FIA CROSS-COUNTRY RALLY SAFETY GUIDELINES **2025**

PRELIMINARY NOTICES AND TERMS

INTRODUCTION

1. The Guidelines set out general informational guidance. This document has no binding regulatory effect and is provided, at the FIA's discretion, to assist National Sporting Authorities ("ASN(s)") and other organisations or individuals (the ASNs and other organisations or individuals together the "Third Party(ies)") involved in organising, promoting, staging or regulating motorsport events ("Motor Sport Event(s)").
2. Use of the Guidelines by any Third Party is strictly subject to the Third Party's acceptance of and agreement to comply with these Preliminary Notices and Terms.

DISCLAIMER

3. The contents of the Guidelines (including general informational guidance in relation to health and safety, sporting or technical matters) taken in isolation may not be suitable or appropriate for each and every Motor Sport Event (which incorporates all of the following activities: i) motor sports competitions, practices, tests, reconnaissance's / "recce's"and demonstrations, ii) any associated entertainment, marketing or commercial activities and iii) any engineering, scrutineering, maintenance or other technical activities, and begins from the time the relevant locations where these activities are taking place are made accessible to any persons, and ends when the relevant locations are closed to access or the activities end, whichever occurs later). This is because the Guidelines are derived from good practice in competitions appearing on the FIA International Sporting Calendar which operate within a regulatory and safety environment that does not apply to Motor Sport Events that do not appear on the FIA International Sporting Calendar.
4. It is the full responsibility of Third Parties to ensure that they understand and comply with any relevant obligations or duties relating to health and safety, product design, construction/manufacturing or consumer law which are placed on them under i) any applicable National Sporting Authority requirements, regulations and safety standards ("ASN Regulations"), ii) FIA requirements, regulations and safety standards ("FIA Regulations") and/or iii) any relevant transnational, national and/or local laws, regulations, directives and decrees passed by the government, a quasi-governmental entity or by any entity which has the same authority as the government in any applicable country or other territory, including all applicable local, state and federal laws, and any industry practices, codes of practice and/or codes of conduct incorporated into any of the foregoing, and all binding court orders, decrees, and any decisions and/or rulings of any competent authority that are relevant ("Applicable Laws"). The FIA assumes no responsibility in relation to such understanding or compliance.
5. The Guidelines do not contain any advice or guidance in relation to Applicable Laws, and the FIA makes no representation or warranty that the general informational guidance within the Guidelines complies with the Applicable Laws applying to a particular Motor Sport Event. Accordingly, it is the full responsibility of Third Parties to i) take appropriate advice and make their own enquiries as to Applicable Laws and any particular local safety requirements or other relevant considerations applying to a Motor Sport Event and ii) to adapt and implement the Guidelines in a suitable and safe manner depending on the circumstances of the particular Motor Sport Event. The FIA assumes no responsibility in this regard.
6. For the avoidance of any doubt, compliance with the Guidelines in isolation does not guarantee the safety of a

particular Motor Sport Event or of the participants to a particular Motor Sport Event.

7. If there is any conflict, or any doubt as to a conflict, between the contents of the Guidelines and Applicable Laws, Applicable Laws always take precedence. If it is possible to comply both with Applicable Laws and the Guidelines (subject to all appropriate adaptations as per paragraph 5), Third Parties should endeavor to do so.

8. The FIA does not make any representation or warranty, express or implied, and does not assume any responsibility as to the quality, suitability or fitness for purpose:

8a. of any equipment, structures, installations, products or facilities that may be referred to within the Guidelines; nor

8b. as to the applicability or suitability of the Guidelines in relation to a particular Motor Sport Event.

9. All Third Parties are made aware that technology utilised in motor sport vehicles, equipment, structures, installations and products is subject to ongoing change and development, as well as good and best practice evolving over time. As a result, the Guidelines are subject to ongoing review and amendment over time.

10. All Third Parties are made aware of the risks that are inherent in the attendance of any person at or within the vicinity of a Motor Sport Event. Depending on the circumstances of the Motor Sport Event, these risks may include (non-exhaustive): the possibility of incidents (resulting from motor sports or otherwise) resulting in physical and/or mental injury or death; exposure to noise; exposure to / interaction with high voltage or other technical / mechanical equipment; or contracting/spreading communicable diseases.

LIMITATION & INDEMNITY

11. The FIA disclaims, excludes and limits (to the fullest extent permitted under Applicable Laws) any and all claims, liability, costs, expenses, damages, losses (including but not limited to any direct, indirect, incidental, special, consequential or exemplary damages or losses, property damage, breach of intellectual property rights, breach of contract, loss of profit, loss of reputation or goodwill, use, data or other intangible loss, loss of agreements or contracts, loss of sales of business and all interest, penalties and legal costs) and any personal or mental injury (including nervous shock, disease, disablement and death and any financial losses resulting), sustained by any organisation or person (including Third Parties and their subsidiaries, affiliates, licensors, licensees, agents, co-branders, partners, employees, directors, members, officers, advisors, consultants, representatives, successors and assigns (collectively the "Representatives")), howsoever arising from any use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event by Third Parties or their Representatives, including in relation to:

11a. statements (including false statements), acts or omissions by the FIA or its Representatives or Third Parties and their Representatives; or

11b. any other negligence, lack of reasonable care, breach of any statutory or other duty or Applicable Laws, careless or wrongful act or wilful default by the FIA or its Representatives or Third Parties and their Representatives.

12. Any use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event by any Third Party or its Representatives is (to the fullest extent permitted under Applicable Laws) strictly subject to acceptance by the Third Party and its Representatives of the following:

12a. the Third Party and its Representatives agree to waive any rights and/or claims, agree to release, hold harmless and not to sue the FIA or its Representatives in relation to any claims, liabilities, costs, expenses, damages and losses (including those referred to in paragraph 11 above); and

12b. the Third Party and its Representatives agree to indemnify the FIA and its Representatives in relation to any and all claims, liabilities, costs, expenses, damages and losses (including those referred to in paragraph 11), and this indemnity shall apply whether or not the FIA has been negligent or is at fault;

in each case arising from the use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event.

GOVERNING LAW & JURISDICTION

13. The Guidelines and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with the Guidelines or their subject matter or formation, shall be governed by and construed in accordance with the laws of France.

14. The courts of France shall have exclusive jurisdiction to settle any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with the Guidelines or their subject matter or formation.

15. Any matters relating to investigation and enforcement of FIA Regulations are subject to the jurisdiction of the internal judicial and disciplinary bodies of the FIA.

SCOPE

The aim of these new Cross-Country Rally Safety Guidelines ("Guidelines") is to complement the FIA safety regulations and to collect all the relevant regulatory information in one place.

This document is intended to make the FIA regulations more easily understandable for officials, competitors and spectators.

The text written here does not replace the official documents published on the FIA website and it has no regulatory value.

This is a living document that can be updated to reflect any new information, updates to regulatory or guidance documents or clarification that the FIA considers relevant to the competitors and officials. Please ensure that you take into consideration the latest available version.

FOREWORD

Welcome to the FIA Cross-Country Rally Safety Guidelines.

These guidelines represent the collective effort and dedication of many individuals from the Cross-Country Rally Commission, as well as the FIA Safety and Road Sport Departments.

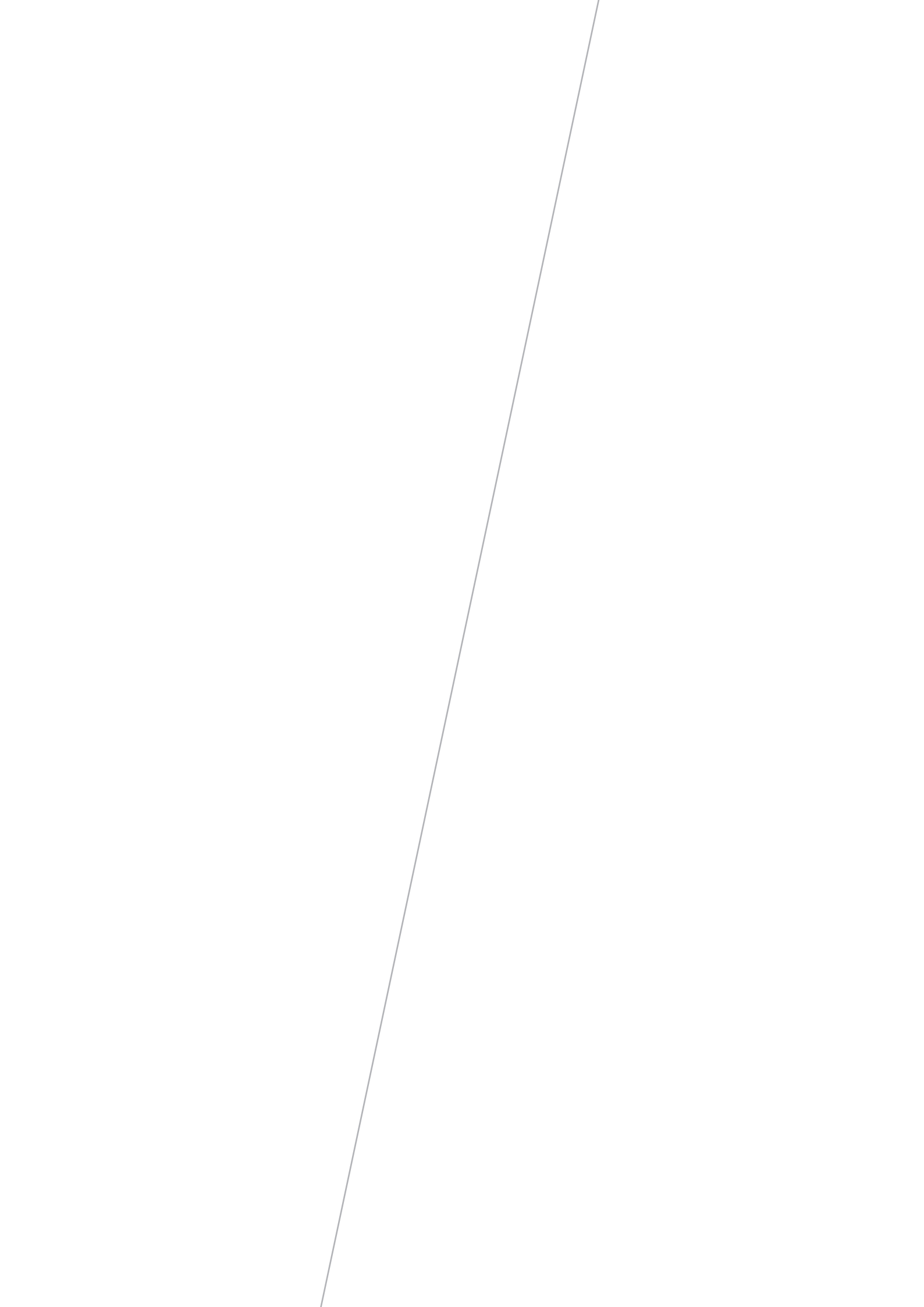
Safety lies at the core of every motorsport event, and it is our responsibility to safeguard the well-being of all involved — from competitors and marshals, to spectators, media, and everyone in between.

The success of our sport depends on expert knowledge, meticulous planning, and flawless execution. With these principles in mind, we hope that ASNs, clubs, and event organisers will use these guidelines to help ensure a safe and fair environment for all participants in the years to come.

I wish you a safe, exciting, and successful season ahead.

Yours sincerely,

Mohammed Ben Sulayem,
FIA President



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1. TYPES OF CROSS-COUNTRY RALLY EVENT

MARATHON RALLY-RAID

A Marathon Rally-Raid is a Cross-Country Rally with minimum total distance for the Selective Sections of 2500 km.

RALLY-RAID

A Championship Rally-Raid is a Cross-Country Rally that must last no more than seven days (including administrative checks and scrutineering) with five days of competition and a total distance for the Selective Sections of at least 1200 km.

BAJA

A Championship Baja is a Cross-Country Rally that must last no more than four days (including administrative checks, scrutineering, and an optional Prologue), with two days of competition and a total distance for the Selective Sections of at least 350 km. A Regional Cup Baja must have a total distance for the Selective Sections of at least 200 km.

2. TYPES OF TERRAIN

The terrain type on Selective Sections will be described in the Supplementary Regulation by the following safety specifications:

- Safety Type Open – Applies to Selective Sections run over open desert and dunes/off-track.
- Safety Type Track – Applies to Selective Sections run only on gravel roads and/or tracks

All three types of Cross-Country Rally events can have both types of Safety Type specifications.

The Safety Type may be described either for the complete event or per stage.

3. SELECTIVE SECTION

3.1 SELECTION CRITERIA

The identification of Selective Sections is crucial to overall event safety for competitors, marshals, spectators and media.

There are no simple criteria on what makes a Selective Section suitable or unsuitable. It can even change depending on which direction it is run, the time of day or season of the year.

Selection is often done from experience and knowledge and not from a document.

The tools available to event organisers when it comes to Selective Section identification are numerous:

- An accurate satellite photos analysis (such as Google Earth) of the chosen area.
- Identify the type of terrain, altitude, inhabited areas and more generally everything that may have an influence on safety during the race.
- Research if the particular SS was used previously either in whole or partially. If so, what speeds were measured from previous runs. However, average speed is not an indicator of the suitability of a SS, though it should be taken into consideration.
- More specifically, any high-speed areas and length areas of prolonged high-speed areas should be identified.
- Is there a GPS trace available from any cars?
- Were there any incidents involving competitors in the past?
- What information about that SS is available from previous reports?
- What information is there about the possible spectator presence on that area? What are the access possibilities ?

In addition, the list below is not exhaustive but gives an indication of topics to consider when looking at a new SS:

- What is the proposed SS length?

- Is it a Selective Section that will add to the sporting and promotional features of the event?
- Are the access roads or terrain suitable for MIV, ambulance and recovery units?
- Are the spectator area accessible without crossing the route?
- What capacity can the allocated spectator viewing areas accept?
- For safety reasons, it is recommended to keep the bivouac in the same location for at least two days in all events, especially Rally Raid Marathon, to give small-team drivers, who also serve as mechanics, the opportunity to rest. When possible, day-by-day movement should be minimized, except in cases with short service time.

3.2 RUNNING PART OF A SELECTIVE SECTION IN THE DARK

In addition, the list below is not exhaustive but gives an indication of topics to consider when looking at a new SS:

- SS Time Control, Start and Stop controls, Passage Controls and Neutralisation/Transfer End need to have powered lights for these areas.
- All MIV and recovery vehicles need to carry portable lighting units to assist them with any rescue or recovery operation.
- Competitors need to be reminded of the importance of positioning the reflective red triangle at least 100m in advance of where their rally car has stopped, left the Selective Section, or before a dune/obstacle when it occur after.
- Unless a night rated helicopter is available, all rescue operations will have to be carried out with suitable ground vehicles.

3.3 WATER HAZARDS

Lakes, sea and dams all provide areas of significant risk when planning Selective Sections. The risk of a competing car entering a water hazard unseen by a marshal is significant. The risk of the crew becoming trapped in the car when it is submerged is very significant. Ideally any planned route would avoid any water hazard throughout an event.

It is recognised that this may not be completely possible, so precautions are necessary to ensure all risk reduction measures have been taken.

- What is the proximity of the water to the SS?
- Are there natural obstacles blocking the chance of a competing car reaching the water?
- Is the approach to the area adjacent to the water taken at high or low speed by the competing cars?
- How deep is the water? Consider potential water floods and that a low water level is already enough to be dangerous.
- Can the event arrange for divers and a boat to be in location throughout the running of the SS? If so, are these divers restricted in their operating window by wind, storms? The organiser needs to know these operating restrictions, if any.
- Is it possible to protect the area around the water to stop cars from leaving the SS route?

Earth bunds, concrete barriers are all examples of protection that could be planned for these areas. It is generally unacceptable to run a stage that runs alongside a water hazard in darkness.

All competing cars should have a harness cutting tool, that includes the hammer end within easy reach of both driver and co-driver in the cockpit of the car. It may well be the case that two cutting tools are required to ensure that either of thecrew can reach this whilst buckled into the competition seat.

Specific attention must be given to any dried-up riverbed that can be turned into a very dangerous high water flow flooding in case of bad weather.0

3.4 CHOOSING A SELECTIVE SECTION FOR SPECTATOR VIEWING

Items to consider for spectator locations are

- Elevated viewing platform.
- The depth of the viewing area.
- Accessibility from car parks.
- Consider location of a safe crossing point, if necessary.
- Consider the approach speeds of the cars and any natural protection around the spectator location.
- Ensure spectator access points do not block any competitor run off area.

• Ensure the spectator area parking does not conflict with an escape route (part. on type 'Track' SS).

• Consider controlling and taping the first and last kilometers of the SS, as well as every crossing road. Each day, a spectator area plan should be prepared and shared, designating at least one or two zones in competitive SS to ensure safe and controlled viewing areas, for instance road crossing, populated area and close to access road, etc...

4. SAFETY SPECIFICATIONS FOR 'OPEN' TYPE EVENT

In the Selective Section with 'Open' type Safety, the following must be considered:

- The competition vehicles could cover different sections of the route, as only the passage through WPs is mandatory. As a consequence, the monitoring of the race, from a safety point of view, must be addressed taking into account the competition area rather than the simple track. Therefore, the concept of a road or area closed to traffic or reserved for competition can never be applied to this type of Selective Section, and the competitors must always keep this in mind.
- It is best to locate spectator areas where the race crosses a road and there is a WP or preferably near a Passage Control (CP), where all the vehicles must pass in the same point at controlled speed. In addition, if there is a possibility to locate spectator area in a part of the track where there is no road, this area must be positioned in raised and safe areas near WPs (with a validation radius not exceeding 90mt) and must not be placed along the ideal track that vehicles could take to validate the WP. Attention must be brought to not give navigation indications to the competitors while placing the spectator areas.
- There may be other vehicle traffic affecting the race area and if this is foreseen, it is ideal to have it checked, possibly by a helicopter, before the due time of the first competitor to ensure sufficient security conditions. It is also useful to notify the local population and the authorities of the area affected by the competition.
- When bikes are going in front, ideally, the helicopter should check spectators positions. It is crucial to ensure that no one is walking inside the incoming car corridor, which can be at least 180m wide. Keep in mind that the width of a flow of cars is significantly larger than that of bikes, so extra precautions must be taken during transition between bike and cars.

5. SAFETY SPECIFICATIONS FOR 'TRACK' TYPE EVENT

In the Selective Section with 'Track' type B Safety, the following must be considered:

- As 'Track' type Selective Sections run on a defined course (i.e. roads or trails) the minimum safety requirement is the closure of the SS course to traffic as done in normal rallies.
- As the event is run under closed road condition, a larger number of marshals and closure personnel (e.g. police) is required to prevent access and monitor all road closures.
- When the course gets near villages and cities, the marshals and closure personnel deployment needs to be increased and dedicated spectators area clearly defined, depending on potential public access from closure points.
- 'Track' type Selective Sections are more suitable than 'Open' type for spectator viewing due to all vehicles going through the same course for the whole stage. It is recommended to follow the guidelines from paragraph 3.4 above, for the choice of spectator zones.These zones will need to be properly planned and monitored through an additional deployment of marshals.

6. ROAD BOOK, SIGNAGE AND WAYPOINTS

The road book is the first and most effective means of ensuring the safety of competitors. The role of the road book is crucial as competitors do not know the route in advance, therefore navigation is a key element in Cross-Country Rallies.

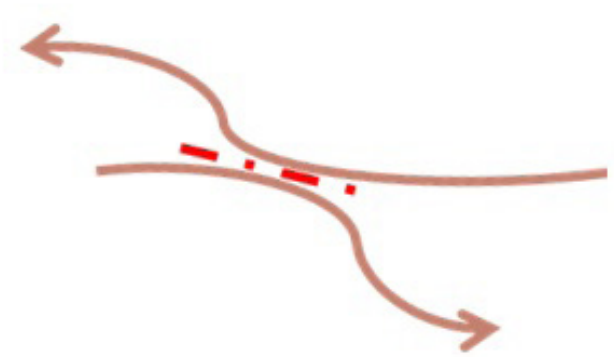
The road book needs to be written as per the guidelines outlined in Art. 5 of the Appendix III to the CCR Sporting Regulations.

In particular, it is compulsory to follow the standard signage provided by Art. 5.13, together with the lexicon in Art. 5.14.

Due to this crucial role of the road book, it should be created by experienced crews with good foresight of the potential issues that competitors may face.

In Baja events, the organisers usually add signage (e.g.arrows or gates) to indicate the Selective Section route.

When tracks are parallels, clearly define prohibited areas to prevent competing cars from crossing. Add clear signage and hardware safety barriers to forbid entry into dangerous opposing directions in SS.

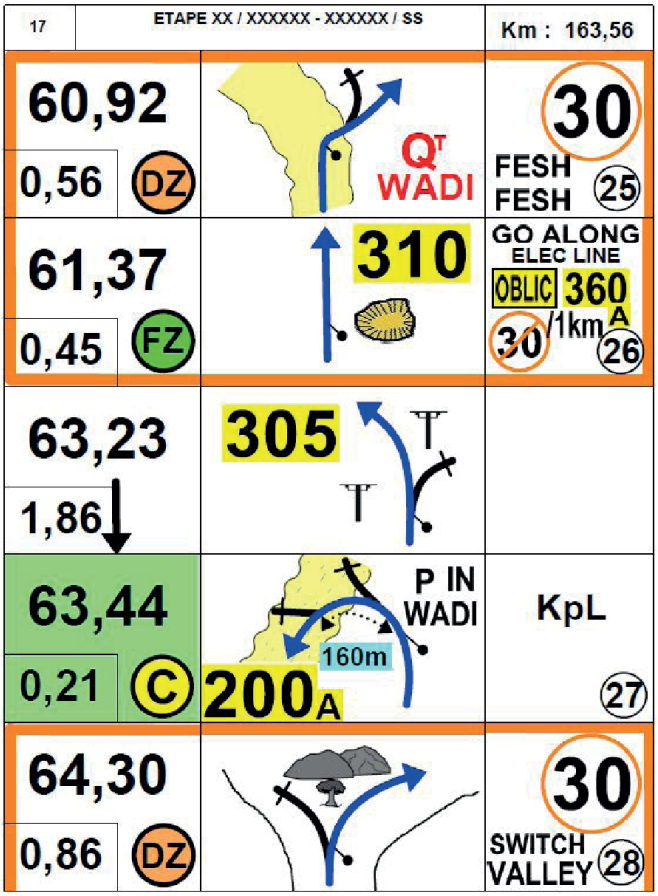


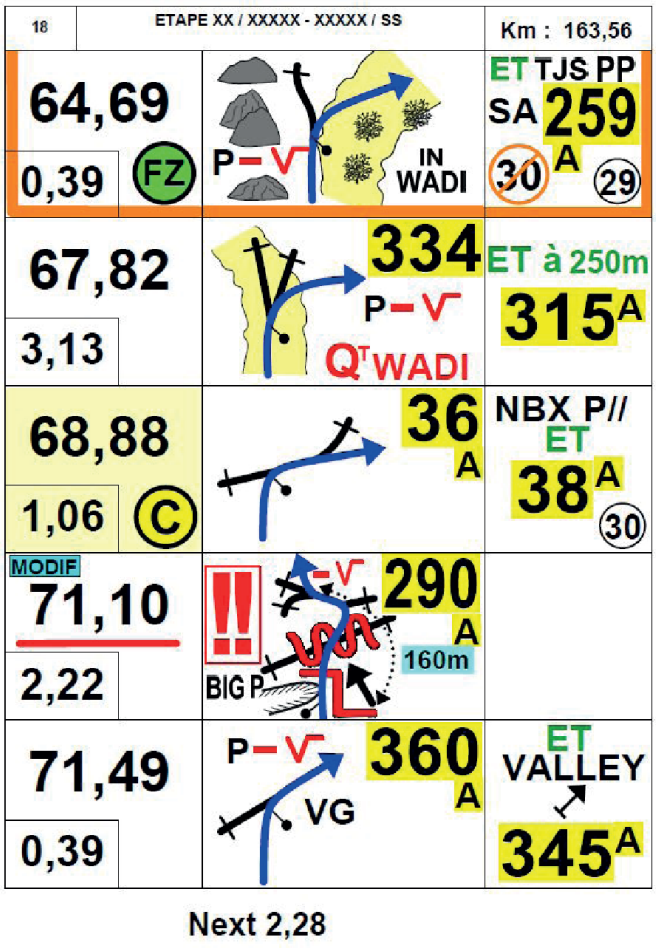
WAYPOINTS

Waypoints are a fundamental component of the Selective Sections route. Together with the road book, they contribute to a safe running of the event.

The various types of waypoints should be chosen as a combination of testing the navigation skills of the crews, along with ensuring appropriate safety. The choice of waypoint position and types should be chosen after the trace of SS has been laid down on the map showing a clear overview of the details of the SS.

The different waypoint types are included in the CCR Sporting Regulations.





7. SAFETY SPECIFICATIONS FOR ROAD BOOK

The crew in charge of road book creation should recognise any relevant dangers on the route and have a good knowledge of how to communicate this information to the competitors by way of a safe road book.

The correct usage of Speed Control Zones, Neutralisation Zones, Transfer Zones and Passage Controls is crucial when creating a safe road book.

For example, when using a road open to normal traffic, it is more appropriate to set up a Transfer Zone rather than Speed Control Zone.

Another key element in making a SS safe is the correct use of all waypoints (position and type, other than WPS) should be graded due to their danger level. As an example, DZ points should take into account the braking tolerance in order to establish the point where competitors will actually have to reduce their speed.

Use waypoints danger level indication (!, !!, !!!) as detailed in the CCR Sporting Regulations.

8. ROUTE OPENING

Another key element in determining the safe running of the event is the route opening activity. This activity is mandatory for all FIA W2RC competitions and strongly recommended for any other Cross-Country Rally.

As per the FIA Cross-Country Sporting Regulations, the race convoy transit will be preceded by the passage of the route opening team.

While in Bajas, it is the sole organiser's responsibility to carry out the opening of the route and the dissemination of information to the crews. This activity will be performed by the Official Opening Car for FIA W2RC events.

The primary task of the Official Opening Car is to check road book and the waypoints in order to improve safety for all competitors. As the road book is usually drawn months before the running of the race, many changes in conditions of the course could have happened. Therefore,

the opening crew will travel the route in advance and amend or add to the provided route notes, modify the route, or, in certain circumstances, recommend the cancellation of a Selective Section.

The organiser will provide its usual opening car that will cover the entire rout following the Official Opening Car under the control of the Delegates.

The Official Opening Car will be fitted at least with the following equipment:

- Improved suspension;
- Tires of a type used by the competitors;
- A minimum of 2 spare wheels;
- A set of spare parts;
- A tool kit;
- Replacement fluids;
- 4 sand ladders;
- 2 sand shovels;
- Straps and shackles;
- Air pump;
- Tire pressure gauge;
- First-aid medical kit and appropriate medicines.

The following navigation equipment must be fitted:

- NAV-GPS as used in the event, downloaded with the points given to the competitors (fixed to the dashboard);
- repeaters for the driver, one displaying the heading and one the distance;
- GPS Tripmeter (fixed to the dashboard).

The following communication equipment must be fitted:

- 1 VHF set + 1 spare for liaison between the Official Opening Car and the organiser's car. A channel, which is not the main Rally Control frequency, must be available for such use;
- 1 system for sending route modifications to Rally Control;
- 1 satellite telephone (e.g.Iridium);
- 1 Tracking System monitored by the organiser, the same as that used by the competitors.

The organiser's car must be equipped with the following equipment only:

- 1 NAV-GPS downloaded with the points given to the competitors +1 identical one as a spare + 1 spare aerial;
- 1 Tripmeter;
- 1 VHF set (liaison with Offcial FIA Opening Car);
- 1 satellite telephone (e.g. Iridium).

At the end of each day, the crew of the Opening Car and the crew of the organiser's car must meet and confirm all changes to be made. The Delegate will submit all changes in A5 format or in digital form to Rally HQ, therefore a good communication channel needs to be

established between Opening Cars and Race Control.

During the event, briefings held for the following stage must include opening notes coming from the opening crews and must be made available to competitors both live at Bivouac/Service Park and by digital or paper means of communication (e.g. Sportity).

A suggested practice is to record the live briefing in video format and upload it for competitors unable to attend.

If a digital road book is in use, the organiser must include all opening notes prior to the daily road book issue.

9. MEDICAL AND RESCUE SERVICES FOR INTERNATIONAL CROSS-COUNTRY RALLIES AND BAJAS

As per Appendix H of the ISC, Medical Intervention Vehicles (MIVs) (number has to be defined according to the route and the number of helicopters), must be positioned at medical points, start and intermediary points. Their purpose is to transport the MIV team to the site of an accident within as short a time as possible. The team should comprise at least one doctor proficient in resuscitation and experienced in the pre-hospital treatment of accident victims, a driver and a paramedic. The driver may be the doctor, the rescue chief or the paramedic.

For avoidance of doubt, the role of Rescue Chief may be performed by an appropriately skilled and experienced doctor/paramedic or intervention vehicle driver. Where this is the case, the nomination and accreditation process for rescue team leaders must be in accordance with Supplement 2 (Art. 6.2) of Appendix H of the ISC.

MIV's may have a specific medical use or a mixed medical use, equipped for extrication (see Supplement 7), extrication with cutting tools and/or firefighting (see Supplement 3). If the medical intervention vehicle has a specific medical use, it should carry on board:

- A fire extinguisher;
- Light extrication with cutting tools capable of cutting through rollbar tubes.

The medical vehicles should:

- Be 4-wheel drive and adapted to the terrain,
- Be in conformity with Supplement 3 with regard to the medical equipment, to deal with neurological, respiratory and cardiovascular emergencies,
- Have at least the same range as that demanded of the competitors,
- Have a sufficient reserve of water,
- Be capable of transporting an injured person in a lying position,
- Be equipped with a trip master and a GPS.
- A safety roll cage is recommended and all members of the crew are also advised to wear a helmet.

Above all, the vehicle should be adapted to the terrain. All Medical intervention vehicles should be fitted with an efficient communications system, able to transmit and receive messages. Each vehicle should have at least the following:

- 1 satellite tracking system;
- 1 VHF radio;
- 1 satellite telephone;
- A Vehicle-to-Vehicle Alarm system if the competitors' vehicles are so equipped.

Due to the type of terrains to be faced when driving to the accident scene, it is important that the driver is proficient in offroad driving techniques and has a clear understanding of the competition procedures in order to minimise the chances of exposing himself or the MIV crew to dangers.

As the majority of medical interventions at daytime is carried out by helicopters, it is advisable that at least one member of the MIVs and ambulances crew is trained on operations with MEDEVAC helicopters.

RESUSCITATION UNIT IN THE BIVOUAC

A resuscitation unit in the bivouac is necessary in all cases, it should be equipped as indicated in Appendix H and capable of treating both patients with minor injuries and patients requiring intensive care:

- In the form of a mobile unit (ambulance equipped for this purpose);
- In the form of a unit which can be dismounted for the bivouac in each stage.

A doctor proficient in resuscitation and experienced in the pre-hospital treatment of accident victims should be posted to each unit. For the bivouac, a surgeon, a radiologist and 2 paramedics are also required.

As well as the equipment listed, the bivouac, when located far from a hospital in desert country, should contain X-ray and ultrasound equipment.

The organiser should provide for a sufficient number of

"beanbags" (casualty immobiliser vacuum mattresses) to facilitate transfers and medical evacuation.

- One or more medically equipped rescue helicopters should be provided. They must be in conformity with the standards required by the aeronautical authority of the country concerned and should be equipped with an accessible stretcher properly fastened to the floor, and with a spinal immobiliser. They are likely to intervene on site in the same way as a medical intervention car. The nature and composition of their equipment are described in Appendix H. For any intervention, the presence of a doctor proficient in resuscitation, and that of a proficient paramedic, would be necessary.

MEDICALLY EQUIPPED TRANSPORT HELICOPTER OR AEROPLANE

- A medically equipped transport helicopter or aeroplane, equipped for transporting one or more casualties over long distances under intensive care should be provided; it must be in conformity with the standards required by the aeronautical authority of the country concerned. The nature and composition of its equipment are described in Appendix H. For any intervention, the presence of a doctor proficient in resuscitation and experienced in transporting patients in critical condition, and that of a proficient paramedic, would be necessary.

9.1 RECOMMENDED POSITIONING OF THE MEDICAL INTERVENTION VEHICLES

CASE 1:

On a Selective Section of which less than 200 km are covered at night by the last competitors (200 km x 50 kph = 4 hours of driving at night):

IF THERE IS ONLY ONE MEDICAL HELICOPTER (EXAMPLE 1):

- 1 medical intervention vehicle at the start of the Selective Section;
- 1 medical intervention vehicle every 80 km of the Selective Section;
- 1 medical intervention vehicle at the finish of the Selective Section, unless the finish of the Selective Section corresponds to the bivouac (= medical assistance provided by the Medical Post at the bivouac).

IF THERE ARE SEVERAL HELICOPTERS (EXAMPLE 2):

- 1 medical rescue helicopter;
- 1 medical transport helicopter at the start of the Selective Section;
- 1 medical intervention vehicle every 100 km of the Selective Section;
- 1 medical intervention vehicle or 1 medical transport helicopter (for the use of the organiser, race control, the media or others) at the finish of the Selective Section, unless the finish of the Selective Section corresponds to the bivouac;
- 1 Medical Post at the bivouac

CASE 2:

On a Selective Section of which more than 200 km are covered at night by the last competitors:

WHATEVER THE NUMBER OF HELICOPTERS (EXAMPLE 3):

- 1 medical rescue helicopter;
- 1 medical intervention vehicle or 1 medical transport helicopter at the start of the Selective Section;
- 1 medical intervention vehicle every 80 km of the Selective Section;
- 1 medical intervention vehicle or 1 medical transport helicopter at the finish of the Selective Section, unless the finish of the Selective Section corresponds to the bivouac;
- 1 Medical Post at the bivouac.

9.2 RECOMMENDATIONS FOR THE DISPATCHING OF THE RESCUE SERVICE

In the event of an accident, the Chief Medical Officer receives information from the observation teams or from a medical intervention vehicle and takes the appropriate decisions.

Sufficiently reliable means of liaison must be provided between the various elements of the medical service, the Chief Medical Officer and race control.

It is also up to the Chief Medical Officer to organise transport to the designated local hospital, for each stage, or to the medical bivouac. He also organises secondary transport to the country of origin of the injured person.

As stated in Appendix L, an incident report must be sent to medical@fia.com after each event to monitor the condition of injured crew members.

9.3 ORGANISATION OF MEDICAL INTERVENTIONS

At the scene of an accident, the organisation and directing of the medical intervention are carried out only by the doctor whom the organiser has designated for this purpose. The medical personnel should be familiar with and trained in the correct use of equipment stored on board their medical intervention vehicle.

10. MEDICAL CENTRE AT THE BIVOUAC AND FIELD EMERGENCY CENTRE

The Medical Centre at the Bivouac is important for treating locally and in an immediate manner, the crews and organisational personnel needing medical assistance.

It is recommended to include the following areas with appropriate personnel and equipment:

- Non-urgent treatment room;
- Emergency treatment room;
- Secure area for drugs.

The aim for such medical centres is to stabilise and transport patients who need specialist care beyond the resource available to the nearest hospital for more specific treatment. Therefore, the availability of a dedicated heli pad and, where feasible, the proximity of a runway to operate fixed wing aircrafts for longer range transport is ideal.

For Selective Sections far from the bivouac or from existing hospitals, a field emergency centre can be set up with essential services in order to quickly stabilise patients before transporting them to the bivouac or the designated hospital.

11. ORGANISER SWEEPER CAR / TRUCK

The role of Sweeper Car / Truck in Cross-Country Rallies is very important, as this vehicle starts the Selective Section after the last competition vehicle has left the starting line. Moreover, given the limited support available from helicopters at night, the work of the Sweeper crews becomes crucial after sundown.

The operation of Sweeper crews can either be carried out by an off road-rated truck or pairs of double cab pick-up lighter trucks, in order to maintain a minimum loading capacity. Even though the Sweeper vehicles may also recover retired vehicles, their absolute priority will always be on people rescue and recovery.

The equipment and preparation of the Sweeper vehicles should be similar to the ones allocated for Route Opening duties (see paragraph 2.8).

As the duties and functions of the Sweeper crews dictate their slower driving speed, (e.g., waiting for competitors carrying out mechanical repairs) this ultimately leads to longer times spent on the Selective Sections. Therefore, it is advisable that some crews may have at least one stage interval between its deployments (e.g. crew A is in charge of Selective Section 1 and 4, B will be on 2 and 5, C on 3 and 6).

It is also advisable that for longer Selective Sections, more than one Sweeper crew is provided (e.g. entering the Selective Section from the end of a Neutralisation or

Transfer Zone) in order to minimise the waiting time for the Sweeper to reach stopped competitors.

Ideally, the sweeper car should be able to monitor all vehicles via a tracking device or a tablet to effectively carry out its duty.

As a standard operation routine, Sweepers will follow the Selective Section course. If Race Control acknowledges that any competitor has stopped far from the intended course, it must inform the Sweeper crew by passing them the coordinates of the vehicle.

Also, if no vehicle has stopped on a certain part of a Selective Section, the Sweeper crew can be instructed to take shortcuts whenever available.

For every competitor stopped on the Selective Section, it is important that Sweeper crews visit them in order to assess their condition and make formally clear (e.g., signing a liability waiver) that after their passage no other assistance will be provided by the Organiser and leave a pack of survival supplies. As a further consideration, it is relevant to point out that the safest approach towards stopped crews is always to evacuate them as assistance crews coming to recover them could come across any kind of issue. Therefore, it is important that at least one of the Sweeper crew members has good communication skills to try persuade competitors to evacuate at that moment.

12. HELICOPTERS

The airspace over the Selective Sections on certain Cross-Country Rallies can be busy with various helicopters carrying out tasks such as: event safety, MEDEVAC, Race Control and Television. The purpose of establishing standard helicopter regulations for events is to create a safe flying environment for all helicopters. In particular, it is necessary to prioritise the role of the Race Control and Medical helicopters. Each Organiser of an event where helicopters are being operated is advised to appoint "Helicopter Coordinator".

Given the importance of helicopter rescue and surveillance in Cross-Country Rallies, the helicopter movements relevant to the event, should be coordinated exclusively by Race Control in accordance with local authorities.

12.1 SELECTIVE SECTION LANDING AREAS

On Selective Section courses with limited helicopter landing zones (e.g., inside forests), it is best practice to establish a list of suitable and safe landing sites for all registered helicopters within walking distance of the competition course, and to obtain the proper permissions for use where necessary.

The areas should be ideally identified at the same time the road book is created and the helicopter coordinator will provide a map and details of those areas to all pilots.

These points should be shared with MIV drivers. The CMO should always know how MIVs need to be directed to rendezvous points when patients need to be transported to hospitals.

12.2 HELICOPTER LANDING AREAS AT BIVOUACS/SERVICE PARKS

Only helicopters registered with the Rally Organisers will be permitted to land at Bivouacs, Service Parks or other organiser sites.

The layout of the helicopter landing area, and the rules for landing, will vary according to the space available. There should always be space for all helicopters to land either next to or within 1 km of a Bivouac.

Fire cover and fuel provision will be arranged, and compliance with local law and regulations respected.

12.3 HELICOPTER SPECTATOR SAFETY CONTROL

The race control helicopter should be used like a 0 car, ideally flying above the stage ahead of the first competitor and equipped with a loudspeaker to warn spectators in crowded areas, especially around crossing points, access points, and the finish. This applies to 'Open' type SS, as after the last bike, the corridor is narrow, and cars arrive at full speed.

For Baja on 'Track' type SS, separate safety SSVs can be deployed from multiple points along the stage to warn spectators of approaching cars, effectively performing the role of a 0 car with multiple vehicles due to the length of the SS.

13. TRACKING SYSTEM AND COMMUNICATIONS WITH THE CREWS DURING THE RACE

Tracking systems are one of the pillars of the safety system of any Cross-Country Event. Currently many different systems and providers are available. Even though few differences may be found between them, a common set of functions is standard.

As per Appendix H, both a safety/search satellite system and a Vehicle-to-Vehicle Alarm System should be imposed on the competitors.

The safety/search satellite system (also referred to as satellite tracking system) should feature real-time transmission of the vehicle position. It should be powered as standard from external power with dedicated wiring from vehicle battery, with an internal battery acting as a backup.

Additionally, it should be ideally fitted and programmed with the following features:

- A list of pre-programmed messages to send that the competitor can choose between in order to alert the Race Control (specific message types based on race venue or other peculiarities should be agreed well before between the organiser and the system provided and competitors be briefed on the whole message list);
- One RESCUE/SOS red button to be pushed in order to request urgent medical assistance either for the competitor calling or any other person in danger;
- One AUX/MECHANICAL green button to inform Race Control that the vehicle is stopped for non-critical issues (mechanical, stuck), this button to be pressed also in case of stopping to help another competitor with the collateral purpose of giving the Stewards a stop time to be possibly deducted;
- One CALL/PHONE button to make voice contact with Race Control over satellite network;
- One SENDING led light or message on screen stating that any message or alarm has been correctly sent to Race Control;
- One ACK/ROGER led light or message on screen stating that any message or alarm has been received by Race Control;
- One CALL/MESSAGE led light or message on screen stating that a message or call is being incoming from by Race Control;
- One POWER led light to display power status (external power or internal battery);
- One STATUS led light to display the signal coverage status;
- One accelerometer with gyroscope to automatically detect high negative G shocks and roll over crashes and send alarms to Race Control accordingly;
- Speakers and microphone in order to allow voice calls to be made.

The satellite tracking system should also be fitted on all vehicles accessing the Selective Section's course.

The Vehicle-to-Vehicle Alarm System is the key element to avoid collisions between competitors. It should be fitted on all competitors and organisation vehicles and be powered as standard from external power with dedicated wiring from vehicle battery, with an internal battery acting as a backup. It must be fitted with a buzzer to emit a clear and loud sound when vehicles are approaching each other in order to give enough time to make corrections to avoid collisions, with a flash to provide visual alert accordingly.

Two external remote buttons must also be included in the system:

- One button for emergency in order to signal to other competitors the stopping of the vehicle in a dangerous position;
- One button for overtake in order to signal in a radius of least 150 m the imminent overtake by another

They should have an internal memory storing all collision alerts in order to support any investigation by the Stewards in case of a collision happening.

Another communication system for all competitors to be used as an extrema ratio in case of failure or loss of power by the tracking system is the distress beacon. It should be complying with the technical standard for Personal Locator Beacon transmitting on the 406 MHz COSPAS-SARSAT frequency. Since its alarm may be handled by a third party it is suggestable that a strong communication link is set up with such agent in order to minimise any forwarding delay.

As per Appendix IX of CCR Sporting Regulations, the GPS system used to monitor the respect of race course should have a function to identify wrong way driving and immediately alert the driver.

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The FIA Road Sports Department and members of the Cross-Country Rally Commission