



RALLY SAFETY SYSTEM

INSTALLATION MANUAL

Version released on 30.07.2020

1. GENERAL

- 1.1. It is mandatory that each rally vehicle to have properly installed and working “RALLY SAFETY SYSTEM” on board of the racing vehicle.
- 1.2. The system is rented at the administrative check and it is installed and sealed by the organizer at the scrutineering.
- 1.3. A deposit published in the supplementary regulations must be paid in cash only at the administrative check. Deposits are refunded in cash at sight when the equipment is returned to the organizer in working condition.
- 1.4. The tracking devices will be dismantled by the organizer in the last Parc Ferme or Time control. If a crew retires the rally, they can dismantle the Rally Safety System without causing any damage to the hardware and return it to the HQ, where after checking of the condition of the devices and hardware, the deposit will be refunded.
- 1.5. Crews will receive special Base/Mounting brackets for the Com-Box unit, that must be installed according to this appendix on the rally vehicle before entering the scrutineering.

1.6. It is the competitor's responsibility to ensure that the Rally Safety System always remain permanently connected and switched on with the antenna connected throughout the duration of the rally. Any crew that fails to do so, or if it is noted that the system is not in operation through the fault of the crew, will be reported to the Clerk of the Course and will incur a penalty of at least 15 minutes, which may be increased at the discretion of the Stewards.

2. SYSTEM COMPONENTS

- 2.1. GPS Tracker – 75 x 75 x 30 mm. Installed by the organizer at scrutineering on the required position. The device is IP 67 protected and have built in battery providing back up power if the external power is lost. See bellow possible installation locations and positions.



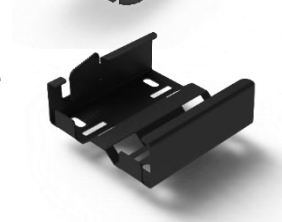
- 2.2. Com-Box – 75 x 75 x 30 mm. Installed by the organizer at scrutineering on the required position. The device is IP 67 protected and have built in battery providing back up power if the external power is lost. See bellow possible installation locations and positions.



- 2.3. Buzzer/Alarm – 55 x 55 x 70 mm. Installed by the organizer at scrutineering on the required position. See bellow possible installation locations and positions.



- 2.4. Base/Mount bracket for Com-box – 75 x 75 x 25 mm. Given at the administrative check, Installed by Crew on the required position before entering scrutineering. See bellow possible installation locations and positions.



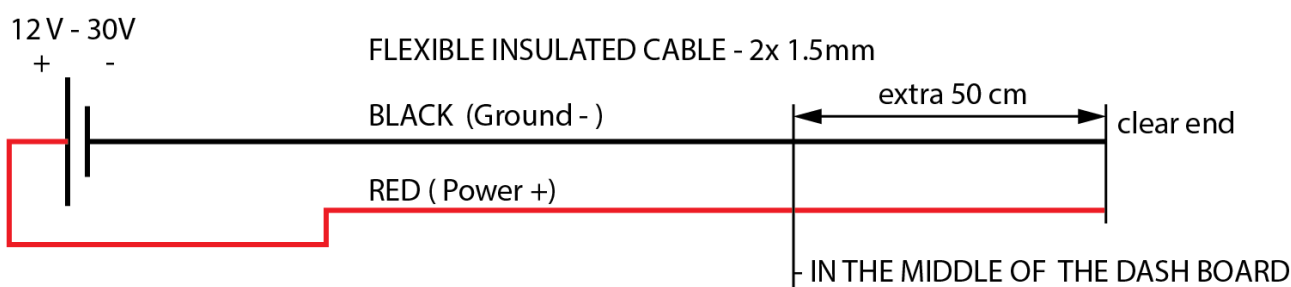
- 2.5. RF extension and antenna installed on the buzzer/alarm or Com-box

- 2.6. It is forbidden to unseal, disassemble, and remove the external power supply for the devices. Checks will be carried out during the event.

3. POWER SUPPLY

- 3.1. IMPORTANT !!! The battery master cut-off (kill) switch MUST NOT DISCONNECT the power supply for the Rally Safety System.**
- 3.2. It is the responsibility of the competitors alone to provide, DIRECT POWER SUPPLY from the vehicle's battery according to the drawings provided.**
- 3.3. The power cables must be "flexible" (multi wire), insulated cables – 2 x min 0.5 to 1.25 mm² (preferably with RED and BLACK insulation color).**
- 3.4. The connection may have an IN-LINE FUSE - "BLADE TYPE" of 5A.**

VEHICLE's BATTERY



- 3.5. The wires must be prepared in advance and connected to the vehicle's battery when the vehicle is presented for scrutineering.**
- 3.6. The cable must have minimum 50cm extra usable length from the middle of the dash board (See installation position).**
- 3.7. The connection to the Rally Safety System will be done with a simple connector terminals supplied by the organizer.**

3.8. Electrical details:

- The allowed range of voltage is 6V to 30V DC.
- The nominal voltage is 12V.
- Energy consumption in idle state (at 12.6V power supply): 250mA r.m.s.
- Maximal power consumption – 2W

4. CONNECTORS

- 4.1. The power supply cables (Power+ and Ground-) must be equipped with FULLY INSULATED FEMALE Crimp Spade Terminal Connector - 6.3 x 0.8mm.**

- 4.2. See the graphic bellow for example:



- 4.3. Rally vehicles using standard power connectors as laid down in the FIA CCRSR Appendix VI will receive an additional cable adapter to connect the system to the vehicle power supply.

5. MOUNTING OF THE SYSTEM COMPONENTS:

5.1. It is the competitor's responsibility to ensure that there is enough free space for each of the system components to be installed.

5.2. The system components will be installed by the organizer at the scrutineering.

5.3. The mounting of the components is specific of each vehicle type using the following (supplied by the organizer):

- Cable / zip ties;
- 3M Velcro tape;
- Electrical connectors

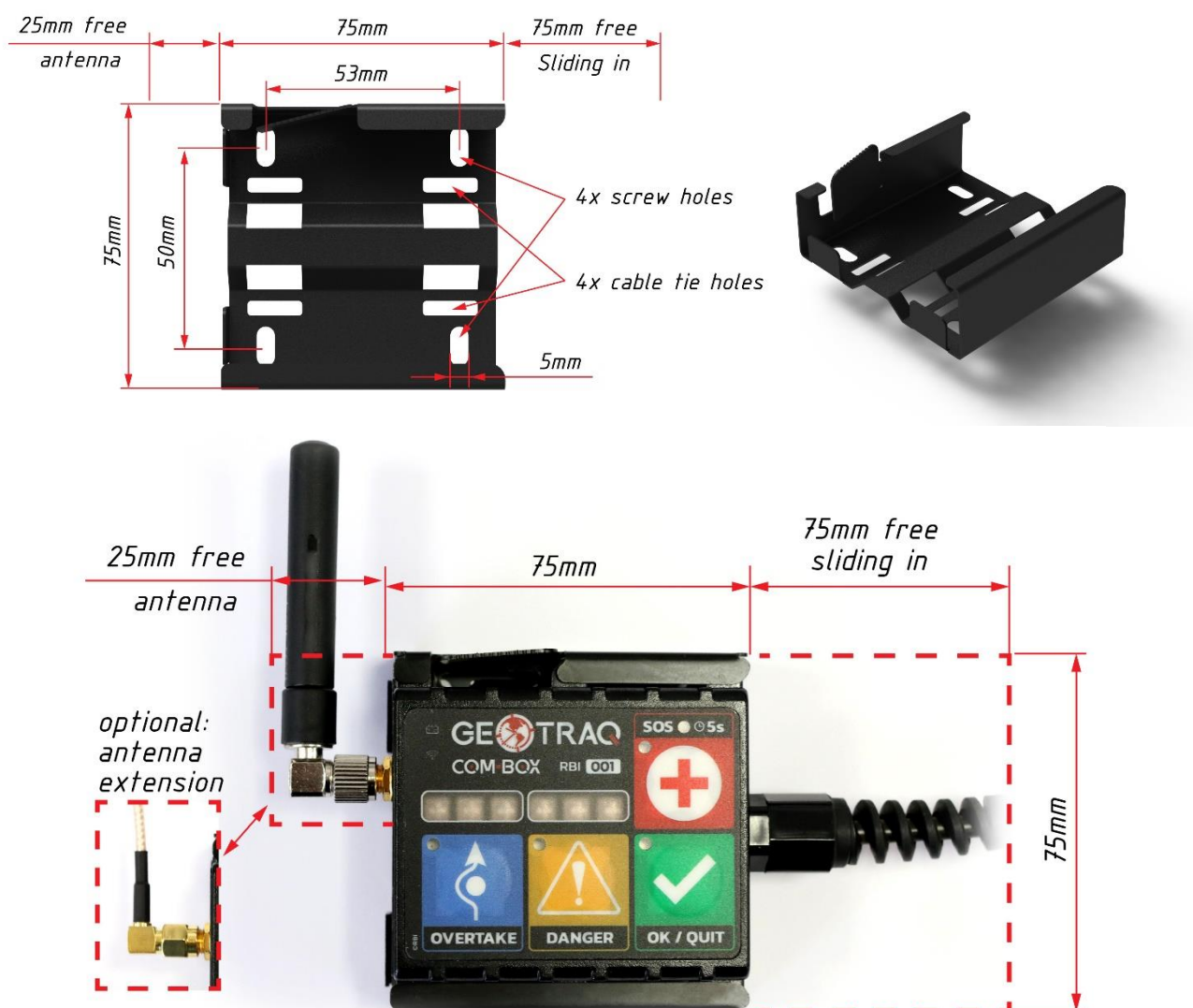
6. COM-BOX INSTALLATION

6.1. Base/Mount bracket will be distributed at the administrative check to each crew and must be installed on the rally vehicle before scrutineering.

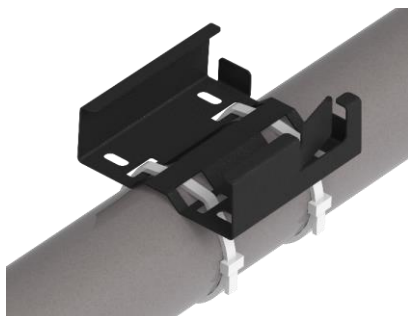
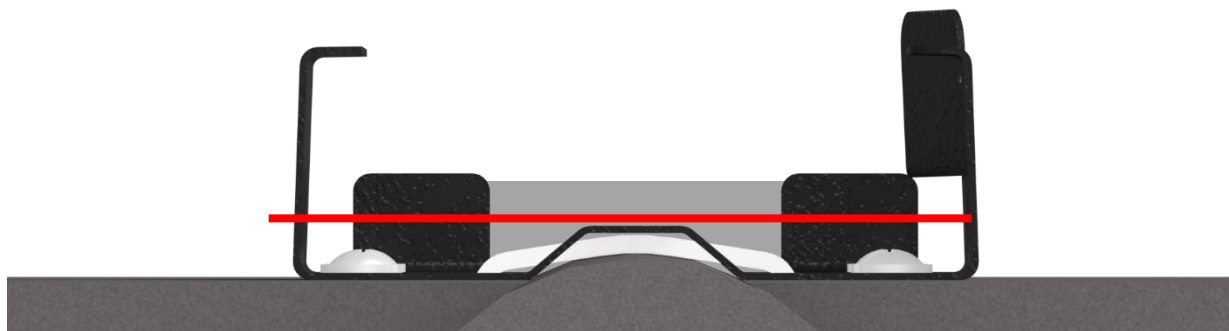
6.2. Base/Mount bracket can be directly bolted or zip-tied or stuck to the rally vehicle at the designated location by the crew. It is the responsibility of the crew alone to install the bracket before scrutineering.

6.3. A minimum of 75mm on the sliding side of the bracket and 25mm on the antenna side must be free for the Com-Box unit.

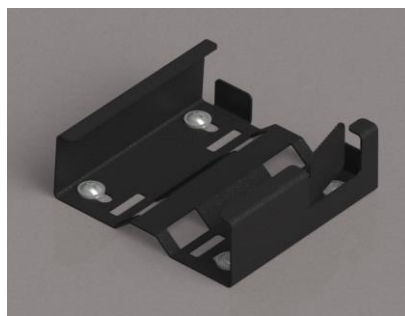
6.4. The installation location must be in reach of the Rider or Co-driver for operation in the rally.



6.5. No bolt/screw heads or cable/zip ties can protrude over the red line as marked bellow.



Cable / zip tie fixture

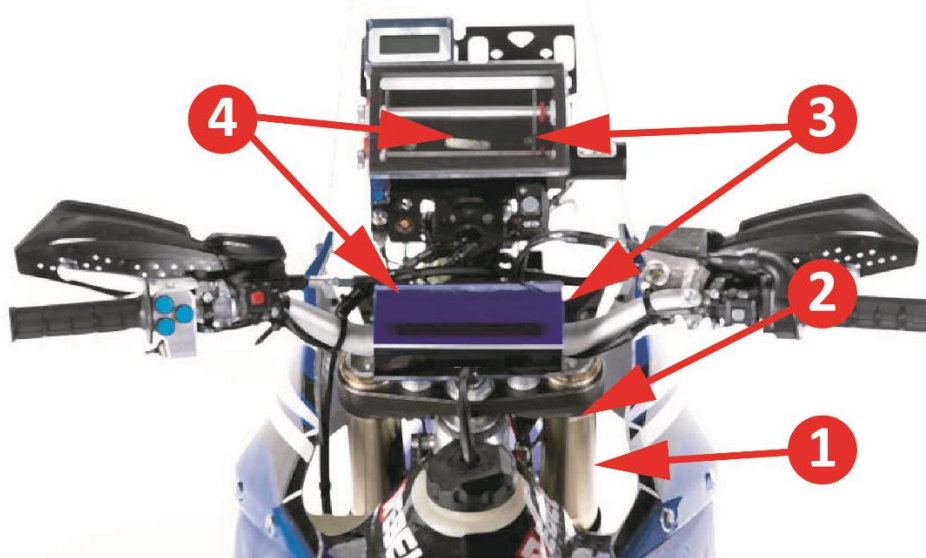


Screw / bolt fixture



Com-Box unit installaed in bracket

7. INSTALLATION POSITION: ENDURO



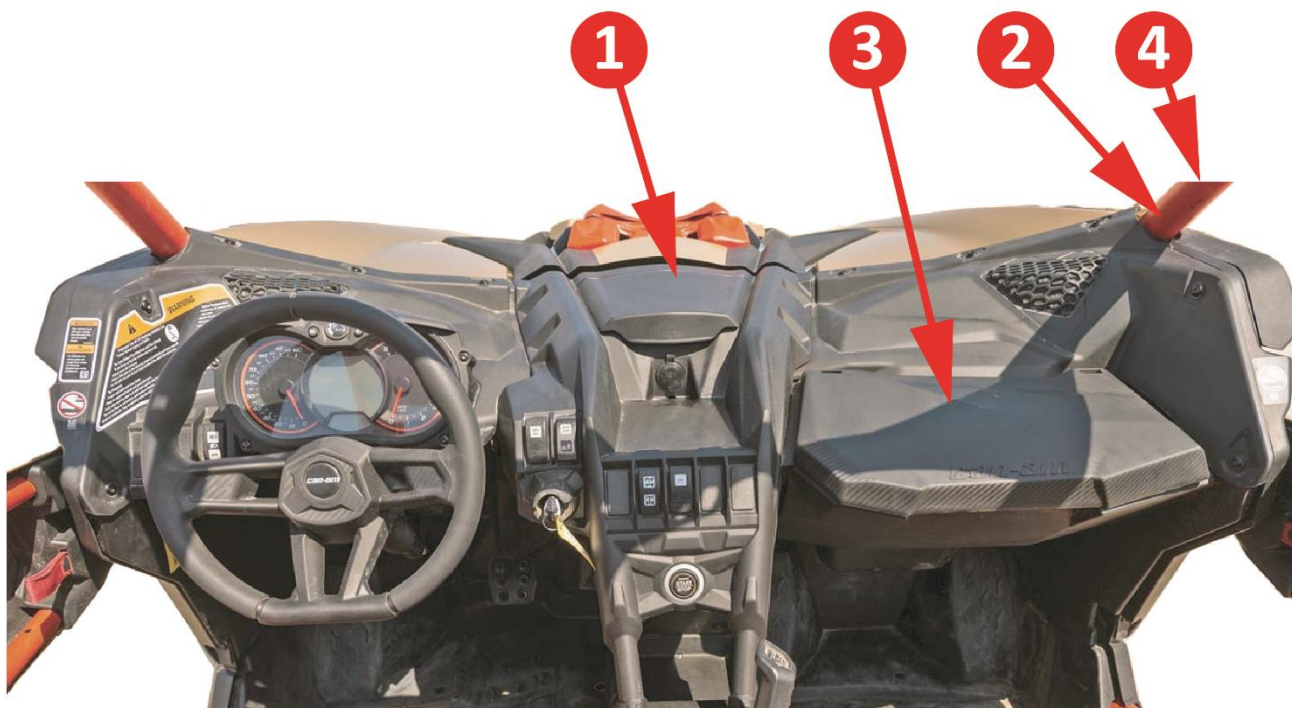
#	Location	Fixing
1 – Power supply cable end	Close to the top fork mount or navigation tower	Zip ties
2 – GPS Tracker	Close to the top fork mount or navigation tower	Zip ties
3 – Com Box	Handle bar or navigation tower	Base/mount bracket
4 – Buzzer / Alarm	Handle bar or navigation tower	Zip ties

8. INSTALLATION POSITION: ATV



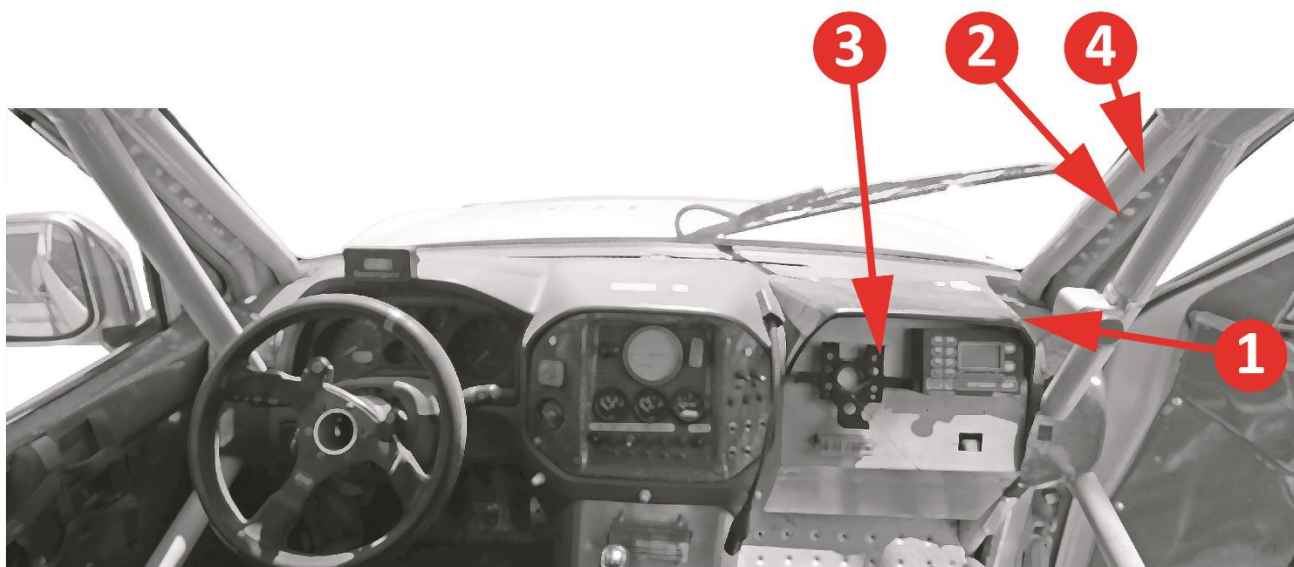
#	Location	Fixing
1 – Power supply cable end	Navigator tower or top of fuel tank protectors	Zip ties
2 – GPS Tracker	Navigation tower or fenders	Zip ties
3 – Com Box	Handle bar or navigation tower or top of fuel tank	Base/mount bracket
4 – Buzzer / Alarm	Handle bar or navigation tower	Zip ties

9. INSTALLATION POSITION: SSV



#	Location	Fixing
1 – Power supply cable end	Middle of the cockpit or co-driver „A-pillar“	Zip ties
2 – GPS Tracker	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties or velcro tape
3 – Com Box	dashboard	Base/mount bracket
4 – Buzzer / Alarm	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties

10.INSTALLATION POSITION: CARS



#	Location	Fixing
1 – Power supply cable end	Middle of the cockpit or co-driver „A-pillar“	Zip ties
2 – GPS Tracker	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties or velcro tape
3 – Com Box	dashboard	Base/mount bracket
4 – Buzzer / Alarm	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties

11.INSTALLATION POSITION: TRUCKS



#	Location	Fixing
1 – Power supply cable end	Middle of the cockpit or co-driver „A-pillar“	Zip ties
2 – GPS Tracker	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties or velcro tape
3 – Com Box	dashboard	Base/mount bracket
4 – Buzzer / Alarm	„A-pillar“ or dashboard or horizontal roll-bar tube	Zip ties

12. COM-BOX INSTALLATION EXAMPLE



13.SYSTEM FUNCTIONS

- 13.1. Tracking and safety functions:
 - GSM/GPRS Tracking
 - Manual and automatic stop vehicle alert to Rally control
 - SOS/OK safety alerts to Rally Control
 - Two-way communication to Rally Control.
 - Live tracking data platform for public access
 - Rally replay
- 13.2. Control functions
 - Validation of waypoints
 - Validation of virtual passage controls
 - Speed control by start and end of speed control zones
- 13.3. Vehicle-to-Vehicle Communication functions
 - Overtake request by vehicle-to-vehicle communication
 - Vehicle in danger
 - Vehicle in SOS