Aerpro
In-Car Tech Solutions

USER MANUAL

APPS4R
WIRED REAR PARKING SENSOR KIT
WITH BEEPER

Version 1 11/03/25

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1. This Aerpro parking system is designed as a parking aid and should not replace careful driving.

2. Under no circumstances will the manufacturer, supplier, and/or dealer accept any responsibility or be held liable for any direct or indirect, incidental, or consequential damage, or for injuries resulting from installing or using this system.

3. Neither Aerpro nor the supplier is responsible for any additional promises or claims made by the retailer of this product.

4. To the extent permitted by law, Aerpro excludes all liability, including negligence, for any loss incurred in reliance on the contents of this publication.

Cautions

1. Please read this manual carefully before using the product.

2. We recommend practicing with the system using various obstacles to understand its performance.

3. Though the minimum detection distance is 0.30m, maintaining enough space to stop your car is still recommended. Considering the car's inertia, it is best to stop when the displayed distance is shorter than 0.60m.

4. False alarms can be caused by interference from sound waves such as horns and air brakes.

5. Car speed should be less than 3-5 km/h when parking. No matter how effective a parking alert system is, parking too quickly can cause accidents.

Products

Model

1.APPS4R: Rear 4 sensor wired parking sensor

Technical Parameters

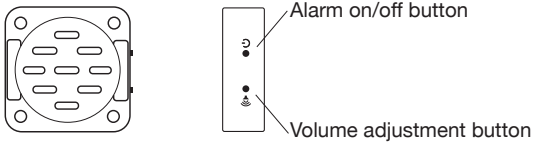
1. Operating voltage: DC12V
2. Maximum power consumption: 2.5W/12V
3. Working ambient temperature: -40°C~+80°C
4. Ultrasonic frequency: 58 KHz

5. APPS4R Rear Detection range:

	Center	Side
Level 1(minimum):	0.30-0.60m	0.30m-0.60m
Level 2(factory default):	0.30-1.60m	0.30m-1.10m
Level 3 (maximum):	0.30-2.60m	0.30m-2.10m

Usage

Display and Functions



1.Audible Alarm: The alarm uses varying sound rhythms to indicate the area where obstacles are located, based on the detected distance.

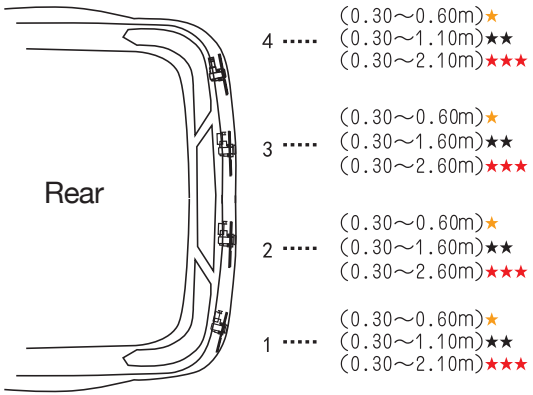
2.System Self-Test: Upon startup, the system tests each sensor sequentially. A short beep indicates a normal sensor, while a long beep signifies a faulty sensor. Four short beeps confirm that all sensors are functioning correctly.

3.Volume Adjustment: The volume can be increased by one level with each press of the volume adjustment button. There are eight adjustable levels.

4.Automatic Volume Decrease/Off: The speaker automatically lowers the alarm volume if the detection distance remains unchanged for approximately seven seconds.

5.Detection Distance Setting: The sensor's detection range has 3 levels. The factory default is level 2. To change the detection range:
- While powered off, press and hold the volume button.
- Turn on the power.
- Press the volume button to cycle through and select the desired detection level. One beep signifies level 1, two beeps signify level 2, and three beeps signify level 3.
- After a power cycle, the alarm will operate according to the newly set level.

● APPS4R Rear sensor detection range and warning method



★ Level 1 ★★ Level 2 (factory default) ★★★ Level3

Warning Method: In the corresponding detection area, the Speaker will emit a heartbeat-like alarm. The closer the distance, the faster the beeping sound. When the detection distance is less than 0.3 meters, a continuous beep will be heard. If the detection distance remains unchanged for more than approximately 7 seconds, the speaker will automatically lower the alarm volume. For APPS4R, the alarm sound will turn off after approximately 8 seconds of sounding at a low volume.

APPS4R Self-Inspection

After the reverse gear is engaged, the system conducts a self-inspection and checks each sensor. A short 'beep' sound indicates a normally functioning sensor, while a long 'beep--' sound indicates a faulty sensor. For instance, 4 short 'beep' sounds ('Didi Didi') will be heard when all four sensors are working correctly.

Following the self-inspection, the system enters the normal detection state. The speaker will emit an alarm at a rhythm that varies based on the distance to the obstacle: slower for farther obstacles and faster for nearer obstacles.

If the detected distance remains unchanged for more than approximately 7 seconds, the speaker will automatically lower the alarm volume."

Notes

Aerpro Parking Assistance System uses wide angle, high sensitivity sensors and advanced data processing technology. The blind zone is relatively small. But in some cases, the measurement may not be entirely accurate due to a combination of factors such as the height of the sensors, the shape, location, angle, and reflectivity of the obstacle, or other characteristics. Please check the condition behind your car before reversing. Some examples are given below（The picture shows the reversing sensor, also applies to the front sensor).

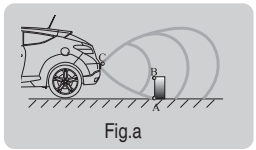


Fig.a

a. As shown in Fig. a, point B is lower than sensors, and point A has a strong reflection, the distance of CA will be shown first. When the obstacle is within the blind zone, neither A nor B will be detected. This usually occurs when the obstacle is lower than the level of sensors.

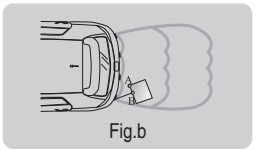


Fig.b

b. As shown in Fig. b, though point A is closer to the sensor than point B, the distance from sensor to point B is detected.

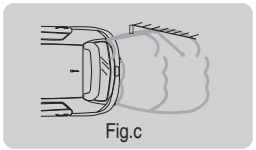


Fig.c

c. As shown in Fig. c, in case of small angle (α) of incidence to the obstacle, such as glass wall or other smooth plane, the obstacle is not detected.

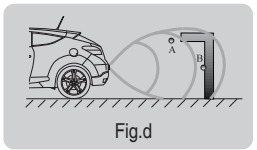


Fig.d

d. As shown in Fig. d, point B will be detected sooner or later, but point A may not be detected at all.

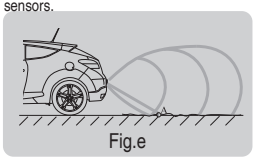


Fig.e

e. As shown in Fig. e, in certain conditions, for example, if the car is slanted backward or/and on a rough road, the ground might be detected and the distance from the sensor to the ground will be detected.

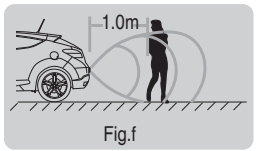


Fig.f

f. As shown in Fig. f, not all obstacles can be detected from 2.6m. For instance, a person is detected from 1.0~1.5m because of the weak reflection of clothes.

Maintenance

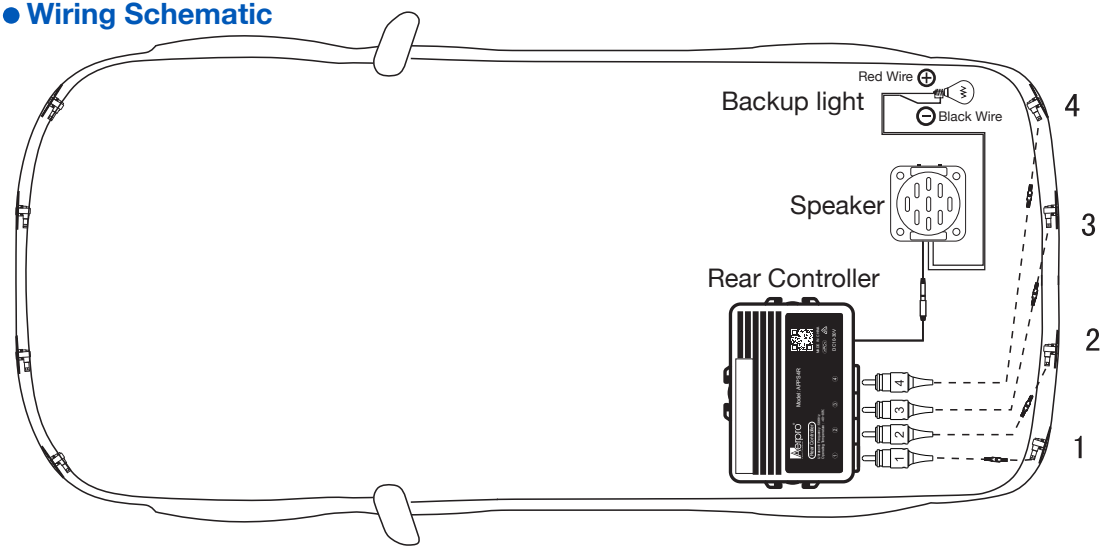
1. Clean any sand, ice, snow or other dirt on the sensors' surface immediately and ensure the sensors' surface is kept clear.

2. You may re-paint the surface of the sensors if you use a very light coat of paint. Be careful, because thick paint will significantly affect detection.

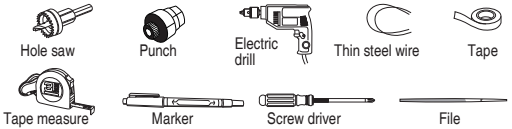
3. Do not press in the sensor center core.

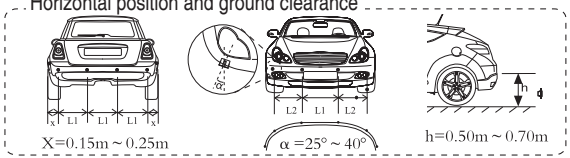
Installation

● Wiring Schematic



Installation Tools





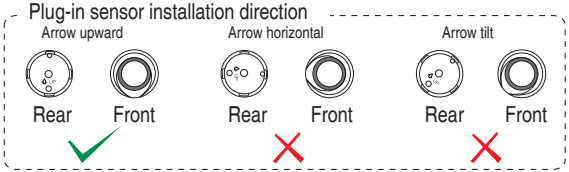
⚠The position of the sensors must be within the required scope of installation, and the whole surface should be perpendicular to the ground.

⚠ Make sure that the rear of the installed sensor is not in contact with any objects.

⚠ The wires cannot be cut and reconnected. The wiring should be installedwithout pulling or squeezing and kept away from exhaust pipes, water tanks, electronic fans, and other similar components.

⚠ Ensure the plug between the sensor and the extension cable, as well as the extension cable connector to the controller socket, are firmly rotated and inserted into place. Failure to do so may result in malfunctions.

Sensor Installation



⚠ The direction of the sensor installation, the arrow should be upward. If the installation surface is too high or inclined upward, the arrow can also be downward to correct the angle.

⚠ For metal bumper bars please first install the supplied silicone/rubber sleeves and then install the sensor.

APPS4R Speaker installation

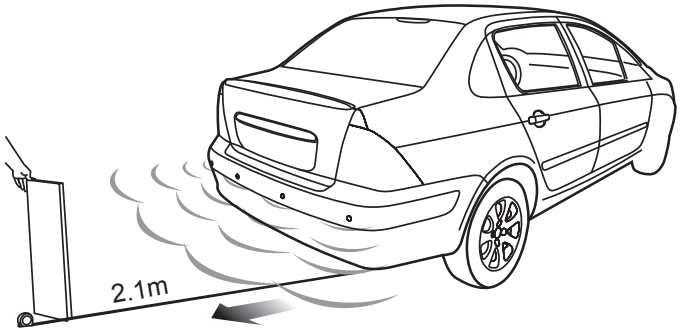
The Speaker is installed in the boot area where it is convenient to mount, and the speaker should face outward to ensure that the sound can be heard when reversing.

For sedan best mounting location is underneath the parcel shelf

APPS4R Module Installation

The module can be installed behind any side trim in the boot area. E.g. For Hatchbacks/SUV's best mounting location is behind interior side panels in the rear.

Functional Testing



Rear sensor functional test

Functional testing is performed by holding a board (0.3 x1.0m) standing at the front or rear of the car, and drive the car forward and backward to test each function respectively as shown in this manual.

● Troubleshooting

Phenomenon	Cause	Remedy
There is no sound when reverse gear is selected	• The beeper is not connected to the module • The Module is not powered	• Check Beeper wiring • Check the reverse light wire has power when reverse gear is selected • Check ground wire is connected to a good ground source i.e. chassis ground
Continuous Beep or beeping	• Detected object within 0.30m from sensor • Detected object within range (2.1m) • Heavy dirt on sensor • The position of the sensor is too close to the ground • The sensor is not positioned correctly	• Wipe Clean sensor(s) with cloth and test • Confirm sensor is at least 50cm high from the ground • Pull sensor out from the bumper and confirm its positioned correctly with the arrow marked on the back of the sensor is facing up
The Beeper volume is too low or too high	The volume setting is not set correctly	• Reset / Adjust beeper volume

Safety Information & Warnings

Do not try opening the shell or try to repair the product by yourself.
If the product or it's accessories have any problems and is still under warranty, then take it back to the place of purchase with the original purchase receipt.
If out of warranty then contact the authorised repair agent, Aerpro Support.
Do not use a chemical substance, cleaning solvent or cleaner to clean the product, please use a moist soft cloth if you would like to clean the product.
Do not use the product under conditions where dust is present.
Please pay attention to cleaning the display surface, use a moist soft cloth to clean the display."

Technical Assistance

Please retain this user guide for future reference. If you would like to download a digital copy of this manual, or other Aerpro manuals/software, please visit the Aerpro.com website and search for information on your model.
This user guide is considered correct at time of printing but is subject to change.
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TEL: 03 – 8587 8898 FAX: 03 – 8587 8866
Mon-Fri 9am – 5pm AEST or EMAIL: service@tdj.com.au