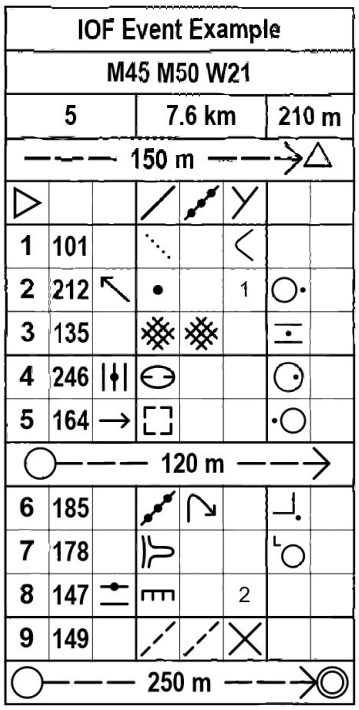
International Specification

for Control Descriptions



INTERNATIONAL ORIENTEERING FEDERATION

2018

INTERNATIONAL ORIENTEERING FEDERATION

International Orienteering Federation
Drottninggatan 47, 3 1/2 tr.
SE-65225 Karlstad
Sweden
http://www.orienteering.org

IOF RULES COMMISSION:
David Rosen (chairman), Barry McCrae, Felix Büchi

Editor:
Barry Elkington

Artwork based on the 1990 edition with additional drawings by Matthew Cook (2004, 2018).
Map sections by Jukka Liikari.
Layout: Pirjo Valjanen.

IOF Control Descriptions

Major Changes to the 2004 version:

1) Optional extra line showing the distance to the start triangle from the timed start.
2) New symbols introduced for Trench, Out of Bounds Area.
3) Changed symbols for Boulder, Boulder Cluster, Dot Knoll.
4) Bend moved from Column G to Column F.
5) Removal of symbol for Radio or TV control.
6) Names and descriptions brought into line with the ISOM 2017 terminology where appropriate.
7) Renumbering of symbols to cater for additions and deletions.
8) A number of minor changes throughout the text in order to provide further clarification as to the use of specific symbols.

Introduction

Orienteering is a worldwide sport. It is the aim of the IOF control description symbols to provide a standard means for orienteers from all countries to be able to understand control descriptions without ambiguity or the need for language translation. This booklet shows how the symbols can be used to do this.

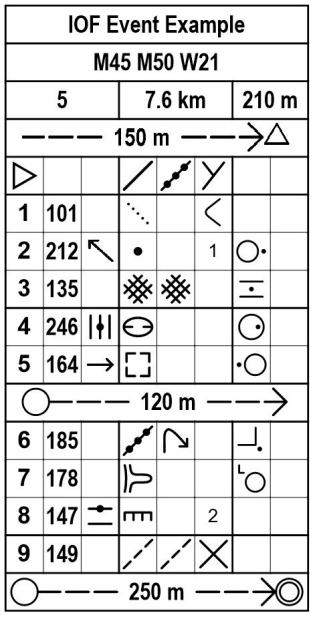
How IOF control descriptions work

The purpose of a control description is to give greater precision to the picture given by the map of the control feature, and to indicate the location of the control flag in relation to this feature, thereby helping the competitor to better visualise the control site.

However, a good control is found primarily by map reading. Descriptions and codes can assist in this task, but should be kept as short and simple as is necessary to locate the control.

Note: Control descriptions should not be used to correct map errors.

Sample control description sheet



IOF Event Example		
Classes M45 M50 W21		
Course number 5	Length 7.6 km	Height climb 210 m
Distance to Start Triangle 150 m		
Start		Road, wall junction
1	101	Narrow marsh bend
2	212	North western boulder, 1m high, east side
3	135	Between thickets
4	246	Middle depression, east part
5	164	Eastern ruin, west side
Follow taped route 120 m away from control		
6	185	Stone wall, ruined, south east corner (outside)
7	178	Spur, north west foot
8	147	Upper cliff, 2m high
9	149	Path crossing
Follow taped route 250 m from last control to finish		

Control description sheet format

The control description sheet for an orienteering course contains the following information:

- Heading.
- Start Location, including details of the distance to the start triangle from the point of the timed start if these are not within a few metres of each other.
- Description of individual controls, incorporating any special instructions such as the length and nature of any marked route during the course.
- Nature of route from the last control to the finish.

When printed, the description sheet boxes should be square, with a side dimension of between 5mm and 7mm.

When control descriptions are provided in a written form the overall presentation should be similar to that of the pictorial version, and the description of the individual controls written, as far as possible, in the same order as for the pictorial version.

Heading

Event title.

Classes (optional line).

Course code; Course length in kilometres to the nearest 0.1km, measured from the point at which the timing starts; Height climb in metres to the nearest 5m.

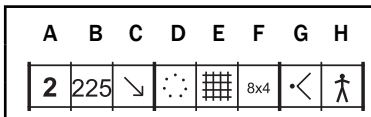
Start location

Shown in the first line of descriptions, using the description as if it were a control feature.

Optionally this may be preceded by a line showing the distance to the start triangle from the timed start if these are not within a few metres of each other.

Description of individual controls

These are normally in the order in which they are to be visited, and may incorporate special instructions such as the length and nature of any marked route during the course. A thicker horizontal line should be used after every third description and on either side of any special instruction.



A	Control number
B	Control code
C	Which of any similar feature
D	Control feature
E	Appearance
F	Dimensions / Combinations / Bend
G	Location of the control flag
H	Other information

Explanation of Columns

Each control is described in the following manner:

Column A - Control number

Numbering of controls is in the sequence they are to be visited, unless the description is for a Score competition in which case this column is usually either left blank or indicates the control value.

Column B - Control code

The control code should be a number greater than 30.

Column C - Which of any similar feature

This column may be used when there is more than one similar feature within the control circle; e.g. south eastern.

Column D - Control feature

The feature, as shown on the map, at the centre of the circle defining the control site; e.g. clearing; boulder. Most of these are cross referenced to the ISOM 2017 (International Specification for Orienteering Maps) symbol used to represent them.

Column E - Appearance

Further information on the nature of the feature if it is required; e.g. overgrown; ruined.

In certain circumstances also used for a second control feature where the description requires this i.e. crossing; junction; between.

Column F - Dimensions / Combinations / Bend

Dimensions of the feature should be given where the size of the control feature on the map is symbolic rather than to scale.

Also used for the two combination symbols (crossing; junction), and the Bend symbol.

Column G - Location of the control flag

Position of the control flag with respect to the feature; e.g. west corner (outside); south foot.

Column H - Other information

Other information that may be of importance to the competitor; e.g. first aid; refreshments.

Special Instructions

These lines go in the body of the descriptions and give specific information about the nature of the route that must be followed at that point; e.g. follow taped route for 50m away from the control; use mandatory crossing point.

Nature of route from the last control to the Finish

This line shows the distance from the last control to the finish, and the nature of any taped route at the finish.

Explanation of Symbols

Where an ISOM reference number is given this shows the relationship to the map symbol as defined in the ISOM 2017 specifications.

Column C - Which of any similar feature

These symbols need only be used when required to clarify on which of several similar features the control banner is placed i.e. the features are close enough on the map such that the intended feature is not obvious. They are not required if, for example, a second feature lies near the edge of the control circle.

Ref.	Symbol	Name	Description
0.1		Northern	The more northern of two similar features, or the northern-most of several similar features.
0.2		South Eastern	The more south eastern of two similar features, or the south-eastern-most of several similar features.
0.3		Upper	Where the control feature is directly above a similar feature.
0.4		Lower	Where the control feature is directly below a similar feature.
0.5		Middle	Where the control feature is the middle one of a number of similar features.

Column D – The Control Feature

Column D indicates the feature on which the control banner is placed.

If a second control feature is required (i.e. for crossing; junction; between) then this must go in column E. It is not permitted to place two symbols in Column D.

Land forms (ISOM section 3.1)

Ref.	Symbol	Name	Description	ISOM
1.1		Terrace	A level area on a slope.	101
1.2		Spur	A contour projection or “nose” rising from the surrounding ground.	101
1.3		Re-entrant	A contour indentation; a valley; the opposite of a spur.	101
1.4		Earth bank	An abrupt change in ground level which can clearly be distinguished from its surroundings.	104
1.5		Quarry	Gravel, sand or stone working in flat or inclined ground.	104

1.6		Earth wall	A narrow wall of earth projecting above the surrounding terrain; may be partially stone faced, usually man-made.	105 106
1.7		Erosion gully	An erosion gully or trench, normally dry.	107
1.8		Small erosion gully	A small erosion gully or trench, normally dry.	108
1.9		Hill	A high point. Shown on the map with contour lines.	101
1.10		Knoll	A small obvious mound.	109 110
1.11		Saddle	The low point between two higher points.	101
1.12		Depression	A depression or hollow from which the ground rises on all sides. Shown on the map with contour lines.	101
1.13		Small depression	A small, shallow, natural depression or hollow from which the ground rises on all sides.	111
1.14		Pit	A pit or hole with distinct steep-sides. Usually man made. Used with symbol 8.6 to indicate a rocky pit.	112 203
1.15		Broken ground	Clearly disturbed ground with features too small or too numerous to be mapped individually; including animal earths.	113 114
1.16		Ant hill (termite mound)	The mound made by ants or termites.	

Rock and boulders (ISOM section 3.2)

Ref.	Symbol	Name	Description	ISOM
2.1		Cliff, Crag	A cliff or rock face. May be passable or impassable.	201 202
2.2		Rock Pillar	A high, natural rock projection.	206
2.3		Cave	A hole in a rock face or hill side, often leading to underground workings.	203
2.4		Boulder	A prominent free-standing block of rock or stone.	204 205

2.5		Boulder field	An area covered by so many boulders that they cannot be individually mapped.	208 209
2.6		Boulder cluster	A small distinct group of boulders so closely clustered together that they cannot be individually mapped.	207
2.7		Stony ground	An area covered with many small stones or rocks.	210 211 212
2.8		Bare rock	A runnable area of rock with no earth or vegetation cover.	214
2.9		Narrow passage	A gap between two cliffs or rock faces that face each other.	201 202
2.10		Trench	A rocky or artificial trench.	215

Water and marsh (ISOM section 3.3)

Ref.	Symbol	Name	Description	ISOM
3.1		Lake	A large area of water, normally mapped as uncrossable.	301
3.2		Pond	A small area of water, may be shallow or seasonable.	302
3.3		Waterhole	A water-filled pit or depression.	303
3.4		River, Stream, Watercourse	A natural or artificial watercourse with either moving or standing water.	304 305
3.5		Minor water channel, Ditch	A natural or man made minor water channel which may contain water only intermittently.	306
3.6		Narrow marsh	A narrow marsh or trickle of water, too narrow to be shown on the map with the marsh symbol.	309
3.7		Marsh	A permanently wet area with marsh vegetation.	307 308
3.8		Firm ground in marsh	A non-marshy area within a marsh, or between two marshes.	307 308
3.9		Well	A shaft containing water or a captive spring, clearly visible on the ground. Often with some form of man-made surround.	311

3.10		Spring	The source of a watercourse with a distinct outflow.	312
3.11		Water tank, Water trough	A man made water container.	311

Vegetation (ISOM section 3.4)

Ref.	Symbol	Name	Description	ISOM
4.1		Open land	An area with no trees. Grassland, a meadow or a field. Also heath or moorland.	401 403
4.2		Semi-open land	An area of open land with scattered trees or bushes.	402 404
4.3		Forest corner	The corner or tip of a forested area projecting into open land.	
4.4		Clearing	A small area of land free from trees within the forest.	401 403
4.5		Thicket	A small area of forest where the tree cover or undergrowth is so dense that it is difficult to pass. May also be used for an individual bush (typically in Sprint competitions).	408 410 411
4.6		Linear thicket	A man-made line of trees or bushes that is difficult to cross. May also be used for a hedge (typically in Sprint competitions).	410 411
4.7		Vegetation boundary	A distinct boundary between different types of trees or vegetation.	416
4.8		Copse	A small area of trees in open ground.	405 406
4.9		Prominent tree	An unusual or prominent tree in either open land or forest; frequently information is also given as to its type.	417 418
4.10		Root stock, Tree stump	The upturned root of a fallen tree, with or without the trunk. The stump of a tree.	

Man-made features (ISOM section 3.5)

Ref.	Symbol	Name	Description	ISOM
5.1		Road	A metalled/asphalt surfaced or dirt road, suitable for vehicles in normal weather conditions.	502-503
5.2		Track / Path	A visible route made by people or animals. Tracks may be driven by rugged vehicles.	504-507
5.3		Ride	A clearly visible linear break in the forest which does not have a distinct path along it.	508
5.4		Bridge	A crossing point over a watercourse or other linear feature.	512
5.5		Power line	A power or telephone line, cableway or ski lift.	510 511
5.6		Power line pylon	A support for power or telephone line, cableway or ski lift.	510 511
5.7		Tunnel	A way under roads, railways, etc.	512
5.8		Stone wall	A stone boundary wall or stone faced bank. Used with symbol 8.11 to indicate a ruined stone wall.	513 515 514
5.9		Fence	A wire or wooden boundary. Used with symbol 8.11 to indicate a ruined fence.	516 518 517
5.10		Crossing point	A way through or over a wall, fence, or other linear feature, including a gate or stile.	519
5.11		Building	A standing brick, wood or stone structure.	521
5.12		Paved area	An area of hard standing used for parking or other purposes.	501
5.13		Ruin	The remains of a building that has fallen down.	523
5.14		Pipeline	A prominent line feature such as a pipeline (gas, water, oil, etc.) above ground level.	528 529
5.15		Tower	A tall metal, wooden or brick structure, usually built for forest observation.	524 525
5.16		Shooting platform	A structure attached to a tree where a marksman or observer can sit.	525

5.17		Boundary stone, Cairn	A man made stone or pile of stones. A cairn, memorial stone, boundary stone or trigonometric point.	526
5.18		Fodder rack	A construction for holding feed for animals.	527
5.19		Charcoal burning ground Platform	The clear remains of an area where charcoal was burned. A small level man made area on a slope. (A platform).	530 115
5.20		Monument or Statue	A monument, memorial or statue.	530 531
5.21		Canopy	An accessible area with a roof. A canopy or a covered passageway through a building.	522
5.22		Stairway	A stairway of at least two steps.	
5.23		Out of Bounds area	Out of Bounds area. Typically a flower bed or similar feature.	520

Special features

Ref.	Symbol	Name	Description	ISOM
6.1		Special item	If used, an explanation of its meaning must be supplied to competitors in the pre-race information.	
6.2		Special item	If used, an explanation of its meaning must be supplied to competitors in the pre-race information.	

Country Specific features

It is not generally recommended to introduce local symbols.

At events likely to attract an international entry, if local symbols are used then information about them must be supplied to competitors in the pre-race details.

Ref.	Symbol	Name	Description	ISOM
7.n		Name	Description of feature.	

Column E - Appearance

These symbols can be used when required to add clarity to the map in order to allow the competitor to better visualise the control site.

Ref.	Symbol	Name	Description
8.1		Low	Where the control feature is particularly low or flat but this is not indicated on the map; e.g. Hill, low.
8.2		Shallow	Where the control feature is particularly shallow but this is not indicated on the map; e.g. Re-entrant, shallow.
8.3		Deep	Where the control feature is particularly deep but this is not indicated on the map; e.g. Pit, deep.
8.4		Overgrown	Where the feature is partially covered in undergrowth or bushes that are not indicated on the map; e.g. Ruin, overgrown.
8.5		Open	Where the feature is in an area where the tree cover is less than the surroundings but this is not indicated on the map; e.g. Marsh, open.
8.6		Rocky, Stony	Where the feature is in an area of rocky or stony ground not indicated on the map; e.g. Pit, rocky.
8.7		Marshy	Where the feature is in an area of marshy ground not indicated on the map; e.g. Re-entrant, marshy.
8.8		Sandy	Where the feature is in an area of sandy ground not indicated on the map; e.g. Spur, sandy.
8.9		Needle leaved	Where the tree or trees associated with the control feature have needle shaped leaves; e.g. Distinctive tree, needle leaved.
8.10		Broad leaved	Where the tree or trees associated with the control feature are broad-leaved; e.g. Copse, broad leaved.
8.11		Ruined	Where the feature has fallen to ground level; e.g. Fence, ruined.

Column F – Dimensions / Combinations / Bend

Dimensions

Note: The dimension(s) of the feature(s) must be given when they add add clarity to the map in order to allow the competitor to better visualise the control site. e.g. from a visibility point of view it is important to know if a boulder is 1m high or 3m high.

Ref.	Symbol	Name	Description
9.1	2.5	Height or Depth	Height or Depth of the feature in metres.
9.2	8 x 4	Size	Horizontal dimensions of the feature in metres
9.3	0.5 / 3	Height on slope	Height of the feature on a slope in metres.
9.4	2 3	Heights of two features	Heights of two features with the control between them.

Combinations

Ref.	Symbol	Name	Description
10.1		Crossing	The point at which two linear features cross.
10.2		Junction	The point at which two linear features meet; or where a linear feature meets the side of an areal feature.

When either of these symbols are used in Column F the two features which either cross or meet must be shown in columns D and E. For example:

D	E	F		
			Path crossing	The point at which two similar linear features cross.
			Ride / Stream crossing	The point at which two different linear features cross.
			Road junction	The point at which two similar linear features meet.
			Stream / Narrow marsh junction	The point at which two different linear features meet.
			Fence / Buidling junction	The point at which a linear feature meets the side of an areal feature.

Bend

Ref.	Symbol	Name	Description
11.1		Bend	Used where a linear feature makes a smooth change of direction; e.g. Path bend; River bend.

Column G - Location of the control flag

Note: No symbol is required to describe the location of the control flag in relation to the feature if the control flag is positioned at, or as near as possible to, the centre of the feature (or the centre of the foot in the case of the cliff).

Ref.	Symbol	Name	Description
12.1		North east Side	Used where the feature extends above the surface of the ground; e.g. Boulder, north east side; Ruin, west side. A control on the side of a feature will not usually be visible from the opposite side.
12.2		South east Edge	Used where: a) The feature extends down from the surface of the surrounding ground and the control is situated on the edge at ground level; e.g. Depression, south east edge. b) The feature extends over a significant area and the control is situated on the border of that area; e.g. Marsh, west edge; Clearing, north west edge.
12.3		West Part	Used where the feature extends over a significant area and the control is located neither at the centre, nor on any of the edges; e.g. Marsh, west part; Depression, south east part.
12.4		East Corner (inside)	Used where: a) The edge of a feature turns through an angle of 45-135 degrees; e.g. Open land, east corner (inside); Ruin, north west corner (outside). b) A linear feature turns a corner; e.g. Fence, south corner (inside); Stone wall, south west corner (outside). Note: The side of a building may be treated as a linear feature and hence “building, east corner (inside)” does not mean “inside the building”. The orientation of the symbol indicates the direction in which the corner points.
12.5		South Corner (outside)	
12.6		South west Tip	Used where the edge of a feature turns through an angle of less than 45 degrees; e.g. Marsh, south west tip.

12.7		North west End	The point at which a linear feature ends or starts; e.g. Ride, north west end; Stone wall, south end.
12.8		Upper Part	Where the feature extends over two or more contours and the control is located near the top; e.g. Erosion Gully, upper part.
12.9		Lower Part	Where the feature extends over two or more contours and the control is located near the bottom; e.g. Re-entrant, lower part.
12.10		Top	Where the control is located at the highest point of the feature and this is not the default location; e.g. Cliff, top; Stairway, top.
12.11		Foot (no direction)	Where the control is located at the lower junction of the slope of the feature and the surface of the surrounding area and this is not the default location; e.g. Earth bank, foot; Stairway, foot.
12.12		North east Foot	As above, but where the feature is large enough for the control to be placed in more than one location around it; e.g. Hill, north east foot.
12.13		Beneath	Where the control is located underneath the feature; e.g. Pipeline, beneath.
12.14		Between	Where the control is located between two features; e.g. Between thickets; Between boulder and knoll.

When symbol 12.14 ‘Between’ is used in Column G, the two features which the control is between must be shown separately in columns D and E. For example:

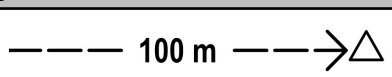
D	E	F	G		
				Between thickets	The point between two similar features.
				Between boulder and knoll	The point between two different features.

Column H - Other information

Ref.	Symbol	Name	Description
13.1		First aid post	Control site where First aid is available.
13.2		Refreshment point	Control site where Refreshments are available.
13.3		Manned control	Manned control site.

Distance from Timed Start to the Start Triangle

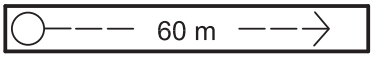
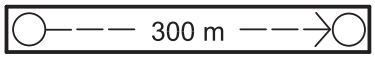
This is an optional line showing the distance to the start triangle from the point of the timed start. This will typically be required for an arena start.

Ref.	**Symbol**	Name/Description
14.1		Distance to the start triangle from the point of the timed start.

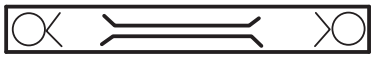
Special Instructions

Special instructions may be given to the competitors within the body of the description sheet. These should be used to re-emphasise what is shown on the map.

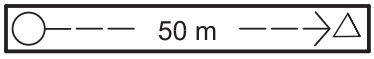
If a marked route is to be followed away from a particular control, or between controls:

Ref.	**Symbol**	Name/Description
15.1		Follow Taped Route, 60m away from control.
15.2		Follow Taped Route, 300m between controls.

If there are mandatory crossing points or routes between two controls:

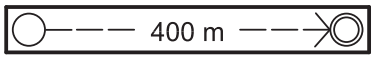
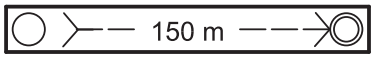
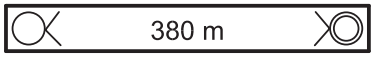
Ref.	**Symbol**	Name/Description
15.3		Mandatory crossing point or points.
15.4		Mandatory passage through out of bounds area.

At a map exchange, or if a marked route is to be followed from a control to a map exchange, it should follow the last control description of the first part of the course as follows:

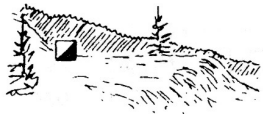
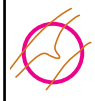
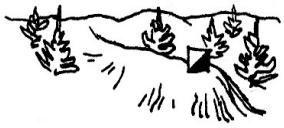
Ref.	**Symbol**	Name/Description
15.5		Follow Taped Route, 50m to Map Exchange.

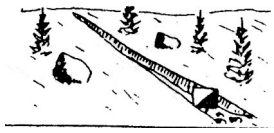
Nature of route from the last control to the Finish

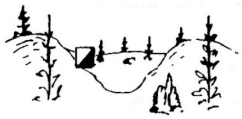
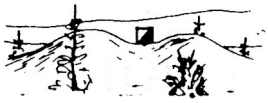
Following the final description, the nature of the route from the last control to the finish is indicated by one of the following:

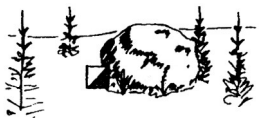
Ref.	**Symbol**	Name/Description
16.1		400m from last control to Finish. Follow taped route.
16.2		150m from last control to Finish. Navigate to finish funnel, then follow tapes.
16.3		380m from last control to Finish. Navigate to finish. No tapes.

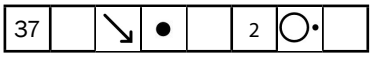
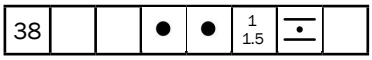
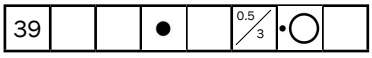
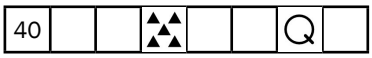
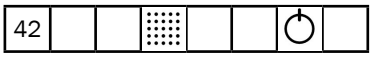
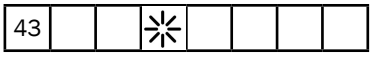
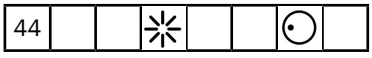
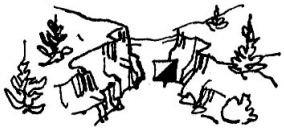
Examples

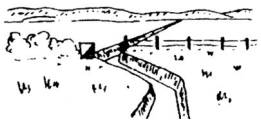
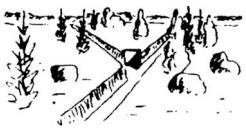
Map	Terrain	Control Descriptions	Text Description
		1	Terrace
		2	Terrace, west part
		3	Spur
		4	Spur, upper part
		5	Spur
		6	Re-entrant
		7	Re-entrant, upper part
		8	Re-entrant, shallow

Map	Terrain	Control Descriptions	Text Description
		9	Eastern re-entrant
		10	Earth bank, foot
		11 5x5	Quarry, 5m x 5m
		12	Quarry, east edge
		13	Quarry, east part
		14	Earth wall, east end
		15	Gully, lower part
		16	Small gully, north-east end
		17	Hill

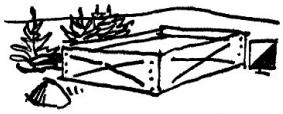
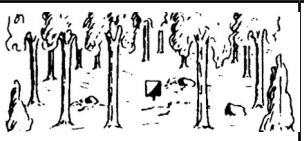
Map	Terrain	Control Descriptions	Text Description
		18	Hill, north-west part
		19	West Hill, East side
		20	Between hill and knoll
		21 1	Knoll, 1m
		22 1	Knoll, 1m, east foot
		23	Saddle
		24	Depression
		25	Depression, east part
		26	Middle small depression, east edge
		27	Pit, west edge

Map	Terrain	Control Descriptions	Text Description
		28	Ant hill
		29 2	Cliff, 2m
		30	Cliff, north foot
		31 2	Upper cliff, 2m
		32 3	Cliff, 3m, top
		33	Between cliffs
		34	Rock pillar, south foot
		35	Cave
		36 1.5	Boulder, 1.5m, west side

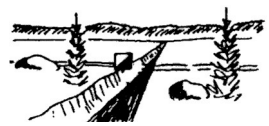
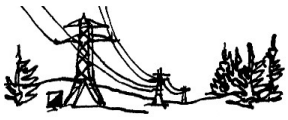
Map	Terrain	Control Descriptions	Text Description
			South-eastern boulder, 2m, east side
			Between boulders 1m and 1.5m
			Boulder, 0.5m/3m, west side
			Boulder field, south-east edge
			Boulder cluster, south side
			Stony ground, north edge
			Bare rock
			Bare rock, west part
			Narrow passage

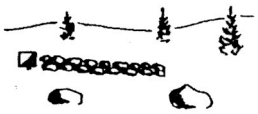
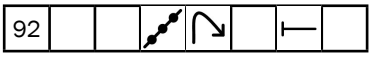
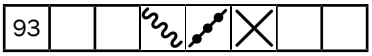
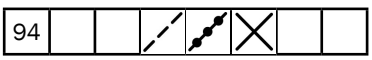
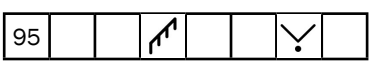
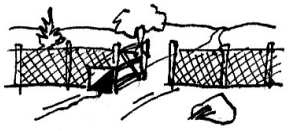
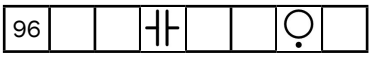
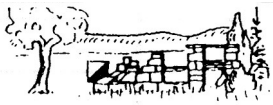
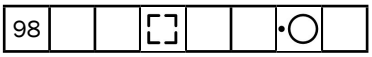
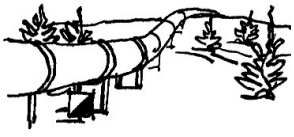
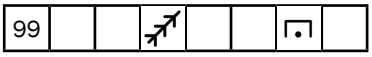
Map	Terrain	Control Descriptions	Text Description
		46	Lake, east tip
		47	Pond, east edge
		48	Waterhole, east edge
		49	Stream bend
		50	Southern stream bend
		51	Stream junction
		52	Ditch, north-east end
		53	Ditch bend
		54	Northern ditch bend
		55	Ditch junction

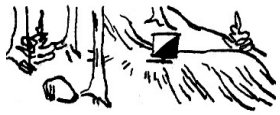
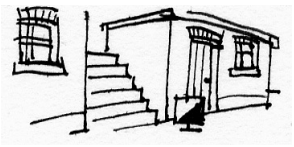
Map	Terrain	Control Descriptions	Text Description
		56	Ditch crossing
		57	Narrow marsh, south-east end
		58	Marsh, north-west part
		59	Marsh, south tip
		60	Marsh, east edge
		61 8x8	Marsh, 8m x 8m
		62	Between marshes
		63	Firm ground in marsh, north-west tip
		64	Well, east side

Map	Terrain	Control Descriptions	Text Description
		65	Spring, west edge
		66	Water tank, east side
		67	Open land, east corner (inside)
		68	Open land, sandy west edge
		69	Semi-open land, east edge
		70	Forest corner, south tip
		71	Clearing
		72	Thicket, east side
		73	Linear thicket, east corner (outside)

Map	Terrain	Control Descriptions	Text Description
		74	Vegetation boundary, east corner outside)
		75	Copse, west tip
		76	Distinctive tree, broad leaved
		77	Root stock, east side
		78	Road, south-east end
		79	Road junction
		80	Road/path crossing
		81	Path bend
		82	Western path bend

Map	Terrain	Control Descriptions	Text Description
		83	Path junction
		84	Path crossing
		85	Path/stream crossing
		86	Path/ditch crossing
		87	Ride bend
		88	Bridge, north end
		89	Power line, pylon
		90	Tunnel, south-west end
		91	Wall, east corner (inside)

Map	Terrain	Control Descriptions	Text Description
			Wall, ruined, west end
			Stream/wall crossing
			Path/wall crossing
			Fence, south corner (outside)
			Crossing point, south side
			Building, east side
			Ruin, west side
			Pipeline, beneath
			Tower, south side

Map	Terrain	Control Descriptions	Text Description
		101	Shooting platform
		102	Cairn, east side
		103	Fodder rock, west side
		104	Charcoal burning ground
		105	Statue
		106	Canopy, south-west end
		107	Stairway, foot

Add two drawings for Trench and Flower Bed (Out of Bounds)

Specifications for Trail Orienteering

There are two variations in the use of the columns when using IOF Control Descriptions for Trail Orienteering.

Column B - Number of control flags

This column is used to denote the number of control flags visible at this control; e.g. A-C equals three control flags to choose from; A-D equals four control flags to choose from.

Column H - Direction of observation

This column is used to denote the direction in which to view a feature. For example an arrow pointing north indicates that the competitor should be on a path/track to the south of the control circle.

Example

A	B	C	D	E	F	G	H
1	A-D						

Notes

INTERNATIONAL ORIENTEERING FEDERATION

INTERNATIONAL ORIENTEERING FEDERATION
Drottninggatan 47, 3 1/2 tr.
SE-65225 Karlstad
Sweden

Tel: +46 xxxxxxxxxx
Fax: +46 xxxxxxxxxx
e-mail: iof@orienteering.org
www.orienteering.org