists, one copy of each course, and the details of any complaints and protests. While the report should be submitted electronically, a hard copy of the printed map, at all scales, should be available for scrutiny by the Technical Committee.

33. Advertising and sponsorship

- 33.1. Advertising of tobacco and alcoholic drinks is not permitted.

34. Media service

- 34.1. The organiser should make every effort to maximise media coverage as long as this does not jeopardise the fairness of the event.

Appendix 1a: Course difficulty levels for non-sprint events

WHITE COURSE

Courses must follow drawn linear features (tracks, fences, streams, distinct vegetation boundaries, etc.). A control site must be placed at decision points (e.g. turning points such as a track junction, or a change in the type of linear feature - from following a track to following a stream). All control markers must be visible from the approach side. Where the course has to deviate from the handrail feature (e.g. to cross through a forest block), the route must be marked all the way until a new handrail feature is reached. The Start Triangle must be on a linear feature. If no such feature is available, then there must be a taped route all the way from the start to a linear feature (i.e. the first control). Compass use is limited to map orientation only. No route choice is offered. Doglegs are permitted. Used for: M/W-10, M/W-12B.

YELLOW COURSE

Control sites must be on or visible from drawn linear features (tracks, fences, streams, distinct vegetation boundaries, etc.) but preferably not at turning points. This gives the opportunity to follow handrails or to cut across-country (i.e. limited route choice). Control sites must be visible from the approach side by any reasonable route. Compass use is limited to rough directional navigation. Contour recognition is not required for navigation but simple contour features may be used for control sites. Doglegs are permitted. Used for: M/W12-A, M/W-14B.

ORANGE COURSE

The course should have route choice with prominent attack points near the control sites and/or catching features less than 100 m behind. Control sites may be fairly small point features and the control markers need not necessarily be visible from the attack point. Exit from the control must not be the same as the entry (doglegs are not permitted). Simple navigation by contours and rough compass with limited distance estimation required. The use of a chain of prominent features as "stepping stones" is encouraged. Used for: M/W -14A, M/W-16B, adult B classes.

RED COURSE

Navigation must be as difficult as possible with small contour and point features as preferred control sites (no obvious attack points, no handrails, etc.). Control sites should be placed in areas rich in detail. Route choice should be an important element in most legs. Doglegs are not permitted.

For older age classes, extra care must be taken so that navigation is still technically difficult, but the terrain and route choices are less physically challenging. Courses should avoid, to the extent possible, excessive climb, high fences or fences that are difficult to cross, steep erosion gullies and rough terrain that is physically challenging to get through.

Note: It may be impossible to set RED courses on some maps. Used for: all other A classes including and above M/W16-A (includes both Long and Middle distance courses), Elite classes.

Appendix 1b: Course difficulty levels for sprint events

Sprint races are held in largely urban environments with an emphasis on high-speed navigation. The course should test the competitor's ability to read and translate the map and to plan and carry out route choices running at high speed. The course should be planned so that the element of speed is maintained throughout the race. Controls are not difficult to find; the challenge comes from choosing and completing the best route choice between controls in a complex environment. Dog legs are permitted at all levels and can provide additional navigational challenges but care must be taken if space is restricted to avoid collisions between runners. It is easy to make a sprint course too difficult for younger age groups and particular care should be taken with course design for these classes. Map legibility, especially for older age classes, is an important consideration. Safety around roads and moving traffic, and members of the public or spectators, must be carefully considered.

SPRINT DIFFICULT COURSE

Route choices should be as complex as possible and the aim should be that every leg poses a route choice challenge. The most obvious way out from a control should not necessarily be the most favourable one. The average leg length should be short with frequent changes of direction (cross-over loops are good). Long legs may be set as long as they require a high rate of decision making along the way, and multiple route choice options. The course should be set to require the competitor's full concentration throughout the race.

Used for all A-classes M/W14A upwards.

SPRINT MODERATE COURSE

Route choice should be a feature of most legs but the complexity of the route choices should be less than that for difficult sprint courses. The obvious exit direction from a control should be the correct direction in which to start the leg (avoid legs that require a "backwards" exit) and ideally give the runner a chance to progress partway along the leg before having to make route choice decisions. Direction changes should be a feature but the overall course design should not be so complex as to confuse the runner.

Used for M/W12A, M/W14B, Adult B-classes.

SPRINT EASY COURSE

Route choice should be restricted to simple two-option choices, and only one option per leg. Controls should be sited so that they are visible from all approach directions, and so that they lead the runner to the correct exit direction. Controls should be placed at the point of each major directional change. Long legs should be avoided, unless very simple. Course design should be simple and clear.

Used for M/W10, M/W12B.

Appendix 2: Recommended Course/Class Combinations

(These recommendations are put forward as a guide for Clubs and are strongly recommended but not mandatory).

The course/class combinations are:

- 15/17 Course format for between 350 and 600 competitors
- 13 Course format for between 200 and 350 competitors

How to use the Tables

Calculate the course length (this will depend on the terrain). See the course length calculator resource on the ONZ website. Look at km-rates from previous results held on the map or on maps of similar terrain. Only you can do that as you know the terrain.

Check the likely numbers on each course. If there is a large number on a course you might need to create a parallel course.

Note that for older age classes, care must be taken to avoid excessive climb, difficult fences, and rough terrain etc.

Organisers have the discretion to offer ten-year classes. [Nationals excluded]

The relative course lengths and combinations set out below are designed to reflect the current relative strengths of the competitors in the various classes.

Long Distance 17 Course Format

Course	Men	Women	Winning Time (minutes)	Relative Course Length	Difficulty
1	M21E		100	100%	Red
2	M20E		85	80%	Red
3		W21E	85	65%	Red
4	M21A		65	55%	Red
	M35A		65		
	M40A		60		
5		W20E	70	50%	Red
	M18A M20A M45A		60		
6	M16A		55	45%	Red
	M50A M55A	W40A	60		
		W21A W35A	65		

7	M60A		55	40%	Red
		W45A W50A	60		
			65		
8	M21AS		50	35%	Red
	M65A	W16A	55		
		W18A W20A W55A	60		
9	M40AS		45	30%	Red
		W21AS	50		
	M70A	W60A	55		
10	M55AS	W40AS	45	23%	Red
	M75A	W70A	50		
		W65A	55		
11	M80A M85A	W75A W80A	40	13%	Red
		W55AS	45		
12	M90A	W85A W90A	40	10%	Red
13	M14A		45	35%	Orange
14		W14A	45	30%	Orange
	M16B M20B M21B M40B		60		
15		W16B W20B W21B W40B	60	20%	Orange
16	M12A M14B	W12A W14B	35	median	Yellow
	Open Easy				
17	M10 M12B	W10 W12B	35	median	White
	Open Very Easy				

Long Distance 13 Course Format (10-year age groups)

Course	Men	Women	Winning Time (minutes)	Relative Course Length	Difficulty
1	M21E		100	100%	Red
2	M20E		85	80%	Red
3		W21E	85	65%	Red
4	M18A M20A M21A M40A	W20E	60	50%	Red
5	M16A M50A	W40A	60	45%	Red
6	M21AS M60A	W16A W18A W20A W21A W50A	60	35%	Red
7	M70A	W60A	50	30%	Red
8	M80A M40AS	W40AS W70A W21AS	45	20%	Red
9	M90A	W80A W90A	40	10%	Red
10	M14A M16B M20B M21B		45	30%	Orange
11	M40B	W14A W16B W20B W21B W40B	45	25%	Orange
12	M12A M14B	W12A W14B	35 median		Yellow
	Open Easy				
13	M10 M12B	W10 W12B	35 median		White
	Open Very Easy				

Middle Distance 15 Course Format

Course	Men	Women	Winning Time (minutes)	Relative Course Length	Difficulty
1	M20E M21E		35	100%	Red
2	M35A M40A	W20E W21E	35	75%	Red
3	M18A M20A M21A M45A M50A		30	70%	Red
4	M16A M55A		25	60%	Red
		W21A W35A W40A	30		
5		W18A W20A W45A W50A	30	55%	Red
6	M60A M65A	W16A W55A	25	45%	Red
7	M70A	W60A	25	40%	Red
8	M75A	W65A W70A	25	30%	Red
	M21AS M40AS		20		
9	M80A M55AS	W75A W21AS W40AS W55AS	20	20%	Red
10	M85A M90A	W80A W85A W90A	20	10%	Red
11	M14A	W14A	20	40%	Orange
12	M16B M20B M21B M40B		20	25%	Orange
13		W16B W20B W21B W40B	20	20%	Orange
14	M12A M14B	W12A W14B	20 Median		Yellow
	Open Easy				
15	M10 M12B	W10 W12B	20 Median		White
	Open Very Easy				

Middle Distance 13 Course Format (10-year age groups)

Course	Men	Women	Winning Time (minutes)	Relative Course Length	Difficulty
1	M21E M20E		35	100%	Red
2		W21E W20E	35	75%	Red
	M21A M40A		30		
3	M18A M20A M50A		30	65%	Red
4		W21A W40A	30	55%	
5		W18A W20A W50A	30	50%	Red
	M16A		25		
6	M60A	W16A	25	45%	Red
7	M70A	W60A	25	35%	Red
	M21AS		20		
8	M80A M40AS	W70A W21AS W40AS	20	20%	Red
9	M90A	W80A W90A	20	10%	Red
10	M14A	W14A	20	40%	Orange
11	M16B M20B M21B M40B	W16B W20B W21B W40B	20	20%	Orange
12	M12A M14B	W12A W14B	20 Median		Yellow
	Open Easy				
13	M10 M12B	W10 W12B	20 Median		White
	Open Very Easy				

Sprint Format

Target winners times 12-15 minutes

Course	Men	Women	Average Distance (km)*	Difficulty
1	M20E M21E		3.5	Difficult
2	M16A M18A M20A M21A M35A M40A	W20E W21E	3	Difficult
3	M45A M50		2.7	Difficult
4	M14A M55A	W16A W18A W20A W21A	2.5	Difficult
5	M60A M65A	W14A W35A W40A W45A W50A	2.2	Difficult
6	M21AS M70A M75A	W21AS W55A W60A W65A	1.8	Difficult
7	M80A	W70A W75A	1.3	Difficult
8	M85A M90A	W80A W85A W90A	1.0	Difficult
9	M16B M20B M21B	W16B W20B W21B	2.3	Moderate
10	M12A M14B M40B	W12A W14B W40B	2	Moderate
	Open Easy			
11	M10 M12B	W10 W12B	1.6	Easy
	Open Very Easy			

*Actual running distance, not straight-line distance.

Appendix 3: Competition Formats

This section will be moved to an Events Manual in due course.

SUMMARY TABLE	Sprint	Middle Distance	Long Distance	Relay	Sprint Relay	Knock-Out Relay
Controls	Technically easy.	Consistently technically difficult.	A mixture of technical difficulties.	A mixture of technical difficulties.	Technically easy.	Technically easy.
Route Choice	Difficult route choice, requiring high concentration.	Small and medium scale route choice.	Significant route choice including some large-scale route choices.	Small and medium scale route choice.	Difficult route choice, requiring high concentration.	Difficult route choice, requiring high concentration.
Type of Running	Very high speed.	High speed, but requiring runners to adjust their speed for the complexity of the terrain.	Physically demanding, requiring endurance and pace judgement.	High speed, often in close proximity to other runners who may, or may not, have the same controls to visit.	Very high speed.	Very high speed.
Terrain	Predominantly in very runnable park or urban (streets/buildings) terrain. Some fast-runnable forest may be included. Spectators are allowed along the course.	Technically complex terrain.	Physically tough terrain allowing good route choice possibilities.	Some route choice possibilities and reasonably complex terrain.	Predominantly in very runnable park or urban (streets/buildings) terrain. Some fast-runnable forest may be included. Spectators are allowed along the course	Predominantly in very runnable park or urban (streets/buildings) terrain. Some fast-runnable forest may be included. Spectators are allowed along the course
Start Interval	1 minute.	2 minutes.	2 or 3 minutes.	Mass start.	Mass start.	1 minute for the qualification round. Mass start for knock-out rounds.

Timing	1 second.	1 second.	1 second.	Mass start so the finish order is the order across the line.	Mass start so the finish order is the order across the line.	1 second for the qualification round. Mass start for knock-out rounds so the finish order is the order across the line.
Winning Time (for Senior Elite competition)	12-15 minutes	30-35 minutes. Qualification races are shorter.	Men 90-100 minutes Women 70-80 minutes Qualification races are shorter.	30-40 minutes per leg. Men Total 90-105 minutes. Women Total 90-105 minutes.	12-15 minutes per leg. Total 55-60 minutes.	8-10 minutes for the qualification round. 6-8 minutes for the knock-out rounds.
Summary	Sprint orienteering is a fast, visible, easy-to-understand format, allowing orienteering to be staged within areas of significant population.	Middle distance orienteering requires fast, accurate orienteering for a moderately long period of time. Even small mistakes will be decisive.	Long distance orienteering tests all orienteering techniques as well as speed and physical endurance.	Relay orienteering is a competition for teams of three runners running on a virtually head-to-head basis with a first-past-the-post winner. Exciting for spectators and competitors.	The Sprint Relay is a competition for teams of four runners. Teams contain at least two women and the first and last legs are run by women. This format provides exciting head-to-head competition with a first-past-the-post winner in an urban environment.	In a Knock-Out Sprint, after initial qualification, there are several knock-out rounds with mass starts and first-past-the-post finishes. The races take place in a compact area. Exciting for spectators and competitors.

1. SPRINT

1.1. The profile

The Sprint profile is high speed. It tests the athletes' ability to read and translate the map in complex environments, and to plan and carry out route choices running at high speed. The course must be planned so that the element of speed is maintained throughout the race. The course may require climbing but steepness forcing the competitors to walk should be avoided. Finding the controls should not be the challenge; rather the ability to choose and complete the best route to them. For example, the most obvious way out from a control should not necessarily be the most favourable one. The course should be set to require the athletes' full concentration throughout the race. An environment that cannot provide this challenge is not appropriate for the Sprint.

1.2. Course planning considerations

In Sprint spectators are allowed along the course. The course planning must consider this, and all controls must be manned. It may also be necessary to have guards at critical passages alerting spectators of approaching competitors and making sure that competitors are not hindered. The start should be at the Arena and spectator sites may be arranged along the course. The spectator value could be enhanced by building temporary stands and by having an on-course announcer. Both spectator sites and sites for media/photographers should be announced at the Arena. The course must be planned to avoid tempting competitors to take shortcuts through private property and other out-of-bound areas. If there is such a risk, a referee should be at such locations to prevent possible attempts. Areas so complex that it is doubtful whether a competitor can interpret the map at high speed should be avoided (e.g. when there are complex three-dimensional structures).

1.3. The map

The current ISSprOM specification must be followed. The map scale is to be 1:4,000 or larger (see ONZ rule 15.2). It is crucial that the map is correct and possible to interpret at high speed, and that the mapping of features that affect route choice and speed are accurate. In non-urban areas, the correct mapping of conditions reducing running speed, both to degree and extent, is important. In urban areas, barriers hindering the passage must be correctly represented and drawn to size.

2. MIDDLE DISTANCE

2.1. The profile

The Middle-distance profile is technical. It takes place in a non-urban (mostly forested) environment with an emphasis on detailed navigation and where finding the controls constitute a challenge. It requires constant concentration on map reading with occasional shifts in running direction out from controls. The element of route choice is essential but should not be at the expense of technically demanding orienteering. The route in itself must involve demanding navigation. The course must require speed-shifts e.g. with legs through different types of vegetation.

2.2. Course planning considerations

The course should be set to allow competitors to be seen by spectators during the race as well as when finishing. The start should be at the Arena and the course should preferably make runners pass the Arena during the competition. The demand on the selection of Arena is subsequently high, providing both suitable terrain and good possibilities to make runners visible to spectators. Spectators are not allowed along the course except for parts passing the Arena (including controls at the Arena).

2.3. The map

The standard current ISOM specification must be followed. The map scale is 1:10,000 or larger (see ONZ rule 15.2). The terrain should be mapped for 1:15,000 and then be strictly enlarged as specified by ISOM.

3. LONG DISTANCE

3.1. The profile

The Long-distance profile is physical endurance. It takes place in a non-urban (mostly forested) environment and aims at testing the athletes' ability to make efficient route choices, to read and interpret the map and plan the race for endurance during a long and physically demanding exercise. For elite classes the format emphasises route choices and navigation in rough, demanding terrain, preferably hilly. The control is the end-point of a long leg with demanding route choice and is not necessarily in itself difficult to find. The Long distance may in parts include elements characteristic of the Middle distance with the course suddenly breaking the pattern of route choice orienteering to introduce a section with more technically demanding legs.

3.2. Course planning considerations

The course should be set to allow competitors to be seen by spectators during the race as well as when finishing. Preferably, the start should be at the Arena and the course should make runners pass the Arena during the competition. A special element of the Long distance is the long legs, considerably longer than the average leg length. These longer legs may be from 1.5 to 3.5 km depending on the terrain type and class. Two or more such long legs should form part of the course (still requiring full concentration on map reading along the route chosen). Another important element of the Long distance is to use course planning techniques to break up groups of runners. Butterfly loops are one such technique. The terrain itself should be used as a break-up method by putting the course through areas with limited visibility. Spectators are not allowed along the course except for parts passing the Arena (including controls at the Arena).

3.3. The map

The standard ISOM specification must be followed. The map scale should be 1:15,000 or larger (see ONZ rule 15.2).

4. RELAYS

4.1. The profile

The Relay profile is a team competition. It takes place in a non-urban (mostly forested) environment. The format is built on a technically demanding concept, more similar to the concept of the Middle than the Long distance. Some elements characteristic of the Long distance, like longer, route-choice legs should occur, allowing competitors to pass each other without making contact. Good Relay terrain has characteristics that make runners lose eye contact with each other (such as denser vegetation, many hills/depressions, etc.). Terrain with continuous good visibility is not suitable for the Relay.

4.2. Course planning considerations

The Relay is a spectator-friendly event in offering competition between teams, head-to-head, and with the first to finish being the winner. The Arena layout and the course planning must consider this (e.g. when forking is used, the time difference between alternatives should be small). The competitors should, on each leg, pass the Arena, and if possible, runners should be visible from the Arena while approaching the last control. An appropriate number of intermediate times (possibly with in-forest commentators) should be provided (as well as TV-controls shown on screen in the Arena). The mass start format requires a course planning technique separating runners from each other (e.g. forking). The best teams should be carefully allocated to different forking combinations. For fairness reasons, the very last part of the last leg must be the same for all runners. Spectators are not allowed along the course except for parts passing the Arena (including controls at the Arena).

4.3. The map

The standard ISOM specification must be followed. The map scale is 1:10,000 or larger (see ONZ rule 15.2). The decision on map scale must be based on the complexity of the course design (e.g. short legs with controls close to each other may require the larger map scale). The terrain should be mapped for 1:15,000 and strictly enlarged as specified by the current ISOM.

5. SPRINT RELAYS

5.1. The profile

The Sprint Relay profile is a mixed-gender high-speed head-to-head competition. It takes place in an urban and park environment. The format is a combination of the Sprint and Relay concepts. There are four legs and the first and last legs must be run by women.

5.2. Course planning considerations

A relatively small area is required for a competition. The event must be easy to understand for the spectators. An arena passage should be used, if possible, without compromising course quality too much. Two loops per leg should be used if there is an arena passage with one loop printed on each side of the map. Courses must be forked. GPS- tracking is desirable and contactless punching is strongly recommended.

5.3. The map

See 1.3 Sprint.

5.4. Winning time, start interval and timing

The winning time (the total time for the winning team) must be 55-60 minutes. The time for each leg is 12-15 minutes so the first and last legs (which are run by women) should be a little shorter than the second and third legs.

6. KNOCK-OUT SPRINT

6.1. The profile

The Knock-Out Sprint profile is an individual multiple-round high-speed competition with head-to-head racing in all but the first round. It takes place in an urban and park environment. There are parallel heats with an interval start to qualify for the knock-out section. In this, there are one or more knock-out rounds with several parallel heats and mass starts where the leading runners qualify for the next round. Finally, there is a single mass start race to determine the winner.

6.2. Course planning considerations

A relatively small area is required for a competition (especially with the use of an arena passage). The event must be easy to understand for the spectators. The courses for the knock-out rounds may be forked. As an alternative to standard forking, course choice forking may be used whereby each runner has 20 seconds, before the start, to choose one of three maps, each with a different course. GPS-tracking is desirable and contactless punching is strongly recommended.

6.3. The map

See 1.3 Sprint.

6.4. Winning time, start interval and timing

The winning time for the initial qualification race shall be 8-10 minutes. The winning time for the knock-out rounds shall be 6-8 minutes. At the finish line there shall be photo- finish equipment to assist in judging the placings.

Appendix 4: IOF Principles for course planning

This section will be moved to an Events Manual in due course.

1. Introduction

1.1. Purpose

These principles aim to establish a common standard for the planning of foot orienteering courses in order to ensure fairness in competition and to safeguard the unique character of the sport of orienteering.

1.2. Application of these principles

Courses in all international foot orienteering events must be planned in accordance with these principles. They should also serve as general guidelines for the planning of other competitive orienteering events. The term 'orienteering' is used throughout to refer specifically to 'orienteering on foot'.

2. Basic principles

2.1. Definition of orienteering

Orienteering is a sport in which competitors visit a number of points marked on the ground, controls, in the shortest possible time aided only by map and compass. Orienteering on foot may be characterised as *running navigation*.

2.2. Aim of good course planning

Course planning aims to offer competitors courses correctly designed for their expected abilities. Results must reflect the competitors' technical and physical ability.

2.3. Course planner's golden rules

The course planner must keep the following principles in mind:

- safety
- the unique character of foot orienteering as running navigation
- the fairness of the competition
- competitor enjoyment
- the protection of wildlife and the environment
- the needs of the media and spectators

2.3.1. Unique character

Every sport has its own character. The unique character of orienteering is to find and follow the best route through unknown terrain against the clock. This demands orienteering skills: accurate map reading, route choice evaluation, compass handling, concentration under stress, quick decision making, running in natural terrain, etc.

2.3.2. Fairness

Fairness is a basic requirement in competitive sport. Unless the greatest care is taken at each step of course planning, luck can easily become significant in orienteering competitions. The course planner must consider all such factors to ensure that the contest is fair and that all competitors face the same conditions on every part of the course.

2.3.3. Competitor enjoyment

The popularity of orienteering can only be enhanced if competitors are satisfied with the courses they are given. Careful course planning is, therefore, necessary to ensure that courses are appropriate in terms of length, physical and technical difficulty, control siting, etc. In this respect, it is particularly important that each course is suitable for the competitors doing that course.

2.3.4. Wildlife and the environment

The environment is sensitive: wildlife may be disturbed and the ground, as well as the vegetation, may suffer from overuse. The environment also includes people living in the competition area, walls, fences, cultivated land, buildings, and other constructions, etc. It is usually possible to find ways to avoid interference with the most sensitive areas without damage. Experience and research have shown that even large events can be organised in sensitive areas without permanent damage if the correct precautions are taken and the courses are well planned. The course planner must ensure that there is access to the chosen terrain and that any sensitive areas in the terrain are discovered in advance.

2.3.5. Media and spectators

The need to give a good public image of the sport of orienteering should be a permanent concern for a course planner. The course planner should endeavour to offer spectators and the press the possibility to follow as closely as possible the progress of a competition without compromising sporting fairness.

3. The orienteering course

3.1. Terrain

The terrain must be chosen so that it can offer fair competition to all competitors. To safeguard the character of the sport, the terrain should be runnable and suitable for testing the orienteering skills of the competitors.

3.2. Definition of an orienteering course

An orienteering course is defined by the start, the controls, and the finish. Between these points, which are given precise locations in the terrain and correspondingly on the map, are the course legs over which the competitor must orienteer.

3.3. The start

The start area should be so situated and organised that:

- there is a warm-up area
- waiting competitors cannot see route choices made by those who have started
- the point from which orienteering on the first leg begins is marked in the terrain by a control flag with no marking device and on the map by a triangle.
- the competitors should be faced with orienteering problems right from the start.

3.4. The course legs

3.4.1. Good legs

The course legs are the most important elements of an orienteering course and will largely determine its quality.

Good legs offer competitors interesting map-reading problems and lead them through good terrain with possibilities for alternative individual routes. Within the same course, different types of legs should be offered, some of them based on intense map-reading and others containing more easily run route choices. There should also be variations concerning leg length and difficulty to force the competitor to use a range of orienteering techniques and running speeds. The course planner should also endeavour to give changes in general direction for consecutive legs as this forces the competitors to reorient themselves frequently.

A course should have a few very good legs joined by short links designed to enhance the legs rather than a larger number of even but lesser quality legs.

3.4.2. **Fairness of legs**

No leg should contain route choices giving any advantage or disadvantage which cannot be foreseen from the map by a competitor under competitive conditions.

Legs that encourage competitors to cross forbidden or dangerous areas must be avoided.

3.5. **The controls**

3.5.1. **Control sites**

Controls are placed at features in the terrain that are marked on the map. These must be visited by the competitors in the given order if the order is specified, but following their own route choices. This demands careful planning and checking to ensure fairness.

It is particularly important that the map portrays the ground accurately in the vicinity of the controls, and that the direction and distances from all possible angles of approach are correct.

Controls must not be sited on small features visible only from a short distance if there are no other supporting features on the map.

Controls must not be sited where the visibility of the control flag for runners coming from different directions cannot be evaluated from the map or control description.

3.5.2. **The function of the controls**

The main function of a control is to mark the beginning and end of an orienteering leg.

Sometimes controls with other specific purposes need to be used as, for example, to funnel runners around dangerous or out of bounds areas.

Controls can also serve as refreshment, press, and spectator points.

3.5.3. **The control flag**

The control equipment must be in accordance with the rules for IOF events. As far as possible, a control flag should be placed in such a manner that competitors first see it only when they have reached the described control feature. For fairness, the visibility of the control should be the same whether or not there is a competitor at the control site. On no account should the control flag be hidden: when competitors reach the control site, they should not have to search for the flag.

3.5.4. **Fairness of control sites**

It is necessary to choose control sites with great care and notably to avoid the 'acute angle' (dog-leg) effect where incoming competitors can be led into the control by outgoing runners.

3.5.5. **Proximity of controls**

Controls on different courses placed too close to one another can mislead runners who have navigated correctly to the control site. According to Rule 19.4, controls must not be sited within 30 metres of each other (25 metres for map scales 1:4,000 or 1:3,000). Only when the control features are distinctly different in the terrain as well as on the map, should controls be placed closer than 60 metres (30 metres for map scales 1:4,000 or 1:3,000). The distance between the controls is measured in a straight line.

3.5.6. **The control description**

The position of the control with respect to the feature shown on the map is defined by the control description.

The exact control feature on the ground, and the point marked on the map, must be indisputable. Controls which cannot be clearly and easily defined by the IOF control symbols are usually not suitable and should be avoided.

3.6. The finish

At least the last part of the route to the finish line should be a compulsory marked route.

3.7. The elements of map-reading

On a good orienteering course, competitors are forced to concentrate on navigation throughout the race. Sections requiring no map-reading or attention to navigation should be avoided unless they result from particularly good route choices.

3.8. Route choices

Alternative routes force competitors to use the map to assess the terrain and to draw conclusions from it. Route choices make competitors think independently and will split up the field, thus minimising 'following'.

3.9. The degree of difficulty

For any terrain and map, a course planner can plan courses with a wide range of difficulty. The degree of difficulty of the legs can be varied by making them follow line features more or less closely.

Competitors should be able to assess the degree of difficulty of the approach to a control from the information available on the map, and so choose the appropriate technique.

Attention should be paid to the competitors' expected skill, experience, and ability to read or understand the fine detail of the map. It is particularly important to get the level of difficulty right when planning courses for novices and children.

3.10. Competition types

Course planning must account for specific requirements of the type of competition considered. For instance, course planning for Sprint and Middle-distance orienteering must call on detailed map reading and a high degree of concentration throughout the entire course. Course planning for relay competitions should consider the need for spectators to be able to follow closely the progress of the competition. Course planning for relays should incorporate a good and sufficient forking/splitting system.

3.11. What the course planner should aim for;

3.11.1. Know the terrain

The course planner should be fully acquainted with the terrain before he or she plans to use any control or leg.

The planner should also be aware that on the day of the competition the conditions regarding map and terrain could be different from those which exist at the time the courses are planned.

3.11.2. Get the degree of difficulty right

It is very easy to make courses for novices and children too difficult. The course planner should be careful not to estimate the difficulty just on his or her own skill at navigating or on his or her walking speed when surveying the area.

3.11.3. Use fair control sites

The desire to make the best possible legs often leads a planner to use unsuitable control sites.

Competitors seldom notice any difference between a good and a superb leg, but they will immediately notice if a control leads to unpredictable loss of time due to a hidden control site or flag, ambiguity, a misleading control description, etc.

3.11.4. Place controls sufficiently far apart

Even though the controls have code numbers they should not be so close to each other as to mislead competitors who navigate correctly to the control site on their course.

3.11.5. Avoid over-complicating the route choices

The planner may see route choices that will never be taken and thereby may waste time by constructing intricate problems, whereas the competitors may take a 'next best' route, thus saving time on route planning.

3.11.6. **Courses that are not too physically demanding**

Courses should be set so that normally fit competitors can run over most of the course set for their level of ability.

The total climb of a course should normally not exceed 4% of the length of the shortest sensible route.

The physical difficulty of courses should progressively decrease as the age of the competitor increases in Masters classes. Special care must be taken that the courses for classes M70 and over and W65 and over are not too physically demanding.

4. The course planner

The person responsible for course planning must have an understanding and appreciation of the qualities of a good course gained from personal experience. He or she must also be familiar with the theory of course planning and appreciate the special requirements of different classes and different types of competition.

The course planner must be able to assess, on-site, the various factors which can affect the competition, such as the conditions of the terrain, the quality of the map, the presence of participants and spectators, etc.

The course planner is responsible for the courses and the running of the competition between the start and the finish line. The course planner's work must be checked by the controller. This is essential because of the numerous opportunities for error, which could have serious consequences.

Appendix 5a: Approved punching systems

[Competition Rule 20.1 states that 'Only IOF approved electronic punching systems may be used'.]

- The only fully approved control punching systems (January 2020) are:
 - the *Emit* Electronic Punching and Timing system
 - the *SPORTident* system
 - the *Emit* touch-free punching system (Version 2013 onwards)
 - the *SPORTident* Air+ system (range ~30cm)
 - the *SFR* system Classic (contact) version
 - the *Learnjoy* system
 - Details of the currently approved versions are shown on the IOF web pages along with any provisionally approved systems.
- The use of any other control punching system requires prior approval of the ONZ Technical Committee.
- With respect to the *Emit* system, the label attached to the competitor's electronic control card for back-up marking must be such that it will survive the conditions likely to be encountered during a competition (including immersion in water). It is the competitor's responsibility to ensure that the back-up card is marked so that it can be used if the electronic punch is missing.
- With respect to the *SPORTident* system, a backup needle punch must be present at each control. It is the competitor's responsibility to ensure that the electronic punch is in the e-card by not removing the e-card until the feedback signal has been received. If, and only if, no feedback signal is received, the competitor must use the backup punch.
- The control card must clearly show that all controls have been visited. A competitor with a control punch missing or unidentifiable must be disqualified unless it can be established with certainty that the punch missing or unidentifiable is not the competitor's fault. In this exceptional circumstance, other evidence may be used to prove that the competitor visited the control, such as evidence from control officials or cameras or read-out from the control unit. In all other circumstances, such evidence is not acceptable and the competitor must be disqualified. In the case of *SPORTident*, this rule means that:
 - If one unit is not working, a competitor must use the backup provided and will be disqualified if no punch is recorded.
 - If a competitor punches too fast and fails to receive the feedback signals, the card will not contain the punch and the competitor must be disqualified (even though the control unit may have recorded the competitor's card number as an error punch).
 - It is permitted for the organiser to read the backup from any control. A competitor can require the organiser to read the backup from a control, subject to a payment. If the control is found to contain a complete (non-error) punch; the competitor must be recorded as having punched that control correctly and the fee will be returned; otherwise, the fee shall be retained by the organiser.

Appendix 5b: ONZ Policy on Touch-free Punching

Background:

Control punching is how competitors prove their passage through specific controls on an orienteering course. This has evolved from physically clipping a card to electronic means.

In New Zealand, the system in most common usage is Sport-Ident. Original Sport-Ident technology requires competitors to insert their SI Card into a hole in the punching unit. In recent years a touch-free system (SI-Air) has been developed whereby competitors only need to pass their SI Card within a certain distance of the control for the punch to be recorded.

Touch-free punching is now a well-established form of control punching worldwide in orienteering.

SI-Air requires the use of a specific type of SI-Card (SIAC). It is expected that competitive orienteers will purchase their own SIAC card.

The main advantage of SI-Air is the quicker punching time and the fact that runners barely need to slow down when passing a control point. This advantage is particularly notable in sprint orienteering.

Clubs requiring advice or support on using SI-Air should contact the ONZ Technical Committee.

ONZ Policy:

1. Until SI-Air completely supersedes conventional SI punching, and when SI Air is used, a mixed punching model must be used where both normal SI cards and SIAC cards can be used.
2. SI-Air must be available at the ONZ National Foot Orienteering Championships and the National MTBO Championships, in all races.
3. SI-Air should be available at any A-grade event.
4. Where SI-Air is used at an event, it must be made available to all classes.
5. Event organisers should make SIAC cards available for hire at events where SI-Air is used.
6. Event organisers may wish to make the use of a SIAC card compulsory for any given class, however, if this approach is taken, there must be sufficient SIAC cards available for hire, at minimal cost, for competitors who do not own their own.

Appendix 6: IOF resolution on good environmental practice

At its meeting on 12/14 April 1996, the Council of the International Orienteering Federation, acknowledging the importance of maintaining the environmentally friendly nature of orienteering, and in accordance with the GAISF Resolution on the Environment of 26 October 1995, adopted the following principles:

- to continue to be aware of the need to preserve a healthy environment and to integrate this principle into the fundamental conduct of orienteering
- to ensure that the rules of the competition and best practice in the organisation of events are consistent with the principle of respect for the environment and the protection of flora and fauna
- to co-operate with landowners, government authorities and environmental organisations so that best practice may be defined
- to take particular care to observe local regulations for environmental protection, to maintain the litter-free nature of orienteering and to take proper measures to avoid pollution
- to include environmental good practice in the education and training of orienteers and officials
- to heighten the national Federations' awareness of worldwide environmental problems so that they may adopt, apply and popularise principles to safeguard orienteering's sensitive use of the countryside
- to recommend that the national Federations prepare environmental good practice guidelines specific to their own countries.

Appendix 7: The Leibnitz Convention

This section will be moved to an Events Manual in due course.

We, the Members of the IOF, attending the 20th IOF General Assembly in Leibnitz, Austria, on the 4 August 2000, hereby declare that "It is of decisive importance to raise the profile of the sport to further the spread of orienteering to more people and new areas, and to get orienteering into the Olympic Games. The main vehicles to achieve this are:

- to organise attractive and exciting orienteering events which are of high quality for competitors, officials, media, spectators, sponsors, and external partners
- to make IOF events attractive for TV and Internet

We shall aim to:

- increase the visibility of our sport by organising our events closer to where people are
- make our event centres more attractive by giving increased attention to the design and quality of installations
- improve the event centre atmosphere, and the excitement, by having both start and finish at the centre
- increase television and other media coverage by ensuring that our events provide more and better opportunities for producing thrilling sports programmes
- improve media service by better catering for the needs of media representatives (in terms of communication facilities, access to runners at start/finish and in the forest, continuous intermediate time information, food and beverages, etc.)
- pay more attention to promoting our sponsors and external partners in connection with our IOF events

We, the Members of the IOF, expect that these measures shall be considered by all future organisers of IOF events."