



**vispect**

Vispect Intelligent Technology Co., Ltd

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# **Vispect ADAS User Manual**

**(Special for S1)**

**Before use, please read this manual carefully and properly keep it safe!**



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**Dear customers,**

Thankful to use Vispect Advanced Driving Assistance System (ADAS).

Before use the product, please go to the dealer to specify the location of the products for correct installation and calibration. This manual describes the general method of use of the product, and other information about the product please consult the dealer.

**Note:** this product only provide driving auxiliary reference, please note when you are driving the vehicle surroundings.

- Forward Collision Warning (FCW), the product for collision warning only since the car in front of the certain range of the rear or front.
- Lane Departure warning (LDW) , the product warning since the car away from the driveway solid or dotted line.
- **Optional Feature:** The reverse collision warning applied to Moving Object Detection (MOD), for static sensitivity is low, cannot effectively detect static (including but not limited to parked vehicles, stationary pedestrians or bicycles, trees, buildings, walls, pillars, steps, handrails, curbs and etc. ), it is recommended that user in use process to confirm or coordinate with other equipment.
- The product maximize utility by combine with screen. It can displayed on original car screen or an external monitor.

◆ **Safety instruction**

- The product can be used only after professional installation and verify qualified, cannot optional installation by oneself. All the consequences should be borne by the driver itself if without verification qualified optional installation, not the product liability.
- In normal working environment, the LDW function has high warning rate when clear lines of the lane departure. In weak light or harsh condition warning rate will be reduced.
- In normal working environment, the FCW function has high warning rate when clear dangerous vehicles. In weak light or harsh condition warning rate will be reduced.
- In normal working environment, the MOD function has high warning rate when barrier is moving. In weak light or harsh condition warning rate will be reduced.



- Please confirm the product volume with dealer to set the alarm volume to be audible level. Do not block or affect the buzzer sound when in use, it may cause an accident if car audio volume could not hear the alarm.
- Do not turn on the MOD function when connection towing. System may only detect the connection towing, ignore other barriers around towing when backing with connection towing, it may cause an accident.
- If the product is installed hinder the driving position or cable tangle on the object, such as steering wheel, gear shift lever, near the brake pedal, etc. please stop using immediately and contact the dealer, otherwise it may affect the drive's vision or driving, and lead to serious accidents.
- Do not depend on the display during the driving. Watch the screen might be dispersed pilot attention, leading to the accident. Drivers do not ignore the alarms, please be sure to thoroughly check the surrounding area when hearing the alarm.
- Please pay attention to working conditions in each warning function. The MOD function will start when gear shift lever in reverse (R) position. In other position FCW and LDW will launch. Closed related functions can cause accidents.
- If the camera position, angle changed or replace vehicle accessories to install this product, please contact dealer for camera calibration again. Otherwise it may lead to failure warning function and auxiliary line position is not accurate.
- This product use in motor voltage of 12V, if use other voltage, could lead to fire electric shock or other damage.
- Do not cut the cables, and do not supply power to other devices, otherwise it will short circuit caused by the over load rating of the cable fire or get an electric shock.

◆ **Model and Function Chart**

According to your model, this product provides the following functions. Function description in this chart only applies to this specific model that contains these functions.

Function	Model	S1
Forward Camera		Optional
Forward Collision Warning System (LDWS)		√



Lane Departure Warning System (LDWS)	√
Rear-view Camera	Optional
Moving Objects Detection (MOD)	Optional

◆ **Instructions**

After installing and finishing camera calibration, product instructions are as followed:

**1) Forward Scene:**

- If your vehicle departs from road lanes that identified with solid lines, system will automatically sound “du-du-du-du” alarm to remind you to check forward road conditions and take measures promptly, to make sure our own vehicle safe.
- If your vehicle quickly approaches to forward vehicles, which may exist collision dangers, system will automatically sound “du” alarm to remind you to check forward road conditions and take measures promptly, to make sure our own vehicle safe.
- If you have chosen to install forward camera, display screen in your vehicle can also show forward or rear-view pictures. Meanwhile, dangerous icons will also be shown on your screen when warning. To confirm warning reasons, please check it in necessary.

**2) Rear-view Scene:**

- When reversing, system will ring the alarm bell with “du” to remind you to watch screen. At the same time, display screen will also show rear-view pictures.
- Confirm that no obstacles in the rear of your vehicle, and then start to back off.
- When in reverse, if any moving objects were crossing or too close to your vehicle, system will warn you with “du-du” alarm to remind you to brake immediately and then watch your screen to confirm the alarm source.
- After obstacles left, please continue to back off.
- When in reverse, you can confirm the distance between your vehicle and parking line or obstacles through top-down view and overlapping range line, to help park your vehicle in a better place.

◆ **Display Interface**

**1) Driving Interface**

The forward picture will be shown on your display screen as followed:



The warning icon of LDW function will be shown as followed. The icon shows that your vehicle departs from the right side of lane line. If your vehicle departs from the left side, warning icon will be shown on the top left corner and icon will also be symmetry with right side icon.

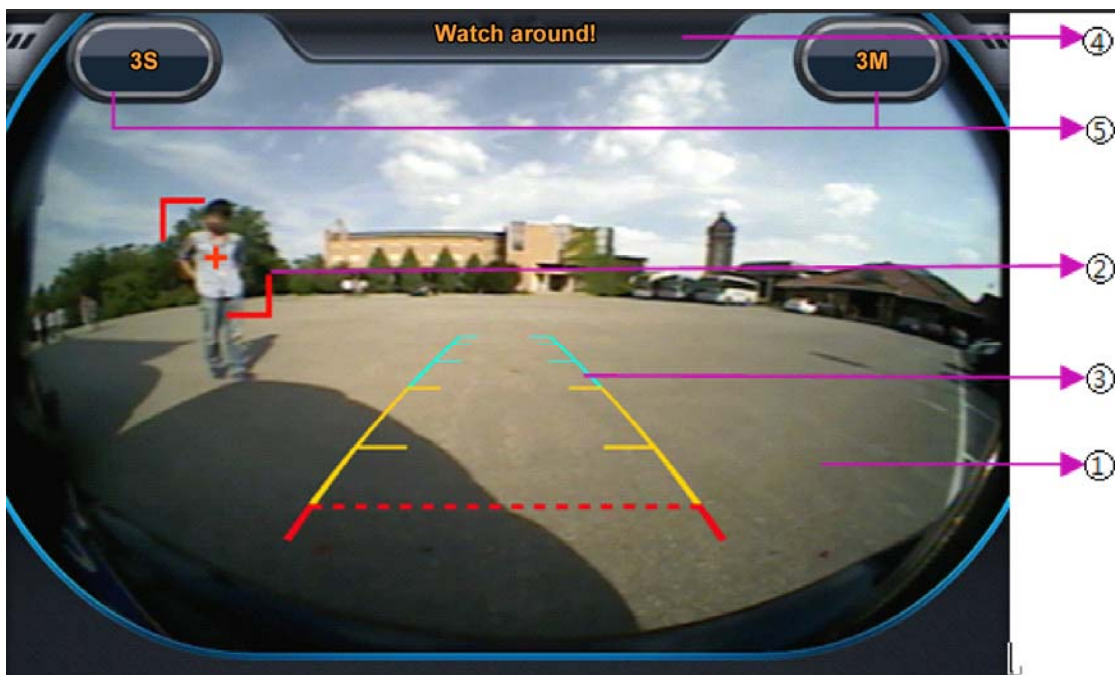


Dangerous icon of FCW function will be shown as followed.



2) **Reversing Interface:** According to your choice that you have chosen in system installation, reversing interfaces separate into two modes: Interface One or Interface Two.

**Interface One:**



**Interface Two:**

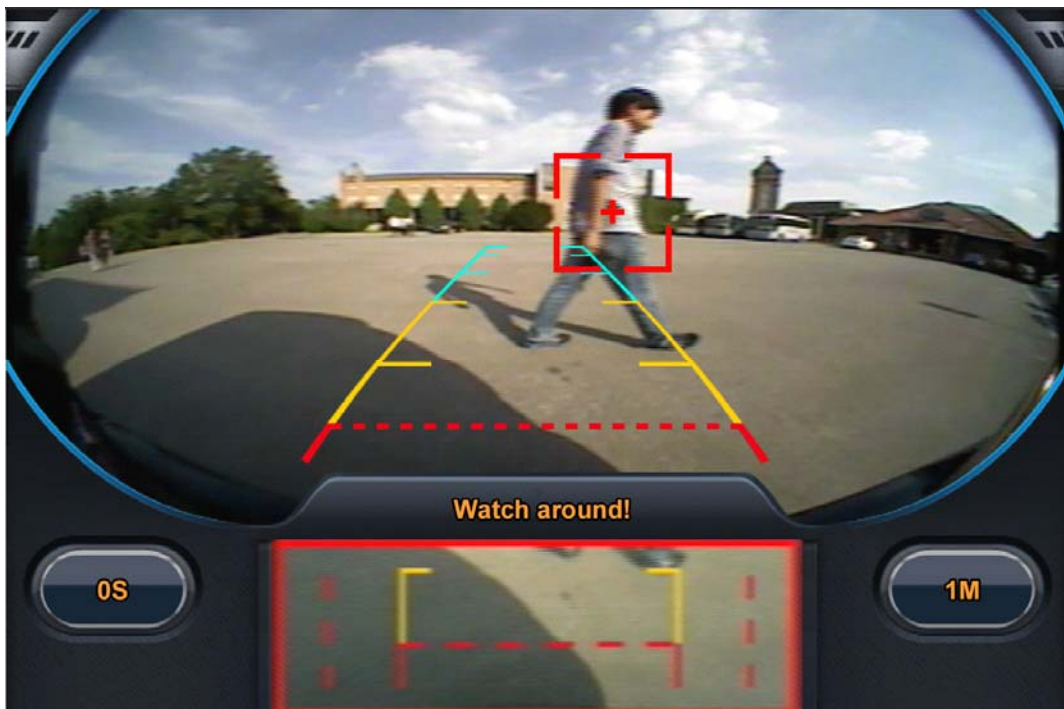


- ① Through rear-view camera, you can get real-time pictures in the rear of your vehicle.
- ② Icons in screen are for indicating obstacles' positions. They have three types:
  - A. When obstacles were at the left side in the rear of your vehicle, the icon would be shown as
  - B. When obstacles were at the right side of your vehicle, the icon would be shown as
  - C. When obstacles were directly in the rear of your vehicle, the icon would be shown as
- ③ Astern Line: Two vertical lines indicate the vehicle width area (except mirrors at driver and copilot seats). Horizontal lines indicate the different ground distance from the outer part in the rear of your vehicle (e.g. rear bumper). The horizontal lines from near to the distant indicate:
  - A. Red line: 0.5m dotted line
  - B. Yellow line one: 1m
  - C. Yellow line two: 2m
  - D. Blue line one: 3m
  - E. Blue line two: 4m
  - F. Blue line three: 5m
- ④ Prompt Information: Look Around, that is to remind you to pay attention to vehicle conditions in reverse to avoid scratch.



- ⑤ It is for indicating the distance from obstacles to camera and predicted collision time after system detecting obstacles.
- ⑥ Vertical view in the rear of your vehicle: display range is 1.2m in vertical direction, 3.6m in horizontal direction. (It may be influenced by camera height and installation angel, existed deviation of suspended objects)  
In vertical view, two red dotted lines indicated that the distance between obstacles and your vehicle is 0.5m.
- ⑦ Arrow means that it may have obstacles close to your vehicle. If no obstacles, the arrow will not appear.
- ⑧ Arrow means that it may have obstacles close to your vehicle. If no obstacles, the arrow will not appear.

When some obstacles have been detected in vertical view, the obstacles will be shown with overlapping red squares as followed:



### ◆ Technical Specifications

- 1) Lane Departure Warning System
  - The visibility of weather conditions must be within 1km.
  - Suitable for primary, secondary, tertiary roads and highways, and the lane lines





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can be clearly seen.

- Suitable for road lanes that has unilateral or bilateral lane lines.
- The colors of white or yellow lane lines must be suitable for national regulations.
- Detection range of lane lines must cover your vehicle lane while driving, the widest range is 5m in horizontal direction.
- Your vehicle speed must be within 30~120km/h for maximum effects.
- The deviation speed of your vehicle must be within 0.5~3km.

## 2) Forward Collision Warning System

- The visibility of weather conditions must be within 1km. Forward vehicles can be clearly seen.
- Suitable for highways, urban roads, primary roads and secondary, tertiary roads in good conditions;
- Vehicles detection range in horizontal direction must cover your vehicle lanes when driving, the widest range is 5m; the furthest detection range is not less than 50m.
- Your vehicle speed must be within 20~80km/h for maximum effects.
- The relative speed between your vehicle and forward vehicles is less than 30km/h for maximum effects.


## 3) Moving Objects Detection

- The horizontal angle of rear camera is 185°, vertical angle is 148°.
- On the flat ground, the deviation of astern line is less than 15cm.
- System will automatically prejudge dangers after obstacles have been detected. The maximum range is 20m in horizontal direction and 5m in vertical direction, that is, 100m<sup>2</sup>.
- Moving objects detection function can detect obstacles with height over 50cm and width over 15cm.
- Moving objects detection function can work normally only when reverse speed is less than 5km/h.
- Moving objects detection function can work normally only when the crossing speed of obstacles is less than 20km/h.



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## ◆ Working/Storage Conditions

- Working Voltage: DC +12V 
- Power Consumption: 5W (max)
- Outer Size: 141mm x 89mm x 30mm
- Working Temperature: -30~80°C
- Storage Temperature: -40~85°C

**Forward and rear functions both use camera to work, the following factors may lead to camera unable to reach the maximum effects:**

- 1) Due to climate, environmental factors and special lights, pictures may not see very clearly:
  - ✧ The rain, snow, fog, sand storm and other low visibility weather.
  - ✧ Too high or too low temperature.
  - ✧ In dark environment, like at night without lights.
  - ✧ Backlight, direct sunlight or other direct light sources, flashing lights.
  - ✧ Light changes quickly from darker to brighter, such as from outside into the garage or leave the garage for outside.
- 2) Camera may be blocked or its position changed:
  - ✧ Camera may be blocked by fog, like from outside into the garage in cold weather.
  - ✧ Camera may be covered by water droplets, dust, mud, snow and other matters.
  - ✧ Camera may be blocked by vehicle body (like spare wheels, bumpers), thus blind area or limited vision may exist.
  - ✧ Camera may be blocked by foggy, frozen and dirty windshield or wipers, thus the surroundings and road conditions may not be seen very clearly in forward pictures.
  - ✧ Camera may be blocked by exhausts, thus the road surfaces or obstacles may not be seen very clearly.
  - ✧ Camera angle or installation position changes, such as opening trunk may lead to camera angle towards sky or one side.
- 3) In camera pictures, it's difficult to distinguish between lane lines, vehicles, obstacles and practical background, such as:
  - ✧ The colors of lane lines, vehicles and obstacles that are similar to road surface or



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surroundings.

- ✧ Lane lines, vehicles and obstacles in the shadow environment.
  - ✧ Vehicles and obstacles that move quickly, or your vehicle bumps or makes a turn.
  - ✧ Blocked by other vehicles, obstacles or other information.
- 4) Influenced by display screen, pictures or interface may not be shown very completely.

**The following factors may result in not sounding an alarm or alarm delay.**

1) Lane Departure Warning System:

- The above factors that may lead to camera unable to reach the maximum effects.
- Special line types, such as diversion zone, etc.
- Your vehicle speed is less than 30km/h, or over 120km/h.
- The deviation speed of your vehicle is over 3km/h.
- Your vehicle drives on the lane lines.

2) Forward Collision Warning System:

- The above factors that may lead to camera unable to reach the maximum effects.
- Special vehicle types, such as irregular loading trucks or tricycles.\
- Other forward vehicles, such as crossing vehicles.
- Your vehicle speed is less than 20km/h, or over 80km/h.
- Vehicles that their relative speed is over 30km/h.

3) Moving Objects Detection:

- The above factors that may lead to camera unable to reach the maximum effects.
- Vehicle slope or close obstacles from the slopes
- Your vehicle is close to the obstacles with the speed of over 5km/h.
- Moving speed of obstacles is the same as your driving speed.
- Obstacles are beyond the detection range in the rear of your vehicle.
- Slender obstacles, such as obstacles narrower than 15cm.
- Obstacles height is lower than 50cm.
- Several pedestrians are crossing or continuous close to your vehicle.

**The following factors may lead to wrong alarms:**



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1) Lane Departure Warning System:

- The signs and markings on the pavement, such as temporary markings, old markings or arrow signs, etc.
- Guard bar, vehicle body, obstacles, street lamps, etc.
- Combination lines, such as double yellow lines, etc.

2) Forward Collision Warning System:

- Obstacles similar to vehicles, such as toll station entrance, tunnel entrance, trees, etc.
- Vehicles in other lanes.
- Remote-distance vehicles and vehicles that their speed is similar to your vehicle.
- Vehicle bump.

3) Moving Objects Detection:

- Marking on the roads, such as parking lines, etc.
- Vehicle exhaust.
- Light shadow or obstacles shadow
- Obstacles that are beyond the detection range, such as vehicles, pedestrians, buildings, trees, etc.
- Slide forward when your vehicle is reversing.
- Parts of your vehicle in the camera view
- In the very humid environment, vehicle may sound an alarm.

◆ **About equipment maintenance**

- DO NOT use chemical wet cloth to wipe stains, or it may cause discoloration or distortion of accessories.
- When washing your vehicle, please be careful of the automatic washer or high-pressure washer.
- Do not fiercely wash the camera, host and their fixed base, or it may cause camera and host to fall off. Meanwhile, it may damage cables and cause angle deviation of your equipment.
- To avoid damaging parts or cables insulation, please keep cables away from heat or moving parts, or it may lead to short circuit, fire and electricity shock.

◆ **About camera**



- Our camera is a specialized product. Please do not connect it with other camera products.
- Do not use mobile phone or wireless devices near the camera, or it may cause signal interference or faults on display screen.

**Attention:** The following factors may directly affect recognition rate accuracy and your experience of our product.

- Calibrate or inaccurately calibrate your vehicle and system when installing.
- Stop your vehicle on a rough and slope road surface.
- Tire pressure of vehicle or vehicle load altered.
- Camera position or angle altered.

◆ **Package Components**

Number	Components Name	Quantity
1	Host	1
2	Buzzer	1
3	Main Cable Harness	1
4	Buzzer Connecting Line	1
5	OBD Connecting Line	2
6	OBD Box	1
7	OBD Extension Line	1
8	Power Extension Line	1
9	Line Light Extension Line	1
10	Fixed Glue Stick( for buzzer use)	1
11	Product Instructions( including quality warranty card)	1
12	Product Certificate	1
13	Rear-view Camera(including support, extension line and screw groups)---Optional	1
14	Forward Camera(including support, extension line and screw groups)---Optional	1
15	Speaker--- Optional	1
16	Fixed Glue Stick( for speaker use)	1
17	Fixed Glue Stick( for forward camera use)	1



**This instruction is for reference only. All reserved by Guangzhou Vispect Intelligent Co., Ltd.**

### Quality Warranty Card

Dear customers:

Thank you for purchasing our product. To ensure your consumer rights and interests, to maintain our company's credibility, please be sure to fill in the following contents:

Sales Information			
User Name		User Phone Number	
Vehicle Model		Serial Number	
Purchasing Date			
Installation Personnel			
Dealer Name			
Dealer Phone Number			
Dealer Address			
Customer Service Address			
Customer Service Hotline	( +86 20 ) 87586372	Dealer Seal	
Manufacturer Name	Guangzhou Vispect Intelligent Co., Ltd.		
Technical Support Hotline	( +86 20 ) 87586372		
Manufacturer Address	Rm 507-508, No.242, Tianhe East Road, Tianhe District, Guangzhou, China		
Production Origin	Shenzhen, China		

1. From the date of purchase, if you have installed and used our product according to our instructions, the quality warranty is within 12 months. But we do not provide door-to-door service.
2. When you purchase our product, please be sure to fill in the relevant content and properly keep it safe. Once the local dealers have affixed the seal and you have



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confirmed to sign, you shall not have the right to alter it, or it's invalid.

3. The picture is for reference only. Please take the actual product as the standard.

**§ 15.19 Labelling requirements.**

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.

**§ 15.21 Information to user.**

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

**§ 15.105 Information to the user.**

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**\*RF warning for Mobile device:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.