

**DRIVESMART**

**SENTINEL**

# Contents

- 2. What's in the box
- 3. Button functionality
- 4. Standby screen explained
- 6. Installation
- 7. Connecting the power lead
- 8. General operation & detection settings
- 10. Using the Sentinel in Europe
- 12. Sentinel menu settings
- 26. Warranty information
- 27. Frequently asked questions
- 30. Types of speed cameras
- 36. Updating the Sentinel
- 42. Connecting the optional rear camera

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## What's In The Box ?

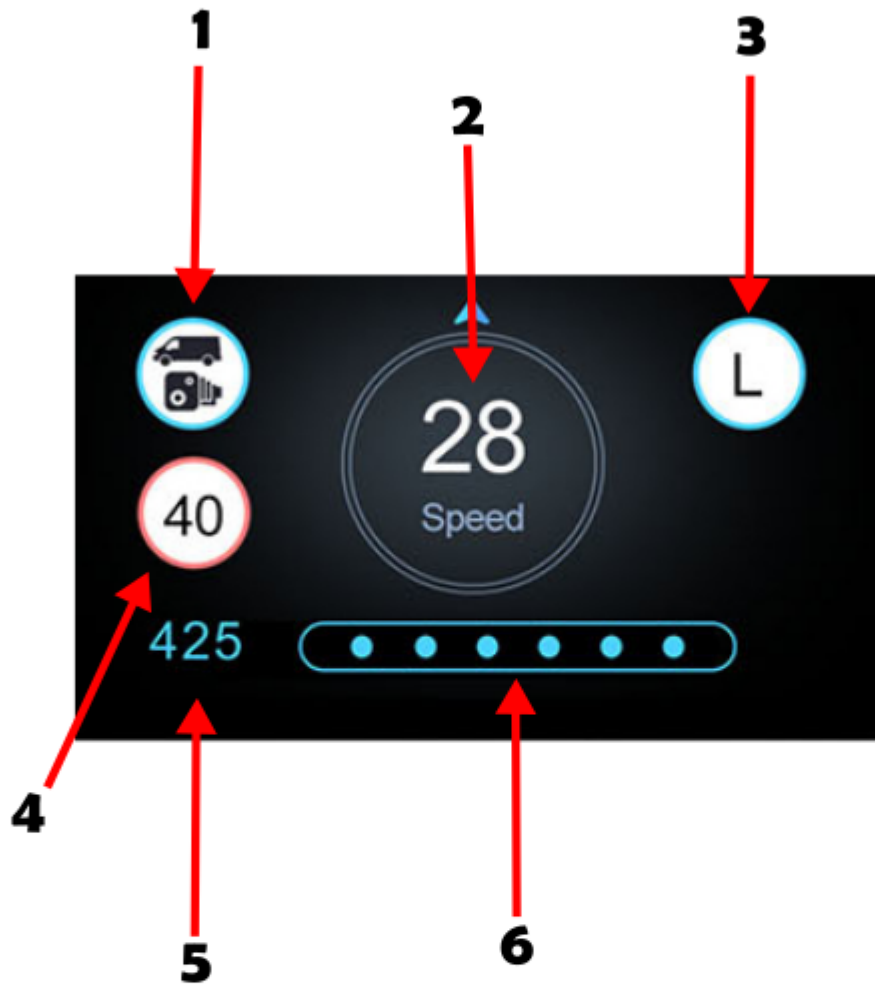
- 1 x Drivesmart Sentinel
- 1 x 12V Cigar Lighter Power Lead
- 1 x Windscreen Mount
- 1 x 32GB Micro SD Card

# Button Functionality



- 1. Windscreen Mount Port
- 2. Power Button
- 3. Still Camera Select
- 4. OK / Select Button
- 5. Menu Select
- 6. Screen Brightness Toggle
- 7. Volume Toggle
- 8. Hands Off Mute Gesture Sensor

# Standby Screen Explained



- 1. Type Of Speed Camera Detected
- 2. Your Vehicle Speed
- 3. Type Of Live Camera Detected
- 4. Speed Limit Of The Road
- 5. Distance To Camera
- 6. Visual Countdown To Camera

## Installation


The Drivesmart Sentinel windscreen mount is made up of two parts, illustrated below. The main part of the mount with the windscreen sucker, and a high powered magnet that holds the mount to the Sentinel.



Connect these two parts so they snap into place.




Now you are ready to attach the mount to the unit. Slide the clip at the top of the mount into the top of the Sentinel.



Mount your Sentinel in a secure and convenient location on the front windscreen, where it has an unrestricted view of the road ahead, using the suction cup bracket.

Once you have found a good spot, press the suction cup bracket against the windscreen and make sure it is secure before pulling down the locking mechanism.

You will need to connect the mini USB in car power lead to the top of the device and plug the other end into your cigarette lighter / 12V power socket, so find a spot where you can accomplish this without obstructing or endangering the driver or passengers.



## Connecting The Power Lead

Connect the power cable's mini USB end to the unit's mini USB, DC-5V, connector on the side. Connect the opposite end of the cable to a 12V cigarette lighter outlet in your vehicle.




# General Operation

The Sentinel has been shipped with settings set for optimum UK Performance as follows:


## Radar / Laser Alert Settings

X Band - Filtered  
K Band - On  
Ka Band - On

## GPS Alert Settings



Speed Trap Alerts - On  
Red Light Cameras - On  
Mobile Speed Trap Locations - On  
Smart Filter - On



## Menu Settings

If you want to change these setting to suit your own requirements, please follow the instructions below.

## Radar / Laser Settings

It is possible to fine tune the Sentinel to the specific country that you reside. To do this enter the Menu by pressing the 'M' button on the right of the unit. Use the '^' to scroll to highlight the option you wish to change.



## Using The Sentinel While Driving In Europe


Below you will find the correct configurations for a selection of European countries

### **Germany / Austria**

#### ***Radar & Laser Alert Settings***

X Band - Filtered  
K Band - On  
Ka Band - On  
Laser - On

GPS Alert Settings  
Speed Trap Alerts - On  
Red Light Cameras - On  
Mobile Speed Trap Locations - On



### **Spain / Portugal**

#### ***Radar & Laser Alert Settings***

X Band - Filtered  
K Band - On  
Ka Band - On  
Laser - On

GPS Alert Settings  
Speed Trap Alerts - On  
Red Light Cameras - On  
Mobile Speed Trap Locations - On



## Italy

### ***Radar & Laser Alert Settings***

X Band - Filtered

K Band - On

Ka Band - On

Laser - On

GPS Alert Settings

Speed Trap Alerts - On

Red Light Cameras - On

Mobile Speed Trap Locations - On

**WARNING. Be advised that it is illegal to use a GPS / Laser / Radar Detector in France. We do not recommend you use Drivesmart products in France**

If you are planning to drive in any country, including those listed here, please research their laws in relation to speed camera detection.

If you are caught using a speed camera detector in any country that has outlawed their use, you will be liable to some form of punishment.

These might include a heavy fine and seizure of your speed camera detector.

## GPS Speed Camera Settings

GPS Speed Camera Settings control the alerts to locations stored within the Drivesmart speed camera database. These locations can be switched on and off to suit your individual needs.

Speed Camera

On / Off

Traffic Light

On / Off

SPECS Camera

On / Off

Mobile Camera

On / Off

To enter the menu, press the 'M' button on the top of the unit. Use the '^' to highlight which option you want to toggle. To select press the 'OK' button.



## Warning Distance

Use this option to set the distance you want to be warned from, when approaching a speed camera detector.

Press the 'M' button to enter the menu. Press the '^' button to select the Warning Distance option and press the 'OK' button.

Now you can use the same buttons to select your appropriate warning distance from the following options:



**200m, 300m, 400m, 500m, 600m, 700m, 800m, 900m, 1000m, 1100m**



## Distance Mode


On / Off

Use this option to turn off warning distance

## Smart Radar

On / Off


Turn this option on to only receive live radar alerts from locations that are listed on the speed camera database.




This filters out locations like supermarkets or hospitals that use radar proximity sensors on their sliding doors.

Press the 'M' button to access the menu. Now press '^' to scroll to the Radar Smart Mute option. Once highlighted, press the 'OK' button. Now you can select from the On / Off options.

### My Top Speed



Turn this option on if you want an alarm to be triggered when your vehicle goes over a certain speed. Bear in mind this alarm will go off every time you go over the speed you set.



For example, if you set it to 40, the alarm will go off every time you go over 40MPH, regardless of the road speed limit.

To set an over speed warning, press the 'M' button to access the menu. Once in, use the '^' to scroll to the over speed warning option.

Make sure this is highlighted and press the 'OK' button. Set your over speed warning from the following options:

**Off, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90.**

## Continuous Alarm

On / Off

This option will give you a continuous alert when you are over the defined speed set in the My Top Speed section. Can be switched on / off

## AI Smart Filtering

On / Off

Additional radar filtering for vehicles that use radar sensors for collision detection and lane guidance. Can be switched on or off.

To access, press the 'M' button on the underside of the unit. Once in, use the '^' to scroll to the filtering system option. Make sure this is highlighted and press the 'OK' button. Select on or off.

## Speed Calibration

This allows you to adjust your real time GPS speed so it matches your speedometer. Your cars speedometer will read higher than your GPS speed. The GPS speed is the more accurate of the two.

**-5, -4, -3, -2, -1, 0, +1, +2, +3, +4**

## Continuous Alarm

On / Off

This option will give you a continuous alert when you are over the defined speed set in the over speed section. Can be switched on / off

To adjust your GPS speed, press the 'M' button to access the menu. Now press the '+' to scroll through the menu until the Speed Adjustment option is highlighted.

Press the 'OK' button to enter this option and scroll through to set your preferred adjustment.

**Off, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90.**

## Laser

On / Off

This option allows you to switch off mobile laser detection. Please note, we strongly advise you keep this option switched on.

## K

On / Off

This option allows you to switch off live K Band radar detection.

## Ka

On / Off

This option allows you to switch off live Ka Band Radar Detection.

## Dark Mode

On / Off

Use this mode when driving at night. The sentinel screen will go off, so you are not dazzled by the light when driving in the dark.

## Auto Range

On / Off

This will increase the warning distance based on your speed. So, if you are driving on a motorway, it will increase the warning distance by a specified range to offset your speed.

## Speed Limit Mode

Allows you to switch between MPH and KPH

## Movie Mode

### Movie Mode

Allows you to select the resolution your video will be recorded in. All are recorded at 30 FPS.

**2304 x 1296, 1920 x 1080, 1280 x 720, 640 x 480**

### Movie Quality

Allows you to select the quality your video is recorded in. Options are Fine, Super Fine.

### Motion Detection

Allows you to select the sensitivity of the motion detection sensor, which will trigger a recording. Options are Off, Low, Medium, High.

### Motion Event Rec

Allows you to specify the time of any recording that is triggered by the motion detection sensor. Options are 5 sec, 10 sec, 30 sec, 1 min.

### Sound Rec

Allows you to toggle sound recording. Options are On / Off.



## Mic Sensitivity

Standard / Low

## Scene

Options are Auto, Sports, Portrait, Landscape, Snow, Beach, Fireworks.

## Exposure

Options are -2, -1, 0, +1, +2

## White Ballance

Options are Auto, Daylight, Cloudy, Flouesc, Flouesc1, Flouesc2, Incandesc

## ISO Sensitivity

Options are Auto, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200.

## Colour

Options are Natural, Vivid, Pale

## Photos Mode

### Still Image Size

Allows you to set the size of any still image captured by the Sentinel. Options are 3 Megapixel, 2 Megapixel, 1.2 Megapixel, VGA.

### Still Quality

Options are Super Fine or Fine.

### Scene

Options are Auto, Sports, Portrait, Landscape, Snow, Beach, Fireworks.

### Exposure

Options are -2, -1, 0, +1, +2

### White Ballance

Options are Auto, Daylight, Cloudy, Flouresc, Flouresc1, Flouresc2, Incandesc

### ISO Sensitivity

Options are Auto, ISO100, ISO200, ISO400, ISO800, ISO1600, ISO3200.

### Colour

Options are Natural, Vivid, Pale

### Effect

Options are Normal, Sepia, B+W, Negative.

## Playback Mode

### Volume

Set volume level for all videos played back.

### Delete

Use to select single video to delete, or delete all videos from the SD card.

### Protect

Use to protect a single video from being deleted, or to protect all videos from being deleted.

### Video Type

Options are Normal, Parking, Emergency.

## Media Tool

### Format SD Card

We recommend doing this every time you need to format the SD card before running a new update.

Options are Yes / No

### SD Card Info

Use this option to view SD card diagnostic information.

## Media Tool

### Format SD Card

We recommend doing this every time you need to format the SD card before running a new update.

Options are Yes / No

### SD Card Info

Use this option to view SD card diagnostic information.

## General Settings

### Date Format

Allows you to select a number of available date formats. Options are YYYYMMDD, MMDDYYYY, DDMMYYYY.

### Stamp

Options are Date & Logo or Logo.

### Flicker

Options are 50Hz, 60Hz.

### LCD Rotate

Options are On / Off.

### LCD Power Save

Options are Off, 1 Min, 3 Min.

### Protect Level

Options are Off, Low, Medium, High.

### GPS Status

Shows GPS diagnostic data.

## Time Zone Select

Use to adjust clock to match your location. Options are GMT -3:00, GMT -2:00, GMT -1:00, GMT +1:00, GMT +2:00, GMT +3:00, GMT +4:00.

## Reset Setup

Use this to perform a factory reset. Options are Yes / No.

## WiFi

Options are On / Off

## FW Version

Select this to check your firmware version (which update you have installed).

## **Warranty**

### **Having a problem with your Drivesmart Sentinel ?**

Your Drivesmart Sentinel comes with a 12 month warranty. To return your unit, please ship in protective packaging using tracked delivery.

**DO NOT SEND SPECIAL DELIVERY.**

### **Returns**

**Trading Direct Ltd  
Unit 2 Francis Place  
Pirbright  
Surrey  
GU24 0JU**

Please enclose the following information:

- (a) Name, address, description of issue.
- (b) A contact telephone number.
- (c) A copy of proof of purchase.

Please note that the warranty will be considered void if the product:

Has been dropped or otherwise obviously mistreated.

Has been subjected to heat, moisture or damp conditions.

Has been opened or dismantled.

Has been charged or powered with any cable or charger other than the one supplied.






## Frequently Asked Questions

**I drove past a camera van and my detector did not go off.**


Mobile camera vans and police units do not fire at every vehicle that drives past. If you are driving at the speed limit, they will not fire.

**I performed the latest database update and now my Sentinel is no longer working.**

Downloading an incorrect database will cause your unit to fail. If this happens, download the correct database and update again.



**When driving, I am getting audio alerts but the screen is blank.**



Your unit is probably in Dark Mode. Scroll through the menu and uncheck this option. Dark Mode enables you to toggle off the display when driving at night. This reduces glare that you might find distracting.

**The speed displayed is incorrect**

Scroll through the menu and make sure your speed is displayed in either MPH or KPH, according to your preference.

**The display turns off after a few seconds and only comes on to give an alert.**

Scroll through the menu and turn off Dark Mode. This is used for night driving. It darkens the display, but keeps the audio alerts active.

**The unit powers up when connected to a PC but not when connected to a cigar lighter socket.**


This generally means you have an incorrect database on the unit. It might also be a faulty power lead. If the new database doesn't solve the issue, give us a call on 01483 522 225.

**I am getting lots of false alerts when I drive past supermarkets, hospitals or when in built up areas.**

Scroll through the menu and make sure you have Radar Smart Mute and Filtering System switched on.

**The Drivesmart Sentinel keeps telling me I am over the speed limit.**


Scroll through the menu and make sure you have Overspeed Setting off.




**The speed shown on the Sentinel is much faster than my actual speed.**

You probably have the speed set to KPH. This can be changed in the settings.

**The speed shown on the Sentinel is slightly slower than my actual speed.**



This is a feature of modern cars which are over calibrated so they cannot be culpable in any speeding offence and to allow for changes in wheel or tyre sizes. There will be some lag in acceleration or braking but at a constant speed, the Guardian will be more accurate. There is a setting in the menu to add a few MPH to the shown speed to level this up should you want to.



**The clock time is wrong by a whole hour or more.**

You can change the clock time to adjust for GMT / BST and European time zones. Scroll through the menu and add or remove an hour or more as required.

## Types Of Speed Camera

### Gatso



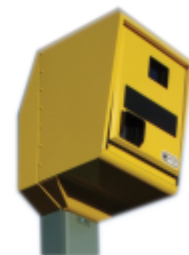
The Gatso Speed Camera was introduced to Britain's roads in 1992. Since then it has become the most commonly used camera on our roads. Their yellow colour makes them very easy

to spot, and they are always in a fixed spot, so their locations have been thoroughly mapped on the GPS Database.

Gatso Speed Cameras are rear facing and use radar technology to measure how fast a vehicle is travelling. If the vehicle is travelling above the speed limit, the Gatso camera uses a powerful flash to illuminate the rear of the vehicle, showing the numberplate. The camera will not flash a vehicle from the front, to avoid blinding oncoming motorists.

There are a number of Gatso cameras, up and down the United Kingdom, that are not operational.

So occasionally they do not go off. However, in 2007, the updated Gatso camera was introduced onto the UK's roads.



They are much larger than the original Gatso and are now completely digital. This means they no longer run out of film and require very little maintenance so will be on all the time.

## Types Of Speed Camera

### Truvelo



Truvelo cameras are forward facing, the advantage being that the photos taken show the driver, clearly, at the time of the speeding offence.

Truvelo cameras use four piezo sensors, embedded into the road surface, to calculate the passing vehicles speed. As the driver passes over these, the time difference between sensors is used to measure the vehicle speed.

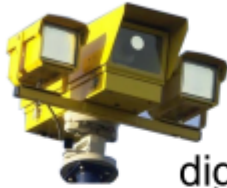
In addition, there are 3 white painted lines approaching the Truvelo camera. When the camera is triggered, it uses an infrared flash (to not blind the driver).

The photo is taken when the vehicle is on the middle of the 3 lines and  $\pm 10\%$  of the other 2. This acts as a secondary method to calculate the vehicles speed and is a legal requirement for any unmanned speed camera in the UK.

Truvelo cameras are not as common as Gatso cameras in the UK overall, but some county's do favour their usage. Northamptonshire and Hampshire for example.

## Types Of Speed Camera

### SPECS



SPECS average speed camera systems combine cutting-edge video technology with ANPR (Automatic Number Plate Reading) digital technology. Each SPECS camera has infrared illuminators mounted on gantries above the road, allowing it to operate at all hours of the day and night.

SPECS speed cameras are placed in numerous locations (at least two, at least 200 metres apart) along a single stretch of road to track your average speed on that road.

SPECS average speed cameras work and track your speed over a predetermined distance, which could be many miles, unlike conventional fixed speed cameras that capture your speed at a specific place on the road.

Because they are permanent or fixed long term, they are always listed on the Drivesmart GPS speed camera database.

## HADECS



One of the newest speed cameras to be put on UK highways is the HADECS 3, which stands for Highway Agency Digital Enforcement Camera System 3.

Because the cameras are compact and painted grey rather than glaring yellow, the Redflex HadeCS3 is being dubbed a "stealth" speed camera by motorists and the media (a colour that has become synonymous with speed cameras since 2003).

As a result, the new REDFLEX hadecs3 camera is difficult to spot on the side of the road or within overhead gantries.

HadeCS 3 cameras installed along the side of the highway automatically adjust to the new enforced speed limit to keep traffic moving during rush hour.

Changes to the enforceable speed limit display are monitored by a pole-mounted external aspect verification (EAV) system situated ahead of the motorway variable message signs (VMS), which signals the camera system to set new enforcing speed limit thresholds accordingly.

HADECS 3 camera locations, for the most part, have all been mapped. Because of this they are all listed on the Drivesmart GPS database.

## Mobile Speed Cameras



On UK roadways, there are numerous distinct types of mobile speed cameras. Some of the more prevalent are explained below.

### How do mobile radar guns work ?

To target a vehicle, handheld radar systems use radio waves. When a vehicle passes by, the radio waves are reflected back to the radar receiver, allowing the handheld radar gun to calculate the vehicle's speed.

The police officer must acquire the speed reading in no less than three seconds. These devices have a 300-yard range.

### How do mobile laser guns work ?

A small beam of light, roughly 10cm wide, is fired by laser handheld speed camera guns.

This laser beam bounces off the target car and provides a speed reading to the police officer.

Because the speed is shown within 0.5 seconds of use, speed camera detectors will give you no advanced warning that a laser is being used. Laser speed guns have a range of around one mile.

### Marked and unmarked Police cars

Although the police have a variety of tools at their disposal for measuring and recording speed, they can also rely on the speedometer on their car. If they



suspect a speeding motorist, they can merely follow him or her for a minimum of 2/10 mile (1056 feet) before pulling the vehicle over and issuing a warning, issuing a Notice of Intended Prosecution (NIP), or considering court action depending on the speed.

A 'follow check' is a sort of speed check that can be conducted by marked or unmarked police cars. Their speedometer, on the other hand, must be properly calibrated and examined on a regular basis.

### **Traffic light cameras**

Traffic light (or 'red light') cameras use sensors or ground loops in the road to identify vehicles that pass through the lights, after they've turned red.



When the traffic lights turn red, the system activates, and the camera prepares to capture any vehicle that drives over the trigger.

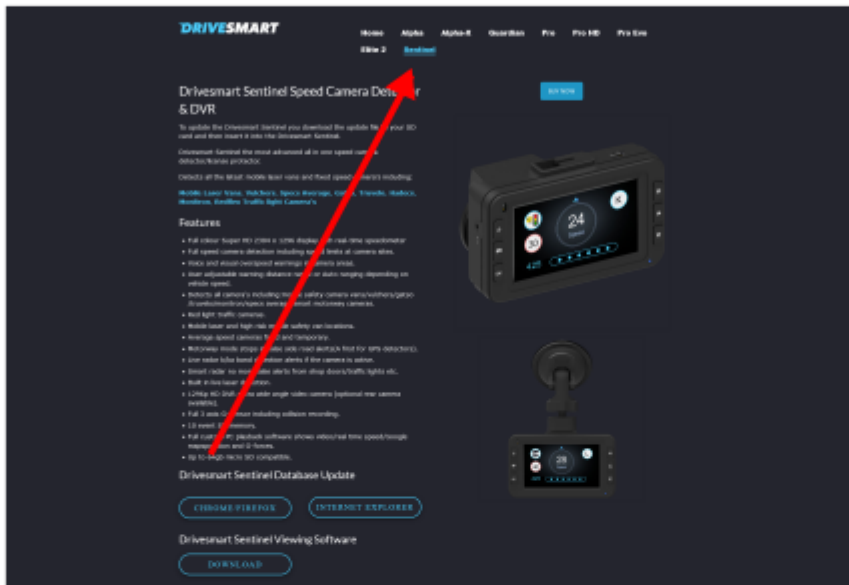
If a traffic signal has gone red, it is an offence for any portion of your vehicle to cross the white stop line.

Gatsometer manufactures the great majority of red light cameras in the United Kingdom. These Gatso RLC 36 units also have built-in radar technology with dual speed and red light functions, to catch you, if you put your foot down as they start to change.

Red light cameras are always found on the Drivesmart database, so you will get an alert way ahead of time.

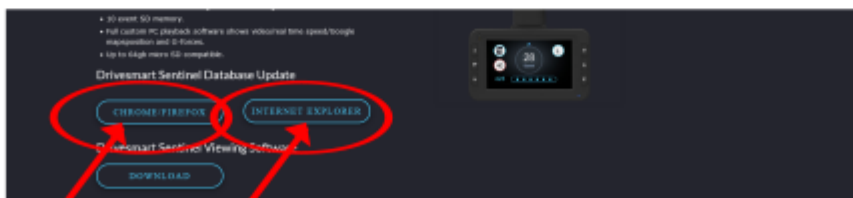
# Updating The Drivesmart Sentinel

1. Go to the [www.drivesmartpro.com](http://www.drivesmartpro.com) website using your browser.

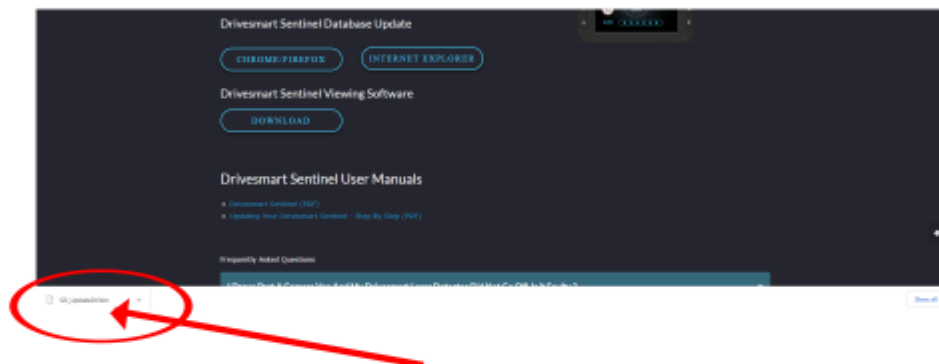


2. **IMPORTANT !** Go to the Sentinel tab along the top of the webpage. Choosing the incorrect download may stop your device from working.

3. At the bottom of the page you have two download options. Pick the option that corresponds to the web browser you are using.



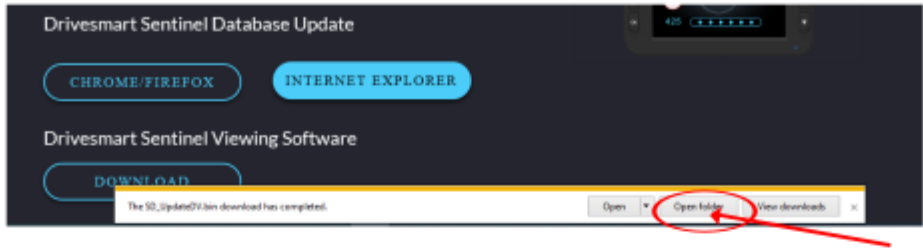
3. When the download appears at the bottom of the screen, click the small UP ARROW to bring up the option to 'SHOW IN FOLDER'. The FILE EXPLORER window should then show you a .BIN file in your DOWNLOADS folder. Now - If you are using the CHROME / FIREFOX download, jump to STEP 11.



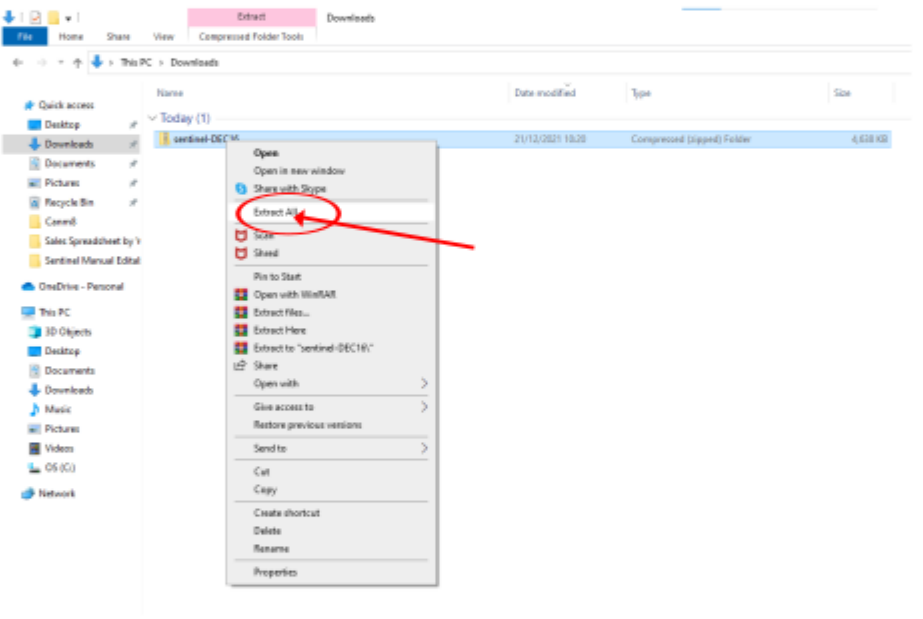
4. If you are using INTERNET EXPLORER, you may have a slightly different download which comes as a .ZIP FILE - the bar will ask you to OPEN / SAVE / CANCEL. You need to click the SAVE option and then the OPEN IN FOLDER option.



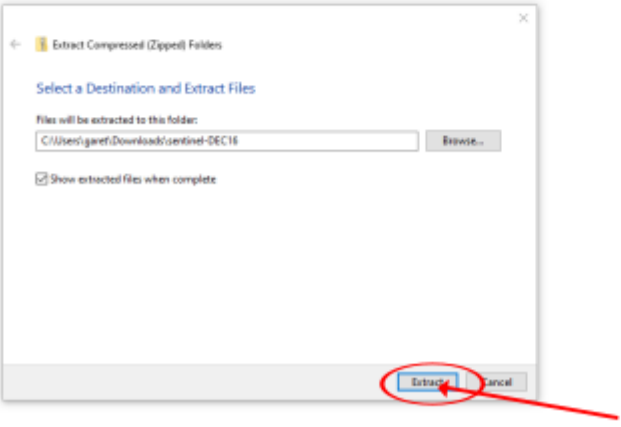
5. When the folder has been saved, you have the option to view where it is located. Click OPEN FOLDER.



6. This will take you into your FILE EXPLORER where you should be able to see where your ZIP file is now located. This will need EXTRACTING before we can upload it your MICRO SD CARD.



7. To EXTRACT the files, you must RIGHT CLICK the ZIP file, and scroll to the option 'EXTRACT ALL.'



7. To EXTRACT the files, you must RIGHT CLICK the ZIP file, and scroll to the option 'EXTRACT ALL.'

8. **\*\*\*IMPORTANT!\*\*\*** This file must always be labelled 'SD\_UpdateDV.bin' in order to work. If your file has a number in the file name (i.e. 'SD\_UpdateDV(2).bin') then you need to edit it accordingly either before or after you have transferred it on to your MICRO SD CARD.

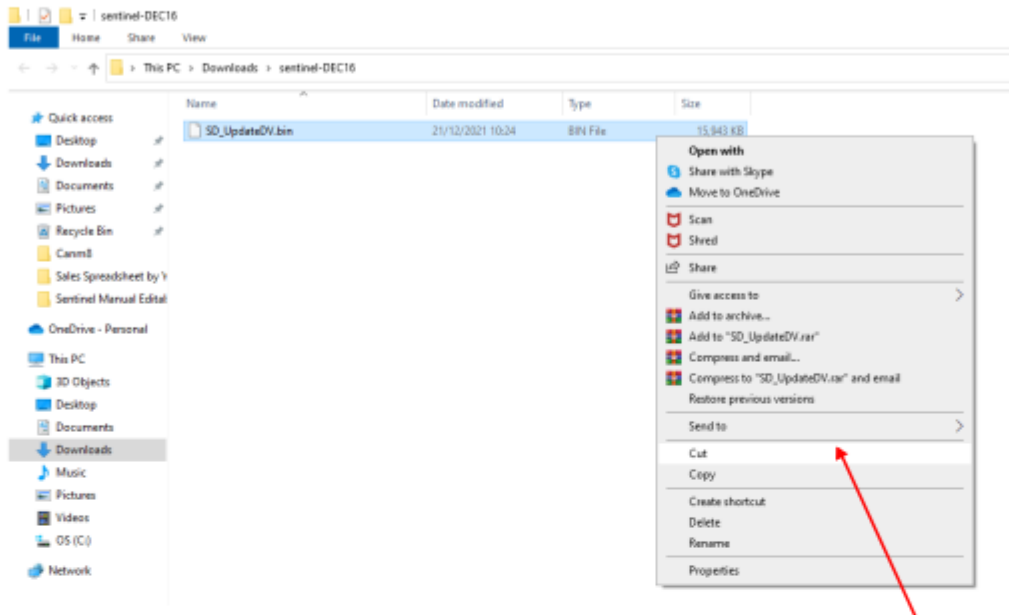
9. We need to now put it on to our ELITE 2 MICRO SD CARD. Start by removing your MICRO SD CARD from your ELITE 2 UNIT.

10. Insert your MICRO SD CARD into your computer using a suitable card slot / card reader.

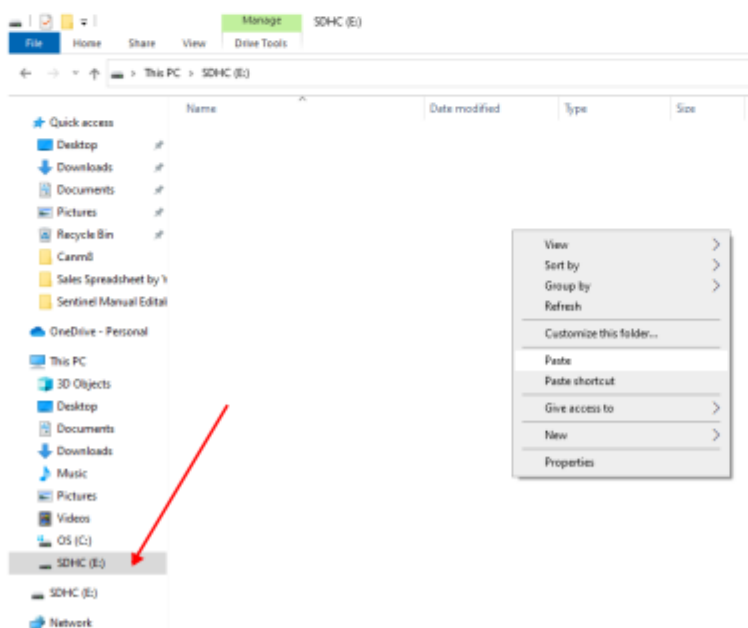


11. Next, we need to open up the FILE EXPLORER on the computer and locate that .BIN file we have just recently downloaded. (Most likely in your DOWNLOADS).

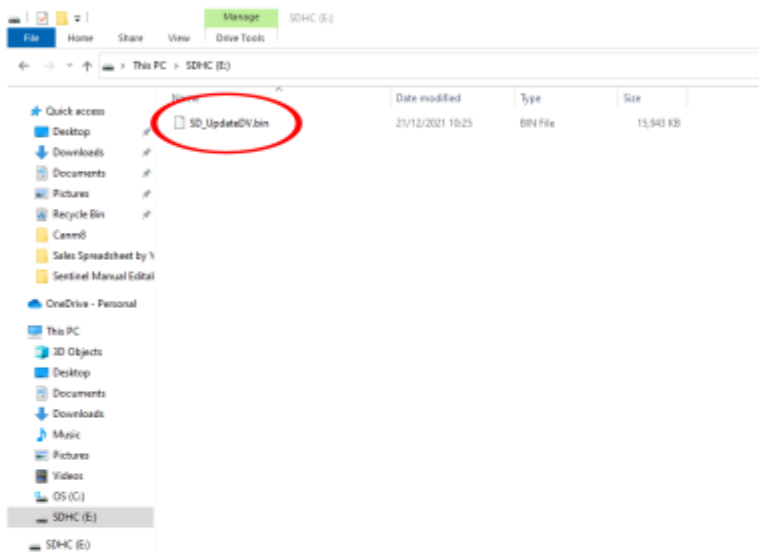
12. We then need to RIGHT CLICK on the .BIN file and scroll to 'CUT'



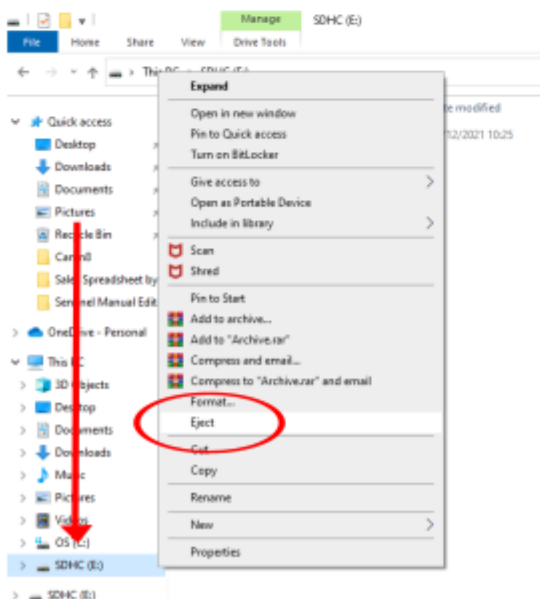
13. Next, while still in the FILE EXPLORER window, we need to locate our MICRO SD CARD main folder which we have just inserted. (You should see it down the left-hand side). Ours is shown as the E: DRIVE, yours may be different.



14. When you find your MICRO SD CARD main folder, open it and simply RIGHT CLICK in the white space to bring up the option to 'PASTE'. Select this to paste the .BIN file on to your MICRO SD CARD.



15. That's now all done. We now just need to safely remove the MICRO SD CARD from our computer. RIGHT CLICK on the MICRO SD CARD main folder and scroll to the option 'EJECT'.



16. You can then remove your MICRO SD CARD from your computer.

17. Place the MICRO SD CARD back into your Drivesmart Elite 2 and then power up the unit.

18. The unit will start to initialise and the new database and firmware will load, indicated by loading bars on the screen. When completed, the unit may need to be restarted.

## **Adding The Optional Rear Facing Camera**

The Drivesmart Sentinel also comes with an optional Rear Camera, which gives complete and all round protection. This works by simply plugging it into the side of the Sentinel.



The camera is also surrounded by a ring of LEDs for nightvision clarity. To enable this feature, you will need to provide power to the LED's by hardwiring them. Hardwire lead is built into the camera. If you do not choose to do this, the camera will

work fine but without the nightvision functionality.

