

# Operation of RallySafe© Unit

## Introduction

Rallysafe© Units are designed to increase competition safety by providing ‘live’ status awareness to all cars – and Safety Notifications which inform event management and assist drivers to avoid secondary incidents

### 1. Turning the Unit On

- The Unit is pre - set with all stage coordinates and is activated when the vehicle is started and power applied
- The Unit will start-up with the "TRANSIT SCREEN" (Ref. Figure1) and driver must confirm that car number is correct

### 2. Turning the Unit Off

- Once power is on, the Unit will not turn off
- During a stage the Unit will not turn off and cannot be turned off
- When out of stage and power is removed the Unit will automatically turn off after **5 minutes**

### 3. Start Detection

- When vehicle is at start line the Unit automatically commences checking for start detection
- Once vehicle accelerates over the line, timing will start and safety notification functions are activated. Ref. Figure 2

| Stage             | TS1 Lillydale | CAR 932               |
|-------------------|---------------|-----------------------|
| Transit Time      | 00h05:33      | Current time 13:23:34 |
| Distance to start | 56.2 km       | Stage length 5.4 km   |
| Speed             | 93.6 kph      | Avg Req'd -----       |

Figure 1 **Transit Screen**

| Stage             | Paloona  | CAR 932                  |
|-------------------|----------|--------------------------|
| Transit Time      | 00h06:24 | Current Time 13:23:34    |
| Distance to start | 11.3 km  | Distance to end 5.0      |
| Speed             | 203 kph  | Avg. Req'd 101.2 / 100.0 |

Figure 2 **Stage Screen**

### 4. Transit Screen

- The TRANSIT SCREEN is displayed throughout the event unless on a competitive stage. Refer Figure 3
- The Transit Screen displays: next stage name, transit time, distance to start line (point to point), speed, car number, current time, stage length and average speed

**NB.** Transit time is the time from Unit switched on or time from last flying finish. Time should be noted when Unit is turned off as it will not resume

**Please note** as per Figure 3, the function of the white keys at the bottom of the transit screen, from left to right are:

**MENU – UP ARROW – DOWN ARROW – ENTER**

- At any time the TRANSIT SCREEN is displayed, stage times can be accessed by pressing MENU. These times are provisional only and exact times are logged internally and sent to control

To return to the TRANSIT SCREEN press the MENU button

- At the flying finish the Unit will calculate stage time and display on screen. Ref Figure 3
- At the stop point it will upload the data for the next stage and display the TRANSIT SCREEN

| Stage         | TS1 Lillydale | CAR 932               |
|---------------|---------------|-----------------------|
| Stage Time    | 00h03:23      | Current time 13:23:34 |
| Distance done | 5.4 km        | Stage length 5.4 km   |
| Speed         | 93.6 kph      | Avg 102.3 Req'd 0.0   |

Figure 3 **Flying Finish Screen**

MENU UP DOWN ENTER  
ARROW ARROW

## 5. Push to pass

- To warn slower cars that you intend to overtake, push the PASS button on the left side of the Transit Screen. Ref. Figure 4

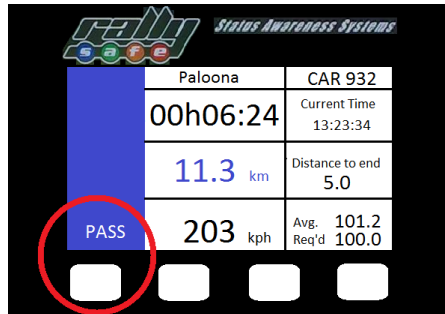


Figure 4 Stage Screen

- This transmits a notification to the vehicle ahead, up to 600m for 10 seconds and the Unit will display TRANSMITTING OVERTAKE. Ref. Figure 5
- The forward vehicle will receive a pass request stating the distance between cars and the car number wanting to overtake. Ref. Figure 6



Figure 5



Figure 6

- Timing continues during any transmission

## 6. Safety Notifications

In the event of a car being stopped on course the Unit will transmit a warning to all following cars. The following cars will be given a distance to the incident and the severity.

When not providing safety notifications the Unit will display the **STAGE SCREEN** Refer. Figure 2

### a. Slow Car

- If speed reduces below 30 kph the Unit will transmit a SLOW CAR notification
- This transmits a notification to vehicle behind and the Unit will display TRANSMITTING SLOW. Ref Figure 7
- The following vehicle/s will receive a SLOW CAR notification and the vehicle speed. Ref Figure 8
- If speed then exceeds 30 kph screen will return to on stage mode



Figure 7



Figure 8

- Timing continues during any transmission

## b. Hazard

Ref. Figure9

- If a car stops during stage the Unit will transmit a HAZARD notification
- The only way to stop a HAZARD transmission is to increase speed to over 30 kph
- A HAZARD can be upgraded to SOS if assistance is required, by selecting SOS SELECT. Ref. Figure 10
- A HAZARD can be downgraded to OK by selecting OK SELECT, if there is no need for following cars to slow and your car is not in a hazardous position. Ref. Figure 10
- **NB. If transmitting an SOS due to an incident and no urgent assistance is required, down grade to OK by selecting the OK SELECT in the green left side panel - or HAZARD by selecting OK SELECT in the yellow right hand side panel**

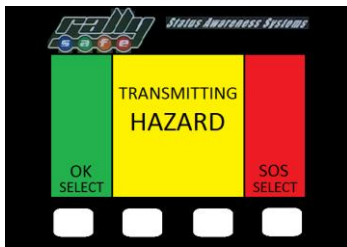


Figure 9

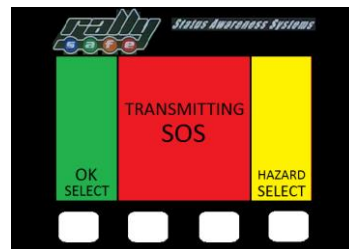


Figure 10

Changed pic

- Approaching vehicles will receive warnings accordingly



Figure 11



Figure 12

- Timing continues during any transmission

## 7. Stage down grades or diversions - What to Do

No button selection will be required for normal operation

- **If a stage is stopped, canceled or missed** due to repairs on vehicle etc then the Unit will need to be re aligned
- **If a stage is driven through** the Unit will activate and deactivate at the required points and then look for the next stage. There will be no affect on the sequence
- **If the Unit is displaying the wrong stage** name for the next stage during transit it can be stepped onto the required stage by pressing and holding the ENTER Button and the appropriate UP/DOWN buttons. Ref. Figure 3  
This can only occur if a stage has been missed.
- **If a stage is not run** the Unit won't know. If the stage is driven through the Unit will activate and deactivate at the required points and then look for the next stage. There will be no affect on the sequence
- **If a stage is stopped mid way through and the finish line bypassed**, the Unit won't know to go to the next stage. The onscreen stage will need to be stopped by pressing and holding ENTER and then pressing MENU button. Ref Figure 3  
This steps through to the flying finish page. The Unit then needs to be stepped through to transit by again pressing the ENTER and MENU buttons simultaneously  
This steps through to the end of stage page. It then needs to be stepped through to transit by again pressing the ENTER and MENU buttons
- **If at the end of a stage the Unit does not switch over to the next stage** contact the RallySafe representative at the Stop Point

The Unit will transmit stage times to race control at this point. It is imperative that all Units are on the correct stage to ensure Safety Notifications are received

If the Unit doesn't start the stage the timing won't be recorded

## Unit Specifications

| Unit Dimensions                     |                  |
|-------------------------------------|------------------|
| 140mm Wide x 120mm High x 40mm Deep | Weight 600 grams |
| Power Consumption                   |                  |
| Power On – Transit Mode             | 0.15A            |
| Power On – Transit Mode - Charging  | 0.3A             |
| Power Down – Sleep Mode             | 0.0002A          |
| Transmitting Incident on Stage      | 0.22A            |
| Conductor Specifications            |                  |
| Number of Conductors                | 5                |
| Outer Insulation                    | Yellow PVC       |
| External Diameter                   | 2.5mm            |
| Material                            | Copper           |
| Current Rating                      | 5.A              |

**NB : All measurements displayed are point to point**



## Quick Reference Manual

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