



User Manual



drive HD[™]
Record Your Ride

1080P FHD DASH CAM
CDR 820



Printed in China
Part No. 490-954-P
Version A

For Customer Service, Please Contact:

Cobra Electronics Corporation
6500 W. Cortland Street
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Introduction

Important Information and Customer Assistance

Important Information

Safe Driving

Motorists, as well as operators of emergency or service vehicles, are expected to exercise all due caution while using this product, and to obey all applicable traffic laws.

Security of Your Vehicle

Before leaving your vehicle, always remember to conceal this device in order to reduce the possibility of break-in and theft.

Privacy

This device may not be used to violate the privacy rights of others. In no way will Cobra Electronics or its subsidiaries be responsible for inappropriate use of this product. It is the sole responsibility of the buyer to consult legal counsel for the interpretation of any laws applicable to the area of intended use of this product.

Customer Assistance

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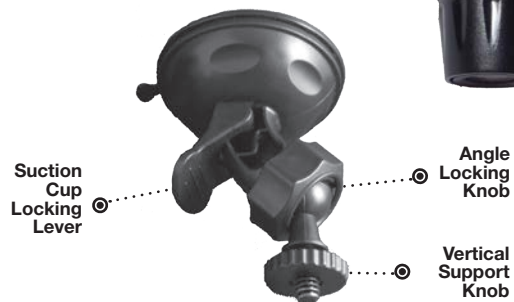
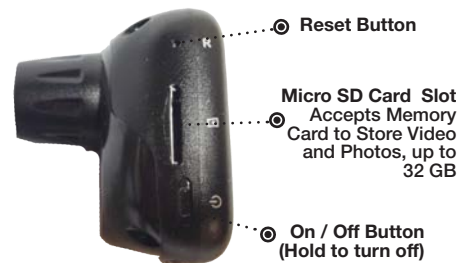
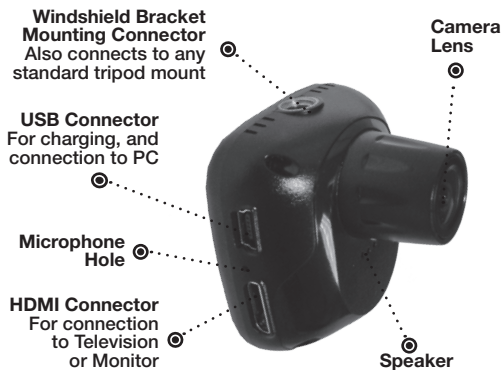
English

Protect • Re-live • Share



Introduction

Controls, Indicators and Connections



Introduction

Congratulations! You've made a smart choice by purchasing a Drive HD Dash Cam from Cobra. This booklet describes the simple steps for mounting, setting up, and using your dash camera.

Camera Features

Records everything you see and hear in 1080P Full HD with high dynamic range that optimizes video during day or night.

Continuous Loop Recording overwrites old footage unless you want to save it. A time/date stamp is embedded on all recordings so you'll never miss an event while driving.

Ready to use out-of-the-box. Includes a heavy-duty suction cup to mount the camera to your windshield and an 8GB MicroSD card to Record your Ride.

Wide angle view gives you a full view of the road without any edge distortion.

3-axis G-Sensor senses sudden accelerations and collisions and automatically protects footage surrounding the incident.

Additional Features

Emergency Record Button

Motion Sensor

Built-in Microphone & Speaker

Auto-Record and Auto-Power Off

Adjustable Movie Clip Time



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Your Device

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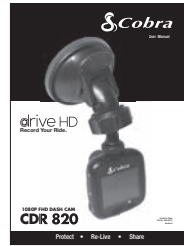
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What's in the box



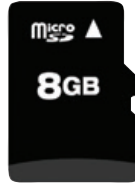
Dash Cam (Model # CDR 820)



Product Manual



Heavy Duty Suction Cup Mount



8GB Micro SD Card (installed)



Cigarette Lighter Adapter



Mini USB to USB Cable

Installation

Where to Mount Your Unit

You will get optimum performance from your camera if you **mount** it on the front windshield, behind the rear-view mirror. This will minimize the impact on the driver's line of sight. You'll also want to keep the camera centered and angle the bracket to optimize the camera's view of the road ahead.

Windshield Mounting

Peel the plastic film off of the suction cup.

Position the mounting bracket above the camera as shown. Rotate the vertical support knob clockwise for 2-3 full rotations until it captures the camera firmly.



To adjust the angle to the road, if necessary, loosen the angle locking knob above. Turn the camera so that it has a clear view of the road, ahead. Tighten the knob when done.

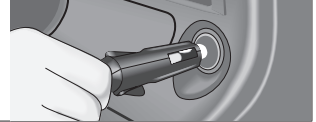
Press the Suction Cup firmly onto the windshield. Push down on the lever to lock the suction cup in place.



Plug the USB power cord into the camera.



Plug the cigarette lighter adapter on the power cord into your vehicle's cigarette lighter.





Powering the Device On and Off

To turn the device on, press the **POWER** button.

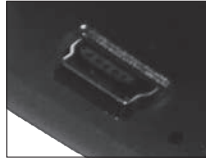
To turn the device off, press and hold the **POWER** button for three seconds.



Charging the device

You can charge the device with the included car charger, or with a USB cable. The device will also run off of its own internal battery for a short time.

NOTE: When the Car charger is connected, the device will automatically power on and start recording video.



Battery: The battery in this unit is intended to operate the unit after power loss due to an accident or crash. Note that while recording may continue, the device was not intended for long-term recording on battery power.



Video Record, Still Photo, and Playback Modes

The camera has four separate modes:



Video Mode



Still Photo Mode



Video Playback Mode



Still Photo Playback Mode



To toggle between the modes:
Press the **MODE** Button:



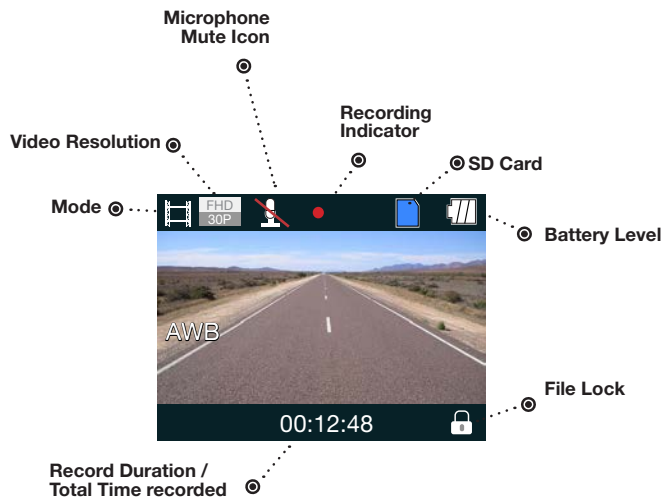
NOTE: You cannot switch modes or enter menus while the camera is recording video.




Video Mode



Video Mode is the primary function of this device and allows you to easily record HD video of the road ahead of you.



Continuous Cyclical Recording: Once the memory card is full, this camera will continuously overwrite the oldest footage recorded. To protect a clip so that it will not be overwritten, press the **FILE LOCK** Button. The  icon will show on the screen. Files can also be locked from the playback menu in **Video Playback Mode**.

G-Sensor: The G-Sensor is an accelerometer that can detect an impact caused by an accident. If the G-Sensor is triggered, the current video segment will automatically be locked so that it is not overwritten by cyclical recording. If the G-Sensor is triggered and video is not being recorded, it will start video recording automatically.

The sensitivity of the G-Sensor can be adjusted in settings.

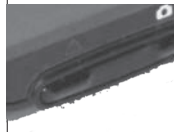
To Start and Stop recording video, press the **RECORD** button



The Red Record Dot starts flashing or stops flashing, and the record duration changes to display total time recorded.



To Lock a video while it is being recorded, press the **FILE LOCK** button



The Lock Current File message and the Lock icon will appear on the screen:



To Toggle the Microphone On / Off, press the **UP** button



The Microphone Mute toggle on the screen:



To Toggle the Screen On / Off, press the **DOWN** button

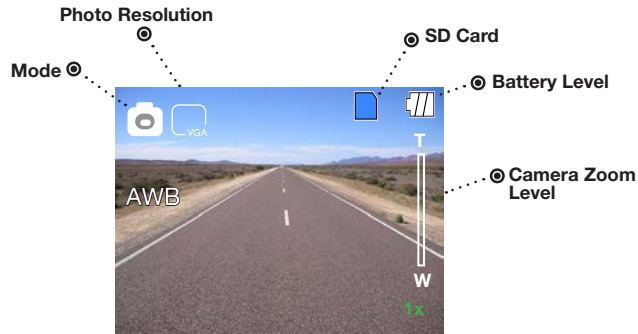


The screen will toggle on and off.



Still Photo Mode

This device can be used to capture high-resolution still photos using its built-in camera. The images are stored on the removable SD Card memory.



To take a picture

Press the **RECORD** button.

The screen flashes black and the image briefly freezes to show that a picture was taken.



To digitally zoom in or out

Press and hold the **UP** or **DOWN** buttons.

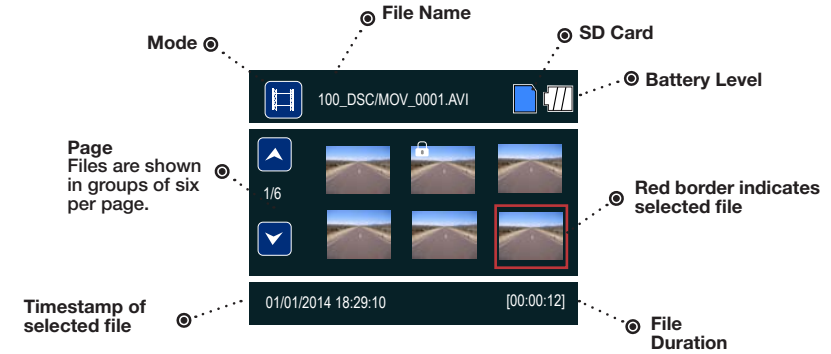
The image zooms in or out, and indicates the zoom factor on the screen. (1x - 4x)



Video and Photo Playback Modes

This device stores video and pictures on its removable SD Card Memory. Playback mode will allow you to review the saved video and photos, and play back the video with sound.

File Selection Screen



To move forward or backward in the list of saved files

Press the **UP** or **DOWN** buttons while on the video selection screen.

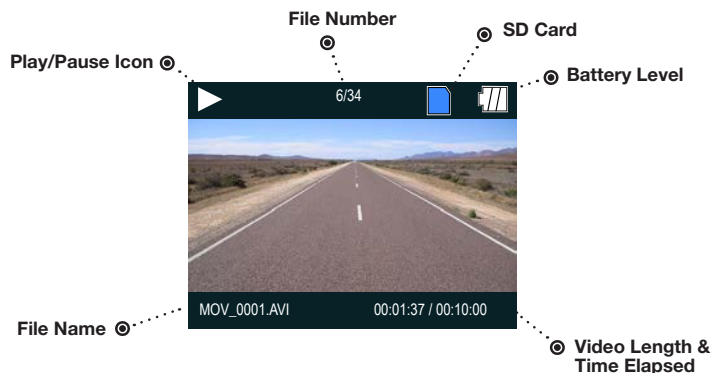
The red box moves to select the next or previous file. If you are at the beginning or end of a page, this may cause you to flip to the previous or next page.

To play a selected file:

Press the **RECORD** button while on the file selection screen.

The video will begin playing.

Video Playback Screen



To play or pause video playback

Press the **RECORD** button.

The video will begin playing or pause playback, and the Play / Pause icon will toggle.

To Fast forward or rewind the video

Press the **UP** or **DOWN** buttons.

The video will begin playing faster or rewind, and the playback speed will show on the screen as 2X, 4X, etc.

To return to the list of saved files while in the middle of video playback

Press the **MODE** button.

You will be returned to the video selection screen.

To adjust the playback audio volume

Press **MENU** to bring up the Playback menu. Make sure **VOLUME** is highlighted, and press **MODE**.

Press the arrow keys to select a volume level, 0-10. The selected volume level will have a red box around it. Press **MODE** again to confirm and close. Finally, press **MENU** to exit.



To delete a file

Press the **MENU** button to bring up the Playback menu. Press the down arrow to highlight **DELETE**, and press **MODE** to confirm.

To delete just one file, highlight the icon with just one item in the trash, and press **MODE** to confirm. You will then see the "select a file" dialog. Use the arrow keys to highlight the file you want to delete with the red box, then press **RECORD** to confirm. The "Delete Selected File" Dialog will appear. Make sure **YES** is selected, and then press **RECORD** to confirm. The file will be deleted and you will return to the video selection screen.



Video Protection Screen

To Lock a video or image while in playback mode

Press the **MENU** button to bring up the Playback menu. Press the down arrow until **PROTECT** is highlighted, and press **MODE** to confirm.

To protect just one file, highlight the icon with the open book and the key, then press **MODE** to confirm.

You will then see the “select a file” dialog. Use the arrow keys to highlight the file you want to protect with the red box, then press **RECORD** to confirm.

You'll see the “Protect Selected File” dialog. Press the **UP** arrow to ensure that **YES** is selected, then press **RECORD** to confirm.



The selected picture will now show a lock icon:



This means this file will not be overwritten by continuous loop recording in **Dash Cam** mode.

Language Selection



While in **Video** or **Still Photo** mode, press the **MENU** button, scroll to the language menu, and press **MODE** to enter the **Language Selection** menu.



Use the **UP** or **DOWN** arrows to select the desired language, and then press **MODE** to confirm.



The following languages are supported:

English
Spanish
Portugese
Russian
Chinese
Simplified Chinese

Video Settings



Note: If you are currently recording video (●) you'll need to stop recording with the **RECORD** button first.



While in **VIDEO** mode, press the **MENU** button once to enter the menu selection screen. Verify that **Video Settings** is selected, then press **MODE** to confirm.



Press the **UP** and **DOWN** arrows to select the setting you'd like to modify, then press the **MODE** button to confirm.



A window on the right edge of the screen will display the available options. Use the **UP** and **DOWN** arrows to make your selection, then press **MODE** to confirm.



A list of the settings and their meanings are shown on the next page.

Adjusting Video Settings

Movie Mode Settings

Video Settings	This sets the level of detail in the video. FHD will give you the best image, but will take up the most memory.
Movie Quality	Select between Super High Quality (SHQ) and High Quality (HQ)
Movie Clip Time	This selects the length of the video clips the system records. Options range from 1 minute to 10 minutes.
Auto Power Off	Once power is removed from the device, it automatically shuts down. This option lets you set how many seconds to continue recording video after power is removed.
Motion REC Time	When the Motion Event REC feature is turned on, the camera will analyze the image and determine when the image has changed substantially, and automatically start recording for you. Leave this feature on if you want to record video when you're moving, and stop recording video when stopped.
Microphone	If you do not want this device to record audio with its internal microphone, turn this setting off.
MIC sensitivity	Set the sensitivity of the microphone.
Scene	Select between Auto, Sport, Portrait, Landscape, Snow, Beach, and Fireworks.
Exposure	In very bright environments, use a positive EV. Dark environments use negative EV. Options between -2 and +2 are available.
White Balance	You can adjust the white balance based on the ambient lighting. Options include: Auto, Daylight, Cloudy, Flourescent 1, Flourescent 2, and Flourescent 3.
ISO Sensitivity	Increasing ISO will make the camera more sensitive to light. Try increasing ISO in low-light conditions, or leave it set to "Auto"
Color	Adjusts color saturation. Options include: natural, bright, and grey.
Effect	Photo effects include: Normal, retro, black and white, relief, negative, drawing, painting, and crayon.



To Adjust General Settings



NOTE: If you are currently recording video (●) you'll need to stop recording with the **Record** button first.



While in **VIDEO** or **STILL PHOTO** mode, press the **MENU** button once to enter the menu selection screen. Press the down arrow until **General Settings** is highlighted, then press **MODE** to confirm.



Press the **UP** and **DOWN** arrows to select the setting you'd like to modify, then press the **MODE** button to confirm.



A window on the right edge of the screen will display the available options. Use the **UP** and **DOWN** arrows to make your selection, then press **MODE** to confirm.



A list of the settings and their meanings are shown on the next page.

General Settings

Beep Sound	If you don't want the device to beep on every button press, turn this option OFF.
Idle Power Off	Once power is removed from the device, it automatically shuts down. This option lets you set how many seconds to wait before shutting down.
Date/Time	Use this to set the current time and date.
Date Format	Sets the date format.
HDMI Output	Lets you choose between 720P and 1080P on the HDMI Output.
Screen Flicker	This sets the screen refresh rate. Options include 50 Hz and 60 Hz.
USB Function	If you want your camera to behave like a Mass Storage device (flash drive) when connected to a computer, select MSDC. If you want to use it as a webcam with your computer, select PCAM.
Screen Rotate	Allows you to flip the screen vertically for upside-down operation.
Screen Saver	Allows you to set a timeout for the screen to go black when not in use. Options include 1 minute and 3 minutes.
G-Sensor Level	Sets the sensitivity of the G-Sensor, from 0 (off) to 4 (max)
Motion Detector	Sets the sensitivity of the Motion sensor, from 0 (off) to 3 (max)
Restore Defaults	Resets the system to its default settings.
Format SD-Card	If you want to completely erase all the movies and files on the SD-card, select this option. Be careful; all your data will be lost.
SD-Card INFO	See how much space remains on the SD Card.
FW Version	Get the firmware version information.



Still Photo Mode Settings



While in **Still Photo** mode, press the **MENU** button to enter the menu selection screen. Verify that **Still Settings** is selected, then press **MODE** to confirm.



Press the **UP** and **DOWN** arrows to select the setting you'd like to modify, then press the **MODE** button to confirm.



A window on the right edge of the screen will display the available options. Use the **UP** and **DOWN** arrows to make your selection, then press **MODE** to confirm.



Still Photo Mode Settings

Still Image Size	This sets the level of detail in the photo. Higher M indicates more megapixels, which will give you a sharper image, but take up more memory. Options between 1M and 14M are available.
Still Quality	Select between Super High Quality (SHQ) and High Quality (HQ)
Scene	Select between Auto, Sport, Portrait, Landscape, Snow, Beach, and Fireworks.
Exposure	In very bright environments, use a positive EV. Dark environments use negative EV. Options between -2 and +2 are available.
White Balance	You can adjust the white balance based on the ambient lighting. Options include: Auto, Daylight, Cloudy, Flourescent 1, Flourescent 2, and Flourescent 3.
ISO Sensitivity	Increasing ISO will make the camera more sensitive to light. Try increasing ISO in low-light conditions, or leave it set to "Auto"
Color	Adjusts color saturation. Options include: natural, bright, and grey.
Effect	Photo effects include: Normal, retro, black and white, relief, negative, drawing, painting, crayon.



To connect your camera to a Computer

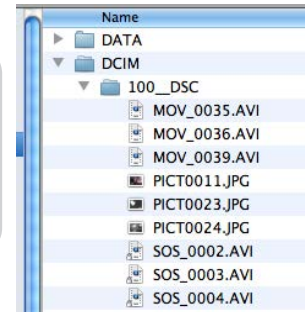
Connect the camera to your computer using the included USB to Mini-USB Cable.



By default, your device connects to your computer in Mass Storage mode, and acts like a flash drive. Videos can be viewed with any standard video player that supports .avi files.



NOTE: Quicktime, the native video player for Mac, only supports specific types of .avi files and cannot playback this camera's videos. For links to third party players that will work on Mac, visit www.cobra.com/support/software-downloads.



Movies that are locked begin with "SOS_" and movies that are not locked begin with "MOV_".

Note that if the Memory card gets too full, videos that are not locked will be overwritten to make room for new videos. If you want to save any videos that begin with "MOV_" you should copy them to your computer, or Lock the files.

To switch the camera's USB function

If you prefer to connect your camera to your PC as a web or video camera, you can change this setting in the settings menu.

Disconnect the camera from your PC, enter **General Settings**, and change the **USB Function** to **MSDC**.

Then, when you reconnect your camera to your PC, it will use this function.



Troubleshooting

If your unit does not appear to be operating properly, please follow these troubleshooting steps:

- Make sure the power cord is properly connected.
- Make sure the socket of your vehicle's cigarette lighter is clean and free of corrosion.
- Make sure the power cord's cigarette lighter adapter is firmly seated in your cigarette lighter, and the Status LED is on between the UP and DOWN buttons.
- Check the power cord fuse. (Unscrew the ribbed end cap of the cigarette lighter adapter and examine the fuse. If required, replace it with a 2-amp fuse only.)

For detailed and up-to-date FAQ's, please visit www.cobra.com/support/faqs.

Trademark Acknowledgement

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Cobra Electronics Corporation™ is a trademark of Cobra Electronics Corporation, USA.

NOTE: This device complies with part 15 of 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.

CAUTION: Modifications or parts not approved by Cobra Electronics Corporation may violate FCC Rules and void authority to operate this equipment.

This device complies with RSS-310 of Industry Canada. Operation is subject to the condition that this device does not cause harmful interference.

CANADA 310

CAN ICES-3B/NMB-3B.

WARNING: This product contains chemicals know to the State of California to cause cancer and birth defects or other reproductive harm.



Camera Specifications:

Visual Angle	118 degrees
Sensor	5 MP CMOS
Video resolution	1080P 1440x1080 30 fps
	720P 1280x720 30 fps
	720P 1280x720 60 fps
	480P 640x480 30 fps
Video Format	H.264 .avi
Picture Resolution	4032x3094 (Max. 14 MP)
Picture Format	JPEG
White Balance	Auto
Color Effect	Auto
Continuous Loop Recording	Supported
Motion Detection	Supported
Date and Time Stamp	Supported
Media Supported	SD Card - 8GB Included (32GB Max)
Languages	English, Spanish, Portugese, Russian, Chinese
Sound Recording	Synchronous video and sound record
USB Interface	USB 2.0
USB Web Camera	Supported
USB Mass Storage	Supported
Display Screen	1.5" LCD
Battery	Rechargeable Lithium-Ion

Camera Capacity:

1080P Recording time with 8GB card (included)	120 minutes
1080P Recording time with 16GB card	240 minutes
1080P Recording time with 32GB card (max)	480 minutes