

## 1. GENERAL DESCRIPTION

The system is based on two device:

- the receiver, fitted in the cabin of the vehicle, takes the information from the transmitter and, through a speaker, can advise the user of possible obstacle detected.
- the transmitter, fitted in the rear of the vehicle, is equipped of four ultrasonic sensor to detect obstacle; the informations of the ultrasonic sensors is send, by radio signal, at the receiver.

The transmitter is powered from rear gear lamp wire: is energized only when the rear gear is engaged. After the power-on and self-test the unit activate the four ultrasonic sensor to detect the obstacle; the echo generated by obstacle with the reflection of the ultrasonic wave is used to calculate the distance between sensor and obstacle. This distance is send to the receiver by radio transmission, a unique fix-code is part of the data-frame and only the receiver with the same unique code can decode the informations of the four ultrasonic sensors.

The receiver can be plugged in cigarette lighter plug or connected to the power supply with two wires.

After the power-on the unit switches on the yellow led to indicate the correct function and is ready to receive the radio-data. The radio signal is processed by a microcontroller what drive a speaker and multi function bi-color led.

With the tone of the speaker is possible understand the distance measured by ultrasonic sensor fitted in the back side of the vehicle.