

RYDEEN®



Owner's Manual

R10-SPL

**Dual Camera Digital Rearview
Mirror 1080P Dash Camera**

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1. Welcome Statement and Warnings

PRECAUTIONS & WARNINGS

IMPORTANT INFORMATION

PLEASE READ THIS MANUAL CAREFULLY BEFORE USING THE PRODUCT

1. Before installation, please check if the product list is complete and free of damage.
2. The installation instructions may differ from the actual installation process on a vehicle. If there are any discrepancies, please contact us.
3. Installation of this product is for Authorized Dealers only. Any installation not done through an Authorized dealer is not covered under warranty.
4. Please read this installation instruction manual carefully before installing the product.
5. Before turning on the product after installation, please confirm that the installation and wiring are correct.
6. Check whether the installed product functions properly. If there are any issues, please check if all connectors have been securely connected.
7. Check if the original vehicle functions are working properly. If there are any issues, please check if all wiring has been securely connected.
8. Please do not install the product if you receive a damaged item. Please take photos immediately and contact our Return Department. Photos should be provided that include all parts of the product and can display the damage.



WARNINGS



- **DO NOT DROP ANY COMPONENTS OF THIS PRODUCT.** 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.
- **DO NOT use any sharp object to operate your unit's touch-screen display.**
- **Excessive force could damage the LCD display.**
- **THE R10-SPL UNIT IS NOT WATERPROOF.** Avoid exposing it to rain or other forms of excessive moisture. **Only the rear camera is waterproof.**
- **Water damage is not covered under the warranty.**
- **THE FOLLOWING INSTRUCTIONS ARE RECOMMENDED FOR AUTHORIZED RYDEEN MOBILE INSTALLERS.**

2. What's in the Box

When opening the packaging box of this product, please make sure that all product accessories are completed.

Standard Package



R10-SPL Main Unit



Power Wire Harness (A)



Mounting (Clip-on) x2



Rubber Band x2 (B)



**Adhesive for Mounting
(Clip-on) x2 (B)**



**Backpack for Mounting
VSM Mirror Stem (B)**



**Screw x5
(PM 3.0 x 10) (C)**



**AHD Rear Camera
(CM-AHD1) (D)**



**27ft AHD Camera
Extension Cable (D)**



**RYDEEN VSM-AV
Mount Stem (E)**



Adaptor Cable (F)



D-Tab (G)

MicroSD
Card (32GB)

L-shaped Tool (G)

OPTIONAL ACCESSORIES



If you want to purchase the optional accessories, please contact your retailer or contact RYDEEN, Toll Free at 1-310-787-7880 for product support, or visit our website: <https://rydeenmobile.com/>

RYDEEN VSM-UNI2 (SOLD SEPARATELY)



23mm 24mm 25mm



26mm 27mm

Mount Adaptor Inserts
23mm-27mmUniversal Mount
Adaptor (Large)14mm 15mm 16mm 17mm 18mm
19mm 20mm 21mmMount Adaptor Inserts
14mm-21mmUniversal Mount
Adaptor (Small)

L-Shape Mount Stem



Screws

RYDEEN BRK01 (SOLD SEPARATELY)

Box Shape Camera
BracketU-Shape Camera
BracketBackup Camera
Screws

RYDEEN JB01 (SOLD SEPARATELY)



Jeep Wrangler Bracket

RYDEEN BL01 (SOLD SEPARATELY)

Universal License
Plate Bracket

RYDEEN CM-D700 AHD (AHD Video Switcher, SOLD SEPARATELY)

CM-AHD Switcher



CM-SIDE AHD

The CM-D700 AHD is a video switching system that supports 3-way video switching. By using left, right, and rear trigger wires, it seamlessly switches between real-time left, right, and rearview images. It is compatible with our AHD digital monitors, enhancing driving safety.

RYDEEN DIGITAL AHD CAMERAS(SOLD SEPARATELY)

CM-SIDE2 AHD



CM-SIDE AHD



CM-V90 AHD



CM-AHD1000P/W



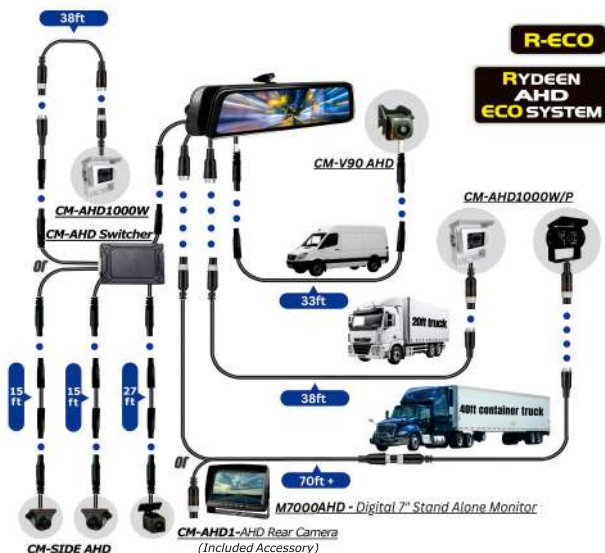
CM-AHD2

RYDEEN EXT01 (SOLD SEPARATELY)

35ft Waterproof Professional Grade Video Cable (Analog/AHD)

RYDEEN GPS Unit (SOLD SEPARATELY)

OPTIONAL ACCESSORIES USAGE SCENARIOS



3. Product Overview

R10-SPL

FRONT



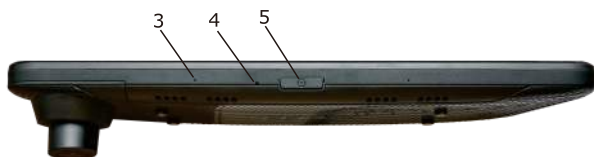
BACK (Backpack)



BACK (Clip-on)



BOTTOM



No.	Item	Description
1	MicroSD Card Slot	Insert or remove microSD card.
2	Front Camera	Adjustable front camera viewing angle.
3	Mic Hole	The mic hole can record sound, which can be turned on or off in the setting menu.
4	Reset Button	Press and hold within reset hole to restart the R10-SPL.
5	Power Button	Long press to power ON/OFF. Short press to turn on/off the screen.



When the R10-SPL main unit is in sleep mode, pressing the power button will not turn it off. To power off the unit, you must press and hold the power button for 3 seconds.

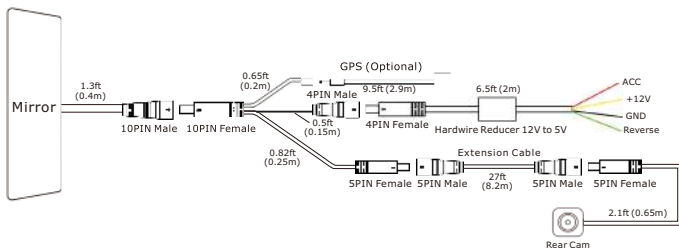
Wiring Diagram

Yellow - Constant 12V+ source

Red - Ignition controlled ACC source

Black - Ground (-) Polarity (Connect to car chassis or ground point)

Green - Reverse Trigger (+) (Connect to reverse wire)



4. Installation



WARNINGS

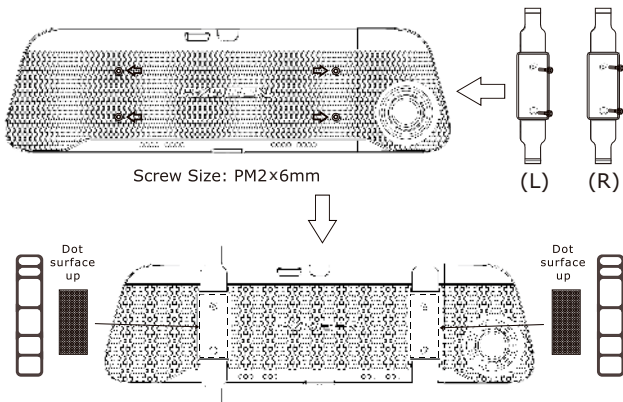


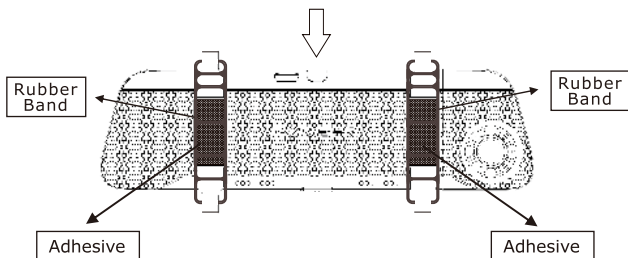
- **THE FOLLOWING INSTRUCTIONS ARE INTENDED TO GIVE YOU A BRIEF GUIDANCE FOR INSTALLATION**
- **Dropping your R10-SPL unit or subjecting it to excessive shock and vibrations may cause it to malfunction and is not covered by warranty.**
- **Most vehicles have the mirror mounted directly onto the glass, therefore improper tools or techniques used in the installation could result in a damaged or broken windshield. Rydeen is not responsible for damages to windshield caused by installation processes.**

5. Universal Mount Solution

Step 1

Install 2pcs clip-on mounting on the back of mirror. Paste the adhesive provided in the position as shown in the picture below, this will prevent vibration and protect the original rear-view mirror from being scratched. Use the provided rubber bands and loop them around the original mirror and tighten down the bands.





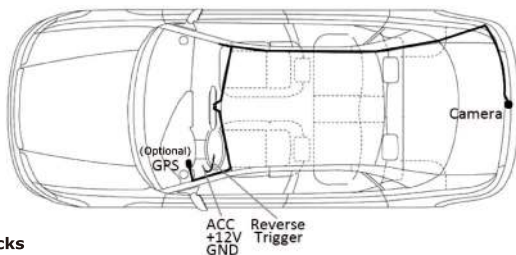
Step 2

Connect each unit according to the wiring diagram (page 7).

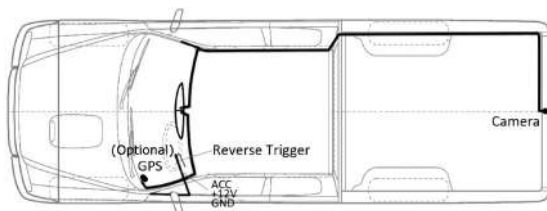
Route the wires along the interior trim panel and go down the A-pillar. Use a pry tool (not included) to tuck the wires within the panels. Make your ACC, +12V, GND and Reverse Trigger connections.

Follow the wiring diagram, install the backup camera and other accessories.

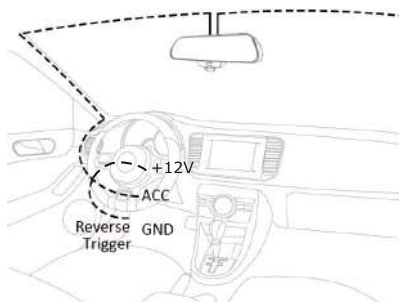
For Cars



For Trucks

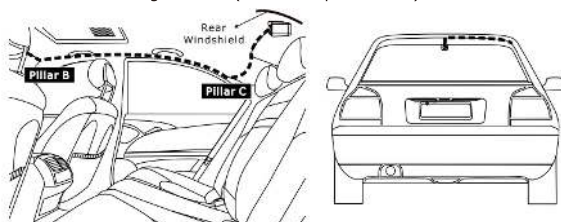


Inside View

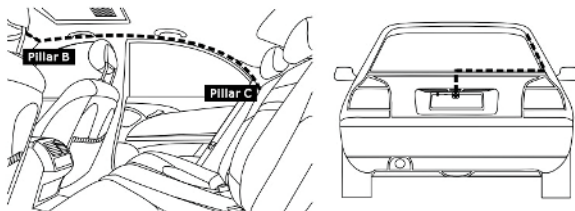


Backup Camera Installation Position Option Diagram

Rear windshield mounting location (Interior top-mounted)



Above license plate mounting location (Exterior mounted)



Step 3

Turn the vehicle on and verify that all the functions are working properly.

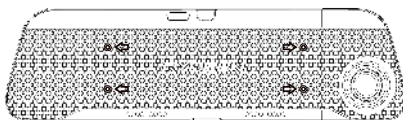
6. Mirror Replacement Methods

1) Remove the existing mirror and unplug the connector, if one exists. (Note: All vehicles use different mounting solutions. If necessary, consult your local automotive dealer or installation professional for specific instructions.)



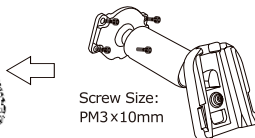
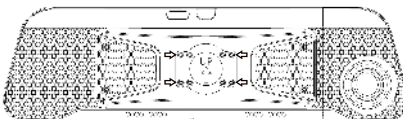
Note: If your vehicle uses a universal D-Tab mount, do not remove the D-Tab and use the VSM-AV mount provided.

2) Insert R10-SPL Mirror Back Plate for windshield mount onto the back side of the R10-SPL mirror, using provided screws.



Screw Size: PM2x6mm

3) Attach VSM-AV mount onto the R10-SPL Back Plate using provided screws and Allen key.



Screw Size:
PM3x10mm

4) Reattach the R10-SPL mirror by sliding the VSM-AV mount onto the factory windshield tab.

5) Adjust to the suitable angle to the mirror, then proceed to Step 2 and Step 3 on page 9-10.



Note: If the included VSM-AV mount does not fit the factory windshield tab please use the VSM-UNI2 (SOLD SEPARATELY). Please contact RYDEEN Technical Support at tech1@rydeenmobile.com or call 1-310-787-7880 for more details.

7. Removable Mount Structure

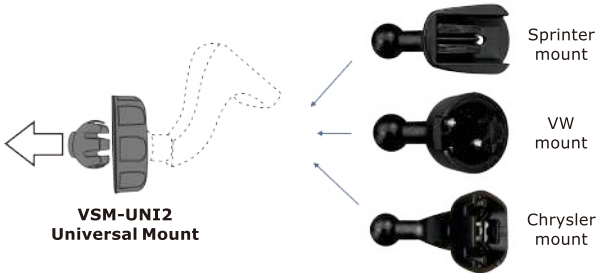
R10-SPL is equipped with removable mounting stem structure which allows to exchange with our available mounting systems.

<https://rydeenmobile.com/vehicle-monitors/mv-mirror-mount-systems/>

OPTIONAL VSM-UNI2 is available for ball joint type original mount stems.

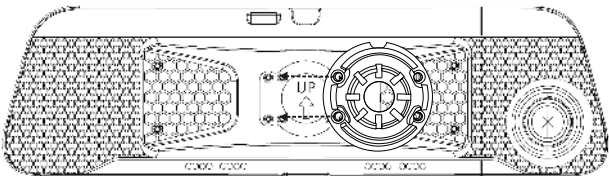
<https://rydeenmobile.com/product/vsm-uni2/>

Original Vehicle Mirror Stems

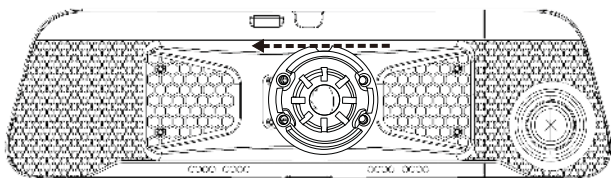


VSM-UNI2 assembly instructions

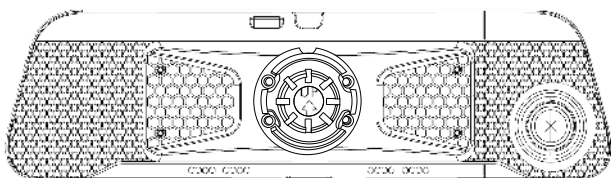
1) Place the universal mount over the backpack, insert diagonally and slide to the side.



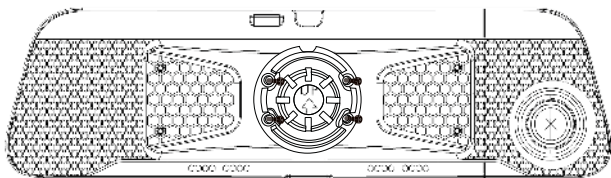
2) Push the universal mount towards the edge.



3) Align the universal mount holes with the backpack holes and push in.



4) Install provided screws into 4 holes.



8. User Interfaces

8.1 Start-up Screen



8.2 Power-down Screen



8.3 Main User Interface (UI)



8.3.1 Brightness Setting



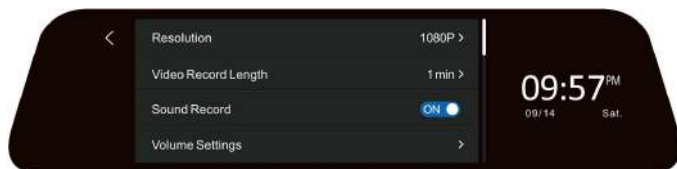
There are four brightness adjustments (Default is the brightest setting)

Click  to reduce brightness

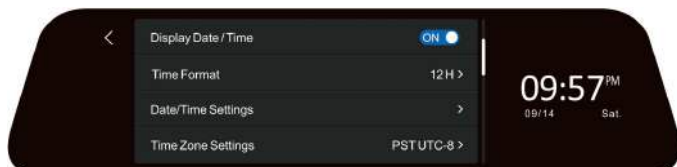
Click  to increase brightness

8.3.2 Setting Menu Icon

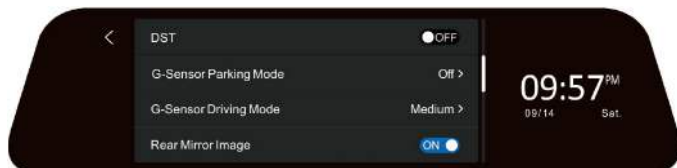
Select this icon to enter the setting menu.



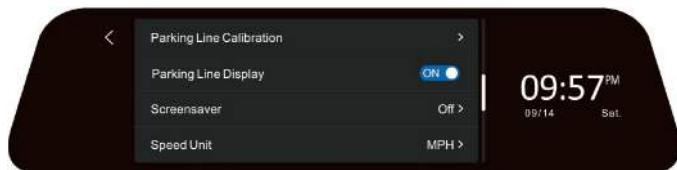
Page 1



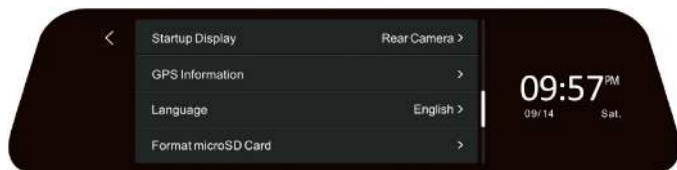
Page 2



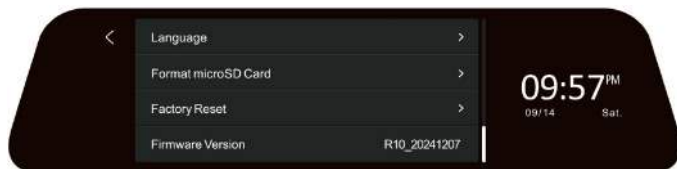
Page 3



Page 4

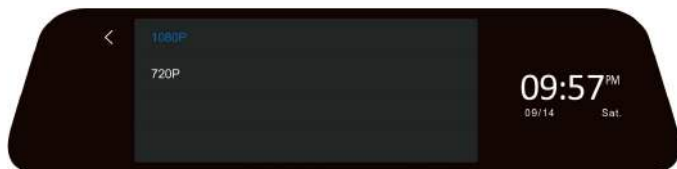


Page 5

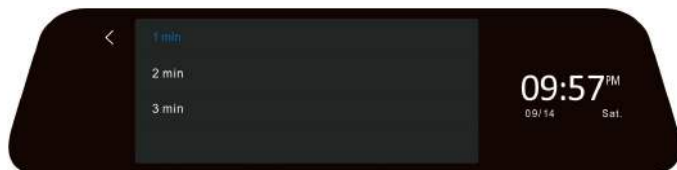


Page 6

Resolution-Select video output resolution, there are two options (1080P / 720P).



Video Record Length-Select the recording time for videos, including three options (1 min, 2 min, 3 min).



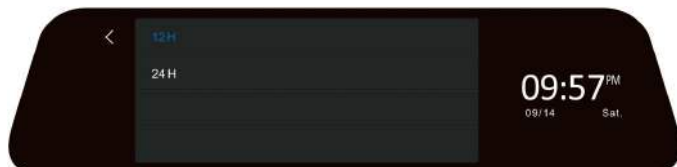
Sound Record-Turn on/off audio while recording.

Volume Settings-Adjust system volumes.



Display Date/Time—Date and time information will be always displayed on the right side if select "On", if select "Off", date and time information will be hidden automatically after 5 seconds.

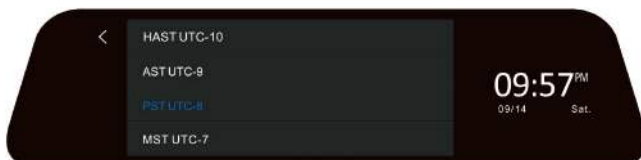
Time Format—Two options for time format, 12 H or 24 H.

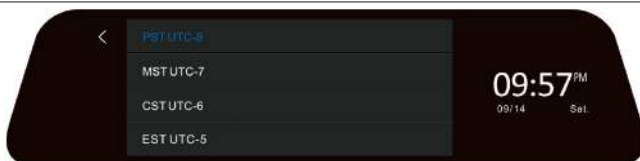


Date/Time Settings—Manually set the date and time in the menu or have them automatically adjusted via GPS.



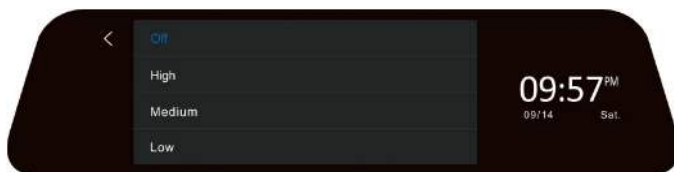
Time Zone Settings—The time is determined by the GPS unit. Select the appropriate time zone for your location, with options for six time zones.



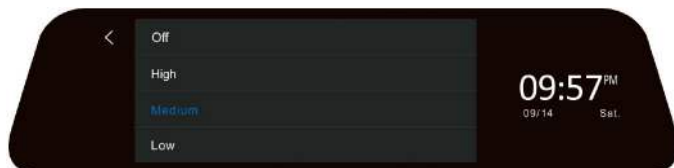


DST – Turn on/off the Daylight-Saving Time.

G-Sensor Parking Mode – Select the sensitivity of the G-sensor when mirror is in parking monitoring mode, the higher the selection, the higher the sensitivity of the G-sensor. Selecting "Off" will disable the G-sensor during parking mode.



G-Sensor Driving Mode – Select the sensitivity of the G-sensor when mirror is under normal operation, the higher the selection, the higher the sensitivity of the G-sensor. Selecting "Off" will disable the G-sensor during driving.



Rear Mirror image – Control mirror image displayed on the backup camera.

Parking Line Calibration – Select this function to adjust the parking line.

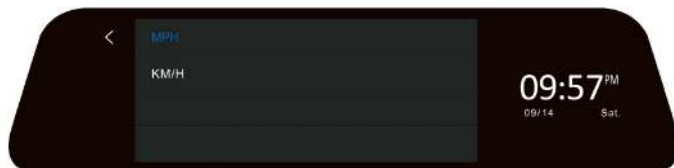


Parking Line Display—Turn on/off Parking Line, default setting is on.

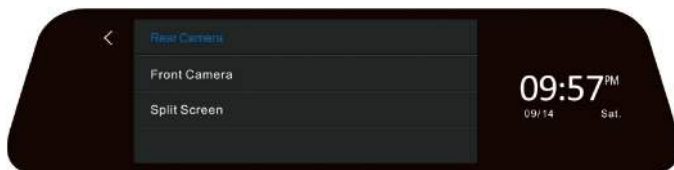
Screensaver—Display will turn off automatically after selected time has been reached with no usage. Selecting "Off" will keep display on during vehicle operation.



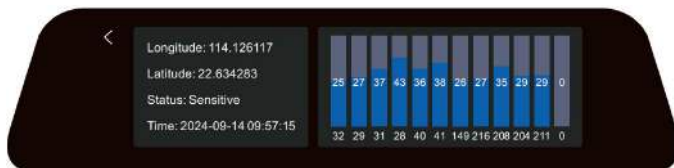
Speed Unit — Choose the speed unit of GPS, the default setting is MPH. When using optional GPS unit (sold separately)



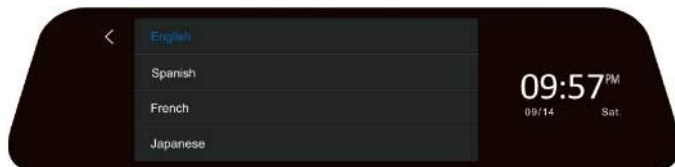
Startup Display—Select the camera display mode for start-up.



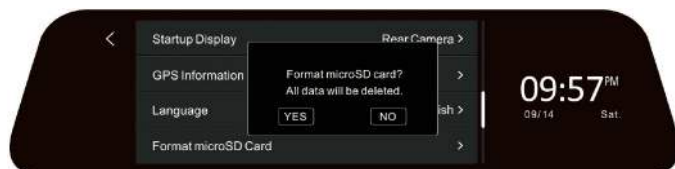
GPS Information—Find the real-time GPS tracking information. When using optional GPS unit (sold separately)



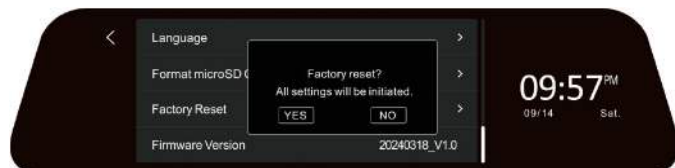
Language–Select the system language, there are four languages (English, French, Spanish, and Japanese).



Format microSD Card–Delete all files in microSD card.

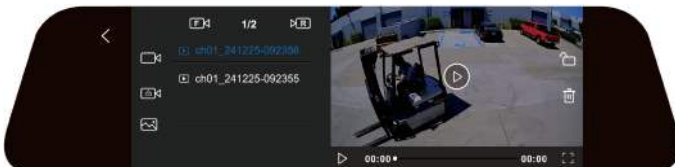


Factory Reset–Select this function to reset all settings back to default.



Firmware Version–Shows current software version installed in your device.

8.3.3 Replay Video and View Photo Icon



Touch the  icon to enter the files for the front and backup camera recordings and view the snapshots. Recordings and images only viewable when system is not recording, to delete press the  icon when in full image.

Select the  icon to view front camera recorded videos and snapshots

Select the  icon to view backup camera recorded videos and snapshots

Select the  icon to view normal recording files

Select the  icon to view SOS recording files

Select the  icon to view the photos

8.3.4 Video Recording Icon

The R10-SPL records at startup (default). When the system is recording the normal files, the red dot will appear on the top left corner of the screen, when the system is recording SOS files, red dot will turn yellow. To enter the settings menu, you must stop recording. To stop/start recording, simply press on the icon.

Note: R10-SPL Maximum microSD card size is 256GB and Minimum storage required is 16GB. For new microSD card, it takes time for formatting and pre-allocating, bigger memory space takes longer.

8.3.5 Photo Icon

Select the photo icon to take a snapshot. Images will be saved in ".jpeg" format inside the picture folder.

8.3.6 Sound Recording Icon

Turn on/off the sound recording of videos.

8.3.7 File Lock Icon

While recording, press this  icon to record a SOS file.

8.3.8 Real-time Speed Information

The real-time speed information is displayed on the left side of mirror when connected to GPS.



8.3.9 Three Modes for Display

Front Camera Full Screen Mode	 A wide-angle view from the front camera showing a street intersection. A white dashed arrow points forward in the center of the road. The speedometer at the bottom left shows "-- MPH". The time "09:57 AM" is displayed in the top right corner, with "Sat" below it.
Rear Camera Full Screen Mode	 A view from the rear camera showing the back of the vehicle and the road behind. A white dashed arrow points forward in the center of the road. The speedometer at the bottom left shows "-- MPH". The time "09:57 AM" is displayed in the top right corner, with "Sat" below it.
Split Mode	 A split-screen view showing both the front and rear camera feeds side-by-side. The left half shows the rear view with a white dashed arrow and "-- MPH". The right half shows the front view with a white dashed arrow and "-- MPH". The time "09:57 AM" is displayed in the top right corner of the right half, with "Sat" below it.

9. Specifications

Basic Parameters	
Video Input (backup camera)	AHD
System Language	English, Japanese, French, Spanish
Screen Dimensions	10 inches
Display Resolution	1280 x 320 Pixels
Front Camera Spec	120°/ 25 fps
Max Aperture Number	F1.6
Power Supply Voltage	DC5V (DC12/24V)
System	Linux
Storage	Built-in microSD card slot
Operational Temperature	-10°C ~ +60°C
Storage Temperature	-20°C ~ +70°C
Operational Humidity	20%~70%RH
Storage Humidity	30%~80%RH
Backup Camera Parameters	
Construction	2G4P+1IR
Water Proof	IP67
Backup Camera Spec	140°/ 30 fps
Viewing Angle	D140°, H118°, V61.5° (±5°)
G-Sensor	
Sensitivity	Low: 1.2g, Mid: 0.8g, High: 0.6g

10. Troubleshooting

- No display: Check to ensure the screen cable is properly connected and terminal connection is not loose.
- Rydeen logo stuck on screen start-up: Please insert a small pin into the reset hole and restart.
- The image display is hazy or blurry: Check if the lens is dirty.
- GPS suddenly no signal:
 - a. You have entered a tunnel or other area where there is no GPS signal.
 - b. Please check whether the GPS cable is loose or disconnected.
- No video (screen without red dot):
 - a. The microSD card is not formatted or corrupted.
 - b. The microSD card is not inserted in place.

11. Technical Support Contact Info

For any questions about **R10-SPL**, please contact your retailer or RYDEEN Technical Support:

- Phone: **1-310-787-7880**
- Email: tech1@rydeenmobile.com
- Web: <https://rydeenmobile.com/contact-support/>

12. One-Year Limited Warranty

RYDEEN MOBILE (a manufacturer of "RYDEEN" products) warrants product (R10-SPL) only to the original purchaser as described 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. 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.

2. Any product(s) which are purchased from an unauthorized retailer (in store or online).
3. Any products in which the serial number label or the model number label are removed, torn, modified, or replicated.
4. 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 1-310-787-7880 on Monday -Friday between 8:00 AM to 5:00 PM Pacific Standard Time or visit www.rydeenmobile.com.

13. To Obtain Warranty Service

If warranty service is required for your Rydeen product:

1. Please call Rydeen Customer Service Department at 1-310-787-7880, Monday-Friday between 8:00 AM to 5:00 PM Pacific Standard time and obtain a Return Authorization Number ("RA") Number.
2. Please pay for any shipping charge to Rydeen Customer Service Department. Rydeen will pay the return shipping charge. If the repair or service was performed during the warranty period. Rydeen will ship freight collect (recipient is responsible for shipping charge) if Rydeen determine the service was performed outside of warranty period or exclusions described above. Rydeen will not accept warranty service requests from outside of the U.S.A. even if product was purchased in the USA.
3. Please include a copy of your original purchase receipt including Rydeen product model number, purchase date, retailer name/address, and a RA Number whenever your product is sent for warranty service.

4. Rydeen will pay for all labor and material expenses for covered product during warranty period.
5. Shipping address for Rydeen Customer Service Department is following:
Rydeen North America, Inc. (a manufacturer of Rydeen products), 2701 Plaza Del Amo, Unit 705, Torrance, California 90503, USA.

14. FCC Compliance Statement

This device complies with Part 15 of the FCC interference limits for Class B digital devices for home or office use. These limits are designed to provide more reasonable protection against harmful interference in a residential installation and are more stringent than "outdoor" requirements.

Operation of this device is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

15. Copyright

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16. Disclaimer

The information in this user's manual is for general guidance. The images in the manual may be similar to the images shown in the actual product, but they do not exactly match. Depending on the optional package, some functions described in the manual may not be available or the functions described may be restricted.



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