



**MRCHDDVR2**

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**FULL SCREEN REAR VIEW MIRROR REPLACEMENT  
MONITOR WITH DVR AND BACKUP CAMERA KIT**

**USER MANUAL**







# Thank you for purchasing the EchoMaster Full Screen Rear View Mirror Replacement Monitor with DVR and Backup Camera Kit

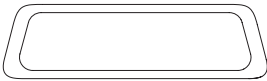


EchoMaster products are designed to improve safety by providing high quality images of surrounding areas and obstacles in the vicinity of the vehicle. This may help improve vehicle maneuvering capabilities by displaying blind spots or areas not normally visible to the driver.

Please ensure you read and understand all aspects of this manual before installing or using your EchoMaster products.



## PACKAGE CONTENTS



Mirror Dash Camera



Rear Camera



Rear Window Bracket



License Plate Bracket



GPS Antenna



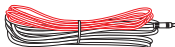
Wrench



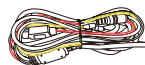
3X Vehicle-specific Monitor Mounting Adapters; 1X Universal Adapter



Micro Fuse Tap Adapter x2



Video Cable



Power Cable



## WHAT'S INCLUDED:

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- 9.3" Mirror Monitor with DVR
- Backup Camera
- Installation Cables
- Vehicle-Specific & Universal Mounting Adapter Brackets
- GPS Antenna
- User Manual

## FEATURES:

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### MIRROR MONITOR FEATURES

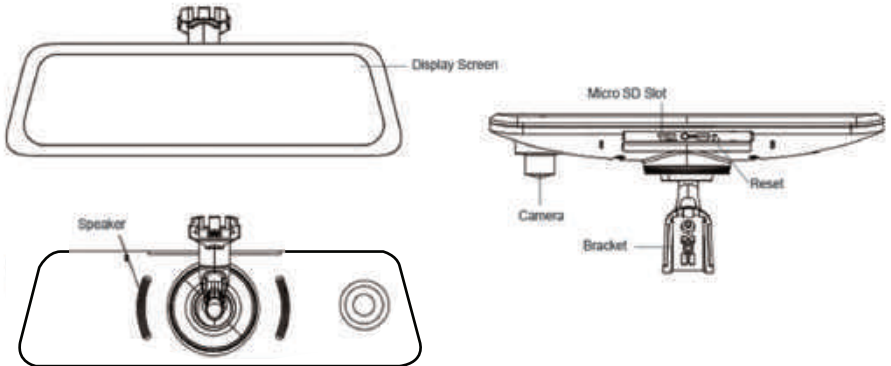
- Wide Viewing Angle: Diagonal 145°/Horizontal 120°
- 1080p 9.3" Touch Screen
- 1080p Front Camera with DVR
- Includes 64 GB Memory Card
- Loop Recording
- Recording Time: 1, 3, or 5 Minutes
- Audio Recording: On/Off

### CAMERA FEATURES

- AHD 1080p
- 1/3" Sensor
- 1080p Resolution and Recording
- Viewing Angle: Diagonal 150°/Horizontal 120°
- Water/Debris Proof Rating: IP67

Full Screen Rear View Mirror Replacement Monitor with DVR and Backup Camera Kit  
**INSTALLATION GUIDE**

## Monitor Overview



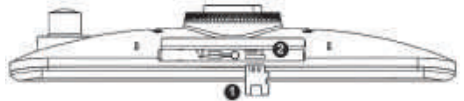
## STEP 1:

### GETTING STARTED

#### Installing the Memory Card

NOTE: Before removing the memory card, make sure the device is turned off.

1. Insert the memory card ❶ into the slot ❷
2. Press the memory card until it clicks.



#### Removing the Memory Card

NOTE: Removing the memory card while the device is turned on can result in a loss of data or damage to the device.

1. Turn off the device.
2. Press the card in until it clicks.
3. Release the card. The card ejects from the slot.

## STEP 2:

### MIRROR INSTALLATION

#### REMOVE THE ORIGINAL MIRROR



1 Hold the base of the bracket



2 Pull out away from the windshield to slide bracket off



3 Remove rear view mirror

#### INSTALL YOUR NEW MIRROR

NOTE: Different cars require different brackets. DO NOT force the mirror off the bracket. Your vehicle may require an included adapter for installation. Refer to the bracket instructions to find the correct bracket and adapter if applicable for your vehicle.



1 Hold the base of the bracket of your new mirror, and find the correct position



2 Slide the bracket in, moving towards the windshield



3 Once in position, secure with a screw and screwdriver



4

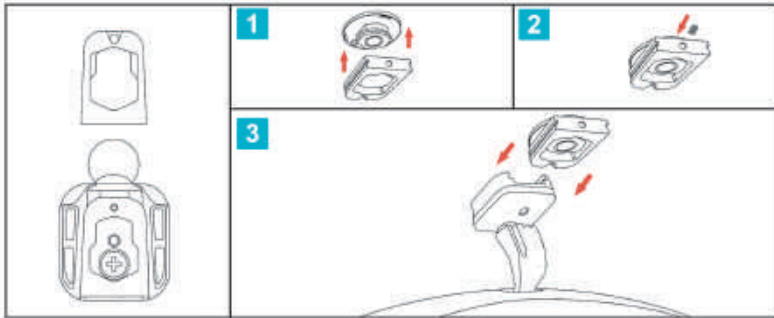
Most cars like Toyota, Toyota Crown, Toyota Prado, Honda MPV, Honda CRV, Nissan, Mazda3/5/6, Hyundai SUV, KIA SUV, Ford, New Mitsubishi and Chevrolets don't need an adapter when installing the mirror. Please refer to the next pages to see if your vehicle requires an adapter.

## STEP 3:

### MIRROR ADAPTERS (IF APPLICABLE)

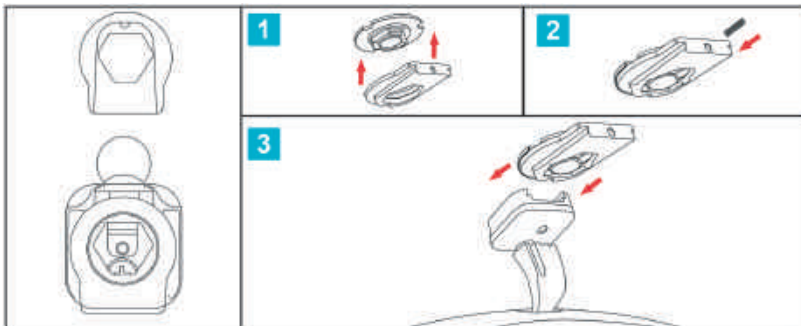
#### VOLKSWAGEN / AUDI (ADAPTER 1)

(not needed with mirrors that have a protective case)

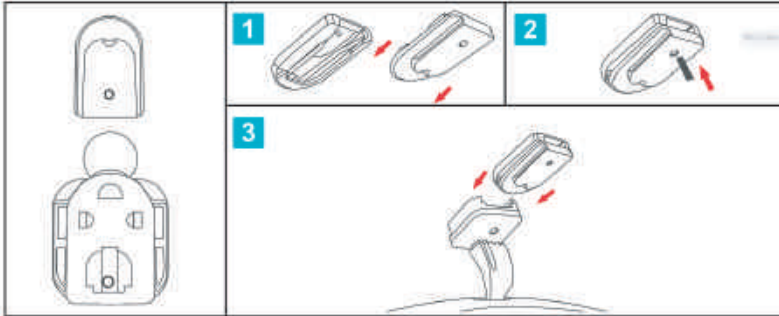


#### DODGE, CHRYSLER, JEEP, VOLVO (COMPACT), BMW (COMPACT) (ADAPTER 2)

(not needed with mirrors that have a protective case)

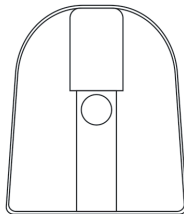


### HONDA / SUBARU (ADAPTER 3)



### ADAPTER 4

In some vehicles, the EchoMaster mirror will not fit in the standard bracket in the vehicle, and none of the adapters fit. In this case, glue Adapter 4 onto the windshield using UV glue.





## STEP 4:

### CAMERA INSTALLATION

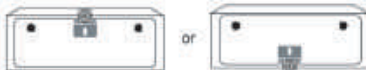


There are two locations you can install your EchoMaster backup camera. We recommend that it is installed on your license plate, but it can also be installed on your back windshield if needed.

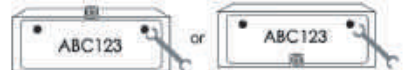
#### MOUNTING THE CAMERA ON YOUR LICENSE PLATE



1. Remove license plate



2. Mount the camera to the top or bottom of your license plate

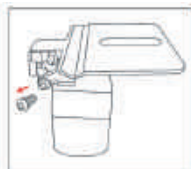


2. Re-mount the license plate

If mounting on the bottom of your license plate, rotate the mounting bracket as shown here:



#### MOUNTING THE CAMERA ON YOUR REAR WINDSHIELD



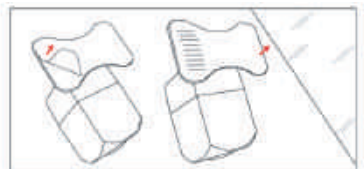
1. Remove bolts from camera mounting bracket



2. Replace the license plate bracket with the windshield mount bracket

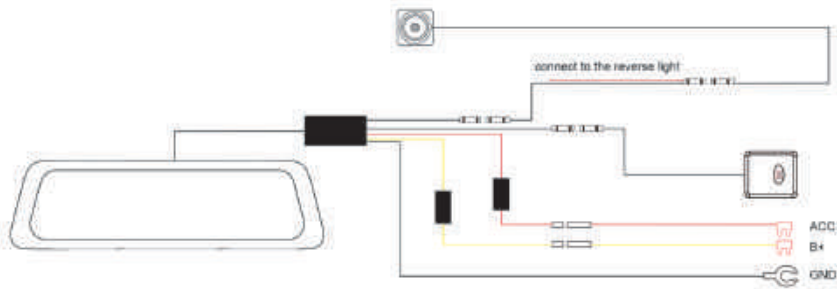


3. Clean the window with water or alcohol and a lint-free cloth



4. Remove protective film from the back of the mount and press firmly to the windshield for 30 seconds

## STEP 5: INSTALLATION WIRING



### NOTE:

The GPS module is mounted on the dashboard, with the front side facing up. (The front side is the side with the word “GPS”)

The 9-pin connector at the mirror is connected to the 9-pin interface of the power cable.

Locate the yellow wire (B+), the red wire (ACC), and the black wire (GND) connectors in the car’s fuse box.

### NOTE:

Before you start wiring in the fuse box, connect the two small fuse tap adapters to the red line (ACC) and the yellow line (B+) respectively.



1. Open the transparent plastic sleeve on the fuse tap adapter



2. Insert (following the direction of the arrow), until the red box marks coincide.



3. Put the long end of the rubber sleeve into the short side and make sure the sleeve is tight.

**NOTE:**

The Micro add-a-circuit fuse tap adapter is included in the package.

**A:** Connect the **yellow wire (B+)** to the fuse box (Please be sure the fuse tap adapter is connected to the other end)

This wire needs to be connected to the fuse which is a constant power source.

How to find it:

Using a test light, check the fuses if you can get power or not when the car is in OFF state.

If the bulb of the car test light is on, then you have found the correct one.

**B:** Connect the **red wire (ACC)** to the fuse box. (Please be sure the fuse tap adapter is connected to the other end )

This wire needs to be connected to the fuse which can get power when the car is in the ACC state.

Switching the key to the ACC state, then using the test light, check which fuses get the power.

If the bulb of the test light is on, switch the car to the OFF state. If the bulb turns off, you have found the correct one.

**C: Black Wire (GND / GROUND)** This wire needs to be connected to the metal part of the car (ground). Most cars have at least one obvious ground point near the fuse box, please connect the ground lug to the ground point (as seen in the photo).



3. Connect the **4 pin connector** of the **power cable** to the **video cable** after installing the rear camera. And connect the **video cable of the monitor** to the **camera wire**.

Finally, connect the **red wire** to the **reverse light**.

## STEP 6:

### MONITOR SETTINGS

#### Turn ON/OFF the Monitor

##### 1. Turn ON

The monitor will automatically turn on when the vehicle turns on. It is not necessary to press the power button.

##### 2. Turn OFF

The monitor will turn off when the engine shuts off .



To operate the mirror dash cam, simply touch the screen with your fingertips, using the icons below to access the functions and settings.

1. (🔇) **Mute:** Mute or unmute the current recording
2. (↺↻) **Switch Views:** Switch between display views (Front or Rear; Front & Rear)
3. (▶) **Playback:** Playback videos and photos
4. (⏸) **Start/Pause:** Start or pause recording manually
5. (📷) **Shutter:** Take pictures
6. (🔒) **Emergency Record:** Start emergency recording manually
7. (⚙️) **Settings:** Open system settings
8. (☀️) **Screen Dimmer:** Manually or automatically dim or increase the screen brightness
9. (🔴) **Recording Indicator:** Red/yellow indicates loop recording or emergency recording

1. Tap (☀️) to be able to adjust screen light manually or automatically. Slide the dot on the lightness bar to dim or brighten the screen.
2. Pause (⏸) current recording to enter into “Playback mode (▶)” or “Settings (⚙️)”.

3. You can show or hide date and time, by tapping the section the date and time are displayed on the screen.



## Screen Saver

1. To enter the screen saver manually:  
Press and hold the screen for 2 seconds - the screen is off  
Press the screen - the screen is on

NOTE: When the mirror is recording, you need to press the screen and hold for 2 seconds to enter Driving Mode first, then press the screen and hold for 2 seconds again to turn the screen off

2. Turn on automatic screen saver loading

Go to the menu General Settings > LCD Power Save and select 1 minute / 3 minutes. Then the screen will automatically enter the screen saver state after 1 minute / 3 minutes.

## System Settings

To adjust settings, tap .

**NOTE:** The system will start loop recording automatically when you leave the settings menu.

## Movie Mode

Menu Options	Description	Available Options
<b>Resolution</b>	Set a desired resolution for front camera	1080P / 720P
<b>Movie Clip Time</b>	The recording can be divided into several video clips, and each clip has the same time length up to 5 min	1 Minute 3 Minutes 5 Minutes
<b>Sound Record</b>	Mute or unmute	On / Off
<b>Reverse Line Switch</b>	Display or hide grid lines	On / Off
<b>Driving Mode</b>	View current speed and direction	On / Off(default)
<b>Parking Monitoring</b>	<ul style="list-style-type: none"> <li>•Activate or deactivate the parking monitoring</li> <li>•Set the desired sensitivity level for parking monitoring</li> </ul>	On / Off(default) High Middle Low

Menu Options	Description	Available Options
<b>Beep</b>	Turn on or off the keytone	On / Off
<b>Volume</b>	Turn off speaker or set a desired volume for speaker	Off / High / Middle / Low
<b>Language</b>	Set the on-screen display menu language	Multilanguage, English(default)
<b>LCD Power Save</b>	Set the desired duration for backlight, always "Off" or shutdown within a specific time	Off / 1 Minute / 3 Minutes
<b>Protect Level</b>	Set the desired sensitivity level for detection of a collision	Off / High / Middle / Low
<b>Speed Unit</b>	Set the desired speed unit	km / h; mph
<b>GPS Time Sync</b>	Receive actual time from the satellite and then automatically adjust the time on the device	On / Off
<b>Time Zone</b>	Select an appropriate time zone manually	-----
<b>Clock Settings</b>	Set date and time	Time; Date & Year ;
<b>Date Format</b>	Set a desired date format	YYYY MM DD / MM DD YYYY / DD MM YYYY
<b>Time Format</b>	Set a desired time format	12 hours / 24 hours
<b>Automatic Rear View</b>	Once this mode is activated, the device will automatically switch over to rear view within 30 sec.	On / Off
<b>Reset Setup</b>	Restore all settings to the factory default values	Yes / No
<b>Format SD-Card</b>	Format a memory card(All data will be erased)	Yes / No
<b>FW Version</b>	Firmware Version	-----

## Loop Recording

Insert a memory card into the card slot, and automatic loop recording will begin after the vehicle turns on. The loop recording will be divided into several video clips; the recording will not stop between video clips.

When there is insufficient space on the memory card, loop recording will automatically overwrite the old files one by one.

When loop recording is in progress, you can manually stop recording by tapping



To enable/disable the audio recording, tap (🔇)

Time frame for each video file can be 1/3/5 minutes.

NOTE: Loop Recording files are saved in memory card: \Normal\FAR folder.

### Approximate recording time

This dash cam requires microSD™ or microSDHC memory card with the FAT32 system file type and requires a card speed rating of 10 or higher.

### Approximate recording time (Dual-channel Front+Rear)

Memory Card Size	720P 30fps+1080P 25fps	1080P 30fps+1080P 25fps
8GB	1.5H	1H
16GB	3H	2H
32GB	7H	4H
64GB	14H	9H

Default setting 1080P/30fps(front) + 1080P/25fps (rear)

NOTE: If the dash cam cannot recognize your memory card, it may be caused by an unrecognizable system file type, therefore please format the memory card first.

## Automatic Emergency Recording

During an accident, the internal G-sensor will detect the crash and activate emergency recording. The current recording will be locked automatically to avoid being overwritten by loop recording.

## Manual Emergency Recording

To activate manual emergency recording, tap (🔒), the current recording will be locked as emergency recording and cannot be overwritten by loop recording.

### NOTE:

The collision sensing function can be adjusted in the “Protect Level” option under the settings.

Emergency recording video files are saved in memory card: \Event\FR folder.

Emergency recording video files have the same time frame as loop video files.

## Parking Monitoring

This feature is meant to provide video proof for a collision that occurs when your vehicle is parked and unattended. When an impact is detected, the mirror dash cam turns on automatically and records a 30-second video (Front and Rear cameras start recording simultaneously). These videos will remain protected on the memory card and will not be overwritten by new recordings.

Parking monitoring function is disabled by default. You can enable the function by selecting (⚙️) Movie Mode > Parking Monitoring

When parking monitoring detection is enabled, the system will enter parking monitoring once the vehicle engine is stopped.

### NOTE:

Parking recording files are saved in memory card: \Event\FR folder.

This function requires constant power supply, and the monitor has been connected to constant power supply so you don't need to hardwire it.



In Parking Monitor Mode, the power cord is equipped with low power protection. When the battery voltage is lower than 11.8v, the power supply will stop automatically.

## GPS Tracking System

GPS tracking system will automatically capture the speed, location and coordinates of your car when the car starts.



## Automatic Date and Time

1. Tap (  ) > (  ) > General Settings > Time Zone
2. Select the appropriate time zone, then press “Yes” to confirm or press “No” to cancel the current selection
3. Go back to >General Settings>GPS Time Sync, click the button on the GPS Time Sync bar to active auto time adjustment

NOTE: Install the GPS antenna correctly on the dashboard according to the instructions and connect it to the dash cam for proper functionality

## Driving Mode

In driving mode, you can view your current speed and direction



1. Tap (  ) > Movie Mode > Driving Mode
2. Activate or deactivate driving mode

Driving mode will automatically appear on the screen within 30 seconds after the dash cam starts.


To display driving mode, press the screen and hold for 2 seconds while recording is in progress.

## Reversing Mode

Parking Assist Grid Lines Show up Automatically

Make sure that you have the trigger line (red thin wire) on the video cable connected with the positive (+) of reverse light. When you place the vehicle in reverse, those parking assist lines are displayed on the monitor to help you estimate your distance from obstacles.

To turn off park assist lines:

1. Tap (  ) > Movie Mode > Grid Lines Switch
2. Turn on or off parking assist grid lines

## Manually Display Park Assist Grid Lines

The park assist grid lines can be shown on the screen manually. Just slide your finger on the screen to the right before putting your vehicle in reverse. It will display the rear view with park assist lines over the image. This allows you to view the park assist lines without connecting the rear camera to your reverse light.

Please refer to the following diagrams:

1. Slide the screen to the right.
2. Rear view with grid lines shown on the screen.
3. Slide the screen to the right again to end the reversing mode.



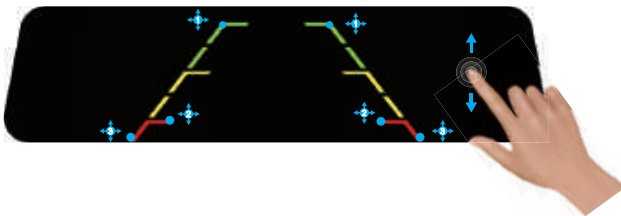
**NOTE:** Please slide your finger below the Brightness Adjustment Section on the screen.

## Parking Grid Lines Adjustment

1. Tap point 1/3 and hold it, move the grid lines to desired position.
2. Tap point 2 and hold it, move it right or left to extend or shorten the grid lines length horizontally. Move it up or down to adjust the distance between red, yellow, and green colors.



**NOTE:**

Move up or down in non-grid lines area to adjust reversing view angle.












## Taking a Photo

Tap (  ) > (  ) > General Settings > Time Zone  
Select the desired type: Normal (Loop recording) /Emergency video (Emergency recording) /Photo.

Tap the desired file to playback.

During playback, you can:

- (1) While playing videos, tap  /  to play the previous/next video; tap  to play/pause the video; hold on a point along the track bar to move directly to a different location for the playback.
- (2) While viewing photos, tap  /  to display the previous/next photo.
- (3) Tap (  ) / (  ) to lock/unlock the current file.


## Installing the Playback Software

For Windows users, you can find the download link for the playback software “EchoMaster GPS Player” on the memory card.

1. Insert your memory card into the initiated mirror dash cam.
2. Take the memory card out after completing the “Memory Card Initialization”.
3. Find the download link called “autoplayerlitev1.1” in your memory card and open it.
4. Follow the on-screen prompts to install the playback software on your computer.

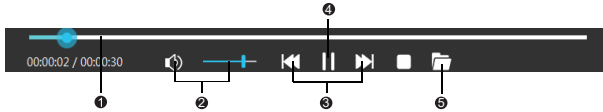
For Mac users, please find the software “EchoMaster GPS Player” in the App Store on your Mac OS computer. Download and follow the on-screen prompts to install it on your computer.

## Playing the Recording Files

1. Remove the memory card from the dash cam and access the card on the computer via a card reader.
2. By default, EchoMaster GPS Player shows the Map and the FILE LIST on the right, meanwhile you can check the speed and direction at the bottom right.
3. Find the download link called “autoplayerlitev1.1” in your memory card and open it.
4. Follow the on-screen prompts to install the playback software on your computer.
5. During playback, you can view more driving information from the dashboard panel and G-sensor chart that are displayed below the video playback screen.  
On the dashboard panel, click (  ) to display the Settings Menu.  
The G-sensor chart displays data in 3-axis waveform about the car’s shift forward/backward (X), to the right/left (Y) and up/down (Z).

**NOTE:** The map screen may not display when the computer is not connected to the internet or when your dash cam does not support the GPS function.

## Playback Controls



The playback controls are as follows:

Display the playback progress

You can click on a point along the track bar to move directly to a different location for the playback

Mute or unmute the volume

Skip to the previous/next file on the list

Start or pause the playback

Select the folder that stores the recording files

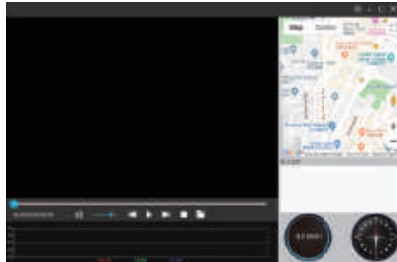
The Settings Menu:

**Change Language:** Set the display language

**Speed Unit:** Set speed unit

**Maps:** Set a map

**Information:** Display the version and copyright information



## Specs

<b>Front Camera</b>	1080P 30fps/720P 30fps	<b>Rear Camera</b>	AHD (1080P) 25fps
<b>Camera Field of View</b>	Front: FOV 145°(diagonal), Rear: FOV 145°(diagonal)	<b>Display Screen</b>	9.35 inch, resolution 1280*320
<b>Sound</b>	Built-in microphone/speaker	<b>Video</b>	H.264 encoding (MOV)
<b>Car Charger</b>	Input: 12-24V; Output: 5V	<b>Image</b>	JPEG
<b>G-Sensor</b>	Built-in three-axis accelerometer	<b>GPS</b>	Support
<b>Working Temperature</b>	-4°F ~149°F (-20°C~65°C)	<b>Storage Temperature</b>	-22°F ~185°F (-30°C~85°C)
<b>Storage</b>	8-64GB MicroSD (FAT 32) card Class 10 and above required		

# TROUBLE SHOOTING

## Crash Issue

- Please format memory card regularly.
- Replace with a new memory card (class 10 or higher).
- If the solutions mentioned above do not help, please reset the dash cam.

## Blank Screen

- Reset or restore default settings.

## Unable to turn on/off automatically

- Reset or restore default settings.

## GPS date / time are incorrect

- Choose the correct time zone manually when using it in the first time.

## Video recording / photography unavailable

Check if memory card inserted or not.

Low memory card class, please insert a larger / higher quality memory card (class10, etc.).

If the solutions mentioned above do not help, the memory card may be broken, please replace a new one.

## Card full or card error

Format the memory card regularly.

Broken card/low card class/incompatible memory card. We suggest you replace the memory card.

Reset or restore the dash cam.



Phone – 866-931-8021

E-Mail – [support@aampglobal.com](mailto:support@aampglobal.com)



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