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VAN SERVICE TOWBAR
Installation Manual
CF0006UNTB11

60' m

KIT CONTENT



WHAT IS VAN SERVICE TOWBAR?

VAN SERVICE TOWBAR is a CANBUS SERVICE interface that can be integrated into cars, vans and motorhomes. Featuring **automatic vehicle profile recognition**, it communicates with the vehicle's electronic systems and replicates 8 different electrical signals across **8 separate output lines**, enabling the transmission of information and service signals.

The kit allows the integration and control of additional rear lights fitted to trailers and other attachments typically connected to a **towbar**. It is also suitable for use with **bike racks, motorcycle trailers, camping trailers and towable storage boxes (towboxes).**

HOW DOES IT WORK?

The unit can detect the lighting **status via the CAN network**, the LIN network, or the 4 discrete auxiliary inputs. The lighting outputs provide sufficient current to power the lamps directly, **without the need for amplifiers or relays.**
The unit also features a relay to disable the "parking sensor" function.

The 8 available outputs are:

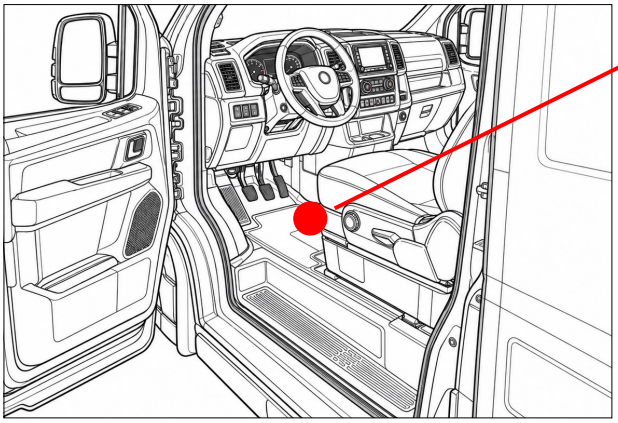
- **Left turn indicator**
- **Right turn indicator**
- **Brake lights**
- **Left position light**
- **Right position light**
- **Reverse lights**
- **Rear fog lights**
- **Ignition ON**

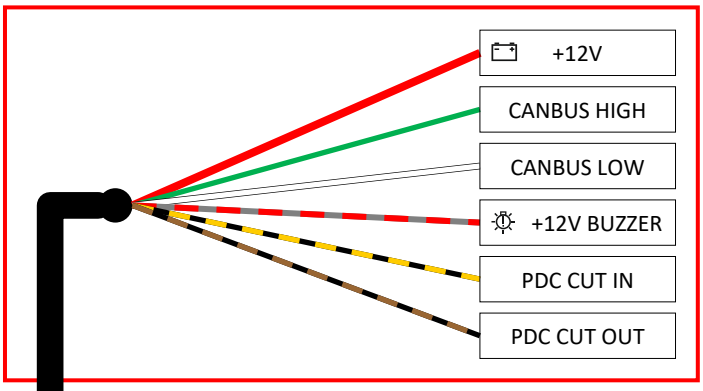
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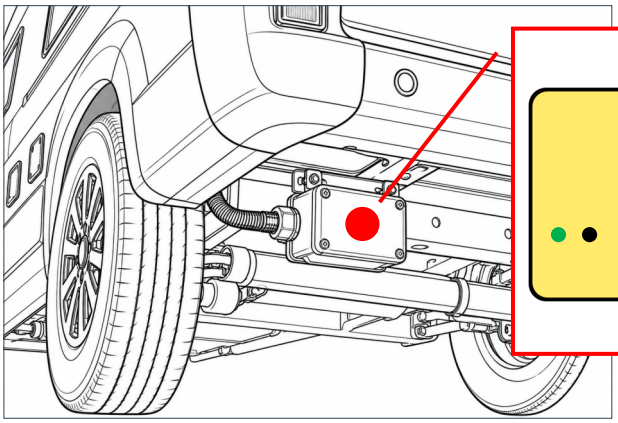
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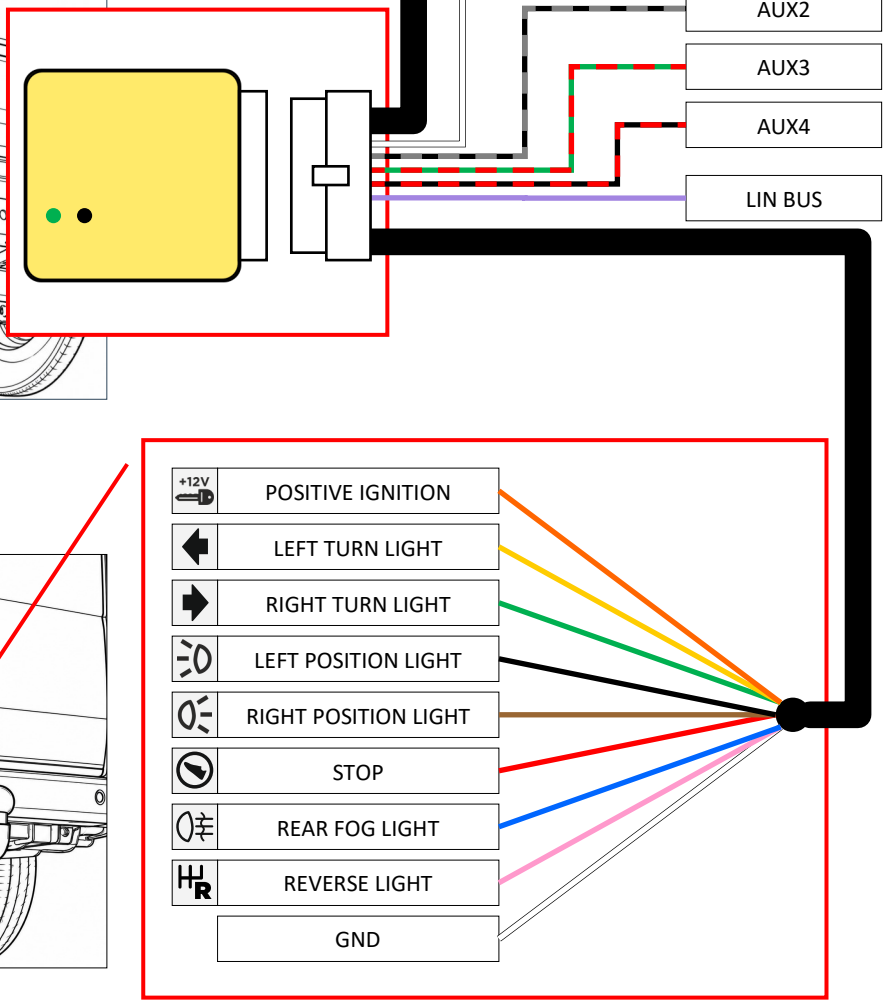
WIRING DIAGRAM

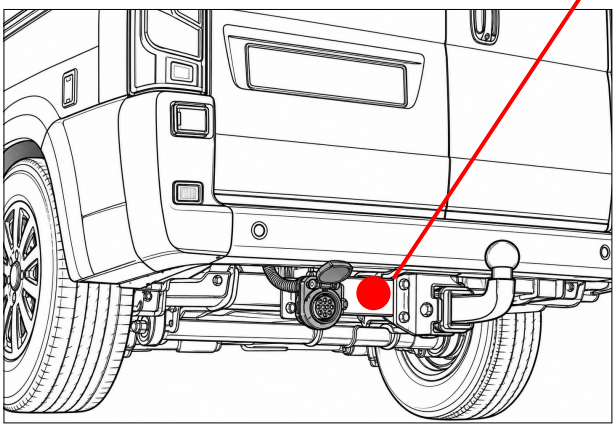




The module must be installed in a waterproof electrical enclosure underneath the vehicle body.

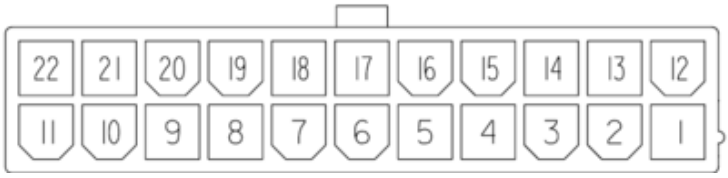






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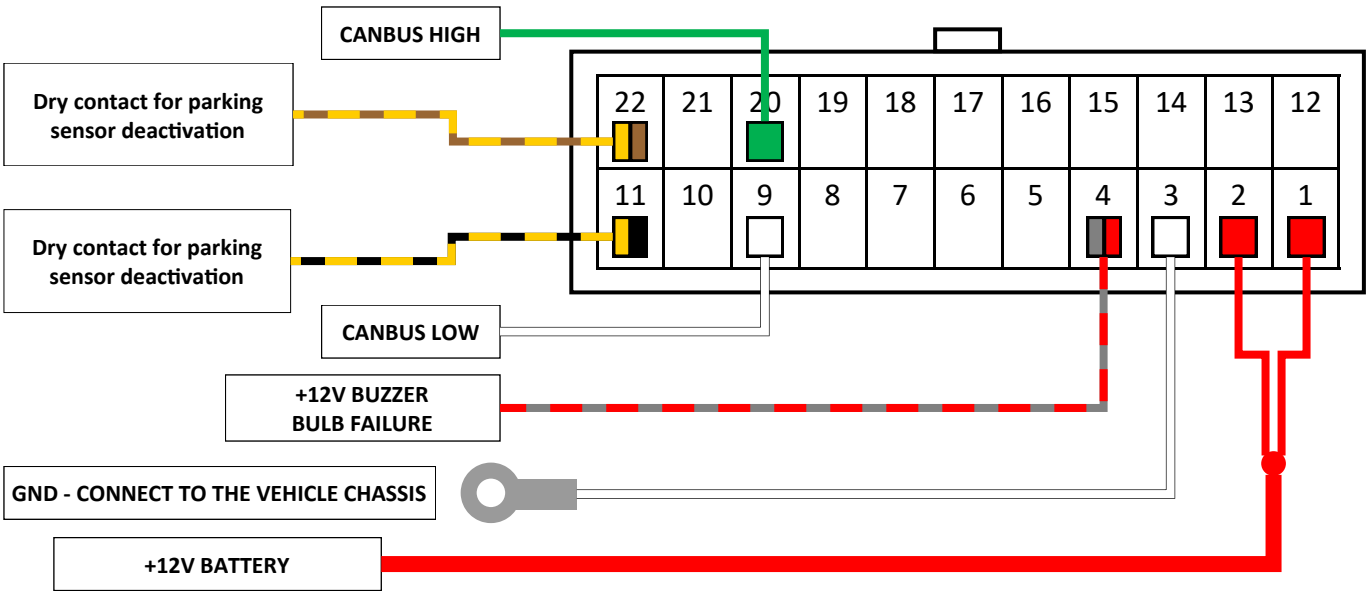
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INTERFACE CONNECTOR			
PIN	**COLOUR**	**NAME**	**FUNCTION**
1	RED	+12V	Power supply positive input
2	RED	+12V	Power supply positive input
3	WHITE	GND	Power supply negative input
4	GREY/RED	AUX IN1	+12V buzzer output for bulb failure warning / Auxiliary input 1 – left turn indicator by default
5	GREY/BLACK	AUX IN2	Auxiliary input 2 – right turn indicator by default
6	RED/GREEN	AUX IN3	Auxiliary input 3 – position lights by default
7	RED/BLACK	AUX IN4	Auxiliary input 4 – brake lights by default
8	VIOLET	LIN BUS	LIN bus
9	WHITE	CANBUS LOW	CAN L input
10			
11	YELLOW/BLACK	PDC CUT IN	Dry contact for parking sensor deactivation
12	YELLOW	LEFT TURN	Left turn indicator output
13	BLACK	LEFT POSITION	Left tail light / number plate light output
14	RED	STOP	Brake light output
15	ORANGE	POSITIVE IGNITION	Ignition-switched positive output (+15)
16	GREEN	RIGHT TURN	Right turn indicator output
17	BROWN	RIGHT POSITION	Right tail light / number plate light output
18	PINK	REVERSE	Reverse light output
19	BLUE	REAR FOG	Rear fog light output
20	GREEN	CANBUS HIGH	CAN H input
21			
22	YELLOW/BROWN	PDC CUT OUT	Dry contact for parking sensor deactivation

The supplied loose-wire harness has two ends: one connects to the supplied 13-pin socket, while the other connects to the vehicle's power supply and CANBUS network.

CONNECTIONS TO BE MADE AT THE FRONT OF THE VEHICLE

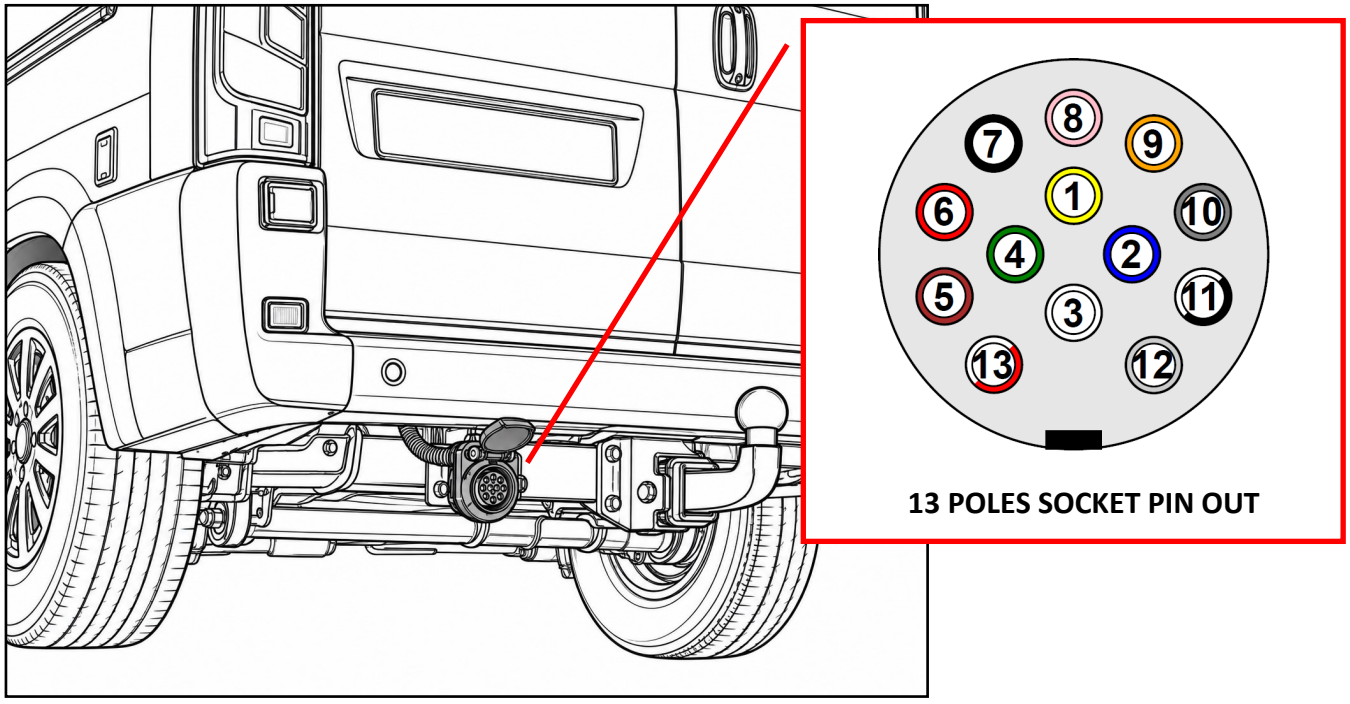


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CONNECTING THE LOOSE-WIRE HARNESS TO THE 13-PIN SOCKET

Before connecting the unit to the vehicle, the supplied loose-wire harness must be connected to the supplied 13-pin socket.
To do this, connect each loose wire in the harness to the corresponding PIN on the 13-pin socket, following the colour and function specifications listed below.



OUTPUT SIGNAL TABLE – WIRE COLOURS

13 POLES SOCKET	COLOUR	DIN 72552	SIGNAL	POWER
1		L	Left turn indicator	25W
2		54G	Rear fog	25W
3		GND	GND (-) for pin 1-8, connect to chassis ground	
4		R	Right turn indicator	25W
5		58R	Right position lights / plate light	7W
6		54	Stop lights	50W
7		58L	Left turn lights / plate light	7W
8			Reverse light	50W
9		30	Permanent +12V, connect to battery positive terminal	
10		15	12V+ ignition	
11		31	GND (-) for pin 10, connect to chassis ground	
12				
13		31	GND (-) for pin 9, connect to chassis ground	

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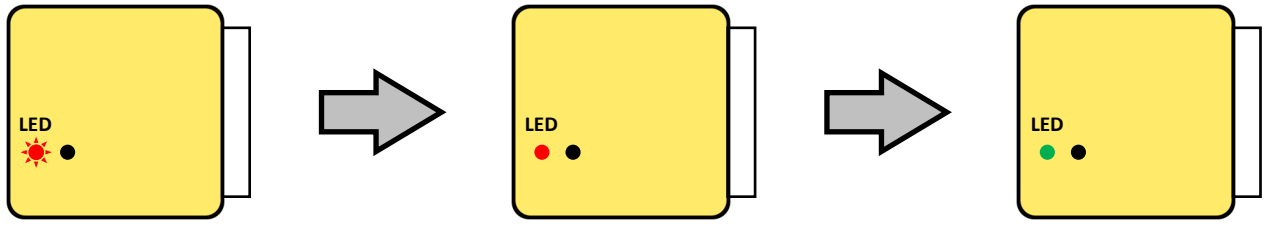
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CONNECTION TO THE VEHICLE DATA NETWORK

Once the connections to the vehicle data network have been completed, **VAN SERVICE TOWBAR** will automatically identify the vehicle model and configure itself accordingly.
The module LED may display the following status indications:

FLASHING RED LED: CANBUS network search in progress
SOLID RED LED: CANBUS network detected, but the vehicle has not yet been identified
SOLID GREEN LED: module operational



CANBUS LINE SEARCH

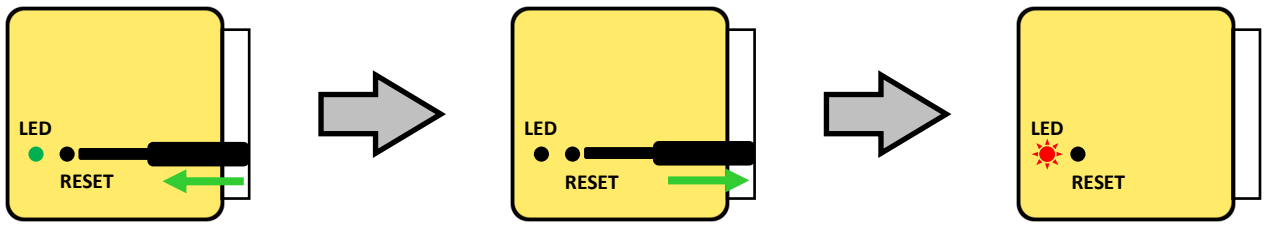
CANBUS LINE DETECTED, BUT VEHICLE NOT YET IDENTIFIED

UNIT IS OPERATIONAL

The CANBUS connections specific to each compatible vehicle are provided in the attached document.

HOW TO RESET THE VEHICLE PROFILE

The vehicle profile can be reset in the event of malfunctions.
A reset is required whenever the interface is moved from one vehicle to another.
The procedure can only be performed when the interface LED is solid green.
Resetting the vehicle profile will not affect any user-configured options.



PRESS AND HOLD THE RESET BUTTON UNTIL THE LED TURNS OFF

ONCE THE LED TURNS OFF, RELEASE THE RESET BUTTON.

RESET COMPLETED

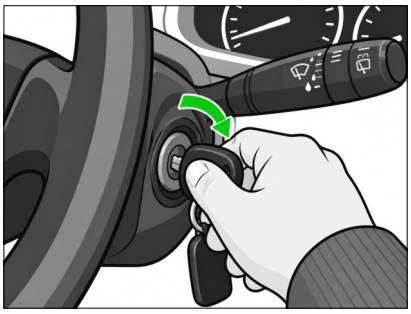
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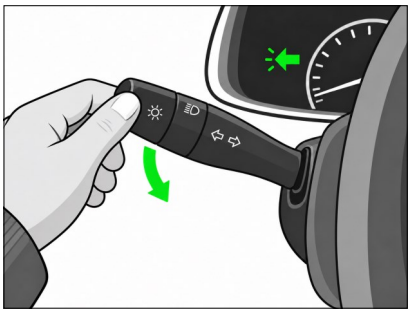
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ACTIVATING AUTO-TEST MODE

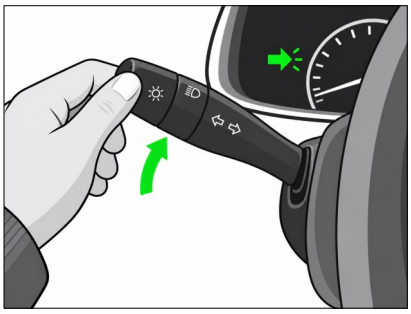
VAN SERVICE TOWBAR features an **auto-test mode** that allows you to verify that the module has been installed correctly.
By following the **procedure described below**, the interface outputs will be activated in a predefined sequence, allowing them to be checked using a trailer or a test lamp kit.



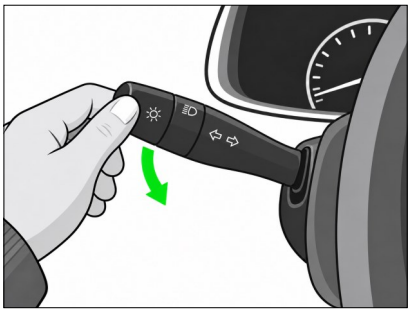
SWITCH ON THE IGNITION AND PROCEED TO THE NEXT STEPS WITHIN 5 SECONDS



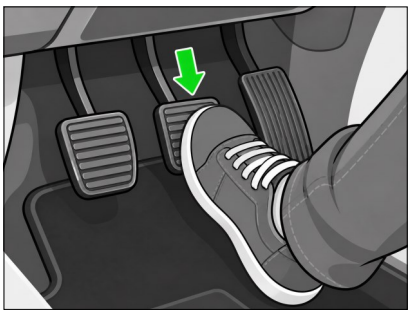
ACTIVATE THE LEFT TURN INDICATOR



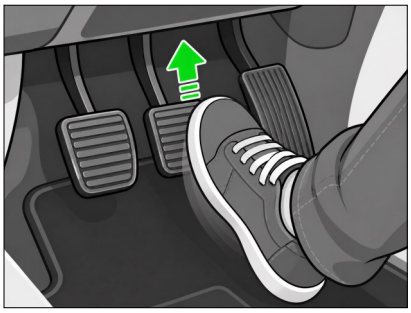
ACTIVATE THE RIGHT TURN INDICATOR



DEACTIVATE THE RIGHT TURN INDICATOR



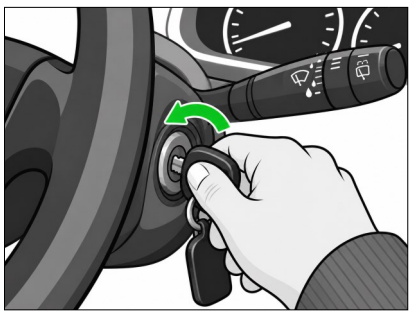
PRESS THE BRAKE PEDAL



RELEASE THE BRAKE PEDAL

Once the procedure is complete, the outputs **will be activated in the following sequence**:

1	2	3	4	5	6	7
						
LEFT TURN INDICATOR	**LEFT POSITION**	**STOP LIGHTS**	**RIGHT POSITION**	**RIGHT TURN INDICATOR**	**REVERSE LIGHT**	**REAR FOG LIGHT**



To deactivate auto-test mode, simply switch off the ignition.

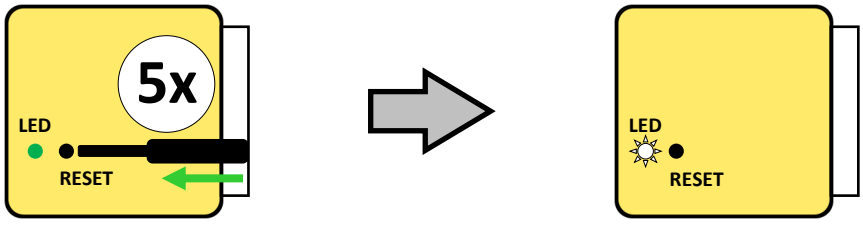
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OPTIONS MANAGEMENT

VAN SERVICE TOWBAR features a range of customisable options that allow users to adjust its operation and personalise their experience.

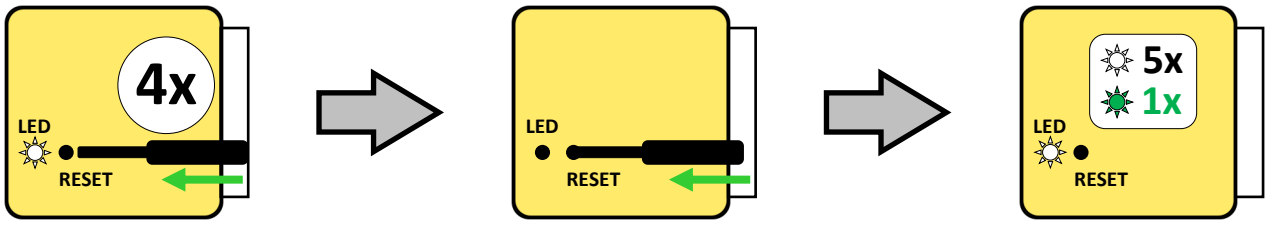
To access the options selection menu, proceed as follows:



QUICKLY PRESS THE MODULE BUTTON 5 TIMES

THE MODULE WILL FLASH WHITE, FOLLOWED BY A PAUSE (OPTION 1 SELECTED)

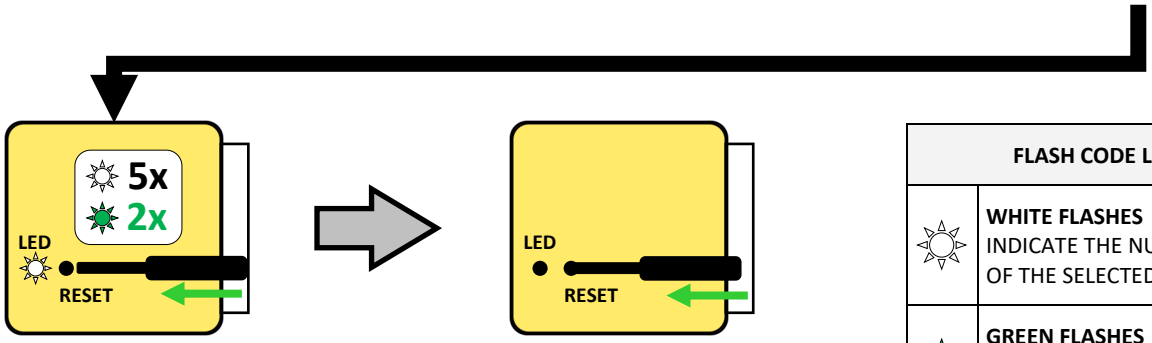
Each short press of the reset button will increase the number of white flashes (option number) until the desired option is selected.



EXAMPLE: TO REACH OPTION 5, STARTING FROM OPTION 1, BRIEFLY PRESS THE RESET BUTTON 4 TIMES.

TO ACCESS THE OPTION SETTINGS MENU, SIMPLY PRESS AND HOLD THE BUTTON UNTIL THE LED TURNS OFF.

THE LED WILL FLASH A DIFFERENT NUMBER OF TIMES TO INDICATE THE OPTION NUMBER (WHITE FLASHES) AND THE CURRENT OPTION VALUE (GREEN FLASHES).



BRIEFLY PRESSING THE RESET BUTTON ALLOWS YOU TO CHANGE THE NUMBER OF GREEN FLASHES AND, CONSEQUENTLY, THE OPTION VALUE.

TO SAVE THE NEW VALUE, PRESS AND HOLD THE RESET BUTTON UNTIL THE LED TURNS OFF.

FLASH CODE LEGEND	
☼	**WHITE FLASHES** INDICATE THE NUMBER OF THE SELECTED OPTION
✹	**GREEN FLASHES** INDICATE THE OPTION VALUE IN UNITS

Refer to the complete list of configurable options and values.

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OPTIONS LIST

OPTION NO. (WHITE LED)	OPTION DESCRIPTION	NUMBER OF FLASHES (GREEN LED)	
		UNIT	AVAILABLE VALUES
1	Function input AUX_IN1	1	Ignition detection input
		2	Lights ON detection input
		3	Left turn indicator detection input
		4	Right turn indicator detection input
		5	Reverse light detection input
		6	Brake light detection input
		7	Rear fog light detection input
		8	Buzzer output (**Default**)
2	Function input AUX_IN2	1	Ignition detection input
		2	Lights ON detection input
		3	Left turn indicator detection input
		4	Right turn indicator detection input
		5	Reverse light detection input
		6	Brake light detection input
		7	Rear fog light detection input
3	Function input AUX_IN3	See values for AUX_IN2 (Option 2)	
4	Function input AUX_IN4		
5	Rear fog light activation setting	1	Forgotten in low-power mode (**Default**)
		2	Retained in low-power mode
6	Parking sensor deactivation contact mode	1	Activated when a trailer is detected (**Default**)
		2	Closed when a trailer is detected
7	Enable turn signal indication via the position lights in the event of turn signal bulb failure	1	Disabled
		2	Enabled (**Default**)
8	Enable turn signal bulb failure monitoring	1	Disabled
		2	Enabled (**Default**)

ADDICTIONAL FUNCTIONS

TURN SIGNAL BACKUP FUNCTION

When Option 7 is enabled, if a turn signal bulb has failed, the module will use the position light to indicate the direction of the turn.

C2 CONTROL FUNCTIONS

These functions monitor the correct operation of the turn signal lights. If a turn signal bulb has failed, an audible warning buzzer will sound when the turn signal is activated.

The buzzer will alert the driver that the trailer towbar rear fog light is switched on.
If the ignition is switched off, the procedure must be repeated (unless Option 5 has been enabled).

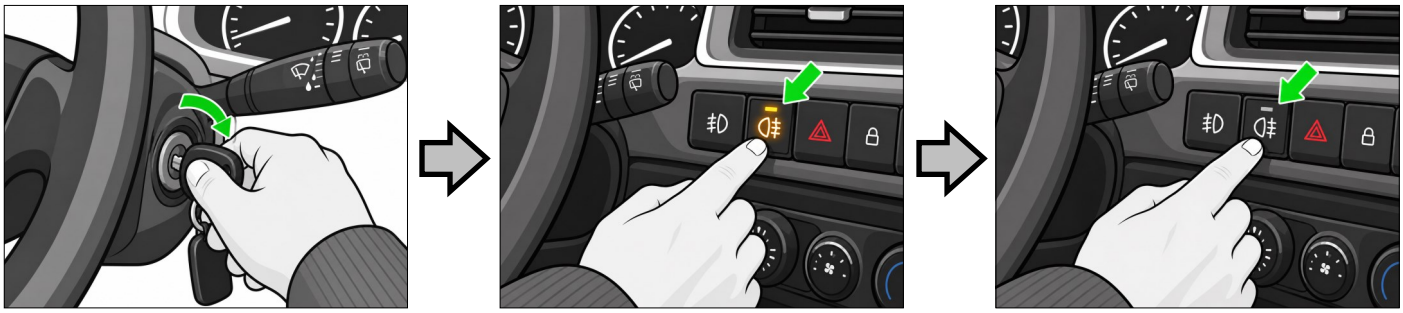
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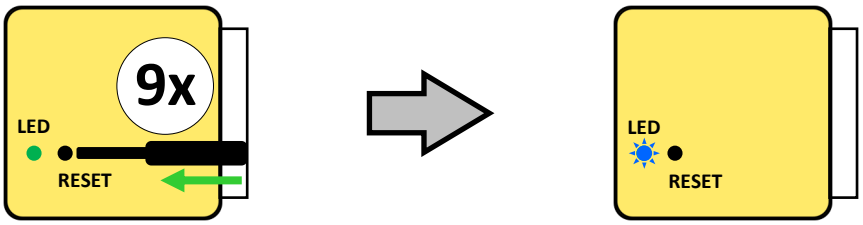
VEHICLE REAR FOG LIGHT DEACTIVATION

In foggy conditions, it is possible to switch on only the rear fog lights of the towed trailer while simultaneously switching off the vehicle's rear fog lights. To do so, proceed as follows:



SWITCH ON THE IGNITION | SWITCH ON THE REAR FOG LIGHT | SWITCH OFF THE REAR FOG LIGHT

RESTORE FACTORY SETTINGS



QUICKLY PRESS THE MODULE BUTTON 9 TIMES

THE MODULE WILL EMIT ONE LONG BLUE FLASH AND RESTART WITH FACTORY SETTINGS.

RESTORING FACTORY SETTINGS WILL ERASE ALL PREVIOUSLY CONFIGURED SETTINGS!

TECHNICAL FEATURES	
POWER FEEDING	**12 VDC**
ABSORPTION IN SLEEP MODE	**0,001 A**
TEMPERATURE RANGE	**-20 / + 60 °C**

WARRANTY CONDITIONS

The product comes with a 2-year warranty covering any manufacturing defects.
The proof of purchase serves as the warranty validation document.

PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE CONTACTING TECHNICAL SUPPORT.
ONLY CONTACT TECHNICAL SUPPORT WHEN THE VEHICLE IS PRESENT AND THE MODULE IS READILY AVAILABLE.

Technical Support: (+39) 0141 - 947676

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