# VENTRA

# VDR-600

## 2 CH Capacity Vehicle HD Video Recorder

## User Guide

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# 1. Product Information

🔍 **Overview**

The VDR-600 vehicle video recorder is a 2 CH (1 + 1) capacity, all-in-one system for safety, security and fleet management. Equipped with a built-in vandal resistant lock, the system offers enhanced security to prevent unauthorized access to power cable, SD Card and Camera Angle.

An optional EX6-OMIR expansion weatherproof AHD camera provides additional recording angle such as in-vehicle, side view and rear of the vehicle. Designed for both forward facing and in-cabin or external/side recording, the VDR is an easy to install, rugged system ideal for passenger, commercial, bus, first responders, trucks, specialized equipment and construction vehicles – across various industries.

The VDR-600 records detailed information including 10800P HD Video, Audio, Speed/Route History, Driver ID, Vehicle ID, Date and Time.

Supporting up to 128GB capacity, the system records vital information on a solid-state storage technology to ensure stability of data.  Auto continuous loop recording enables the system to constantly record Normal and Events.  A built-in 3-Axis G-Sensor detects and records any sudden accelerations, braking or impact.

Recorded files can be viewed from the licenses free PC software by removing the SD card from the unit and connecting it to a PC.  From there, files can be easily accessed via different criteria such as date, incident and type of recording.

## Feature Highlight

- 2 CH Capacity (1 + 1)
- Optional 2nd Camera – EX6-OMIR
- 1080P HD Video @ 30/20 FPS (Front Cam)
- EX6-OMIR optional 2nd camera @ 10 FPS
- Wide Angle Recording / Viewing
- Built-in Mic / Speaker
- Supports up to 128GB Capacity
- Normal + Event Recording
- Pre-Event, Overspeed,, Shock, Sudden Acceleration / Braking

- Built-in GPS for Speed / Route History
- Built-in Precise Shock Sensor
- Tamper Resistant Lock
- Assignable Vehicle, Driver and Company ID
- Back up video files and images
- Password protection
- Supports Video Out to monitor
- Format Free

# 1. Product Information

## Recording Time Table -   All figures are approximate

### Recording time of VDR-600 – Front (1080P HD) and Expansion Camera (720P AHD)

| Video Quality @ 30FPS | 16GB | 32GB | 64GB | 128GB |
|---|---|---|---|---|
| High | 1H 50M | 3H 20M | 7H 15M | 14H 30M |
| Med | 2H 30M | 5H 15M | 10H 45M | 21H 30M |
| Low | 3H 30M | 7H 00M | 14H 30M | 29H 00M |

## Important Information

This VDR-600 utilizes a continuous recording file architecture and proprietary Variable Bit Rate Recording (VBR). The files are recorded and stored in a continuous format, rather than in a uniform time segment.   This means that the Normal and Event Recording length will vary based on the size of Micro SD card.

VDR-600 will automatically record once it is connected to the car battery/fuse or when the vehicle ignition is on. Recording can be stopped by unplugging the power cable from the VDR or turning off the  engine (cigar plug connection). VDR will save the last recording and end operation.

If  the system is directly connected to the car battery/fuse and wired for continuous 24/7 recording, it  will record continuously until the voltage of the vehicle battery goes below the set voltage limit. At that point, VDR will automatically turn off to prevent battery drain (Battery Protection Mode).

Once the storage space of the microSD memory card is full, the VDR will overwrite the latest data on top of  the existing data (Loop Recording). For instance, the oldest Normal recording data will be deleted  and  the  latest recording  data will be saved. In case of Event recording data, it deletes the data depends on the importance and time  frame of the data.

# 1. Product Information

### Instructions Before Operating this Product

- Thank you for selecting Ventra. The following is the safety instructions, product user manual and product warranty information

- Please read these safety instructions thoroughly before operating the product and keep this manual for future reference

- The VDR-600 main camera is designed to be installed inside of the vehicle to record front and rear (or interior) with audio (can be disabled). This device is to encourage safe driving and provide video documentation.

- The product may not be able to recognize a slight shock or a minor collision as an event. In this case, you may press the event button to save the data as an event

- We strongly encourage you to use Ventra recommended micro SD memory cards. No standard warranty service is provided by the manufacturer unless the product is used with the recommended micro SD memory cards even within the warranty period

- Please be aware that micro SD memory card have limited product life expectancy and will eventually degrade in time - causing errors in recordings / data corruption. It is highly recommended to format and check the integrity of the micro SD card on a regular basis. Micro SD memory card related problems are not under warranty and the manufacturer or the supplier is not responsible for your data loss or missing recordings

### Note: GPS Satellite Reception

- GPS signal may take 5~15 minutes to be connected when turning on the system for the first time, or if the product has not been used for more than 3 days.

- GPS may lose reception in areas where high-rise buildings are present. Stop at a location where your GPS can regain its reception, before proceeding again.

- Extreme weather conditions may interfere with the GPS reception. The operating temperature should remain between 14F ~150F

# 1. Product Information

### Important Information – Review Before Installation and Operation

- Before implementing the device, record on to a micro SD memory card for 5 to 10 minutes as a trial recording then check to make sure that it has recorded properly

- Using other types of power sources than the one that is supplied will void the product warranty. Please note that alternative power sources could cause a fire and damage the product

- Consult a professional installer if you intend on using direct power connection to the vehicle's battery. The product warranty will be void due to improper installation or by a non-qualified installer

- The warranty does not cover claims related to mishandling, tampering and / or disassembling of the product

- Altering and disassembling of the product may result in a fire or electric shock. Disassembling the product will void the warranty. Inquire with Ventra in the event the product needs repair

- Do not store the product in extreme high or low weather conditions. Exposure to sunlight for extended period of time could cause the product to malfunction

- Refrain from using liquid cleaners or chemicals to clean the device. Using a dry cloth to wipe down the product will suffice

- Product warranty will be void if using micro SD memory card other than the one supplied or recommended by the manufacturer or the distributor

- Saving files other than the device's recorded files on to the micro SD memory card, may cause a camera error

- Do not use the micro SD memory card with other applicable products such as a portable navigation system or a digital camera, as this may cause an error to the already existing recorded files

- Do NOT remove the micro SD memory card from the VDR until after the power has been completely turned off, as this will damage the camera

- Removing the micro SD memory card prior to all the LED lights shutting off may not save the last recorded file

- Do not try to change the settings of the product while driving, as it may cause a fatal accident

- Stop operating the product immediately if you notice smoke or burning smell, as it may result in a fire or electric shock. Please contact your local dealer or supplier

- Clean the area of the windshield with damp cloth prior to mounting the camera

- Please note that cold weather may temporarily weaken the strength of the adhesive

- The product is designed to be installed inside the vehicle. Any damage caused by placing the device outside the vehicle, or damage due to misuse or handling of the product will void the warranty

- For additional information regarding your warranty and after warranty servicing of your product, please contact Ventra

# 1. Product Information

<div style="border:1px solid; background:#ffffcc; border-radius:20px;">

## Q   Warning – Safety Precaution

</div>

- 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

- If using the permanent battery power cable to connect the VDR-600 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 extended period of time, the equipment may become hot.  Please exercise caution when touching the equipment

- Do not operate, adjust or view this recorder while driving or when vehicle is in motion

- Do not place the device insecurely on the dashboard, or place the device in front of or above an airbag

- Please comply with all local, state and federal 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 and replace the cable if wire is stripped or damaged

- 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

- Fuse rating must be in rated capacity

- Do not put foreign material into card insertion slot of the terminal, it may cause product failure

# 1. Product Information

🔍 **Warning**

## Windshield Mounted Device Legal Notice

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.

**IT IS THE USER'S RESPONSBILITY TO MOUNT VENTRA EQUIPMENT IN COMPLIANCE WITH ALL PPLICABLE LAWS AND ORDINCANCE.**

## Audio and Video Recording Legal Notice

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

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

**IT IS THE USER'S RESPONSBILITY TO USE VENTRA EQUIPMENT IN COMPLIANCE WITH ALL PPLICABLE LAWS AND ORDINCANCE**

Use of this product other than its intended purpose is strictly prohibited

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

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

# 1. Product Information

🔍 **Model Information**

| Models | | | |
|---|---|---|---|
| VDR-600 | VDR-600BT | VDR-600XT | VDR-600ZT |
| 16GB | 32GB | 64GB | 128GB |
| Main Camera | | | |
| Windshield Mount Bracket with Adhesive | | | |
| Permanent Power Cable (Hardwired) | | | |
| 2 Keys | | | |
| Memory card adapter | | | |
| Cable holders | | | |
| User manual | | | |

**Model:** EX6-OMIR

**720P AHD IR Indoor/Outdoor Camera**

**Included Components**

- Camera
- 15ft cable
- Mounting bracket
- Screws

**[Optional Accessories]**

- EX6-BPC        Permanent Hardwired Power cable
- EX6-PWR       Aux Power cable (Cigarette / Aux plug)
- EX6-VOC        Video Out Cable
- EX6-BKT        Replacement Windshield Bracket

# 1. Product Information



**System Layout Overview VDR-600**

① Front Camera Lens

② Bracket

③ Security LED

④ LED Status

🎤 : MIC LED
📶 : GPS LED
📷 : Recording LED
⏻ : Power LED

⑤ Emergency / Manual Event Button

⑥ Speaker

⑦ Microphone input

⑧ Key lock: Micro SD memory card slot & cable

   input ports (Inside the cover)
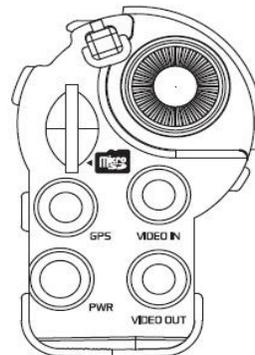
- Micro SD card slot
- Camera Angle Adjustment Screw
- GPS Input
- Power Input
- Video Input – 2$^{nd}$ Camera
- Video Output

If using optional EX6-OMIR expansion camera, connect camera PIN connector to **VIDEO IN** port on VDR-600

EX6-OMIR is powered by VDR-600 (5VDC)

# 1. Product Information

## Specifications

Product specifications may change without prior notice

| Model | VDR-600 / VDR-600BT / VDR-600XT / VDR-600ZT |
|---|---|
| Channel | 2 |
| Camera (VDR-600 / Front) | 1/2.9" CMOS Digital |
| Camera Angle (VDR-600 Front) | 140 |
| Recording Resolution (VDR-600 Front) | 1920 x 1080 @ 30 frame per second (FPS) for 1 Camera, 20 FPS if EX6-OMIR is connected |
| Camera (EX6-OMIR / Rear) | 1/4" CMOS |
| Camera Angle (EX6-OMIR / Rear) | 120 |
| Recording Resolution (EX6-OMIR / Rear) | Analog HD 720P    1280x720 @ 10FPS |
| Power consumption of (EX6-OMIR / Rear) | 5V – Provided by the VDR-600 Main Camera |
| Recording Mode | Normal, Parking, Event, Pre-Event |
| Video Out | CVBS output (1V Vp-p 75ohm) |
| GPS | Built-in Passive GPS |
| G-Sensor | Built-in 14 Bit 3 Axis (X, Y, Z axis), acceleration sensor |
| Memory Storage Card | 8GB~128GB  MicroSD memory card  SDXC Class 10 / U1 Min 20MB Minimum Write Speed |
| Audio Recording | Built-in high-sensitivity microphone / PCM compression |
| Voice / Audio Announcement | Built-in speaker for status notice (voice/buzzer) |
| Battery Protection | Yes |
| PC Desktop Software | Yes |
| Power - rated voltage | DC 12V~24V |
| Power - operating voltage | DC 7V~28V |
| Power Consumption | 12V (210~250mA) |
| Temperature Range – Operating | 14F ~ 150F |
| Temperature Range - Storage | -22F ~ 165F |

# 1. Product Information

⚠️  🔍 **Installation Overview**

The VDR has a 140-degree field of view, providing wide-angle recording.  The optimal placement is the center top section, below the tint of the windshield, adjacent to or below the rear view mirror

2) Determine front camera angle (Top / Down) – can be adjusted via screw

2) Place the optional EX6-OMIR expansion camera (if applicable) in the desired location and connect the camera cable to    the Video Input port of the VDR-600 by using the provided extension cable.

4)  Insert the micro SD memory card into the VDR-600. (Ensure that the micro SD memory card is properly inserted - will hear a click sound)

5)  Connect either hard wiring power cable or optional Aux cigarette lighter power cable to the system

6)  Check the LED Status light

**Insert or eject the micro SD memory card ONLY when both the Vehicle and VDR are TURNED OFF.**

# 1. Product Information

**Warning**: Do not use sharp object to force power cable as it may damage the wire and risk injury, fire and electrical shock

The VDR has a 140-degree field of view, providing wide-angle recording.  The optimal placement is the center top section, below the tint of the windshield, adjacent to or below the rear view mirror.

Allow sufficient room for access to Lock and SD Card
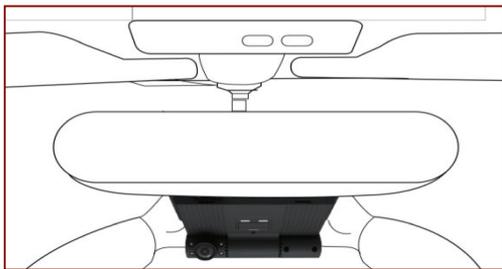


Install VDR-600 on windshield - below or adjacent to the rear view mirror.  Press the VDR against the windshield for at least 10 seconds to ensure firm adhesion
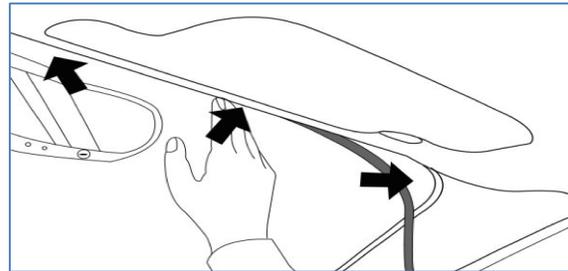


Tuck the power cable between the windshield and interior liner
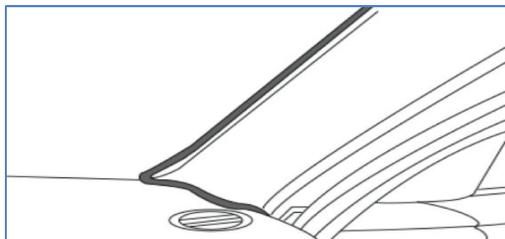


Continue to tuck power cable along the side pillar
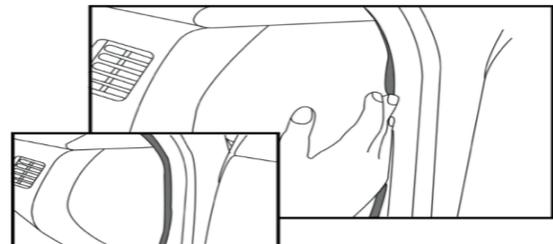


Fit the power cord to the side of the dashboard
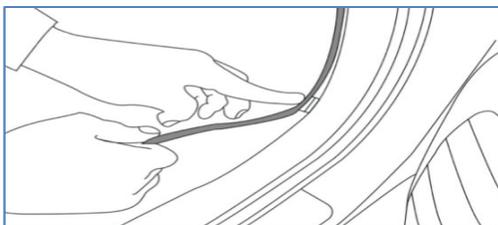


Fit the power cord along the door frame and into the power source



Connect the (optional) EX6-OMIR camera with video cable provide.  Connect to VIDEO Input port on the VDR-600



Mount the EX6-OMIR to desired recording angle (inside the vehicle, driver or rear of vehicle..etc).

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# 1. Product Information

### Q Installation Wiring

**Vehicle Hard Wire FUSE connection for VDR Permanent power** ⚠

**Warning: Installation should only be performed by professional vehicle electronics installer. Failure to install or connect wires properly may cause damages and or malfunction of vehicle, which may lead to injury or death.  Ventra is not responsible for any damages arising from installation**



Red = Ignition / Accessory

Black = Ground

Yellow = 12 / 24V DC
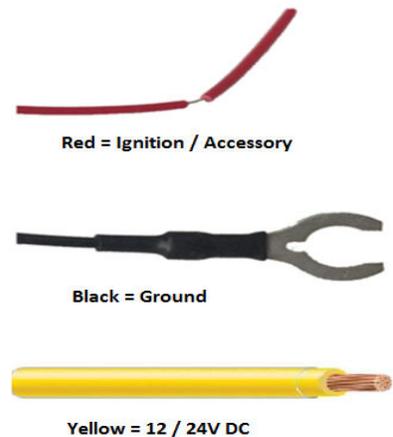
Identify the proper fuse and location.  Refer to vehicle owners manual.

**To record continuously (24/7) regardless if the vehicle ignition is turned on and off:**

- Connect Red wire to ACC or Aux fuse
- Connect Yellow wire to 12V or 24V constant power
- Connect Black wire to bolt or metal frame of a vehicle (Ground)

**To record only while the car ignition is turned on:**

- Splice Red and Yellow wires together and connect to ACC or Aux fuse
- Connect Black wire to bolt or metal frame of a vehicle (Ground)

# 2. Operations and Functions of Viewer

Insert the micro SD memory card directly to PC or use a memory card reader to  connect the micro SD memory card to PC. Open the micro SD memory card folder and  double click on [viewer.exe] file to run the VDR PC Manager program. The program can be found in the  micro SD memory card upon system recording



VDR PC Manager Icon

**Compatible only with Windows OS**

**[To start PC Manager]**

1) Click the 'Open' folder icon. and select the folder called "BLACKBOX"
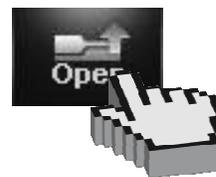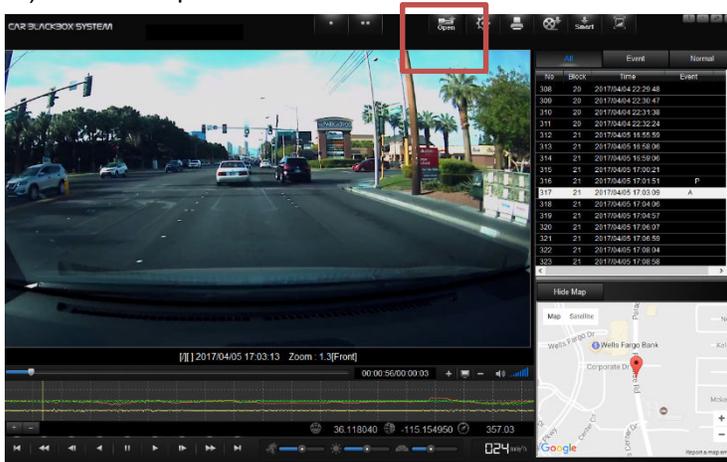


2) 'Select Drive' window appears. Select drive, i.e. BLACKBOX(H:), and then click the [ok]  button.

**[PC Minimum Requirement]**
- CPU : Pentium4 (Recommended-Dual Core)
- Memory : RAM 2G (Recommended-RAM 4G)
- Graphic : Graphic card compatible with DIRECT-X 10
- Operating System : MS WINDOWS VISTA / 7 / 8 / 10

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# 2. Operations and Functions of Viewer (Cont.)

**[VDR PC Manager]**



**1) Playback Display Screen :** It shows the playback of the recorded video data from the micro SD memory card.

① Enlarge Screen: Double click the mouse enlarges the display screen. Double click again returns to its original size

② Zooming: Scroll the mouse wheel upward to zoom in on the video. Scroll mouse wheel downward zooms out (up to 3x)

③ View Shift: Clicking the mouse and dragging the cursor will allow you to view the desired position on the display screen.

**2) G-Sensor Graph :** The G-sensor graph displays the information on 3 axis points.



Clicking on the 'Zoom' button on the top left corner of the box gives you a closer look at the graph.

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# 2. Operations and Functions of Viewer (Cont.)

3) **GPS Information :** Displays the longitude, latitude, azimuth, date and time of the  current playback

4) **Playback Position Slider / Playback Time : C**hoose the position of playback  data and displays current / the total time of  playback

5) **Control Button**

| | | |
|---|---|---|
| ◄◄ Jump to previous file | ◄◄ Reverse playback search | ◄I Frame by frame playback in reverse |
| ◄ Reverse playback | II Pause | ► Forward playback |
| I► Frame by frame forward playback | ►► Forward playback search | ►I Jump to next file |
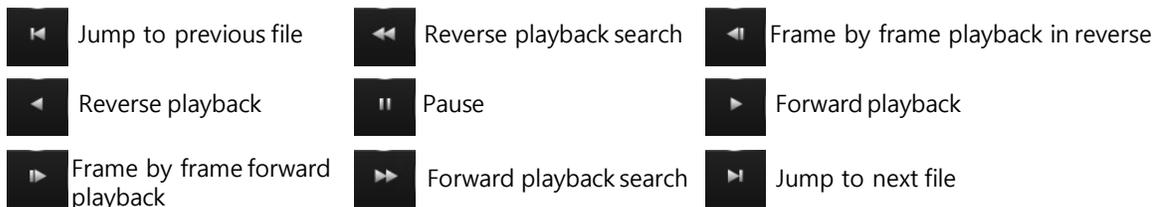
6) **Speed :** Displays vehicle speed (MPH, KMH) via GPS signal analysis

7) **Volume Control** : Recorded audio volume controller

8) **Control Slider**

-1. Playback Speed Slider : Adjusts playback  speed

-2. Brightness Control Slider : Brightness adjustment of video

-3. Saturation Control Slider

9) **Open file / Configuration / Print / AVI Backup / Smart Backup / Capture  Image**

10) **Click on All / Event / Normal** to show the lists and type of recorded data

# 2. Operations and Functions of Viewer (Cont.)

**11) Playback List :** A list of recorded files in the playback list. Double click on the file to view

**12) Maps: I**nternet connection is required to display map information

**13) Software version information / Minimize window / Maximize window / Close button**




ⓘ **Information** : this is an information message

**Upgrading the Product**

**VDR may need to be periodically updated for continuous product enhancement and maintenance**

1.  Insert a BLANK micro SD memory card in to the computer

2.  Download the updated firmware from Ventra website onto a BLANK micro SD card

3.  Insert the micro SD card in to the VDR and power on the system. The LED lights will begin to flicker as the VDR automatically executes the firmware update.  Allow few minutes for the update operation


⚠ **Warning !** This is a warning message

**Please do not change the file name of the firmware. The VDR cannot recognize or install file names that have been changed or mislabed.  This will prevent the VDR from updating properly.**

# 2. Operations and Functions of Viewer (Cont.)

**[Playing the recorded data]**

1) Click the 'OPEN' button. Load the data from the micro SD memory card which is  connected to PC.



2)  [Select drive] window appears. Select the micro SD memory card drive and then click the 'OK' button.

3)  A list of playback appears and select a file that you want to watch by double  click.

\* All: Normal + Event files.

| No | Block | Time | Event | |
|----|-------|------|-------|---|
| All | | Event | Normal | |
| 445 | 34 | 2017/04/07 14:52:16 | P | |
| 446 | 35 | 2017/04/07 16:17:24 | S I | |
| 447 | 35 | 2017/04/07 16:20:08 | S I | |

\* Event: Events such as impact, sudden acceleration, sudden break, sharp turn, overspeed, emergency and pre-event recording files.

| | |
|--|--|
| **I** = Impact | |
| **P** = Pre-Event | |
| **S** = Sudden Stop | |
| **A** = Sudden Acceleration | |
| **T** = Sharp Turn | |
| **E** = Emergency | |
| **0** = Overspeed | |
| **X** = External Signal | |

| No | Block | Time | Event | |
|----|-------|------|-------|---|
| All | | Event | Normal | |
| 445 | 34 | 2017/04/07 14:52:16 | P | |
| 446 | 35 | 2017/04/07 16:17:24 | S I | |
| 447 | 35 | 2017/04/07 16:20:08 | S I | |
| 448 | 35 | 2017/04/07 16:20:56 | I | |
| 449 | 35 | 2017/04/07 16:21:50 | A I | |
| 450 | 35 | 2017/04/07 16:22:42 | T I | |

# 2. Operations and Functions of Viewer (Cont.)

**[Setup configurations]**

1)Click the 'Configuration' icon.

2)'Configuration' window appears. Select the desired function and settings, select Save and the updated settings will be saved to the micro SD card. Insert  the micro SD memory card into the micro SD memory card slot of the VDR and turn the  power on. The VDR will be updated with the new settings.

\* If there is no data on the micro SD memory, the settings menu cannot be configured or accessed
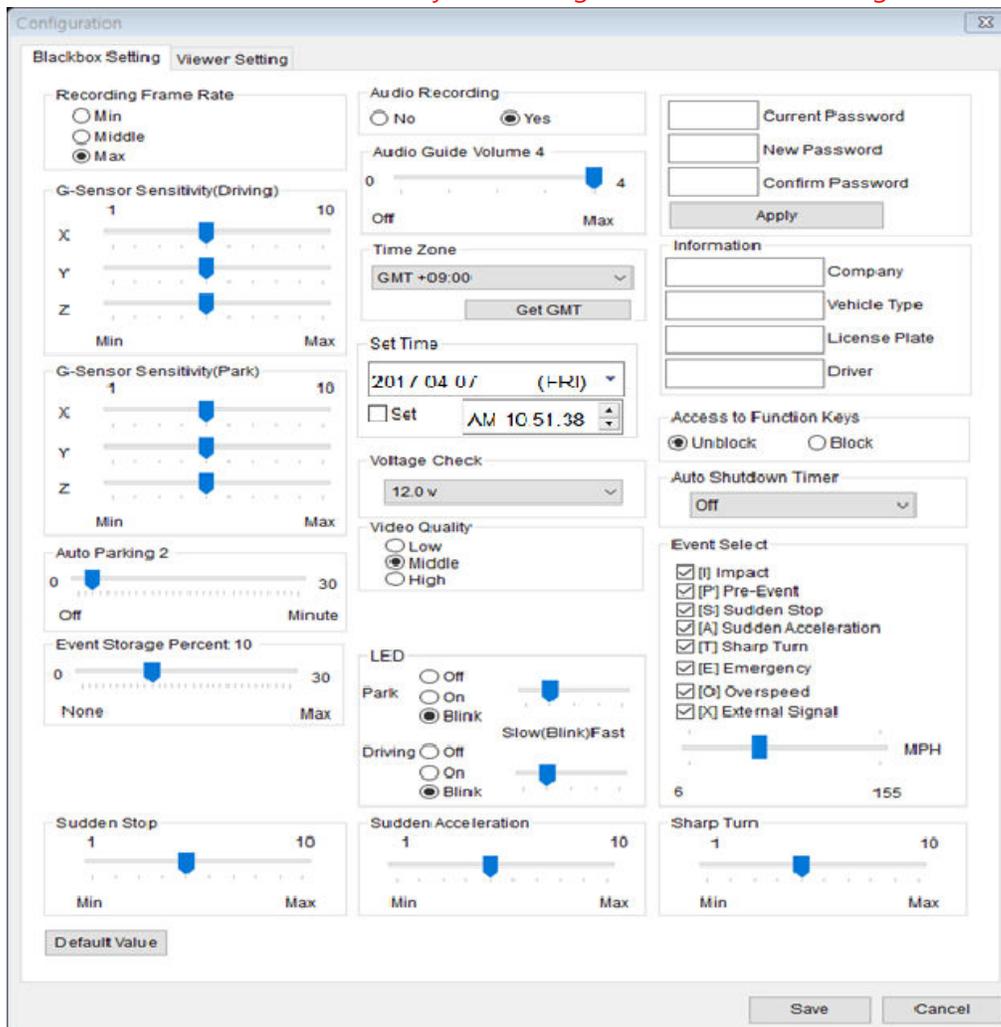


Please be aware that if the [index.dat] file gets deleted from the micro SD memory card, it will not save the configuration settings. The [index.dat] file can be created again when the  micro SD card is inserted into the VDR and power on, but the configuration  settings will not be applied.

# 2. Operations and Functions of Viewer (Cont.)

**• Recording Frame setting (default setting : maximum)**

```
Recording Frame Rate
  ○ Min
  ○ Middle
  ◉ Max
```

**- Maximum recording mode** (Max. normal recording mode)

This is the normal recording mode which records a total of **30 FPS** (frames per second) for the entire system. The 30 FPS is shared between front which is **20 FPS** for the front channel and **10 FPS** for the 2nd channel. If only using Front channel, then it will record full **30 FPS**. If the memory card has reached its full capacity, it overwrites new recording files on top of existing files. In case of event recording data, it erases the data depends on the importance and time frame of the data

**- Max recording mode (Max)**
: [**Front**] Recorded at **20 FPS**
: [**Rear**]  Recorded at **10 FPS**

**- Mid-recording mode (Mid)**
: [**Front**] Recorded at **15 FPS**
: [**Rear**]  Recorded at **15 FPS**

**- Minimum recording mode (Min) *Low video quality**
: [**Front**] Recorded at **7.5 FPS**
: [**Rear**]  Recorded at **7.5 FPS**

**• G-Sensor Sensitivity setting [default setting : DRIVING =  (X) 5,  (Y) 5, (Z) 5**
**PARKING =  (X) 5,  (Y) 5, (Z) 5**

```
G-Sensor Sensitivity(Driving)          G-Sensor Sensitivity(Park)
    1              10                       1              10
X  _____■_____              X  _____■_____
Y  _____■_____              Y  _____■_____
Z  _____■_____              Z  _____■_____
   Min            Max                   Min            Max
```
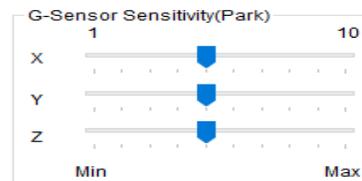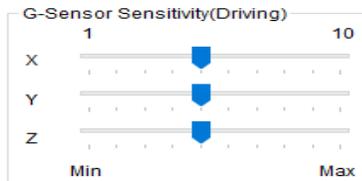
**X-axis / Y-axis / Z-axis**

- Adjusts the sensitivity of the shock sensor. Select detection level from 1  (min) to 10 (max), VDR will determine the shock level based on the setting and save video recording as an 'Event'

⚠ Higher G-Sensor sensitivity level will lead to more events, which may result in increased false positives.  Level may be adjusted accordingly based on individual vehicle, condition and driving pattern

# 2. Operations and Functions of Viewer (Cont.)

**• Auto Parking Mode (default setting : 2 minutes)**

```
Auto Parking 2
0  ▮━━━━━━━━━━  30
   ⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄
Off              Minute
```
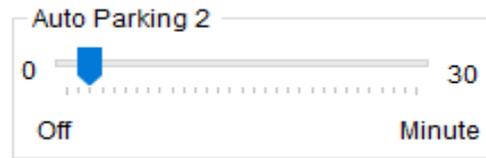
- Configuration setting : 0 (**do not use**) ~ 30mins (max)

If there is no impact or movement on the vehicle because it is stopped or parked, this function records 3 frames per second during this time setting. However, VDR will automatically change from parking mode to auto driving mode when the vehicle starts to move.

⚠ Must set auto parking mode to protect car battery from discharge. Please  refer to Voltage Check menu.

**• Event Storage Percent (default setting : 10%)**

```
Event Storage Percent 10
0  ━━━━▮━━━━━━  30
   ⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄⌄
None              Max
```
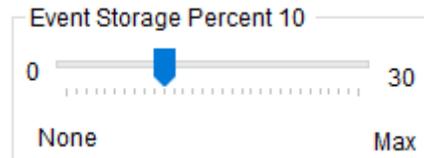
-Configuration setting : 0 (**do not use**) ~ 30% (max)

This function sets the total event recording capacity (%) of the total capacity  of the micro SD card. For instance, if you set '30' for the event recording ratio, then  event recording data will not be deleted before it reaches 30 percent. However, if the total  event recording data reaches 30 percent, then it starts to delete the oldest event data  in consecutive order.

( 30% of 32GB Card equates to approximately 9GB storage for event recording )

**• Audio Recording (default setting : Yes)**

```
Audio Recording
○ No        ◉ Yes
```
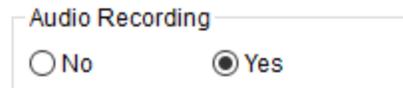
- Enable / Disable Audio Recording

**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**

**• Connected Camera (default setting : both front and EX6-OMIR  2nd expansion camera)**

```
Connected Camera
☑ Front    ☑ Rear
```
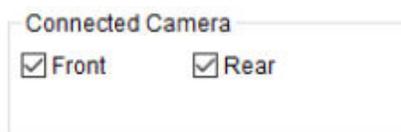
- Record main VDR-600 camera and optional EX6-OMIR 2nd  camera

# 2. Operations and Functions of Viewer (Cont.)

.
**• Audio Guide Volume (default setting : 4)**

Audio Guide Volume 4

0 ———————————————●— 4

Off                        Max
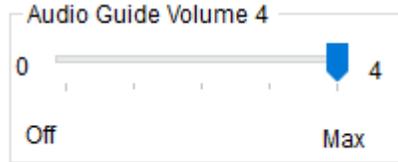
- Adjust the volume of audio announcement or operation status

- Select the setting from 0 (off) to 4 (max)

**Time Zone : regional time setting (default setting : +9 *Seoul)**

| | |
|---|---|
| Pacific | = GMT – 8:00 |
| Phoenix | = GMT – 7:00 |
| Mountain | = GMT – 7:00 |
| Central | = GMT – 6:00 |
| Eastern | = GMT – 5:00 |
| Puerto Rico | = GMT – 4:00 |

Time Zone

GMT +09:00                      ⌄
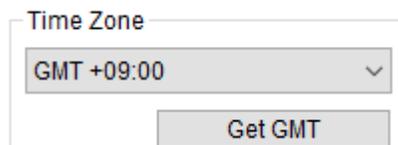
Get GMT

* GMT(Greenwich Mean Time)

- Adjust to your local time, time on your computer, by pressing the [Get GMT] button

- It sets/acquire the time automatically through the GPS reception

**Time Settings**

Set Time

2017 04 07        (FRI)   ▾

☐ Set        AM 10 51:38 ⬍
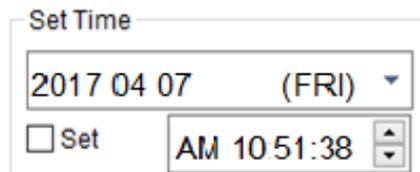
- Adjust Date and Time

- When making changes, please ensure that '☐ set' is checked in order to activate save the new setting

⚠ **In regards to time settings, please be aware of that you may need to set the clock forward a bit ahead of the current time, in order to adjust the time duration which will be taken to insert the micro SD memory card into the product and reboot the system.**

# 2. Operations and Functions of Viewer (Cont.)

• **Voltage Check (default setting : 12.0v)**

Voltage Check
12.0 v ⌄

Off
11.6 v
11.8 v
12.0 v
12.2 v
12.4 v
23.8 v
24.0 v
24.2 v
24.4 v

Voltage Check for both driving and parking mode.

- Function for avoiding battery discharge and low battery protection

- Off: it operates without battery protection mode (**NOT Recommended**)

i.e. 11.6V : Stops operating when the voltage drops under 11.6V and restarts when voltage goes over 11.6V

- The battery protection voltage range is from 11.6V to 24.4V

⚠ **Voltage check function may not work properly depends on the conditions of the motor vehicle and the weather (temperature, humidity).**

• **Video Quality (default setting : High)**

| Video Quality @ 1080P | FPS | Bitrate |
|---|---|---|
| **High** | 30FPS | 10Mbps |
| | 15FPS | 5Mbps |
| | 7.5FPS | 2.5Mbps |

Video Quality
○ Low
○ Middle
◉ High

- Adjust video quality of recording data. The main purpose is to extend the total recording hours of the memory card. For instance, if video quality is set to "Low", it will occupy less memory capacity.

• **LED indicator**

LED
Park ○ Off
○ On
◉ Blink
Slow(Blink)Fast
Driving ○ Off
○ On
◉ Blink

- Set the LED indicator for both park and driving mode
- Recommend turning on for Driving mode for status indicator
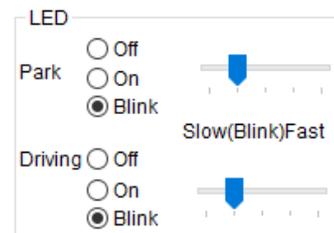
# 2. Operations and Functions of Viewer (Cont.)

**• Password**

| | |
|---|---|
| [ ] | Current Password |
| [ ] | New Password |
| [ ] | Confirm Password |
| | Apply |

- Password protection for playback and configurations

- Please safeguard password. For privacy reason, Ventra does have or provide master code or password reset

**• Information**

Information
| | |
|---|---|
| [ ] | Company |
| [ ] | Vehicle Type |
| [ ] | License Plate |
| [ ] | Driver |

- Input information such as company name, vehicle type, license plate and driver name or ID to be displayed on the screen or in backup screen shot

**• Access to function keys [default setting: Unblock]  \*\*FEATUER NON APPLICABLE**

Access to Function Keys
◉ Unblock      ○ Block

- Feature Not Applicable

**• Auto shutdown timer [default setting: Off**

Auto Shutdown Timer
Off

| Off |
|---|
| Off |
| 15 Min |
| 30 Min |
| 60 Min |
| 90 Min |
| 2 Hour |
| 3 Hour |
| 6 Hour |
| 12 Hour |
| 24 Hour |

- Select a time period for 'auto shutdown timer' function. This instructs the VDR to shutdown after set time period. Feature can help prevent low battery or battery drain, depending on the condition of the battery

# 2. Operations and Functions of Viewer (Cont.)

• **Event Select**



| Event Select |
| --- |
| ☑ [I] Impact |
| ☑ [P] Pre-Event |
| ☑ [S] Sudden Stop |
| ☑ [A] Sudden Acceleration |
| ☑ [T] Sharp Turn |
| ☑ [E] Emergency |
| ☑ [O] Overspeed |
| ☑ [X] External Signal |

| All | | Event | Normal | |
| --- | --- | --- | --- | --- |
| No | Block | Time | Event | |
| 445 | 34 | 2017/04/07 14:52:16 | P | |
| 446 | 35 | 2017/04/07 16:17:24 | S I | |
| 447 | 35 | 2017/04/07 16:20:08 | S I | |
| 448 | 35 | 2017/04/07 16:20:56 | I | |
| 449 | 35 | 2017/04/07 16:21:50 | A I | |
| 450 | 35 | 2017/04/07 16:22:42 | T I | |

- To select which types of occurrences or driving behaviors are recorded as an event. It shows the [letter] of an event for that playback period in the playback list.

Adjustable sensitivity settings for different Event categories

[I] Impact – please refer to page x for sensitivity settings (both driving and parking mode)

[S] Sudden Stop, [A] Sudden Acceleration, [T] Sharp Turn
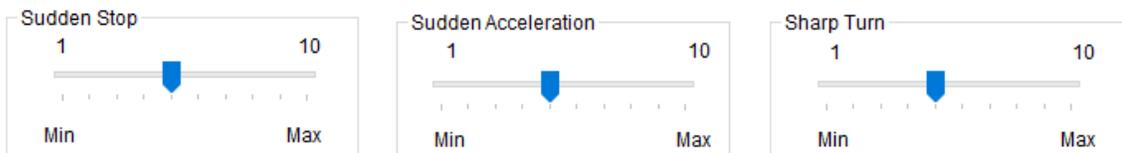


[P] Pre-Event – This is the recording prior to Event

[E] Emergency

[O] Overspeed - Adjustable overspeed settings
(Can select either KMH or MPH from Viewer configuration page)



[X] External Signal (Trigger)

## 2. Operations and Functions of Viewer (Cont.)

Click on 'Viewer Setting' under 'Configuration'. Select desired functions and save configuration settings. The updated settings are saved to the micro SD card. Insert the micro SD memory card into the VDR-600 and turn on the power. The VDR will load and update new settings.
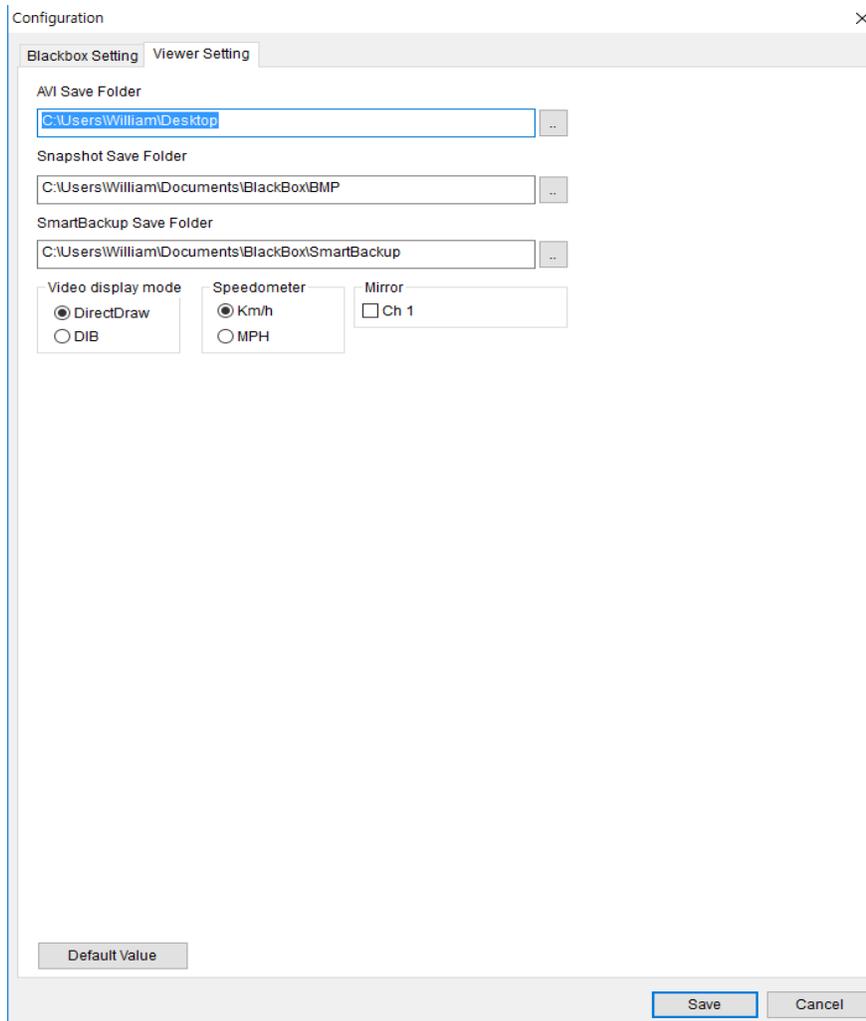


Please be aware of that if the [index.dat] file gets deleted from the micro SD memory card, it does not allow to save the configuration settings. The [index.dat] file can be created again when the micro SD memory card is inserted into the product and the power is turned on, but the configuration settings will not be applied.

# 2. Operations and Functions of Viewer (Cont.)

**• Select the folder for AVI, Snapshot and Smart Backup to be saved**

AVI Save Folder

D:₩

Snapshot Save Folder

D:₩

SmartBackup Save Folder

D:₩

**• Video display mode (default setting : Direct Draw)**

Video display mode
◉ DirectDraw
◯ DIB

- DirectDraw – select this option if using a relatively high-quality graphic card
- DIB – select this option if using relatively low-quality or built-in graphic card

**• Speedometer (default setting : Km/h)**

Speedometer
◉ Km/h
◯ MPH

- Set vehicle speed in Kilometers Per Hour (Km/h) or Miles Per Hour (MPH)

**• Mirror**

Mirror
☐ Ch 1

- Mirror function switches the viewing mode between actual image and mirror image.

# 2. Operations and Functions of Viewer (Cont.)

**[Printing the video image on display]**

1) Click the 'PRINT' icon to open print option. Click the [OK] button. This prints a screenshot of the video image on display while viewing the playback.

**[AVI Backup]**

1) This feature export and converts a specific video recording into an AVI media file. Click the 'AVI' button to open AVI Backup feature. Select the following options: Save Folder/ Filename/ Caption (Date, Time, Speed, Coordinate)/ Audio Save and CH. etc and click the 'Convert' button. The recording will be converted to an AVI file and save to the designated location.

2) Filename will be save as (user's input)_CHn.AVI [n:Ch.1(front)/ 2(rear)]
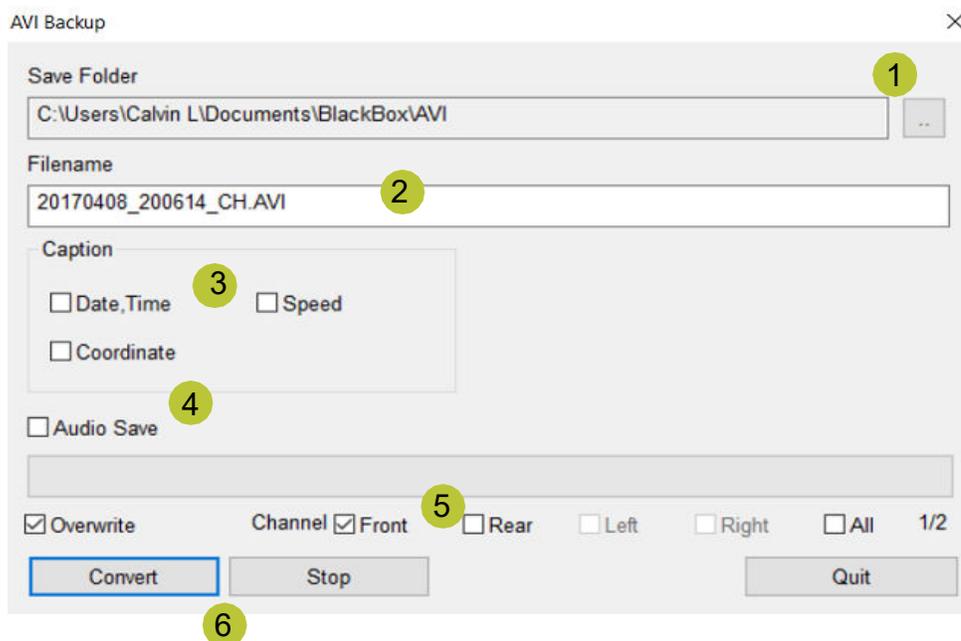
- 1 : Browse (folder) location
- 2 : Enter the filename
- 3 : Select save option: Date,Time/Speed/Coordinate
- 4 : Audio save option
- 5 : Save Front and Rear Camera Video
- 6 : Convert / Stop

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# 2. Operations and Functions of Viewer (Cont.)

**[Smart backup]**

1) This function exports / backup specific VDR-600 file recordings and time period.  The recordings can only be viewed via the VDR-600 PC viewer
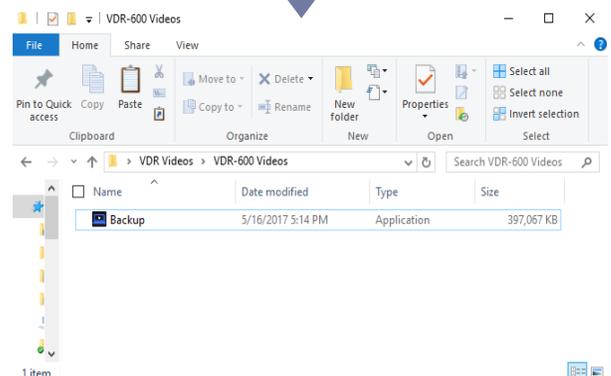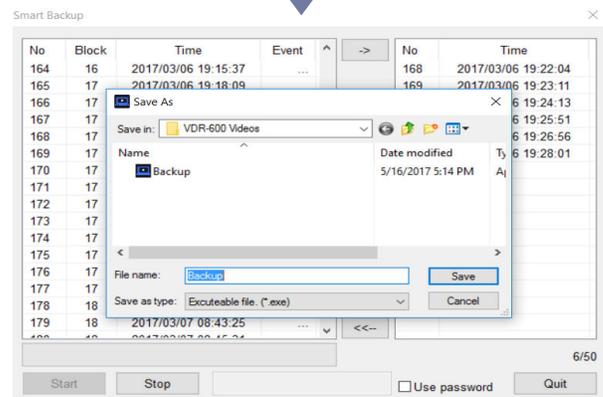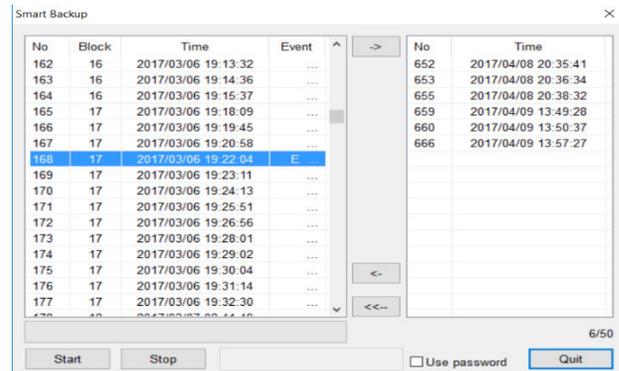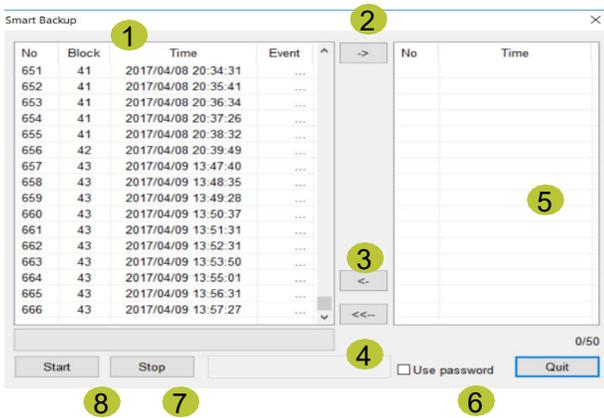
- 1 : Playback list

- 2 : Select / Export button

- 3 : Delete button

- 4 : Delete all button

- 5 : Selected files from the playback list

- 6 : Password to secure recordings

- 7 : Saving status

- 8 : Start button (select the folder location + insert filename)

- • To View the recordings, close existing VDR PC viewer

- • Open the file where the backup recording is located

- • Select the file and VDR PC viewer will automatically
  activate for video playback

# Operations and Functions of Viewer (Cont.)

**[Saving the video image on display as jpg, png, bmp files]**

1) Click the 'Capture' icon to open [Select Channel] window. Select the 'Save Folder' and  file type such as JPG, PNG, BMP and click 'OK' button
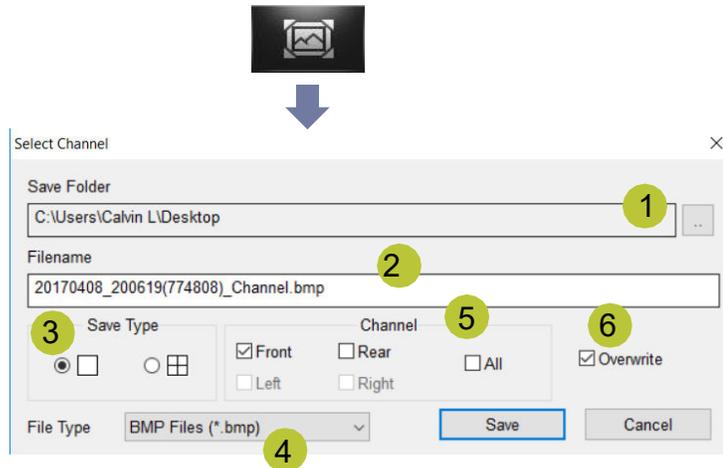


- 1 : Browse (folder) location

- 2 : Enter the filename

- 3 : Choose desired channel display type

- 4 : Select file type (JPG, PNG, BMP)

- 5 : Select the channel

- 6 : Option for overwriting the same filename

2) Select desired channel. Filename will be saved as (user's input)_CHn.bmp  (file type)  (CH 1[front]/2[rear]
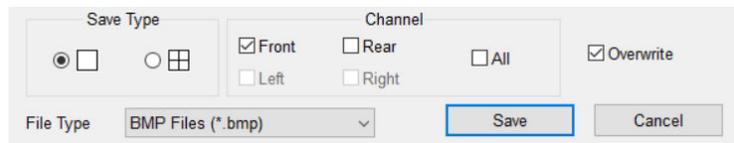


3) In Quad mode, channel cannot be selected. Filename will be saved as (user's input)_QUAD.bmp (file  type)



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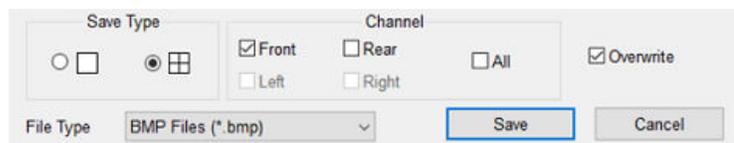
## TROUBLESHOTTING

| Trouble / Symptom | Troubleshooting |
|---|---|
| ✓ System does not start. | 1. Check that the power of is properly connected on VDR and Vehicle.<br><br>2. Use only the cable that is supplied by Ventra |
| ✓Video is not as clear as it should be. | 1. Make sure the camera lens is clean and dust free<br><br>2. Make sure the vehicle's windshield is clean<br><br>3. Make sure that the desired resolution is selected |
| ✓Footage is not being saved on the micro SD memory card.<br><br>✓The device does not recognize the micro SD memory card. | 1. Eject the micro SD memory card and insert it into the device again<br><br>2. Make sure your micro SD memory card is not locked<br><br>3. Format your micro SD memory card and try it again<br><br>4. Replace the micro SD memory card with a new one |
| ✓ Cannot receive GPS signal<br><br>✓ Loss of GPS reception | 1. Check the vehicle is in open area<br><br>2. Make sure the front windshield is not tinted<br><br>3. If the system has not bē used for more than 3 days or are using it for the first time, it may take longer, as much as up to 15 minutes, to receive the GPS signal<br><br>4. The GPS may lose reception depending on the weather conditions and surroundings. Safely stop at a location where GPS can regain its reception before proceeding. |

# 3. Warranty Policy

**VENTRA LIMITED WARRANTY**

Ventra Technology warrants the system against defects in material and workmanship for a period of **one (1) year** from the date of original purchase.  During this period, Ventra's liability for any defective product, or any product part, shall be limited to the repair or replacement of the product, at Ventra's sole discretion.

This warranty does not apply to defects or damages resulting from mishandling, accident, abuse, negligence, lightning, water/liquid, power surges, improper interfacing, operation outside of design limits, misapplication, improper repair, or unauthorized modification.

The term "Ventra Product" is limited to the hardware components and required firmware. It DOES NOT include software applications or programs, non-Ventra products or peripherals. To the extent permitted by local law, all non-Ventra products or non-Ventra branded peripherals - such as external storage SD card are provided provide the respective manufacturer's own warranties directly to you, and are not covered by this Limited Warranty.

To obtain service within the warranty period, please contact Ventra at (888) 418 3833 or tech@ventrainc.com for assistance. If product repair or replacement is necessary, a Return Merchandise Authorization (RMA) will be issued.  The Customer will be solely responsible for shipping charges, insurance and proper packaging to prevent breakage in transit, whether or not the product is covered by this warranty. All shipments of repaired or replaced products by Ventra will be F.O.B. California.

**VENTRA MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF ANY PRODUCT SOLD UNDER THIS CONTRACT. UNDER NO CIRCUMSTANCES SHALL VENTRA BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, INFRINGEMENT OF THIRD PARTY RIGHTS, LOST GOODWILL, LOST REVENUES OR PROFITS, WORK STOPPAGE, DATA LOSS, SYSTEM FAILURE, IMPAIRMENT OF OTHER GOODS, COSTS OF REMOVAL AND REINSTALLATION OF THE SYSTEM, LOSS OF USE, INJURY TO PERSONS OR PROPERTY ARISING OUT OR RELATED TO THE SYSTEM WHETHER BASED ON BREACH OF WARRANTY, BREACH OF CONTRACT, TORT OR OTHERWISE. IN NO EVENT SHALL VENTRA's LIABILITY EXCEED THE ACTUAL PURCHASE PRICE OF THE SYSTEM WITH RESPECT TO WHICH ANY CLAIM IS MADE.**

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While every effort has been made to ensure the accuracy of the information, certain specifications are based on approximate figures

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Ventra Technology Inc.  T:  888 418 3833 [www.ventrainc.com](http://www.ventrainc.com)     [info@ventrainc.com](mailto:info@ventrainc.com)