Annex S – Technology Specifications

Tracking Specifications

This section provides the specification for inclusion in the Stage Rally Safety Requirements in respect of the introduction of mandatory tracking on all UK Multi-Venue Stage Rallies from 1st January 2024.

Tracking will not replace the existing safety response systems, as regulated by Motorsport UK under Ch. 13 Art. 2 App. 4.13b and Ch. 13 Art. 2 App. 4.27, which will remain as a predicted number of marshals throughout the route together with an effective radio communication network managed through a nominated controller working alongside the Clerk of Course (COC) and Motorsport UK Steward in Rally Control. This system is integral to safety management and includes Mandatory Radio posts which positively monitors and record the passage of competing cars through stages.

The following minimum requirement for a Tracking system will always complement but not replace these systems.

In-Vehicle Tracking System must:

- Be fitted in advance of and checked at pre-event scrutineering (where possible) using a universal connector and/or mounting bracket
- Be securely mounted, where both the Driver and Co-Driver can reach the controls/buttons to report status
- Have the facility as a minimum to enable crews to report OK, SOS and 'Hazard' via the system
- Have in-built system to allow the controller in Rally Control to advise the COC that a car has come to a controlled stop or was subject to rapid deceleration
- Be fitted to defined Zero cars, the Safety Delegate and all competing cars. Consideration should be given to fitting trackers to other official cars, such as Road Closing and Opening Cars on Closed Road Rallies and additional set-up vehicles which might be traversing a stage.

Rally Control Monitoring System must:

- Be located in Rally Control where the COC, Motorsport UK Steward, Radio controllers and the person monitoring the Tracking System as a minimum will be present. This will ideally be one large display unit to consist of a digital map with icons showing each vehicle's tracked position.

Rally Control Monitoring System must include:

- An icon for every tracked vehicle which must contain the competitor number (or the identity for all other Safety or Official tracked Vehicles). Icon colours must change to reflect status, see below
- A map showing each stage which should have clearly marked lines to show stage route with start / finish icons, including a radio symbol to show the position of mandatory radio points throughout a stage route. Road sections must also be marked in a different colour to differentiate stage and road section liaison routes
- A changed icon colour for any vehicle stopping in stage for more than 5 seconds.
- A changed icon colour to reflect a system report by the crew – e.g., RED for SOS, ORANGE for OK. A separate on-screen alert might be useful but not essential
- An automatic refresh update on the digital map which must be no longer than 10 seconds from previous refresh if the system is not instant

- One person in Rally Control dedicated solely to monitoring the Tracking System. This person should be from the Tracking supplier however if a member of the organising team is fully conversant with the system that would be acceptable. As well as SOS/OK warnings, this person should pay particular attention to potential stage blockages and communicate with the COC.

Recommended vehicle icon colours

	Status	**Colour**
Stage / Liaison	Moving vehicle	GREEN
Stage / Liaison	Stopped, no button pressed	BLUE
Stage / Liaison	OK	ORANGE
Stage / Liaison	SOS	RED

Additional recommended / desirable functions:

- Facility for Rally Control to send a 'red flag' to a vehicle or group of vehicles
- Facility for a vehicle to acknowledge 'red flag' notification
- Facility to record the tracking map / activations to enable review / replay for investigations and training
- An in-car Danger warning for vehicle stopped ahead
- Facility for monitoring and reporting speeding on road sections and reconnaissance (see below)
- An in-car warning for over-speed on road sections and reconnaissance
- An overtake request facility

This list is subject to ongoing review with the potential for some functions to be mandated in future.

Tracking supplier requirements:

- The tracking supplier should be on Motorsport UK's 'Approved Supplier' list. Clubs proposing to use a supplier not on the list should contact the Head of Rallying as soon as possible
- The tracking supplier, in liaison with the event organising team, is to provide a report to the COC on the expected 'coverage available throughout stages' either by presentation of a map or by a paper report in advance of the event
- The tracking supplier, in liaison with the event organising team, must also provide advice to the COC in consideration of placing additional event management or mandatory radios to cover areas with potentially poor tracking coverage within a stage. Before the event starts, the COC must provide a copy of this report together with a note of his actions to both the nominated Motorsport UK Steward and Safety Delegate
- The coverage throughout a stage will be verified during the passage of the first vehicles in the safety convoy as network coverage on the day will vary due to weather conditions, number of users, etc.
- Ensure that the COC is advised as soon as practicable during the running of a stage if there are any potential 'dead' areas with little or no tracking coverage, to allow the COC to advise the relevant Stage Commander and nearby Mandatory Radio Points.

Annex T provides the most up to date list of Tracking Providers

Virtual Chicanes (VC) Specification

The use of Virtual Chicanes remains under Motorsport UK trial. Any potential supplier is requested to contact Motorsport UK prior to contacting permitted events.

Similarly, Event Organisers are requested to contact Motorsport UK prior to using Virtual Chicanes on their events.

Both may contact rally@motorsportuk.org in the first instance.

A full specification for Virtual Chicanes will be determined in conjunction with Rallies Committee during 2027 and will be published here in Edition 10 of the Stage Rally Safety Requirements.