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Vehicle Digital Video Recorder and Data Logger



User Manual
The Worlds Smallest Vehicle
DVR/Data Logger

DOMY & Co.
<http://domyco.net>

- Innovation
- Security
- Durability
- Functionality

Actual product may vary slightly from images displayed.

Product design and specification are subject to change, as part of continuous improvements, without prior notice.

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10. PRODUCT GUARANTEE/WARRANTY PROVISION

The BLACKBOX Mobile is a video storage device to help enhance the safety of vehicles and its passengers, which has been developed and manufactured by BLACKBOX Technologies.

As part of our committed after sales care we provide free repair, service and support for all goods under warranty (1 year from date of purchase). However, please note that service charges may apply should a problem be deemed as not under our Warranty Terms & Conditions.

The period of warranty is calculated from the date the goods leave the warehouse if date of purchase is not clear.

Period of Warranty

- All units come with 1 year Warranty (from date of purchase).

Limitations of the Warranty*

- When the period of warranty (1 year) is over.
- Damage or failure due to careless use.
- Any attempted repair by the user immediately invalidates the warranty.
- When the product has been damaged by an external device.
- Damages or failures due to a natural disaster.
- General misuse of the product.
- Failing to follow the instructions laid out in this manual.
- When specifically sold with no warranty.
- When product is significantly damaged in an accident.

* Please also see **Section 1** Notifications.

Standard of Warranty

The Terms and Conditions and information contained within this User Guide do not affect your statutory rights.

WARRANTY

This Warranty is only covered for units used

*If the unit is faulty, please send email to
lee@domyco.net*

*In circumstances relating to the limitations mentioned
on the previous page, some repairs may be charged.*

DOMY & Co.

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The device is a “supplementary image storage device for vehicles”, for the automatic recording of video and voice data while driving.

* We cannot guarantee that **ALL** data will be captured at all times.

This product may be used for capturing the cause of a traffic accident.

* We cannot be responsible for any loss or damage, due to failure of the device to capture information.

The device will record video and voice data into two types of file. Primarily, normal files are recorded during a typical period of driving. However, event files are created when triggered by excessive G-Force detected by the sensor (in the event of accident or break-in etc.).

The device continuously records video and, if required, audio data while driving. It’s storage time varies depending on factors, such as, the size of SD card used and external image conditions (number of events logged, video complexity & number of journeys undertaken). Our tests indicate that a standard 8GB SD card will hold about 8 hours of captured data before overwrite begins.

Importantly, always backup SD card data onto separate storage devices, such as, a personal computer or notebook where possible. When attempting to retain files note that the device will overwrite the data on a first-in first-out basis. This starts from the oldest file and works in a sequential order. Please be aware that the over-write function initiates not only on normal files but also on event files so it is important to copy event files if you wish to retain them.

1. NOTICES - Important Notes for use of Product

1. A continuous warning sound occurs when memory card is unreadable, not inserted correctly or memory card door is open.
2. Rating voltage of power supply is DC 12 ~ 24V.
3. Please note that the recording LED blinks after connecting power cable.
4. Video and audio data recordings begin approximately 1 min after starting vehicle and product initialization.
5. The recording LED will not blink if the memory card is unreadable or not inserted correctly.
6. The device will continue to record video and audio data for about 5 to 10 seconds after power is removed.
7. Video and audio data records only when the memory card door is closed to maximize data protection.
8. You should only connect power as recommended using the cable supplied or similar connector.
9. The event record function will vary with the mounting position in the vehicle. This is due to the G-Sensor sensitivity changing with its position in the vehicle.
10. Use only BLACKBOX recommended memory cards for high speed storage and data reliability (use of an inferior memory card may result in incomplete data due to data transfer limitations of other cards).
11. You should replace an old memory card with a new one periodically (about once per year) for data reliability. For further information please see **Page 6**.
12. At all times back-up important data on another suitable storage medium, such as, (HDD, CD, USB).

8. Notes

Notes

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1. NOTICES - Important Notes for use of Product

13. To avoid possible damage to the device ensure that the temperature in the vehicle is within operational limits at all times.
14. At all times (when not in use) keep the memory card in its protective case to protect the card.
15. The product stores location, time, and speed information, periodically using the built-in GPS sensor (GPS-sensor operation is determined by driving conditions and location).
16. The blue GPS LED illuminates when GPS information is being received.
17. In the unlikely event of the unit overheating, stop using the device and remove power from it immediately. Then contact BLACKBOX support team.
18. Never attempt to change the position of the device while driving, this can be dangerous.
19. In normal mode voice record default setting is off.
20. You can stop the video recording manually. However, please note that the device will resume automatic recording when it is next used.
21. Please note that the system is to be used as a method for enhancing vehicle and road safety. At all times drive in accordance with Road Traffic Regulations.
22. The purchaser is responsible for all content of data recorded by the device (including consequences resulting from copying and/or distribution of any data, whether recorded intentionally or not).

1. NOTICES - Important Notes for use of Memory Card

1. We can only offer guarantees for products purchased from BLACKBOX Technologies and are not held responsible for use of any other products.
2. Please check the correct orientation of the memory card when inserting into the device as memory cards and slots can be damaged when the card is inserted incorrectly.
3. You should only insert and remove memory cards when all the product's LEDs have exhausted.
4. Only use the product as a supplementary video storage device for a car. It is not intended for any other use and we are not responsible for its use other than this.
5. You should use 'Copy' function to transfer data from the SD card. Do not use 'Cut' or you will need to format the SD card before further use.
6. This product will initialize the memory card if an unformatted card is inserted. The formatting time for memory cards is approximately 10 mins.
7. If you use the same memory card repeatedly for a long time, the card may become unreliable and produce errors. This is a property of any flash card. To protect against card errors and maximize reliability please replace the card every 12 months. Please note that we are not responsible for data loss due to the age of a card.
8. On no account change any file names on the card.
9. Do NOT use the memory card in any other device (NAVIGATIONAL, DIGITAL CAMERA, MP3, PMP, etc..)

8. Q & A

- Q. The Memory Card is broken what can I do?**
A. *We recommend contacting your BLACKBOX Technologies for a replacement card.*
- Q. The device was damaged in an accident, is it possible to have it repaired?**
A. *If the device is involved in a severe accident and the unit is heavily damaged the unit may be un-repairable and data could be lost. Please contact us about repair.*
- Q. When the Memory Card is full, is the old data erased?**
A. *The device overwrites the oldest files enabling newer files to be recorded. After an incident remove the memory card, to retrieve and back-up important information quickly.*
- Q. The captured video is hazy or blurred?**
A. *Please clean the lens with a soft, dry lens cloth.*
- Q. How do I increase the length of recording time before the unit overwrites data?**
A. *An 8Gb card is supplied with each unit. For longer recording times larger memory cards are available from us. Please note when purchasing an after market SD Card that some retail memory cards may not have the desired read/write speeds to support the unit.*
- Q. I am changing the settings through the viewing software but they are not saving to the SD Card, what should I do?**
A. *Please update your drivers if you are using an in-built SD reader on your PC/laptop. Alternatively, you can purchase an external SD Card reader device from a reputable PC store.*

8. Q & A

- Q. Can the device be mounted anywhere?**
A. *Yes, but, attach the device in a location where the driver's 'field of vision' is not obstructed in any way.*
- Q. Why does the video replay upside down?**
A. *Please check the GPS mark is pointed toward the sky (upwards) in the mounting bracket.*
- Q. Despite of the power being on and the vehicle ignition on, the LED doesn't blink.**
A. *Check the power connection of the device and that the correct voltage is present at the connection.*
- Q. How can I know if the device is operating normally?**
A. *Start the engine and check the blinking of LEDs, record a test video for few minutes. Then play the recorded video data through the viewing programme via PC.*
- Q. The 12v power cable is too short.**
A. *The 12v power cable is 15 feet. This is usually sufficient. However, you can move the position of the device or purchase a longer cable.*
- Q. Is it possible to view the output on my Navigation system screen?**
A. *Yes, it is possible if your system has an external input, you will need to purchase the correct cable/connector.*
- Q. I don't want to record audio (sound).**
A. *You can turn off the sound so that the device is set to record video only.*
- Q. Can I erase saved video files?**
A. *Yes, you can erase the files using the playback software on your PC.*
- Q. Will the device save recordings when power is lost?**
A. *The device will record for 5 to 10 seconds after power is lost and save the current file.*

1. NOTICES - Installation Notes

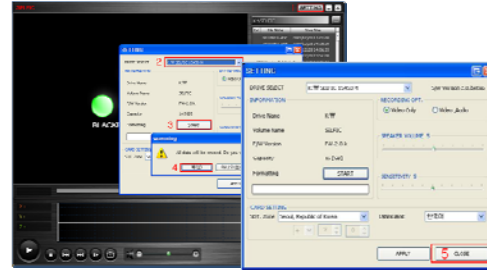
1. We recommend installation of the device with our nationwide installers. However, should you install the product yourself ensure that it is located in a bright and safe place and carefully study the information laid out throughout this User Manual.
2. Install the device using the fixing pad and cable clips supplied. Please ensure that adequate consideration is given to prevent from impeding the drivers' 'field of vision'. For further information please see **Section 5, page 13.**
3. Properly clean the surface where the fixing pad is to be located before mounting the device.
4. Ensure that hands are clean and dry throughout the entire installation process.
5. At all times use only the power cord supplied (DC12V ~ 24V). Please note that we are not held responsible for any damage caused by use of other cables or connectors.
6. Install the Camera facing internally or externally so that captured images are not hindered by other objects (interior mirror etc.)
7. Appropriately set direction and angle with viewer program or use AV cable provided, then connect AV out to a suitable monitor.
8. When mounting the device in the bracket, slide the unit in from the rear at a slight angle and then align with the grooves each side of the device and snap into position.

1. NOTICES - Notice for Safekeeping

1. Keep the device out of reach of children.
2. Never expose the device to a naked flame.
3. Do not allow water or foreign material to enter the device at anytime.
4. Do not drop or subject the device to severe shock or impact.
5. Do not allow the device to come into contact with any solvents or chemicals.
6. Do not expose device to extreme temperatures.
7. Do not disassemble or attempt repairs or modifications to the device. This instantly invalidates the warranty for the product. Please contact us immediately should you have a fault or problem with the product.

7. VIEWING SOFTWARE - Formatting the Memory Card

Formatting in Viewing Software



Please use the following steps to format memory card in bbplayer:

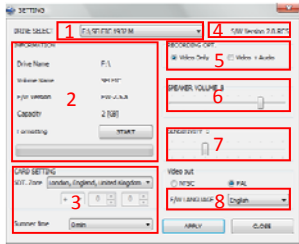
1. Click on the Setting Button
2. Select Memory Card Driver
3. Click Start Button
4. Click Yes
5. Finish

NB:

- The initializing function of memory card includes both formatting of the memory card and generating the initial files.
- At all times please back-up important files.
- Always initialize the memory card after a firmware update.
- The blue LED blinks during initializing. The blue LED stops and the red LED blinks after completing an update. The red LED blinks when recording is functioning normally.

7. VIEWING SOFTWARE - Changing the Settings

The Settings feature in the viewing software enables the user to customize the options to suit their needs. This includes being able to change the driver name, time and zone settings, sensitivity of the G Shock Sensor, along with



1. Memory Card Driver
2. Memory Card Information
3. Time Zone Setting
4. Viewer program
5. Recording option version
6. Speaker volume
7. G Shock Sensitivity
8. Internal software language

VIEWING SOFTWARE - Formatting the Memory Card

There are several ways to format the Memory Card:

Formatting in Windows

Remove the memory card from the device -> Insert the memory card into the card reader -> Run format in PC (recommend FAT32) -> Remove the memory card from the card reader -> Insert the memory card into the device after power-on -> Check that blue LED flashes-> It needs about 5 minutes (depending on memory card size etc) -> Check Red LED now flashes -> Format Complete

2. COMPONENTS

The following components come as standard with the device;

1. Main Body
2. Mounting Bracket
3. Micro SD Card
4. User Manual
5. Cable Clips
6. Cigarette Jack Cable
7. AV Adapter
8. Micro SD Adapter
9. BLACKBOX Viewer Software



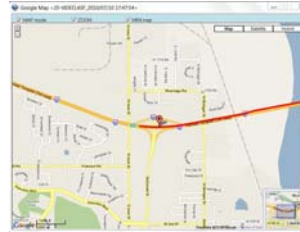
3. FULL TECHNICAL SPECIFICATION

Item	Specification
Size/Weight	1" × 1" × 2"/Main Body 1oz.,
	Mounting Bracket .84oz
Camera	Channel 1 Channel
	Sight Angle 83.9°(V)×103.1°(H)×120°
	Pixel 130,000Pixels
	Sensor 1.4 " CMOS
Image	Recording Continuous Recording and Shock/ Emergency Function
	Compression MPEG4
	Resolution 640 x 480(VGA)
	Speed 30fps
Data Storage	micro SD (8GB supplied), micro SDHC Card (4GB~16GB)
Cradle	Right and Left : 360°, Up/ Down 180°
Audio/Video	Internal Mic (ON/OFF), Internal Speaker, TV output
G-Sensor	Tri-axial Digital Acceleration Sensor (3 axis impact)
Module	GPS Google Map (G9300 only)
	RTC Real time Clock (R500 only)
LED Display	Green -> Voice Recording , Red -> REC , Blue -> GPS
Power	DC 12 ~ 24V
Viewing Software	Searching, Printing, Security & Management functions

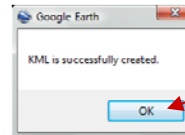
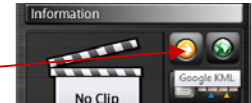
NB: The specification of this device may be changed for better performance without prior notice.

7. VIEWING SOFTWARE - Using GPS Function and Map Location

The accurate GPS Module not only highlights the exact location whilst footage is being taken but also maps the journey of the vehicle from departure to arrival.

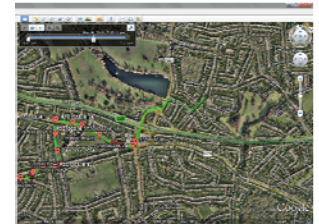


While a video is playing in the viewer, clicking the Google KML button enables the user to create a KML file. This can be viewed using Google Earth.



Once clicked, select 'My Documents' > 'BLACKBOX', > 'GPS' and click 'OK' a message will appear confirming this. The file can now be opened via Google Earth.

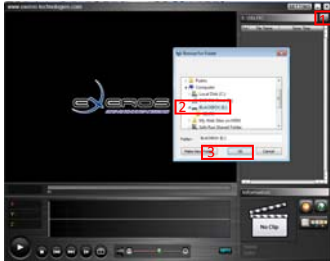
Go to 'My Documents' > 'BLACKBOX', > 'GPS' and double click the created file to open the journey. Google Earth shows the journey with a time based slider that corresponds with progress along the recorded trip.



7. VIEWING SOFTWARE - Playing Files

Playing files in the viewing software couldn't be easier.

First, click the button as highlighted. Then, select the relevant folder. Next, simply click OK. The viewing software then highlights all of the available files stored in the chosen folder (please see below).

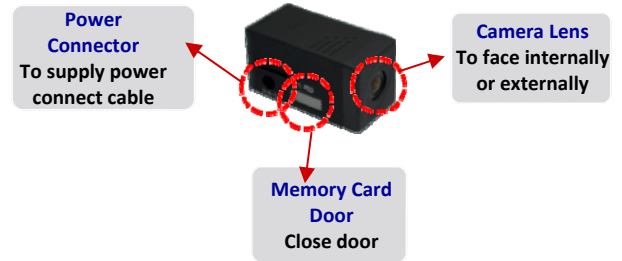


Now simply double click on the relevant file to open it. For your convenience and to enhance the validity of created images, files are date and time stamped from satellite.

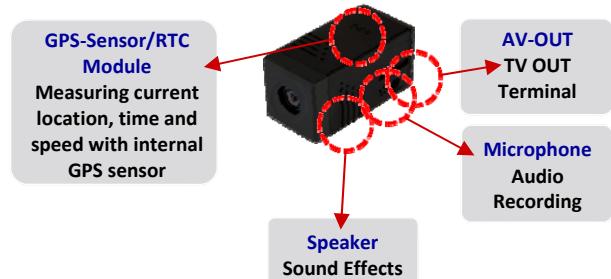


4. PARTS and FUNCTIONS

View 1



View 2



4. PARTS and FUNCTIONS - User Interface

Event Button
The button saves current images into event files

TV Out (Esc)
Set AV Out On/Off

MIC (Down Button)
When recording image, sound record mode is ON/OFF with this button.



SET(MODE)
Main Menu Button (card format etc.)
Can be viewed using AV-OUT terminal

MIC
When this LED (green) is ON, Sound record mode is ON.

GPS/RTC
When this LED (blue) is ON, the GPS signal is being received/ RTC is activated

REC
When Red LED is blinking record mode is SET.

NB: To ensure that all functions respond accordingly, press and hold buttons for approximately 2 seconds.

7. VIEWING SOFTWARE - Structure of the Window

The user-friendly software enables you to view and extract data easily and securely. All recorded files are date and time stamped and event files are created that allow you to locate captured images with ease.



Program Functions







1. Video Screen Window
2. Setting Toolbar
3. Browser Function
4. File List
5. 'G' Shock Sensor
6. Play Controller
7. Vehicle Speed
8. File Information
9. Export Buttons
10. Volume Control function
11. Google Maps/Route display

Minimum PC requirements
CPU: Pentium 1 GHZ or higher
OS: Win98, ME, XP, Vista, Windows 7
Memory: 512 MB RAM or higher
HDD: 500MB or higher

6. USING TV OUT FUNCTION - Setting Audio and Memory Card

The diagram below demonstrates how to adjust the speaker volume and microphone level for recordings.

Button Function








- | | |
|---|-----------------------|
|  | Volume UP |
|  | Volume DOWN |
|  | EXIT |
|  | Enter/Top Menu Select |
|  | Adjust Speaker Volume |
|  | Recording Opt |



Please see the information below regarding Firmware updates and initialization of memory the card.



Button Function

- | | |
|---|----------------------------|
|  | Select UP |
|  | Select DOWN |
|  | EXIT/Top Menu |
|  | Move |
|  | Enter/Top Menu Select |
|  | Memory card initialization |
|  | Sensitivity setting |



Please Note:

- Memory card initialization formats/creates recording files.
- Back-up all files you want to retain.
- Firmware update function not available without valid upgrade file present.
- After a Firmware Update, you will have to initialize the memory card (use the function on this screen).

5. INSTALLATION PROCEDURE - The Memory Card

1. Insert the memory card into the lot and close the door.



Please note that if the door is not closed completely, the memory card will not work.

To eject the memory card simply open the door and push the memory card in. When the door is opened a short audio tone sounds to notify that it has been opened.



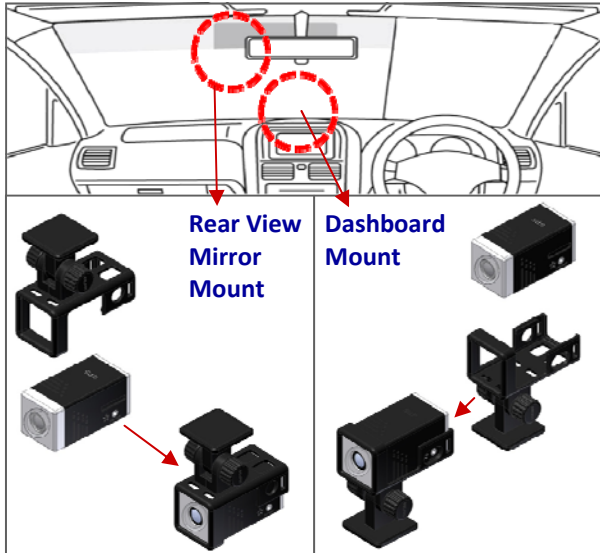
2. Mount the main body in the bracket with the GPS/RTC mark facing upwards. Please note that if the GPS mark is facing down then the video will be upside down and no GPS will be received.

5. INSTALLATION PROCEDURE - Choosing a Location

The DVR can be mounted anywhere secure in the vehicle. Typical installations are on the dashboard or above rear view mirror.



The best location depends on the intended use. For Taxi Drivers it is recommended that the device is mounted by the rear view mirror. For other applications (motorsports, private & domestic use etc.) the dash may be more appropriate.



6. USING TV OUT FUNCTION - Setting Mode (video playback)

Please see the diagrams below to understand the various button functions when replaying a video using an external AV player.

Selecting a Video File

Button Function



Select Up



Select Down



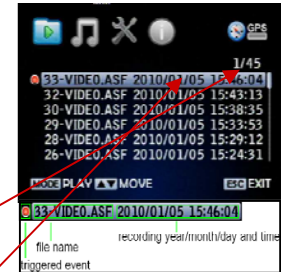
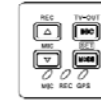
EXIT



PLAY/Top Menu
Select

File Number / Total files

Example: first file of the 45 files



Playing a Video File

Button Function



REV



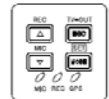
FF



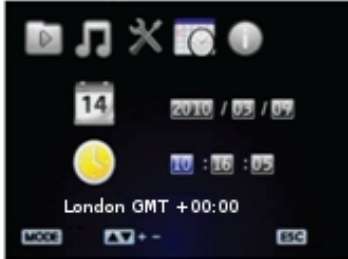
EXIT



PLAY/PAUSE



6. USING TV OUT FUNCTION - Setting Mode (main menu)



The **Key Functions**, while in **Setting Mode** are displayed below.

Key Functions



File replay: displays a list of stored files.



Audio: adjusts speaker volume and voice recording level.



Memory Card: controls memory card initialization and sensitivity setting.



Information: displays information for the product (model name, Software Version, Homepage, standard time etc).



GPS signal status: user can check door Open Close of the Memory Card and GPS signal status.



Date Setting: set the date



Time Setting: set the date

5. INSTALLATION PROCEDURE - Configuration



After adjusting the angle of the camera, tighten the clamp and lock into position. The main body of the device should now be firmly in place with the mounting bracket tightly secured. Please test this by gently attempting to swivel the bracket and device.

The power cable should then be inserted to power-up the device. This is illustrated in the picture on the right.



After the power cable is connected to the main body, carefully bind the extension wire with the clips supplied. Next, start the vehicle's ignition and wait for the unit to power-up. This is signified by the LEDs flashing from one to the next and is followed by an audio tone that highlights the device is now ready for use.

It is now important to test the device to become familiar with its functioning.

6. USING TV OUT FUNCTION

The product has the capability to be linked up to an external AV device, such as, a TV monitor or screen.

To do this firstly connect the device to the 2.5 mono AV Adapter. This comes supplied as standard with the device.



Then connect an AV cable and the device is now ready for use.

Please note that AV cables are not supplied as standard.

This due to the fact that many connection combinations exist, which are dependent on the type of external device being used.

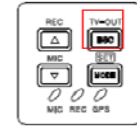
If you wish to use this function then please purchase a suitable cable.



6. USING TV OUT FUNCTION

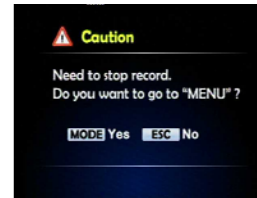


Output of current image



Operation

- **To initiate Image Output:** push the ESC button for 2 or 3 seconds-> then check the image output.
- **To stop Image Output:** push the ESC button.



Operation

- **Setting mode output:** push the mode button for 2 or 3 seconds -> then push 'mode' to stop recording.
- **Exit Setting mode output:** push the ESC button to exit.