

USER GUIDE



EVOLIS SOLUTION

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Thank you for choosing Evolis « Solution » radar speed sign. It allows speed reduction by displaying:

- the speed
- a pictogram « warning sign» alternately to excess speeds (optional)
- 5 messages (editable) depending on the vehicle's speed and time of the day

The device also records traffic data (average and maximum speeds, number of vehicles, vehicle distribution per speed, percentiles, and both sides of traffic). Set up and traffic data collection are achieved using « Evocom/Evograph » software and connection with the device is done by USB cable (standard), Bluetooth (optional), touchpad (optional) and G.P.R.S. (optional).

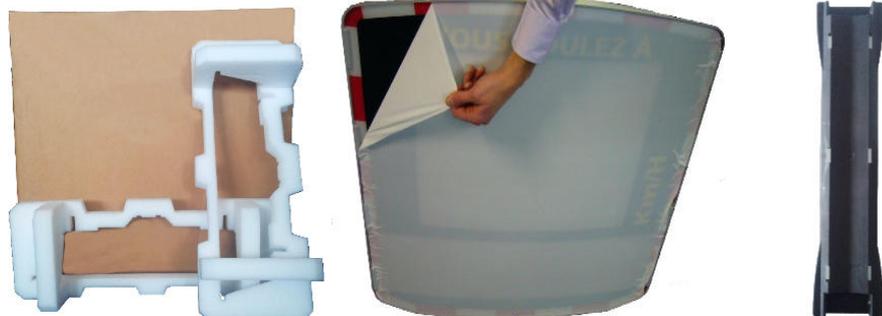
I. DELIVERY

What's in the box:

At delivery, please check the correspondence between the package's contents and the delivery note. Any mistake or any damage related to the transport should be reported to us within 2 working days.

5 elements must be in the box

- Radar Speed Sign « Evolis Solution »
- Vertical mounting bar
- USB cable (5m)
- User guide
- A set of 2 keys for the battery compartment



Please keep original packaging for transport during the 2-year warranty period

Depending on the power supply mode chosen, other accessories may be present:

- Mains / Street lighting



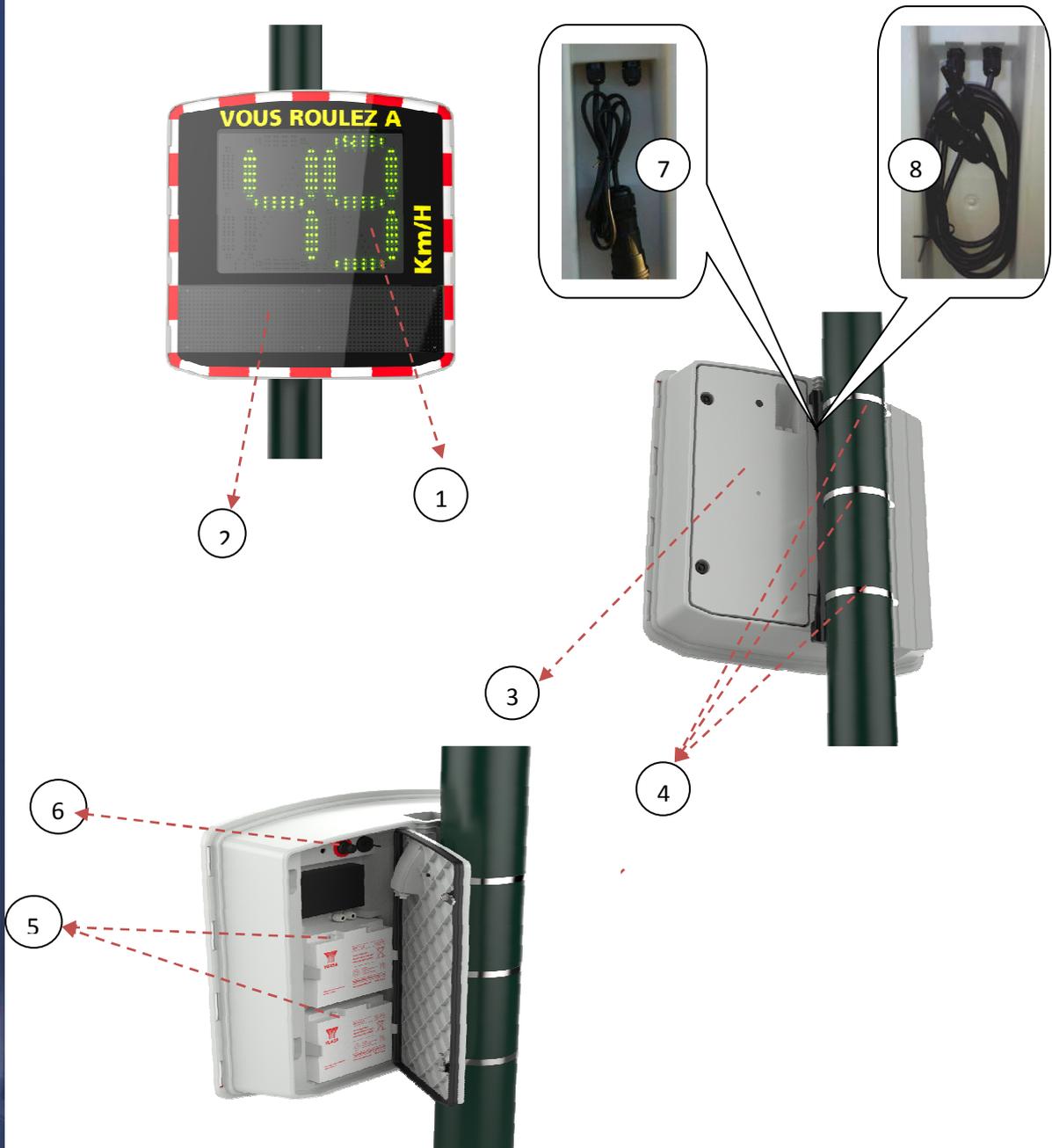
A set of outdoor male/female electric plugs with a 12V/17Ah battery

- Solar powered or with external charger

2 batteries 12V/22Ah



II. PRODUCT DESCRIPTION



1	2 colors speed display (green/amber) + red
2	Message display (amber)
3	Backdoor
4	Pole straps (not included)
5	Battery compartments
6	Dial switch with preset speed thresholds, waterproof USB port and fuse for power supply
7	Electric plug for mains (if ordered)
8	Cables and plugs for connection to solar panel (if ordered)

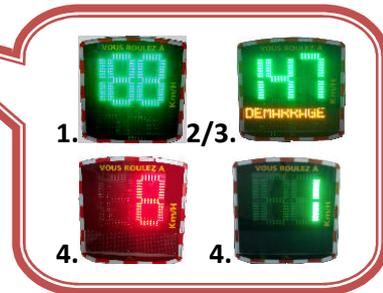
III. INITIAL POWER-UP

a. Auto-test at start up :

Once powered on, turn the dial switch on any other position than OFF (Veille), Evolis Solution will run a quick auto-test:



Speed Display	1	188 in green
	3	Battery voltage level (e.g. : 147 for 14.7 Volts)
	4	Then a red 8 for Bluetooth or a green 1 for GPRS
Text Display	2	test OK or DEMARRAGE



IV. START UP INSTALLATION

a. Current French regulations

Speed Display

It must distinguish posted speed limits from excessive speeds: green or amber for posted speed limit and below; and red for excessive speed

Speed must not be displayed beyond 10 km/h above the posted speed limit in urban areas and 20 km/h outside urban areas. Beyond, and instead of the speed, a regulatory logo type AX14 can be displayed.

No other logo from the AX14 is authorized to be displayed alternately with the speed or beyond the excessive speed (Repeal of Smiles...)

Text Display

No message must be displayed below the posted speed limit (e.g. Thank You...)

Beyond the posted speed limit, the message displayed must be a short warning message: DANGER, SLOW DOWN.....

Legal texts

Decree of November 25, 1967 relative to road signaling (modified in 2011)

Part 9 of the ISSR (Ministerial instructions for road safety)

CERTU recommendations for radar speed signs

** Dimensions of the speed digits and letters must allow the driver to read them safely. Characters must meet the recommendations of Article 11 Part 1 of the ISSR.

b. Pre set-up

Several thresholds can be programmable:

- Minimum speed display
- Threshold for color changing
- Warning threshold before red display
- Flash trigger speed threshold
- Maximum speed display (anti-race)
- Activation of alternate « warning sign » display
- Thresholds of message activation

For quick start-up, all these parameters are already set-up according to usual speed zones with corresponding standard messages.

The dial switch in the battery compartment allows to easily selecting speed and corresponding factory parameters according to the posted speed limit where installed.



Factory parameters SOLUTION :

<u>Position of dial switch</u>	<u>30 km/h</u>	<u>50 km/h</u>	<u>70 km/h</u>	<u>90 km/h</u>	<u>110 km/h</u>	SP *	
						Standard	School function* *
<u>Minimum speed displayed</u>	15 km/h	15 km/h	15 km/h	15 km/h	15 km/h	15 km/h	
<u>Color change</u>	31 km/h	51 km/h	71 km/h	91 km/h	111 km/h	51 km/h	31 km/h
<u>Alert Zone ***</u>	6 km/h	6 km/h	6 km/h	6 km/h	6 km/h	6 km/h	
<u>Flashing threshold</u>	35 km/h	55 km/h	75km/h	95 km/h	115 km/h	55 km/h	35 km/h
<u>Maximum speed displayed</u>	41 km/h	61 km/h	91 km/h	111 km/h	131 km/h	61 km/h	41 km/h
<u>Message n°1</u> 	from 31 to 40 km/h	from 51 to 60 km/h	from 71 to 80 km/h	from 91 to 100 km/h	from 111 to 120 km/h	from 51 to 60 km/h	
<u>Message n°2</u> 	41 km/h	61 km/h	81 km/h	101 km/h	121 km/h	61 km/h	
<u>Message n°3</u> 							from 31km/h



OPTION Display of the warning sign alternately to excess speed or beyond the anti race threshold.

* SP: Specific mode or user mode (Select custom parameters set-up using Evocom software, (see page 15/16)

** School function: (set-up by time slots and days of the week)

*** Activation of amber before red (deactivated by default)

c. Mounting

For best operating performances, please select the location for your radar speed sign according to the following criteria:

- An open field of at least 490ft upstream the sign. This area and the radar beam should be free of any objects (trees, poles, parked vehicles...)

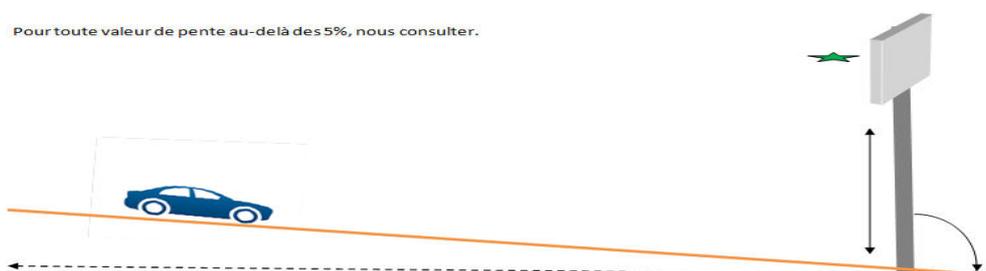


- The speed display should be distant from more than 210ft of large road signs. Otherwise, these road signs may disturb the radar beam.
- Do not install a speed display at crossings or on bridges. Keep a minimum distance of 410ft with cross traffic, to prevent influence on display and traffic data.
- Please make sure the speed display does not interfere in the visibility of road signs.

Installation height: Between 7ft and 16ft (calculated from the bottom edge of the speed display).
 Off road: please do not exceed a 9ft off road

Orientation	• Horizontal
	Evolis Solution must be perpendicular to the road , even by strong off road, in order to keep a maximum range.
	• Vertical
	Sign must be installed straight, unless there is a strong road gradient (+/- 5%). In this case, the sign can be installed with the same angle, using a wedge, in order to optimize the detection range.

Pour toute valeur de pente au-delà des 5%, nous consulter.



For any value
 >5%, please
 contact us

d. Mounting kit

A mounting bar is supplied with the display. Please mount it onto the pole using pole straps (not included). Please watch the mounting direction (up/down). Insert the hooks of the speed display into the bar. You can secure the speed sign with the bar using a key lock (not included). In a safety interest, it is highly recommended to use an aerial lift during the installation of the speed display.

We recommend the following installation procedure:

1. Put the bar onto the pole
2. Install the sign (without the batteries) onto the bar
3. Choose the correct direction and clamp the pole straps
4. Install the batteries, and/or connect the sign with mains

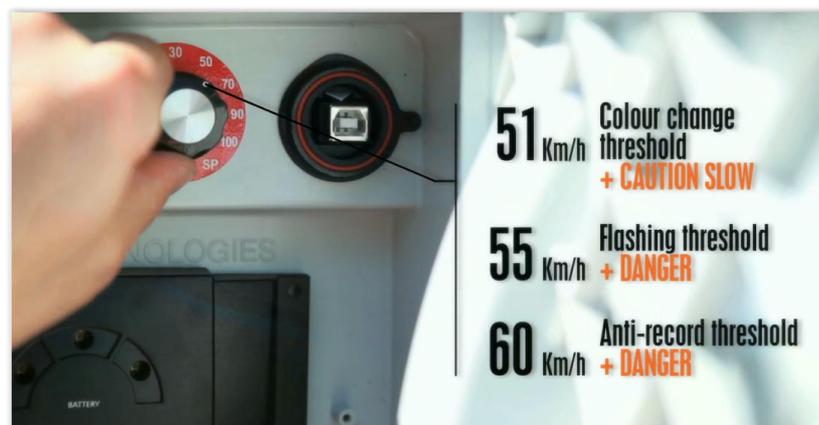


In case of solar power, it is necessary to install the solar panel with its mounting kit before installing the speed sign (**See Solar Panel user guide**)

Verification:

Once the sign has been installed, the detection range shall be between 330 and 820ft, but some items may alter the range: curves, presence of obstacles, fog...

The dial switch located in the battery compartment allows you to choose the speed according to the posted speed limit.

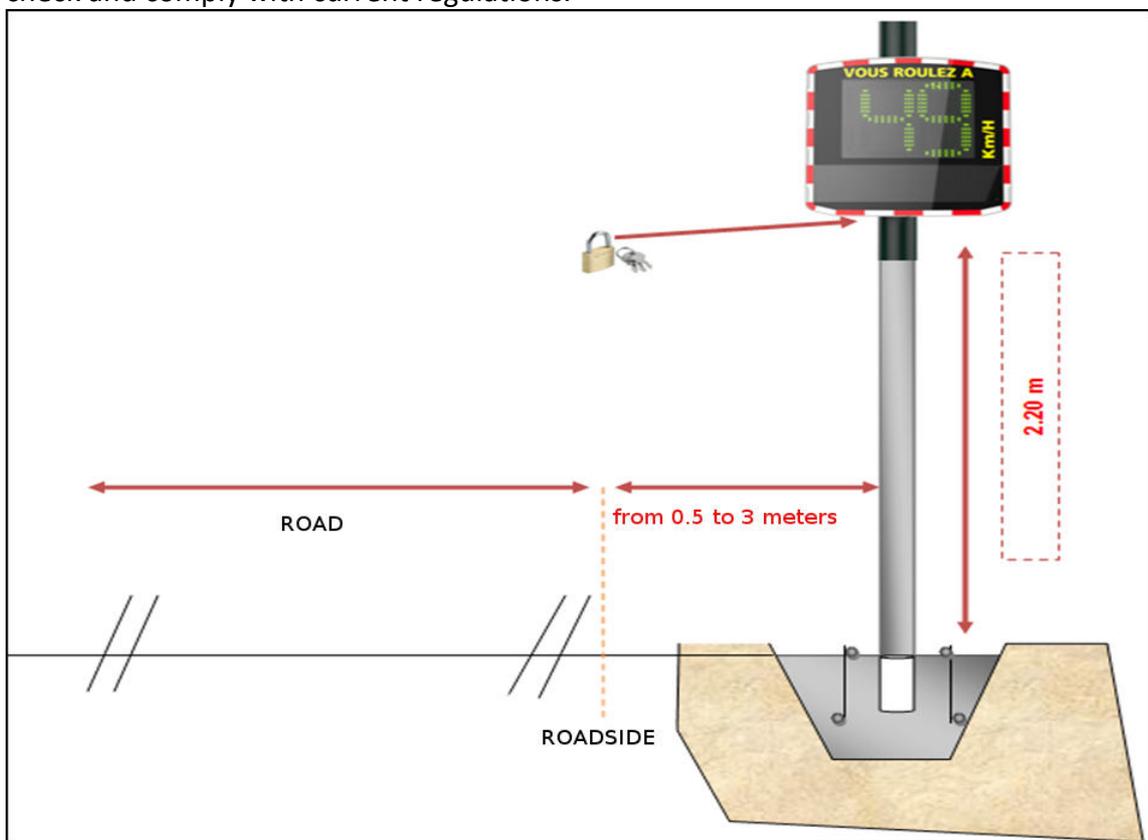


e. Reminder:



Before the installation of your speed display:

- Remember to check and comply with the current regulations concerning working at a height, and make sure to always operate safely for you and the others.
- Also observe the regulations on the construction site signaling applicable to road border interventions.
- Always make sure that the pole on which you install the unit is stable and has a sufficient diameter. If in doubt, consult our sales or service representatives.
- Works on high voltage electrical equipments are subject to authorizations. Remember to check and comply with current regulations.



f. Power supply

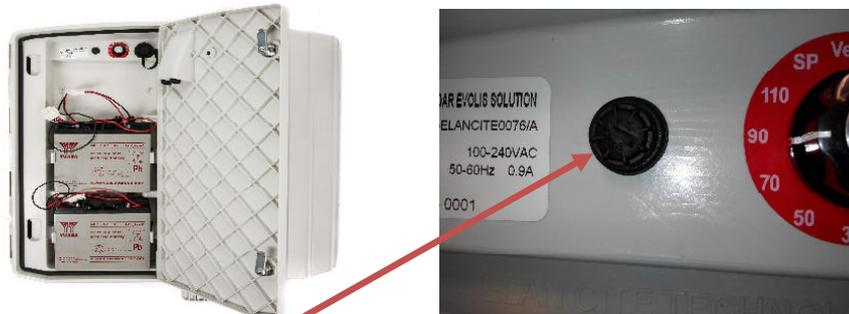
Evolis Solution is 12V powered and design to operate either:

- *connected with permanent mains network or street light and a 12V/17Ah battery*
- *by solar panel with 2 rechargeable 12V22Ah batteries*
- *on rechargeable batteries with an external 12V/4A charge.*

Evolis Solution is protected against batteries deep discharges. Average consumption and wattage:

- Speed: 0,3 A (3,6 Watts at 12V)
- Speed + Message: 0,8 A (9,6 Watts at 12V)
- Standby: 0,1 A (1,2 Watts at 12V)

- Safety feature :
Evolis integrates an intelligent protection process based on battery voltage thresholds:
- Threshold 1: Deactivation of text messages
- Threshold 2: Lower luminosity
- Threshold 3: Display stops in order to avoid deep discharge and battery damage



- Electrical fuses :
A 6,3 A fuse is located at the battery output to protect the device in case of wrong polarity. A second fuse (located in the casing) protects the whole system.



AC power:

For a charge on the street lighting system, Evolis is equipped with:

- a 4 Ah internal charger
- a 12V17 Ah battery
- IP66 male/female plugs for connection to mains

To connect the female plug to the mains, please do as follows:

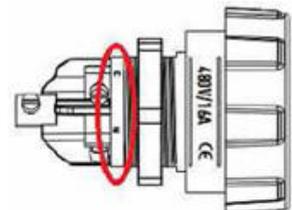
Plug the neutral cable on « N »

Plug the phase on « 1 »

Plug the ground on central plot



Phase	1
Neutre	N



We strongly recommend adding a 30mA caliber 16A type AC breaker upstream the speed sign. ELANCITE cannot be held responsible for damage caused by a poor quality installation. In the absence of circuit breaker, the warranty may not be able to apply in case of failure on the internal electrical charger.



Solar power :

Position the solar panel ideally south. It is also recommended to padlock the system through the hole provided for this purpose (padlock not included). Before connecting the solar panel to the radar, the battery must be installed and connected to the radar. The vertical angle is directly given by the panel structure.



- Please connect using the plug cables.



Mounting: please refer to solar panel user guide.

The location must have a clear view of the sky to enjoy maximum loading capacity. Trees and buildings can cast shadows on the solar panels, thus reducing considerably the performance of solar cells.



Batterie only :

- Mobile use with one or two batteries:

In the case of mobile applications, Evolis Solution is designed to work with one or two batteries. After opening the back door of the unit, install the batteries charged in the slot between the two retaining hooks.

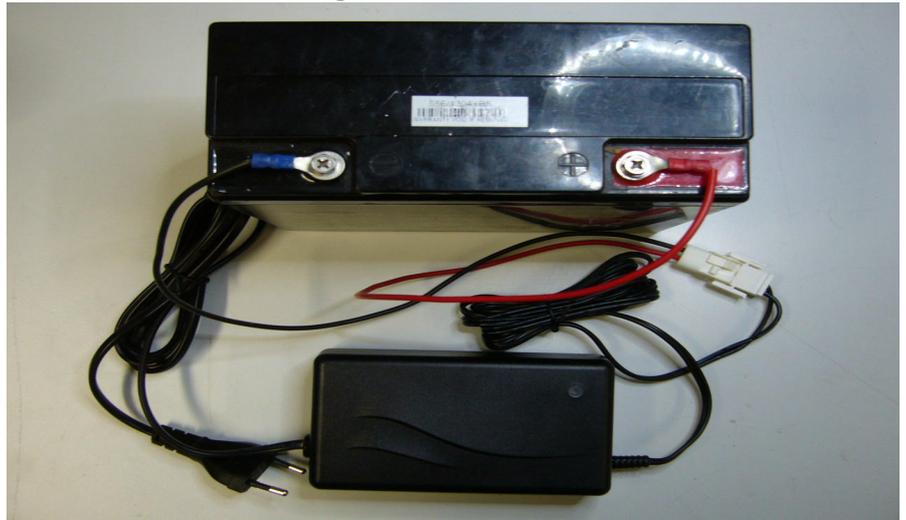
Connect the terminals respecting the polarity and turn the dial to select your speed to suit the current limitation. Check the startup display on the Evolis Solution (self-test: 188 / battery voltage / 8 in red for Bluetooth versions). These are sealed batteries 12 Volts 22 Ah.



Their lifespan depends on the type of use. Autonomy with 1 single battery (without charge) is 3 to 8 days. Avoid moving Evolis Solution with batteries inside for security reasons and weight. If tricolor square is displayed (low battery warning), please replace both batteries with other charged.

Note

The charged battery will discharge gradually even if you do not use it. Please remember to charge the battery before use, to avoid being run out of power when you want to make a replacement locally. For this, use our external charger.



- Load indicator:

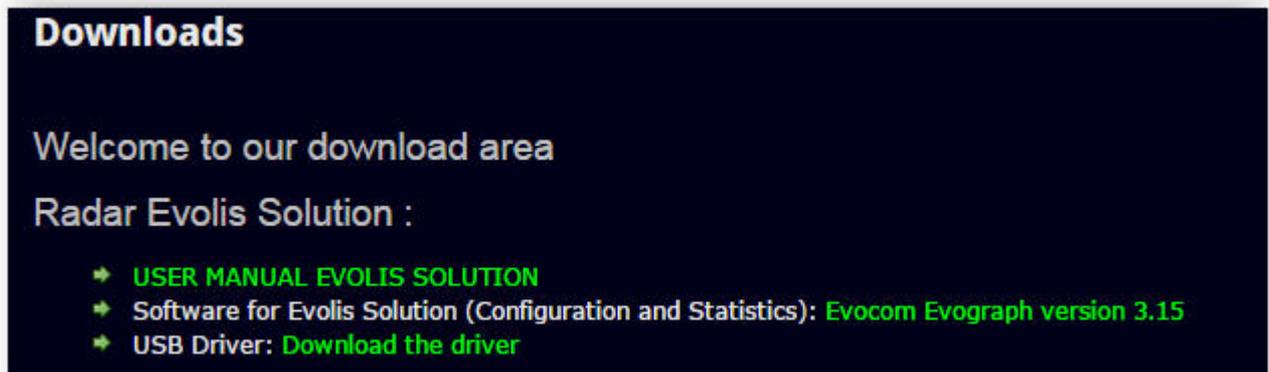
Red	Charge is starting
Amber	Charge in progress
Green	Charge completed

The duration of a full charge is approximately 5 hours. The charging time may vary depending on the remaining battery charge and the conditions under which the charge is made. The battery can be charged even when it is not completely discharged. The charging time indicated above is the charge of a battery (provided by us) discharged to 11.1V.

V. SET-UP AND DATA COLLECTION

All our software programs are available for download on www.elancite.fr, "Customer Area"

Login "**utilisateur**" and password "**radarevolis**".



Downloads

Welcome to our download area

Radar Evolis Solution :

- **USER MANUAL EVOLIS SOLUTION**
- Software for Evolis Solution (Configuration and Statistics): **Evocom Evograph version 3.15**
- USB Driver: **Download the driver**

USB driver:

USB driver is now directly integrated with the software. There is no need to download it separately.

Evocom :

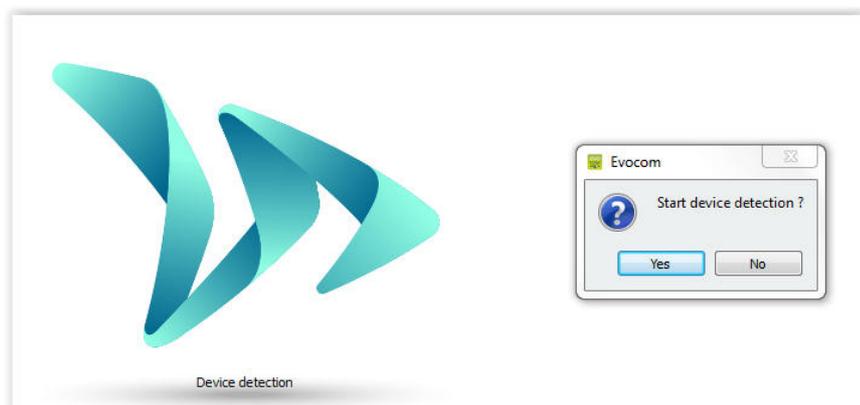


« Evocom » enables advanced set-up of the speed display. Please download "Evocom - Evograph" from the website, then install using "Setup.exe".

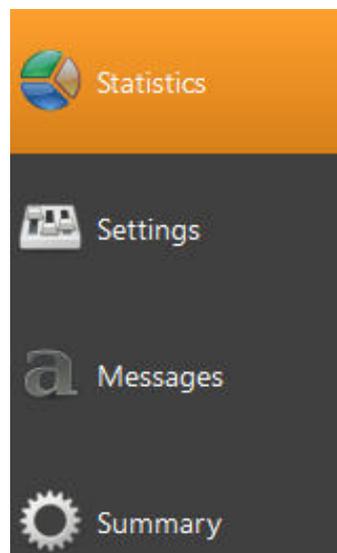
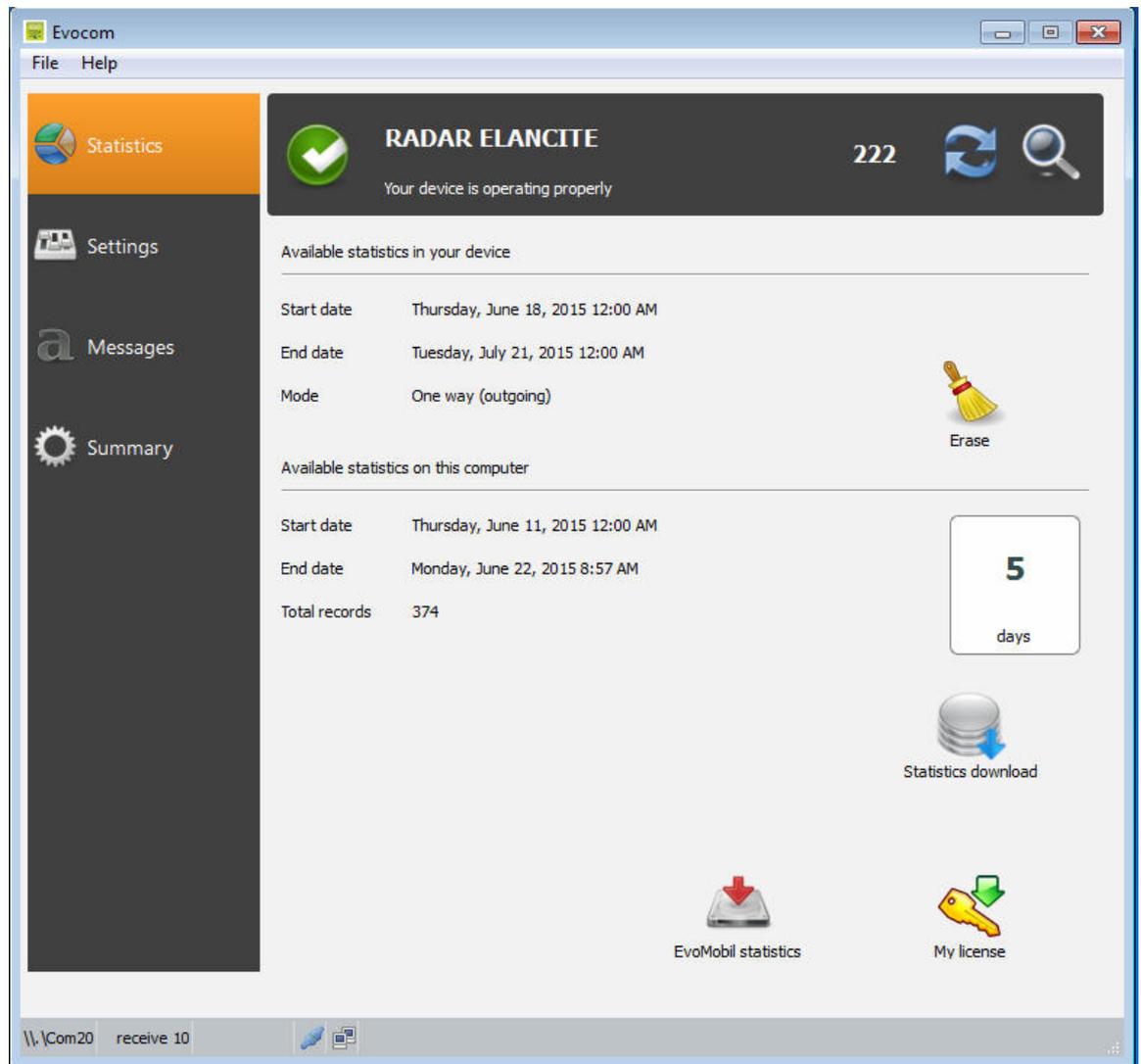


2 shortcuts will appear on your desktop.

To launch the program, double click on the icon EVOCOM on your desktop. The software will propose you an automatic detection of the device. Select YES.



By default, EVOCOM presents you a summary of the statistics available for your radar.

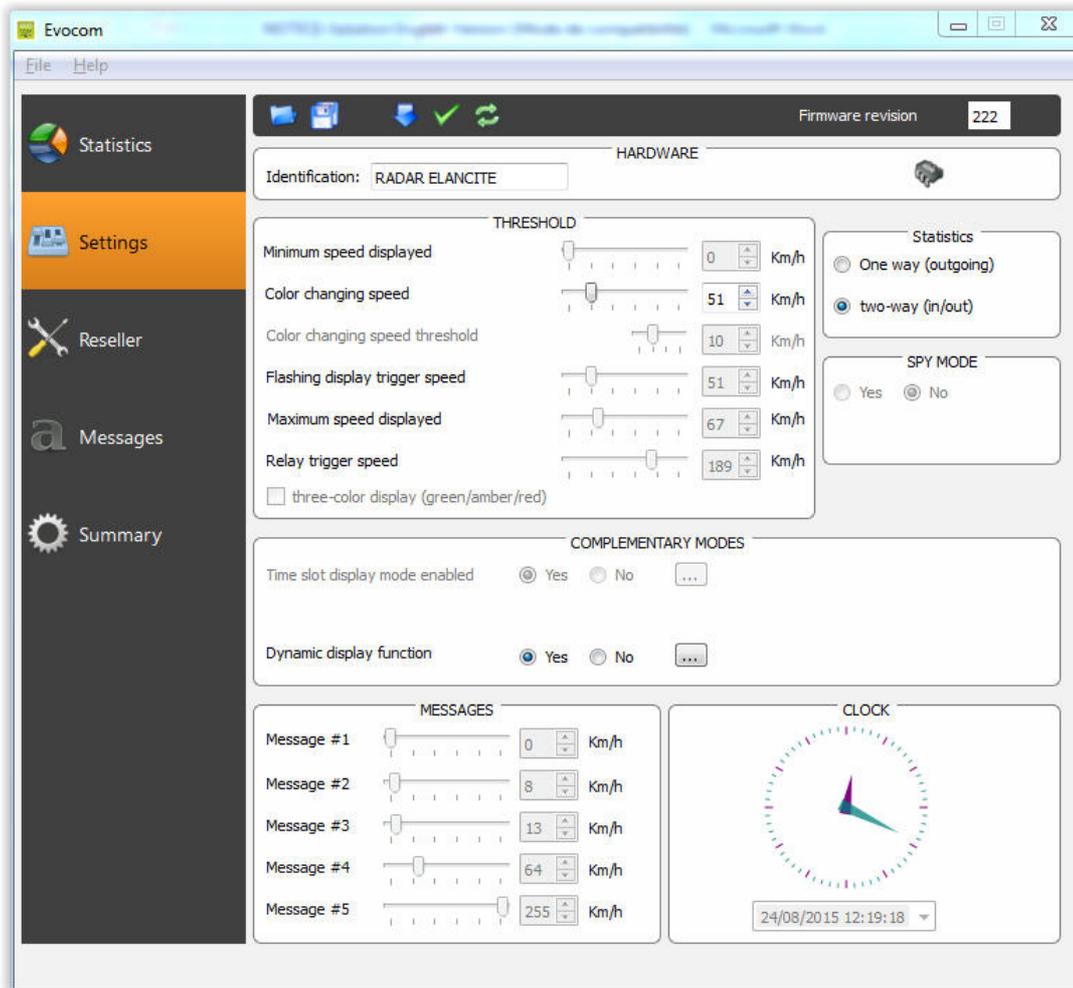


Home screen, management of your statistics and connection to EVOMOBILE

Set-up of the position « SP » for the dial switch

Set-up of the messages

Summary page including all the details of your radar



All the features available in the "Settings" tab (except "STATISTICS" and "SPY MODE») relate to the management of the SP mode (see Configuration Table).

All the programmable thresholds can be seen on the screen. The thresholds indicated are the ones in memory in Evolis. Set up the desired thresholds and, with the icon , send them into the Evolis memory as the new ones.

The message « Device configuration done » informs you of the good completion of the set-up.

You can save your configuration for a future use with the icon .

WARNING: Only the speed thresholds are saved. Text messages are taken into account.

a. Icons:

	Send the new parameters from Evocom to Evolis
	Save the configuration for a future use
	Run a simulation on Evolis
	Open a configuration previously saved
	Reload the parameters into Evolis

• **Three-color display:**

- Evolis can display up to 3 colors: (deactivated in Factory set-up).

- Green** for speeds below the speed limit,
- Amber** for speeds close to the speed limit
- Red** for speeds above the speed limit

Activation: select « three-color display »

three-color display (green/amber/red)

• **Set-up of the three-color display threshold:**

Possibility to activate it between 0 and 30 km/h before passing from green to red.

Color changing speed threshold  5 Km/h

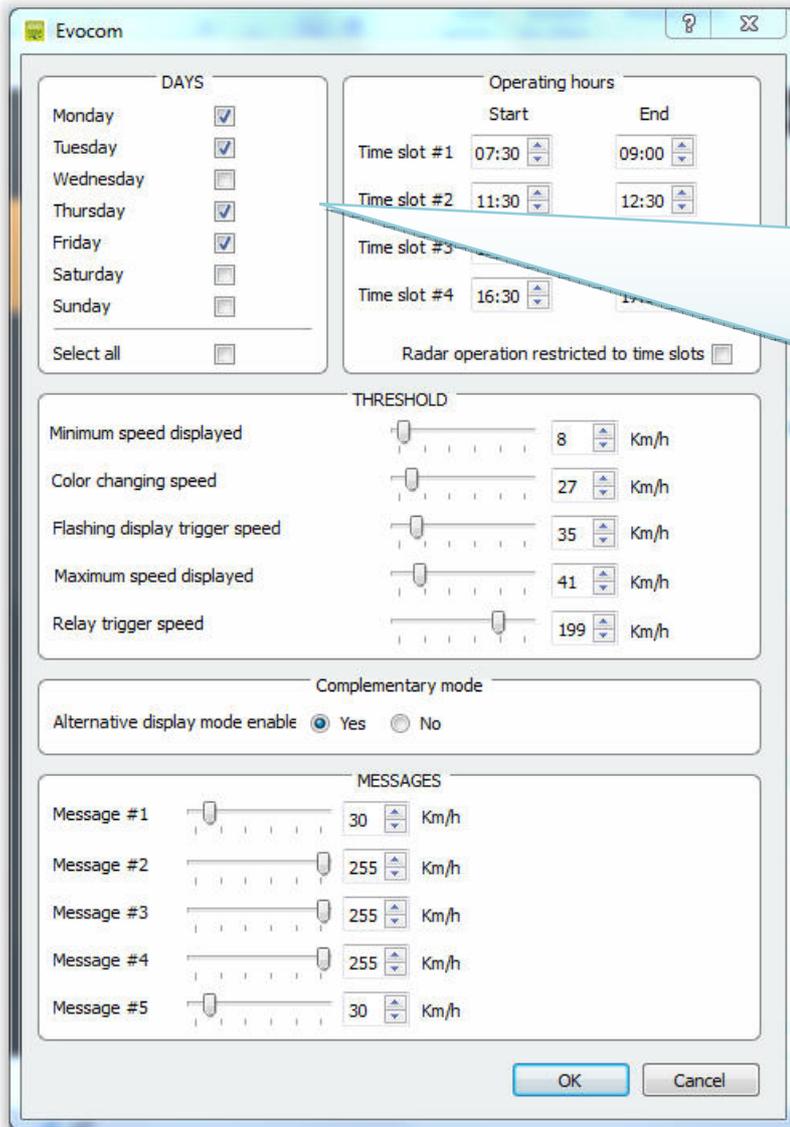
a. Complementary modes: (Only available on SP)

COMPLEMENTARY MODES

Time slot display mode enabled Yes No ...

Dynamic display function Yes No ...

Time slot display:



The screenshot shows the Evocom configuration window with the following settings:

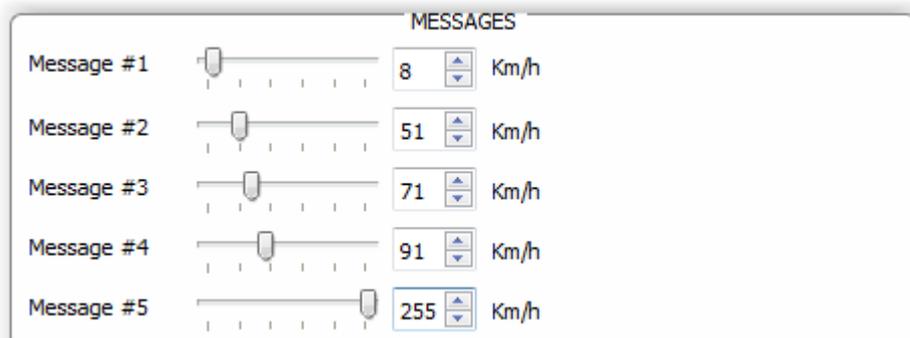
- DAYS:** Monday, Tuesday, Thursday, and Friday are checked.
- Operating hours:**
 - Time slot #1: 07:30 to 09:00
 - Time slot #2: 11:30 to 12:30
 - Time slot #3: (empty)
 - Time slot #4: 16:30 to (empty)
- THRESHOLD:**
 - Minimum speed displayed: 8 Km/h
 - Color changing speed: 27 Km/h
 - Flashing display trigger speed: 35 Km/h
 - Maximum speed displayed: 41 Km/h
 - Relay trigger speed: 199 Km/h
- Complementary mode:** Alternative display mode enable is set to Yes.
- MESSAGES:**
 - Message #1: 30 Km/h
 - Message #2: 255 Km/h
 - Message #3: 255 Km/h
 - Message #4: 255 Km/h
 - Message #5: 30 Km/h

For certain locations like schools or markets, Evocom allows you to display specific messages (e.g.: « CAUTION SCHOOL » or « SLOW DOWN MARKET ») at different operating hours and days of the week
 By selecting « Yes », the following window will appear:



You can then program the desired parameters, days and hours. Click on OK to confirm. Related to the configuration mentioned in example: At the time of entry and exit of schools, speed thresholds (and configurations related) switch automatically from a 50 km/h zone (previous page) to a 30 km/h zone.

Furthermore, only the diffusion of Message #5 is activated during the time slots selected. (Its diffusion will then have to be deactivated on the main screen by switching the speed of diffusion to 255):



The screenshot shows the MESSAGE configuration window with the following settings:

- MESSAGES:**
 - Message #1: 8 Km/h
 - Message #2: 51 Km/h
 - Message #3: 71 Km/h
 - Message #4: 91 Km/h
 - Message #5: 255 Km/h

b. Dynamic display activation

COMPLEMENTARY MODES

Time slot display mode enabled Yes No

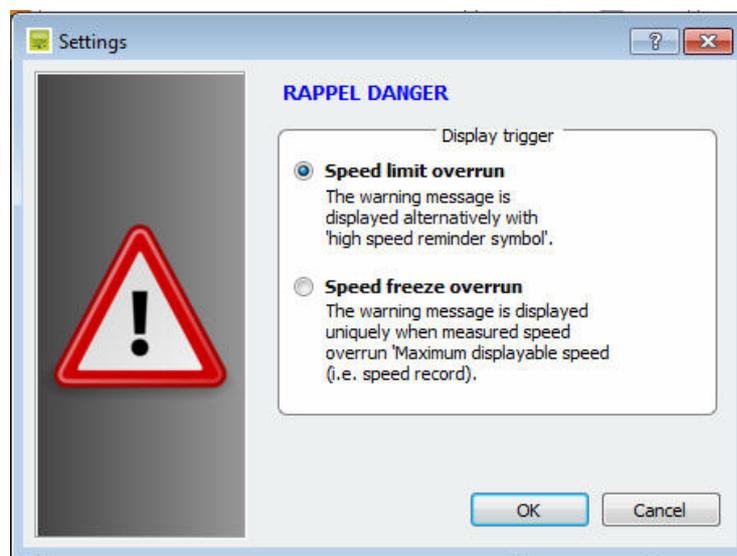
Alternative display mode enable Yes No

This feature allows you to choose the activation of the “Dynamic display” logo:



- Alternately with excessive speeds + beyond the « anti-race » threshold.
- Only beyond the « anti-race » threshold.

By clicking on « Yes », the following window appears:



Select the display mode and click on OK.

Note : This feature can only be deactivated in SP mode.

c. Messages

- Utilization of an amber «full graphic» 64 x 16 cm (l x h) matrix. High resolution display: 64*16 pixels. Pitch (gap between each LED): 10 mm

Multiple choices of messages forms:

Examples:

2 lines of text up to 11 characters of 8 cm and/or 1 line of 6 characters of 16 cm and pictograms up to 16 cm of height...

Select the « Messages » tab in the menu

You will have the possibility to program up to 5 messages (text or images) displayed automatically depending on the speed.

Warning: messages saved in the Evolis memory are not visible on the Evocom interface. To display the existing messages on the device, click on () pour launch the testing procedure.

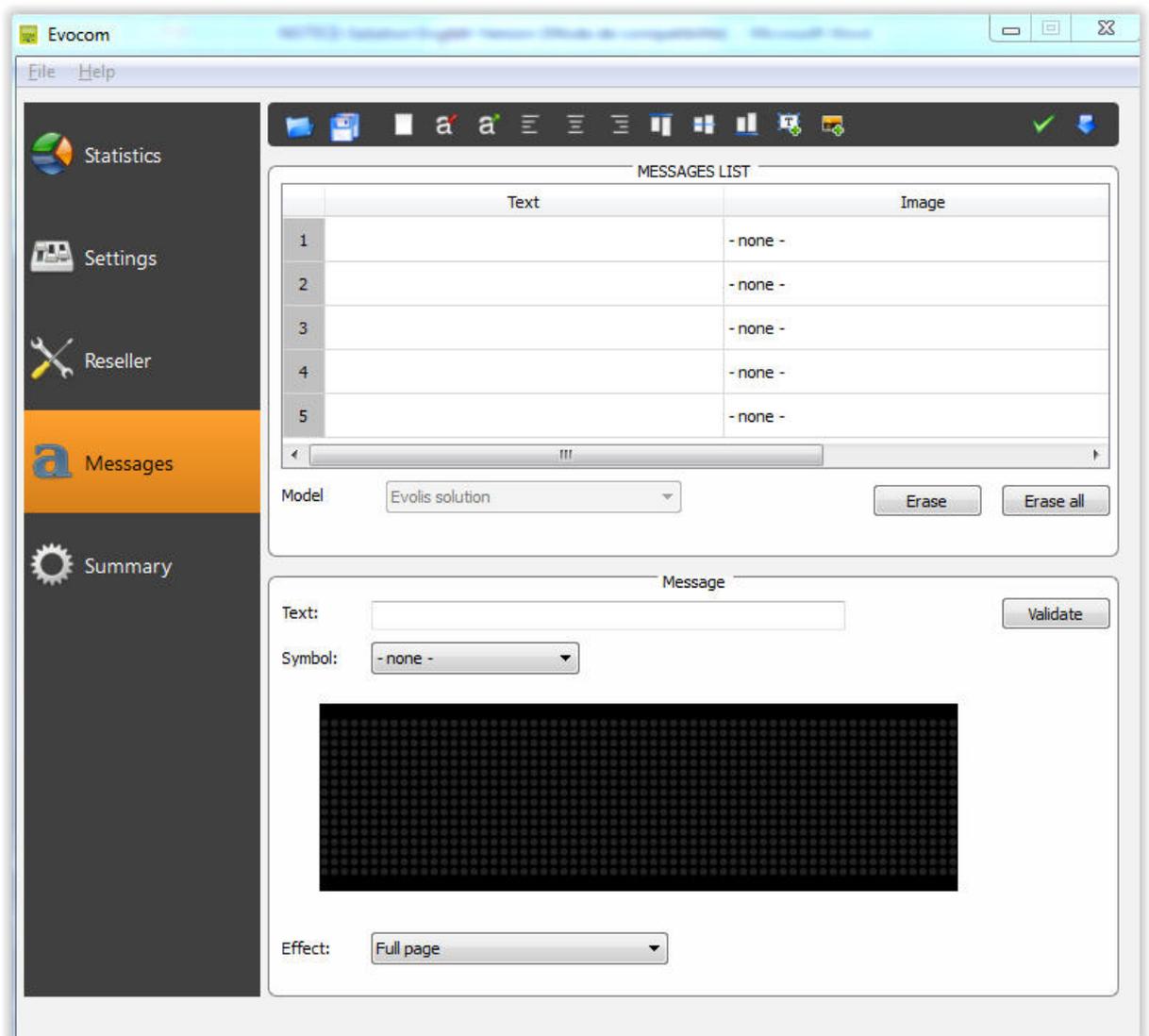
Edition of messages:

Click on the message n° 1 to write your message:

In the text field, type the message you want to display. The message is automatically simulated in the matrix.



You can choose to display the messages on 1 or 2 lines by increasing/reducing the size of the characters. With the icon  you can choose type and size of the font.



Other icons for message setting:



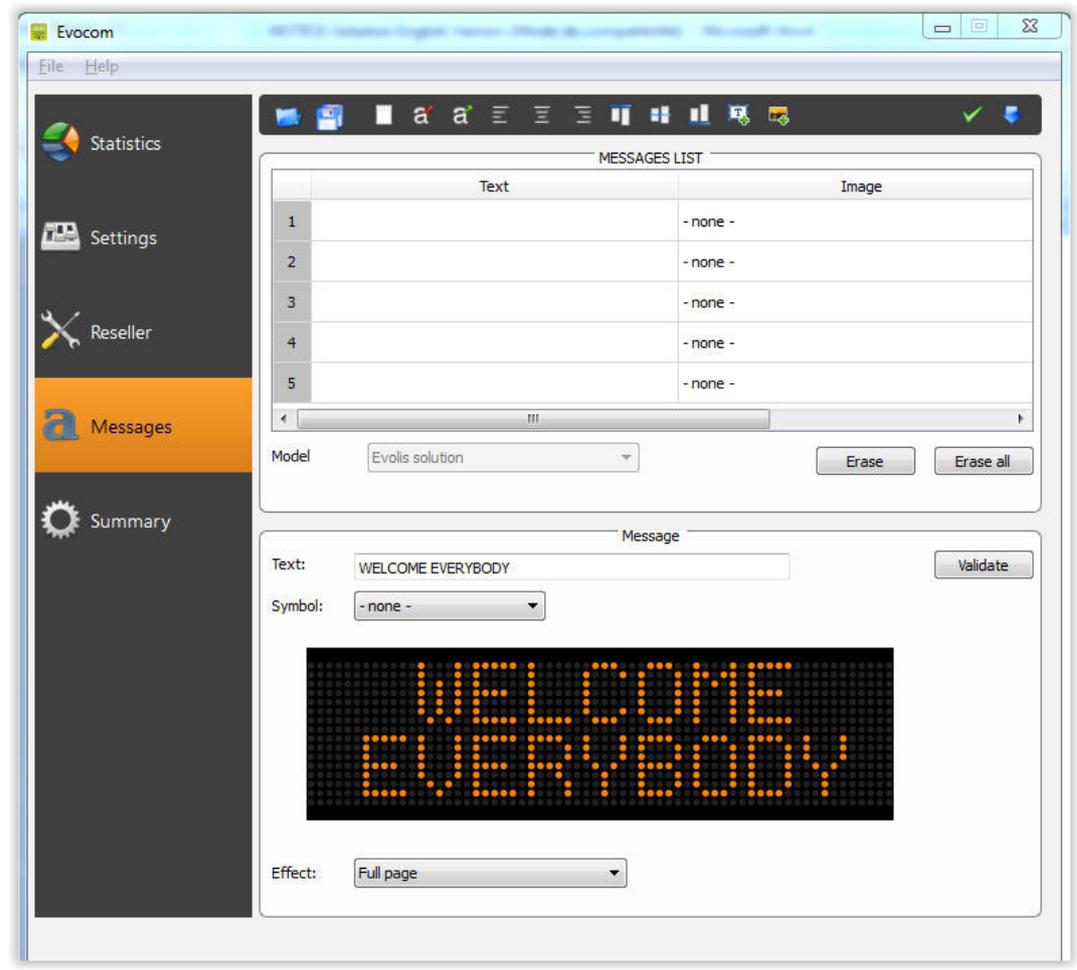
Reduce / Extend the size of the letters



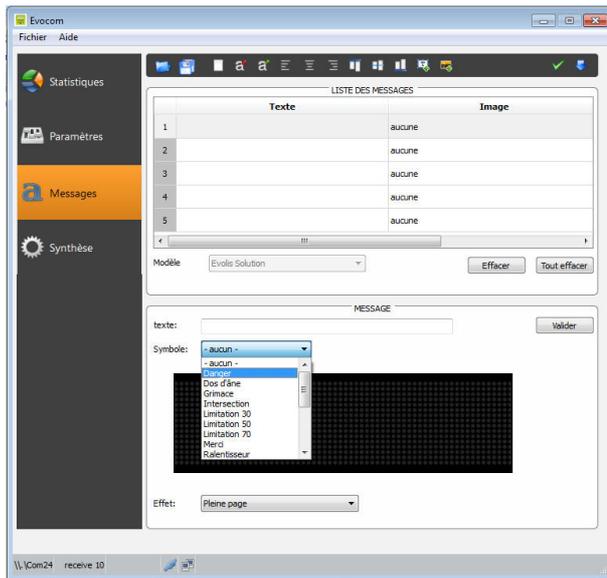
Centering or alignment left / right



Vertical centering or alignment top / bottom



Set up an « image message »:



In the drop-down menu « Symbol » select the image desired for message 1. You can add your own images by clicking on the icon . (Format Paint BMP monochrome 64*15)

Once the message is written and set up, click on « Validate ».

Do the same for messages 2, 3, 4 and 5.

Click then on « Send messages » . A progress bar will indicate you the transfer status and completion.

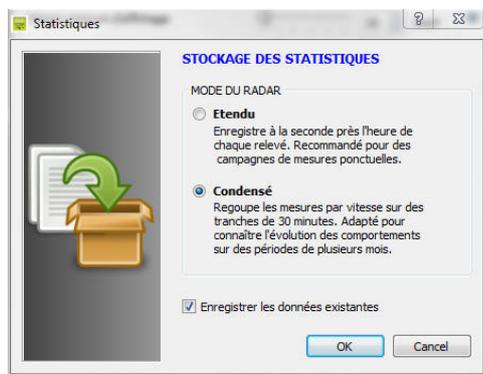
Remark: You can save your messages and the configurations associated by clicking on « Save

message configuration » .

WARNING: Only the messages are saved, not the speed thresholds.

d. Parameters for advanced statistics management features

The data collected are recorded on an integrated 8Mo memory stick (SD Card) allowing more than 4 million data in High Accuracy Mode, which increase the autonomy up to 1000 days. The radar « Solution » allows you to record the speeds in all the radar beam range in a « db » file with the date and time, and allows showing the reaction of the driver confronted to his speed. All of these data allow a clear vision of the traffic density. In the case of a mobile use you can record to the second, the time of each measure, by selecting the High Accuracy Mode in the menu Statistics Storage (Ctrl+M). The Evolis Solution is setup to operate in Condensed Mode by default.



Note

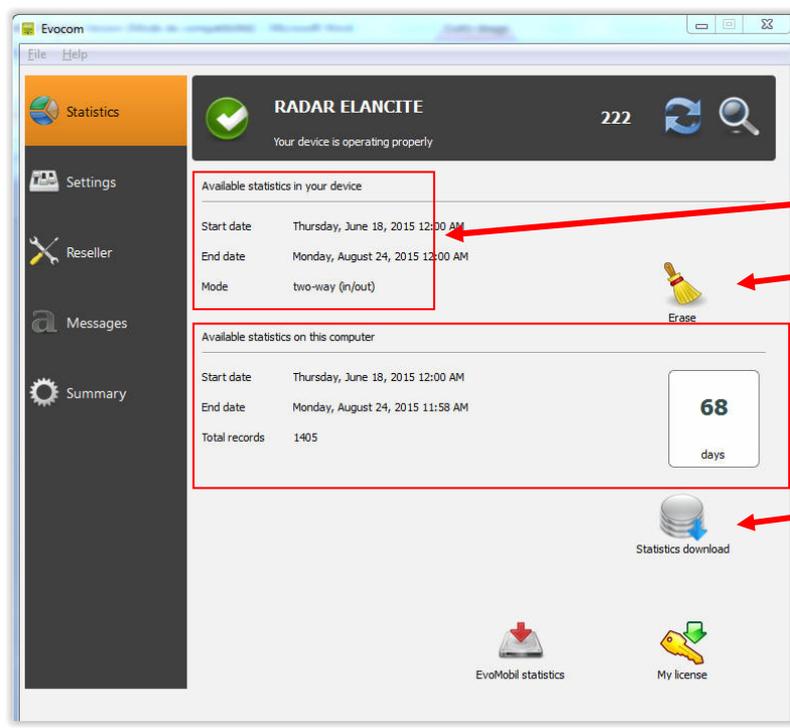
The radar « Solution » does not replace in any case a counting and classifying device like the ones used by the Traffic Engineer/Transportation Departments.

e. Data recovery

The EVOCOM home page allows you to collect the statistics recorded by your radar. You will also find information on the starting and ending dates of the statistics, as well as the ones already available on your computer.

The software will automatically manage the file .DB. It is no longer necessary to choose where to save the file.

Select « Statistics download » to initiate the transfer of the statistics from Evolis to the computer. Progress of the transfer will appear in a window on your screen. Transfer may take several minutes.

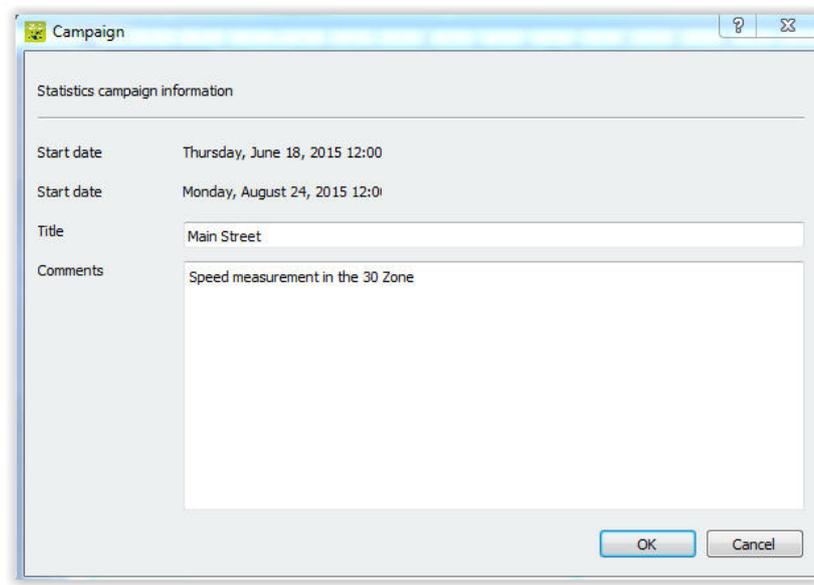
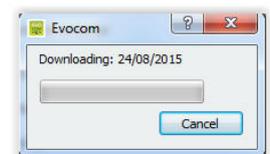


Statistics in Evolis

Erase the statistics from Evolis

Statistics already available in your computer for this radar

Download the statistics

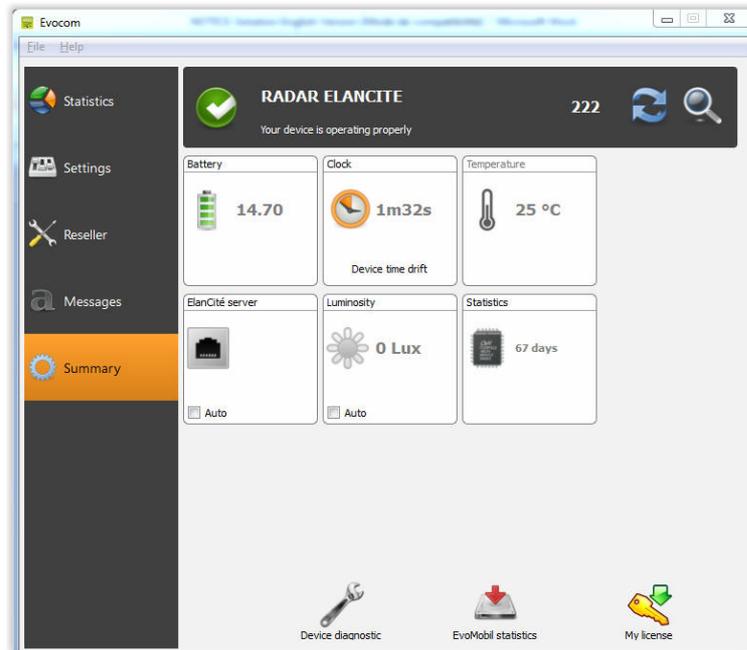


You will have the possibility, at the end of each download, to enter a Title as well as Description.

These information will be then freely accessible and editable on EVOGRAPH

f. Summary page

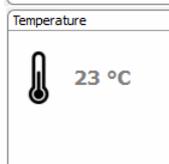
This page allows you to monitor the main parameters of your radar, like the battery level, the date and time.



Battery level indicator. In case of low battery, the color of the icon changes. A fully charged battery is comprised between 12.8 and 13.1V



This icon indicates you the time drift between the radar and the computer. A simple click on the icon will synchronize both times.



Internal radar temperature. (Warning, the temperature indicated is not the ambient temperature)



Number of days of statistics in the radar's memory.



Ambient luminosity indication. Click on the icon to obtain the measure.

The other features are destined for fixing your device. They may be asked in case of default of the device.

VI. DATA ANALYSIS

Presentation of the software « Evograph »:

« Evograph » will allow you to analyze and process the data collected by the radar. The software is installed simultaneously with Evocom (see section V of the manual).

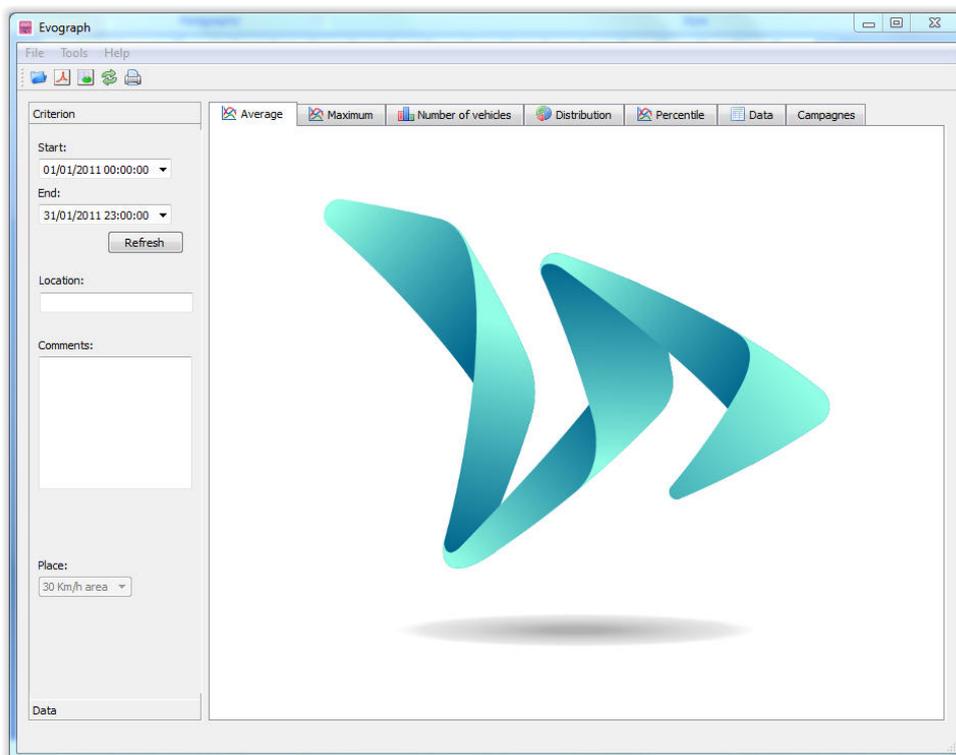
« Evograph » analyze these data and generates reports and charts (PDF or Excel) in just a few clicks.

a. Graphics visualization

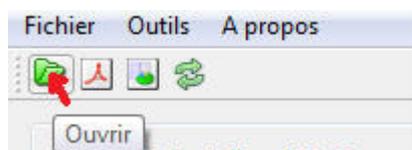


Click on the icon to open the software

Step 1. Home page

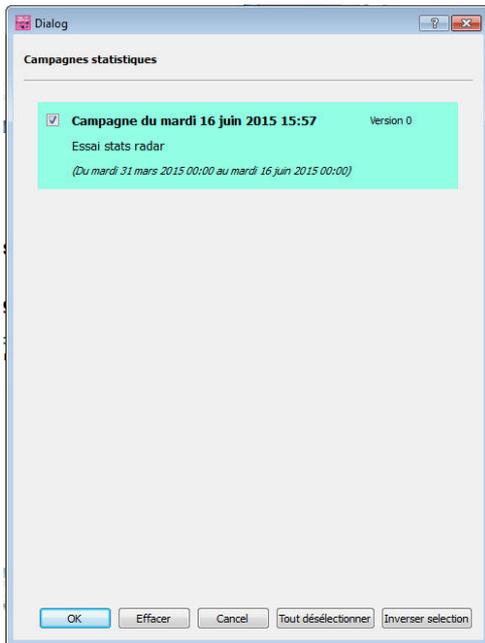


Step 2. Selection and loading of the file to process



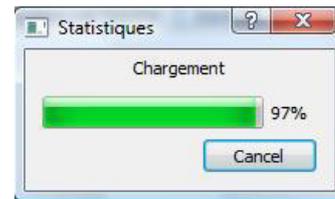
Click on this icon to open the statistics file to process

Select the file



A window allows you to visualize all the campaigns available in the database. Evograph enables you to choose one or several campaigns to analyze. You also have the possibility to delete a campaign

Select OK to download the file.

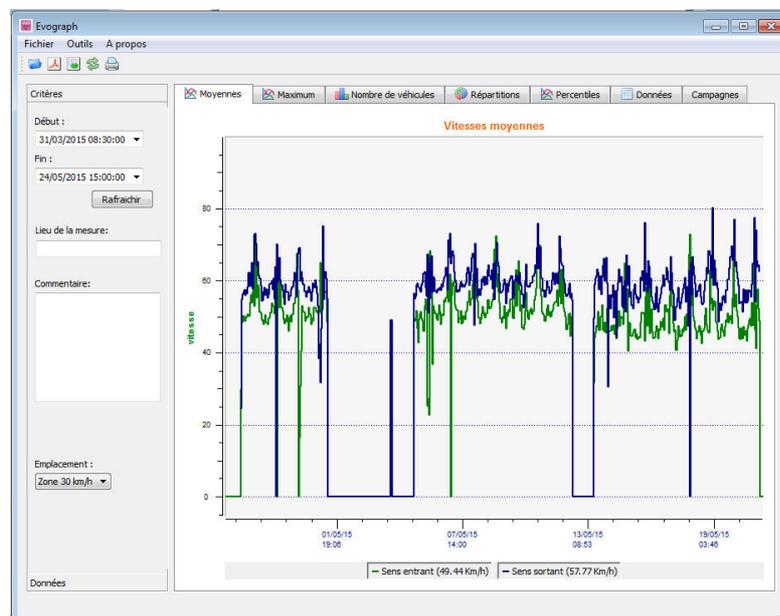


Once the data downloaded, the six graphs are directly processed on the full recording period.

- Evolution of the average and maximal speeds
- Evolution of the number of vehicles
- Distribution of the number of vehicles per speed groups
- Percentiles
- And synthesis of the data

Simply navigate between the tabs to visualize the graphs:

- Example: Average speeds evolution



b. Average speeds:

The Average Speeds graph includes two averages.

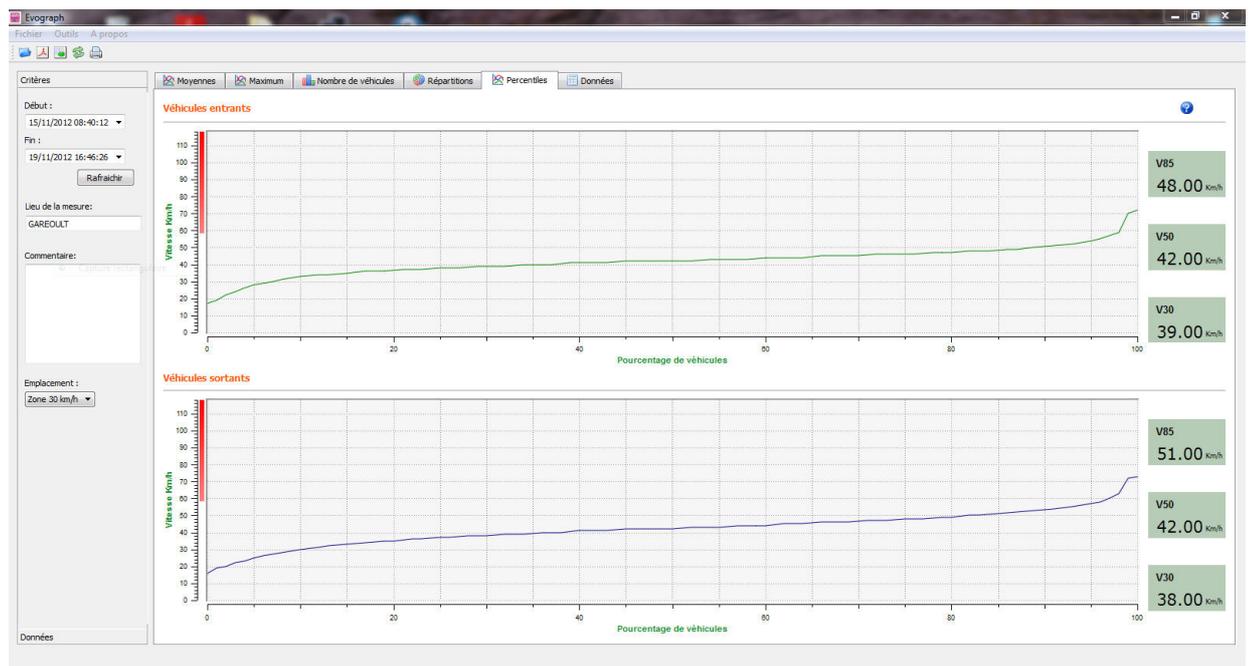
- An average by time slot, which is displayed as curves on the graph. (1 curve per way: ingoing/outgoing)
- An overall average which is displayed in the lower part of the graph (legend).

The average by time slot corresponds to the arithmetic average calculated on the speeds included between the starting/ending dates and assembled on a default time period of 60 minutes.

The overall speed corresponds to the arithmetic average of all the speeds included between the starting/ending dates on the time period selected. The software sums all the instant speeds then divide the result by the number of measures. The shortcut « Ctrl+X » allows you to export the totality of the measures in a .csv file.

c. Percentiles

Le 85th percentile is an important indicator frequently used to report the behavior of the majority of the drivers. It is the speed respected by 85% of the drivers. The 85th gives an idea of the speed scattering.



If the 85th is close to the average, this indicates that the speeds observed on a road are consistent. If the opposite is noted, this means that a significant proportion of drivers are above the speed limit.

d. Features for Evograph

Printing to PDF file

 This icon allows you to export the graphs to a PDF format for storage or printing. It will be asked if you want to print the four graphs or only the active view.

The fields « measuring location » and « comments » can be filled in and will appear directly in footer (PDF or paper).

Remark: We advise you to use PDF printing before paper printing.

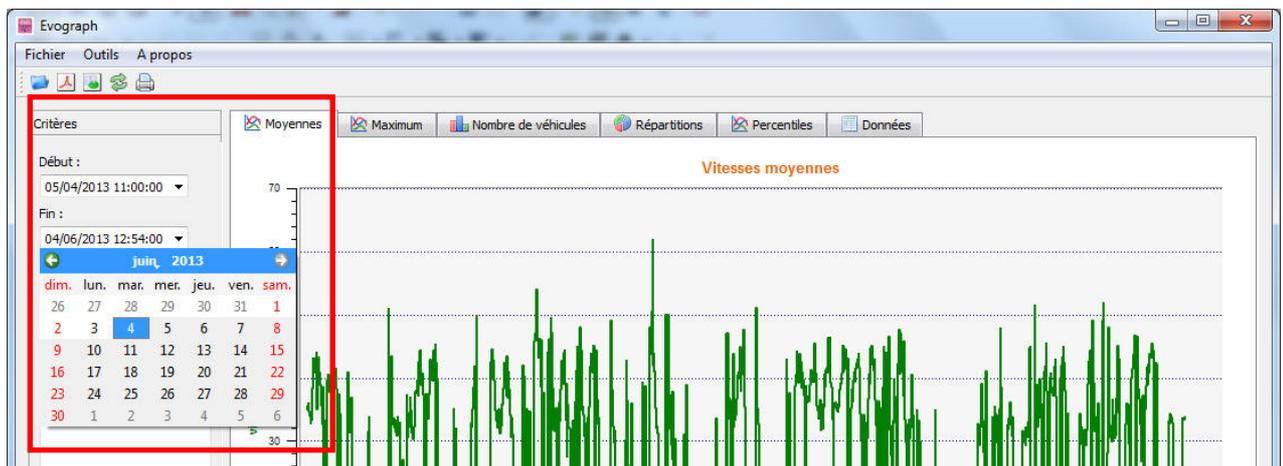
Export to Excel

Using the icon , you can export your data to Excel to realize personalized graphs or to compile data (recording periods).

Dates selection

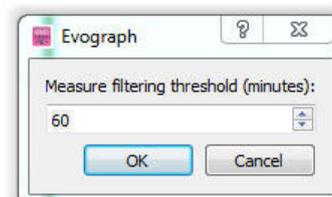
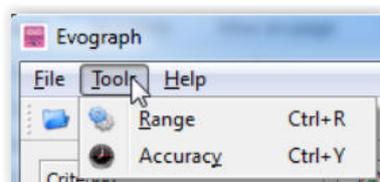
The graphs initially focus on all the recording period.

In order to generate specific statistics on a given period, you can choose to use the function “selection by calendar”.



A function « zoom » on the graph allows you also to analyze the statistics on a very specific period of time (Example: identify speeding to the minute).

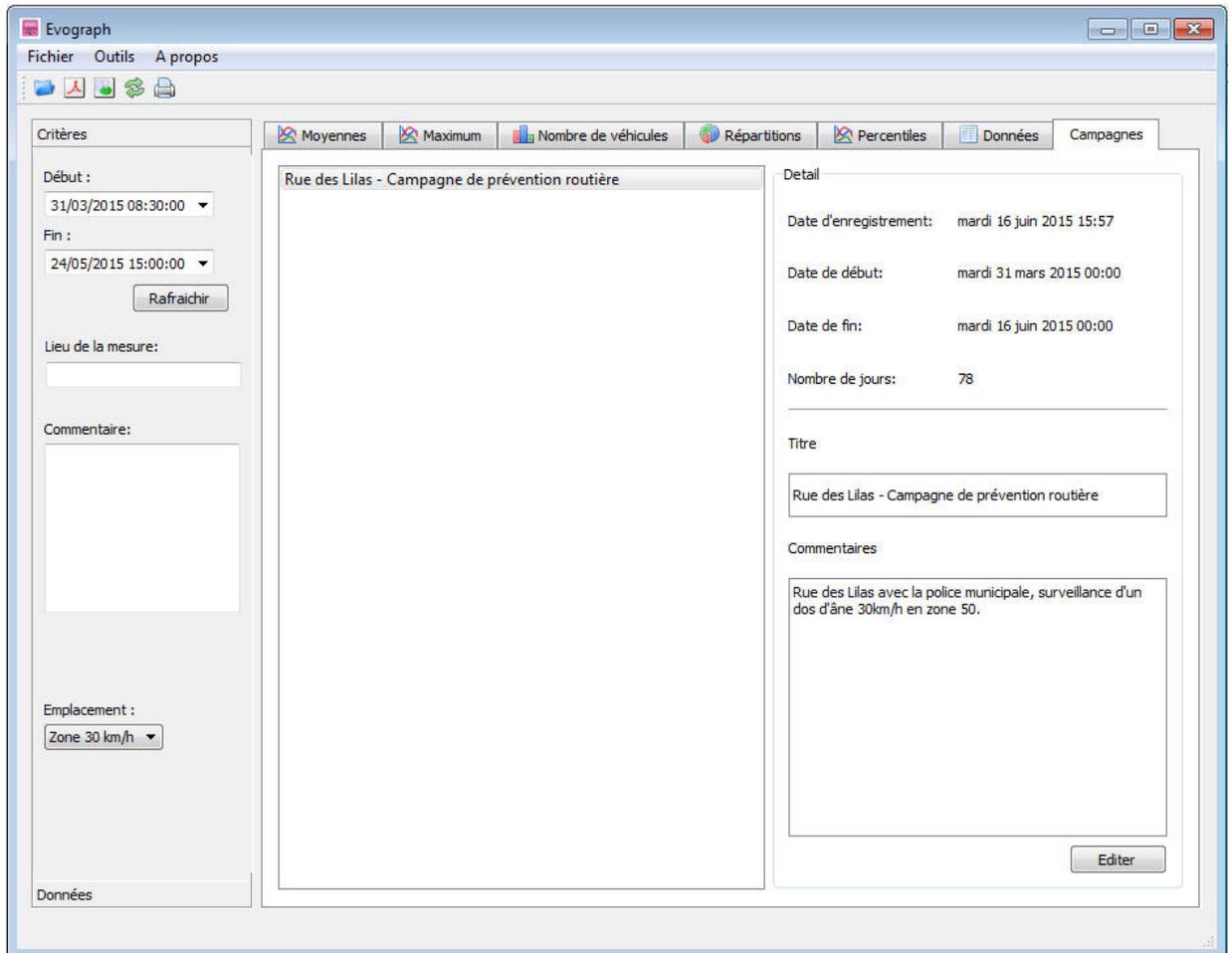
Precision (= Timescale graphs)



You can select a scale of half an hour or an hour (timestamp)

Change the information of a campaign.

You can change the title and the information of a campaign in the tab « Campagnes ». You will also in this tab the starting/ending dates of the campaign.



e. The G.P.R.S option

This option uses the telephone network to transfer the data on our servers (once a day) and allows you to set up your radar, collect your statistics, but also allows our Technical Service at Elan Cité to process your data. Some dysfunctions can also be detected before giving rise to failures. For each alert, we organize a corrective action without delay. You will also be informed in case of dysfunction of your product, and all this, from your office via the « Evoweb » interface. For more information concerning the G.P.R.S option, feel free to contact our services.



f. Bluetooth® Bluetooth: security coupling computer / Evolis:

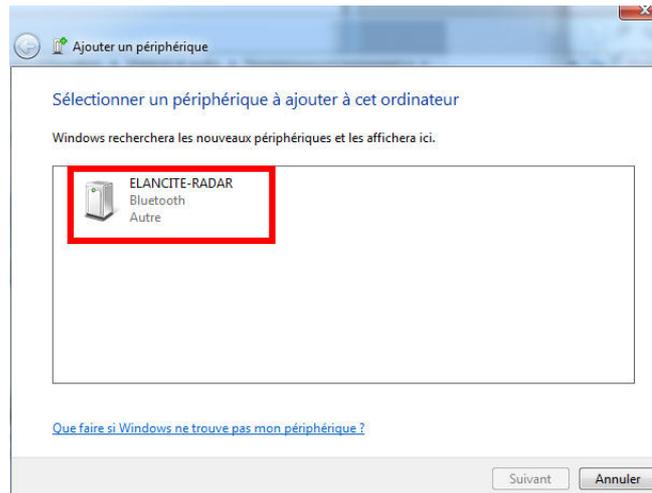
The radar Solution communicates via Bluetooth directly with your computer (if equipped with Bluetooth) or via a Bluetooth key (available in option for non-equipped computer). The transfer occurs within a maximal range of 32 to 82 feet. Yet, the connection can be altered by an impervious windshield or weather conditions.

1°) On your desktop, select Bluetooth et click on the icon to make sure the Bluetooth is activated.

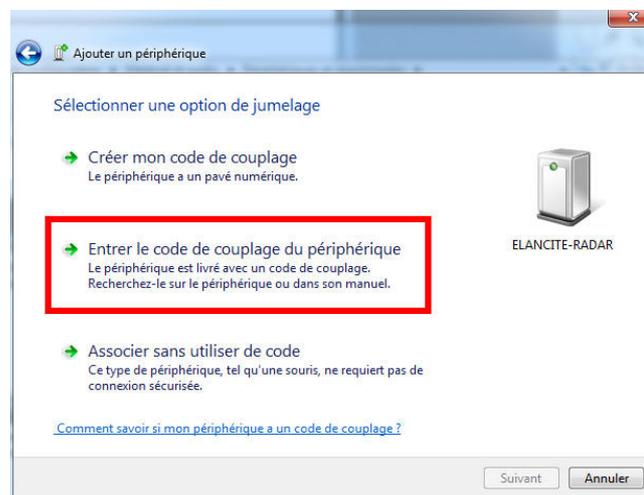


2°) Initiate a research of peripheral device via the menu "Add a Peripheral", your computer will detect automatically all the devices within its range.

Turn the Evolis on and next to your computer, then search on the list the device you want to connect with by clicking on « ELANCITE RADAR » or « RADAR EXAMPLE ».

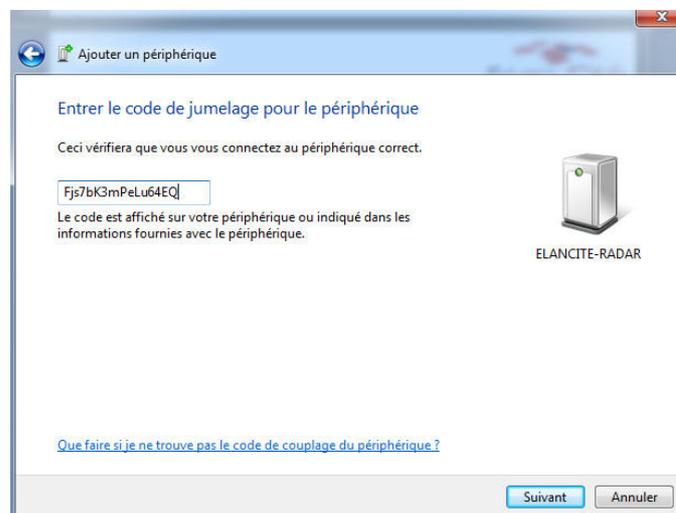


3°) When selecting the device you want to connect with, you will be asked to enter a « coupling code ».

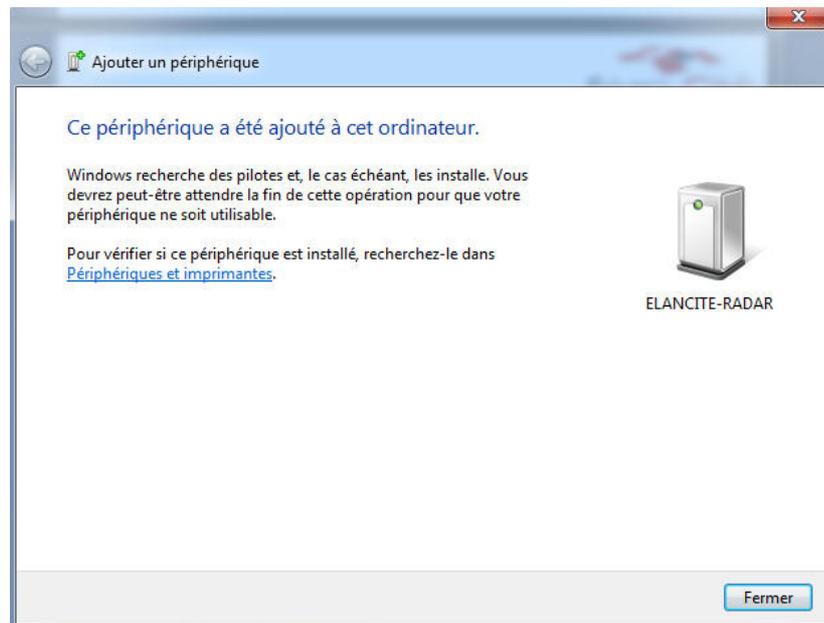


Enter this code: Fjs7bK3mPeLu64EQ

(WARNING: Not compatible with radars with short code, the short code is available on the document delivered with the radar, in case of loss, please contact ELAN CITE)

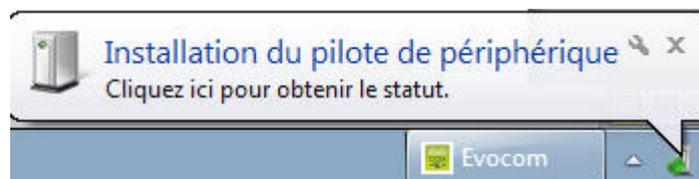


4°) Confirm or click on next.
 A message must appear to confirm the operation.



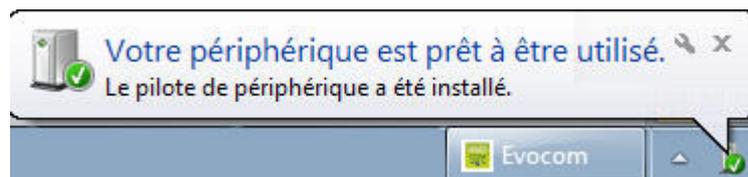
If your computer does not have Bluetooth, make sure you have a Bluetooth adaptor and connect it to a USB port.

A similar message must appear:



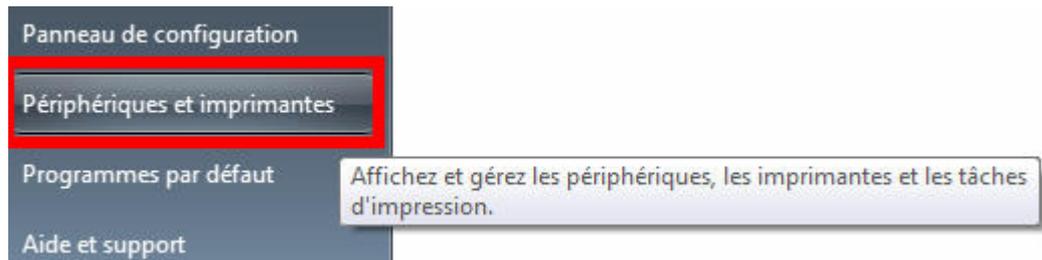
Your computer is processing automatically the installation of the pilot

Once the installation is completed, a message must appear to confirm the installation of the pilot:

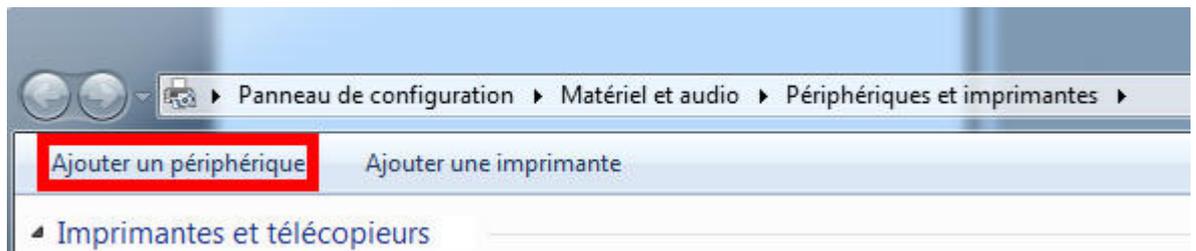


If it does not, make sure your USB port is « active » or try to connect your Bluetooth key on another port. If the pilot is not installed, you will not be able to establish a connection with the radar Evolis.

Once the procedure is completed, go to “Control Panel”, then “Devices and Printers”.



Click on «Add a device».



From now on, you can report to Step n°2 of the normal procedure.

Remark: it is common that the security coupling fails during the first try. If it happens, try again. Once the security coupling between your computer and Evolis is active, your radar is automatically recognized with Evocom via the automatic detection procedure.

VII. MAINTENANCE OF THE DEVICE

- **Batteries and solar panel:**

Make sure that the solar panel is not placed in a shaded area (under trees, next to high buildings, etc.), covered in snow during winter time or dust; this will prevent the luminosity transmission. Proceed to a regular cleaning of the surface of the panel. Check regularly the batteries condition by using a digital multimeter.



The electrical connection components, like plugs, outlets, battery cables, etc., are electrical components that can be easily replaced by a qualified electrician.

- **Vandalism:**

The Evolis Solution is designed to withstand vandalism just like traffic signs. In case of important degradation, a fixing or a replacement will be necessary. Please call our Technical Service for an expert assessment before any fixing.

All damages on external parts (casing, front face, batteries door, and fixing bar) must be also repaired by a qualified personal.

VIII. TECHNICAL CHARACTERISTICS

- Casing in ABS/PC Ral 7035/7040 anti-UV / IP64
- Dimensions: 27.5*27.5*6" / Weight: 9Kg - 21Lbs without batteries
- Sensor: Doppler 24,125 GHz / 5mv
- Beam aperture: Horizontal 12° / Vertical 25°
- Speed range: 8 to 199 Km/h – 5 to 160 Mph
- Radar range: 250 meters – 820 feet
- Speed precision: +/- 1Km/h (0.6 Mph)
- Display: 3 digits 34cm - 13.4in with high luminosity low consumption LEDs
- 3 colors displayed: green – amber – red
- Display refresh programmable from 1 to 3 seconds
- Power rating: 8W / 0,7A
- Diffusion of 5 messages, text or image on a 64x16cm (24x6inch)
« Full Matrix »
- Pitch (gap between the center of each LED): 10mm (0.4inch)
- 2 lines of text up to 11 characters of 8cm (3inch) and/or 1 line of 6 characters of 16cm (6inch) and pictograms.
- Readability up to 150 meters – 500 feet
- Connection: USB 2 / Bluetooth / GPRS
- Battery: 12V/17 and 22 Ah / Weight: 5 to 6kg – 12lbs
- Battery charging system: internal solar regulator 12V/6A or electrical 220V/50Hz/4A and internal charger.

IX.  **CHART OF SYMPTOMS/SOLUTIONS**

Evolis Solution's possible failures and unexpected performances can be limited and fixed using the following chart of symptoms / solutions. Unidentified and/or unfixed failures shall be reported to our Technical Service for assistance.

Tooling required:



Symptoms	Potential causes	Parts concerned
Absence of display	Power supply	Batteries / Plugs / Solar Panel
Solutions		
1. Turn the dial switch on Off then On and check the auto test on both displays : speed and messages		
2. Try a connection on Evocom either via USB or Bluetooth		
3. Check if the spy mode is activated on Evocom		
4. Control the power supply of the Evolis Solution by checking the battery terminals voltage, solar panel, main supply 220V		
5. Check the primary fuse located in the battery compartment. (page 11 of the manual)		
6. Check the external mobile plugs condition (PNC16 or plugs male/female)		

Symptoms	Causes	Sections
Late vehicle detection	Installation / utilization	Topography / configuration / setup
Solutions		
1. Check the installation of the device (see page 8/9)		
2. Check the setup of the device on Evocom (see configuration table page 7 of the manual)		
3. Move the device to another location if the current one is not conform to our recommendations		

Symptoms	Causes	Sections
Display of a tricolored square	Battery level	Batteries / Plugs / Solar panel
Solutions		
1. Check the battery terminals voltage (if < à 11,1V replace the battery)		
2. Wrong connection of the battery cables, plugs or solar panel		
3. Check the external mobile plugs condition (PNC16 or plugs male/female)		
4. High traffic volume, use a second battery		
5. Low solar panel power, check if the panel is not in a shaded area, covered with dust, ...		
6. Try a connection on Evocom either via USB or Bluetooth to reduce the power consumption of the display		

Symptoms	Causes	Sections
Problem with the data recording	Installation / utilization	Setup / Functions management
Solutions		
1. Vehicles not detected further to a wrong utilization / installation		
2. Check in the parameters if the option « Save statistics » is activated		
3 Check the location and the mounting of the device		

Symptoms	Causes	Sections
Failure to connect with Evocom	Installation /software utilization	Software download
Solutions		
1. Check the software and USB pilot installation (default content in Program files/Evocom /Outils/ Drivers/Ftdi) on your computer (page 14 of the manual)		
2. Check if the power is on (battery voltage superior to 11,3V)		
3 Check if the switch dial is not on the Stand By position		
4. Make sure that the USB port on your computer is active. Try with another USB port or another computer		

X. AFTER SALES SERVICE – TERMS AND CONDITIONS GUARANTEE

The After Sales Service for warranted/unwarranted devices, spare parts management, software and installation / utilization manuals is managed by our Technical Service for which you will find the contacts below.

SAV Elan Cité
12 ROUTE DE LA GARENNE
44700 ORVAULT

France
Direct number: +33 228 077 129 / Main: +33 240 160 114

Contact : contact@elancite.fr

Terms and Conditions

In addition to the legal guarantee of conformity, for defaults and/or hidden defects (articles 1641 to 1649 of the Code Civil) the company Elan Cité assures a contractual guarantee of 12 months, being a total guarantee of 24 months starting upon delivery of the product.

This guarantee includes the supply of spare parts, labour costs related to the replacement of the spare parts, as well as the freight costs (round trip) of the package to our workshop, following the After Sales Service return policy stated in this document.

Disclaimer of guarantee:

- ❖ Defaults due to a damage, fall or impact
- ❖ Abuses and bad handling or unauthorized modifications
- ❖ Transport disputes arising from a packing negligence not conform to After Sales Service return policy
- ❖ Breakdowns due to a wrong connection or to an inversion of the battery cables polarity
- ❖ Following an installation not conform to our recommendations, to a default of maintenance or modification
- ❖ Accessories and wearing parts are not guaranteed (e.g: batteries used for more than 6 months, tablet....)

Any repairable device showing a disclaimer of guarantee, which will be returned to our service after sale, will undergo a refurbishment quote submitted to the customer for acceptance or rejection. In case of rejection, the client will be liable for the payment of the costs incurred by Elan Cité (freight costs and labor costs for the diagnosis).

In the case of economically irreparable products, Elan Cité will inform the client by registered letter and will make the product available to the client for 45 days. After this time, the product will become again the property of Elan Cité.

Failure during the guarantee period

1. Definition

Will be considered as under guarantee failing product, any failing device from the delivery date to the end of the 24-month guarantee period, starting from the date of delivery.

2. Procedure to follow

The user informs either by telephone or email our After Sales Service explaining in the slightest details the problem encountered. Our technician will assist you and try to identify the problem designated by performing remote computer and electrical implementing tests with the user.

In case of failure, your call will be subjected to a request of support application with return of the product to the After Sales Service. This last will be confirmed by email along with a form about the After Sales Service return policy to complete by the client.

Upon return of the form, signed and dated by the client, our logistician will process your demand in the best period of time by sending a transport warrant by email to the sender and will organize the removal of the package with our authorized carrier.

Of course, devices not showing functioning default will not be taken care of under the guarantee. Our After Sales Service will inform the client by sending a quote on the freight costs (round trip) of the package as well as a price of 80 €/HT for the diagnosis costs.

Any incomplete demand will not be processed in the best period of time.

3. Average time for repair (indicative)

Consider 5 business days upon reception of the package, if the repairs can be done in our workshop. If the product has to be repaired on site, time can go up to 4 weeks depending on the planning of our teams. In any case, we do our best to reduce the times according to our imperatives.

Defective device out of guarantee

1. Definition

Will be considered as a defective device out of guarantee, any defective device repairable beyond the contractual 24-month guarantee period; or presenting a disclaimer of guarantee as well as all the manufacturer modification request. Freight costs (round trip), labor cost and spare parts will be at the client expense.

2. Procedure to follow

The client informs by telephone or by email our After Sales Service and precise the default observed. A technician will assist you through the process by and will propose several corrective actions to repair your device. After consultation, a support request will be sent by email along with an informative form on the After Sales Service return policy. After an expert assessment of the device effectuated by our technical service, a quote for repairs will be sent either by mail, fax or by email. After written consent, repairs will be done in the best period of time. The device will be sent back to the address indicated and the client will be informed by email.

In case of reject of the quote, a fee will be charged.

3. Subscription to service contracts

3.1 Definition

The service contract can be subscribed at the end of the 24-month initial guarantee and/or beyond. This contract, available under several options, allows you to keep the product under guarantee and this for 60-month renewable period of time.

3.2 Service contract

This contract includes:

- Return of the product to the factory
- Transport (round trip)
- Parts replacement and labor cost
- Software updates
- GPRS monitoring and traffic data management

For more information, contact our commercial team by telephone: [+33 240.160.114](tel:+33240160114) or by email contact@elancite.fr

After Sales Service return policy

1. Definition

Any request for return service for repair, modification or revision, must meet and respect several instructions, so that the package can be delivered in the best condition to our service.

The applicant undertakes to comply with the terms of transport stated below. In case of non compliance with the instructions, only the applicant's liability will be engaged (Carrier and Elan Cité's liability cannot be invoked). The applicant undertakes, consequently, to pay the costs related to the refurbishment of the device in case of dispute with the carrier.

2. Terms of transport

- No battery should be present in the device or in its package during the transport.
- The device must be put in its original package with its protective foams. If the original package has not been kept, a quote for secured transport, insurance included, will be sent to the client.
- If the package is shipped by pallet, the package must be put upright and film-wrapped before shipment.
- The package must be sealed with the security tape in both ways.
- Protection foams must protect the device at the four corners.
- If the terms of transport are not respected, the device will be returned to the expeditor and the return material authorization will be cancelled.

SPARE PARTS

All spare parts or accessories can be ordered through our After Sales Service.
Freight costs will be at the client expense.

S.A.V Elan Cité
12 ROUTE DE LA GARENNE
44700 ORVAULT
France
Tél : +33 228 077 129
Fax : +33 240 160 273
E-mail : contact@elancite.fr

USER MANUALS / SOFTWARE

All the user manuals and software of our devices are available on our website www.elancite.fr in the section « Customer Area - Downloads » by using the User Name and Password indicated in the user manual.