

RALLY RADIO OFFICIAL'S PROCEDURES : DO'S AND DON'T'S

GUIDELINES FOR RADIO MARSHALS: OPERATING RALLY COMMUNICATIONS.

1. Introduction

- a. Many a radio operator are fully conversant with their equipment and the standard operating procedures. These guidelines are written for the less experienced operators, but at the same time cover some interesting points that will assist in standardising the communications used on rallies in the Republic of South Africa.
- b. The Clerk of the Course, Chief Marshal, Safety Officer, the scorers and other senior officials rely on clear and accurate communications on which to base their decisions and for up to date results available to various interested parties. The media and internet provide information for the motorsport enthusiast, and the Radio Communications are the main source for fast and accurate information.
- c. Good communications are an essential part of the handling of any emergency that may occur during an event. The Safety Plan drawn up by the organisers depends on reliable radio communications by competent operators.
- d. Where and when required, unmanned VHF / UHF repeaters or simplex relays should be utilised to expand the communications to cover the whole area used for the event. Under difficult situations HF communication can assist to cover a larger area.
- e. Although reliable and good equipment is essential, the quality of the communication depends on the skill and experience of the operators.
- f. Do not hesitate to request help from Rally Head Quarters – RHQ or CONTROL – if you have any queries, difficulties, running late or vehicle / terrain problems. You shouldn't get lost due to adequate route instructions.
- g. Remember that the radio operators are on the event to provide highly reliable communications, and that this is not the time to experiment with power settings, different antennas or even new equipment, that has not been previously tested or with which you are not familiar. Refrain from using flea power hand held radios.

2. Minimum equipment requirements.

a. Control -

Transceiver with a minimum power output of 25 Watts. A fully connected standby radio. A suitable outside antenna, mounted on a high mast. A Suitable standby power supply in the event of power loss. Use the shortest possible co-ax cable and do not leave the unused cable coiled. Prevent sharp bends that can sever or pinch the cable, causing a malfunction.

b. Mobile stations -

Transceiver with a minimum power output of 25 Watts. A fully connected standby radio. A suitable 5/8 roof-mounted / magnetic antenna. Fix the antenna to the roof with Mcgyver / duct tape with a thin piece of plastic between roof and magnet to prevent scratching of the paint. This will prevent the antenna to dislodge at high speed or being swept off the roof by trees or by driving under obstructions. Make the driver aware of your antenna height. Ensure that the shortest possible co-ax cable is used between radio and antenna. Prevent sharp bends and knots that can sever or pinch the cable. Ensure that the cable is not damaged and that the plug and socket is firmly screwed in. Where possible use a heavy cable ($\pm 2.5 \text{ mm}^2$) and a direct connection to the vehicle's battery with suitable terminals. Remember a 10 and 13 mm spanner. The radio must be firmly secured or bolted down to prevent the equipment from moving around when things start getting rough. Ensure that the microphone is secure in its socket.

c. Field stations -

Transceiver with a minimum power output of 25 Watts. A fully connected standby radio. A suitable outside antenna, mounted on a stayed mast of at least 6 meters. A Suitable standby power supply in the event of power loss. Use the shortest possible co-ax cable and do not leave the unused cable coiled. Prevent sharp bends that can sever or pinch the cable, causing a malfunction. Remember the spade and toilet paper. IT make good sense to carry a dry and clean set of clothing with you.

d. Note – all stations -

It is advisable to carry standby equipment, spare fuses and tools to repair in case of malfunctioning. Remember the pen / pencil and clipboard.

3. Radio operating instructions.

- a. The Chief Radio Marshal shall issue the operating instructions containing the following : Operators positions, Call signs, Overall route map, Route sheet / instructions, Safety plan, Entry lists, Time sheets, Sequence sheets, Sponsor decals, ect., Tickets / passes, Name tags, Tel contact numbers, Freq sheets - hf, vhf, uhf, air, ect. Sponsor's clothing and other required info.
- b. Ensure that you are familiar with the operation of your equipment well before the start of the event. Ensure all connections are secure, turn the radio on, select the correct frequency, adjust the volume to your preferred level. Adjust volume according to conditions or requirements. Listen to the traffic / conversations on the air – remember it is an important part of your duty to monitor the traffic to enable you to provide, or react to, any relevant information to or from a rally official requesting it.
- c. Microphone technique is a very important part of using the transceiver :
 - i. Listen !. make sure the frequency is clear before keying the mic PTT.
 - ii. Remember, 2 meter – 2 minutes – 2 seconds. On 2 meters speak for 2 minutes and listens for 2 seconds. This holds good for repeaters and simplex operation.
 - iii. Place the mic approximately 50mm from your mouth, press the PTT and hold for 1 second before speaking **over** the mic and not into it. Speak slowly, clearly and forcefully. Don't shout !.
 - iv. Use the approved phonetic alphabet for important data / detail transmissions. Keep transmissions short and to the point.
- d. All radio communication is to be directed through CONTROL who is in absolute control of radio communications. In certain circumstances CONTROL may direct that two stations should communicate directly with each other in order to clear a particular situation. When an emergency occur, other stations to wait and keep the frequency clear until CONTROL resume control again.
- e. Follow instructions. You may be requested by CONTROL to operate somewhat differently to what you planned or are used to.
- f. Be patient. Control will get to you and take your message as soon as possible. If you feel that you have been forgotten, and there is no evidence of radio traffic, call again.
- g. In the case of urgent traffic or an emergency, clear the frequency immediately so that RHQ and the relevant stations can converse without interruption. After stand-down, CONTROL will invite normal traffic to continue.
- h. during an emergency remember the 5 "C's" :
 - Contact - make contact with CONTROL , tell them who you are.
 - Co-ordinates - Tell them where you are.
 - Conditions - Tell the what the prevailing observed conditions are.
 - Casualties - Tell them what has happened and what you need.
 - Confirm - Control to confirm info and / or request more detail and issue instructions or request a competent person to handle the situation.

- i. Use the radio for official rally business only. During the event all conversations are controlled and authorised by CONTROL.
- j. Exercise discretion. At all times there are many listeners, legal and illegal, monitoring the frequencies. Transmission of information which is not verified, confirmed or relevant to the situation, may lead to speculation and problems if incorrectly interpreted by parties outside the organisation of the event.
- k. Keep calm. Especially in an emergency, it is essential that the officials concerned can rely on communications by calm operators who contribute to the normalisation of a situation by keeping their cool. In an evaluated situation, the microphone can be given to the senior officials to talk directly to each other to save time.

NOTE : The best emergency frequency is that one you are working on at this moment when a distress arises. **“The ITU gives anybody the authority to call or use any frequency with any equipment at any time when at distress, safety is jeopardised or life is at stake.”**

- l. Do not issue any statements to the media or any outside parties. All statements are to be made by the Clerk of the Course or the appointed PRO of the event. This statement should only be relayed when specifically instructed to do so. Keep note and time of such authority.
- m. Keep CONTROL informed about your whereabouts and status at all times. Field stations should report as soon as they are in their allocated position as per the radio marshal schedule, and should monitor the frequency at all times in case CONTROL requires to contact them. Field stations, start and end, can only be closed by CONTROL when advised by the sweep marshal or official. The time should be noted.

Mobile operators should advise as soon as they move from a position to another with their intended route and destination, and should again advise when arriving at said position or destination. Monitoring the frequency is essential to ensure that the official that they are with can immediately be contacted when required.

4. Radio Marshall Job Description.

Providing communications for rally officials is two way traffic. Not only must you transmit information from your particular station to other parties as required, but you must also at all times monitor the frequency for any information that may be relevant to the official that you are with. Emergencies have precedence at all times. Mobile stations normally have precedence over field stations. Passing times have the lowest precedence.

- a. **Field station - SSS1** – Start of special stage 1. Call sign : Start 1 or Sierra 1.
 - i. Liase with ESS, preferably on simplex, passing info and during emergencies.
 - ii. Report to CONTROL the presence of an ambulance or medic vehicle.
 - iii. Get an official stage open time from the COC when all is in order to run the stage. Transmit this time to ESS and CONTROL.
 - iv. Transmit competitor stage start times in the prescribed format to ESS in groups of five for onward transfer to the scoring officials at RHQ or CONTROL.
 - v. Advise ESS when car 000, car 00, car 0, first competitor and last competitor and sweep have entered the stage. Also advice Control when the medics, ambulance or senior official has entered / left the stage.
 - vi. Keep an updated sequence sheet of all competitors.
 - vii. Assist the sweep official with stage closing procedures.
 - viii. Monitor the frequency at all times for any messages that may be of relevance to the officials at the start of stage.
- b. **Field station - ESS 1** – End of special stage 1. Call sign : End 1 or Echo 1.
 - i. Liase with SSS, preferably on simplex, passing info and during emergencies.
 - ii. Report to CONTROL the presence of an ambulance or medic vehicle.
 - iii. Get the official stage open time from SSS, issued by the COC, when all is in order to run the stage. Transmit confirmation of this time to CONTROL.

- iv. Transmit competitor stage start times in the prescribed format to CONTROL in groups of five for onward transfer to the scoring officials at RHQ or CONTROL.
 - v. Provide provisional stage times to PA vans on simplex or on the allocated / dedicated frequency issued by Chief Radio.
 - vi. Advise CONTROL when car 000, car 00, car 0, first competitor and last competitor and sweep have entered the stage. Also advise Control when the medics, ambulance or senior official has entered / left the stage.
 - vii. Advise CONTROL when car 000, car 00, car 0, first competitor and last competitor and sweep have cleared the stage.
 - viii. Keep an updated sequence sheet of all competitors.
 - ix. Assist the sweep official with stage closing procedures and obtain a closing time, transmit the time on to control..
 - x. Monitor the frequency at all times for any messages that may be of relevance to the officials at the end of stage.
 - xi. Pass interesting and factual information to control. Do not spread rumours.
 - xii. Monitor the frequency at all times for any messages that may be of relevance to the officials at the end of stage.
- c. **CONTROL** station – Call sign : CONTROL.
- i. Control of rally communications for the smooth running of the event.
 - ii. Assist radio marshals with queries or problems. Correct, assist and help the radio officials / marshal's to follow laid down procedures.
 - iii. Passing of relevant and factual information from field and mobile stations to senior officials at RHQ.
 - iv. Transmitting information as may be required by rally officials and marshals.
 - v. Request times from ES Stages to be passed to the scorers as required.
 - vi. Monitor the frequency at all times for any messages that may be of relevance to the rally officials.
- d. **MOBILE** station – Call sign : COC, Chief Marshal, Safety officer, Medic 1, etc.
The call sign will identify the senior rally official concerned in the motor vehicle.
- i. Transmitting information from the official concerned.
 - ii. Monitor the frequency at all times for any messages that may be of relevance to the official in the vehicle.
 - ii. Assist the official with his duties without jeopardising the transmission of relevant information.

5. Speech procedures.

- a. For ease of operation and quick identification of the station, the allocated call signs as per the Chief Radio Marshal schedule should be used in preference to the radio amateur call sign. It is essential that any monitoring station should know immediately where a particular message originates from and who it is destined for. **Control ... Echo 2** : means Echo 2 is calling Control.
- b. When queried by any outside radio amateur as to the call signs used, it will be the function of CONTROL to respond as follows : “ **This is Warren, ZR1HIL operating Rally Control at Killarney for the Nissan Rally now in progress in the Swartland area over the period 5 and 6 May and we will be using the 650 and 750 repeaters.** Thank you, CONTROL standing by for any rally traffic.”
(This means that you have explained the unfamiliar call signs used to the enquirer and that you, Control, are not interested in any more of the enquirer's interference.)

c. Example : Typical traffic.

Field station : Control ... End 5.
Control : End 5 go ahead.
Field station : We need a replacement of our end clock.
Control : End 5 stand by. Chief marshal ... Control.
Mobile station : Control ... Chief marshal. Assistant COC should be closer to Echo 5. We are busy at start 2 with lights.
Control : Assistant COC did you copy ?
Mobile station : Control ... A COC. Going to Echo 5 now with spare clock.

2 sec gap. Listen.

Control : Thanks. Any other mobile traffic ?
Mobile station : Control ... Safety officer.
Control : Safety officer go.
Mobile station : Permission to speak to Medic 1.
Control : OK. Granted. Do so and keep it short.
Mobile station : Medic 1 . Medic 1 ... Safety officer.
Mobile station : Medic one standing by.
Mobile station : Sakkie, can you meet us at end 4. We need to discuss spectator
Control, evacuating and ambu parking.
Mobile station: Will do. See you in 10 minutes. Thanks Control. Medic 1.
Control : Any other traffic?.

2 sec gap. Listen !

Control : Echo 3. Piet do you have any more times for me?
Field station : Echo 3. Yes, 4 only, in a batch of 4. QSL.
Control : QSL. Go echo 3.

2 sec gap. Listen !

Field station : Control ... Echo 3, here they are.

(Talk slower than normal. Do not fire like a machine gun. Use clearly pronounced words.)

CAR .. WUN ZERO (competitor number **10**
WUN FIVE - WUN TWO (**15 : 12** no seconds. **TC** time.
WUN FIVE - WUN FOUR (**15 : 14** no seconds. **START** time.
WUN FIVE - TREE FOUR - TWO SIX (**15 : 34 : 26** **FF** time.
TWO ZERO - TWO SIX (**20 : 26** no hours. **STAGE** time

Small gap. Take a breath.

CAR .. WUN WUN (give 4x times of competitor 11)

Small gap. Take a breath.

CAR .. ZERO NINER (give 4x times of competitor 9)

Small gap. Take a breath.

CAR .. WUN FOUR WUN (give 4x times of competitor 141)

Small gap. Take a breath.

QSL ?. Echo 3 by.

Control : QSL. Thank you. Any other traffic ? Control listening.

- i. The above example illustrates concise, clear and to the point communications.
- ii. Under questionable conditions messages can be given twice for clarity.
- iii. It must be very clear that if one of the concerned stations does not constantly monitor the frequency, the chain of the events will be severely interrupted or delayed, with possible serious implications for the smooth running of the event.
- iv. By using the unique allocated and descriptive call signs, any station or official monitoring the traffic is instantly able to follow exactly what is happening between the relevant officials. It is also an advantage to be informed if a message is to be relayed between stations.

6. Radio Marshal's documents.

- a. Radio Marshal's Schedule - containing operators & officials positions, call signs, Tel contact numbers, allocated frequencies, stage numbers with open & first car times,
- b. Route sheet / instructions – to get to your position of duty.
- c. Safety plan – to know what to do in an emergency.
- d. Overall route map – indicating all stages, service points, marshal points and spectator points including kilometre distances and GPS readings.

- e. Entry lists – competitor name and car number.
- f. Check list – not to forget the vital important required item.
- g. Stage Time sheets – prescribed format for transmission of competitors times.
- h. Stage Sequence sheets – to keep control of running order and to verify cars out.
- i. Control time sheets - prescribed format for receipt of competitors times
- j. Control sequence sheet - keep control of running order and to verify cars out.
- k. Rally radio procedures - to do it right the first time, every time.
- l. Scrap or writing paper pad – to have something to write messages on.

7. General.

- a. Always keep the microphone on its hanger unless you are transmitting. If the PTT is activated my mistake, by sitting on it when carelessly thrown on a seat, the complete network becomes inoperative with serious possible consequences.
- b. As repeaters are normally used, it is essential to start talking after a delay of ONE second after the PTT has been pushed. This delay of triggering the repeater will suppress the initial first word or two, which is normally the station being called, call sign. This may result in the relevant station not taking note that they are called to respond, and the particular message is not taken care of.
- c. Do not engage the repeater for longer than the time-out time. Normally about 3 min's. maximum. Let go of the PTT, trigger again, wait one second and carry on with conversation ; only for a long winded message.
- d. It is good practise at all times to leave at least a 2 (two) second gap between overs / transmissions to give a mobile stations a gap to call if required.
- e. Charge your battery frequently to ensure sufficient available power. Run the vehicle engine above 1500 RPM, use a solar panel or portable generator to charge, or a deep cycle extra battery. Ensure that your / all vehicles can start before other marshals is leaving.
- f. Carry spare fuses and basic tools to perform repairs if required.
- g. During the event , CONTROL controls all traffic on the band. Use the radio for official rally communications only.
- h. Exercise discretion at all times, as you never know who is monitoring the frequency .
- i. Do not issue any statements to the press or media or outside parties.
- j. Do not issue instructions not originating from a rally official. The Clerk of the Course is in strict control of the rally. Get his authority for any changes or deviation from any event to take place, or changes from set documentation to be implemented. A bulletin will be issued re the implementation of said changes. Warnings to drivers can be given verbally given to them at the start of stage, re dangerous happenings on the route, when instructed so by a senior rally official.
- k. Do not interfere with the running of the rally outside your scope of communication functions. Suggestion : Learn the rally control signs and other facets of the organization like dust gaps, lateness, penalties, services, assistance, controls, ect..
- l. Keep CONTROL / RHQ informed of your position at all times, even when travelling between stages or standing down for meals.
- m. Do not consume alcohol or drugs while you are partaking in the rally as a marshal.

- n. Monitor the frequency at all times, to keep you up to date with the happenings.
- o. Refrain from swearing or in-appropriate language use whilst on the air.
- p. Enjoy the rally, be it rain, wind, dust or muggies, and drive safely please.

For further info please contact your local rally organisers or Chief Radio.

Davey	ZR1FR	082 651 1782	701-1782 h	511-7101 w
Hugh	ZS1YS	072 719 7063	53 53 150 w	53 53 828 fax
Theo	ZS1BMT	082 818 5033	948-4360 h	948-4360 fax
Tony	ZR1ARK	083 343 7415	762-2349 h	787-3453 w -3460 fax

8. Checklist for Radio Officials.

Field stations

Roadworthy vehicle & enough fuel !
 Transceivers 2
 Power cables
 Microphones, whistle,
 Speakers, head phones,
 Co-ax cables
 5/8 Antennas & magnetic bases,
 Portable radio & charger
 Cell phone & charger
 Mast & stay wires
 Hammer & pegs
 Umbrella, table, chair
 Clip board, pen, pencil,
 Eats & drinks
 Neon lamp, torch,
 Navigators-, reading light,
 Duct tape, cable ties,
 Insulation & masking tape,
 Spare fuses, Prestik,
 Car & Electronic tools,
 Hat, sun screen, personal medication,
 Reading-, sun glasses,
 Paper towels, Toilet paper,
 Expected weather clothing,
 Dry set clothing (extra)
 Pick, spade, axe,
 Spare 12v battery, Sun panel,
 12v Extension cables,
 Water 10 ltr,
 Documentation for rally,
 Money. Reflective jacket.
 First aid box, Pocket knife.

Mobile stations

Roadworthy vehicle & enough fuel !
 Transceivers 2
 Power cables
 Microphones, whistle,
 Speakers, head phones,
 Co-ax cables
 5/8 Antennas & magnetic bases,
 Portable radio & charger
 Cell phone & charger
 Fixing equipment for radios.
 Clip board, pen, pencil,
 Eats & drinks
 Navigators-, reading light,
 Duct tape, cable ties,
 Insulation & masking tape,
 Spare fuses, Prestik,
 Electronic tools, 10 & 13 mm spanner,
 Hat, sun screen, personal medication,
 Reading-, sun glasses,
 Paper towels, Toilet paper,
 Documentation for rally,
 Money. Reflective jacket.
 Dry set clothing (extra)
 First aid box, Pocket knife.

COMPILED:- THEO SCHUTTE.