



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:

- This RallySafe Fitting Kit Manual,
- 3-in-1 antenna with leads,
- Internal radio antenna with lead,
- 6 – 24v wiring loom with plug,
- Mount, either roll cage or flat (to be bolted through dash), with 25mm ball joint,
- Adjustable mount connector/knuckle.



(Contents may differ slightly to image shown)

N.B. The RallySafe Display Unit is NOT part of the fitting kit and will be available at Documentation or Scrutineering

12 Volt Power Supply (Please read carefully)

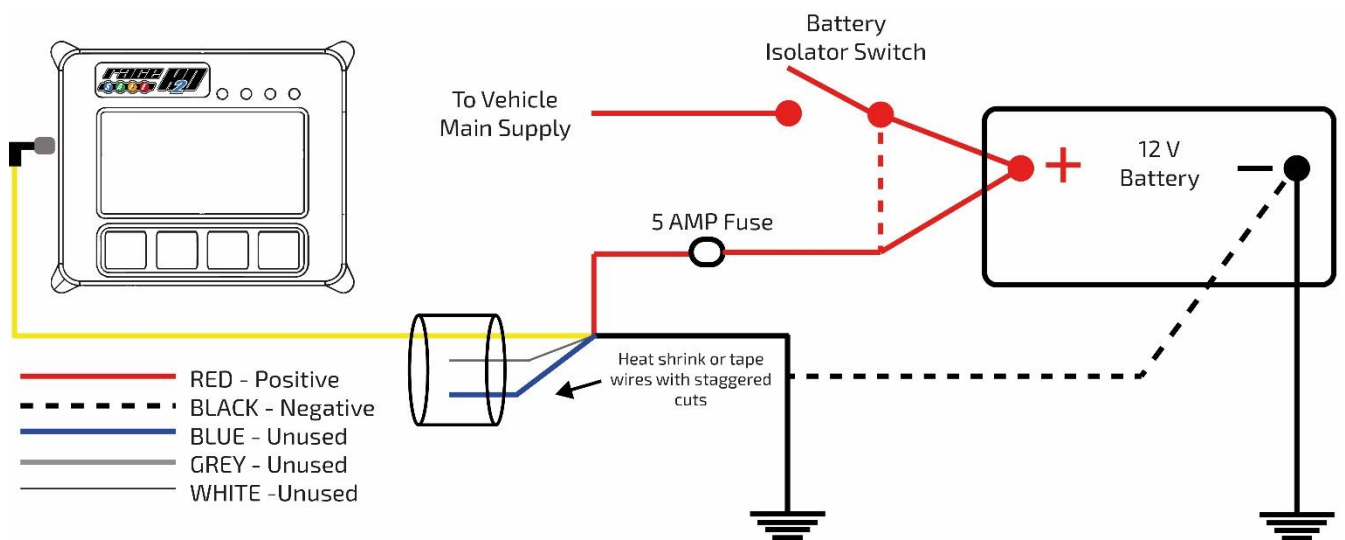
RallySafe requires a continual reliable power supply from 9 to 28 volts DC. For your safety and continuity of service, it is imperative that the unit is connected to an un-switched supply on the battery's positive terminal or the battery's positive side of the isolation switch. **Ensure that power is always supplied to the unit. Do not use an ignition switched power supply.**

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

Zero 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.

In the yellow power loom there are 5 wires. **White blue and grey must be stagger cut and heat shrunk or taped back so they can't short to ground or to each other.** Red and black are used as follows:

Connection Diagram



RALLYSAFE 12V WIRING DIAGRAM

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

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 impact. The preferred route is to go down from the antenna, underneath the closest part of the roll cage (roof cross or main hoop), follow that along to the roof hoop, then go down the inside A pillar to the unit. Any excess cable must be run so that the cable is not bent any tighter than a 100mm radius. It is recommended that excess cable be run across the underside of the dash and back (do not coil in tight loops). Cables must be tied neatly along the whole installation all the way to the unit so they can't be accidentally caught or dislodged. This may be checked at scrutineering, and you may be required to fix it before your car can pass. When antenna fittings are not in use, please safely tuck them away to avoid any damage.

Bolt-on Antenna (Preferred):

The antenna is mounted through a 12mm hole in a central location on the **ROOF** of the vehicle, allowing the cabling to pass through the roof and follow the roll cage bars to the RallySafe unit location. The antenna is a semi water-resistant unit which adheres to the roof surface. (High pressure water against the antenna may cause damage, please be mindful when washing interior and exterior of vehicle – **See Fitting Kit Care Instructions**)

(In special circumstances, a temporary stick-on antenna that does not require a hole through the roof can be ordered. It is highly recommended, however, that the standard 3-in-1 antenna be used, as it significantly improves communications.)

Step By Step Process for the Bolt-on Antenna



12mm hole drilled through the roof.



Antenna leads passed through the hole.



Nut used to secure antenna to roof.



Leads tied to roll cage.

Stick-on Antenna (Alternative):

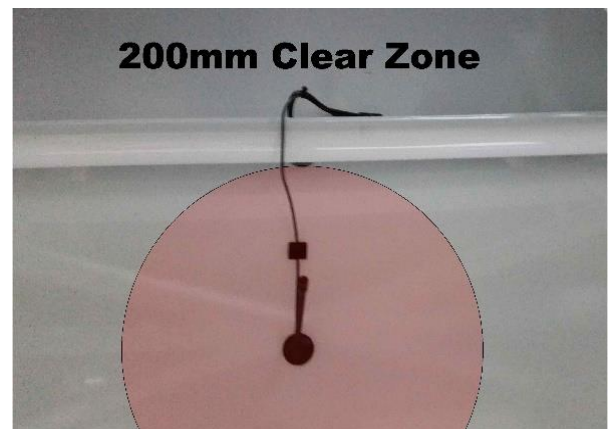
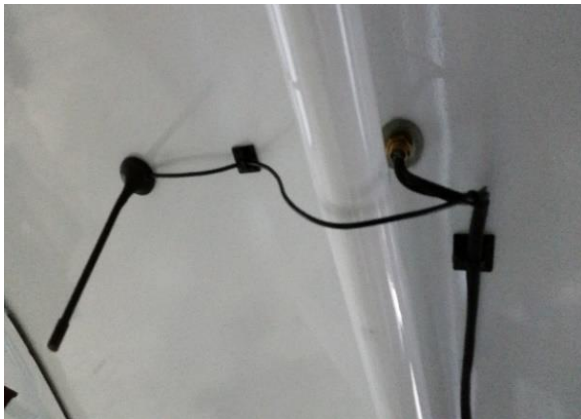
The antenna is mounted on the **ROOF** of the vehicle, preferably within easy cable reach of the final RallySafe unit mounting position allowing the cabling to then pass through the door seal and follow the cage bars back to the RallySafe unit location. The antenna is a semi water-resistant unit which adheres to 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** in a clear area, with a 200mm radius clear of any bar work or solid metal object. The cable is then run to the RallySafe unit. **(For protection of the cable, please keep cable inside roll cage)** Poor positioning or mounting of this antenna will result in decreased range of car-to-car functions i.e., Push-to-Pass, safety warnings, etc. This is also important for relaying your safety status via other vehicles to race control if damage occurs to your external antenna.



Unit Mounting

The preferred methods for mounting the RallySafe unit are listed below:

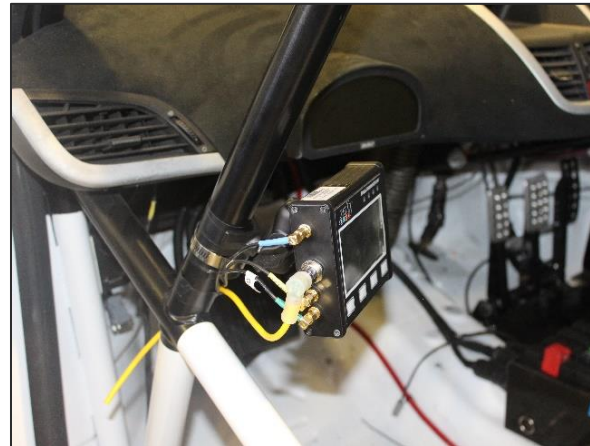
- RAM Flat Mount Base (50mm x 75mm) with ball, bolted through the dash with a 3mm aluminum backing plate. It should be in a central, protected location, and be easily visible and accessible by both the driver and co-driver/nav.
- RAM Roll Cage Mount with ball, attached to the roll cage forward leg tube on the co-driver's side.

(Photographs of preferred mounting and positioning can be seen below)

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 using the adjustable mount connector.



Fitting Kit Care Instructions (Roof-top Antenna + Unit-end and Power Connections)

Care must be taken to protect the roof-top antenna, unit-end antenna connections and power lead unit connection when a vehicle is washed before/after an event.

In-house testing at RallySafe has shown that a single drop of water inside the unit-end connectors will cause communication failure. This could mean that you will lose your stage/lap timing!!!

Water ingress of the roof-top antenna and/or unit-end antenna connections can cause corrosion which could result in communication failure between the antenna components, unit-end antenna connections and the RallySafe Unit. **This will result in possible timing issues and a loss of tracking and safety functions.**

Water ingress of the power lead unit connection can cause corrosion which could result in a loss of power to the RallySafe unit. **This will result in possible timing issues and a loss of tracking and safety functions.**

Roof-top antennas for Off-Road cars, trucks, buggies, and motorcycles (e.g.: no windscreen/windows fitted) are partially sealed where the leads exit the antenna to protect from dust and water ingress during competition. **This sealing is not designed to withstand the force of a pressure washer.**

Unit-end antenna connections are brass and are not sealed or waterproof.

The power lead unit connection is waterproof. **This waterproofing is not designed to withstand the force of a pressure washer.**

Care instructions during and after washing:

Bundle the unit-end antenna connections and the power lead unit connection into a plastic bag and tape/seal the plastic bag to prevent water ingress. **Avoid directing pressure washer spray at or near the sealed plastic bag.**

Avoid directing pressure washer spray at or near the area where the leads exit the roof-top antenna.

After washing, remove the sealed plastic bag from the bundled unit-end connections and the power lead unit connection and hand/blow-dry the connections to remove any moisture.

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