Manual



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*Specifications subject to change without notice

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- VOXX reserves the right to change details and specifications in this manual without notice. VOXX does not warranty this manual is errorfree. VOXX assumes no liability for damage incurred directly or indirectly from errors, omission, or discrepancies between the recorder and the manual.
- This Digital Audio Video Recorder (DVR) is for personal use, it is not designed for commercial purposes.
- Please read this manual carefully before using the DVR.

Disclaimer

Important Instructions

- 1. This DVR is for vehicles with 12V DC only.
- 2. It is highly recommended to have the DVR installed by a professional technician.
- 3. This DVR should be installed near the rear-view mirror to get the best view.
- 4. Make sure the lens is within the scope of the windshield wipers to ensure good vision even on a rainy day, this will ensure a good picture.
- 5. Do not touch the lens directly. Oils and or dirt from your fingers may be left on the lens, resulting in a poor image quality. Please clean the lens periodically with a soft dry cloth or lens cleaner
- 6. Do not install the DVR on tinted windows as this could damage the tint film.
- 7. Make sure the view will not be blocked when determining the installation location of DVR.
- 8. The image quality may be affected by intensity of light.
- 9. The image may be distorted due to vehicle speed changing.

Safety Precautions

Power Supply

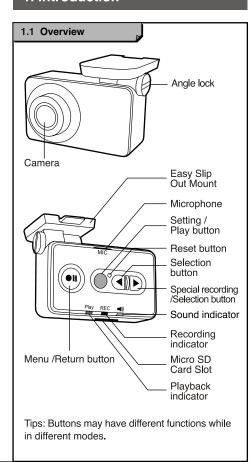
- Use only the charger supplied with the DVR. Use of another type of charger may result in malfunction and/or damage to the DVR.
- Do not use the charger if the cord becomes damaged.
- Do not attempt to repair the DVR. There are no repairable parts inside. Replace the DVR if it is damaged or exposed to excess moisture.

About the built-in battery

- This DVR contains a non-replaceable built-in Lithium Ion battery.
- To reduce the risk of fire or burns, do not disassemble, crush, puncture, or dispose of in fire or water. The battery could burst or explode, releasing hazardous chemicals if disposed of in this manor.
- If connected to other power supplies or cables not designed for this product the battery could be damaged.

User Manual

1. Introduction



1.2 Key features

- HD Resolution (1280 x 720)
- Compact size (L19 x W60 x H36mm)
- Easy slip out mount
- DIY installation
- Real-time replaying
- Language selection (Chinese / English/Spanish)
- Power supply: thru ACC direct wire or Cigarette lighter
- Recording mode: Auto / Manual / Loop / Emergency / Special / Panic

1.3 Specifications

Processor	
Solution	Ambarella Chip Set A2s
Image Sensor	1/4"
Image Resolution	HD, 1280 x 720
Recording Speed	≥25f/s
ISO	Auto
White Balance	Auto
G-Sensor	Built-in integrated 3-axis Sensor; Adjustable sensitivity
Lens	
Focus	F/0 2.4
View Angle	FOV100°±5°
File	
Output	A/V OUT
Video Format	MOV
Video Compression	H.264
Audio Format	PCM
Audio (input & output)	
Microphone	Built-in
Battery	
Туре	Built-in Rechargeable Lithium Ion battery
Capacity	90mAh

Memory		
Туре	Micro SD	
Class	Class 10 or above	
Support Capacity	Up to 8~32GB - 8Gb supplied with unit.	
Temperature		
Operating	-10°C ~ +60°C / +14°F ~ +140°F	
Storage	-20°C ~ +70°C / -4°F ~ +158°F	
Voltage & Current		
Operating voltage	9 ~ 16V	
Operating current	≤400mA	
Static current	≤50μA	

1.4 Indicator Status Table

Play indicator (green)	REC indicator (red)	Sound indicator (yellow)	Function
			Mute recording
			Voice recording
			Invalid SD card
			Recording pause (in recording mode)
			Video playback
			Playback pause (in playback mode)
			Special recording
			Time reset reminder
			CMOS Sensor abnormal
			Time reset recording
			Emergency recording

1.5 Screen Status Icons

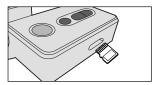
On External Monitor-Not Included

No.	Icon	Name	Description
1	00:08	Recording Time	Duration of recording
2	2013/05/20 18:28:08	Date & Time Stamped	The recording date & time
3	720P	Recording Resolution	720p (1280x720)/ VGA (640x480)
4	<u>•</u>	Voice Recording	Press play button enter Voice recording
5	•	Loop Recording	Mute recording
6	% G %	Emergency Recording	When an impact event happened, it will show on the screen automatically
7	A	Special Recording	Press ▶ button to start the special recording manually when it is in recording mode.
8	-	Invalid Card	DVR will check the Micro SD card when it is powered ON every time

2. Basic Operations

2.1 Memory

Your Micro SD Card is Already installed at the factory. If you need to remove or replace the card follow the instructions below:



To insert Micro SD card

- Slide memory into card slot with label facing front of DVR
- The card will click into place when fully inserted

To remove Micro SD card

- Place fingernail against edge of memory card and lightly press further into DVR.
- Card will spring out far enough to be removed.

Tips:

- Do not insert/remove Micro SD card when operating the DVR.
- Please format the Marcos card before use. See card manufacturer's instructions and use only a PC computer.
- The DVR supports Micro SD cards with up to 32GB capacity. Recommended to use Class 10 memory card with at least 8GB capacity. Slower cards can cause recording/playback issues.

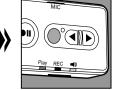
Notes:

• VOXX does not guarantee the DVR's compatibility with Micro SD cards from all manufacturers.

2.2 DVR ON/OFF

When wired to the ACC circuit in the vehicle:





All lights on





WELCOME page is showing on the monitor (if A/V out connected)

Enter recording mode automatically

By default:

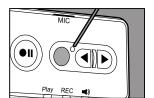
ACC ON

The DVR will start Video & Audio Recording automatically when the vehicle ACC is ON. (The sound Mute setting can be changed in Setup Menu. Please refer to page 16)

The DVR will stop recording and save the files automatically when the vehicle ACC is shut off OFF.

If powered by the Cigarette lighter adapter supplied please be sure that your power outlet shuts off when the car shuts off. If it does not then remove the adapter when not driving or the DVR could drain the car battery over long periods of parking.

2.3 Hardware Reset



If for some reason the hardware needed to be reset or restarted, the DVR stops recording; or appears to be "frozen" or "locked-up".

Press the **RESET** button to perform a hardware reset.

2.4 Micro SD Card Self-Checking

The DVR checks the Micro SD card when it is powered ON every time.

If there is a problem with the SD card it will alert with a indicator / Message.



Self-Checking Result	Message Pop-up
No memory card inserted	No card / Flashing Yellow
Memory card damaged	Invalid image card / Flashing Yellow

Notes:

• The DVR will start recording automatically if the memory card is valid;

2.5 Date & Time Setting

You must connect the DVR to a monitor to see the setup menus, this is only needed the first time. To make sure of the correct date and time for the recordings, please check the date and time settings before begin the recording.



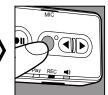




Then press the "●" button to select "Time Setup"



Press the "◀" / "▶" button for value adjustment

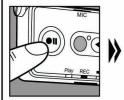


Press the "O" button to save and jump to next value; Press the "OII" button to return to the Setup Menu.

- 07

2.6 Resolution Setting

To DVR has two resolutions 720p(1280X720) and VGA (640X480) for option. The default 720p can be changed to VGA if desired.



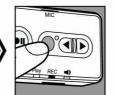
Press the "Oll" button to enter Setup Menu.



Press the "O" button to enter menu page, then select "Resolution"



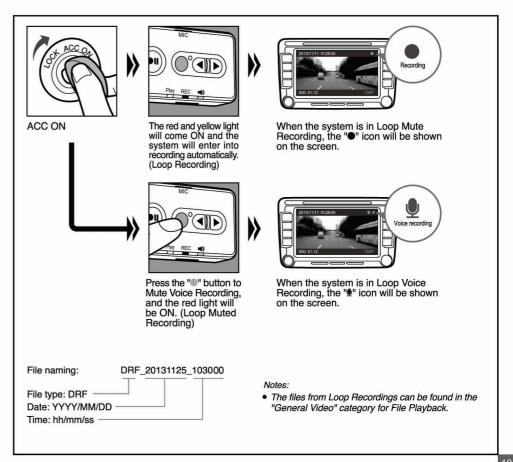
Press the "◀" / "▶" button for resolution selection.



Press the "O" button to save and DVR will restart automatically.

2.7 Loop Recording

- Loop recording is a process in which the DVR will continuously record video. In the event the memory becomes full it will record over the oldest file first.
- When vehicle ACC is ON, the DVR will start recording automatically (Red light is ON) when in Auto Recording mode (Default). The frameless recording may be divided into several video clips (default is 3 min/video clips). The length of video clips can be changed in Setup Menu (Please refer to page 16).
- When vehicle ACC is OFF, the DVR will stop recording and save the files automatically; OR press the "●II" button to stop recording manually (Green light is ON). The DVR enters the Standby mode and Setup will be shown automatically when connected to a monitor. Press the "●II" button to resume recording (Red light is ON).
- When recording is not in progress, press the "▶" button any time to start the recording manually (Green & Yellow light will flash) and icon "♣" will show on screen.



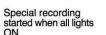
2.8 Emergency Recording

By default, if an event happens, such as sudden impact, high-speed driving, an hard turn or an accident or crash, the G-sensor will trigger the DVR to start an Emergency Recording automatically if the Event Detection mode is ON. The video for before and after 10 seconds from the moment of the event will be saved and protected. This cannot be recorded over.

When an Emergency Recording is in progress ALL lights will be on.

The icons "%G\" & ". will be shown on the screen as an indication.







When the system is in Special mode and enter voice recoding automatically, the "♠" and "♠" will be shown on the screen

Notes:

• The files from Emergency Recordings can be found in the "Video incident" category on the SD Card for File Playback.

File naming: EVT_20131125_103000
File type: EVT
Date: YYYY/MM/DD
Time: hh/mm/ss

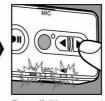
2.9 Special/Panic Recording

To lock a Special/Panic Recording manually while in the standard Loop Recording mode, press the ">" button. The Red light will be ON solid and the Yellow & Green lights will flash.

The recording will not automatically stop 10 seconds when pressing any button and the video will be saved and protected. 2 video clips for both before and after from the moment of the Special Recording will be saved and protected. This can be used in the event that you see something happen or a picture you would like to save.



ACC ON



Press "▶" button and the green light and yellow light will be flashing



When the system is in Special / Panic Recording, the "A" icon will be shown on the screen.

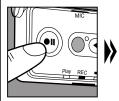
Notes:

• The files from Special Recordings can be found in the "Emergency Video" category for File Playback.

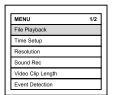
File naming: SPE_20131125_103000
File type: SPE
Date: YYYY/MM/DD
Time: hh/mm/ss

2.10 File Playback on a connected monitor

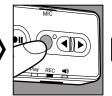
If you do not have a monitor connected you will remove the SD card (when the unit is off) and use your computer to view the files.



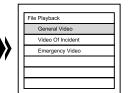
Press the "OII" button to enter Setup Menu.



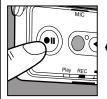
Select "File Playback"



Press the "O" button to confirm



Press the "◀" / "▶" button to select the desired file type, and then press the "●" button to confirm.



Press the "**II**" button to return to the page for selecting file.



Press the "O" button to stop the viewing.

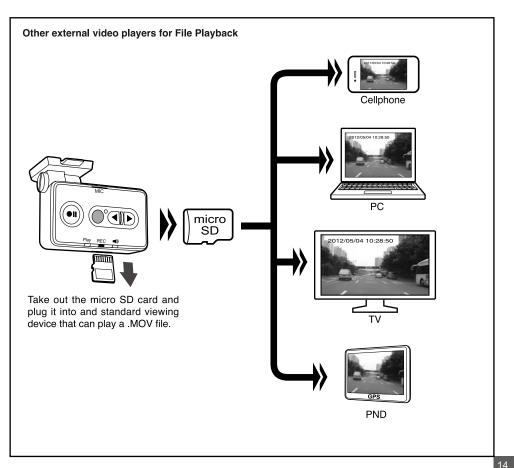


Press the "◀" / "▶" button to return to the page for selecting file.



Notes:

- General Video (from Standard Loop Recording)
- Video of incident (from Emergency Recording)
- Emergency Video (from Special / Panic Recording)



2.11 File Deletion

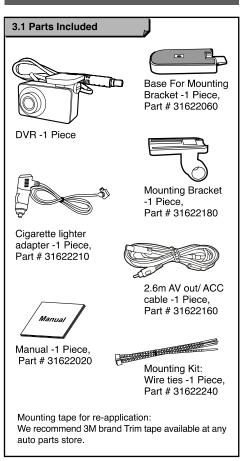
- 1. Press the "Oll" button to enter the Setup Menu.
- 2. Select File Deletion, and then press the "O" button to enter.
- 3. Press the "◀" / "▶" button to select the desired delete file type, and then press the "●" button to enter.
 - General Video (from Loop Recording)
 - Video of Incident (from Emergency Recording)
 - Emergency Video (from Special / Panic Recording)
- 4. Video overview shown on the screen and press the "◀" / "▶" button to select the desired file.
- 5. Press the "O" button to enter the Delete Menu. It includes:
 - Delete a single file: to delete the current file
 - Delete all files: to delete all files of the selected file type
- 6. Select and Press the "O" button to confirm the deletion.

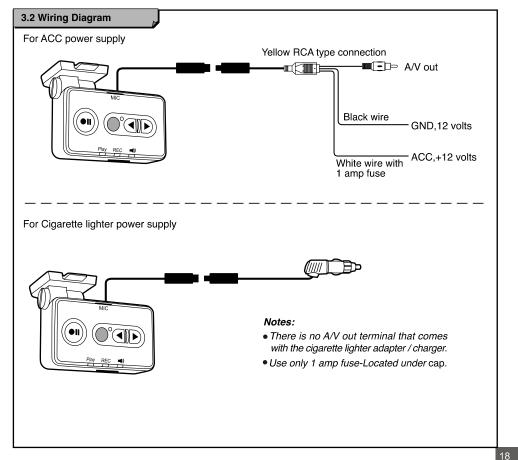
2.12 Setup Menu Overview

Only viewable when connected to a monitor.

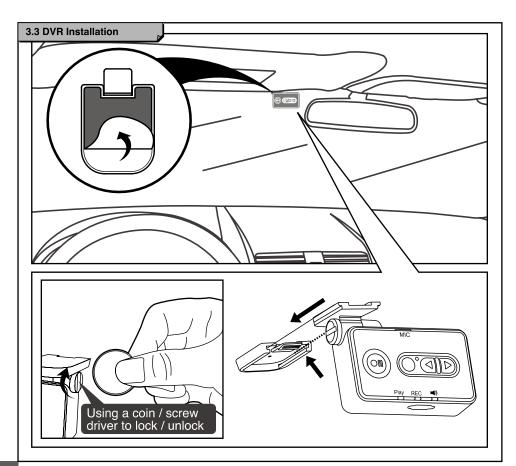
Item	Description	Option
File Playback	Plays videos	General Video / Video of Incident / Emergency Video
Time Setup	Sets the system date and time	Press the "\ " / "\" button to adjust the value (YYYY / MM / DD / ss / mm / hh). Press the "\ " button to jump to the next value and confirm.
Sound Rec Sets if mute recording is needed (Default On)		720p (1280X720 30 fps) VGA (640X480 30 fps)
		ON / OFF
		1mins / 3 mins / 5 mins
Event Detection	When enabled, the G sensor will trigger the DVR to start Emergency Recording automatically when event happened. The G sensor sensitivity can be adjusted.	High / Medium / Low / Off
Language Setting	Language selection	English / Chinese / Spanish
File Deletion	Delete file(s)	General Video / Video of Incident / Emergency Video
Format Formats an external memory card (All data will be erased)		YES / NO
Default Setting	Restores system settings to factory defaults	YES / NO
About Software infomation		Version information

3. Installation





Installation Manual



- 1. Locate an appropriate spot on your windshield. Be sure there are no safety devices or other equipment obstructed by the camera. Do NOT locate the camera in your line of sight. We recommend behind the rear view mirror.
- 2. Use an alcohol pad or window cleaner and clean the glass completely.
- **3.** Remove the protective covering from the tape on the mounting foot. Use caution to attach correctly as the tape is very strong and will not easily release. Place the mount on the appropriate position on the windshield and press and hold firmly for 30 seconds to insure a good bond.
- 4. Slide in the DVR on the Mounting foot.
- 5. Adjust the angle of the DVR to be level with the ground and looking straight ahead.
- **6.** Tighten the screw on the side of the bracket to hold the camera in place. Do NOT over tighten or you could damage the bracket.

4. Troubleshooting

After installation, the DVR doesn't work(NO lights ON)

- Make sure the vehicle ACC is ON.
- Make sure the power supply is connected correctly and properly.
- Check to insure that your power source has power.
- Check the 1 amp fuse to insure it is not blown out.

2. The Yellow light keeps flashing

- An Invalid / Damaged Micro SD card inserted.
- There in no SD card in the unit.
- Type of Memory or Micro SD card is not compatible with the DVR.

3. The Green light keeps flashing.

- The File Playback mode is in progress. Press the "OII" button to exit.
- Restart the vehicle, the DVR will start the Loop & Voice Recording mode automatically.

4. Incorrect Date/ Time.

- Use a monitor and correct the Time/Date setting as per the manual.
- When the recording is in progress, turn off the power supply to the DVR and check the Poweroff Delay function is working or not. If yes, the built-in battery is still good and you will adjust the Date and Time correctly.

5. No video output during recording.

- Make sure the external A/V monitor is on and the AUX in is connected.
- Some in-dash A/V monitors will not show a
 picture when driving or cannot work with two
 devices connected. Apply your parking brake
 and check for video.: Note this is only for vehicles
 with A/V input, not Audio input. Refer to your
 vehicle or head unit manual for details.

6. The video playback is not in Color.

- The background lighting is dim or not bright enough and this is normal operation in a dark setting.
- 7. The DVR doesn't turn off automatically when the vehicle is powered OFF 10 seconds.
- The white wire is connected incorrectly to constant power and not to the ACC wire of the vehicle, please check and re-connect it correctly and properly.
- The power outlet that you have plugged the cigarette lighter adapter into is not shutting off.
 Use another power outlet.
- Press RESET button to restore the default settings.
- Video can't be played or is not smooth when being played on external video players, PC, tablet, etc.

The Micro SD card is inserted incorrectly to the external video players. Please check and re-inserted it correctly and properly.

- The player may not be compatible with or have a player installed that can play a video with MOV file format. Download a free player by searching "MOV Player" on the internet or Play store.
- The player doesn't have enough memory.
 Use another device for playback.

9. Care for the DVR.

- Keep the DVR away from excessive moisture and extreme temperatures.
- Do not drop the DVR or subject it to severe shock.
- Do not subject the DVR to sudden and severe temperature change. In the event of moisture condensation, allow the DVR to dry out completely before use.
- Never attempt to disassemble, repair or make any modifications to the DVR. Disassembly, modification or any attempt at repair could cause damage to the DVR and even bodily injury or property damage and will void any warranty.
- Please remove the DVR in an unattended vehicle to discourage theft.

Limited Warranty

DO NOT RETURN THIS PRODUCT TO THE STORE

Voxx Electronics Corporation ("the Company") is committed to quality and customer service, and are pleased to offer you this Warranty. Please read it thoroughly and contact the Company at 1-800-323-4815 with any questions.

Who is covered?

The Company extends this warranty to the original retail purchaser of products purchased through an authorized Voxx retailer in the U.S.A., Puerto Rico or Canada. This warranty is not transferable or assignable. Proof of purchase is required in the form of an original sales receipt.

What is covered?

The Company warrants that should this product or any part thereof, under normal use, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with a new or reconditioned product (at the Company's option) without charge for parts and repair labor.

What is not covered?

This Warranty does not cover the following:

- Damage incurred during shipping or transporting the product to the Company or a service center
- Elimination of car static or motor noise
- Defects in cosmetic, decorative or non-operative structural parts
- Correction of antenna problems

- Costs incurred for installation, removal or reinstallation of the product
- Consequential damage to compact discs, USB devices, digital media cards, accessories or vehicle electrical systems
- Damage caused by improper installation, mishandling, misuse, neglect, accident, blown fuse, battery leakage, theft or improper storage
- Products whose factory serial number/bar code label
 (s) or markings have been removed or defaced
- Damage resulting from moisture, humidity, excessive temperature, extreme environmental conditions or external natural causes

Please review the Care and Maintenance section of your Installation and Operation Manual for additional information regarding the proper use of your product.

Limitations

THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT. This Warranty is in lieu of all other express warranties or liabilities. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, SHALL BE LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. ANY ACTION FOR BREACH OF ANY WARRANTY HEREUNDER INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY MUST BE BROUGHT WITHIN A PERIOD OF 24 MONTHS FROM

DATE OF ORIGINAL PURCHASE. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage 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.

Obtaining Warranty Service

- To obtain repair or replacement within the terms of this Warranty, call 1-800-323-4815 for the location of a warranty station serving your area.
- You must prepay the initial shipping charges to the Company. The Company will pay the return shipping charges for all warranted products returned to an address within the U.S.A., Puerto Rico or Canada.
- Please package the product securely to avoid shipping damage. We recommend using a carrier that provides tracking service to prevent lost packages. Lost or damaged packages are not covered by this warranty.
- Provide a detailed description of the problem(s) for which you require service.