

BSD BLIND SPOT DETECTION SYSTEM USER MANUAL

Thank you for choosing to purchase our BSD microwave blind spot detection system products, Our aim is to supply you with the best quality product with the best possible service. In order to ensure the best operating performance and to avoid any false alarm or function failure, we strongly suggest reading this user manual carefully before installation and use.

This product is only auxiliary driver driving and lane change, in the actual driving process, the driver must be strictly in accordance with traffic regulations driving, due to driver accidentally caused by traffic accidents, the company is not responsible.

1. CONTENTS

Number	Item Name	Quantity	Picture
1	Main Unit	1PC	
2	Main Harness & Extension Cable	1SET	
3	Radar Sensor	2PCS	
4	LED Indicator	2PCS	
5	GPS Antenna	1PC	
6	Buzzer	1PC	
7	Puck Bracket	2PCS	
8	Installation Angle tool	1PC	

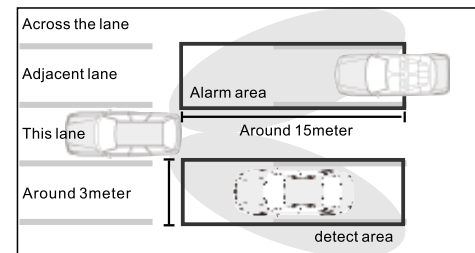
2. FUNCTION

2.1 Operating principle:

This product uses the 24GHz millimeter-wave radar technology, the use of ultra-computing technology, high-speed travel in the data supercomputing, accurate detection of vehicles on the left side of the rear high-speed close to the distance of the vehicle. Vehicle real-time detection, when the vehicle is in a dangerous blind spot, the system through the buzzer and LED sound and light alarm, promptly notify the owner to take the necessary measures to avoid the accident.

The sensor does not alarm to stationary objects, and only when the relative distance is reduced. In the process of driving forward, BSD will not detect isolation zone, green belt.

2.2 Function Introduction



2.2.1 When normal driving, if there another car closing to the left(right) side of the car, the left(right) LED light will light. No buzzer alarm.

2.2.2 When turn on the Left right, if there are another car closing to the left side of the car, the left LED light will flashing, and the buzzer alarming.

2.2.3 When turn on the Right light, if there another car closing to the right side of the car, the right LED light will flashing, and the buzzer alarming.

2.2.4 With RCTA function. When reversing, when the relative speed between the car and the object behind the car exceeds 8KM/H, the LED flashes and the buzzer alarm.

2.3 Features

2.3.1 Blind spot detection, lane change decision aid system, RCTA function.

2.3.2 Led and buzzer alarm, collision warning.

2.3.3 Low power consumption, suitable for long-term power work.

2.3.4 All cable sockets have self-locking function, to avoid poor contact when the car vibration.

3. SPECIFICATIONS

3.1 Size

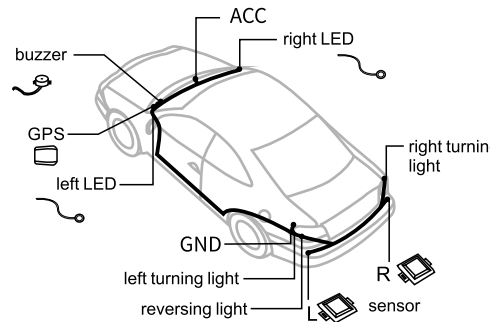
No.	Name	Size	Remark
1	Microwave sensor	83×50.5×24.5mm	
2	Buzzer	Φ 42×16mm	
3	LED light	Φ 24.5×7mm	

3.2. Technical Data

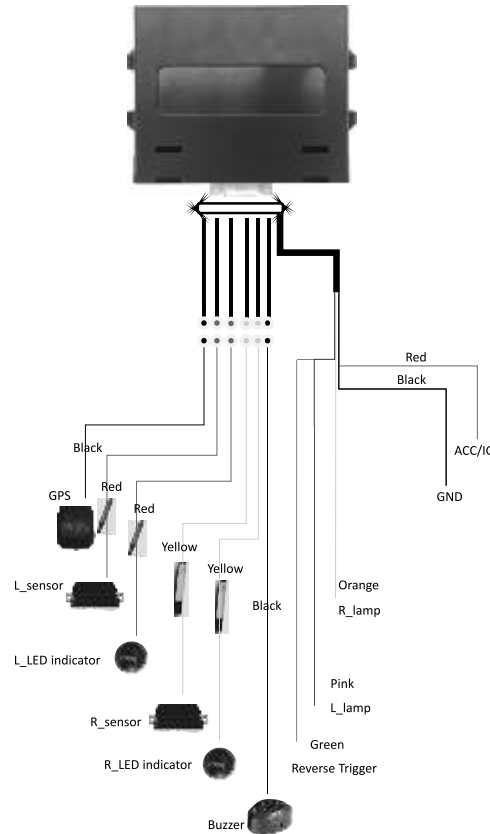
No.	Project	Technical Parameters
1	Working Voltage	DC9~18V (9~30V optional)
2	Working current	<120mA
3	Detection Speed Range	1km/h ~ 120km/h
4	Maximum detection range	Truck: 0.3m~15m Vehicle: 0.3m~15m Motorcycle: 0.3m~15m Pedestrian: 0.3m~10m
5	Speed Restriction	1) There are 4 speed restriction option: 5 mph, 10 mph, 15 mph, 20 mph. Default is 20mph. Please see below (from 1-4 switch, it could control 4 speed restriction) Switch 1=5 mph, Switch 2=10 mph, Switch 3=15 mph, Switch 4=20 mph 2) If no GPS signal is detected or satellites not found, the system will be activated at any speed
6	Buzzer alarm mode	LED + Buzzer alarm
7	Horizontal detection angle	52°
8	Working temperature	-20°C~+70°C
9	Storage temperature	-30°C~+80°C

4. INSTALLATION GUIDE

4.1 Installation diagram



4.2 Wiring diagram



4.3 Installation Attention

4.3.1 Remove(Loose) the Negative Line from the battery before installing.

4.3.2 When removing the connector, do not pull the harness too hard, otherwise it may damage the harness, When the connector is inserted, Should be inserted until the real fastening (have a fasten voice)

4.3.3 The wiring fixed in the car's wiring harness with the cable ties in the package, so that it does not sag and no sound, and cut off the excess part of the cable ties.

4.3.4 When disassembly and installation, please follow the requirements of the vehicle maintenance manual, should avoid damage to parts. If you accidentally damaged, please replace the corresponding parts.

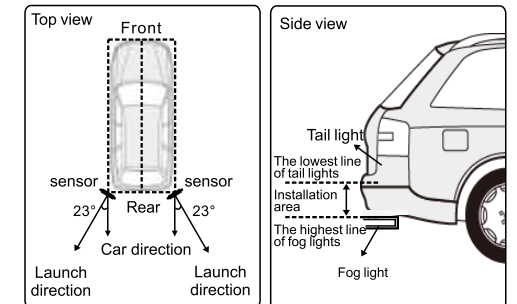
4.4 Microwave sensor layout requirements

4.4.1. Microwave sensor (signal emission surface) can only penetrate the plastic bumper.

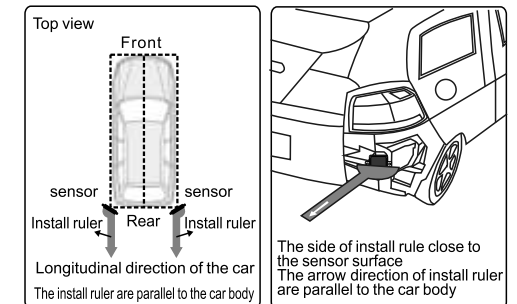
4.4.2. Microwave sensor (signal emission surface) can't have metal in front, it will be interference.

4.4.3. Please not install Microwave sensor (signal emission surface) in front of fluorescent light.

4.5 Sensors Installation

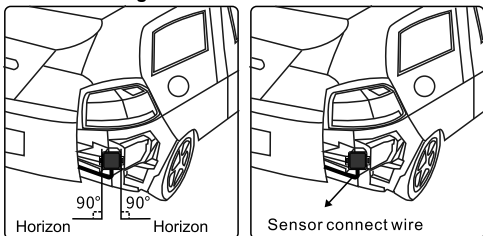


The two sensors will respectively installed the vehicle rear left and right corner parts, in the bumper
Height of sensor installation should be between the lowest line of tail lights and the highest line of fog lights



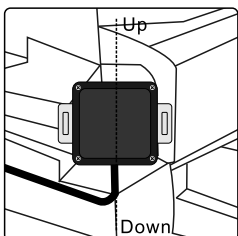
Install ruler using demonstration: the install ruler are parallel to the car body
Install sensors: can be installed get help with install ruler

Note: Please strictly install it the right direction as shown in the figure



When fixing the sensor, keep the metal back side close to the mounting surface. Keep both sides of the sensor perpendicular to the ground

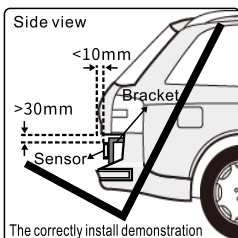
To make sure the connect wire vertical down, the sensor installed successfully as shown in the figure (Left installation the same as the above is ok)



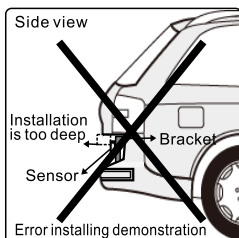
Note: Please install it according to the correct wiring way

The sensors correct installation details image(the correct placed direction)

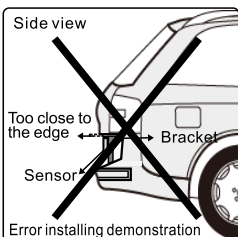
Install sensors error installing demonstration



The position to install bracket is above 30mm distance to the top edge will be better, the depth of the sensor surface from the cavity is less than 10 mm.



Error installing demonstration: Installation is too deep



Error installing demonstration: Too close to the edge

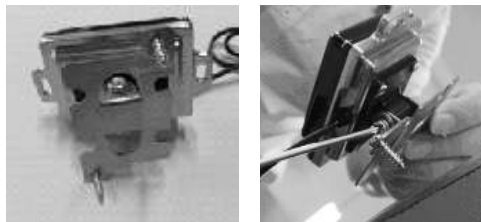
Note: The front of the sensor can not have metal objects

Note: Please install it according to the correct wiring way

- 1) Prepare the material
- 2) Use 4 small screws to install the bracket to the sensor backside



- 3) Use two big screws to fix the bracket on the car
- 4) After angle fixed, fix firmly the screw of the bracket



4.5.1 These system sensor is required to be installed in the rear metal bumper of the car Arc angle 23° ,height range 35-80cm.Please note the sensors installation direction, Do not install the wrong direction, otherwise it will be false alarm.

4.6 The sensor wire through the bumper empty space, connect to the control box, control box on the left side of the trunk.

4.7 According to the marked on the power cable, connect the ACC, Left Turning light, Right Turning light, reversing light, GND to the corresponding power supply at the car respectively.

4.8 Route the main harness along the left side to the driving control center, then install the LED lights and buzzer.

4.8.1 The LED lights installed on A column left and right inside the car



4.8.2 The buzzer affixed inside plastic of the main driving, make sure a sound output.



5、 SYSTEM DEBUGGING

5.1 Vehicle parts recovery

5.1.1. Confirm the installation status

① Before powering on, make sure the wiring and installation are normal.

② Special checking of the vehicle wiring harness, if there have Inappropriate press, stretch, stuck and so on.

5.1.2. Power up

① Connect the battery negative terminal (-) ,to ensure that the vehicle function to work properly.

② If an abnormal occurrence, check the harness installed whether correct or not.

5.2 Test

5.2.1 Starting the car engine ,after ACC getting the power, the LED lights which installed on the left and right side on the car A column will always light for 2 seconds at the same time. Also the buzzer will alarm once, that means the systems have been completed. And the system will enter into the environment adaptation test immediately ,5-8 seconds to enter the working state



5.2.2 After the system enters the working condition, to detect both sides of the car rear side blind area (covering both sides of lane, the length about 15 meters). According to 2.2 features, the assistant walking from the rear side far to near, to testing the LED lights and buzzer working.

5.3 After testing all the functions, recovery all the parts disassembled when installation, auto parts、 bumper etc.

6、 NOTICE

6.1 In the following situation,the microwave sensor may not be able to detect the target object or it is difficult to detect the target object.

- The vehicle is located at the rear blind area of the adjacent lane, but the vehicle is not near
- The vehicle travels next to your car for a long time at almost the same speed
- The vehicle travels from the opposite side Vehicles of adjacent lanes try to overtake you
- The adjacent lanes of the vehicle are extremely wide, The detection area of the radar sensor is set to the expressway Width of road

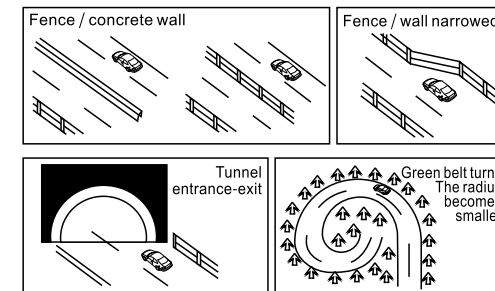
The system alarm lights and warning sounds may not be activated or may be delayed in the following cases.

- When the vehicle is changed from two lanes outside to adjacent lanes

- When driving on steep slopes
- Through the hills or mountain vertex
- Turning radius is small (sharp turn at the crossroad)
- There is a height difference between the driving lane and the adjacent lane

6.2 If the width of the road is narrow,may detect two lanes of vehicles.

6.3 The BSD system alarm signal lights may be opened according to the reaction of the road or roadside stationary objects (such as fence / concrete walls, tunnels, green belts, etc.)



7、 TROUBLESHOOTING GUIDE

No.	Project	Reason	Solution
1	Not flashing	The harness interface is loose or haven't connected	Checking all the harness and make sure all connected
		LED damaged	Replace the LED Lights
2	The left and right LED alarming are opposite	The left and right lights line are wrong connected with the BSD main harness.	Swap left LED line and right LED line to connect the BSD main harness.
3	The buzzer does not alarm	The harness interface is loose or haven't connected	Checking all the harness and make sure all connected
		Buzzer LED damaged	Replace the buzzer