ANNEX I – STAGE RALLY SAFETY CAR GUIDELINES



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Overview

Motorsport UK is the governing body for motorsport in the UK and is the National Sporting Authority (ASN) for four-wheeled motor sport affiliated to the Federation International de l'Automobile (FIA).

This document has been developed from the guidelines originally written in 2004 and has been updated to reflect the work undertaken as part of the RallyFuture project following the review of rally safety led by the Scottish Government Review Group.

It is absolutely vital for the future of our sport that we effectively manage the safety risks to everyone – competitor, volunteer, media or spectator. **Safety must be at the heart of every rally event**. The Stage Rally Safety Requirements provide the information necessary to ensure events are organised in accordance with current Motorsport UK National Competition Rules.

The NCR state that the number of cars sent through any stage prior to the Competition shall be in accordance with the Stage Rally Safety Requirements. The Rules also confirm that the crew of each safety car shall have specific duties based on these Stage Rally Safety Requirements.

Safety Car Guidelines

All Safety Cars whether Spectator Safety, Intermediate Safety, 000, 00 or Sweeper Cars will be referred to as Safety Cars. The only car referred to as the Zero car will be the one with a single 0 on the side. Other vehicles will be referred to as Official Cars. The purpose of this document is to provide guidelines for Safety Cars and the Zero car that can be adopted as best practice at all rallies run under Motorsport UK National Competition Rules at either International or National status as well as under FIA WRC or Regional Rally Regulations. It is recognised that Organisers have their own way of managing their events and this document is intended as guidance to assist them.

Safety Cars will be identified by carrying markings as specified in this document, no other vehicle will carry such markings. All other cars which need to traverse the stage will be referred to as Official Cars and should NOT have the word safety on their identification plates.

The primary function of the safety cars on an event is to check the course for route and safety information providing this information to Rally Control. It is advisable for all safety cars to be able to film each stage and for these films to be given to the event for future use.

General Information – all Safety Cars

As each event attended is different in the way the stages and documentation are presented. Always ensure you have received all your paperwork in sufficient time to prepare fully. As part of your preparation, you should consider the following:

Clip Board	Pens/Pencils (including permanent marker)
Staple Gun and Staples	Video camera, charger and fixing mount (ensure it does not obstruct the airbag)
Maps	Event Paperwork
Personal preparation including food and drink	Suitable clothing
Motorsport UK marshal's tabard & whistle	Motorsport UK Safety Car Official Licence
Personal First Aid Kit	Mobile phone and charger
PA/Sirens/Lights	Radio – fitted and working

Obviously, there are many more items to prepare, refer to your notes from the Safety Car workshop for further information.

When installing dash cams, tablets, trip meters, mobile phones etc, please ensure they are not covering the airbag or obstructing the vision of the driver.

The role of the safety car is for safety purposes, they are not intended to undertake any towing and specifically, no multiple towing should be undertaken by anyone on the event.

Golden Rules

Without exception, the following Golden Rules should be applied to every Safety Car/Crew including the Zero car;

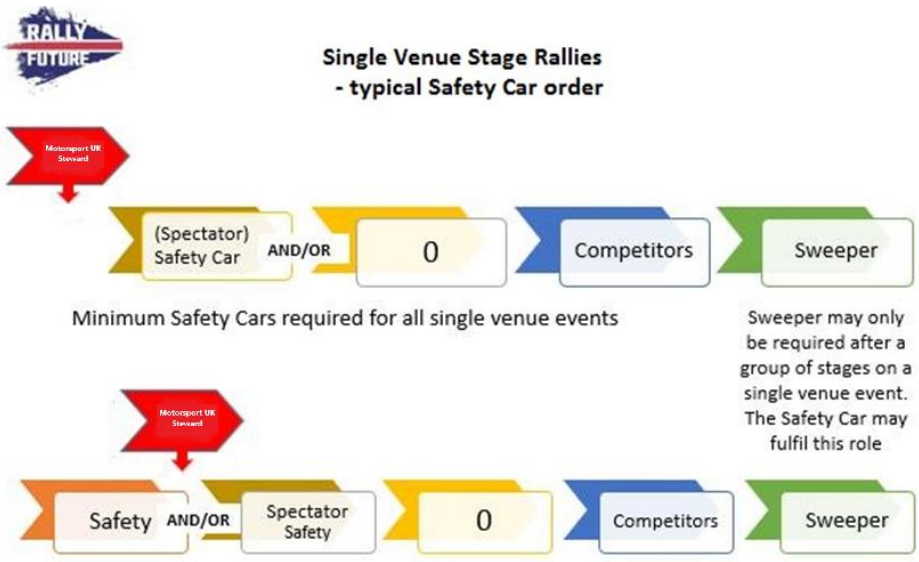
1. All Safety Cars should be clearly identified and all Safety Car crew members should also be clearly identifiable when they are out of their vehicles.
2. Pre-event the crew of each of the Safety Cars should familiarise themselves with the safety paperwork and the road book
3. Where realistic all official Safety Cars & Sweeper Cars should complete the full route and wherever possible maintain a completed timecard. If this is not practical for all cars then at least two Safety Cars MUST fulfil this requirement.
4. Each crew should have a means of communication with the other Safety Cars **and** with Rally Control/Clerk of the Course.
5. All Safety Cars should proceed through special stages at a speed suitable to the vehicle being driven and to the prevailing stage condition. At no time should a Safety Car be driven in a manner that puts the occupants, stage officials or members of the public at risk.
6. Safety Cars including the zero car should only use stage set up notes, road books and other printed information supplied by the event organisers. (They should not have access to or be using any subjective route notes/pace notes).
7. Safety Cars should not be used to entertain sponsors or to give "stars" a free run in order to boost event publicity, they have a vital role to play and as such their occupants are there to work.
8. Safety Car crew members should remember that marshals are volunteers and as such, be courteous to them at all times. It may be the case that marshals require reassurance and brief training on their duties.
9. Safety Cars should always keep to their pre-determined time schedule and ensure that they adapt this to compensate for any delays in the running of the event. The closer an event can keep to running on time, the safer it becomes.
10. It is essential that all crews have a "*see it sort it*" attitude for anything they see pertaining to the rally.
11. All Safety Cars (excluding the Zero Car) should have roof lights, sirens, radio, a dashcam and a PA system. The Zero Car may have these or warning lights if the vehicle is suitable however sirens are strongly recommended.
12. As a minimum, events MUST have one (spectator) safety vehicle and one Zero Car.
13. Post-event, all Safety Cars and the Zero Car should provide a report to the Event Safety Officer or Clerk of the Course for use in the event debrief.

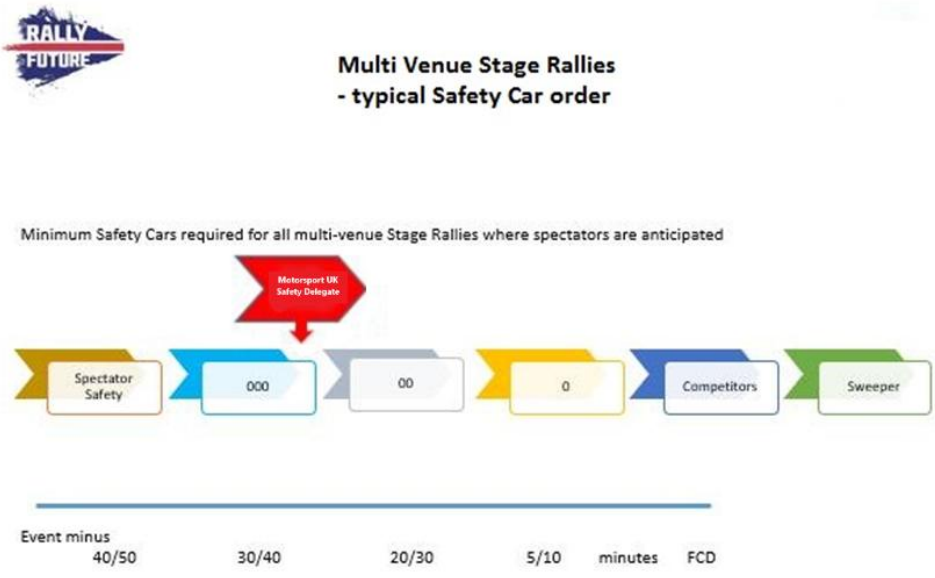
References to Stage Rally Safety Requirements Edition 9

This document must be read in conjunction with the following sections of the Stage Rally Safety Requirements Edition 9:

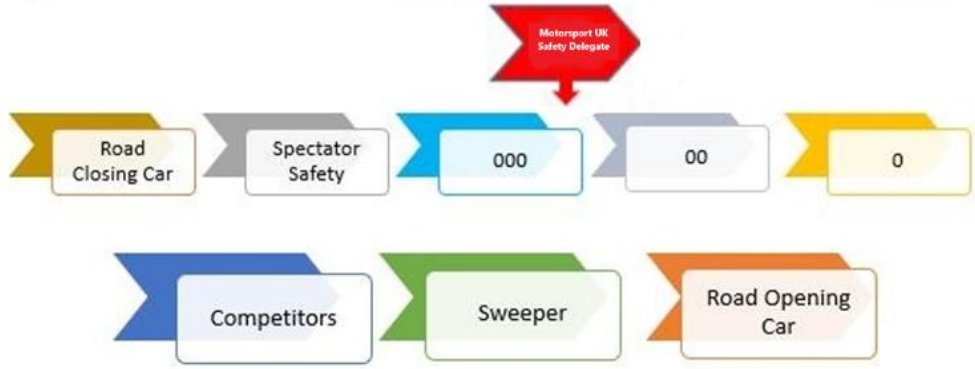
- Section 2.12 – **Safety Car Team**
- Section 11 – Safety Cars and their Duties
  - Section 11.1 – **For all Single-Venue Stage Rallies**
  - Section 11.2 – **For Multi-Venue Stage Rallies**
  - Section 11.10 – **Interim Safety Cars**
  - Section 11.11 – **Safety Cars Time Schedule**

Safety Car Typical Running Order

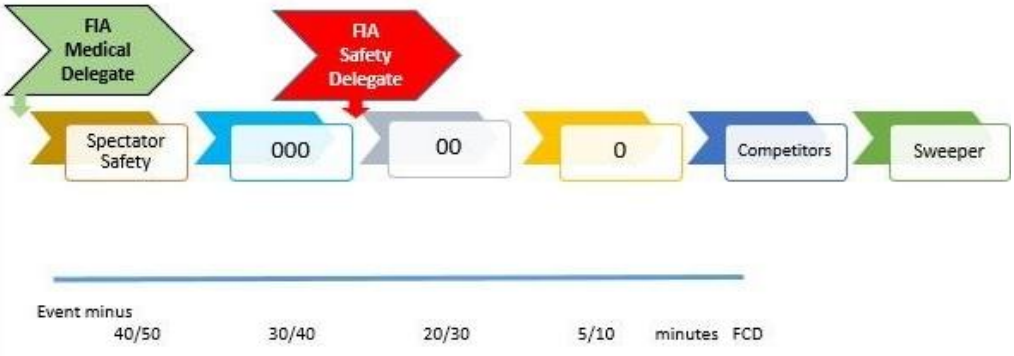




Closed Road Rallies
- typical Safety Car order



Typical FIA Championship
Safety Car running order



Specific Responsibilities – Spectator Safety Car

The Spectator Safety Car (SSC) should always have suitable identification as well as a PA system and warning lights. It should be driven by a competent person who should have an in-depth knowledge of the route. The Spectator Safety Officer will often travel in this vehicle.

1. Pre-event – where possible they should familiarise themselves with the route and spectator areas by visiting the stages prior to the event or watching previous in-car footage.
2. The SSC should visit every stage and should have their timecard completed at these TC's, if possible they should also cover the entire route, especially the service areas and any other spectator areas.
3. They should have means of communication with all other Safety Cars and Rally Control.
4. On a single venue event where limited spectator numbers are expected the minimum requirement is for either a spectator car or a zero car plus the Motorsport UK Steward.
5. If a significant number of spectators are anticipated and several Spectator Viewing Areas (SVA's) have been identified, then both 000 and 00 Safety Car could be used, see chart on previous page.
6. On arrival at each stage start the SSC should liaise with the Stage Commander and find out if there are any Spectator Safety issues within the stage including any amendments to the predicted marshal numbers contained in the stage set-up/safety plans
7. They should contact Rally Control and confirm their due time into each stage (Rally Control may require the SSC to wait at stage starts if there has been a delay in any other section of the route).
8. When given clearance the SSC will proceed through the stage making sure that:
    - All spectators and marshals are in a suitable position in accordance with the stage setup plans, advising them of suitable locations as alternatives and reporting these situations to the following safety cars
    - The stage is in compliance with safety plans in terms of signage, taping etc (carrying spare equipment to distribute should it be necessary)
    - The stage marshals have any spectator issues in hand.
9. They should confirm that the correct number of marshals are in place at each of the spectator areas or work with the stage commander to rectify the situation prior to the stage going live.
10. The SSC should be prepared to stop at any spectator problem area and adopt a "*see it, sort it*" policy using all resources at their disposal.
11. The SSC should make Rally Control/Stage Commander aware of any such problem and its potential to delay the FCD start time and if appropriate, request assistance.
12. Wherever possible the SSC will use the PA system to announce when the due time of the first car is expected and provide any results available.

13. The SSC will work closely with the 000 and 00 to ensure that a consistent message is given to all spectators ensuring they remain in acceptable locations.
14. When they reach the end of each stage they must liaise with the Stage Commander (or Deputy Stage Commander where appropriate) and report that they are satisfied all spectators are in a suitable area that is set up according to the safety plan and that there are sufficient marshals in place.
15. On an FIA sanctioned Rally (WRC/ERC level), the Stage Safety Officer (SSO) should travel through the stage with the Spectator Safety Officer in order that they can act as the eyes and ears of the Stage Commander as close to the FCD as possible. The SSO will then remain at the Stage Finish.
16. On a National Event, the Spectator Safety Car may be required to take the stage safety officer through the stage to the stop line for them to also check the stage plans are implemented according to the safety plan.
17. Although this vehicle is running very close to other Safety Cars, it should carry spare stage equipment as well as equipment for cordoning off spectator areas.
18. While it is very important that the SSC maintains its pre-determined time schedule it is critical that they are satisfied the stage is in a safe condition to run. If ensuring the stage is safe means delays then this cannot be avoided.

Specific Responsibilities – Safety Cars 000 and 00

It is recognised that many events may deem the use of a 000 Car unnecessary, while other events will use the 00 Car as a back-up to a Zero Car should the Zero Car be unable to complete the full route. Ideally (for forest events) 000 and 00 should be 4x4 vehicles to ensure their suitability for undertaking the role in all conditions. These vehicles also provide greatest visibility to spectators. The vehicle chosen should be determined according to the venue and requirements.

1. Only experienced crews should be utilised
2. These vehicles should always have suitable identification as well as a PA system, sirens, radio, dash cam and warning lights.
3. Pre-event they should familiarise themselves with the route, the safety plan including anticipated spectator numbers and other relevant documents plus the time schedule as well as liaise with the event officials over their final responsibilities.
4. On-event – check official notice board for any route alterations
5. It is strongly recommended that either the 000 or 00 Car follow the complete route and should ensure they have a completed timecard for each control that they visit. This must be clarified in the final safety car schedule. This may involve coaching the timing marshals in the correct completion of the Timecard, ensuring that the previous car number system is being implemented correctly.
6. It is essential that the 000 and 00 Cars comply with the pre-determined time schedule to enable the event to run on time but are ready to adapt the time schedule should the event require this.
7. They MUST have a method of communication with all other Safety Cars **and** Rally Control and work as a team to follow through on any requests related to spectator movement and locations.
8. At each TC before a special stage, they should liaise with the Stage Commander before they enter. The Clerk of the Course or Event Safety Officer should structure the Safety Car's time schedule to allow for this. This may mean the 000 and 00 Car having a shorter time in any service/re-group area than competitors. They need to ensure they are clear about any amendments to the safety plan, predicted numbers or set up plans in respect of signage or predicted numbers.
9. The 000 and 00 crews should, between them, carry out a final check on stage furniture, safety issues, Motorsport UK official notices especially in relation to Rights of Way, marshalling & spectator safety. They MUST also carry spare stage furniture/equipment and the means to fix it.
10. Any issues encountered must be reported through to the Stage Commander/Rally Control for awareness or advice.
11. Interim Safety points as well as Mandatory Radio Location signs and Red Flags should also be checked by these crew
12. Check FF & Stop locations are in accordance with the road book and that fire extinguishers are also in place.
13. At the end of each stage, they should confirm to the Stage Commander (or Deputy Stage Commander where appropriate) that the stage is in an acceptable condition to run. They should also ensure that this message is passed to Rally Control.
14. They should give/provide a post-event debrief/report to the Event Safety Officer

Specific Responsibilities – Zero Car (0)

As the Zero Car should be a rally prepared vehicle then it should be presented for scrutineering (including sound test) in the same manner as any other competition vehicle, and the crew must at all times abide by the same rules as all other competitors, i.e. they must wear harnesses, FHR devices and approved overalls and helmets.

1. Only a crew with at least one member having both event safety and safety car experience should be utilised.
2. The driver of a Zero Car should either be an existing Stage Rally competition licence holder or should have previously held a Stage Rally competition licence
3. The Zero Car must follow the full route as per road book and should ensure they have a completed timecard for each control that they visit.
4. It is essential that the Zero Car complies with the pre-determined time schedule to enable the event to run on time.
5. The Zero Car must have a method of communication with all other Safety Cars **and** Rally Control – the co-driver would benefit from using a separate earpiece attached to the installed radio for communications.
6. At each special stage start they should liaise with the Stage Commander and should enter where practicable on their due time.
7. The Zero Car should only use road books and other printed information supplied by the event organisers. (They should not have access to or be using any subjective route notes/pace notes).
8. Ensure the route is still compliant with the safety plans and if necessary be prepared to STOP. If this is required – immediately report to Rally Control requesting a delay to the stage start and explaining the situation. If it is possible to resolve the issue, do so. If not, be prepared for the Stage Commander and Rally Control to cancel the stage. IT is NOT acceptable to run a stage that is not considered compliant with the safety plan.
9. At the end of each stage they should confirm to the Stage Commander, Deputy Stage Commander (or Clerk of the Course) that the stage is in an acceptable condition to run. They should also ensure that this message is passed to Rally Control.
10. Post-event debrief/report to the Event Safety Officer or Clerk of the Course where necessary.

Specific Responsibilities – Sweeper Car for Multi-Venue and Single-Venue Rallies

Some events may have more than one Sweeper Car, however where this is the case only one Sweeper Car should traverse each stage. The Sweeper Car for stage rallies should be identified by a single chequered flag on a door panel. Closed Road Events may use different signage.

1. The Sweeper should follow the complete route, including road sections. At each stage start they must report to the Stage Commander who will be able to provide the following information:
    a. the number of cars that have entered the stage
    b. number of cars that have exited the stage
    c. accurate reports as to where any cars that have failed to complete the stage are
    d. the time the last competitor left the stage start control
2. The Sweeper Car should confirm that the number of competitors that have entered the stage matches the number that has left the last stage including any that have retired on the road section.
3. They should collect all check sheets from all locations visited
4. It is essential that they gather all completed check sheets, official reports (including those of judges of fact) together with officials signing on sheets from each stage. These sheets must be returned to Rally Control at the earliest opportunity. It is advisable to keep them accessible for any queries Rally Control or the Results team may have. If there are any incident reports, try to photograph them and send by email at the earliest opportunity.
5. Then, with approval from Rally Control the Sweeper will enter the stage.
6. The crew in the Sweeper Car should have an in-depth knowledge of how the event timing system operates and should where possible, stop at each vehicle that has exceeded its maximum lateness (OTL) and in consultation with Rally Control gather their timecards along with their damage declaration form.
7. The crew should remain as close as possible to the last competitor on the event.
8. It is essential that the Sweeper Car liaises with Rally Control at all times in order to verify when a competitor is OTL and hence is no longer eligible to continue in the event.
9. If a Sweeper is delayed, they should advise Rally Control immediately.
10. If the stage is being used again, the Sweeper Car crew should advise Rally Control of any junction or area which requires rebuilding/re-marking as well as identifying any areas with significant numbers of spectators. They may also be asked to report on the location and where possible cause of competitor retirements.
11. If competitor vehicles are still in the stage, consider whether there is a need to move them or

whether it is more prudent to leave them in situ. Competitors will ALWAYS want to have their cars recovered at the earliest opportunity; this may however not be in the best interests of all others involved in the event. Do not ask for a vehicle to be recovered or moved unless it is actually blocking the stage or you are concerned it presents a hazard.

12. Once they are satisfied all crews have been accounted for then if it is the last time the stage will be run, on the authority of Rally Control, and only then, will marshals, doctors and rescue crews involved in the running of that stage be able to stand down.
13. Send or give a post-event debrief/report to the Event Safety Officer or Clerk of the Course where necessary.

Additional Vehicles (Official Cars)

These vehicles may travel through the stage before the Safety Cars

Equipment Officer

The Equipment Officer (EO), if used, is either responsible for ensuring that the stage is set up in a condition ready to run or for ensuring the stage commander has the correct equipment required for each location and timing point. If the former, there should be no alterations required to anything on the special stage after it has been checked by the EO.

Not all events run an EO at the front of the field but those who do should take the following into consideration:

1. The EO and any other members who are part of the EO's crew should always ensure that they have signed on as an event official. The EO should run approximately 90 minutes before the due time of the first car. Should the event be delayed there is no need to re-schedule the timing of the EO.
2. The EO should have an in-depth knowledge of the complete route (both stage and road sections) and as far as reasonably practicable, should know all the permutations of special stages being used.
3. The EO should be driven round the route by a competent person, thus allowing them to concentrate on the stage furniture etc. and ensure it is all set up as per the set up book from which they are working. They should carry as a minimum a complete set of stage start and finish boards along with barrier tape, stakes, mallet, arrows, a staple gun and staples. They should also have a direct method of contact with the Chief Timekeeper, Chief Marshal, Rally Control and the Clerk of the Course.
4. Wherever possible they should inform Rally Control that they are about to enter the stage and also ensure that the radio controller knows when they have exited the stage. As with all Safety Cars it is essential that they maintain the "*if you see it, you sort it*" attitude to any problems which they may encounter.
5. When the EO has passed through all stages they should remain in a location central to the event, in order to co-ordinate any equipment requirements that may arise.

Chief Timekeeper

The Chief Timekeeper (CT) or nominated deputy, should run as one of the first official cars through the stage usually just in front of the Chief Marshal (this can be anything from 60 to 120 minutes before the due time of the first car depending on the structure of the event and the timing system being used). They should have a record of the serial numbers of each clock being used in the event. Where start lights and automatic timing equipment is used, they will keep a record of the equipment issued.

1. The CT must liaise with the Chief Marshal as to whom to expect at each control.
2. The CT should liaise with Rally Control when they arrive at each stage arrival control area and they should ensure that they have an official timecard completed at each control.
3. Prior to entering any stage, they should obtain permission from Rally Control to proceed into the stage. They should also confirm if there are any other vehicles in the stage at this time.
4. The CT should ensure that any marshal that is to use the clock or timing equipment knows exactly what they are doing and if necessary, spend time reassuring the marshal on the operation of the equipment to ensure that the timing system is operated accurately for all cars. The Stage Commander should ensure that at least one member of the Timing Team is available when the CT comes through for this purpose.
5. The CT should ensure that where the previous car number system is being used, the marshals are competent in completing the Timecards correctly.
6. At the end of each stage the CT should verify that there is a working system of communication between the Flying Finish and the Stop Line and that a backup system exists in the event of failure.
7. The CT should be driven by a competent person who should have knowledge of the complete route and who also is competent in the timekeeping role.
8. They should check all control area signage when traversing the route and ensure that it matches the supplied road book/route information. If any signage or equipment is missing, they should report through to Rally Control to request the next official or safety car to issue the missing items.
9. It is also essential that they visit each time control, including the service area and regroup area to ensure everyone in these areas knows what they are doing, they do not necessarily have to traverse the complete route. If this is not possible, one of the other official or safety cars MUST attend these locations and undertake the role of CT for those locations.

Chief Marshal and/or Event Safety Officer

Pre-event - the more work the CM puts in prior to the event the easier it is for them to carry out their duties on the day.

It is recognised that at some events the CM may not travel through the stages or may travel along with the Event Safety Officer (ESO). Where the CM does not travel through the stages one of the other official cars should undertake these duties:

1. The CM should ensure that there are sufficient marshals available to cover the event and stage start areas and that they have the correct paperwork and suitable control boards and equipment.
2. Where practicable the CM should complete the route in full as is laid down in the road book or any other official route information.
3. On arrival at each control the CM should lead by example and always wear an official tabard or event clothing and/or identification.
4. They should ensure that every marshal at each post they visit has a clear and concise understanding of what duties they are expected to perform and that all stage personnel are wearing tabards.
5. By the time the CM reaches each control all stage/control furniture should be in place and they should check off each item on the set-up book.
6. The CM should check that the correct number of marshals are in place to meet predicted numbers as described in the event safety plan.
7. They should always have their timecard completed and run through the complete stage start procedure that will be implemented for each competing car.
8. As with all Official or Safety Cars the CM should be driven by a competent person. The vehicle should always have suitable identification as well a(a PA system bay be useful).
9. They should have communication links with all other Safety Cars as well as Rally Control.
10. As well as stopping at timing points they should stop at each point that has been advertised as a spectator access point, ensuring that all Spectator Safety marshals are in position, at least the predicted number as identified in the Safety Plan. If this number is not according to the plan, a dynamic risk assessment will need to be undertaken to ascertain whether the number of marshals at that location are sufficient for the actual number of spectators anticipated.
11. All official Motorsport UK signage and appropriate warning notices should also be checked at all Rights of Way and access points onto the special stage.
12. If, on their route through the stage they identify an issue, they should immediately call Rally

Control to discuss with the stage commander and agree an action plan to rectify the problem

13. At the end of each stage, they should radio back to the stage start and Rally Control and inform the stage commander that they are satisfied the stage is in a complete and acceptable condition to run. Only when this message has been confirmed should they proceed to the next stage/control point.
14. In the event of delays the CM should keep in constant communication with Rally Control in case there is an adjustment to their time schedule. If the CM is aware of any delay they should cascade this information to the marshals out in the field.
15. The CM should always have a complete set of spare stage furniture, Motorsport UK warning notices and barrier tape together with a mallet and a staple gun in their vehicle.
16. They should also have spare official signing on sheets and wherever possible, they should ensure that each marshal has signed on.
17. The CM should also ensure that all doctors, rescue, recovery and radio crews are in position along the route. If any of these officials are not in position, the CM should investigate and deal with appropriately, while keeping Rally Control advised of any actions taken.
18. Where Red Flags are being used on the stage it is appropriate for this vehicle to check that Red Flags are in the right locations and are being correctly displayed. It is advisable for the CM to carry spare flags.
19. Post-event – they collate all feedback from the marshals and provide a report to the event organising team for the debrief

Check Sheets

The following is an example of a check sheet suitable for use by Safety Car Crew(s) to check stage ready status. This document is available in editable format on the Motorsport UK website.

Stage - Please Circle					
1	2	3	4	5	6

Safety Car ID - Please Circle				
CM	OOO	Spec Safety	OO	O

Time Started

Time Control	Yes	No
Notice A, C & Safety Code		
Route in Arrowed		
Control Boards		
Park Fermé taped off		
TC Manned		
Marshals with Tabards		
Clocks		
Time Cards Completed		

Start		
Control Boards		
Park Fermé taped off		
Start Manned		
Marshals with Tabards		
Stage Commander Present		
Rescue		
Doctor/Para Medic		
Recovery		
Radio Car		
Fire Extinguishers		
Clocks & Start Lights		
Time Cards Completed		

Interim Point		
Correct Boards		
Rescue		
Doctor/Para Medic		
Recovery		
Yellow Flag Shown		

In Stage	Yes	No
Junctions Set Up as per plans		
Radio Signs Displayed		
Radio Marshal with Tabard		
Yellow Flag Shown		

Spectator Viewing Areas		
Set Up as Safety Plan		
Marshals at each end		
Minimum number of marshals		
Crossing Point as per plan		
Sector Officials in Tabards		
Good spread of Marshals (not bunched)		

Flying Finish		
Control Boards		
Correctly Positioned		

Stop Line		
Control Boards		
Count down boards		
Correct Distance between signs		
Fire Extinguishers		
Clocks		
Time Cards Completed		
Effective Comms to F/F		

Please use reverse of sheet to report any issues and resolutions

Junction / Posts				
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
-	-	-	-	-

Notes - non stage venues

Road Closing Car (RCC)

The RCC is the first Car to technically "close the road" to the general public.

1. It is important that the RCC is easily identified by all residents, spectators as well as everyone involved in the rally.
2. The crew must be very experienced in the safety aspects of such an event and ideally one of the crew should be a member of the Organising Committee.
3. The crew must be familiar with the route and all the safety measures in place for ensuring the roads are closed.
4. The RCC MUST check that the "Road Ahead Closed" and "Road Closed" boards are correctly positioned at both ends and at the intermediate junctions within the stage.
5. They must be prepared to advise the equipment officer or set up crews of any work that is required in order to comply with the road closure order although it is appreciated, apart from the statutory Road Ahead Closed and Road Closed boards, it is not practical for this car to check tape etc. this will be checked by subsequent safety cars.
6. The RCC must run to the Road Closing Schedule even if the stage is not ready to run.
7. The vehicle should be clearly identified as the RCC so that all residents and spectators are in no doubt that the route is closed to all moving traffic other than Safety Cars and competitors.
8. They should have a PA system, in order to advise residents and spectators on route of the fact that the road is now closed and is due to open at XX.
9. They should have a siren (if permitted) to ensure all marshals and spectators know that the road is now closed. These must be operational from stage start through to the stop line. These lights MUST only be used within the closed road sections. They will be of a colour specified in the road closure agreement.
10. They will carry timecards which should be completed by the time control crews at each location.
11. They must follow the prescribed route through the special stage but may not be required to follow the entire route if time does not permit.
12. They must have permanent communications available to them for both Rally Control **and** the other Safety Cars and Set-up Teams.
13. A police vehicle may enter the stage as part of the road closing convoy under blue lights

Sweeper Car and Road Opening Car (ROC)

1. Following the last competitor into the stage the Sweeper Car/s will enter the stage. They may be numbered sequentially. This is to ensure that spectators are not aware too early that the Road Opening Car is following., Movement of people or vehicles onto stage before the Road Opening Car is not acceptable
2. The Road Opening Car will follow the sweeper cars (if used) and will have also have clear identification, this can often be the chequered flag OR the words Road Opening Car as well as flashing lights (colour to be agreed within road closure agreement).
3. The beacons must only be used within the closed road sections.
4. They may have other duties too such as those of a Sweeper Car.
5. It is important that the ROC is easily identified by all residents, spectators as well as everyone involved in the rally as it is only when this vehicle has passed their location that they are free to move on the roads again.
6. As this is a legal requirement, organisers must be prepared to have a second vehicle in readiness should the original ROC vehicle not be able to complete the entire route.

Cameras for Safety Cars

Many Safety Cars are already using dashcams and this has proven significantly beneficial for reviewing post event footage. Therefore, it is a requirement that all Safety Cars, inclusive from the Spectator Safety Car to the 0 Car, are equipped with, and use, dashcams.

Camera Specification

There are many dashcams on the market today and it is not necessary to spend a lot of money to buy a suitable camera. From Motorsport UK Safety Delegate experiences over the last 3 years the following criteria should help select a suitable camera:

- Resolution: 1080p @ 30fps
- Lens: 130º to 180º are typical and ideal angles of view
- Storage: 32GB capacity is ideal. Less capacity requires more rigorous management on the event.

There are many other features such as GPS logging and Google Map recording, and a backup battery to continue recording if 12v supply is lost is strongly recommended.

Camera Installation and Use

The natural location is the co-driver windscreen (top near to the mirror) to give as uninterrupted view of the Stage as possible. It is accepted that when using a Rally-prepared car as the 0 Car, it may be necessary to mount the camera to the roll cage, but in so doing provide as uninterrupted view as possible. For the other Safety Cars when choosing a suitable installation take note of any airbags that may be fitted. Dashcams are to enhance safety!

It is not necessary to use voice recording facilities and we are aware that some crews may feel self-conscious and not be as focused on their duties. After the event all Stage footage should be up/downloaded or retained on the memory cards for a period of not less than 14 days. If, after that period, no queries have been identified the memory cards may be re-used.

Even where there are no accidents or incidents, dashcam footage will allow you to review the Stages after the event, looking at setup consistency and compliance, spectator hot spots and so on. This footage MUST be made available to the event organisers at the earliest possible time (at most within 7 days).

Radio Protocol

Clear communication is an essential role for each safety car crew and whether using a management radio frequency or Motorsport UK's Medical and Safety Frequency (81FM) it is important to familiarise yourself with the basics. The full details are available in the Radio Marshals' Handbook, available https://www.motorsportuk.org/wp-content/uploads/2021/08/2021-05-06-radio-marshal-handbook.pdf

The following extracts are essential basics.

Radio Operation

You should be aware that there are various physical factors that will influence the efficiency of your radio reception and transmission. These factors may include:

- Man-made;
  - High tension cables
  - electricity generators
  - computer centres
  - hospitals
  - radio transmitters
  - Other 'on event' radio networks
- Natural phenomena;
  - Weather
  - cliffs
  - steep banks
  - trees
  - iron ore deposits
  - water

Manmade obstacles can be overcome by relocating your position, if possible. If the interference is coming from another radio, ask them, in the interests of the event safety, to relocate. Natural phenomena can sometimes be negated by moving, but usually it is a case of working with what you have.

You should also be aware of the operating specification of your radio in relation to the length of message transmissions. The specification of your radio includes a thirty second time out function. This means that 30 seconds after the PTT button is triggered and the set begins to broadcast, it will 'time out' and the transmission will cease. This system is a fail-safe, which allows the radio network to be useable again 30 seconds after a PTT is triggered accidentally.

During normal operation it is very unlikely that your message will be longer than 30 seconds. This time period is usually more than sufficient time to pass your message. To assist in getting your message through, write it down before you transmit it. This will help if you need to repeat all or part of your message. If you have an exceptionally long message to pass, keep transmitting until you hear the first 'Beep' then say 'Break', release the PTT, pause, then continue your message.

DO NOT BE TEMPTED TO PUT A 'BREAK' INTO YOUR MESSAGE IN ANTICIPATION OF THE TIME OUT – this wastes time.

SUPeR System

To process an incident more efficiently there is a key word system in place. The application of this system is explained below & is in use on a national basis. Should you be advised of, or witness an incident you may include one of the following prefix words in your initial call to your radio controller:

a. **SAFETY** For messages concerning stage safety, e.g. car overdue, first competitor into stage, stage furniture problems, spectator marshalling – problems where a slight delay can be tolerated.

b. **URGENT** For situations requiring immediate action, e.g. car known to be in difficulty, suspected injured persons – problems which may necessitate the cessation of the stage.

c. **PRIORITY** For situations where there is a CONFIRMED injury(s) – situations where immediate Medical/Rescue intervention is required

d. **RELEVANT** For messages which have a bearing on the incident – submission of relevant information.
Use common sense – **DO NOT** overrate the urgency of your message unnecessarily.

This is how a SUPeR message should be initiated:

'Mercury Control from Mercury Three, (SAFETY/URGENT/PRIORITY), Over'

'Mercury Three this is Mercury Control – go ahead with your, (SAFETY/URGENT/PRIORITY), Over'

'Mercury Control from Mercury Three on stage (no.) at post/junction (no.) I have.....

Mercury Three will then transmit the details of the (SAFETY/URGENT/PRIORITY) and Control will deal appropriately with it in conjunction with the correct on stage and/or off-stage personnel To ensure that the (SAFETY/URGENT/PRIORITY) is dealt with correctly Mercury Control will announce:

'Mercury Control is accepting (SAFETY/URGENT/PRIORITY) and above messages only'

This means that any none key worded messages or key worded messages below the level maintained must wait to be transmitted.

If the incident which generated the SAFETY call escalates to an URGENT or an URGENT situation arises then the control would increase the restriction imposed on the radio network to URGENT and above only, therefore any SAFETY messages must wait to be transmitted.

Similarly, if the PRIORITY restriction is imposed only PRIORITY messages will be allowed across the radio network.

If, however, you have information which is relevant to the incident but is not a result of the incident you can use the RELEVANT key word to access the restricted radio network. The RELEVANT key word works on all levels of restriction.

It is important that all radio marshals not directly involved with the ongoing incident remain silent & monitor the radio network. As soon as the incident is resolved control will begin to reduce the level of restriction downgrading from PRIORITY to URGENT. It will then deal with all the URGENT calls before downgrading to SAFETY. Once all SAFETY calls have been processed control will announce 'Mercury Control to standby' at which point normal working is resumed.

REMEMBER

ALWAYS Use the callsign of the radio you are calling followed by your own when opening a transmission i.e. (Mercury Four this is Mercury Control – Over)

ALWAYS Say 'Over' at the end of each transmission

ALWAYS Take your finger of the PTT (Push To Talk) button when you have finished speaking

ALWAYS Be as brief as is possible

ALWAYS Make sure you transmit your message completely and correctly. If necessary, write it down before speaking

ALWAYS Remember, safety is paramount, especially your own.

ALWAYS Have your radio in sight in order to monitor its operation

ALWAYS Know where your microphone is and make sure that the PTT button cannot be operated accidentally

ALWAYS When transmitting a message, press the PTT, pause ----- then, talk, otherwise your first few words will be lost. (This allows the tones transmitted at the front end of the message to 'open' other radios on the network)

ALWAYS Put a 'Roger so far' into long messages but remember that you have 30 seconds of message time

ALWAYS If you feel unable to handle a situation, pass the microphone to someone who is, if possible

ALWAYS Keep calm

NEVER Transmit when the frequency is in use – you will cause interference and disrupt the radio network

NEVER Use bad language

NEVER Use the Safety & Medical frequencies as a 'chat channel'

NEVER Add to, embellish and/or use unnecessary voice inflections to messages and information given which is to be passed over the radio network

NEVER Divulge information passed over the radio network to third parties who are not part of the event organisation either verbally or by operating with your volume too loud or your speaker outside your vehicle

NEVER Panic

THINK OFF AIR