

CDR 500
MOBILE RECORDER

ventra



ventra

1500 S. Milliken Ave., Suite G
Ontario, CA. 91761, USA

Toll Free: (888) 418-3833
Fax: (888) 845 4398

Info and sales - info@ventrainc.com
Tech support - support@ventrainc.com
Media relations: media@ventrainc.com

USER MANUAL

www.ventrainc.com

FCC Information

FCC Part 15 Subpart B

This device complies with Part 15 of the FCC rules. Operation is subject to the following 2 conditions:

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

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference harmful to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

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Overview

The CDR-500 mobile DVR is a feature rich, High Definition all-in-one vehicle mobile recorder - micro DVR. With an integrated video camera and passive GPS, the CDR records detailed information such as video at a stunning 720P resolution, audio, speed, route, location, date and time.

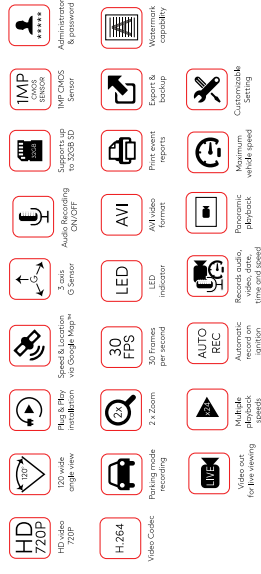
Designed for forward facing or in-cabin recording, the CDR is an easy to install Plug and Play compact system that is ideal for passenger, commercial, bus, tractors, forklifts and specialized agriculture and construction vehicles – across various industries.

Utilizing SD card storage up to 32GB, the CDR-500 records vital information on a solid state storage technology to ensure the stability of the data. Auto continuous loop recording enables the system to constantly record by over-writing the oldest info with the newest. A built-in 3 axis G-Sensor detects and records any sudden accelerations, braking or impact.

Recorded files can be viewed from our user friendly software by removing the SD card from the recorder and connecting it to a PC. From there, files can be easily accessed or searched via different criteria such as date, incident and type of recording.

Much like a security system for your home or office, the Ventrira mobile DVR is a mobile recording system that provides valuable insight in the event of an incident as well as for safety, training and fleet management purpose.

Feature Highlights:



- High definition video - 720P
 - 1280 x 720 recording at 30fps
 - 1M pixel CMOS sensor
 - 120 degree wide angle view
 - Easy installation, Plug and Play
 - Auto continuous recording
 - Records audio, video, date, time and speed
 - Built-in GPS receiver – displays speed and location info via Google Map™ *
 - Built in 3-axis G sensor for impact, acceleration and stops
 - Built in speaker / microphone
 - Supports up to 32GB SD Card
 - Various recording options – Continuous, Event and Motion
- Parking mode recording **
 - Video files marked by category – Normal, Impact, Parking, Over speed
 - Video-out for live viewing
 - User friendly software for various video playback modes
 - Panoramic playback displays multiple frames simultaneously
 - Adjustable playback speed and zoom
 - Customizable system configuration
 - Password protected Administrator
 - Maximum vehicle speed limit setting
 - Incident report print out
 - Video, audio, images and location can be individually saved and exported

*Route and location syncs with Google Map™. Requires internet connection

**Requires optional battery power cable

CDR-500 various recording modes

Continuous / Event / Parking

Continuous

The CDR is designed to record automatically when the vehicle is on and power is supplied to the CDR. By default, it records Audio, Video, Speed, G Force, Location, Coordinates, Time and Date in a Continuous cycle, replacing the oldest normal event data files with the newest. This ensures that the SD card has storage capacity to record continuously.

It takes approximately 10 to 15 seconds for the system to initialize upon the start of the vehicle. All LED – GPS, REC and MIC will illuminate and stay on, which indicates normal operation.

Note:

GPS signal and LED may require additional time to acquire signal depending on the environment such as parking lot structures, trees, buildings...etc.

Event

In case of an incident, the Event button can be pressed to archive the incident as an emergency. The CDR is designed to continuously record with or without the activation of the event button. The Event feature simply allows the system to index the file as an Event, and will not overwrite the file once the disk is full. This feature can be useful if the driver witnesses an event or gets into an accident.

Parking Mode (requires optional EX5-BP power cable to connect to car battery)

Parking mode recording is an innovative feature that enables the CDR-500 to record while the vehicle is parked. The system automatically switches to parking mode after idling for a period of time and intelligently switches to a standby status. Utilizing motion detection and impact sensors, if either of which is detected, the system activates recording automatically.

Equipment Precautions



CAUTION



The CDR is designed to be installed and used within the interior of a vehicle. The system is not waterproof or intended for external use. Do not expose the system to direct climate such as rain, water, dust, sand or moisture.



Do not clean the product with liquid or chemical. This may damage the product, cause fire or electric shock. To clean, simply use a damp cotton cloth to wipe dust or finger print.



Do not remove the SD card when the system is powered on or during recording. Doing so will damage the system as well as the SD card and data. To safely remove the SD card, wait for the system to power off completely.



Do not disassemble, modify or attempt to open or fix the system as this would void all warranty. All inspection and or repair should be done by the manufacturer.

WARNING
Failure to follow these safety warnings could potentially result in an accident, collision resulting in serious injury or death.

- Install the device in a manner that does not obstruct the driver's view of the front or sides of the vehicle, or interfere with the safety of operating the vehicle.
- Do not operate, adjust or view this recorder while driving or when vehicle is in motion
- Do not place the device unsecurely on the dashboard, or place the device in front of or above an airbag
- Please comply with all driving and traffic regulations
- To reduce the risk of fire or electric shock, do not expose this unit to water, liquid, rain or moisture
- Disconnect the power from the CDR if equipment or wire is exposed to liquid
- Disconnect and replace the cable if wire is stripped or damaged
- If using the optional EX5-BP permanent battery power cable to connect the CDR-500 to the vehicle's battery, please remember to disconnect the power plug from the unit. Vehicle battery will be drained if left unoperated for an extended period of time depending of the size and condition of the battery
- When exposed to direct sunlight for a period of time, the equipment may become hot. Please exercise caution when touching the equipment
- Do not disassemble or alter the equipment, cable or accessories as this may lead to equipment error and failure
- In the event of an impact or accident, please check to ensure the equipment is properly secured. Inspect the mounting bracket and adhesive for any signs of damage.

Windshield Mounted Device Legal Notice

WARNING

1. Please check and comply with ALL local, state and federal laws and or regulations regarding windshield mounted devices. Some state laws prohibit drivers from using suction mounts on their windshield when operating motor vehicles. Other state laws allow the suction mount to be mounted to be located only in specific locations on the windshield. Numerous states have enacted restrictions against placing objects on the windshield in locations that obstruct the driver's vision.

2. IT IS THE USER'S RESPONSIBILITY TO MOUNT VENTRA EQUIPMENT IN COMPLIANCE WITH ALL APPLICABLE LAWS AND ORDINANCE.

Audio and Video Recording Legal Notice

3. Certain local, state and federal laws may prohibit recording of audio and or video in vehicles or public area, or without knowledge and or consent, please check and comply with ALL local, state and federal laws and regulations.

4. Certain local, state and federal laws may require signage or display that indicate recording of audio and or video in vehicles or public area. Please check and comply with ALL local, state and federal laws and regulations.

5. IT IS THE USER'S RESPONSIBILITY TO USE VENTRA EQUIPMENT IN COMPLIANCE WITH ALL APPLICABLE LAWS AND ORDINANCE.

6. Use of this product other than its intended purpose is strictly prohibited
7. Disconnect the power of the CDR if not used for an extended period of time
8. Ventra Technologies Inc. does not assume any responsibility for any fines, violation, penalties or damages that may be incurred as a result of the use of the product.
9. Ventra Technologies Inc. is not responsible for any direct, indirect, incidental or consequential damages, arising out of use, misuse or inability to use of our products.



Important Precautions

1. Install the device in a manner that does not obstruct the driver's view of the front or sides of the vehicle or interfere with the safety or operating equipment of the vehicle.
2. Use only cables, power supply and accessories provided by the manufacturer. The modification or use of any 3rd party cable and or hardware will void all warranty.
3. Do not remove the SD card while the CDR is in operation or powered on. Damages to the system, SD card and stored files may occur.
4. When exposed to direct sunlight, the equipment may become hot. Please exercise caution when touching the equipment.
5. To ensure proper installation of the mounting bracket, please clean the surface area where the equipment will be installed from dust, moisture or stains.
6. If an administrator password is set for the Ventra viewing software, please safeguard the password as there is no retrieval option and the recorded data may not be accessed.

Technical Specification

Image Sensor	1M Pixel CMOS Sensor
Channel	1 Channel
Video Resolution	720P HD (1280*720), 360P (640*360)
Lens	120 Viewing Angle
Record Speed	Max.30 fps
Video Compression	H.264 (AVI)
Audio Compression	ADPCM (Built in Mic)
Event Button	Event recording by Event button
G-Sensor	3 Axis G-Sensor. Acceleration, Braking, Impact
GPS Sensor	Built-in. Event record by the user's set about over speed
Record Media	SDHC card (Max: 32GB, Default 8GB) Requirement: Speed Class 6 and up
Video Out	NTSC
LED Indicator	Mic, GPS, Rec
Viewer	Windows XP/ VISTA/ 7
Power	DC 12V~24V
Operation Temperature	23° ~ 122° F (-5° ~ 50° C) Storage: -4° ~ 176° F (-20° ~ 80° C)
Humidity	10 - 95%
Weight	3.52oz (Excluding SDHC card)
Size (WxDxH)	104.5(W) x 42(D) x 39.5(H)mm

Product Layout



Component Overview

Mic
Audio recording

Rec LED
Video recording status. The LED will illuminate when the system is recording.

GPS LED
GPS status signal. The LED will illuminate when GPS signal is acquired.
(For LED status, refer to LED indicator status chart on page 42)

Event Recording Button

Event feature simply allows the system to index the file as an Event, and will not overwrite the file once the disk is full. This feature can be used if the driver witnesses an event or an emergency.

Do not operate the Event button while driving. Only engage the system when the vehicle is safely parked.

Power Connector

Power plug input from the DC power cable or EX5-BP permanent power cable

Mini USB

This connection is for Ventra factory diagnostic use only and NOT for PC connection. It is not intended for use with any computer.

Monitor - Video Out

The video out cable provides real-time video for viewing or installation when connected to a display monitor via RCA connection. (For video out connection, refer to page 41)

SD Card

SD card storage slot.

Included Contents



CDR Recorder



Mounting Bracket



8GB SHDC Card



DC Power Cable



Software



User Guide



Video Out Cable



Cable Tie / Holder

Due to continuous enhancements, actual accessories may vary and are subject to change without notice

Optional Accessories



EX5-BP - Connects to the vehicle battery for permanent power. Refer to page 25

Installation - Software

System Requirement	
Minimum PC requirement	Core 2 Duo 1.83GHz, 1GB RAM, 200MB free space on HDD
Operating System	Windows XP (SP3), Windows Vista, Windows 7, Windows 8

Step 1: Format the SD card on a PC

- While the SD card included is brand new, it is always recommended to format the SD card to ensure a clean disk.
- SD card must be Class 6 speed and up
- Do not use an existing SD card with any previous data on it. If using an existing SD card, format the card prior to use.
- Formatting a SD card will permanently delete all information; please back up any data prior to the procedure.

Step 2: Install the Ventra Mobile DVR software CD into PC

1. Run Ventra.exe program



2. Click next to start installation



3. Agree to End User Agreement



4. Click finish to execute installation



5. Ventra Mobile DVR Desktop Icon



After clicking finish, the program automatically runs and creates a desktop icon

Configuration Software

Initial software dashboard layout after installation



Because there are no pre-recorded data, the initial view will not display any info or files

- The system is designed for plug and record so while it is not necessary to configure any of the settings, it is highly recommended to go through the setting options to customize and take advantage of all available features.
- The Ventra software can be used to manage from a single car to an entire fleet of vehicles. Customizable settings can be assigned to each SD card for every vehicle along with administrative password for secure access.

Software Configuration - System



- **Resolution**
Select between HD 720P (1280 x 720) or 360P (640 x 360)
- **Camera**
Adjust the frames per second (fps) for Normal and Event recording. The default recording for Normal conditions is 20 fps and Event is 25 fps.

Recording Time Table

Resolution	HD (1280 X 720)			360P (640 X 360)		
	Frames Per Second (fps)	30 fps	20 fps	Parking Mode	30 fps	20 fps
Recording time	8GB	4 hours	5 hours	10 hours	12 hours	15 hours
	16GB	8 hours	10 hours	20 hours	24 hours	30 hours
	32GB	16 hours	20 hours	40 hours	48 hours	60 hours
						Parking Mode
						30 hours
						60 hours
						120 hours

- Above data is an approximate figure
- Above data is from 0% setting for the event folder.

- **Brightness**

Three selectable options, Darkness, Default and Bright.

- **Audio Recording**

Enable or disable the Microphone for audio recording. **By default, the audio recording is disabled for privacy reasons.**

This feature is useful for companies or parents that enforce no cell phone policy during driving. Another application is utilizing the CDR as a "Black Box" or cockpit recording device for investigative purpose in the event of an accident.

Certain local, state and federal laws may prohibit recording of audio in vehicles, public setting, or without knowledge and or consent, please check and comply with ALL local, state and federal laws and regulations.

- **Overwrite**

In checking "Use", when the SD memory card is full, it will automatically overwrite the normal event data saved on the SD card. It is also referred to as continuous recording and is highly recommended as the default setting.

If select "Not use", it will NOT record after writing the last data into the SD card when



- **Standard Time Zone**
Select the appropriate time zone

- **Auto Reboot**
Set the auto reboot once daily for optimization of system operation

- **Km/Miles**
Select between Kilometers or Miles

Software Configuration - Event



The REC LED button on the CDR will blink when the system recording is triggered by any of the selected Events

- **Event**

Emergency / Impact / Over Speed / Sudden Start / Sudden Stop / Parking / Motion

The CDR is equipped with a powerful management system that can detect various conditions and mark specific events according to the features selected. These events can then be displayed in the viewing software during playback. User can also do a search based on individual criteria.

This provides valuable insight on the driving history and offers an easy management system.



Parking / Motion: If vehicle is idle for 10 minutes, recording frame rate is reduced to 5 frames per second. It returns to normal recording when vehicle moves, passenger entering/exiting the vehicle, or when the CDR detects impact.

- **Event Recording Time**

Post-alarm: Selectable recording time ranging from 2 ~ 30 seconds after event occurs. The Event recording time is triggered by depressing the Event Recording Button located on the back of the CDR. The system will then index the video as an Event and will not be recorded over.

This feature is useful when an incident has occurred or is witnessed.

- **Over Speed Setting**

Once the speed limit has been exceeded, the system will begin indexing the recordings as Over Speed. Km or Miles will be shown according to the selection.

This feature is especially useful if a speed limit policy is enforced.

* For safety purpose, the recorded files cannot be manually deleted. It can only be overwritten and replaced by new files once the disk is full. For back-up or incident report purpose, the files can be individually exported in various formats.

SD Card Capacity	Percentage for Event folder				
	10%	20%	30%	40%	50%
8GB	30	60	90	120	150
16GB	60	120	180	240	300
32GB	120	240	360	720	840

Caution: Whenever the setting of the storage capacity for Events is changed, the SD card will be formatted and delete all data. Please back up any data prior to such procedure.

Software Configuration - User



- **Vehicle Info**

Input the vehicle or fleet number if one is assigned. The information can be assigned to individual SD card and displayed on the recording next to the date, time and speed. If unasigned, the playback will show UNKNOWN.

This feature is useful in fleet management and identifying the recorded data to the individual driver / vehicle.

- **Driver Info**

Input the driver's info such as name or employee ID if applicable. The information is displayed in the recording screen.

- **License Plate Number**

Input the license plate number if applicable. The information is not displayed in the / recording screen.

- **User ID**

A User ID can be assigned to individual SD card for administrative and security purpose. This unique ID is applicable only to that specific SD card and not the software itself. Each SD card can have its own password.

If User ID and passwords are assigned, login credential will be required to view the recorded data (Default: admin)

- **Password**

Please refer to User ID. Input password to log in to specific SD card (Default: No password)

Caution: Please safeguard the password as there is no password retrieval option and the recorded data may not be accessed without a password.

Software Configuration - Removable Disk



- **Select Drive**

Displays the drive the SD card is located.

- **Data Recover**

In case of SD card error, this function can be used to attempt data restore.

- **Format Drive**

Formatting the SD card will permanently delete all data. Please ensure to back up all data prior to formatting.

Notice: The speed and performance of the SD card declines after prolong period of use. Management of SD card is important and it is recommended to check and format the SD card once every 3 months

Software Configuration - Version



The software version tab indicates the current version of the firmware and software.

Visit www.ventrainc.com for the latest software update.

Installation - CDR

⚠ CAUTION

- Ensure the vehicle is **SAFELY PARKED** prior to installing and operating the equipment
- Install the device in a manner that does not obstruct the driver's view of the front or sides of the vehicle, or interfere with the safety or operating of the vehicle.
- Use only the power cable included with the CDR system (DC 12V ~24V)
- To ensure proper installation of the mounting bracket, clean the surface area where the equipment will be installed from dust, moisture or stains

Step 1: Connect the mounting bracket to the CDR-500 body

- Connect the bracket firmly into the CDR (Pic)
- Check to ensure the bracket is securely attached



Step 2: Plan and determine the location to install the CDR

- Install the device in a manner that does not obstruct the driver's view of the front or sides of the vehicle, or interfere with the safety or operating of the vehicle
- Do not place the device unsecurely on the dashboard, or in front of or above an airbag
- It is highly recommended to predetermine the location to install the CDR. Take the power cable into consideration (length and cable management for concealment) as some vehicle may have power outlets in different locations
- The permanent mounting adhesive is industrial strength and is difficult to remove after installation. Do not use any sharp or steel object to pry the adhesive as damage to wind shield may occur

The CDR has a 120 degree field of view, and the optimal recording angle is in the center top portion of the windshield, next to the rear view mirror



*Leave enough space between the CDR-500 and rear view mirror so the SD card slot is accessible

- Clean the area free from fingerprints, dust, moisture or foreign matters
- Remove the backing from the adhesive
- Mount the CDR to the windshield by applying pressure to the bracket for 10 seconds
- Check to ensure there CDR is properly installed by visual and physical inspection



4.1

Step 4: Connecting the power (Standard Vehicle Power Outlet)

- Use only the power cable included with the CDR system (DC 12V~24V). Using 3rd party cable voids warranty and may damage the system and or vehicle.
- Connect the included power supply to the vehicle power outlet (cigarette jack)
- Connect the power plug into the CDR



4.2

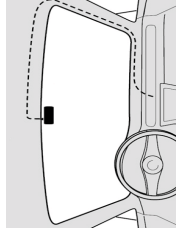


Step 5: Managing the power cable

- The power cable can be neatly arranged in various ways. Either aligned along the windshield with the included cable holder or tucked in between the padded interior fabric for concealment.



5.1



5.2

*During initial setup, user can utilize the Monitor connection to connect the CDR to an external monitor to view or adjust the recording angle. Refer to Monitor out connection on page 41.

*Do not use any sharp objects such as a screwdriver to tuck in the cable, as it may puncture or damage the wire.

Installation - EX5 - BP

OPTIONAL – only when EX5-BP cable is purchased



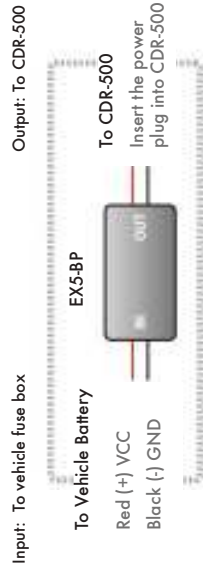
• Supports both 12VDC and 24VDC battery

- For 12V vehicle battery, the power is cut off when voltage is less than 11.7V
- For 24V vehicle battery, the power is cut off when voltage is less than 23V
- The CDR will power on approximately 15 seconds after the battery voltage is stable at 12V or 24V depending on the condition and type of the battery

- Professional installation by a technician is highly recommended
- Please exercise caution when connecting the power to prevent shock
- Vehicle battery will be drained if unoperated for an extended period of time depending on the size of the battery. Please disconnect the power plug from the CDR if vehicle will be parked for longer than 1 week.

Step 1: Fix the GND (black line) with the metal portion of the vehicle.

The CDR mobile HD recorder can be connected to the vehicle's battery for constant power via an optional EX5-BP cable. This cable enables the CDR to record even when the vehicle is turned off / parked. The PARKING feature includes motion and impact detection.



Step 2: Connect the VCC (Red Wire) with the battery of the vehicle (i.e. Audio Fuse)



Software - Dashboard Overview



Initial startup screen of the viewing software.

NOTE: There will not be any info or data as the SD card does not have any recorded files

	Backward play, Play		Volume up/down
	1 frame playback		Event Search
	Repeat an event		GPS signal window
	Pause		Print
	Next Event		Back up
	Playback speed		Setup
	Speed		Open a file
	Panorama		Draw Lane
	Route history displayed on Google map (Requires Internet Connection)		GPS Signal Bar

Software

The CDR-500, by default, displays the recorded files in chronological order. For convenience, the files can be sorted or searched by event via the magnifying glass icon based on search criteria.



Playback

To playback a file, simply select the file and click the Play button. There are various playback speeds to choose from.



G-Sensor Display

The G-Sensor is an accelerometer that measures the force during a change in velocity. This measures and record fluctuations in acceleration, stops, turns and movement in 3-Axis



Full Screen Playback View

Playback can be viewed in full screen mode by double clicking the left mouse button. This will display only the video portion along with date, time and speed. To exit full screen mode, simply double click the left mouse button or by clicking the dual window icon on the lower right section of the full screen mode.



Magnify Viewing

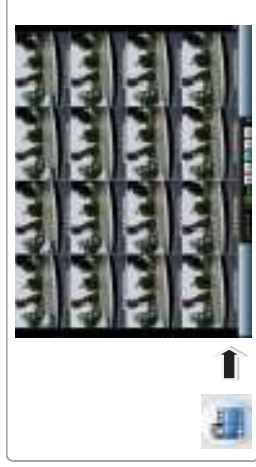
Click the right mouse button during playback magnifies the view by 1X zoom. The magnifying glass can be moved to view different areas of the screen



Magnify viewing feature is not available when recording resolution is set to 640 x 360

Panoramic Viewing

This feature simultaneously displays the recorded data frame by frame which enables the user to see the events in a panoramic perspective



The user can play the file in various speeds while using the panoramic mode as well as click on any image to enlarge.

Route Map

This feature simultaneously displays the recorded data frame by frame which enables the user to see the events in a panoramic perspective



The software viewer has a link on the lower right hand box that connects to Google Map™ (requires internet connection). It shows the route of the current recorded file that is being viewed.

Repeat

Click desired starting point and ending point during playback. Default is the duration of the current file. To change the ending time, click the Ending point. Playback will continuously repeat the selected time frame. Click Release to clear Starting point and Ending point.



Draw Lane

Select Draw lane icon for pop up screen, adjust the size and angle of line to match lane. Draw lane on the load and click Apply button to display on video playback. To cancel Draw lane, unselect Draw lane on the load and click Apply button



Print

The Print function allows the system to print a specific screenshot/frame with Vehicle Info, Driver info, Date, Time, Speed, Coordinates and a map of the vehicle. User can also enter comments in the User Input section.



Save / Back Up

The Save feature allows the current playback file/ frame to be exported in different formats for incident report or back-up. JPEG, BMP, AVI, JDR and G-Sensor

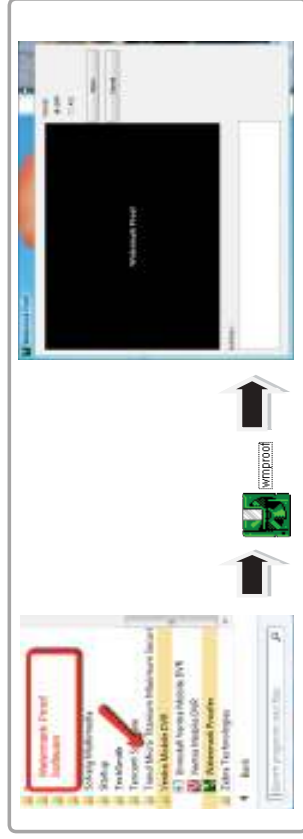


Save / Back-up – Watermark Software

JPEG and BMP

Both of these options are snapshot pictures of the screen. It includes a timestamp of the Vehicle Info, Driver info, Date, Time, Speed and Coordinates of the vehicle.

Exporting in BMP format includes Ventra watermark authentication which adds an additional layer of security. The Watermark software will authenticate both BMP and AVI files to determine if it has been altered in any form.



Watermark Software

To use the Watermark software, open the Ventra Mobile DVR folder in your Program Folder or Start Option. Select Yes to run the program.

The Watermark software can authenticate both BMP and AVI files that were saved/backed-up from the Ventra Mobile DVR software.

Green circle indicates an original file. Red X indicates a non-original file that has been altered

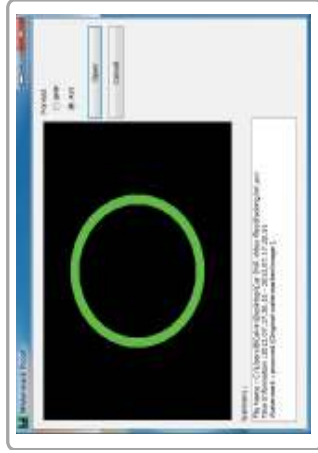


AVI

AVI is a popular file format and can be played back in a wide selection of media players. The saved AVI file includes a timestamp of the Vehicle Info, Driver info, Date, Time, and Speed of the vehicle. To include the Audio recording with the export, select the Audio On/Off box.



To add Anti-Tamper feature to the AVI file, select the Anti-Tamper feature. The Watermark proof software does not display the video on the screen, instead, just a green circle on a black screen when the file has been authenticated



JDR

JDR files can only be played back in the Ventrax viewing software. It utilizes the program to run the saved file and has access to all the features and information within the software.

G-Sensor

The G-Sensor is a log saved in a text file (.txt) that shows the figures from all 3 axis associated with the recording.

Monitor - Video Out Video Out

The Monitor connection is a video out cable that provides real-time video, for live viewing or initial installation setup when connected to a display monitor.

- * The CDR-500 must be powered on to enable video output function
- * The video signal is NTSC only



Connect the 3.5mm plug to the Monitor connection on the CDR-500 and the RCA video connector to the display monitor

LED Status



Error Indicator (Beep Sound)

Status	LED		Beep	Description
	REC	GPS		
System not recording due to SD card error	Off	On	1	Rec LED off, system will beep once every 0.5 seconds and repeats every 2 seconds. Solution: 1. Check to ensure there are no physical damage or scratch to the SD card pins. Also check the Lock button on the SD card as this will prevent data from being recorded. 2. Check the viewing software to ensure the overwrite feature in the configuration setting is not disabled 3. Try with a new formatted SD card
System cannot acquire GPS signal for prolong period of time	On	Off	-	If GPS LED does not come on permanently after various attempts in different open locations Solution: Reboot the system. Test to determine if GPS will acquire signal in various locations such as a freeway or open area. If that does not solve the issue, please contact Venira
System not recording due to camera module error	Off	On	3	System will beep 3 times, standby for 2 seconds and beep 3 additional times Solution: Reboot the system, check the power connection. If that does not solve the issue, please contact Venira
File system is damaged or data cannot be recorded in SD card	Off	On	4	System will beep 4 times, standby for 2 seconds and beep 4 additional times, then restart. Solution: 1. Check to ensure there are no physical damage or scratch to the SD card pins. Also check the Lock button on the SD card as this will prevent data from being recorded. 2. Check the viewing software to ensure the overwrite feature in the configuration setting is not disabled 3. Try with a new formatted SD card

Status	LED		Beep	Description
	REC	GPS		
System Start Up	On	On	x 1	System powering on
Acquiring GPS Signal	On	Blink	-	The GPS LED will blink until signal is acquired. Actual time depends on environmental factors
System On / Normal Operation	On	On	-	System is powered up and initialized, recording initiated, GPS signal acquired
Event Recording	Blink	On	-	Rec button blink once every second when a recording is triggered automatically by an event (Overspeed, sudden start/stop, impact...etc)
No SD Card	Off	Off	x 1	If no SD Card in the slot, the system beeps once every 2 seconds
Disk Full	Off	Off	x 4	System beeps 4 times, stops for 3 seconds and repeat 4 beeps
Updating New Firmware	On / Off	On/Off	x 1	When uploading new firmware to the system, the Rec and GPS LED will go On and Off repeatedly until system is updated. Once completed, all LED will stay On

Trouble Shooting

Error	Check point
The system does not turn on	<p>Check power cable to ensure proper connection for both the CDR and power outlet of the car as it may become loose</p> <p>Test if power outlet is functioning by connecting other device such as a phone charger.</p> <p>Check the fuse of the power outlet (more than 250V/3A)</p>
Cannot find the recorded video	<p>During search, make sure the recorded video is present</p> <p>Make sure the SD card is not faulty or full</p> <p>Re format the SD card and try again, or try with a new SD card</p>
Does not record	<p>If the device beeps every 2 seconds, reinsert the SD card.</p>
Cannot replay the recorded video.	<p>Make sure if the SD card is not faulty.</p> <p>Use the SD card recovery feature in the removable disk category of the software program</p>
The objects are not clear in the video.	<p>Clean the lens with soft cloth</p> <p>Clean the inside and outside of the windshield</p>
Cannot record at night.	<p>Request service from the retailer where the product was purchased.</p>
Cannot connect to Map in software	<p>Check internet connection</p>
Cannot install the viewer program.	<p>If using Window Vista and Vista 7, please install the viewer program with administrative rights</p>
Parts of audio or video data is lost	<p>Recommend using Class 6 or higher SD card.</p>
PC does not recognize the SD card	<p>Check if the SD card reader supports SDHC.</p>
The time stamp of the data in the SD card is not correct	<p>Once the GPS starts to operate, the time will automatically set to correct time zone. Check the selected time zone in the software configuration setting</p>
The audio playback is normal, but no video displayed	<p>Compatibility problem with graphic card driver. Please update the latest driver version</p>

Firmware Update

1. For the latest firmware update, Please visit www.ventrainc.com
2. Download the update and save onto PC
3. Turn off the by removing the power plug to the CDR-500 and remove the SD card.
4. Connect SD card to PC and copy the downloaded latest firmware into the "UPDATE" folder of SD card.
5. After copying the latest firmware onto the SD card, insert it to CDR-500. At this point, the product should be in the power-off status.
6. Turn on the CDR-500 by reconnecting the power plug and make sure power is not interrupted.
7. The CDR-500 will reboot with beep sound. ALL LED will be blinking.
8. After the firmware is successfully upgraded, it will resume normal operation after rebooting.

To check the operation after upgrading the product, please press the Event button. IF REC LED blinks, the normal operation is on.

LIMITED WARRANTY STATEMENT

VENTRA TECHNOLOGY INC. provides a limited warranty to the original purchaser of new products against defects in parts and labor for a period of one (1) year from the date of purchase. This warranty is not transferable. If a product covered by this warranty is determined to be defective within the warranty period, VENTRA TECHNOLOGY INC. will, unless otherwise required by applicable law, either repair or exchange the product at its sole option and discretion.

To obtain warranty service, a pre-authorization number is required by contacting VENTRA TECHNOLOGY INC. All products must be shipped to Ventra freight pre-paid and should be via reputable carrier. Ventra is not responsible for any lost or misdelivered package.

EXCHANGE

Should VENTRA TECHNOLOGY INC. elect to exchange a product due to a covered defect during the warranty period, the replacement unit may, at VENTRA TECHNOLOGY INC.'s sole option and discretion, be new or one which has been recertified, reconditioned, refurbished or otherwise remanufactured from new or used parts and is functionally equivalent to the original product.

REPAIR: PARTS AND LABOR

There will be no charge for parts or labor to repair a product for a covered defect during the warranty period. Replacement parts may, at VENTRA TECHNOLOGY INC.'s sole option and discretion, be new, used, reconditioned, refurbished or otherwise remanufactured or recertified as functionally equivalent replacement parts.

REMAINING WARRANTY

Repaired or exchanged products are warranted for the remaining portion of the product's original warranty or for ninety (90) days from warranty service or exchange, whichever is longer. Any upgrade to the original product will be covered only for the duration of the original warranty period.

EXCLUSIONS

This warranty does not cover, for example: abuse, accident, negligence, acts of God, and consumable parts such as batteries, cosmetic damage (e.g. scratches, dents, cracks), damage caused by use with non-VENTRA TECHNOLOGY products (e.g. accessories, housing, parts, etc.), damages from shipping, improper installation or operation, improper voltage supply or power surges, lack of reasonable use, misuse, modifications or alterations, normal wear and tear or aging, as well as installation and set-up issues or any tampering or repairs attempted by anyone other than by a VENTRA TECHNOLOGY INC. authorized repair technician. This one year limited warranty does not cover products sold "AS IS", "FACTORY RECERTIFIED", or by a non-authorized reseller.

ASSIGNMENT OF WARRANTIES

Ventra Technology Inc. assigns to product purchasers any and all warranties of manufacturers and suppliers of component parts that are assignable, but VENTRA TECHNOLOGY INC. makes no representations as to the effectiveness or extent of such warranties and assumes no liability or responsibility for any third-party manufacturer or supplier's products or component parts that are sold by VENTRA TECHNOLOGY INC.

DISCLAIMER OF WARRANTY

There are no express warranties other than those listed or described above. Except as specified in this warranty section, all express or implied conditions, representations, and warranties including, without limitation, any implied warranty or condition of merchantability, fitness for a particular purpose, or arising from a course of dealing, law, usage, or trade practice, are hereby excluded to the extent allowed by applicable law and are expressly disclaimed by ventra technology inc. To the extent that any of the same cannot be excluded, such implied condition, representation and/or warranty is limited in duration to the express warranty period referred to in the "limited warranty" section above. Because some states or jurisdictions do not allow limitations on how long an implied warranty lasts, the above limitation may not apply in such states. This warranty gives the customer specific legal rights, and the customer may also have other rights which vary from jurisdiction to jurisdiction.

DISCLAIMER OF LIABILITY

Ventra technology inc's total liability for any and all losses and damages resulting from any cause whatsoever including ventra technology inc's negligence, alleged damage, or defective goods, whether such defects are discoverable or latent, shall in no event exceed the purchase price of the product. Ventra technology inc. Shall not be responsible for loss of use, work stoppage, failure of other equipment to which the product is connected, commercial loss, lost revenue or lost profits, loss of goodwill, loss of reputation, or other incidental or consequential damages. No oral or written representations made by ventra technology inc. Shall create any additional warranty obligations, increase the scope, or otherwise modify in any manner the terms of this limited warranty. To the extent permitted by applicable law, ventra technology inc. Does not warrant that the operation of any products covered under this limited warranty will meet your requirements, or third party services, be uninterrupted, error-free, or that defects in the products will be corrected. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This limited warranty is subject to change without notice. Check www.VentraInc.Com for the most current version of this warranty.

SEVERABILITY

In the event that any term or provision contained in this limited warranty is found to be invalid, illegal or unenforceable by a court of competent jurisdiction, then such provision shall be deemed modified to the extent necessary to make such provision enforceable by such court, taking into account the intent of the parties. The invalidity in whole or in part of any portion of this limited warranty shall not impair or affect the validity or enforceability of the remaining provisions of this limited warranty.

HOW TO OBTAIN WARRANTY SERVICE (PRE-AUTHORIZATION REQUIRED):

To obtain warranty service and pre-authorization number, contact VENTRA TECHNOLOGY INC:

1. If via email: Info@ventrainc.com
2. If via phone at (888) 418-3833 from 9:00AM to 5:00PM Monday through Friday Pacific Time.

Disclaimer

Ventra Technology Inc., and its employees, agents, distributors, and resellers makes no claim or guarantees that the user of Ventra products will not be in an accident or otherwise not collide with an object and/or person. Our products are not intended in any way, a substitute for safe driving or for the consistent adherence to all applicable traffic laws and motor vehicle safety regulations. Ventra products are intended for informational purpose, and to be used as a device to view, record and provide information when installed in a vehicle.

User should always be attentive to the road, driving condition and adhere to all regulations. Even when properly installed, the camera has a limited field of vision and does not provide a complete view of the road.

Ventra Technology Inc., and its employees, agents, distributors, and resellers are not responsible for a user's intended or actual use of its product. In addition, Ventra Technology Inc., and its employees, agents, distributors, and resellers are not liable for any losses (whether direct or indirect, in contract, tort or otherwise) incurred in connection with the use of Ventra products, including but not limited to damaged property, personal injury and/or loss of life. Furthermore, Ventra Technology Inc., and its employees, agents, distributors, and resellers are not liable for any decisions, action or inaction taken by any person in reliance on the Ventra products, or for any delays, inaccuracies and or errors in connection with the vehicle camera and its functioning.

By installing and or use of this device, the user and or business entity, understands and agree to the conditions set forth in the disclaimer, and agree to indemnify Ventra Technology Inc., and its employees, agents, distributors, and resellers harmless from any claim relating to Ventra products.



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