COURSE CAR OPERATIONS MANUAL

Contents

1. Purpose

The information in this document is to introduce the functions of the RallySafe unit for use by Course Car officials. This document describes the mounting installation process, the operations of the unit during an event as well as links to further manuals. We recommend familiarizing yourself with the contents of this manual, as well as the links as your role may require this knowledge during the event.

2. Scope

This document has been prepared for course car officials using a RallySafe unit at a special stage rally, particularly the zero, double zero, triple zero and sweep vehicles. If this does not refer to your particular use case, please refer to the correct manual, or get in contact with a Status Awareness Systems (SAS) team member as soon as possible.

3. Responsibilities

It is the responsibility of the course car official to do the following.

- Collect the RallySafe unit and fitting kit equipment prior to the first competition car leaving the first-time control.
- Ensure the RallySafe unit is mounted securely and safely as described in this document, if you are unable to do so, please contact a SAS team member as soon as possible.
- Return all equipment in the same condition as it was collected to the designated collection area; this should be advised when collecting the equipment.

4. Procedure

Mounting

Most course cars are not suitable for mounting the full RallySafe Installation Kit. The most practical solution is the suction cup mount with Ball and Connector Clamp, as shown in below images. Power is provided from the cars OBDII connector for a constant 12 V supply.

For 2000 and 3000 Series units it is possible to mount the short aerial on top of the unit.

For 4000 Series units it is better to use a 0.5m flat mount aerial and Tape it to the Dash.

IMPORTANT: Ensure the unit is not mounted over airbags.

If your vehicle does not have an OBD port, please prepare a constant 12V supply around the under-dash area to allow connection of the unit.
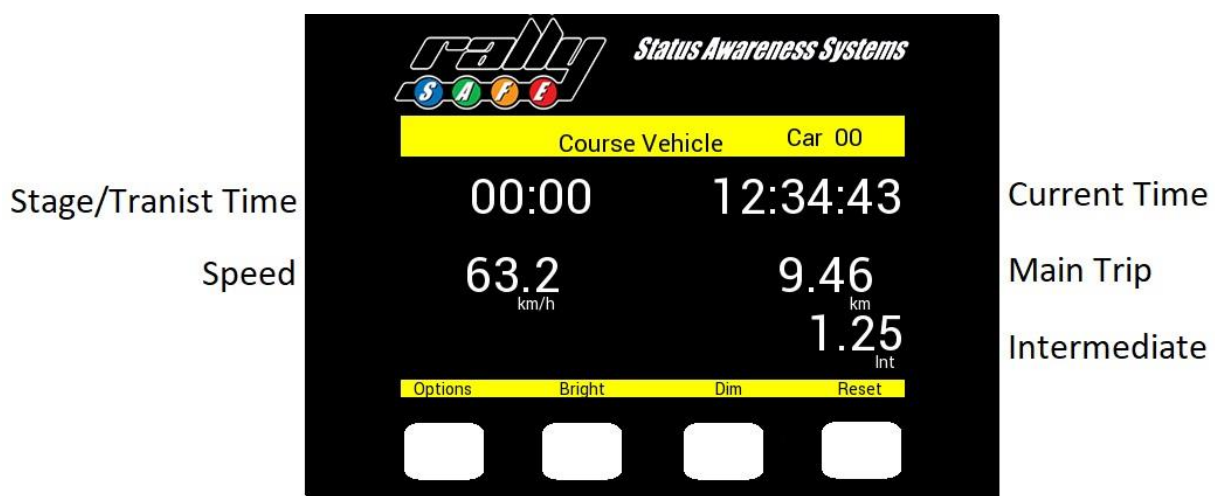
Operation

Car 000 and Car 00 cars perform the final check of the course before competition cars enter the course. While a course will have been checked for accuracy prior to the event, it is possible for these cars to confirm that the course is set up correctly. Start locations, restriction zones and finishes need to be in the specified location. The course condition can be reported to race control.

Sweep can see and record hazard information.

All course cars can update the status of a stopped car, ready for a second pass of a stage.

Car 0 is treated as a competition vehicle. This car should not stop on course, so the transmission of a hazard from this car is of high priority.

(Figure 1) Normal Operation

Button operation

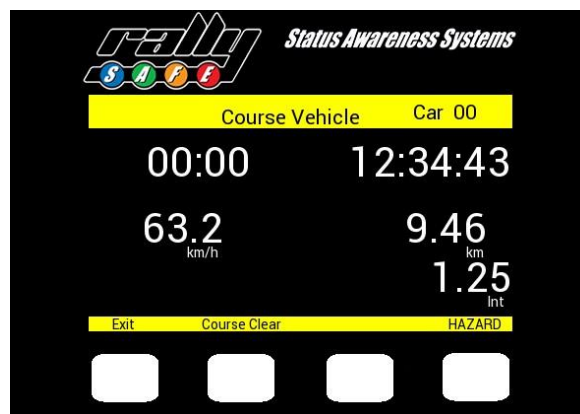The Buttons on the Main Display are:

OPTIONS: Display changes to allow the selection of special Course Car functions (see Figure 2).

BRIGHT: Increase brightness

DIM: Decrease brightness

RESET: Press once will reset the Intermediate Trip (right trip meter)

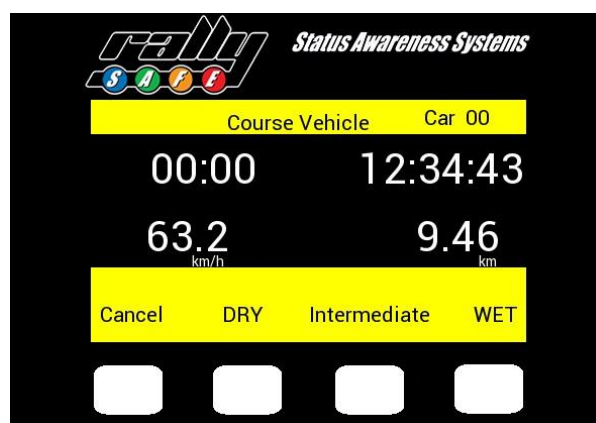> Press again while stationary to reset the Main Trip

(Figure 2) "Options" buttons

Exit: Return to "Normal Operation" screen.

Course Clear: Display changes to Course Condition Reporting screen (see Figure 3).

Hazard: When "Hazard" is selected, display changes to the Manual Hazard screen (see Figure 4).


(Figure 3) "Course Clear"

Options to send are Dry, Intermediate, Wet.

While sending, a message will display for 5 seconds as confirmation before returning to "Normal Operation".

When "Hazard" had been selected, Figure 4 will display.

A hazard can be sent from a course vehicle to warn other vehicles or attract the attention of Race Control.

This Hazard can be cancelled if required (buttons 2 or 3) or upgraded or downgraded depending on the situation. Upon moving again, the hazard will clear automatically, returning to normal operation.
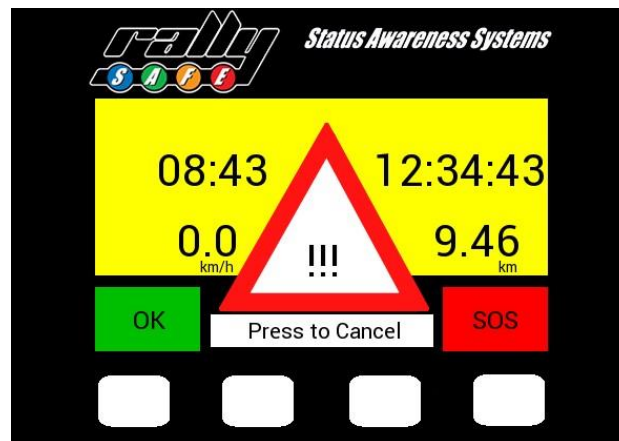

(Figure 4) Manual Hazard
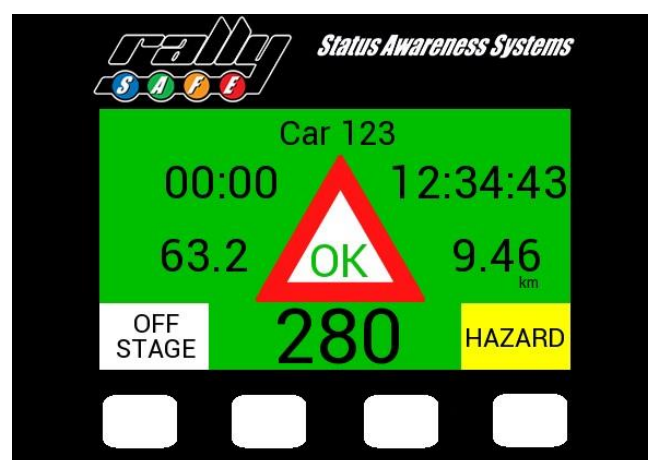
Management of Hazards

When a course car approaches a stopped car – the type of hazard and distance to the hazard will be displayed, along with the distance into stage (Figure 4 to 6). The Car stopped is shown above the triangle. The distance to the stopped car is shown below the triangle.

00, 000 and Sweep can change the type of warning being sent by a stopped car. The Officials on the ground have the best information available to assess the situation and change the status. Particularly if the stage is to be run in reverse.

Any course car needs to downgrade a SOS once the event is dealt with so that other competitors don't need to stop at the scene. This is particularly important if a stage is to be used for a second pass.
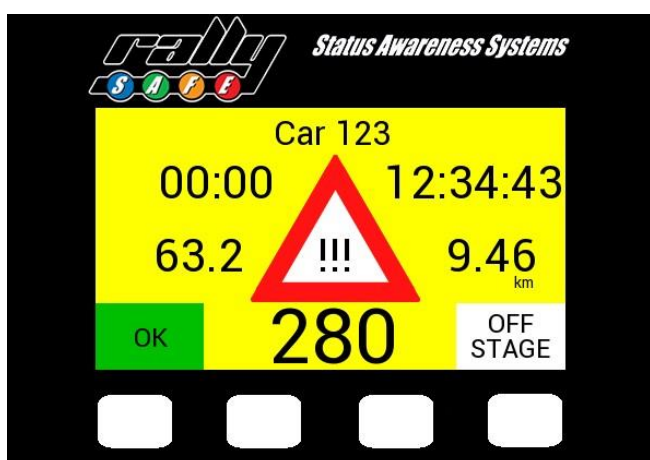
(Figure 4) Course Car view of a Hazard warning.　　(Figure 5) Course Car view of an OK   warning.

If a Course Car detects a hazard, it can change the "Hazard" of the stopped car to "OK" or stop transmission by taking it "Off Stage" by pressing the applicable button.

Similarly, for an "OK", the status can be changed to "Hazard" if the car is in an unsafe location.
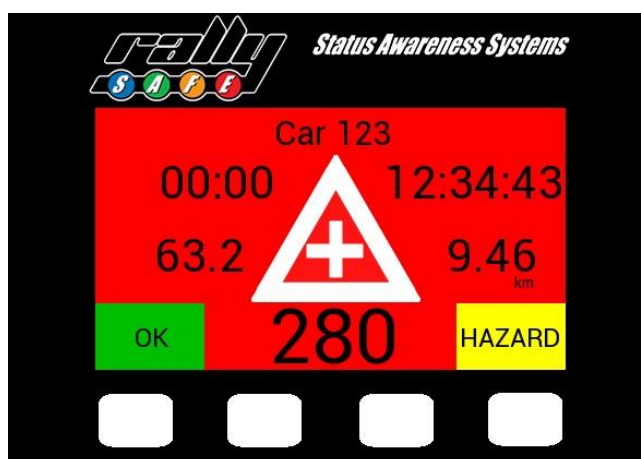
(Figure 6) Course Car view of a SOS warning.

Note: a SOS needs to be changed back to "OK" or "Hazard" before being able to set "Off Stage"

The options are:

OK -If a stage is to be continued or run for a second time and that the stopped car is in a safe location.

Hazard - If a stage is to be continued or run for a second time and other competitors need to be aware that the stopped car is in a hazardous location.

Off Stage - If a stage is to be continued or run for a second time and the car is off course. Or if the stage is completed and the car will not be completing the stage. (Note: a car can only be taken off stage if it is transmitting Hazard or OK.)

Additional Functions

(Figure 7) Start time issued for SS1 at 12:36.

At the Stage Start a start time can be issued to 00 or 000 simply by entering the car number into the tablet that is being used by the Start Officials.

This serves two purposes. It allows the 000 and 00 cars to confirm that the tablet is set to the correct stage and synchronizes the unit to the event coordinates. The coordinate distance is then displayed from a distance of 350m, to allow the course car to check placement of boards and control points.

If the car is not at the pre-defined start location the text "CONFIRM STAGE NUMBER IS CORRECT" will be displayed. Check the stage number on unit and confirm that the official tablet is set to the correct stage.
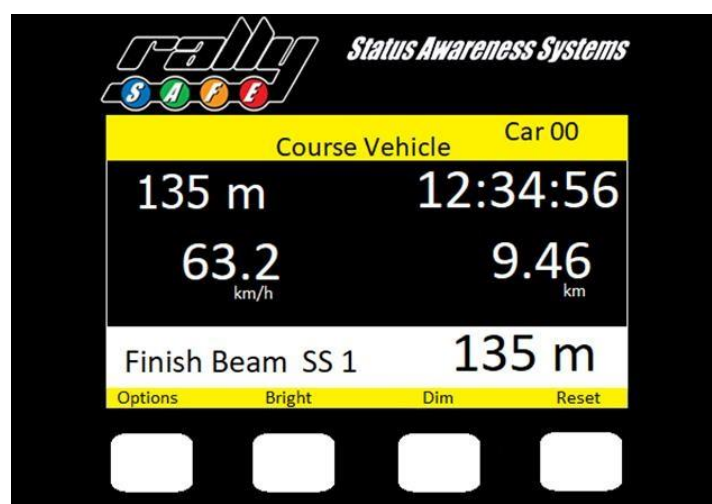
(Figure 8)

When Timing beams are in use, the distance to the beam will be displayed from 350m, if the beam is turned on and aligned.

5. References

[RallySafe RaceCommander Training](#)

[RaceCommander Start Control Manual](#)

[RallySafe Finish Beam Manual](#)

6. Definitions

3-in-1 Antenna	GPS, IRI, WIFI all included in 1 box antenna
Beam	A timing beam that is used as either the primary or back up timing system at an event
Competition	The event that a competitor has entered and is actively competing in.
Entry	A vehicle involved within a competition event.
EventManager	Program used to upload course and competitor information to a RallySafe Unit.
Faults	See Unit Faults.
Flying Finish	GPS precise point where the car finished the stage without stopping
Geoff	Program used to update unit code and pull log files off a RallySafe unit.
GPS	Global Positioning System, is a satellite-based radio navigation system owned and operated by the United States Government
GSM	Global System for Mobile Communications, most seen as 3G, 4G, LTE and 5G as used by your mobile phone.
Hazard	Vehicle stopped on any section of a special stage.
IRI	See Iridium.
Iridium	The Iridium satellite constellation provides data information to be transferred worldwide and in remote locations.

Itinerary	The order of running controls at an event.
Knuckle	The short arm between the RallySafe unit's ball mount and the ball mount secured to your vehicle.
Mobile Device	Your personal mobile phone, Status Awareness Systems supports both iPhone (iOS) and Android Devices.
MT	Satellite command message from Race Control Web App to a RallySafe unit or RSLite enabled device.
Quite Zone	A Quiet Zone is a speed monitored zone used only on transport sections of a rally.
RaceCommander	program used to upload control times to a competitors RallySafe unit.
RallySafe	The world's most advanced Rally Management System
RallySafe App	The publicly available mobile application where you can track the location and times of all the rally competitors at any time during the event.
RAM® Mount	Ram® Mounts is the industry leader in rugged motorcycle and car mounting solutions and is used by Status Awareness Systems as the preferred mounting solution for their products.
RFD	The USB radio dongle
Restriction Speed Zone	A Restricted Speed Zone is used on a stage to control vehicle speed over a section of road for a designated length or speed, as required.
Restriction Time Zone	A Restricted Time Zone is similar to a Restricted Speed Zone, but rather than controlling speed in a designated zone, the car must spend a set amount of time within the Restricted Time Zone parameters.
RSLite	RallySafe lite, a mobile phone application that monitors and reports your tracking information during a competition event.
SAS	Acronomn of Status Awareness Systems
Slow Car	A car the drops below the pre-defined SLOW limit
SOS	A serious incident occurring during the event, requiring additional support from Fire or Medical teams.
Special Stage	A competitive section of an event, normally timed for competitive results.
Start Clock	A countdown timer clock that cycles through
Start Control	The officials and crew working at the start of a competition stage, issuing start times and confirming that each vehicle is starting in a safe manner.
Status Awareness Systems	The parent company of RallySafe
Stop Point	The point at the end of a special stage where to car stops
Surface	The tablet computer used at various control points for inputting data.
Time Control	A control where a car his required to hand over a time card and check in
Transport	The distance between one competition stage and another.
Unit	The RallySafe device, most commonly referred to as 'the unit' or 'the RallySafe Unit'.
USB Radio Dongle	A USB device that is the communication link between the RaceCommander tablet and the RallySafe unit.
Virtual Chicane	A Virtual Chicane is used to help reduce average speeds and terminal speeds on high-speed parts of rallies. Competitors must reduce speed to a pre-set speed within the designated area given.
Wi-Fi	Wireless communication between multiple devices
Xbee	The USB Radio Dongle
Zero Point	A Zero Point was designed for use when a vehicle, in an endurance type event, has to come to a complete stop prior to crossing a live/open road.

7. Contact us:

Questions can be directed to info@statusas.com