## Navigation Instruction Interpretation

This event is based on the navigation style and terminology defined by Motorsport Australia (The National Touring Standing Regulations - Navigational Assembly).

The primary form of navigation for these events is use the supplied maps and the event instructions to derive the shortest mapped route that complies with the instructions, and doesn't use any roads that are not on the map.

The second form of instructions is called a route chart, where there are instructions at cumulative distances for each junction that you need to turn, or directions at crossroads and roundabouts. A set of route chart instructions will be available at the start of the drive in a sealed envelope.

For mapped navigation the start of the event is almost always defined by a map grid reference (GR). On the event map is a $10 \mathrm{~mm} \times 10 \mathrm{~mm}$ grid. Each grid line marks 1 km of distance. A grid reference defines the bottom left corner of the grid square, with the horizontal (how far east, written along the top and bottom) number before the vertical. GS 6866082 defines the grid square that the Burns Club is in. It is common for the leading, smaller digits are dropped, unless large distances are involved, usually across several maps. So you may see instructions like visit a mapped TJ in GS 00 09, which would require you to travel west along TALLAGANDRA LANE.

To give a grid reference for a location, it needs to be more accurate than just the nearest kilometre, so for the Burns Club, it would be GR 869828 . This is read as 9 mm or $90 \%$ across (further east), and 8 mm up from the bottom left corner of GS 8682 .

To visit a T-junction (TJ), you need to approach the junction on the terminating road. If you are on the through road, it is called a road junction (RJ), but a road junction can also be a crossroad, or other junctions of more than one road.

Borrowing from rallying terminology, the start and finish of sections are major controls, which are usually numbered in order. (M1 to M4 in this event.) The instructions, in combination with the map, define how you are meant to derive the route. The most commonly used format is shortest mapped route VIA to VIA, and then shortest mapped route overall. VIA is an abbreviation of via point, and is usually capitalised. Think of a VIA as a way point that you must visit.

In general there are some key rules to follow:
You can only use each road section in one direction, often written as you cannot oppose rally traffic.
The VIA point is out of bounds until you have completed all of the proceeding instructions.
The rule about not being able to visit a VIA point before using it as a VIA, will not change the shortest mapped route in this event. It usually requires you to detour around the point.

Not opposing rally traffic means that you cannot use one-way roads, but you cannot ignore one-way roads. If instructed to pass a map feature on the nearest road, e.g. an RFS, if the nearest road is a one-way road, you'll need to find another RFS on the map to pass. The event instructions may give you permission to oppose rally traffic in certain circumstances, such as if the start and finish are at the same location.

If a division is specified as shortest mapped route VIA to VIA, then from the M control to VIA 1 you'll need to find the shortest mapped route that complies with all the instructions written between the control location instruction and the VIA 1 instruction. These instructions might be:

Drive through three TJ
Cross a mapped bridge
Unless there is an order specified, such as the use of the words 'then' or 'before', the instructions can be completed in any order. So the shortest route might be to visit one TJ , then cross a bridge, then visit a second TJ , and then drive through the second TJ again having done a loop before arriving at the VIA point. From the VIA point you would then follow the instructions to the next VIA point if there is one, or the next Major control.

Depending on the choices made by the Event Director when setting the event, determining the shortest mapped route might involve finding something that is hard to spot on the map, or it could involve determining which of several routes that address the instructions is the shortest. I prefer the latter case, rather than asking you to pass a spot elevation of 840 that is somewhere in the vicinity of GOOGONG RESERVOIR.

Not applicable for this event, and used rarely is shortest mapped route overall. In this case there will usually be several VIA points, without any other instructions, and you'll need to work out the order to visit them that is the shortest route between the major controls. The VIA points in shortest mapped route overall are equivalent to the intermediate instructions in shortest mapped route VIA to VIA.

In this event, there will be more major controls than is normal, (and fewer VIA points) to allow crews to reset their trip meters, as many of you will not have particularly accurate trip meters. Rally trip meters will allow you to run in reverse, if you go the wrong way, or reset to a non-zero distance. There are some mobile phone rally trip meter apps that work well.

Instructions that feature a bold and underlined letter, in the case of this event, monument, are identifying the bold and underlined letter as the precise point to look for. In this event's instructions, MONARO is written in uppercase as that is how it is written on the map.

Fron the start to VIA 1 I have asked you to follow a short herringbone chart.
A herringbone, or stick chart, will represent the route you are meant to follow as the main path through the diagram. In this, common case, the route starts at the black dot and finishes at the arrow. It is as if the route you are meant to take is a piece of string that has been pulled straight to remove all of the bends and turns at intersections. The branches off the main path are all the roads that you are not to take.


In the case of the first instruction after the start, it is telling you not to take a road on your right. This could either be not turning right at a road junction (driving along the top of the $T$ ), or coming up from the base of a T junction, you then turn left, leaving a road on your right.

The second point on the herringbone has two roads on your right that you do not take: this is turning left at a crossroad or some other four-way junction. The next two are the same concept as the first example, with the result depending on whether you are on the through road (Road Junction) or the terminating one (T-Junction).

The fifth instruction is to drive straight through a crossroad. The final example is to leave one road on the left and leave two roads on the right, which could be taking the second exit on a five exit roundabout.

The following is a longer example:


The freehand red line shows the path this route makes.


Herringbones can often be a complex way of describing a simple route. To make them more difficult the start of the herringbone is often ambiguous, but isn't for this event. You should only try to trace the herringbone on the official map, as other maps are likely to include or exclude roads not on the official map, or a mapped crossroad might be slightly offset in reality, appearing on another map as two road junctions.

In Classic Rally Club events the questions are there primarily to confirm that you are on the correct route. Pure observation runs with a route chart may use more cryptic questions to increase the chance of having a unique winner. In this event it is a mix of both. The questions are identified by precise distances, and it may be worthwhile comparing your trip meter calibration at VIA 2 and/or the early questions to see if you have any significant variation from the distances recorded by the Monit G-200 rally trip meter I used to measure to route with.

