Street GUARDIAN

DIGITAL VIDEO RECORDER
SG9663DR

USER MANUAL

PRODUCT SAFETY & PRECAUTIONS

Thank you for purchasing the Street Guardian SG9663DR Dual Channel Digital Video Recorder (DVR), please read and follow this guide before installation and use.

The camera is designed to operate at temperatures of between -20°c to +70°c, operating outside of these temperatures may produce unpredictable results.

Clean only with a soft dry cloth, being careful not to use excessive pressure when cleaning the lenses, the use of liquids or cleaning fluids may damage the product, and could void your warranty.

The DVR records two channels of video in full high definition 1080P/30fps at high bitrates, a large amount of data is generated for the video recording function. Use quality high speed Class 10 Micro SD cards only, with a recommended minimum capacity of 32 GB, please consult your dealer about supported memory cards.

The DVR does not support hot plugging of the Micro SD memory card. Be sure to remove or replace the Micro SD memory card only while the recorder is powered off or the memory card and any recordings may be damaged.

Memory cards are a consumable item and require regular inspection to ensure they are in working order, memory cards should be formatted in the camera to ensure the file system is set according to the required parameters for the camera to operate reliably.

Please use only the included Street Guardian accessories or approved replacements from a Street Guardian dealer. Use of non-approved accessories may damage your product, or your vehicle, and may void your warranty. Street Guardian supplied accessories are tested to meet or exceed recognised testing standards worldwide to ensure reliable performance of your product.

INTRODUCTION

The Street Guardian SG9663DR Digital Video Recorder is engineered to require minimal user intervention, it is pre-configured with logical default settings and is supplied ready to use once installed with a minimum of adjustment needed to personalise to your needs.

The default operation of the product means that it will power on and start recording shortly after starting the vehicle, and will according to your selected menu settings, either power down, or enter parking mode shortly after the vehicle is turned off, the recordings will be segmented into easy to navigate chapters and once the memory card is full will automatically delete the oldest recorded segments to make way for further recordings.

Operating in this *'first in, first out'* manner means that the memory card will cycle the recordings continuously and will always have the most recent recordings, a 128GB memory card will store around 8 hours of recordings before beginning to recycle.

Emergency files created by G-Sensor trigger, or by pressing the OK/EMERGENCY key are moved to a separate folder so that they are not overwritten by the regular recording and recycling process.

[Note] Formatting the memory card will erase all files including emergency files.

CAMERA LAYOUT & OVERVIEW

OK

MENU DOWN

MENU UP

EMERGENCY/RETURN

AV

USB

MICRO SD
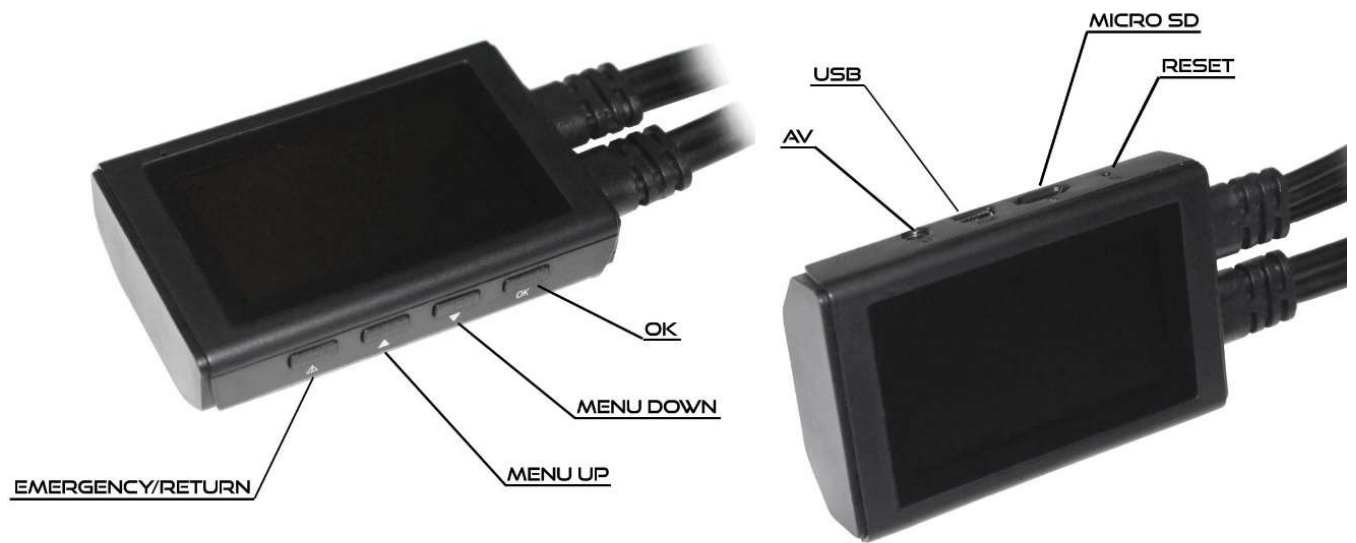
RESET

SETTINGS

The DVR is pre-set with logical default settings and is ready to operate with minimal adjustment required, when powered on the internal capacitors will charge, the DVR will then power up and recording will commence.

 *[Note] The DVR does not contain a battery and will need to be connected to a power source to configure settings, **connecting to a computer USB port is not supported.***

Before using the DVR it is important to adjust the TIME ZONE offset in the settings menu to configure according to your region.

[Note] If you are in a region that supports daylight savings it will be necessary to adjust the time zone at the beginning and end of the period accordingly.

MENU OPTIONS & DEFAULTS

To access the menus short press the MENU/DOWN key, the recording will stop and will enter the settings menu, pressing the RETURN key will exit the menu.

Following is a list of the menu items, their default settings listed in **BLUE** and a brief description of each setting.

Resolution – **1080P30,1080P30** – The resolution of the recorded files.

Quality – **Standard** – Adjust the recording bitrate.

Display Mode – **Picture in Picture** – Set the view on the LCD, (will revert to Picture in Picture when restarted).

Loop Recording – **1 MIN** – The length of each recording segment.

Camera1 – **Normal** – Setting to invert the picture for the front channel.

Camera2 – **Normal** – Setting to invert the picture for the rear channel.

Display Orientation – **Normal** – Set the default orientation of the LCD display.

Exposure – **+0.0** – Exposure Value – Adjustable to increase or decrease brightness of the recordings for the front or rear cameras.

WDR – **OFF** – Wide Dynamic Range setting.

AE Metering – **Center Weighted** – Settings to select different AE metering table.

G-Sensor – **OFF** – Adjustable to increase or decrease the force required to trigger automatic protection of files while in normal recording mode.

Parking G-Sensor – **Middle Sensitivity** – Adjustable to increase or decrease the force required to trigger automatic protection of files while in parking mode.

Parking Monitor – **1FPS** – Setting to select different framerates, or disable parking mode.

Shutdown Timer – **10min** – Select different Parking Monitor shutdown timer values.

Date Stamp – **ON** – Embeds the time and date in the recorded video.

Speed Unit – **OFF** – Function to enable the speed to be displayed in the recorded video OSD text (MPH or KM/H selectable).

Display Logo – **ON** – Display the logo in the recorded video.

Record Audio – **ON** – Turn the Microphone on or off.

Screen Saver – **1 MIN** – Setting to automatically turn off the LCD display.

Auto Restart – **1 MIN** – Setting to automatically restart the DVR if there is no active recording or power is interrupted during boot.

Boot Delay – **5 Sec** – selectable power on boot delay options.

DATE/TIME – **DD/MM/YYYY** enter the date and time and choose the display format, press the **OK** key to advance to the next option.

Time Zone – **GMT 0** – Set the time zone as appropriate to your region.

Language – **ENGLISH** – Set the desired menu language.

Beep Sound – **ON** – Turn the keypress sound on or off.

Frequency – **50 Hz** – Set the anti flicker mode to suit the local AC mains power used, (LED lighting may still show some flicker, this is normal).

TV mode – **PAL** – Set the AV output TV standard to PAL or NTSC.

Status LED – **ON** – Enable or disable the LED light in the remote key during normal use.

Format – **CANCEL** – Memory card format function, cards larger than 32 GB use exFAT which is not a supported file system, if using a card formatted exFAT the camera will automatically enter the format menu to allow the card to be formatted correctly before use.

Default setting – **CANCEL** – Resetting defaults will return all setting to the values shown in **BLUE**

Car Number – Function to embed name or number display into the video, press the **UP/DOWN** keys to select each character, press the **RETURN** key to proceed to each character setting option, press the **OK** key to save and return to the menu.

Firmware Version – Displays the firmware version number.

DESCRIPTION OF KEY FUNCTIONS

[Note] The keys have different functions depending on the current state, recording, standby, menu navigation, or playback mode.

1.**<EMERGENCY/RETURN>** Key

Function 1: Emergency file save

During recording short press the <**EMERGENCY/RETURN**> key to save the current recording to the RO (read only) folder so that the files will not be overwritten during the normal recording function.

Function 2: WiFi On/Off

During recording long press the <**EMERGENCY/RETURN**> key to stop recording and activate the WiFi function, short press the <**EMERGENCY/RETURN**> key to exit WiFi mode and return to normal recording.

Function 3: Menu navigation

While accessing the playback function or settings menus the <**EMERGENCY/RETURN**> key will allow you to exit current menu level.

*[Note] these functions are applicable whether using the <**EMERGENCY/RETURN**> key on the main unit, or using the remote key.*

2. <**MENU/UP**> Key

Function 1: Playback menu

Whilst in recording mode short press the <**MENU/UP**> key to enter the playback menu.

Function 2: Microphone On/Off

Whilst in recording mode long press the <**MENU/UP**> key to enable or disable the microphone.

Function 3: Menu navigation

Whilst in playback mode or the settings menus the < **MENU/UP**> key is used to navigate through playback and menu options.

3. < **MENU/DOWN**> Key

Function 1: Menu access

Whilst in recording mode short press the <**MENU/DOWN**> key to enter the settings menu.

Function 2: Menu navigation

Whilst in the settings menus the < **MENU/DOWN**> key is used to navigate through playback and menu options.

4. <**OK**> Key

Function 1: LCD display

Whilst in recording mode short press the <**OK**> key to cycle through the various views, front camera, rear camera, picture in picture and LCD ON/OFF.

Function 2: Menu navigation

Whilst in playback mode or the settings menus the < **OK**> key is used to select and navigate through playback and sub menu options.

Function 3: Power off

Press and hold the <**OK**> key to manually power off the system.

5. <**RESET**> Switch

If the DVR does not respond press and hold the <**RESET**> switch briefly to power off and restart the DVR, if the DVR has to be reset please ensure to check the memory card for errors and format the card in the camera before using again.

[Note] It is recommended to regularly check the memory card for errors, software for error checking of memory cards is available for download from the downloads section of our website.

https://support.streetguardian.info/downloads

BASIC OPERATION DESCRIPTION

1. Automatic recording

When you start your vehicle the DVR is automatically started and the recording commences, the REC indicator on the screen will blink and (if enabled in the settings menu) the LED light and remote key light will flash to indicate recording status.

[Note] If the DVR detects an error with the memory card or fails to detect the front or rear camera the DVR will emit a series of warning beeps to notify of an error, check the main display for any relevant notification messages.

At power off the DVR will automatically save the current recording and will enter parking mode, or power down, according to the selected settings. The recordings are saved according to the setting chosen in the loop recording menu. As the card reaches capacity the oldest recordings are automatically deleted to allow recording to continue seamlessly.

[Note] Any event files that are recorded, whether automatically locked by the G-Sensor or manually locked are moved to the RO (read only) folder and are not overwritten during the normal loop recording process.

2. Parking mode recording

The default settings will allow parking mode recording to commence once the vehicle is powered off, the recording will continue according to the option selected in the Shutdown Timer menu or until the selected low voltage limit of the hardwire kit is reached, whichever occurs first, restarting the vehicle will return to normal recording mode.

3. Automatic collision sensing

The DVR is fitted with a built in G-sensor. In case of severe vehicle collision the DVR can lock the recording at the time of the accident, and display a yellow triangle icon on the display screen.

The collision G-sensor has adjustable sensitivity, the default setting is set to <**OFF**>. You can change the sensitivity settings as desired in the settings menu.

Recordings can also be saved manually by short pressing the emergency key, the LED and remote key will flash to indicate the file is protected even if the LED function is set to OFF in the menu.

[Note] the main unit must be securely mounted for the G-Sensor automatic collision sensing function to operate effectively or it may result in false positives

5. Playback of Recorded Files

Press the <**MENU/UP**> key to enter the playback mode. Press the <**MENU/UP**> or <**MENU/DOWN**> keys to navigate back and forth through the recordings, press the <**OK**> key to go to the playback sub menu and play a file, press <**OK**> to start or stop playback. Press the <**EMERGENCY/RETURN**> key to exit each playback menu level and return to normal mode, see the description of key functions section of the user manual for further details on navigating the playback menu.

[Note] If any file is damaged due to improper shutdown or memory card error and is not playable on computer it may be possible to repair the broken file by using the built in playback mode on the camera, the camera will attempt to repair the files before playback.

CAMERA & ACCESSORIES

1	FRONT & REAR CAMERA CABLES	6	PARKING MODE HARDWIRE KIT & FUSES	11	CABLE CLIPS
2	QUICK START GUIDE	7	REMOTE GPS	12	WARNING STICKERS
3	CAMERA BAG	8	FERITE CORES FOR CAMERA CABLES	13	SPARE MOUNT TAPE
4	REMOVAL STRING	9	CLEANING WIPES	14	3M DUAL LOCK TAPE
5	REMOTE RECORDING INDICATOR & TAPE	10	OTG CARD READER ADAPTER	15	MAGNETIC MOUNTING PLATES

Front and rear camera cables – 4m and 6M cables for connecting the camera to the main recording unit.

Quick start guide – Basic starter instructions.

Microfiber carry bag – Will help protect camera from getting scratched when transporting outside of the vehicle.

String for bracket removal – Used to cut through 3M tape if needing to remove the bracket.

Remote key – Combination LED indicator light, File save, and Microphone with spare 3M tape.

12v~24v power lead – 3 wire power supply to suit, terminated with Mini fuse taps and ground terminal, other fuse tap types available.

GPS antenna – Dash mount type.

Ferrite filters – 4 pieces, 1 to be used at each end of the video cables, for best results the filters should be installed as close to the connectors at each end of the cable.

Windscreen cleaning wipe – Used to clean the window prior to mounting the brackets to ensure a good bond for the 3M tape, surfaces must be clean and dry prior to application.

Android compatible memory card reader – USB card reader for SD and Micro SD memory cards, may also be connected to supported Android mobile phones and tablets to access files directly from the memory card.

Cable clips – May be useful in some installations to secure wiring.

Warning stickers – required to be affixed in the vehicle in some sales regions for legal compliance, check local laws.

Spare 3M tape – Die cut replacement 3M tape to suit the various mounts.

3M Dual Lock tape – Can be used for securing the main unit as required.

Magnetic mounts with 3M tape – Can be used for securing the main unit as required.

INSTALLATION

Before installing it is important to familiarise yourself with the various components and plan the installation accordingly, in particular take note of cable lengths, connector orientation, and where you would like to mount each component, consult your vehicle owners manual for the location of any safety related items such as air bags, and the location of the fuse panel, planning your installation before you start can save time.

1. The front camera unit should preferably be mounted behind, or to either side of the rear view mirror and within the sweep area of the windscreen wipers. The rear camera should be mounted high in the window to have a suitable viewpoint to the rear of the vehicle, taking note of anything that may interfere with the installation and operation such as heater demister lines, or in glass antenna systems, if the rear window has a wiper be sure to mount the camera in the sweep area of the wiper.

2. Once a suitable mounting location is decided secure the camera mount brackets to the windshield using the provided 3M adhesive tape, clean the glass prior to camera installation to ensure a good bond for the adhesive to the glass, the 3M adhesive used to mount the cameras require a smooth mounting surface and is not suitable for use on plastic interior trims.

3. Remove the backing tape from each camera mount and press and hold the bracket firmly against the glass for 2 minutes, then wait 20 minutes before attaching the camera. The 3M adhesive tape will achieve 50% bond after 20 minutes, 100% bond is achieved after 72 hours, if the camera is attached to the mount

bracket too soon after installation the adhesive may not bond correctly to the glass.

[Note] When determining the mounting locations be sure to leave adequate room to be able to detach the cameras.

It is always advisable where possible to route any cables across the passenger side of the vehicle to avoid any chance of cables interfering with control of the vehicle or causing a distraction to the driver should a cable become loose. Any cables that are routed through the A pillar or roof area where there are SRS airbag systems must be routed so that the cables are fixed behind the airbags so as not to interfere with the operation of the vehicle safety systems.

4. Before mounting the DVR main unit ensure that there is enough room to access and remove the memory card, there is sufficient room for the cables, and adequate clearance for access, if mounted to a vertical surface the adhesive dual lock tape is a better choice than the adhesive magnet mounts, choose the mounts that best suit your application

   [Note] If the main unit is not mounted securely it will affect the performance of the built in G-Sensor.

5. Choose a suitable location for the GPS, it must be mounted with the GPS logo facing up with adequate access to signal, mounted to the top of the dash or similar, it can be mounted under the dash if the dashboard is plastic and does not have any steel panel or vehicle electronics in the chosen location that could inhibit the signal, the GPS cable can be extended using a typical 75ohm 3.5mm male to 3.5mm female extension lead if required.

6. Choose a suitable location for the emergency remote key, the remote key has an LED status light and also contains the microphone so choose a suitable location that will allow access and does not block or inhibit the microphone function, the LED status light can be disabled in the settings menu if preferred.

7. The power supply is the three wire type, and has a four position switch for setting the cut off voltage threshold of your vehicle battery. Once the threshold has been set, power will be automatically terminated if power consumption drains the battery beyond this point. As a reference, please use the top row [L-R 11.8v, 12.v, 12.2v, 12.4v] for 12V batteries, and the bottom row [L-R 23.6v, 24.0v, 24.4v, 24.8v] for 24V batteries, input voltage detection is automatic.

   In colder conditions, we recommend selecting a higher voltage threshold on the dipswitch to ensure optimal reserve power.

   [Note] The duration of parking mode recording is decreased in direct proportion to the increase of the voltage cut off threshold. The highest voltage threshold setting will result in a lower

recording duration to provide more reserve power for your vehicle's battery.

8. Before connecting the power supply consult the vehicle user manual to find the location of the fuse panel and select appropriate circuits in your fuse panel for the Battery + (yellow wire) power, and ACC switched (red wire) power that are **not** part of the vehicle safety systems such as airbags, ECU etc, the black ground wire should be connected to a factory grounding point.

   Professional installation is recommended

   Fuse panel information for many popular vehicles can be found at the following websites.

   - http://www.autogenius.info
   - https://fuse-box.info/
   - http://fusesdiagram.com/

[Note] it is necessary to start the vehicle after installation to allow the hardwire kit to detect the default voltage and set a reference voltage level.

9. Ensure a suitable memory card is correctly installed and has been formatted in the camera before use, consult your dealer for information about the correct type of memory cards to use.

CPL FILTER

The included CPL filter will help to reduce dashboard reflections which can otherwise inhibit details in some scenes.

Below is an example of the reduction in glare and reflection when using the CPL filter.

[Note] Video performance is adversely affected if the windows are not kept clean, ammonia free automotive glass cleaners are recommended for the inside glass surfaces for optimum results.

HINTS & TIPS

It is essential to make sure the camera has a clear view for best results, automotive glass cleaners should be used to prevent window fogging, using a glass cleaning additive in the washer fluid is also recommended, keeping wiper blades in good working order and replacing them when they start to wear is best practice.
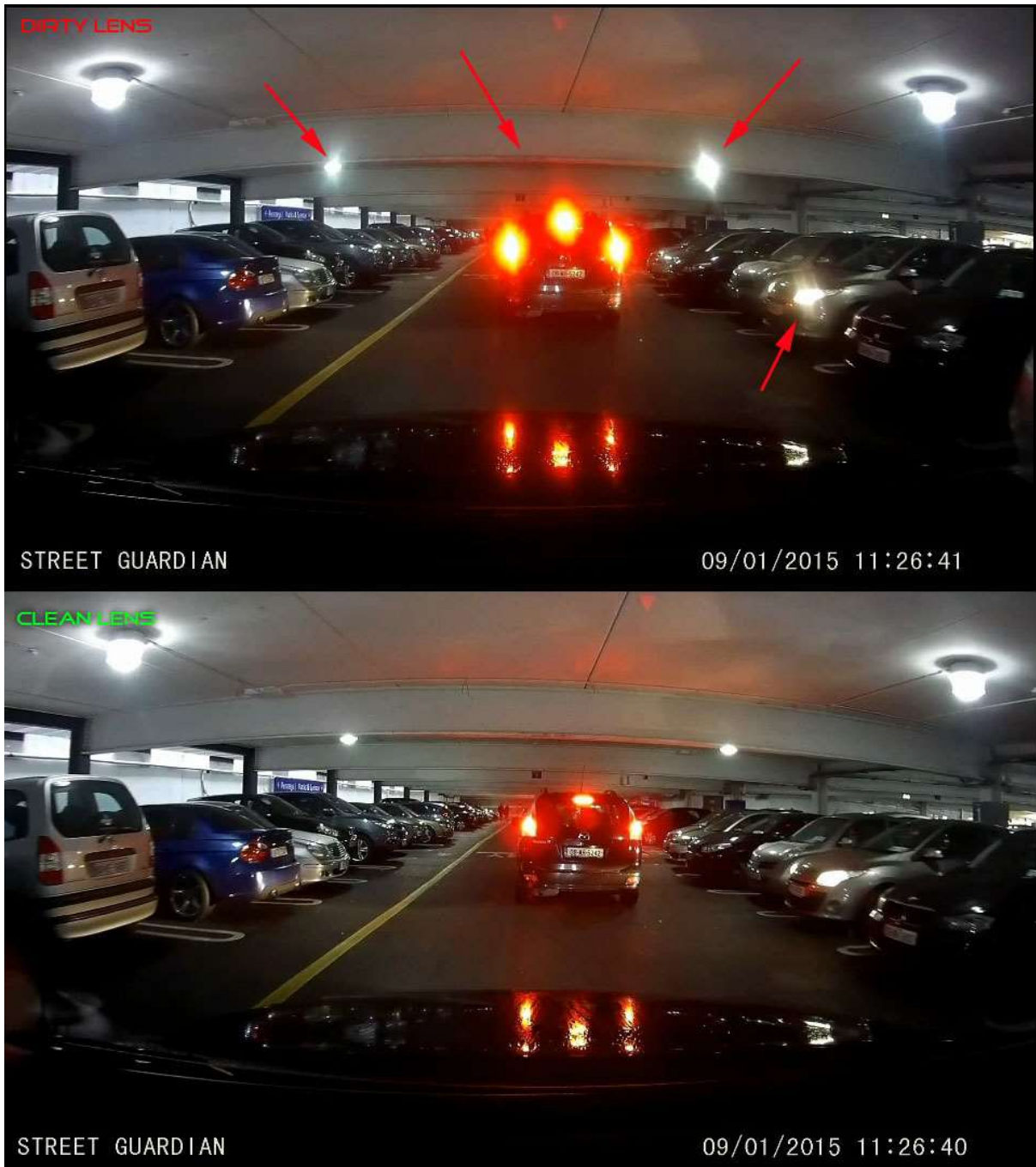
Example above shows side by side video where one camera has a single fingerprint on the lens, keeping the lens clean is imperative.

PLAYBACK AND FILE HANDLING

PC and Mac software for playback and map interpretation of the recorded files can be download from the downloads section of our website https://support.streetguardian.info/downloads

Download the Street Guardian Dashcam Viewer Mobile App. Available on the Apple App Store and Google Play store.

https://bit.ly/SGAPPiOS

https://bit.ly/SGAPPandroid

FREQUENTLY ASKED QUESTIONS

Q. Can I connect the camera to my computer to access the recordings?

A. No, computer access is **not** supported, the power requirements of the camera exceed the output level of most computers, always use a card reader to access files on the memory card.

Q. My vehicle has a USB port, can I connect the DVR there?

A. No, the USB port s a service port, also vehicle USB ports do no supply sufficient output for reliable operation, some may also act as a host to play files through in vehicle media system, these will interfere with the correct operation of the camera system.

Q. Why do I need to set the time zone, doesn't GPS know that already?

A. GPS time information is only transmitted as UTC or GMT 0, the offset to suit your location needs to be set in the camera menu.

Q. How often should I format the memory card?

A. It is good practice to format the memory card on a regular basis and check to ensure the card is in working order, memory cards are a consumable and although they have no moving parts they do wear out. Always format the memory card in the camera if it has been used in another device to view or otherwise manipulate the recordings.

Q. I use a Mac, anything I need to know?

A. Mac can leave hidden system files on the memory card that can prevent the camera from recycling correctly and cause recordings to

fail, **memory cards should always be reformatted in the DVR before use.**

Q. Can I just format the memory card in my computer?

A. It is advisable to only format memory cards in the DVR to ensure the file system parameters are correct, if the memory card becomes corrupt you may need to format the card in your computer to return the card to a default state, then format the card in the DVR before use.

Q. How can I test my memory cards to make sure they are ok?

A. You can download Windows memory card test software from the downloads section of our website

https://support.streetguardian.info/downloads

Q. I have the USB OTG card reader connected to my Android phone but can't see any files?

A. Some models of Android phones will view files without any additional software, for others you may need to use a file browser to access, ES File explorer is a popular file browser which can be downloaded from the play store http://www.estrongs.com/

Q. I need further help, how can I get help?

A. Please open a support ticket for further assistance https://support.streetguardian.info/create-a-ticket

FIRMWARE UPDATE INSTRUCTIONS

Any updated firmware will be made available on the downloads section of our website
https://support.streetguardian.info/downloads

To update the firmware the process is as follows

• Extract the zipped firmware file downloaded from our website

• Delete any files from the memory card

• Copy the firmware SG9663DR.bin file to the empty memory card (Linux/Chromebook users rename file to SG9663DR.BIN)

• Insert the card to DVR (note, cameras must be connected to main unit when updating)

• Connect to power, do not disconnect power at any time during update process

• DVR will power on, screen will remain blank while updating

• Once update has finished DVR will startup as per normal

• Stop any active recording

• Enter settings menu and format the memory card

• Enter settings menu and reset default settings

• Any personalised settings will then need to be re-entered

• Ensure time is synced from GPS before use

• Process is complete

Memory cards can be reset and checked for errors by doing a full overwrite erase using SDFormatter, http://bit.ly/SDformatter

[Note]Memory cards must be formatted in the DVR before use!

TECHNICAL SPECIFICATIONS

Processor	Novatek 96663
Image Sensor front	SONY Exmor R IMX291 Starvis
Image Sensor rear	SONY Exmor R IMX291 Starvis
Lens	f/2.0 Metal Body, 7 Element Glass
Angle of View	112° Horizontal, 135° Diagonal
Resolution	2 x 1920×1080 @15/18/21 mbit/sec
Frame Rate	30FPS
Video Format	H.264 MP4
LCD display	2.7 - inch
Storage Temp	-40°C to +85°C
Operating Temp:	-20°C to +70°C
Optimal Operating Temp:	-10°C to +60°C
Operating Humidity	15% to 65% (RH)
Memory Card	Minimum 32 GB
Memory Card	Supported, 32GB to 512GB*

*Memory cards must be formatted in the camera using the built in formatting menu option, not all brands supported, consult your dealer for recommended memory cards, memory cards must be formatted in the camera to ensure compatibility.

[Note] Specification and features are subject to improvement.

FURTHER INFORMATION

All attempts are made to ensure that the information contained in this user guide is correct at time of publication.

The specifications and details within this guide are based on the Australian market version of the product and are subject to change, the pictures used are for illustration purposes only.

Information about the latest specification, any amendments, the availability of replacement parts and accessories, warranty information, detail of other sales region product specification and the respective user manuals will be listed on the support section of our website https://streetguardian.info/support/

[Note] The information contained in this user manual is based on the features and functions found in release version 1.10

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