

# SOS MANUAL

## CONTENTS

Introduction.....	2
Stage Personnel .....	2
The Tracking Systems .....	2
Rally Control SOS Tracking.....	2
SOS Tracking Officials.....	3
SOS Crews .....	3
SOS Duties .....	3
The Tracking Process.....	3
Ending Each Transmission.....	4
Competitor / Vehicle Numbers.....	4
No Cars Recorded Since last Cycle .....	4
Multiple Cars Recorded Since Last Cycle.....	5
Stage Set Up .....	5
The “B” System in Operation .....	5
Radio Setup .....	6
Correct Radio Procedures.....	7
Spelling of Words and Initials .....	8
Phonetic Alphabet.....	8
Numerals .....	9
Emergencies and Missing Car Procedures .....	9
Incident Reports .....	10
Advising Rally Tracking.....	11
Equipment Required.....	11
Closing Down .....	11
Accident Appraisal Procedure.....	12

## INTRODUCTION

Although all motor sport has its dangers, rallying presents organisers with the greatest challenges when it comes to ensuring competitor safety. With conventional motor racing it is possible to see, or at least monitor, all parts of the circuit quite easily. In rallying this is not practical as competitors are out of visual contact for lengthy periods of time. Therefore it has been necessary to develop a method of tracking vehicles through the special stages so that in the event that a vehicle goes missing, a search procedure can be implemented without delay.

The "B" system is designed to monitor all vehicles progress through each special stage, including official course cars, the media and FIA vehicles. This is achieved by having radio operators located approximately every 5km throughout each special stage. The Rally Tracking operator located at Rally Headquarters collects the information obtained from these operators. By plotting each piece of data, it becomes immediately apparent when a car fails to pass a radio point and where a car is reported as "late" through a designated 5km location, a search procedure will be implemented and if necessary, rescue crews will be dispatched to the scene.

Safety is a primary concern of all involved with the event. SOS radio operators have a critical role to play in ensuring the safety of the competitors and as such are an integral part of the special stage safety plan.

During stage operations the SOS radio operators are under the control of the Rally Tracking operator at Rally Headquarters who is accountable to the Clerk of Course.

## STAGE PERSONNEL

The 'Safety on Stage' (SOS) system requires that there be an operator and radio at the stage start then approximately every 5km along the stage.

Wherever practical, SOS radio teams will be allocated to each stage for the duration of the event.

## THE TRACKING SYSTEMS

### Rally Control SOS Tracking

Radio operators located at Rally Control (Rally Tracking) will observe the competitor's progress on the Timing System and will record the competitor start times on tracking sheets as a manual recording of the competitor's progress. Intermediate SOS point tracking will be maintained via the manual SOS Tracking radio network. Rally Tracking will poll the SOS field operators of the active stages to call their competitor progress over the Rally Tracking radio network in cycles to avoid radio network congestion.

## **SOS TRACKING OFFICIALS**

### **SOS Crews**

The 'Safety on Stage' (SOS) system has a radio and operator approximately every 5km through the stage. SOS radio teams will be allocated to each stage for the duration of the event. Since each SOS point is not at exact increments of 5kms along a stage, SOS point's will be identified by an alpha character (starting at Alpha) and incremented until the last SOS point is defined (eg: Derrier Alpha, Derrier Beta etc).

All operators are to record tracking data and work as a 'link' in the team to form each special stage SOS.

### **SOS Duties**

In the event of an incident, the Rally Tracking operators will bring the issue to the attention of the Clerk of Course or his assistant for further direction.

Rally Tracking will be conducted in "call cycles" to report the passage of competitors and will commence by Rally Tracking inviting a stage to commence their cycle starting at the first SOS point (SOS Alpha).

On completion and subsequent acknowledgement from Rally Tracking, the remaining SOS Field operators will then call their car(s) as they have them recorded progressively through the stage until reaching the last SOS operator of that stage.

Once each operator has finished announcing the information, he / she will then draw a diagonal line through the lines on the recording sheets to signify that the data has been announced.

No calls are to be made out of sequence unless there is an emergency situation that needs to interrupt the cycle (see emergency call procedures).

At this point, Rally Tracking may invite another stage to commence their calls or return to the previous stage SOS "Alpha" operator.

These calls will continue for the duration of the special stage commencing with the start time of the '0' car and continue until the finishing of the special stage by the sweep vehicle.

All Course Cars & Safety Cars are to be 'tracked' through the stage, however this may only be by announcing their passage as they start and pass each 5km point and arrival at the stop point.

## **THE TRACKING PROCESS**

Rally Tracking will be performed in cycles that will be initiated by the Rally Tracking operator at Rally Headquarters. The operator will ask all stage SOS operators to standby approximately 15 minutes before their stage is to start.

This gives the stage SOS operators time to ensure they are ready for their tracking duties to commence.

Once the stage has commenced, all Stage SOS operators will commence recording the tracking information on his / her tracking forms and get ready to radio this information to Rally Tracking. Where possible, it would also be good for each SOS location to record the tracking calls made by the previous locations operator.

**Stage vehicle tracking radio call cycles are initiated by the Rally Tracking operator at the Rally Headquarters** who invites the stages first SOS operator (Alpha) to announce the car numbers of the competitors who have passed that point.

On completion of the ALPHA radio call and subsequent acknowledgement from Rally Tracking, the SOS Field operators will then call their car numbers only as they have them recorded progressively through the stage until reaching the last SOS point operator of the stage. At this point, Rally Tracking may invite another stage to commence their calls or return to your first SOS stage operator.

Once each operator has finished announcing the information, he / she will then draw a diagonal line through the lines on the recording sheets to signify that the data has been announced. Refer to the sample at the end of this document.

**No calls are to be made out of sequence unless there is an emergency situation that needs to interrupt the cycle.**

These calls will continue for the duration of the special stage commencing with the start time of the '0' car and continue until the finishing of the special stage by the sweep vehicle.

Car '000' and '00' are also to be 'tracked' through the stage, however this may only be by announcing their passage as they start and pass each 5km point and arrival at the stop point.

### Ending Each Transmission

To ensure Rally Tracking can identify the end of every call, please concluded each call with **"over"**. This tells Rally Tracking that you have finished transmitting so that Rally Tracking can then acknowledge your call.

### Competitor / Vehicle Numbers

To ensure Rally Tracking can identify the car numbers that are announced, please announce each numeral clearly for multiple digit numbers eg: Car 2 will be Car two however Car 20 will be announced as Car two zero.

### No Cars Recorded Since last Cycle

If no cars have passaged through your location since the last call cycle, it is still necessary to make a call. In this instance the call will be a NO CAR call eg: **"Kandanga Alpha – No car over"**. This type of call could include the START location if this scenario arises.

## Multiple Cars Recorded Since Last Cycle

When multiple stages are active and the cycle period extends longer than the gap between cars, it is possible that you will have recorded multiple car numbers on your tracking forms. In this instance, each car must be announced eg: **“Kandanga Alpha – Car 1 Car 2 over”**.

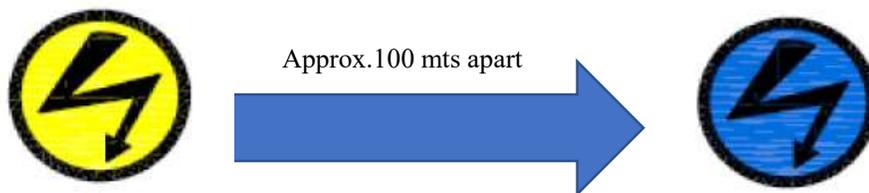
## STAGE SET UP

i) SOS radio operators will travel with the team convoy to the stage, and then to their specific locations. Each operator must check that they have good radio communications with Rally Tracking before the convoy moves on. If you experience any communication problems, notify the official in charge of the convoy immediately.

ii) If you have communication problems after the convoy has moved on, attempt to rectify the fault yourself by relocating your car or the antenna. If the problem persists, wave down the next official vehicle that comes along the stage and request assistance.

iii) The 5km interval SOS operators have the responsibility of erecting a blue SOS sign at each 5k interval and a yellow SOS 100m sign, **approximately 100 metres** before their position. The stage set up teams will have already erected the small signs for recce so the location of the signs will be obvious.

Both signs are to be mounted on metal droppers, erected on the left side of the road, facing oncoming rally traffic.



When travelling in convoy, use your own UHF CB radio to communicate with other vehicles in the convoy.

**Be patient.**

## THE “B” SYSTEM IN OPERATION

Under normal circumstances, competing vehicles start a special stage at two minute intervals. Although official vehicles have a schedule, they do not start at regular intervals.

To provide an example of how you would hear the cycle, please examine the following sequence:

- Initially, Rally Tracking will invite the stage 5k (Alpha) Officials to commence the sequence:
- At the first 5km point

**LOCATION ID.....** “Kandanga Alpha”

**CAR NUMBER...** “Car Two Three, Over”.

- At the 10km point

**LOCATION ID.....** “Kandanga Bravo”

**CAR NUMBER...** “Car Two One, Over”

- At the 15km point

**LOCATION ID.....** “Kandanga Charlie”

**CAR NUMBER...** “No Car.

The sequence continues until its conclusion with the last SOS point operator ending the call with “Over”.

**All** SOS radio operators will record the competitors’ numbers from the location before your location to assist with the identification of potentially missing competitors. SOS operators can estimate the arrival time of a vehicle at their location by noting the time the Zero cars took to pass through each successive point along the stage.

Also each of the intermediate SOS operators (5km, 10km, 15km etc) should record the time that each car passed their respective location (to the nearest 10 seconds) for later reference if required, **however it is not necessary to announce this time when you make your report to Rally Tracking.**

Each of the SOS operators are to note the car numbers on their record sheets as they are announced at the previous location as this creates a mirror image of the recording sheets for later reference if necessary.

At all times it is critical that SOS radio operators listen for questions or instructions from the Rally Tracking Operator. Such questions usually indicate that a vehicle may be missing. Further instructions on what to do in this situation are covered in the

Emergencies and Missing Car P section.

Ensure that you listen carefully to the Rally Tracking operator and follow all instructions as necessary.

## **Radio Setup**

(i) Most radios are ‘in-car types’ and are powered by the car battery. The power consumption is quite low and with normal use, will operate from a car battery all day without flattening the battery, assuming of course that the car battery is in reasonable condition.

(ii) Most radios have a roof-mounted, magnetic base antenna or Front mudguard mounts. If you receive a magnetic based antenna, this should be placed in the middle of the car roof for best performance. If your car does not have a steel roof, advice should be sought from your team leader.

(i) Be careful where the antenna lead is run through the door seals to avoid damage to the cable. It is also a good idea to place a small piece of Gladwrap under the 'mag base' to prevent scratching of the paintwork. Do not use anything thicker as it will weaken the magnetic grip. 'Race tape' can also be used to help hold the 'mag base' to the roof.

(ii) The battery leads are to be carefully connected to the car battery to ensure a good connection. It is important that the **red** lead be connected to the **positive** terminal and the **black** lead to the **negative** terminal.

(iii) At all times, the microphone should be stored such that the 'push to talk'

(PTT) button cannot be accidentally pushed in and held. If the PTT button is jammed in, then your radio will transmit continuously and prevent all others from using the channel.

(iv) You will be advised by your team leader which channel to use during the event. In most events this will be channel 2.

(i) Non-routine radio messages should be commenced with 'the station you are calling' (this should only ever be Rally Base), your own call sign, then the message you wish to convey. All such messages should be as short as is practical.

### Correct Radio Procedures

The correct radio procedure is to say each numeral separately ie. ONE FIVE instead of FIFTEEN. An example of a transmission for car 23 would be – KANDANGA ALPHA, CAR TWO THREE, OVER.

After pressing the microphone talk button, wait for a second before talking. This will ensure that your first words are not lost in the transmission while the radio is establishing a connection to the network.

A Location ID is the stage name (or the abbreviation), followed by the 5km SOS location (e.g. the 5km location on Kandanga South would be "Kandanga Alpha". (See the call sign table)

Common sense prevails on tongue twisters.

If you have a long message, write it down first and read it aloud to yourself before using the radio. This will reduce the possibility of you stumbling over words or phrases, which could cause an unnecessary delay in communications.

Operators must monitor the operating frequency before commencing a transmission. Pronounce and enunciate all words as clearly as possible.

A normal tone of voice should be used. Raising the voice does not contribute to clarity or increased volume to the recipients.

**A short time lapse between transmissions should be observed in order to allow other stations to break in with emergency traffic.**

### Spelling of Words and Initials

When it becomes necessary to spell difficult words or groups, or to identify any letter of the alphabet, the standard phonetic alphabet should be used.

### Phonetic Alphabet

<b>Letter</b>	<b>Word</b>	<b>Pronunciation</b>
A	Alpha	(Al Fah)
B	Bravo	(Bra Voh)
C	Charlie	(Char Lee)
D	Delta	(Dell Tah)
E	Echo	(Eck Oh)
F	Foxtrot	(Foks Trot)
G	Golf	(Golf)
H	Hotel	(Hoh Tell)
I	India	(In Dee Ah)
J	Juliet	(Jew Lee Et)
K	Kilo	(Key Loh)
L	Lima	(Lee Mah)
M	Mike	(Mike)
N	November	(No Vem Ber)
O	Oscar	(Oss Cah)
P	Papa	(Pah Pah)
Q	Quebec	(Keh Beck)
R	Romeo	(Row Me Oh)
S	Sierra	(See Air Rah)
T	Tango	(Tan Go)
U	Uniform	(You Nee Form)
V	Victor	(Vik Tah)
W	Whiskey	(Wiss Key)
X	Xray	(Ecks Ray)

Y	Yankee	(Yang Kee)
Z	Zulu	(Zoo Loo)

## Numerals

Numeral	Spoken As
0	Zero
1	Wun
2	Too
3	Thu Ree
4	Fo Wer
5	Fi Yiv
6	Six
7	Seven
8	Ate
9	Niner

## EMERGENCIES AND MISSING CAR PROCEDURES

In the event an accident has taken place, the next car in sequence will stop at the scene to render assistance to the crew of the accident vehicle and the next car after that will proceed to your location to call for further assistance. Should this happen, remember to question the crew (of the car that has stopped) in accordance with your 'accident appraisal form', then check that the channel is clear and contact the Rally Tracking Operator using the following example eg: **“Rally Base Rally Base, Kandanga Bravo, DATA, Over”** and then respond as requested.

On hearing this call being acknowledged by Rally Tracking all other SOS point operators should standby for further instructions. During this time, vehicle tracking will continue on the forms but radio communications will discontinue.

In the event that a vehicle has started but has not yet reached your location ie: you have heard that the vehicle has passed by the previous location to you and yet reasonable time has passed for that vehicle to have reached you, then it is reasonable to suggest that the vehicle has either broken down or gone off the course unnoticed.

In such situations, the Rally tracking Operator will use the following criteria;

- What is being displayed on the RallySafe screen in HQ
- Is a search on the SOS network to be initiated.

Rally Tracking may then suspend all other transmissions and ask for further information including details from 'INCIDENT REPORT' form if possible. Have this form within reach at all times.

If a conversation is in progress and you have relevant information, then you may interject using the same protocol of a DATA call. This is not an invitation for non-useful information, so think carefully before calling.

The only time an SOS operator is to transmit out of sequence will be:

- If a competitor reports an emergency
- If they have been asked to report an overdue competitor who passes their location.
- If an emergency vehicle passes their location.

Each 5km radio operator has been provided with a yellow flag and a distinctive yellow vest. The flag will be used to advise competitors and officials to slow their speed in the event of a major incident on the course ahead of them.

**The flags are only to be used upon instruction, via the “B” system Rally Tracking operator, from the Clerk of Course or the Deputy Clerk of Course.**

**The person designated to use the yellow flag at the SOS location must wear the yellow vest from the time they enter the stage until advised that the stage is clear.**

A position should be selected that is safe and visible to oncoming vehicles when waving the yellow flag, remember your safety is paramount.

It is important that the radio operator is not distracted during the course of his duties. The assistant to the SOS radio operator should be aware of any possible distractions and deflect them away, e.g. in the case of a competitor requesting help after breaking down, or other persons requesting information whilst the call sequence is in progress.

**Returning to normal Service** – Whilst a search is underway, you may have stood down from making radio transmissions. Continue to track vehicles on the provided forms until Rally Tracking instigates normal sequencing of calls. Rally Tracking will nominate the SOS location from which calls will recommence. Always be ready to return to normal procedures.

## **INCIDENT REPORTS**

An incident report should be completed if any known violation of the regulations, or any unusual situation is observed during the running of the Rally.

The official who completes the report must also supply a telephone number where he or she can be contacted during the following 24 hours.

Competitors are not permitted to receive any outside assistance at any location, other than at designated service areas. However the crew, using only the equipment and parts carried in the car, may carry out work on their car at any time, except where this is specifically prohibited (control zones, parc ferme)

Service vehicles may drive between special stages but must not stop.

Competitors are not allowed to leave the route for any reason.

If an official observes assistance of any kind being given to a competitor in contravention of the regulations, or a competitor leaving the route, the official should complete an incident report immediately.

### Advising Rally Tracking

With all incident reports, the paperwork should be completed as soon as possible and handed to a senior official who should immediately relay the information to Rally Tracking either by radio or telephone, as it may affect the results.

The Senior Official should arrange for the written report to be delivered to Rally Tracking via the Sweeper, another official or themselves.

Your role within the International Rally of Queensland is extremely important. For the safety of competitors, a special stage is not permitted to start without an operational SOS radio system. Senior international rally visitors monitor the system and our ability to run it. It is important that we demonstrate that our system works efficiently and is professionally conducted.

### EQUIPMENT REQUIRED

The following equipment / supplies are suggested and should be included in the inventory of each SOS Radio operator:

- Digital clock or digital watch adjusted to official rally time
- Clothing - wet weather gear, warm clothing, hat
- Umbrella, sun screen, insect repellent, portable shade
- Chairs, good company
- Hammer and small axe
- Pair of pliers and assorted small tools.
- Pens, pencils, note pads and clipboard
- Torch/Light
- Food and drink for 12 hours
- Reliable vehicle fuelled and serviced and spare fuses for radio and your car.

**The service you provide is greatly appreciated and we trust the time you spend on the EVENT will be enjoyable.**

### CLOSING DOWN

The Sweeper vehicle will be equipped with a flashing amber light, and identified with door posters and follows the last competitor through each stage. As the Sweeper passes your location, you may begin to pack up your area, however continue to monitor and transmit in

accordance with normal procedures until advised to cease by the Rally Tracking Operator as it is likely there will still be competitors between your location and the stop point.

**Please leave the area cleaner than you found it.**

On being advised by Rally Tracking or the Stage Commander that it is OK to leave your location, please travel in rally traffic direction to exit the stage. Always do this with caution as you may encounter a rally car that has broken down and awaiting recovery or their team to retrieve their vehicle.

The safety of officials is paramount to the event. If you leave your location before being authorised to do so, or try to find your own way out, you may become bogged, break down or get lost on an unknown, unmapped track. In such a situation, nobody will know where you are, or that you are in trouble, and the event will be unable to assist you. Worse still, you may stray onto the rally route and inadvertently find yourself travelling against other traffic, thus risking a collision.

You will be at your location for at least 4 hours, and possibly up to 12 hours for stages used twice on one day. Please take enough food, drink (not alcohol) and other supplies to get you through the day.

**Do not take animals with you.**

**Children must be kept in a safe area.**

### ACCIDENT APPRAISAL PROCEDURE

If you are faced with an accident, use the following procedure to report the incident to Rally Tracking.

**For Radio transmission**, please follow this sequence, speak clearly and remain calm and do not shout into the radio microphone.

1. Who is calling (your name, status)?
2. Where are you calling from (Special Stage, distance)?
3. What is the nature of the incident (briefly)?
4. How many people/vehicles involved?
5. Are any people trapped?
6. Is there a fire?
7. Can you handle the situation, or do you need help?

THEN - Answer these very important medical questions in relation to any or each injured person:

8. Is the person conscious?
  1. Is breathing...
    - a. Normal? (and patient talking?)
    - b. Noisy?

c. Absent?

3. Is the patient bleeding? If so, from where? How much (slow, trickle, spurting)?
9. Is there obvious injury? If so, what and where?
10. Other problems (e.g. vomiting, fits etc.)?

**REMEMBER:**

**STAY CALM, SPEAK SLOWLY AND CLEARLY.**

**YOUR ACTIONS MAY SAVE A LIFE!**