



RALLYSAFE RALLY CAR FITTING KIT MANUAL

Rallysafe® Fitting Kit Manual – RALLY CAR

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Rallysafe® Fitting Kit Components

The Rallysafe Fitting Kit includes:

- Rallysafe Installation and Fitting Kit Instruction Sheet;
- 2 in 1 Antenna with Leads (options for stick on or bolt on and lead length to be selected when ordering), with the bolt on type being the preferred method.
- Internal Wi-Fi Antenna with lead (options of lead length to be selected when ordered)
- 6 – 24v hard wiring loom with plug (length selected when ordering to include 300mm spare cable at mounting point.)
- 1 Roll Cage Mount or 1 flat mount with 25mm ball joint (to be bolted through dash)
- 1 adjustable mount connector/knuckle (short of long to be selected when ordering).



(Contents may not be identical to the picture shown)

(The Rallysafe Display Unit is not a part of the fitting kit and will be available at documentation or scrutiny)

12 Volt Power Supply (Please read this carefully)

Rallysafe requires a continual reliable power supply from 9 to 28 volts DC, for your safety and continuity of service, it is imperative that the unit is connected to an un-switched supply on the battery positive terminal or the battery positive side of the isolation switch, **insure that power is supplied to the unit at all times. Do not use an ignition switched power supply.**

We recommend that a 5 amp (Max) blade type or similar quality fuse is used at the battery supply end of the Rallysafe power lead.

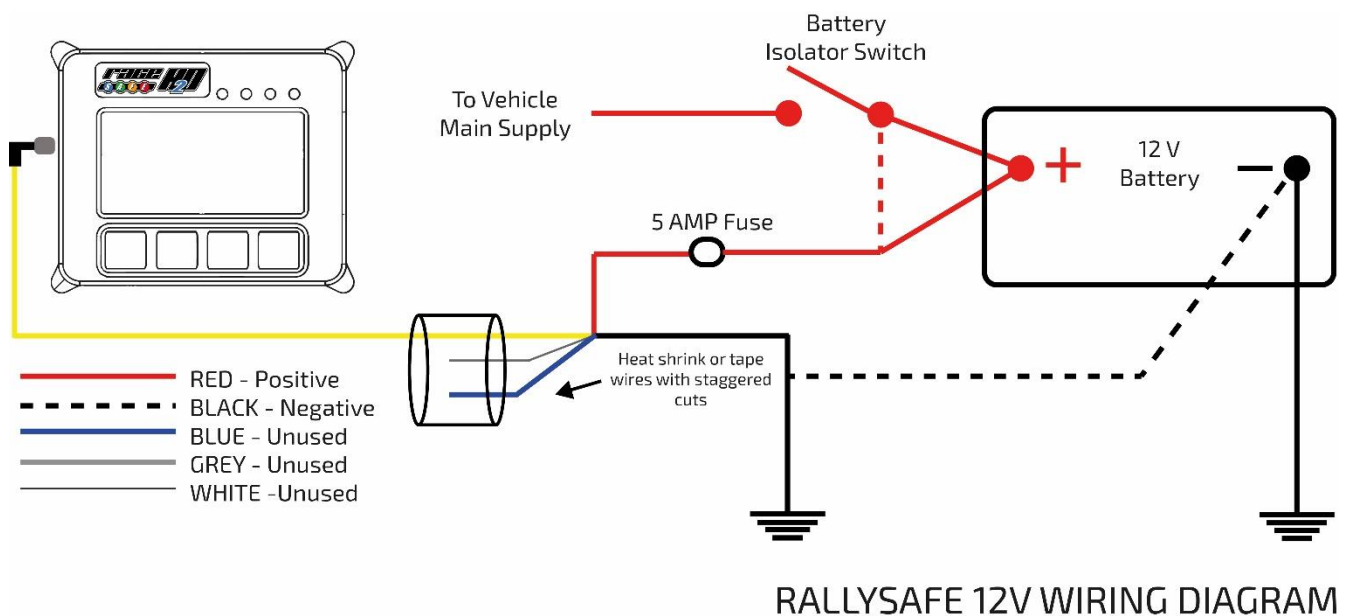
0 volts or Battery negative can be picked up at any suitable earthing point providing the isolation switch does not switch the negative side of the battery.

The Rallysafe unit has an internal battery that is kept charged via the cars power supply, it is only there as a reserve supply to power the unit in an accident situation where the cars power supply is interrupted. ie: car battery smashed or dislodged.

As the Rallysafe unit is aware of movement and its location; it will automatically go into power save/sleep mode 5 minutes after no movement is detected, however, the unit will continue to function is when it is sending Hazard type signals while on stage. The unit will be "woken" up by pressing any button or by movement of the car.

In the yellow power loom there are 5 wires red and black are used as follows, **white blue and grey must be stagger cut and heat shrinked or taped back so they cant short to ground or to each other.**

Connection Diagram.



Mounting and Antenna Leads



Here is what a standard installation would look like. Note the unit and aerial placed in clear and unobstructed view.



The rear panel of the unit, with all aerial and power leads connected.



A minimum of 300mm of Rallysafe Power Supply Cable and Antenna Leads should be left at the unit mounting bracket location for connection to the unit



The Antenna leads are connected as follows. (There may be variations with the type and number of leads)

- 1: The WiFi lead labelled by the colour "**Blue**" is connected to the terminal labelled "Wi-Fi" on the Rallysafe unit, (it is Right Hand Thread), terminals may be on the side or rear of the unit and or colour coded Blue.
- 2: The Satellite communication Antenna lead is connected to the centre or rear terminal labelled "IRI". It may also be colour coded **Yellow**; (this may be not marked on the 2 in 1 antenna) and is **Left Hand Thread**.
- 3: The GPS Antenna lead labelled "GPS", is connected to the terminal labelled "GPS" on the Rallysafe unit, (it is Right Hand Thread), terminals may be on the side or rear of the unit and or colour coded **Green**.
- 4: GSM, if optional will have a small stick antenna supplied with the Rallysafe unit, and is connected to corresponding terminal labelled "GSM" on the Rallysafe unit, (it is Left Hand Thread), the terminal may be on the side or rear of the unit and or colour coded **Red**.

(Note: Internal Wi-Fi is only marked by the colour "**Blue**", it is to be connected to the uppermost or rear terminal labelled "Wi-Fi" on the RallySafe Unit).

Unit Mounting & Dimensions

The preferred mounting method for the RallySafe unit is on a Ram style 50mm x 75mm flat base with ball, bolted through the dash (with a 3mm aluminum backing plate), in a protected central location, easily seen and accessible by both the driver and co-driver/nav. Photographs of the best mounting options and positioning are below.

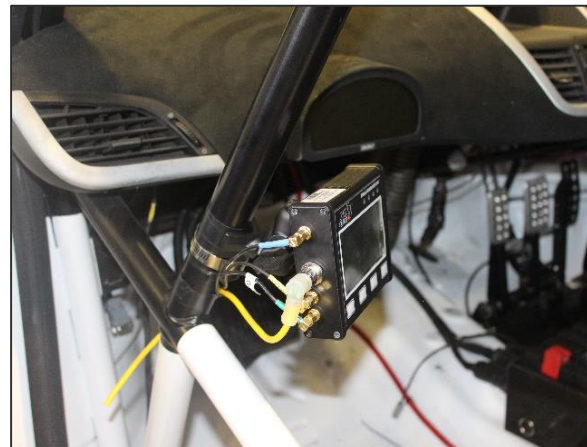
An alternative mounting method for the Rallysafe unit is on the roll cage forward leg on the Co-Driver's side on a Right Angle Roll cage Bracket with ball and Connector Clamp (also shown in photos above and below).

The Rallysafe unit should be mounted in a vertical (preferred) position where peripheral vision will catch screen warnings etc. Some Drivers prefer to have visual contact with the unit others prefer to let the Co- Driver view the screen and call the warnings as required.

MOUNTING EXAMPLES



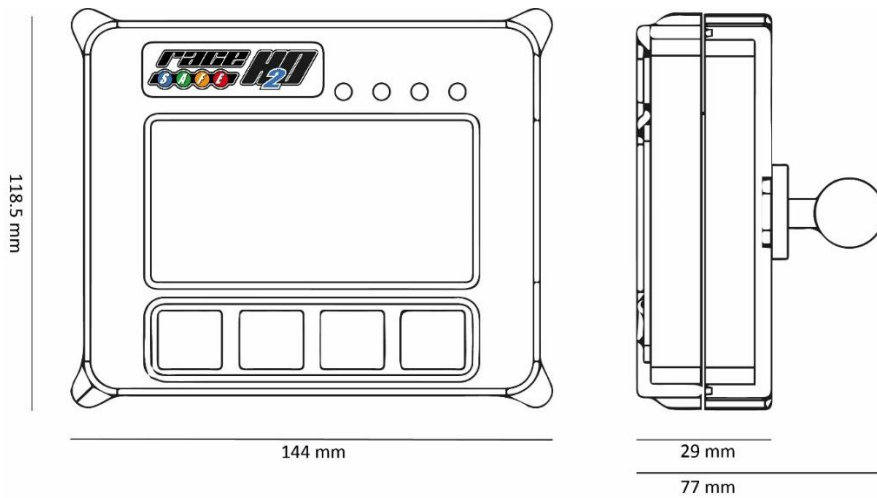
Here the 25mm rubber ball mount is securely attached to the A Pillar bar of the Roll Cage.



The RallySafe unit then mounts to the 25mm Rubber Ball mount. (This is connected through the RallySafe connector)



UNIT DIMENSIONS



Antenna installation

All leads on both external and internal antennas must run on the inside of all roll cage bars. This is to stop cable crushing on an impact. The preferred route is to go from antenna under then across the main hoop to roll cage front leg, then follow down the inside of the front leg down the a pillar on the inside to the unit. Any excess cable must be ran in a way that the cable is not bent any tighter that a 100mm radius we recommend running it across the underside of the dash and back (do not coil in tight loops) Cables must be tied neatly along the whole installation right to the units so damage from hooking gear or body parts will not cause damage to the installation. All this will be checked at scrutineering and you may be required to fix it before your car will pass.

Bolt on Antenna: (Preferred)

The antenna is mounted through a 12mm hole in a central location on the **ROOF** of the vehicle, preferably 50mm forward of the main Roll bar hoop allowing the cabling to pass through the roof and follow the cage bars back to the RallySafe unit location. In certain circumstances, an alternative style of antenna can be ordered that does not require a hole to be made through the roof. It is highly recommended that the normal 2 in 1 antenna be used, as it significantly improves communications. The antenna is a fully watertight unit which seals against the roof surface.



Step By Step Process for the Bolt on Antenna



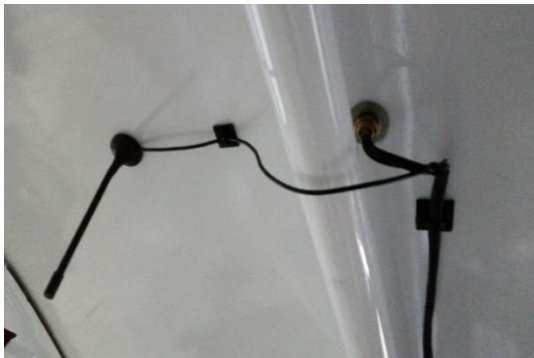
Stick on Antenna: (Alternative)

The antenna is to be mounted in a location on the ROOF of the vehicle preferably within easy cable reach of the final RS unit mounting position allowing the cabling to then pass through the door seal and follow the cage bars back to the RS unit location. The antenna is a fully watertight unit which seals against the roof surface. Cabling will need to be suitably taped and protected to the outside of the car.

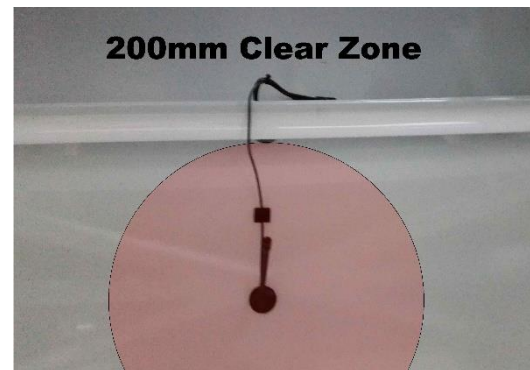


Internal Wi-Fi:

The Internal Wi-Fi should be placed on the inside of the ROOF with a 200mm radius clear of any bar work or solid metal object in a clear uncluttered area. The internal Wi-Fi Antenna has a magnetic base with a double sided tape for adhesion, the cable is then to be run to the Rallysafe unit. ***(Please keep cable inside roll cage so not to be crushed in the event of an accident.)*** Poor positioning or mounting of this antenna will result in decreased range of Car to Car functions i.e. push to Pass Hazard warnings etc. It is also important for relaying your safety status out via other vehicles to race control if damage is done to your external antenna.



Here the antenna is stuck inside the roof in the middle of the vehicle (Preferred)



Please note the Internal Antenna is 200mm AWAY from any roll cage components

Unit Power Consumption Figures & Specifications

Power Cable Conductor Specifications	
Number of Conductors	5
External Diameter	2.5mm
Material	Copper
Current Rating	5A

Unit Power Consumption at 12 Volts	
Power on Transit Mode	.200A
Power on Transit Mode - Charging	.300A
Power Down – Sleep Mode	.002A
Transmitting Incident on Stage	.250A

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