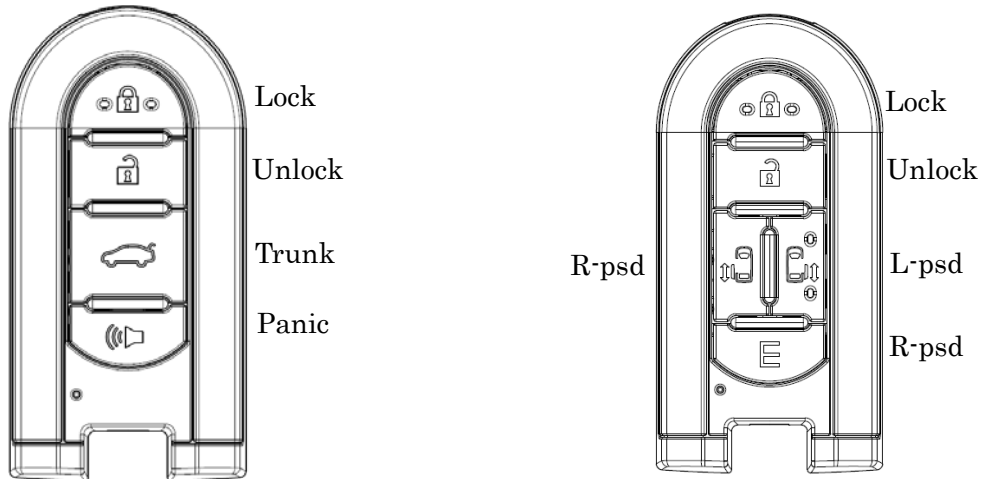


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Since this device is always used with vehicle, it is not sold to general end users separately. Therefore there is no user manual of this device by alone.

1. Electrical Characteristics

(1) Hand Unit



- Modulation type
- Operating supply voltage
- Operating supply current
- Stand-by current
- Operating ambient temperature
- Antenna direction
- Battery life

Transmission : FSK Reception : ASK
2.5V ~ 3.2V (3.0V Battery)
< 15mA
< 7.5uA
-20°C to +60°C
3-Dimension (X, Y, Z), to be considered
2.5 Years (Low battery indication is considered)

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2. Passive Access Entry Functionality

A handle sw located on, for example the door handles, mirrors and trunk lid will be used for proximity check if user is in neighborhood of the vehicle. The switch input will trigger for unlocking and open the doors and trunk.



Door Handle SW

Figure 1

2.1. Door Unlocking

- User pushes door handle sw.
- ECU sends LF-challenge via exterior antenna.
- FOB sends RF-response to the ECU.
- Door unlocking status is engaged.
- Doors are opened.

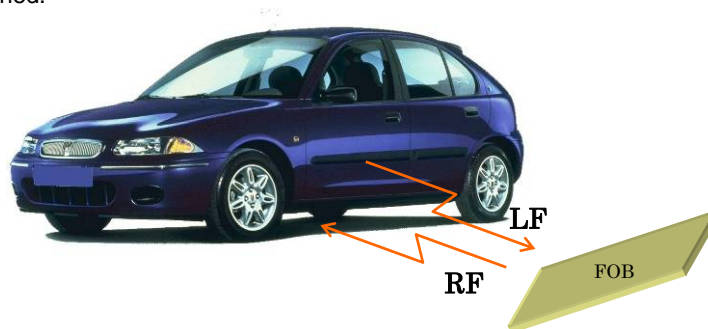


Figure 2

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2.2.Engine Start

- User operates the engine start knob or switch.
- ECU sends LF-challenge via interior antenna.
- FOB sends RF-response to the ECU.
- Immobilizer ECU receives and authorizes the response.
- Engine controller ECU receives the authorization for engine start.
- Start the engine.

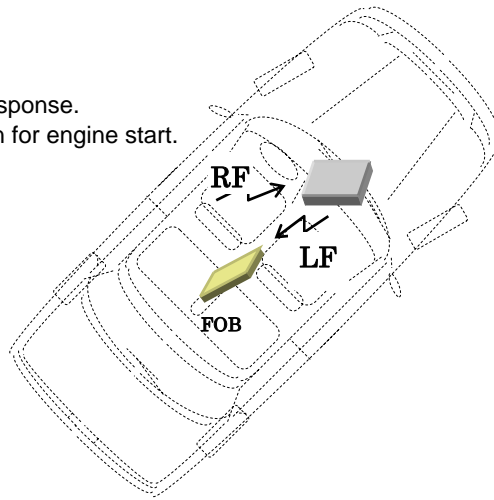


Figure 3

2.3.Engine Stop

- User operates the engine stop knob or switch.
- ECU communicates with the other ECU for engine start request.
- Engine controller ECU receives the request.
- Stop the engine.



Figure 4

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2.4. Door Locking (Push switch)

- User closes the door and pushes the switch (sensing of door locking switch).
- ECU sends LF-challenge via exterior antenna.
- FOB sends RF-response to the ECU.
- Door locking status is engaged.
- Doors are locked.
- (Indicates the door locking status by means of Flasher / Buzzer or stuff)



2.5. Trunk Opening

- User pushes trunk sw.
- ECU sends LF-challenge via exterior antenna.
- FOB sends RF-response to the ECU.
- Trunk is opened.

3. Active Access Entry Functionality

3.1. Door Unlocking

Same functionality as the current one.

3.2. Engine Start

This function does not effect on the active entry system.

3.3. Engine Stop

This function does not have influence on the active entry system.

3.4. Door Locking

Same functionality as the current one.

3.5. Trunk Opening

Same functionality as the current one.

4. Communication Areas

Exterior operating range: MIN 0.8m
Interior operating range: Only inside the car

Number of the exterior exciters: typ.3, however, it is depending on the type of the vehicle.
Number of the interior exciters: max.4 (min.2)

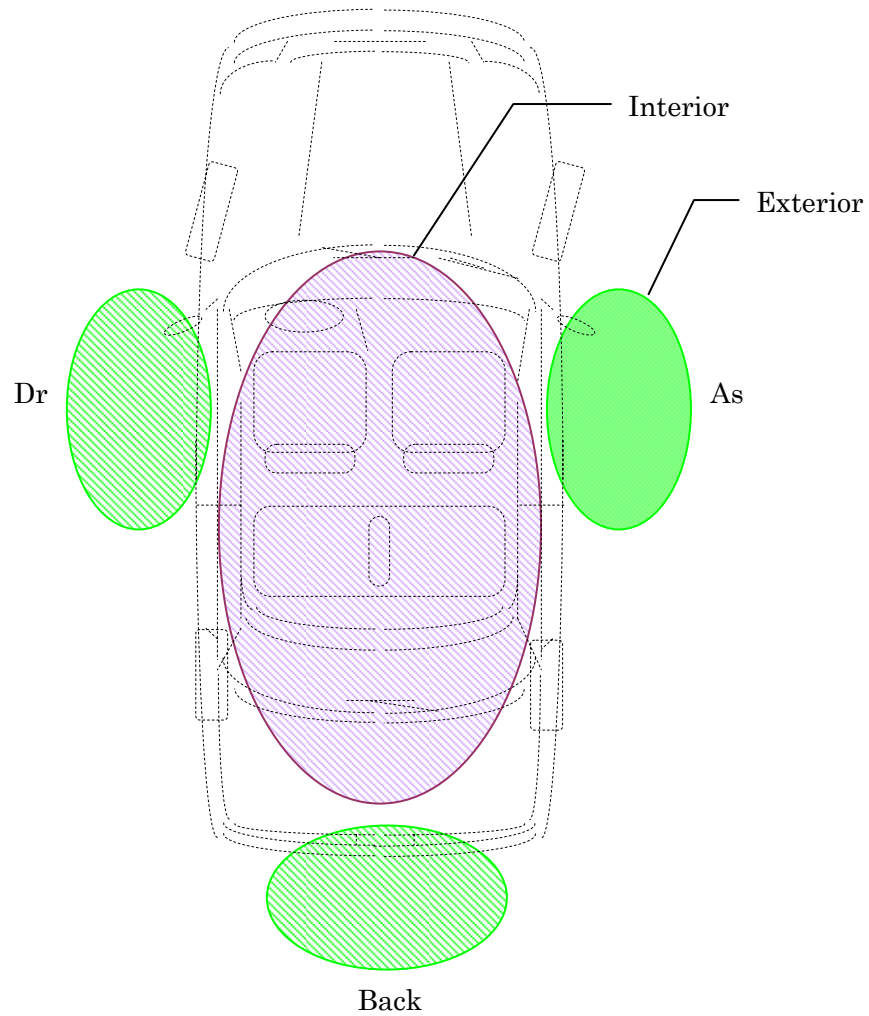


Figure 5



Exterior antenna functionality:

- Unlock / lock doors.
- Open trunk.
- Activate / deactivate alarm system.
- Activate immobilizer

Interior antenna functionality:

- Deactivate immobilizer
- Engine start

5. Marked contents

The following statements must be described on the user manual of the vehicle;

FCC ID is marked inside the product.

A user replaces the battery without using special tools.

And FCC ID can be confirmed when the battery is replaced

-CAUTION - Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type

-CAUTION - Do not exposed to excessive heat such as sunshine, fire or the like.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.