

RYDEEN[®]
find your road



RDV360 II SYSTEM
Owners Manual
360° Surround View 4-CH DVR Parking Assist System

V1.0

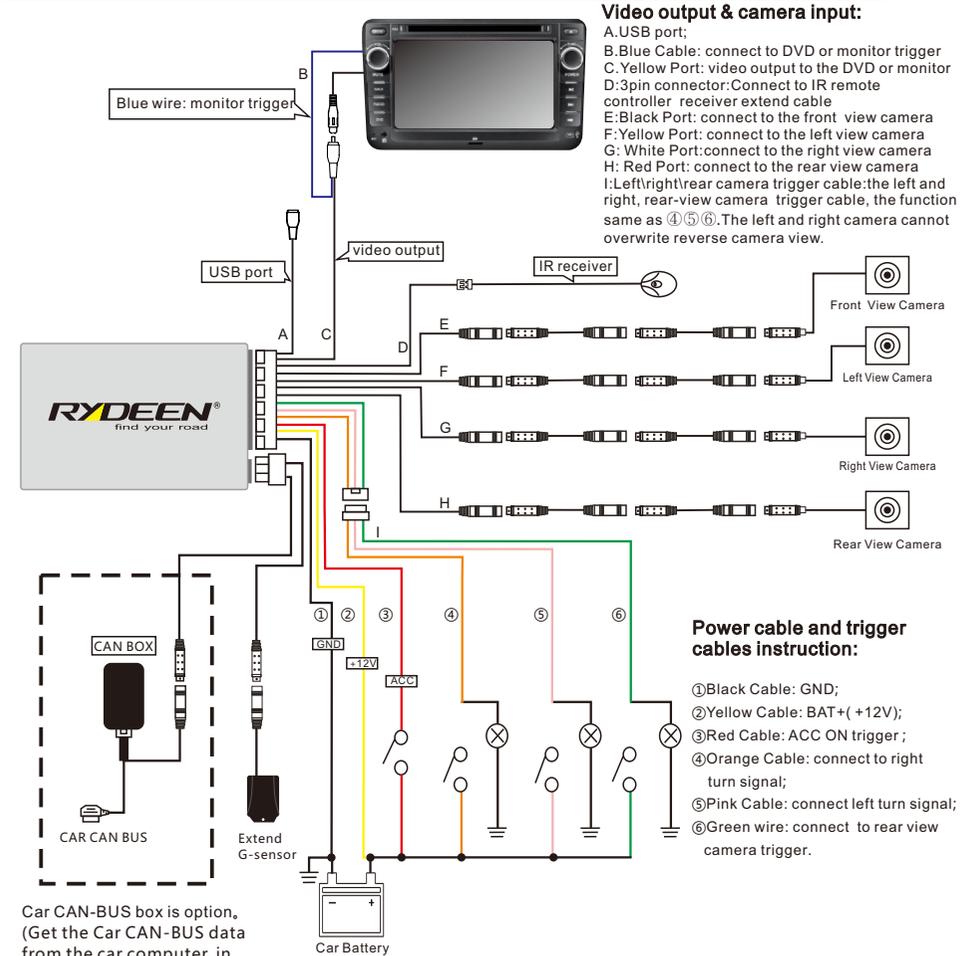
⚠ WARNINGS ⚠

- **THE FOLLOWING INSTRUCTIONS ARE INTENDED FOR AUTHORIZED RYDEEN MOBILE INSTALLERS ONLY.**
- **DAMAGE FROM IMPROPER INSTALLATION WILL VOID THE WARRANTY.**
- **EXCESSIVE SHOCK** due to dropping any components in the system or subjecting it to excessive shock and vibrations may cause malfunction and is not covered by warranty.
- **The Control Box of the 360 DVR System IS NOT WATERPROOF.** Avoid exposing it to rain or other forms of excessive moisture.
- **Water damage is not covered under the warranty.**
- **CAN BUS Vehicles:** There is NO NEED TO CUT AN ORIGINAL VEHICLE WIRE YOU MUST SPLICE WIRE ONLY AND OBTAIN POSITIVE POWER (+12V).
- **MUST CHECK BEHIND BUMPER FOR ANY METAL BRACKETS OR INTERNAL BRACES BEFORE DRILLING**
- **The use of Rydeen 360 DVR System should never replace normal operational and safety precautions needed for reversing a vehicle. Caution should always be taken in ANY vehicle operation.**

1. Kit Contents

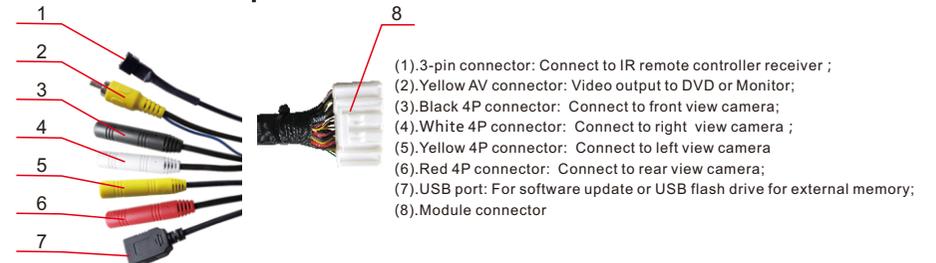


2. Wire Harness Connections



Car CAN-BUS box is option, (Get the Car CAN-BUS data from the car computer, in order to achieve Dynamic parking line function)

Wire Harness input connectors:

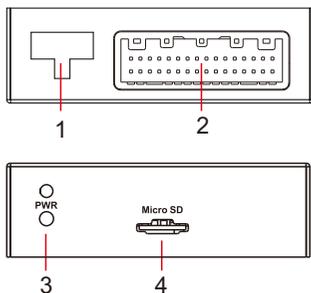


3.Remote Control Features



- Attention:**
- 1.Remove plastic sheet off the battery cover.
 - 2.Check the remote battery for proper voltage. If voltage is low, please replace it.
 - 3.Please use same specification of the battery when need change.

Host Function Description:



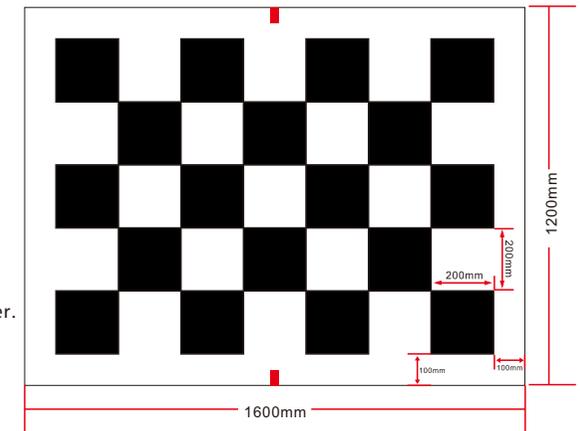
- 1、 CAN-BUS port : connect to car CAN-BUS port , Collect the car computer information, get the steering wheel data, to make dynamic parking line (This feature is optional, part of the car is not supported);
- 2、 32pin main cable ;
- 3、 LED indicator: Flashing LED means system is booting up. Steady LED means the system is ON.
- 4、 SD card port :Micro SD ;

4.Preparation Before Installation

1.25ft measuring tape.



2.Prepare 4 sets of black and white checkered mats, the sizes are 1600mmX1200mm.

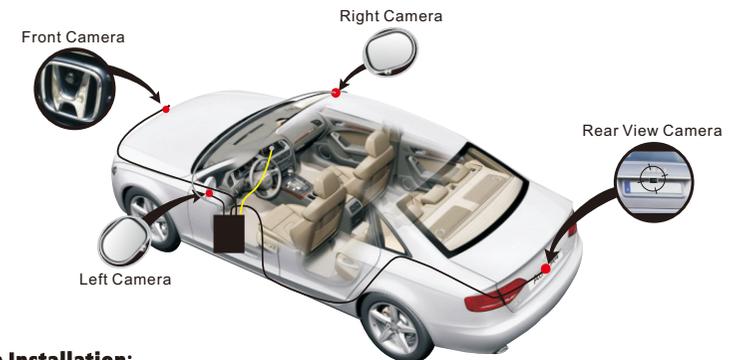


3.electric drill \multimeter\screwdriver.

5.Product Installation

1.Bird's Eye view module:

We suggest to place the module under the seat, so the user can have easy access to the SD card.



2.Camera Installation:

2.1 Rear view camera installation:

Camera must be higher than 16 inches from the ground. After placing the rear camera, angle the view where it can show little portion of the rear bumper.

2.2 Front view camera installation:

Camera must be higher than 16 inches from the ground. Make sure the camera and the cable is well protected from the engine heat.

2.3 Left view camera installation:

Before drilling the hole, inspect carefully to make sure to have enough space. *Left and Right location must be symmetrical.

2.4 Right view camera: Same as left view camera

Before drilling the hole, inspect carefully to make sure to have enough space. *Left and Right location must be symmetrical.

6. How to locate the left and right turn signals

1. Location: Most connections can be found near the steering column or kick panel of the driver seat.



Lamp Trigger Location

2. how to find the left and right turn signal :use the multimeter, black probe connect to GND, then turn on the car key to ACC ON, turn on left or right steering lamp, use the red probe to touch the pins one by one, the multimeter should show a fluctuating voltage for the turn signal. Turn OFF the turn signal and the voltage should drop to almost 0mV.

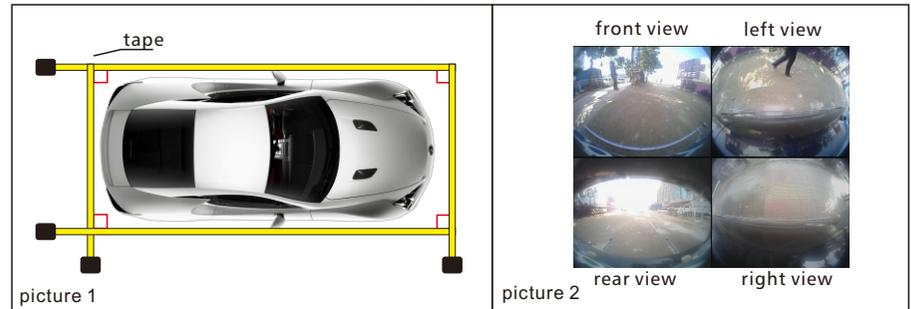


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7. Calibration

1. Put the measuring tapes on each side of the vehicle

1.1 It should form a box after placing each measuring tape on each side. (See picture 1)
 1.2 Adjust camera's angle and tapes in a symmetrical position, press remote control "turn on the system", press "OK" into main menu, password is "654321", Select "Lens Adj.", press "change to front view camera", check the tapes position whether it is at the edge of the car, the left/right/rear view camera follow the same method.(see picture 2)



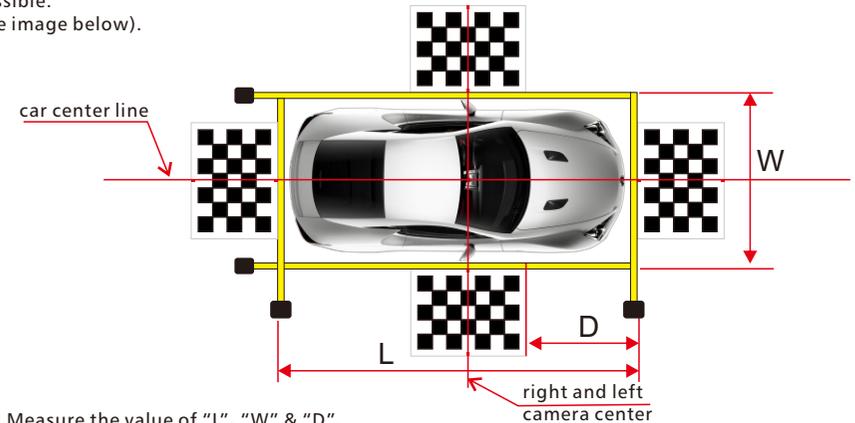
2. Put the checkered floor mats

2.1 Front and back

Base on the rectangle box which made from the tapes, keep the checkered floor mats as centered as possible (see image below).

2.2 Left and right

Base on the rectangle box which made from the tapes, Keep the checkered floor mats as centered as possible. (see image below).



2.3. Measure the value of "L", "W" & "D".

For example: L=15.00 / W=5.00 / D=4.00

Front/rear/left/right view cameras, Checkered floor mats.

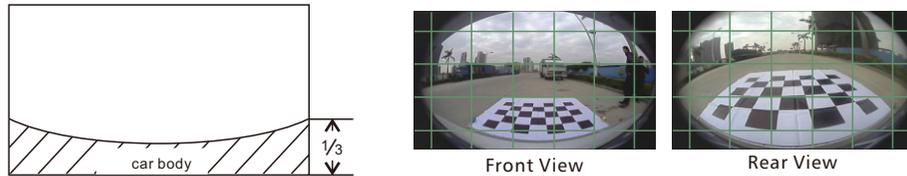


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3. Adjust camera view angle

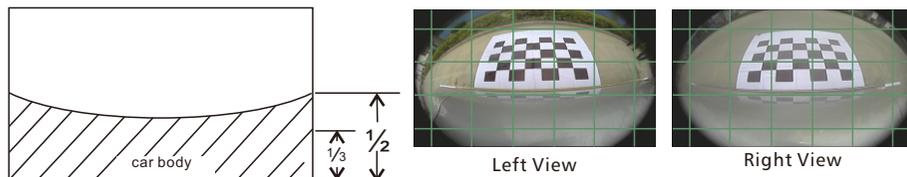
3.1. Front and Rear camera view

- 3.1.1. The vehicle should show on the bottom of the screen. The location of the camera should be no less than 16 inches from the ground.
- 3.1.2. The front and rear of the vehicle should appear on the bottom of the screen taking 1/3 of the screen only. The angle between camera and car body should be 45°-75°. After adjusting the camera angle, secure the camera.

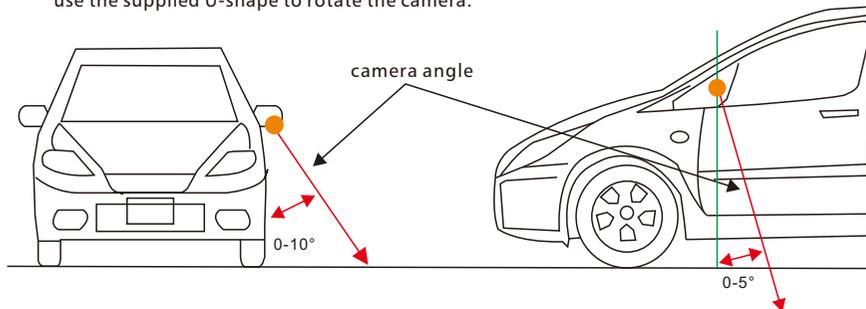


3.2. left and right view camera

- 3.2.1. The vehicle should take up to 1/2 of the screen. See image below, and the car body display is in parallel.



- 3.2.2. Refer to the image below to see how the side cameras are angled. When adjusting the side cameras, use the supplied U-shape to rotate the camera.



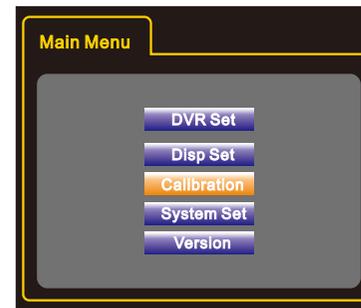
3.3. Check the checkered floor mat view on the monitor.

- 3.3.1. Into single camera picture mode, check the location of the black and white checkered floor mats. For the front and rear camera, make sure the red dot on the screen is aligned to the center of the floor mat. The sides should be symmetrical to each other.
- 3.3.2. Into single camera picture mode, check the black and white checkered floor mat for clarity. Make sure the cameras are clean.

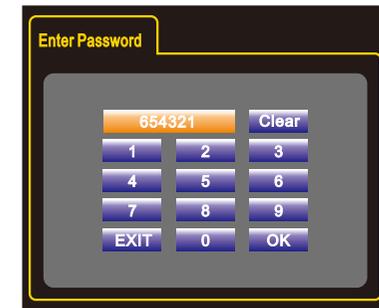
4. Calibration Process

After completing the previous steps, go to the main menu.

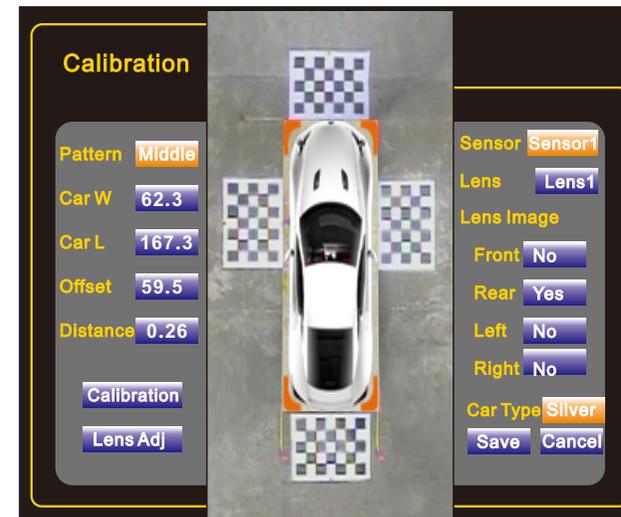
4.1 Select "CALIBRATION" icon



4.2 Input the password: 654321



4.3 Calibration Mode

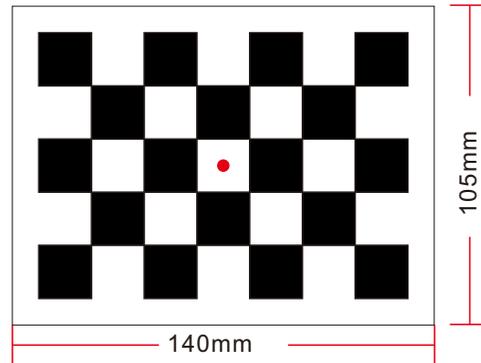


In "Calibration" screen:

- Pattern:** middle, small;
- Car. W:** Input the value of the "W";
- Car.L:** Input the value of the "L" ;
- Offset:** Input the value of the "D";
- Distance:** To adjust the size of the bird's eye view. Zooming in or out;
- Calibration:** After adjusting each camera and the checkered floor mats, press "OK" to enable the auto-stitch. If no issue found, the RDV360 II will calibrate and show the bird's eye view. If it failed, the system will indicate which side failed.
- Lens_T:** lens1(factory default);
- Lens Image:** Front : NO Rear : YES Left : NO Right : NO;

4.4 advanced setup

140mmX105mm Adjustment card



Lens Adj.: Single camera calibration: after completing the calibration and the bird's eye view is not perfect, go to "Lens Adj." to adjust each camera manually.

Single camera calibration method: Place the calibration card (behind the owner's manual) in front of the camera (see photo 1). Keep the checkered card aligned to the gridlines of the screen. When the red dot on the monitor is centered to the checkered card, press "OK" to accept current view and if successful, it will auto adjust (see photo 2).

If it failed, move the checkered card around (slant angle, closer to the lens, away from the lens, etc).

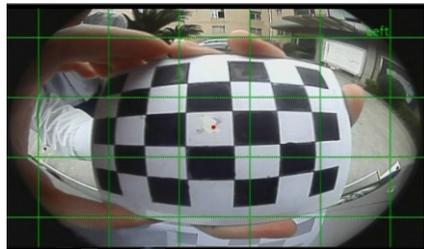


Photo 1

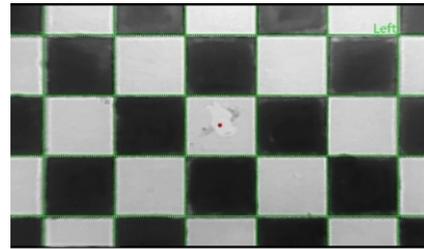


Photo 2

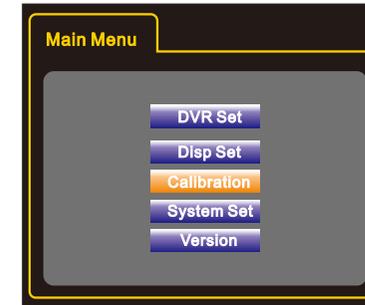
4.5 Reasons to fail the calibration:

For camera detection failed, please proceed to the following steps below.

- A: Height of the camera from the ground is less than 16 inches.
- B: Glare of the sun affecting the RDV360 II calibration. Cameras are unable to detect the checkered floor mats.
- C: Make sure each camera lens are clean.
- D: Checkered floor mat is crooked or dirty.
- E: Checkered floor mat is either too close or too far from the camera.

After checking these steps, please calibrate the system again.

8.Main menu



Press "OK" into main menu settings

DVR Set: File play/delete/lock/driving record settings

Disp Set: System turn on/delay settings

Calibration: Calibration settings

Sys.Setting: Upgrade/backup/restore the backup/display setup/
SD card Format/Language

Version: Version

9.Playback previously recorded files

1.Select "DVR SET"



2.Select a file for playback



Press remote control "▶" for next step:

Press "Lock" to protect files, the files will display "🔒", won't be able to delete unless the user unlocks the file.

Press "Delete" to delete certain files.

Press "DVR SET" to go to DVR settings.

Press "Back" to exit.

3.File playback



Four Picture



Front View Picture



Left View Picture



Rear View Picture

Monitor display

After selecting file, press "OK" to play. Repress "OK" to pause the video when in play status.

"⏮" And "⏭" is fast rewind and forward, press the arrow button to focus on one view only.

SD card play on PC

User can use a computer to view the playback. May need to download the software.

Attention: Please make sure the RDV360 II power is OFF before removing the USB flash drive or micro SD card.

4.Record Setup



Press "▶" select record setup

Channel : four channel\No\Left\rear\righ\front
(Insert USB flash drive).

Storage : SD \USB (Insert USB flash drive).

Record time : 3\5\10 (single record file time).

Time : 2014.09.26 18:20

(Press "⏮" and "⏭" to adjust the date and time.

Press "SAVE" after adjusting the Date and Time.)

10.Display Set



Hazard :ON\OFF\15second\1min:

ON: Display ON, display will show on the screen when the user double taps the hazard button.

OFF: OFF: Hazard function is disabled.

15second\1min:Display will only show for certain amount of time.

Startup: ON\OFF\15second\1min

ON: Display on DVD or monitor when ACC ON,and recording is on at the same time.

OFF: no display on the DVD or monitor when ACC ON.But recording is ON and works the same time.

15second\1min:Dispaly15s\1min after ACC ON.

Turn Light:OFF\2second\5second

OFF: No display on the DVD or monitor when turn left or right.

2second\5second: Display on the DVD or monitor 2second\5second when turn left or right.

Backup:2second\15second\30second:display on the DVD or monitor for 2 second /15second /30second when backup.

Gsensor:Lever1~5:Set G-sensor sensitive class from Level 1 to Level 5.The most sensitive level is Level 5. The event file can be locked when in motion. If ACC is OFF, if the G-sensor senses a vibration, it will start recording instantly and lock the recorded file automatically.

Voltage: If ACC is OFF, the RDV360 II is in standby mode. If the RDV360 II is detecting a low voltage from the main battery, it will automatically turn OFF. The minimum voltage can be adjusted to 11.8V / 12V / 12.4V.

Brightness: adjust video brightness **Color**:adjust video color

Contrast:adjust video contrast **Sharpness**:adjust video sharpness

Press "⏮" or "⏭" to save when setup finished.

11. System set

Select main menu "system setup", press "OK" and input the password "654321".



Display : Setup display parameter .



Sideview Set



Upgrade : Used to update the software (file name:sys.bif). download the file from the computer using the USB flash drive. Then put the USB into the Bird view USB port, and press "Upgrade". The system will update and the RDV360 II must NOT turn OFF during the update process.

Backup : Save the current setup.

Recovery : Restore "backup settings" initial status.

Output : Copy the current setup data into USB used for the same kind car.

Format : Must format SD card using PC before usage.

Display:setup display parameter,please see the next "Display" description.

Language:Language selection.

Output : NTSC/PAL

Output location

Left:0 These 4 options are mainly used to adjust picture quality on the monitor.. If the picture cannot display completely, adjust the display format.

Right:720

Top :0

Bottom:576

Car Location : These 2 options are used to adjust the car picture on the birdview position.

Offset H:0

Offset V:-10

Unit: Set units in meters or inches.

Display: Set bird's eye view display format.

Sideview Set: it is used to set sideview parameter.See the next manual.

Car Depart : Select different car brand .

Car Type : Select different car mode.

Camera Select : select front/rear/left/right Camera to set.

Offset H. : Adjust sideview camera angle right or left.

Offset V. : Adjust sideview camera angle up or down.

Zoom : zoom the current camera picture.

Parking line : Set the rearview camera parking line ON or OFF.

Line offset : Adjust the assist lines.

One Year Limited Warranty

Rydeen North America Inc. (a manufacturer of RYDEEN" products) warrants this product (RDV360 System) only to the original purchaser as described by the following:

Warranty Period

Rydeen warrants this product for a period of one (1) year from the original purchase date.

Warranty Coverage

This warranty covers all defects in material and workmanship except as specified below.

1. Installation by anyone other than an authorized RYDEEN retailer voids the warranty.
2. Any products distributed outside of the USA by Rydeen North America Inc. (RYDEEN) or which is not purchased in the USA or Canada unless the product is purchased through the USA Military Exchange Service.
3. Any product(s) which are purchased from an unauthorized retailer (in store or online).
4. Any products in which the serial number label or the model number label are removed, torn, modified or replicated.
5. Any damage defects or malfunctions resulting from any of following:
 - a) When defect occurs during shipment of product (freight carrier's responsibility).
 - b) Installation or removal of product.
 - c) Accidents, act of nature, misuse, abuse, neglect, unauthorized product modification or failure to follow product owner's manual instructions.
 - d) Any repair or attempt to repair without RYDEEN authorization.
 - e) Any other cause which is not related to product defect.
 - f) Any cosmetic damages due to normal wear and tear.
 - g) Any consumable items (such as fuse or batteries).

If any problems develop with your RYDEEN products during or after the Limited Warranty Period, or if you have any questions regarding the operation or installation of the product, you should contact your RYDEEN retailer. If the problem or your question is not handled to your satisfaction, please contact Rydeen Customer Service Department at 1-877-777-8811 (within the USA only) Monday - Friday between 9:00 AM to 4:00 PM Pacific Standard Time or visit www.rydeenmobile.com.

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12. Technical Support Contact Info

If you have other questions about the **RYDEEN 360 Parking Assist System**, please contact your retailer or Technical Support:

Telephone: **1-877-777-8811 (within USA only)**

Email: techdept@rydeenmobile.com

Web Address: www.rydeenmobile.com

Tech Forum: <http://rydeen.forumotion.com/>