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Most articles have been modified due to a review of these regulations for 2024	01/01/2024	01/01/2024

A capitalised and italicised word in this document is defined in the FIA International Sporting Code *(Code)* or the National Competition Rules *(NCR),* including their Appendices.

Any HEADING is for reference only and has no regulatory effect.

1. INTRODUCTION

The Clerk of the Course is responsible for the conduct of a *Circuit Race Event.* To carry out the role there must be two-way communication with each flag post, key official, emergency response vehicle, etc, around the *Circuit* at all times.

To facilitate this, Race Control is the communication and control centre where the Clerk of the Course is based and from which instructions are issued.

2. COMMUNICATIONS SYSTEM

The following is necessary.

2.1 Race Control

Race Control must have sufficient staff to allow the monitoring and logging of each communication channel. In the case of a serious incident, the log may play a key part in the post-incident review. The addition of audio recording of each channel is highly recommended.

It is recommended Race Control be sound proofed such that it minimises background noise as any emergency communication tends to come when the noise is loudest.

2.2 Trackside Observation System

This is the major source of information from around the *Track*. An open-line system is necessary to enable each post to speak to each other and hear all other communication to and from Race Control. The system may be a landline or a digital (to minimise unauthorised intrusion) radio network.

Whichever system is used, it is recommended each communicator wears a headset/microphone boom with each incorporating a noise cancelling feature.

2.3 Race Control Radio

This system provides Race Control with two-way communication on a dedicated channel to each key official (e.g. sector marshal, post chief) and each emergency response vehicle none of which work from a fixed location. It is normally used to provide detailed information to Race Control, e.g. during an on *Track* incident. It is recommended a digital (to minimise unauthorised intrusion) radio system is used with each communicator wearing a headset/microphone boom with both incorporating noise cancelling features.

A minimum of 2 channels are necessary: one to each key official, and the second to each emergency response vehicle.
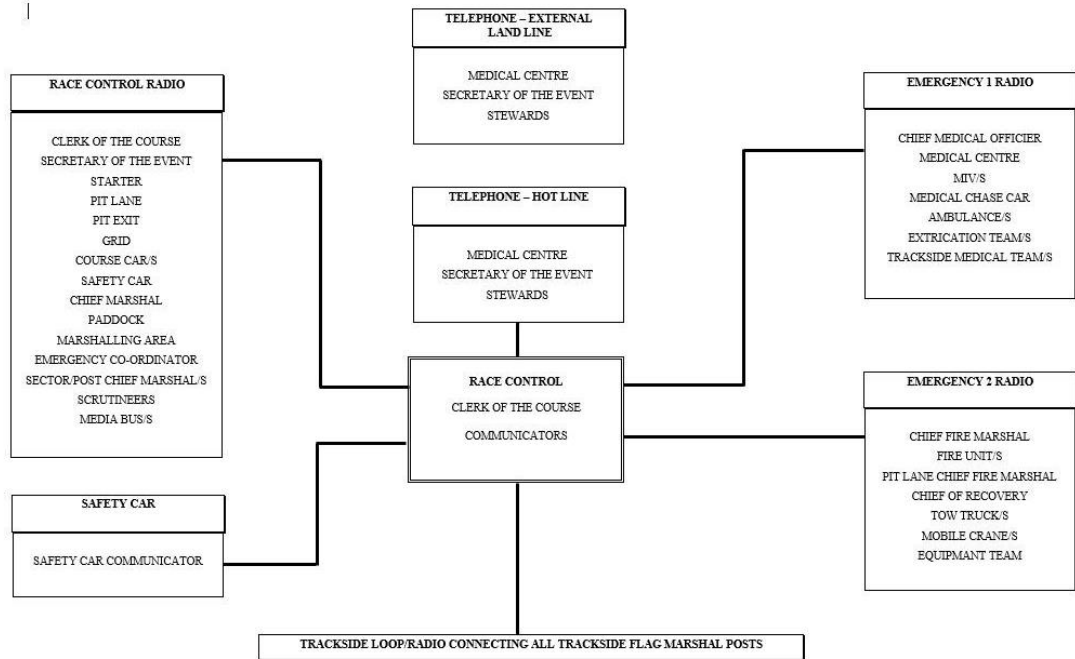
The emergency response vehicle channel can be further divided into separate communication with each, e.g:

> medical intervention vehicle (MIV), ambulance, doctors, etc; and

> fire vehicle, tow truck, crane, shuttle bus, equipment team, etc.

It is strongly recommended that an internal communication system is provided for Race Control staff. This provides the benefits of cutting out background noise, preventing noise transfer between channels and reduces the volume at which people need to speak to communicate to each other.

TYPICAL RACE CONTROL COMMUNICATIONS CHART FOR CIRCUIT EVENTS

TELEPHONE – EXTERNAL LAND LINE
MEDICAL CENTRE
SECRETARY OF THE EVENT
STEWARDS

RACE CONTROL RADIO
CLERK OF THE COURSE
SECRETARY OF THE EVENT
STARTER
PIT LANE
PIT EXIT
GRID
COURSE CAR/S
SAFETY CAR
CHIEF MARSHAL
PADDOCK
MARSHALLING AREA
EMERGENCY CO-ORDINATOR
SECTOR/POST CHIEF MARSHAL/S
SCRUTINEERS
MEDIA BUS/S

EMERGENCY 1 RADIO
CHIEF MEDICAL OFFICER
MEDICAL CENTRE
MIV/S
MEDICAL CHASE CAR
AMBULANCE/S
EXTRICATION TEAM/S
TRACKSIDE MEDICAL TEAM/S

TELEPHONE – HOT LINE
MEDICAL CENTRE
SECRETARY OF THE EVENT
STEWARDS

RACE CONTROL
CLERK OF THE COURSE
COMMUNICATORS

EMERGENCY 2 RADIO
CHIEF FIRE MARSHAL
FIRE UNIT/S
PIT LANE CHIEF FIRE MARSHAL
CHIEF OF RECOVERY
TOW TRUCK/S
MOBILE CRANE/S
EQUIPMANT TEAM

SAFETY CAR
SAFETY CAR COMMUNICATOR

TRACKSIDE LOOP/RADIO CONNECTING ALL TRACKSIDE FLAG MARSHAL POSTS

2.4 Telephone System

To assist with the efficient running of an *Event,* a telephone system connected to each operation centre is necessary, e.g. the Secretary of the Event, paddock office, scrutineering area, medical centre, Race Control.

An external telephone line must be provided to at least the Stewards, the Secretary of the Event, and the medical centre.

2.5 Location and Staffing of Communication Posts

Each trackside communications post must be located so that the complete *Circuit* is under observation.

Ideally, each post will be staffed by 2 marshals: 1 to remain at the post and in communication with Race Control at all times, the other able to attend an incident, consult other officials to obtain further information, or to assist otherwise if required.

3. COMMUNICATION METHODS

3.1 Protocol / Call Signs

All communication must use the correct protocol or the channel may become crowded and clear communication become impossible.

A communicator must use their official title or location as their call-sign e.g., 'Race Control', 'Chief Pit Lane Marshal', 'Grid', 'Pit Exit', 'Post 6', 'Scrutineer' etc. An official's name generally must not be used. Any boundary rider must use their exact location as their call-sign, e.g., 'boundary rider at Turn 10.7 left'.

Be clear and unambiguous, e.g., it is 'Race Control', not 'Control'; it is 'post 10.5", not '10.5' nor 'ten-five'.

If you do not understand something, request a repeat of the message. A misunderstood message may create a safety issue.

Be calm, brief and to the point. Do not waste words or make conversation.

Identify the intended recipient first and then identify yourself, e.g., 'Race Control, this is Post 5. After Race Control has acknowledged your call and indicated to continue, proceed with the message. If you are asked to "hold" be patient as there may be another issue being dealt with. If necessary, allow a reasonable time prior to a reminder, then transmit again.

When communicating an important message, the receiver must repeat it in an abbreviated fashion. This ensures the message has been correctly received. Do not respond using "copy", "roger" or a similar term.

Use the following International Phonetic Alphabet to spell out words or acronyms which may not transmit clearly.

A — Alpha	B — Bravo	C — Charlie	D — Delta
E — Echo	F — Foxtrot	G — Golf	H — Hotel
I — India	J — Juliet	K — Kilo	L — Lima
M — Mike	N — November	O — Oscar	P — Papa
Q — Quebec	R — Romeo	S — Sierra	T — Tango
U — Uniform	V — Victor	W — Whiskey	X — Xray
Y — Yankee	Z — Zebra		

3.2 Good Practice

Race Control must carry out a communication check each day of each system and prior to the commencement of *Track* activity. Following a long break, a further check is necessary.

A check is also necessary for any official vehicle (e.g. Course Car, Safety Car, Medical Car) by completing a lap checking at specific points the clarity of the transmission. Use a number for vehicle identification. Only use a driver's name when the message relates directly to one.

Each flag post communicator must remain at their assigned location to enable any instruction from Race Control to be communicated quickly and efficiently to the relevant marshal (e.g. instructions to a flag marshal).

Give a clear, precise description of the circumstances of the incident, remembering that Race Control may have to make the appropriate response based on that information alone. Describe the position accurately, e.g. 'Turn 11.8 on the right'.

Acknowledge all calls as promptly as possible.

Keep Race Control informed about the progress of any incident.

Advise on the condition of the *Driver* and importantly if medical attention is required.

Confirm what flag/s is being displayed, then when appropriate that the *Track* condition has returned to normal.

Where CCTV/TV pictures of an incident are available in Race Control, communication to the site must continue as if no vision is available.

It is important to understand that while you are talking, no-one else can gain access to the network. If long messages need to be transmitted or perhaps during the radio checks at the start of the day, which will occupy the radio network for a long time, then it is important to pause the transmission/s to allow access for anyone else who may have an important message or question.

The person speaking should simply say "BREAK" at a suitable point, stop talking and then allow a few seconds for anyone else to speak with any urgent message. Otherwise, the person can continue.

3.3 Communication Example

Incident

Cars 4 and 12 collide at the entry to Turn 5. Car 4 spins to the right and stops; Car 12 leaves the *Track* to the left and strikes the barrier. Flames can be seen.

Communication

Post 5:	Race Control, this is Post 5.
Race Control:	Go ahead Post 5.
Post 5:	We have 2 cars stopped, Car 12 hit barrier and is on fire. We require a fire unit on the left at Turn 5 – *Driver* is not moving, and we may need medical help as well. Car 4 has stopped on the right. Yellow flags displayed – OVER.
Race Control:	2 cars stopped - 1 on fire - fire unit requested - the Car 4 driver not moving - yellow flags displayed. Confirm you require fire unit at Turn 5 on the left – OVER.
Post 5:	Confirm fire unit on left required - OVER.

Race Control:	Fire unit dispatched. Please confirm whether medical assistance will be required as soon as possible - OVER.
Post 5:	Race Control this is Post 5.
Race Control:	Hold Post 5.
Race Control:	To all posts, Safety Car, Safety Car, Safety Car.
Race Control:	Race Control to Safety Car – scramble – leader car 25.
Safety Car:	Safety Car on circuit – Car 25 behind us.
Race Control:	Race Control to Post 5.
Post 5:	Medical response not required, *Driver* is out of car and is OK – OVER.
Race Control:	Medical unit not required. Can you provide incident details - OVER?
Post 5:	Cars 4 and 12 collided on entry to Turn 5; car 4 stopped on right, *Driver* out of car and behind barrier. Car 12 hit the barrier on left, car was visibly on fire but now smoking. Driver is out of car and behind barrier – OVER.
Race Control:	Drivers of cars 4 and 12 behind barriers. Please report location of vehicles relevant to track, bogged or moveable, and whether track is blocked – OVER.
Post 5:	Race Control, this is Post 5.
Race Control:	Go ahead Post 5.
Post 5:	Fire unit has arrived. Fire is confirmed out. Car 12 is behind barriers and will require a lift tow. Car 4 is close to track but considered safe. Car 4 requires a flat tow – OVER.
Race Control:	Fire unit arrived - fire out - car 12 behind barriers and will require lift tow. Car 4 also safe and requires flat tow - OVER.
Post 5:	Race Control, this is Post 5.
Race Control:	Go ahead Post 5.
Post 5:	Fire and recovery units and Car 4 are behind barriers. All marshals are clear of the circuit – OUT.
Race Control:	Fire unit - recovery - Car 4 behind barrier – all marshals clear. Thank you, Post 5 – OUT.
Race Control:	Race control to all posts – prepare to withdraw SC Boards and yellow flags.
Race Control:	Race Control to Safety Car – lights out at T9 and return to pit lane.
Safety Car:	Lights out T9 - return to pit lane.
Safety Car:	Safety Car in pit lane.
Race Control:	Safety Car in pit lane.
Race Control:	Race Control to all posts – withdraw SC Boards and yellow flags – display green flags.
Race Control:	Race Control to all posts - last Car 10 crossed finish line. Withdraw green flags – OUT.

4. CLOSED CIRCUIT TELEVISION (CCTV)

CCTV is a system to assist the Clerk of the Course in managing an *Event*.

The default setup for each camera must be such that an *Automobile* as it moves around the *Track* can be seen in sequence moving from monitor to monitor without any blind spot.

Any other default setting may include displaying a specific view, e.g. *Track* limits, a runoff, grid, pit lane, paddock.

5. BROADCAST TV

If a Championship/Series is being broadcast, a direct live 'clean' feed into Race Control with monitors selected for specific cameras can assist in managing track activity.

A direct link to the TV director is useful for any special requests, e.g. if the circuit CCTV cannot provide a clear picture of an incident, then a broadcast camera might be better positioned to provide that clarity. The TV director may also provide a feed into Race Control to show pictures that are not being broadcast but which will provide useful information. Such images may also be available to the Stewards as required.

6. TIMING SCREENS

Timing screens communicate useful information including lap times, laps completed/remaining, sector times, pitstops and race position. Dependent upon the extent of the timing data available, the screens can also communicate pit stop durations, *Track* limit violations and *Pit Lane* speed limit violations.

Messages can also be added on the timing screen; however, the Clerk of the Course must ensure that all teams have access to a timing screen before this can be considered as a regulatory means of communication.

The timing screen may also be used to convey messages from the Stewards regarding an incident, investigation or penalty as follows:
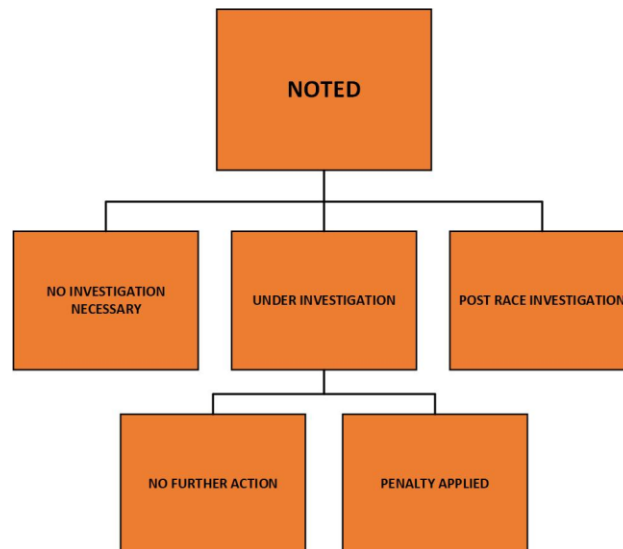
7. GPS MAPPING

GPS mapping is becoming more popular as more Championships/Series require that each *Automobile* is fitted with a GPS transmitter. This provides Race Control with a 'real time' position of each *Automobile* on the *Track*, which is particularly useful during an incident or locating the leader when deploying a Safety Car. A

GPS transmitter may also be fitted to each emergency response vehicle to assist in identifying the location of each.

Other track position displays may use a program based on data produced by a timing system, e.g. timing loops.

8. MESSAGING APP

If a messaging app is used for communication between Race Control and the *Competitors*/*Drivers* the following needs to be established:

Access restriction;

Regulatory value; and

Security settings.