



FEDERATION INTERNATIONALE DE L' AUTOMOBILE

Rally Safety Guidelines

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INTRODUCTION

One of the greatest challenges for the sport of motor rallying is to ensure the safety of the public.

Unfortunately, the majority of the watching public do not clearly understand the potential dangers and are unable to comprehend the speed of the cars. As a consequence they frequently place themselves in dangerous positions simply through lack of understanding.

It is our responsibility to ensure that spectators are placed in acceptable locations and are clearly aware of the dangers if a car should get out of control.

The possibility of injury to spectators, volunteers, officials or media is not acceptable.

Traditionally, our sport has well-established safety plans with many excellent examples; however, they do not all sufficiently take into account the special needs of spectator safety, and this booklet is targeted at identifying the special attention that is necessary to ensure that spectators are in an acceptable location. By doing this we will in fact contribute to the improved safety of the competitors.

STANDARD OF SAFETY PLAN

A safety plan must be drawn up and include:

- The location of the Rally Headquarters (Rally Control);
- The names of the various people in charge:
 - Clerk of the Course;
 - Deputy clerks of the course;
 - Chief medical officer (FIA approval required for World Championship events in accordance with Supplement 2 of the appendix H);
 - Chief safety officer;
 - Safety officers in each special stage.
- The addresses and telephone numbers of the various safety services:
 - Police,
 - Hospitals,
 - Emergency medical services,
 - Fire-fighting services,
 - Breakdown services,

- Red Cross (or equivalent).
- The full itinerary with detailed road sections.
- The safety plan for each special stage, which should list all key officials, emergency services for that stage, telephone numbers, etc., plus a detailed map of the special stage.
- The organisers and the clerk of the course should make provision for an alternative route for each special stage, to be used in the event of cancellation as above.
- For WRC events, see also the WRC regulations specifying deadlines for submitting to the FIA the safety plan and medical questionnaire and arrangements with the designated hospitals.

The safety plan specifically addresses issues in each of the following areas:

- safety of the public,
- safety of the competing crews,
- safety of the officials of the event.

and includes:

- details of where the rescue services are stationed,
- instructions for intervention,
- evacuation routes,
- rendezvous points,
- the hospitals which have been contacted and which would be used in the event of an emergency.

In all cases, contact should be made with the local authorities or, failing this, with a private organisation, in order to draw up a rescue plan to be implemented in the event of a major incident or incidents which do not fall within the scope of the medical service on site.

The hospitals selected should be contacted in writing, no less than 16 days before the rally, requesting that the emergency services be placed on standby.

RESPONSIBILITIES

Clerk of the Course

He [NB: throughout this document, "he" implicitly includes "she"] is responsible for the safe running of the event, for taking all necessary decisions and measures and for the deployment of competent staff to assist him in drawing up and implementing the safety plan. If the case arises, he is responsible for applying the safety plan as practically as possible.

He is responsible for informing the Stewards of the Meeting of all urgent matters and, in co-operation with the Chief Safety Officer, for having all relevant information regarding emergency matters go public only through the Press Office.

Chief Safety Officer

- He participates in drawing up the safety plan.
- With the Clerk of the Course and the Stage Commander, he appoints the Start and Stop Safety officers for each stage.
- In co-operation with each Stage Commander, he prepares a plan showing the meeting points and locations of ambulance, fire and rescue teams, radio point marshals and safety marshals.
- Before the start of the event he makes sure that all personnel have a copy of the safety plan, that all personnel are properly trained, and that all responsibilities assigned to them are clear.
- On the day of the event, he checks the correct position of all safety vehicles and staff.

Chief Medical Officer

- He is responsible for the early recruitment of all doctors and paramedic teams who will support the event.
- He is responsible for the medical part of the Safety Plan, or for the Medical Safety Plan, as are the Clerk of the Course and the Safety Officer.
- He must go into all the special stages well ahead of the rally, with the Safety Officer and/or the Clerk of the Course, in a car similar to the medical intervention car to establish the right position for the start and intermediate points, and to make sure that all the medical and safety facilities will be correctly positioned in accordance with the regulations.
- He assigns to them their specific duties, informs them of the safety plan and introduces them to the Stage Commanders of the special stage they have been assigned to.
- On the day of the event he ensures that all medical personnel have met with the Stage Commanders at the specific meeting points and have been positioned at the pre-arranged locations.
- He is in constant communication with the Chief Safety Officer of the event as well as the Clerk of the Course.
- He will advise the Clerk of the Course of the seriousness of any reported incident or injury.
- He will visit hospitals and medical centres to inform medical staff to be on alert during the event.

Special Stage Commander

- It is his duty to have full knowledge of the Special Stage(s) he has been assigned to, at the earliest possible time before the event.
- He must draw up a list of the special stage necessities in accordance with the special requirements of each special stage, and therefore ask the organisers for the necessary personnel and materials to support him at the event.

- Together with the Clerk of the Course or his representative and the Chief Safety Officer of the event, he will assign the safety officers that will cooperate with him in case the safety plan needs to be followed.
- He is responsible for liaising with the Senior Officials in order to implement the spectators' areas as well as the prohibited points.
- He takes care of preparing the special stage and the proper installation of barriers and all other equipment needed for the special stage.
- He specifies the position and implements the posting of warning signs within the special stage(s) that he is responsible for and assigns the distribution of information for spectators and locals, in the area of his responsibility during reconnaissance and the event.
- It is his duty to request detailed maps of the special stages assigned to him and, together with the stage safety officer, to implement the safety plan on the map, by ensuring that all safety teams are positioned according to the prepared plan.

Special Stage Safety officers

- They are fully aware of the safety plan and have listed all equipment at their disposal during the event.
- They are in constant contact with the Special Stage Commander and the Chief Safety Officer at HQ, and the safety marshals.
- They check the emergency roads, so that in case of an accident the ambulance will not be blocked by spectators' cars.
- During the event the Start safety officer is to be found at the start of the special stage.
- He may also record the passage of each rally car and inform all radio point marshals and the Stop safety officer through the safety radio channel.

Safety Marshals

- They are positioned along the special stage.
- They report to the stage safety officer.
- They are trained properly and know exactly what their duties are (a training plan should be given to the ASN/FIA on request).
- They are equipped with whistles in order to keep spectators away from prohibited areas and inform them of the passing of rally cars.

The personnel should wear identifying tabards.

The recommended colours are:

Safety Marshals:	Orange
Safety Officer:	Orange with white stripe and text
Post Chief:	Blue with white stripe and text
Media:	Green
Stage Commander:	Red with text
Competitor Relations Officer:	Red jacket or red tabard

Medical:	White
Radio:	Yellow with blue mark
Scrutineer:	Black

PREPARING THE SPECIAL STAGE

During preparations for the stage we should recognise special danger spots for rally cars, such as a tree on a fast bend, a big drop, damaged Armco barriers, electric (telegraph) poles, narrow bridge, etc.

For protecting such places it is good to use:

- Armco barriers
- Straw bales (round bale more than 1 m in diameter is recommended)
- Concrete barriers
- Sand bank
- Wall of connected tyres
- Water tanks

CHICANES

Chicanes can be used for reducing speed before certain danger spots on a special stage, but it is the duty of the organiser to find some place where chicanes are not necessary.

All chicanes must be noted in the road book and must be in place during reconnaissance.

Chicanes should be made from:

- Straw bales
- Water tanks
- Wall of connected tyres
- Concrete barriers

During the race, a car may hit a part of or the entire chicane and leave some obstacles in the middle of the road for the next competitor.

In such a case, a marshal should stand at this place, in order to "clean" the area or at least show the yellow flag, if necessary.

08 June 2005

CHICANES PROFILE'S - RECOMMENDATION

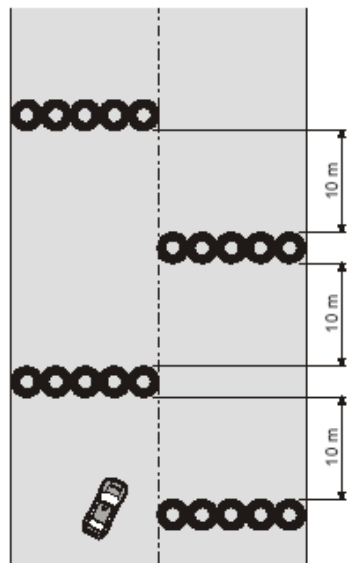


Fig. A

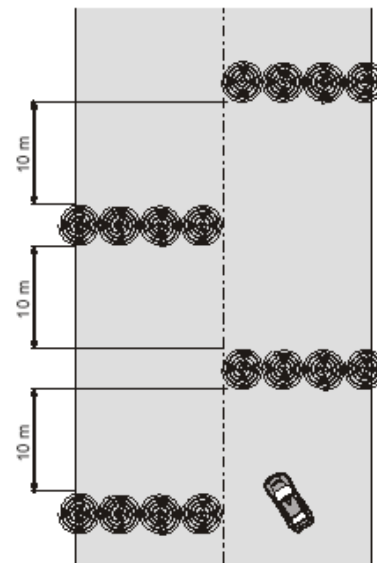


Fig. B

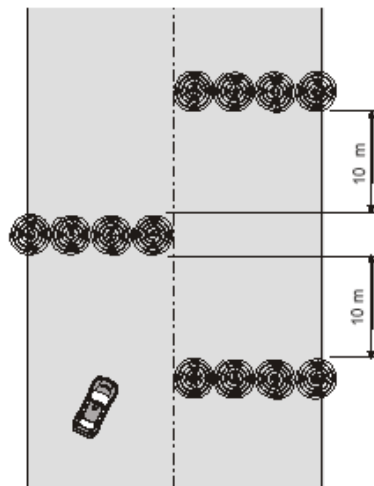


Fig. C

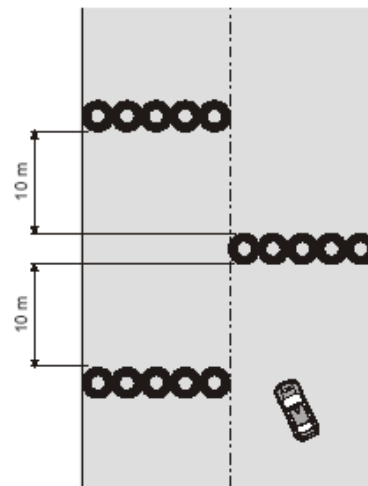


Fig. D

Jacek Bartoś - FIA WRC SAFETY

CRITERIA FOR “SPECTATOR AREAS” & “NO GO AREAS”

Why did the rally cars go off the road?

- Driver mistakes
- Too fast in a bend
- Wrong pace note
- Co-driver’s mistake
- Rally car suffered a technical failure
- Driver health problems

In reviewing a special stage it is necessary to identify those parts of the stage which signify above-normal danger risks.

These would be such locations as:

- Immediately over a brow or jump
- On sharp corners
- At a road intersection
- At a double change of direction (“S” bend)
- Medium fast bend after very fast section.

Undoubtedly there are other areas which will be immediately apparent to experienced persons on reviewing the stage.

The FIA recommends following the advice of a local very experienced driver or co-driver going through the stages in advance, identifying the danger spots.

In identifying these locations it is then necessary to identify the special needs of the safety plan to provide for these.

This will include:

- Providing run-off areas
- Identifying the high ground where spectators can stand safely
- Identifying the areas where it is dangerous for spectators to stand
- Consideration of the needs of the accredited media.

Having reviewed the whole of the stage and identified the sections which require attention and spectator safety, it is necessary to grade these points on a 1-3 scale with 1 being general safety requirements up to 3 being acute with special attention to safety.

Category 1

Low-risk sections can probably simply be managed by the placement of suitably briefed and identified marshals, tape and markers to identify the points beyond which spectators may not pass.

Category 2

Middle-risk sections where additional spectator marshals may be required. Danger signs and no go areas identified by signage, an additional barrier net and possibly

the inclusion of police authorities to ensure that the spectators obey the officials. Such areas will also recognise those locations where run-off areas are required for competitors' cars.

Category 3

Highly dangerous areas. These positions will be identified by:

- Major changes in direction
- "S" bends
- Over jumps where cars could lose control on landing and leave the road.
- Medium fast bend after very fast section.

All category 3 sections need to be identified as no go sections except for high ground above the stage.

Speed	Low speed	Mid speed	High speed
height of verge	1m	2m-3m	More than 3m

Obviously all of the above will be related to the number of spectators attending. In many situations the positions described above will generally not be accessible to spectators and as a consequence no special attention will be required.

The success of the plan is to be able to manage and control the spectators. The best way to achieve this is to be there before them.

Be early and place the spectators where you want them.

Use your previous experience to know the popular viewing points and be in position ahead of the crowd.

SPECIAL PRECAUTIONS DURING THE RUNNING OF STAGES

1. Access of spectators to Stages should be recommended only in spectators' zones.
2. Emergency roads should be guarded by police officers and security guards, from the point where they join the main roads leading to the stages.
3. All access roads should be indicated with special signs and extra information.
4. All pre-planned access roads should be announced in the official programme, in special informative leaflets and on the website. Simple road book signs should be included to guide all spectators from main roads towards the proper parking areas and the designated spectators' zones.
5. Where possible, media parking areas should be organised near the photographers' areas. Special marshals should be available to assist photographers and prevent spectators from approaching these venues.
6. Spectators' zones should be marked out with fences, signs and tape. Where possible, these zones should be far from the road, in order to keep spectators in safe places.

The implementation of the plan needs to be considered in two parts:

- Identification and grading of the danger of spectator locations
- Training the spectator marshals.

ACCIDENT PROCEDURE FOR RALLY CREWS AND MARSHALS

Whilst nobody likes to believe that there will be an accident which will involve spectators or competitors, it is prudent to plan for such an eventuality.

This plan will consist in:

- Reviewing the location of the spectator viewing points
- Identifying the access to reach these points from outside the stage
- Identifying the nearest medical services/hospital.

Determine the course of action that is to be undertaken in case of an accident, at each of the independent viewing points. It is probable that the plan will vary at different points of the stage, and in some cases the plan may provide for shutting down the stage and sending emergency services through the stage as being the quickest and most efficient way.

In preparing the accident plan, each of the spectator viewing points needs to be identified by either letter or number, so that in the event of an accident the location can be very quickly established by the officials in charge.

A further aspect to consider is keeping the access road clear to ensure that medical assistance can easily reach the viewing point. This may need additional marshals and even a separate access plan.

PROCEDURE IN CASE OF AN INCIDENT

All medical and safety crews report to the Stage Commander.

As soon as the stage commander has received information that an incident has occurred, he informs HQ.

Should a serious accident be reported, the Stage Commander should let the stage safety officer interrupt the starting procedure after informing the Clerk of the Course and receiving his permission to interrupt the starting procedure and implement the yellow flag procedure.

The following procedure will take place:

1. He interrupts the special stage and notifies by radio that the stage has been interrupted.
2. A radio point marshal, a safety marshal or a rider who is closer to the scene of the accident may be instructed to proceed in order to reach the spot as soon as possible and to give a more accurate report and/or provide first aid, depending on the case.
3. In the meantime, rally control will make all necessary contacts with the Rescue Helicopter to fly towards the scene.

4. He instructs rescue vehicles to enter the stage and drive to the scene without waiting for rally cars, already in the stage, to pass from the point where rescue vehicles are positioned.

Rescue vehicles always drive in the direction of the rally.

If the Stage Safety Officer is informed that, apart from medical aid, further assistance is required, he will instruct the FIV or rescue vehicle and/or the other safety vehicles to proceed to the scene.

5. He orders the radio point marshals, up to the point of the incident, to display yellow flags.

Displaying yellow flags advises competitors that there are emergency vehicles ahead of them and that they must reduce speed. If they catch up with these vehicles, they must not overtake them.

6. Any car that receives the yellow flag will be recorded from the radio point marshal so as to inform Rally Control, when asked.
7. Since there may be competing cars following, as soon as the emergency vehicles arrive, their crews will:
 - place a warning triangle before the location of the accident,
 - park their vehicles in such a way as to protect the car involved in the accident,
 - report the situation to the Chief Safety Officer at Rally Control. In case of injury the doctor will decide whether the injured is/are in need of hospitalisation. Depending on how severe the injury is, he will decide upon the means of transportation, be it by ambulance or helicopter which has already arrived on the scene.

If it is decided that the removal of casualties will be carried out by ambulance, the removal will take place either through the finish of the special stage or from an emergency exit, which has been agreed in advance and mentioned in the stage safety plan. The direction to be followed is that of the rally route.

CRITERIA FOR SAFETY INSPECTION

The inspectors may:

- recommend that the stage be not included in the itinerary;
- record measures intended to help prevent an accident during the rally, which have been agreed upon with the organiser during the inspection;
- request the organiser to propose measures intended to help prevent or lessen the severity of an accident.

After visiting the stage, the inspectors will submit a written report to the Chairman of the Rally Safety Working Group or the ASN representative.

CONSEQUENCES OF AN INSPECTION

An inspection report or the inclusion of any stage in an event in no way guarantees or implies that a stage can be considered safe.

After an inspection report is officially sent, the rally concerned will have a maximum of three weeks to reply giving any comment on the said report. In the absence of any comment, the report will be considered as final. If, however, after this three-week period there remains a persistent disagreement between the inspectors and the Rally concerned, the Safety Commission will settle the matter.

DUTY OF ORGANISER'S SAFETY CARS (A, B, C, INFO, "000, 00, 0" AND SWEEPER)

One of the biggest problems in setting up a stage prior to its running is ensuring that you are set up well ahead of the arrival of the spectators. There is no point in setting up this stage after the spectators have arrived, as it will be difficult to get them to move into the correct position. Your programming for the running of the stage needs to identify a time at which the Chief Stage Marshal ventures through the stage to check that it is set out and, if necessary, inform the Post Chief of further requirements. On very long stages it is possible that an Assistant will also check part of the stage, such that one official checks the first half and the second official, at the same time, checks the second half. This will allow the check to be carried out at a later time after more spectators have arrived.

When moving through the stage, ensure that all sections are set up in accordance with the safety plan. Remember that this plan has been prepared after careful consideration and it should not be easily dispensed with. At the time of viewing the stage it is probable that many spectators will have arrived, and this will give you the opportunity to review it and ensure that the plan that you have put in place is satisfactory.

Remember, a car that is out of control can travel a long distance. Ensure that spectators are kept well back at dangerous points. Obviously, the high ground is the place to be.

SAFETY CARS

The safety cars drive through the special stages before the rally cars, in order to check the readiness and safety of special stages, controls, and the correct positioning of spectators.

1. Safety Inspection Car "C, B, A" (Info 1, 2, 3)

The Safety Inspection Cars should run each special stage following a planned timetable between 1.5 hours and 50 minutes before the first car's scheduled time at the TC. Their role is to track possible route problems. They check the closing of all junctions and the correct signposting in all prohibited areas. They should be equipped with radio and mobile phone.

2. Road Closing Car "000" (or the last Safety car)

The 000 safety car should drive through each special stage between 50 and 40 minutes before the first rally car is due. Its role is to check whether all warning signs, radio point marshals and safety marshals are in place. It should inform Rally Control of the stage's readiness.

It should be equipped with a loudspeaker, flashing roof lights and sirens, radio and mobile telephone.

3. Road Closing Car "00"

The 00 car, driven by an experienced rally driver, should run each special stage following a planned timetable between 40 and 30 minutes before the first car is due, according to the length and particulars of each special stage. It should provide a further check of spectator safety and, with the use of loudspeakers, should also guide spectators to safe viewing places.

It should be equipped with a loudspeaker, flashing roof lights and sirens, radio and mobile telephone.

4. Road Closing Car "0"

The 0 car, driven by an experienced rally crew, should run each special stage following a scheduled timetable between 20 and 10 minutes before the first car is due to start, according to the length and particulars of each special stage.

Final check of the stage and final warning that the special stage is about to start.

It should be equipped with flashing roof lights, sirens, radio and mobile telephone.

The 0 car is not competing in the Rally as such, but is the last safety car before the first car to arrive. It must not be driven at the maximum capability of the car and the driver.

5. Sweepers

"Sweeping" vehicles should run all special stages after the last competing car, checking any immobilised car within the stage. They report to the Chief Safety Officer at Rally Control regarding the situation and condition of each case. Necessary actions should be taken over by Rally Control. They collect all lists from controls and radio point marshals.

No stage controls should close unless informed by the sweeping vehicle that it has completed the stage. The authorisation to close is given by the Clerk of the Course.

6. The 000, 00 and 0 cars report by radio the moment they start and finish each Special Stage.
7. The 00 and 0 car drivers should use time cards in order to ensure full familiarity by all timekeepers.
8. Vehicles in reserve should be available at each special stage start to function as a road closing 0 car should a stage be delayed or stopped for any reason whatsoever.

(see the check list in Appendix Two)

MEDIA

The journalists/photographers are issued with official tabards and passes which authorise them to move outside the areas which have been set aside for the special stage. This of course is to enable them to obtain clear action photographs; however, at no time can the photographers place themselves in a position which is a danger to them or to the competitors.

No special viewing position is necessary for journalists.

If the Senior Marshal considers that the photographer is in a dangerous location, then he must ask the photographer to move to a safe location. Be firm and calm and do not enter into a situation of confrontation.

Ensure that the photographer is clearly identifiable to the public so that they realise why and on what authority he is standing in an area where they are not allowed to go.

Ensure that all officials and particularly the senior marshal at each location is fully briefed as to on what authority he is standing in an area where they are not allowed to go.

The issuing of an identification sheet showing the various credentials is helpful to ensure that the officials assist the media where practical.

In certain cases it may be necessary to publish a special plan showing detailed arrangements for the media.

Media safety and identification

1. It is acknowledged that the media play an important role in rallies, and each member of the working media must be permitted to carry out his or her work in the best possible conditions.
2. However, the media are not exempt from having to respect general safety rules. In general, this should not interfere with their ability to perform their duties. However, if a choice has to be made between carrying out their work and being exposed to an unacceptable level of risk, safety must always take precedence.
3. As far as safety-related matters are concerned, the media will be divided into two groups:
 - TV, Cinemas and Photo (and support, e.g. equipment, etc.)
 - Journalists, radio reporters and other media

Each group will be identified as follows:

- Numbered tabards issued by the FIA
 - Media passes, with a number and the name of the publication
 - Organisers' media passes must on no account be issued to journalists, photographers or other representatives of the media who hold permanent FIA passes.
4. Only media representatives wearing a tabard will be permitted in those areas on the route of the special stages to which spectators are not normally admitted. All other members of the media must conform to normal spectator standards, except for interview areas, media centres, etc.

Any person wearing a tabard must ensure that it is clearly visible at all times, and is not covered by any other garment.

5. If, in the opinion of a safety marshal or the FIA safety delegate, a wearer of a tabard is located in an area of danger, he or she will be asked to move to a safe location. If this instruction is not complied with, a senior official of the event may request the person concerned to move to a safe place. If this instruction is again ignored, the official in charge will immediately submit a report to the Clerk of the Course and the stewards. A copy of this report must be sent to the Media Delegate.

CRITERIA FOR GPS TRACKING SYSTEM

Criteria for Radio SOS Points (Organiser's Tracking System)

At each stage, radio points must be situated at intervals of approximately 5 km.

During reconnaissance, a sign bearing the radio point symbol must be displayed at the location of each radio point. This sign may be smaller but must be clearly visible to crews performing reconnaissance in order that the location may be noted in their pace notes.

A radio network (set up approximately every 5 km), unique to each special stage, should be established to allow the vehicles to be tracked and the running of the rally to be supervised.

Each radio point shall be identified in the road book and by a sign at least 70 cm in diameter, bearing the radio point symbol, a black spark on a blue background.

Any ambulance within a stage shall be located at a radio point. An additional sign (red or green cross on a blue background) should be located beneath the radio point sign at this point.

In addition there should be warning signs 100 m to 200 m prior to the SOS radio and medical points, with the same designs as above but on a yellow background.

The tracking of vehicles must be carried out either at rally headquarters (rally control) or by the special stage safety officer on the special stage. Some form of tracking chart should be used, either on the special stage by the special stage safety officer or at rally headquarters. Each organiser must design, and show in the safety plan, this procedure for tracking vehicles and must also list the procedures to be followed in the event of a missing competitor.

In case of incidents concerning spectator safety and control, the marshals must cooperate with the public services as laid down in the overall plan, by reporting to rally control any incidents or accidents and allowing the security service to make use of the means of communication at the post.

Two marshals are needed to handle the point – one must be equipped with a yellow vest with the symbol of the radio point and yellow flag in accordance with the FIA flag code. The marshals must be positioned in a safe place with the best possible view of the rally cars.

It is advisable that this point be located close to escape routes or in the vicinity of particularly dangerous spots.

Radio Point Marshals:

- They are responsible for their sector.
- They are in position well before spectators arrive and they prevent them from entering forbidden areas. They check communication with the safety officers of the special stage and Rally headquarters.
- In a polite manner they inform spectators that the special stage will be run only if they follow their instructions to stand in the recommended areas.
- They inform their stage commander about the number of spectators and decide if more support personnel are needed.
- Once all safety precautions have been met and everybody is in position, they inform Rally HQ accordingly.
- During the running of the stage, they stay next to their radio and follow the announcement of each car starting the special stage. They record cars passing in front of them. If a car is missing, they immediately inform the safety officer of the stage and wait for instructions.
- They co-operate with the safety marshals positioned before and after them to alert spectators to approaching rally cars by means of whistles.
- They will display the yellow flag only on the instructions of the clerk of the course.
- They check that there are no cars parked next to the road in a special stage and, if there are, they remove them before the stage starts.

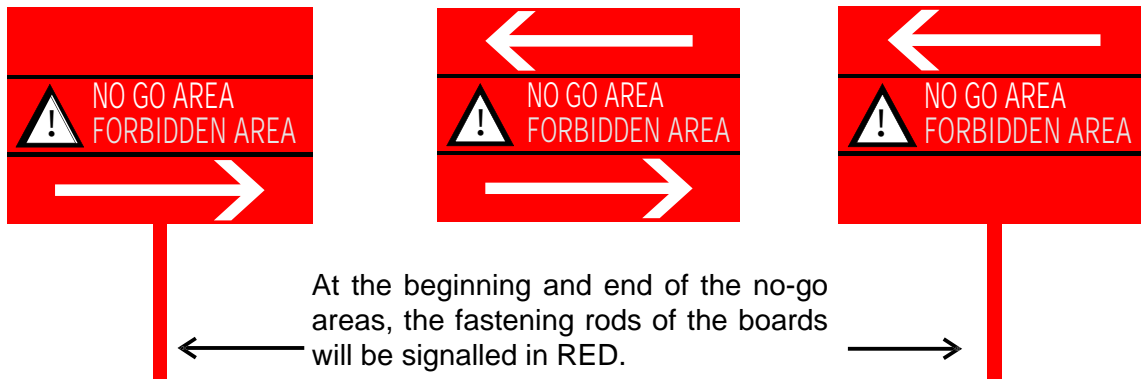
Yellow Flag Procedure

Should the use of yellow flags be required, the following procedure is to be adopted:

- a. A yellow flag must be available at each stage radio point (situated at intervals of approximately 5 km).
- b. The yellow flag will be displayed to crews only on the instructions of the clerk of the course and only at the radio points.
- c. The flags may only be displayed by a marshal wearing a distinctive jacket as recommended in 5.2.6 of Appendix H, and on which is marked the radio point symbol. The time of deployment of the flag will be recorded and notified to the stewards by the clerk of the course.
- d. During reconnaissance, a sign bearing the symbol specified in 5.5.4.4 of Appendix H must be displayed at the location of each radio point. This sign may be smaller but must be clearly visible to crews performing reconnaissance in order that the location may be noted in their pace notes.
- e. On passing a displayed yellow flag, the driver must immediately reduce speed, maintain this reduced speed until the end of the special stage, and follow the instructions of any marshals or safety car drivers he encounters. Flags will be displayed at all radio points preceding the incident. Failure to comply with this rule will entail a penalty at the discretion of the stewards.
- f. No flag other than the yellow flag may be deployed in a special stage.
- g. Different signalling systems (e.g. flashing lights) may be used in super special stages. Full details must be included in the Supplementary Regulations.

NO-GO AREAS

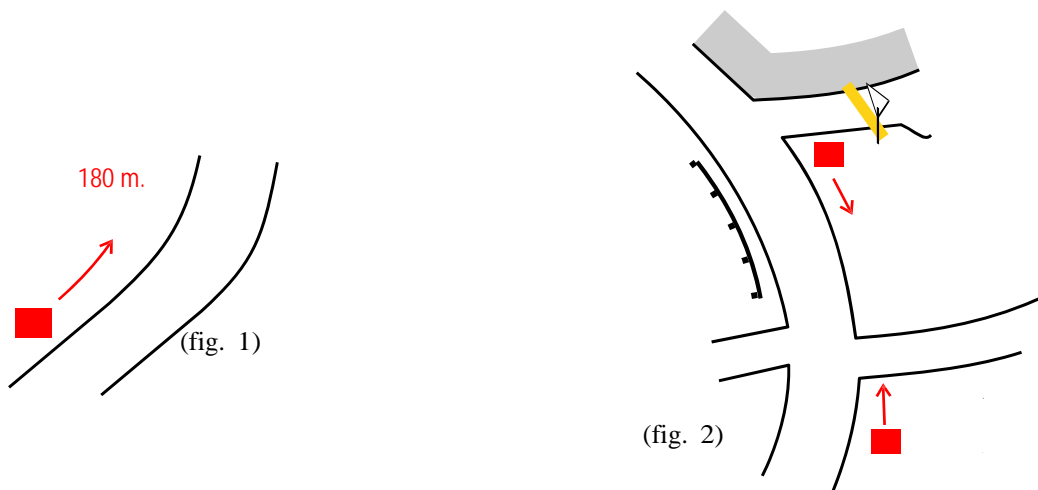
All NO-GO AREAS must always be marked in RED (signs or tapes).
Signs are recommended.

RED SIGNS:

These signs will be located every 8-10 metres.

Only the area with the first sign will be marked on the drawing and the number of signs will be determined by the total number of metres indicated after the red arrow. (fig. 1)

When there are no metres indicated, there will be two arrows between two specific points. The respective red signs will be placed between these two points. (fig. 2)



The physical location of the signs will not necessarily follow a specific design, but the following priorities will be respected:

- 1st On signs, trees, poles, etc.
- 2nd On guardrails
- 3rd As a last option, on pegs

SPECTATOR AREAS**ALLOWED AREAS:**  (fig. 3)

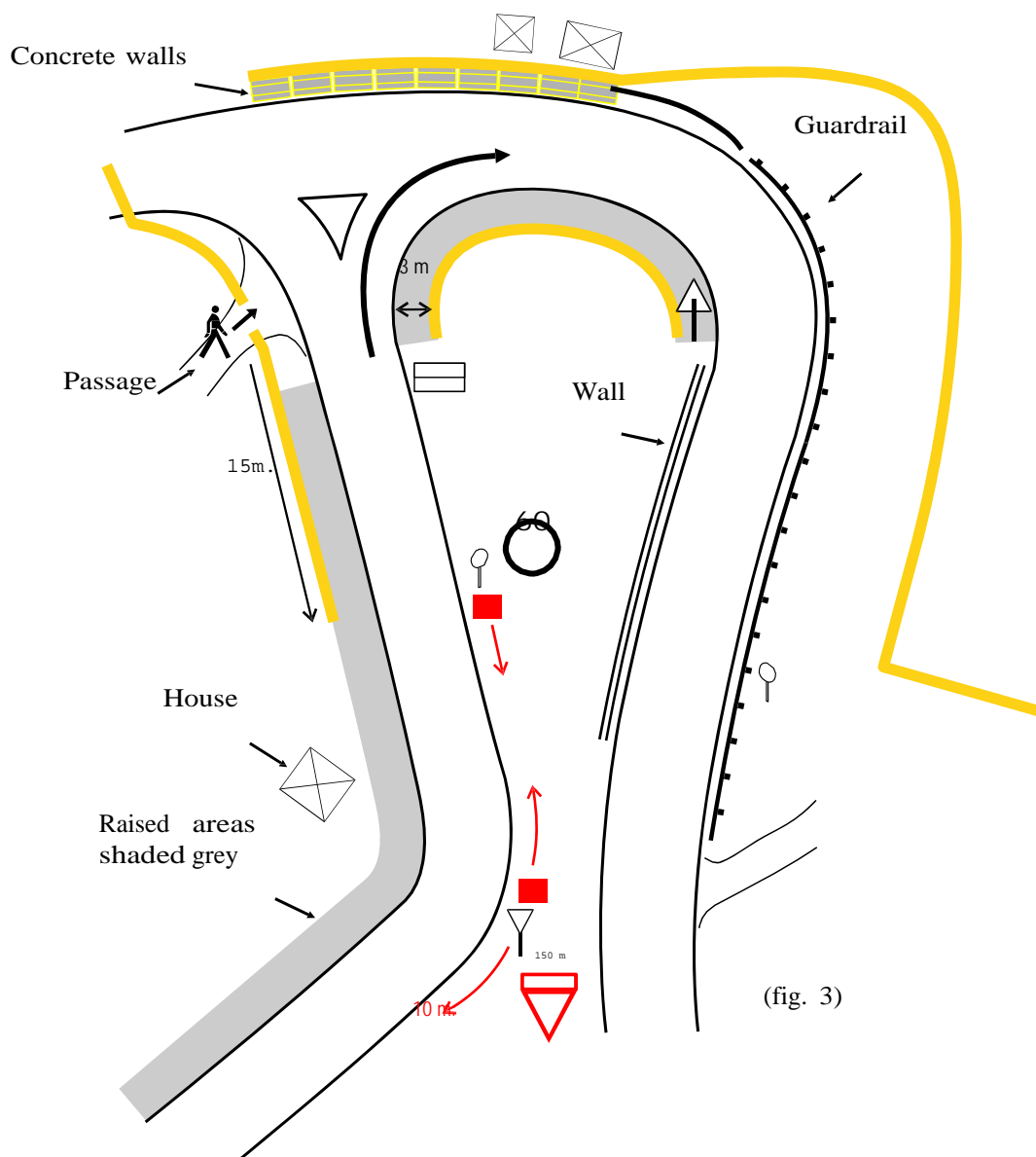
Indicate with yellow or green if possible (but no RED) (tape or polymesh fencing) delimiting the area in which spectators are allowed to be. The same colour must be used for the whole event.

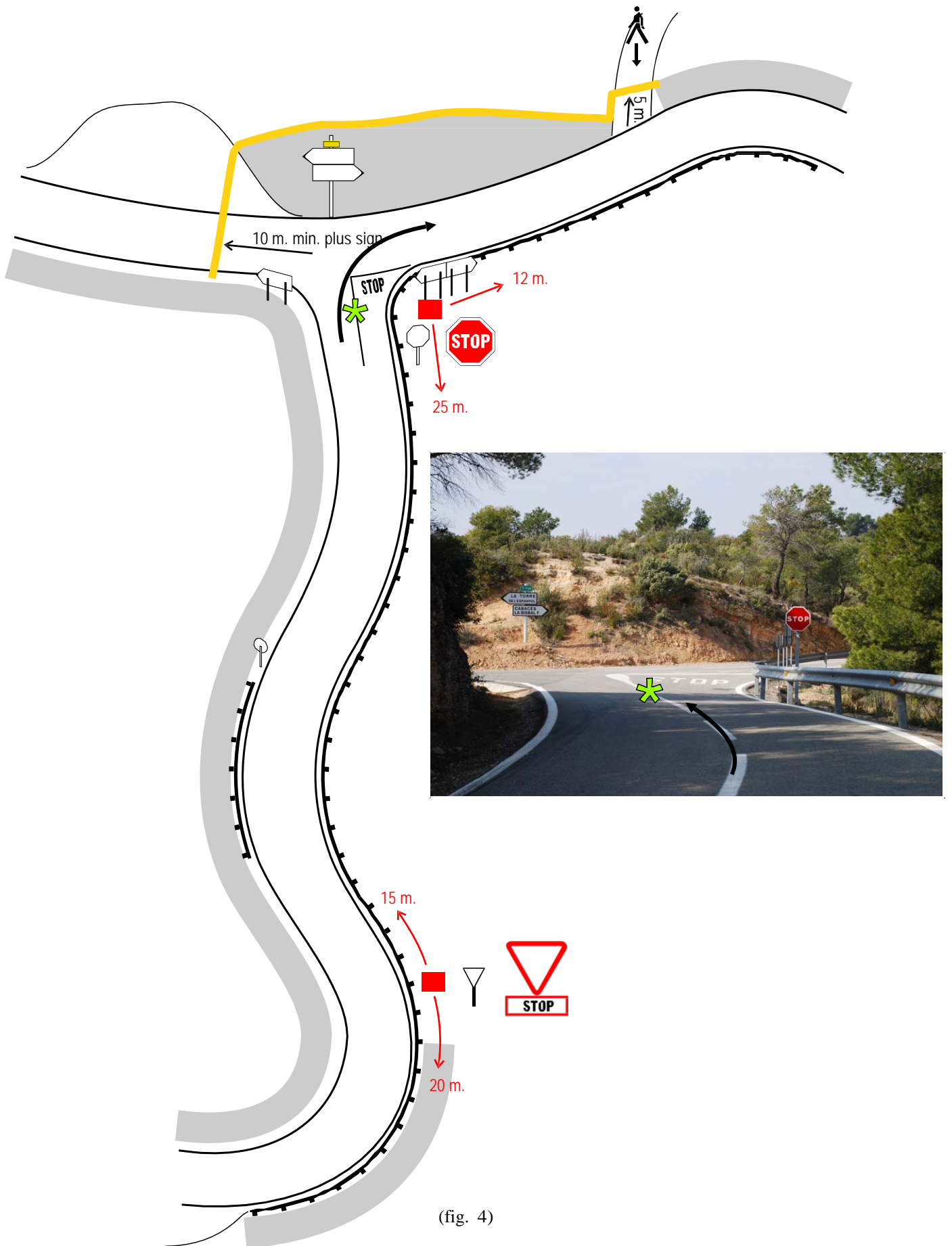
It will only be used to delimit the area if there is no raised area.

When there is a raised area, no type of barrier will be used, as long as the area is not limited.

The physical placing will be carried out on trees, poles, pegs, etc.

The distance and length are shown by means of a black, arrow-shaped line indicating the total metres.

EXAMPLES: (fig. 3/4)



(fig. 4)

SPECTATOR DISTANCE (criteria)

Speed	High				Medium				Low			
	0m.		+1m.		0m.		+1m.		0m.		+1m.	
Elevation	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
Protections*	++	∅	+	+	+	+++	0	0	0	+	0	0

* Protections: Newjersey and double fence

∅	NO-GO AREA
+++	MORE DISTANCE
++	MEDIUM DISTANCE
+	SMALL DISTANCE
0	OK

EXPLANATION:

1. The first factor to be considered is the speed at which the vehicles will arrive
2. If the spectator area is raised
3. If the area is already protected



FEDERATION INTERNATIONALE DE L' AUTOMOBILE

Rally Safety Guidelines

HELICOPTERS

Duty of Safety Helicopters and Regulations for Commercial Helicopters

App.1	Rally Flying Rules
App.2	Helicopter numbering system
App.3	Helicopter landing zone at Service Areas
App.4	Helicopter landing sites near Special Stages
App.5	Radio Procedures
App.6	Pilots' Briefing
App.7	Documentation and Maps
App.8	Timetable
App.9	Helicopter Registration Form

Introduction

The purpose of establishing standard helicopter regulations for Rally events is to create a safe flying environment for all helicopters flying in support of the event.

In particular it is necessary to prioritise the role of FIA Safety and Medical helicopters. Each Organiser is asked to appoint a "Helicopter Coordinator".

The Role of Helicopter Coordinator

1. In cooperation with the national aviation authority (where appropriate) and for the purpose of flight safety, the coordinator will arrange appropriate restricted and/or NOTAM airspace designations for the duration of the event. Only helicopters registered with the rally will be permitted to fly within such airspace.
2. In conjunction with a local operator or pilot, the coordinator will conduct the pilots' briefing the day before the Rally. All helicopter pilots will be provided with details of the procedures to be followed, radio frequencies and other aviation-related items. A list of helicopters and pilots will be provided to each participant, so that an atmosphere of comradeship and accountability will be established.

3. To provide operational details to registered helicopter pilots before, or at, the pilots' briefing. It is anticipated that all administration and communication will be by e-mail.
4. To arrange, where appropriate, an air traffic radio service for Rally helicopters.
5. To create and evolve a set of flight safety rules for helicopter flying during Rally events. A draft of the proposed Rally Helicopter Flying Rules is attached in Appendix 1.

Recommended action of the Rally Organiser

1. To state in all information issued by the Rally organiser that with the FIA's safety recommendation, and in accordance with the local Air Traffic Authority, every helicopter flying in support of the rally must be registered with the organisers.
2. To issue a Standard Form (proposed format in App.9) for helicopter registration.
3. To assist and support the FIA and the helicopter company in arrangements with their National Aviation Authority, and to support requests for radio frequencies, restricted airspace, landing permission, etc.
4. To identify suitable landing sites at the Rally service areas, and on Rally special stages with GPS position.
5. To identify the location of local hospitals with helicopter landing sites by map, with photographs and GPS position.
6. To provide a suitable room at Rally HQ to conduct the helicopter pilots' briefing, usually the day before the start of the Rally.

APPENDIX 1

Proposed Rally Helicopter Flight Safety Rules

The following is a draft of the proposed rules to be provided to pilots:

There are (nn) registered helicopters flying during the rally. A list is attached.

All radio communications will be in English.

The tasks of the helicopters vary in importance. The highest priority is to be given to helicopters operated by the event organiser and (for some FIA events) for the purpose of spectator safety and medical emergencies.

Most of the remaining helicopters will be flying passengers from the service areas to vantage points in the stages in order to watch the first few top cars, and return to the service areas. These helicopters are not permitted to follow the cars.

By contrast, at least one TV Wescam helicopter will be following cars at low level along the stages for filming purposes.

The big danger for all pilots is collision with another helicopter, especially in difficult weather conditions.

All helicopters registered to fly during the Rally will be provided with an identification sticker, which must be affixed to the helicopter.

If you meet the pilot of an unregistered helicopter, give him a copy of these rules and report the details to the helicopter coordinator. Unregistered means that the pilot has not been briefed and could prejudice the safety of everyone.

(If appropriate). The special stages and service areas of the Rally have been designated as restricted airspace. Only registered helicopters may fly within this airspace during the Rally.

To prevent collisions, and for flight safety, please follow these simple rules.

1. Priorities: except when normal national flying rules apply, helicopter pilots are to give priority to other helicopters in the following order of importance:
 - a) The FIA Safety and Technical helicopters (if the helicopters are operating)
 - b) The local Emergency Medical Services
 - c) The local Police and other security agencies
 - d) Wescam-equipped helicopters filming the stages.

In case of a Rally incident, b) and c) would have priority.

2. Approaching service areas, call on the notified frequency at least 2 minutes out, stating from which direction you are arriving, and call again on final approach.
3. Call before lifting off from the service areas.
4. Announce your intentions to "Rally Traffic" on (insert radio frequency) before landing and take-off in special stages. Identify yourself by helicopter number.
5. The Wescam TV helicopter will announce its presence on stages when following cars at low level.
6. If flying within 1000 ft of a rally stage, fly only in the direction of the stage. Minimum height above stage is 500 ftagl. If crossing a stage, try to do so at right angles, and at least 1000 ftagl. Try to land at least 100 m away from the stage. If landing/taking off within 100 m of a live stage, only do so after a competing car has just passed, and fly away from the stage, so as not to distract the competitor. Do not attempt to follow a competing car by helicopter under any circumstances.
7. Be aware that the Wescam TV helicopter will often follow the leading cars over the same stretch of special stage, at very low level.
8. Ensure that you know the start time of each stage, and be on the ground by then. Understand the 2-minute and one-minute car interval schedule.
9. Near stages and service areas, have your landing light on.
10. In the event of a Rally incident, the medical helicopter may need your landing place if there is nowhere else to land in the stage. Ensure that the pilot remains with the helicopter and be ready to move if need be.
11. Do not fly too close to the public (quote national rules).
12. Quote national weather limitation flying rules.

APPENDIX 2

Helicopter numbering system

Each helicopter will be given a number to clearly identify it. The numbers allocated have nothing to do with the level of priority of helicopters.

Helicopter No.	Allocated to
1 & 2	FIA
3	Medivac
4 & 5	Local Organiser
6 – 8	TV & Media
9 onwards	Teams, Public & Private.

Medivac: When Medivac comes in, it has absolute priority.

Identification markings for attachment to the helicopter will be provided, and are to be affixed to each helicopter as directed.

APPENDIX 3

Helicopter landing zone at Service Areas

Only helicopters registered with the Organisers of the Rally will be permitted to land at the service areas 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 the FIA, Organisers, Medivac and TV helicopters to land either next to or within 1 km of a service area (the Primary landing site). If necessary, other public helicopters will be allocated a landing site at a different location. Public helicopters may, however, be permitted to land at the primary landing site to drop off or pick up passengers, provided their stay is momentary and the engines are not shut down.

Layout of the Primary area

Landing spots will be established for each Primary helicopter. The most convenient spot will be allocated to Helicopter 1, and progress numerically.

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

APPENDIX 4

Special Stage Landing Areas

The long-term goal will be to establish a list of suitable and safe helicopter landing sites for all registered helicopters within walking distance of special stages, and to obtain the proper permissions for use, etc.

It is proposed that the helicopter co-ordinator will, in conjunction with the event organisers, carry out reconnaissance and establish suitable sites in order to provide a map and details to all pilots.

APPENDIX 5

Radio Procedures

Radio Procedures will be established for arrival and departure from the Service Areas and the Rally Special Stages.

A ground radio station will be established at busy Service Areas to enhance flight safety, especially as to landing positions and parking of helicopters.

Helicopters will be required to call this station before landing and take-off at service areas, identifying themselves by helicopter number, and will receive flight safety information.

Approaching a service area, helicopters should call at least 2 minutes out, stating from which direction they are arriving, and call again on final approach.

Helicopters will call before lifting off from a service area, and announce when 30 seconds away, so other pilots know it is safe to lift off.

Approaching a Special Stage, Helicopters will announce their intentions to "Rally Traffic" before landing and take-off at special stages, referring to their helicopter number.

The Wescam TV helicopter will announce itself when following cars at low level.

APPENDIX 6

Briefings for Pilots

An important element of the safety and consistency of helicopter operations during Rally events will be the Helicopter Pilots' Briefing. The organisers will be asked to provide a suitable room with theatre style seating and screen facilities.

The briefing will be conducted in English and the local language.

A standard presentation format will be established, which will include the following:

- Overview of the Rally, special stage organisation and competitor running intervals
- Times and location of stages
- Take-off and landing procedures
- Local aviation regulations

- Rally flying rules
- Rally Radio procedures
- Service Area landing site procedures and priorities
- Distribution of identification stickers
- Fuel provision arrangements
- Details of all helicopters' and pilots' mobile telephone numbers
- Details of hospital site
- Weather forecast information.

APPENDIX 7

Pre-Rally Documentation

The following documentation will be provided by the Rally helicopter coordinator:

- Rally Flying Rules
- Timetable of the event
- GPS positions of stages (start & finish) and landing sites
- Rally Map, to include aeronautical information and Wescam filming sectors
- List of Registered helicopters, their role and pilots' details
- All pre-rally communication will be by e-mail.

APPENDIX 8

Timetable

4 weeks in advance	Submission of helicopter registration forms.
2 weeks in advance	Provision of Rally Route and GPS positions, event timetable, and Rally Flying Rules.
1 day in advance	Pilots' briefing. Helicopter marking stickers, maps & pilots list issued.

Safety Helicopter (Local Organisers) in cooperation with FIA Safety Helicopter

The safety helicopter, crewed by an assistant safety officer and equipped with loudspeakers, should be flying over each special stage between approx. 25 and 5 minutes before the first car is due to start. The ASO should check that all spectators are positioned in safe places and, if need be, should instruct them with loudspeakers. He should be in constant touch with Rally Control and should inform it of the complete "readiness" of the special stage.

Medivac Helicopter

- One medivac helicopter should be ready to intervene in case of emergency, near and/or over the running stages. Landing points for emergency cases are shown by GPS positions in the safety plan in every stage.

- It patrols all special stages, ready to provide first aid and/or emergency medical transport in case of an accident.
- It is supported by ground engineers and a refuelling vehicle to keep it continuously airborne or ready to take off.
- It communicates directly with Rally Control and the special stages safety officers.
- The helicopter intervenes after having consulted either the Chief Medical Officer or the Chief Safety Officer at Rally Control.
- As soon as the helicopter flies to the incident, it reports its arrival to Rally Control, and does not land unless instructed to do so by Rally Control.
- If required and feasible it lands, as close as possible to the incident but off the stage.
- If unable to land at the site of the incident, the helicopter should land at the nearest available landing site, after the incident, clear of the stage. If a casualty or casualties is/are to be evacuated to hospital by the helicopter, an ambulance or a rescue vehicle should bring him/them to it, following the rally route.

Safety procedure for helicopters

Marshals who have arrived at the helicopter (after its landing) must take heed of the following:

- The pilot or the crew will instruct you when and how to approach.
- If not asked, you should not try to help the helicopter's crew to load the casualty.
- Keep yourself and other people away from the helicopter. The tail rotor, when turning, cannot be seen.
- During landing and take-off, the helicopter generates considerable wind. Secure any loose items.

APPENDIX 9**HELICOPTER REGISTRATION FORM****HELICOPTER**

HELICOPTER'S REGISTRATION	
TYPE AND MAKE	
COLOURS	

OWNER

COMPANY/NAME	
ADDRESS	
PHONE	

OPERATION

WHAT WILL BE THE USE OF THE HELICOPTER ON THE RALLY	
JET A1 AT SERVICE AREA REQUIRED? QUANTITY?	
OVERNIGHT PARKING LOCATION	

PILOT

NAME:
ADDRESS AND PHONE:
E-MAIL ADDRESS (all info will be by e-mail)
ADDRESS AND MOBILE PHONE DURING THE EVENT:

FLYING UNDER CONTRACT FROM

NAME	
ADDRESS	
PHONE	

POSSIBILITY FOR PATIENT TRANSPORT: yes no

I, the pilot of the above helicopter, agree to follow the rules notified to me during the Rally.

SIGNATURE: