

MTB Orienteering Map

Common errors and solutions

At high speeds and maximum intensity, there must be no issues around legibility and clarity for the athlete. With a few seconds to make a decision under pressure, objects and areas forbidden to cross or pass must be clear and obvious. In addition, too much map detail can detract from the important details; mainly, the track network and contours.

A greatly simplified map will be easier for the athlete to read and understand at high speed in a competition.

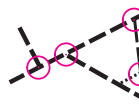
Specific MTBO symbols

Ensure all symbols are MTBO specific, and double check the dimensions are correct for the scale used. Common incorrect symbol inclusions are: undergrowth symbols for FootO maps, failure to change all FootO track symbols, form lines (on non-sprint maps), indistinct marshes, small erosion gullies, wet pits, pits, depressions and knolls.

Distinct and indistinct junctions

Join all distinct junctions using \boxplus or \boxminus buttons (corner and dash control). Indistinct junctions shall be drawn with a clear gap of at least 1mm between the main track and the incoming path.

Problem



Incorrectly joined junctions.

Example 1



Distinct junctions

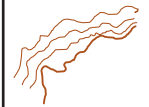
Example 2



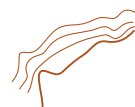
Indistinct and distinct junctions.

Contours

LiDAR data is typically used for maps due to its accuracy. Maps using LiDAR data will often have detailed contours with excessive curves. For MTBO maps, it is important to show the general shape of the land, rather than fine contour details. It is worth spending time smoothing the contours, to create an aesthetically pleasing map with clearly defined contours



'Nervous' LiDAR contours

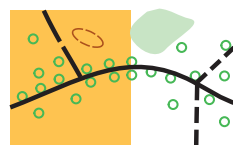


Smooth contours

Simplify details

Remove all unnecessary detail from the map, including excessive detail away from the track network. Distinct trees (418, 419) are recommended only be shown if they are found in open areas of grassland. Parkland with many single and distinct trees can be drawn using area symbols for woodland for clarity. Symbols to remove: indistinct marshes, form lines, distinct and single trees in forested areas, small depressions and pits etc

Problem

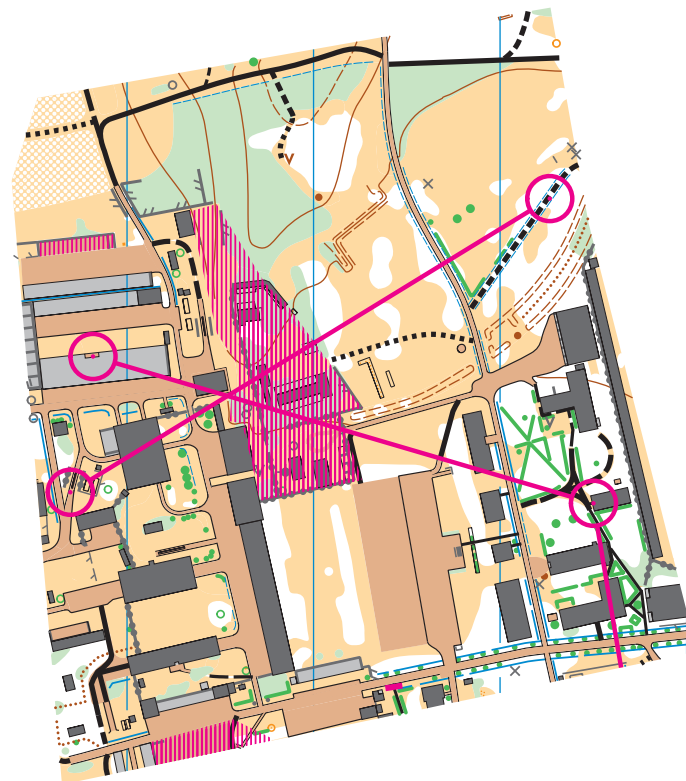


Example solution



Out Of Bounds and Forbidden Areas

In most cases, out of bounds and forbidden areas are put on the maps due to safety, hazardous objects, landowner permissions, or private property. In some cases, a planner may set a course with numerous traps: dead ends, walls, buildings etc. In these cases, in order to create a fair competition for all athletes, the planner may decide to create forbidden areas to draw competitor attention to these traps. A good example of this was from the World Cup in Hungary in 2011.



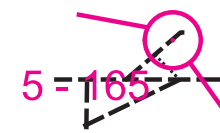
Map extract reproduced with permission from the World Cup 2011 organisers.

Position of course setting symbols

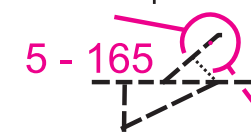
During course setting, check all control numbers and codes are not overlapping important map information or route choices.

Remember the (-) separating the control number and code, can be confused with symbol 843, obstacle, if placed over track symbols. Cut control circles and lines where they cover junctions and track/path symbols.

Problem



Example solution



Forbidden to cross features

Features such as fences and walls that are forbidden to cross must be drawn clearly so these can be seen by athletes at high speeds.

In sprint races, the use of excess purple to highlight these 'traps' is not recommended due to the density of controls and overprint symbols.

Solutions can include: moving tracks away from the uncrossable feature, adding a white borderline around the uncrossable feature, or overprinting symbol 711, forbidden route, to the uncrossable symbol.

Problem



Tracks close to fence, taglines appear to touch track, appearance of permitted travel.

Example solution 1



Tracks moved away from fence.

Example solution 2



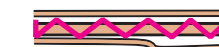
Tracks moved away from fence. Fence overprinted with forbidden route symbol to provide greater legibility in ambiguous areas.

Problem



Forbidden route drawn irregularly, gives appearance of crossing points. Obscures adjacent permitted route

Example solution 1



Forbidden route drawn regularly, and permitted route moved away for clarity

Example solution 2



Permitted route drawn using symbol 831.

Problem



Solid straight line as uncrossable boundary, can appear as symbol 843, causing confusion

Example solution 1



Example solution 2

