

INSTALLATION CERTIFICATE

The undersigned qualified installer attests having personally fitted the here described vehicle security system following the manufacturer instructions.

By :

Sold on :

Type of product :

933

932

Vehicle :



SERIE 933

933

932

INSTALLATION AND USE MANUAL



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1.0 - PRELIMINARY ADVICE

Dear Customer, the present manual illustrates the most fully featured alarm system; not all functions, electrical connections etc. will therefore apply to all models.

Before installing, identify your alarm model and refer to it for the correct instructions.

GEMINI 932: same as 933 without self-powered battery.

The following signs, intended for the installer or the user, indicate particular functions or connections as follows:



For the user.

This sign highlights useful information.



For the installer.

This sign indicates that the system will work according to the connections and the programming selected or it simply provides useful installation tips.

USER MANUAL**2.0 - OPERATING DESCRIPTION****2.1 - COMPLETE SYSTEM ARMING**

Press the lock button on the vehicle original remote control; system arming is confirmed by a siren chirp (if feature has been modified) and a flash of the turn indicators.

The system has a 30" pre-arming "neutral time" (indicated by the LED turned on steady).

2.2 - SYSTEM ARMING WITH SENSOR AND COMFORT CONTROL EXCLUSION

The driver can arm the system and exclude the internal volumetric protection and comfort function.

To activate this feature, the system should be disarmed and the ignition key turned "OFF" position; proceed as follows.

- Show the electronic key to its receptacle; the LED gives out a quick flash.
- Close all vehicle doors and press the lock button on the original remote control.
- System activation is confirmed by the standard optical/acoustic signals.



Exclusion of sensors and comfort feature is bound to each single arming cycle.

2.3 - PASSIVE ARMING

When this function is programmed, the system passively arms approx. 60" after ignition switch off and after the last door is closed.

System activation is confirmed by the standard optical/acoustic signals.



If passive arming is activated, functioning of internal sensors and comfort output (automatic window roll-up) are excluded.
Opening a door 60" before the system is armed causes the procedure to interrupt; it is resumed once the door is closed.

2.4 - ARMING INHIBIT TIME

System inhibit arming time lasts approximately 30" and is signalled by the LED on; it is possible to exit the vehicle without triggering any alarm.

2.5 - SYSTEM ARMED

After the inhibit time the system is “armed” and ready to detect any theft attempt. When the system is fully armed, the LED flashes.

2.6 - ALARM, INHIBIT TIME BETWEEN ALARMS AND ALARM CYCLES

A theft attempt is indicated by acoustic/optical signals. After the alarm is triggered, but before another alarm cycle starts, the system goes into “neutral time” for about 5“. An alarm event can generate up to 10 alarm cycles of 30” each for each input and for each arming cycle.

2.7 - SYSTEM DISARMING

Press the unlock button on the vehicle original remote control. Disarming is confirmed by two siren chirp (if feature has been modified) and two flashes of the turn indicators. An alarm condition is signalled by five acoustic signals (if feature has been modified) and five flashes of the turn indicators. Relative paragraph (2.9) lists the various alarm causes and relative LED signals.

2.8 - EMERGENCY DISARMING BY ELECTRONIC KEY

This disarming mode is used for “EMERGENCY DISARMING” and “TOTAL DISARMING”. Touching the electronic key to its receptacle disarms and switches off the system which does not reararm when the remote control is used.



To restore normal operation, touch the electronic key to its receptacle. A quick chirp and a flash of the status LED confirm that the system is back to normal mode.

2.9 - ALARM MEMORY

Five flashes of the turn indicators and five chirp of the siren (if feature has been modified) upon disarming indicate a theft attempt. The last cause of alarm can be identified by the LED memory. Turn ignition key “ON” ; the vehicle status LED blinks according to the last alarm detected. Optical signals are repeated 3 times; to interrupt, turn ignition key “OFF”. The table below lists the various alarm causes and relative LED signals.

LED FLASHES	ALARM CAUSES	Nr. OF ALARM
* * ● * *	Ignition attempt (+15/54)	10
* * * ● * * *	Door opening	10
* * * * ● * * * *	Bonnet opening	10
* * * * * ● * * * * *	Boot opening	10
* * * * * * ● * * * * * *	Volumetric or external sensor	10
* * * * * * * * ● * * * * * * * * *	Wire tampering	10
● LED OFF (2 seconds) * LED ON (1 second)		

3.0 - WARRANTY CONDITIONS

This product is guaranteed to be free from manufacturing defects for a period of 24 months from the installation date shown on this warranty, in compliance with the Directive 1999/44/CE. Please fill-in entirely the guarantee certificate included in this booklet and do NOT REMOVE the guarantee label from the device. The warranty will become void if labels are missing or torn, if the installation certificate is not fully compiled or if the enclosed sale document is missing. The guarantee is valid exclusively at authorized Gemini Technologies S.p.A. Service Centers. The manufacturer declines any responsibility for eventual malfunctions of the device or any damage to the vehicle electrical system due to improper installation, use or tampering. This alarm system is solely intended to be a theft-deterrent device.


4.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE

The present device does not fall within the scope of Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) as specified in art. 2.1 of L.D. no. 151 of 25/07/2005.

5.0 - CONNECTORS TABLES

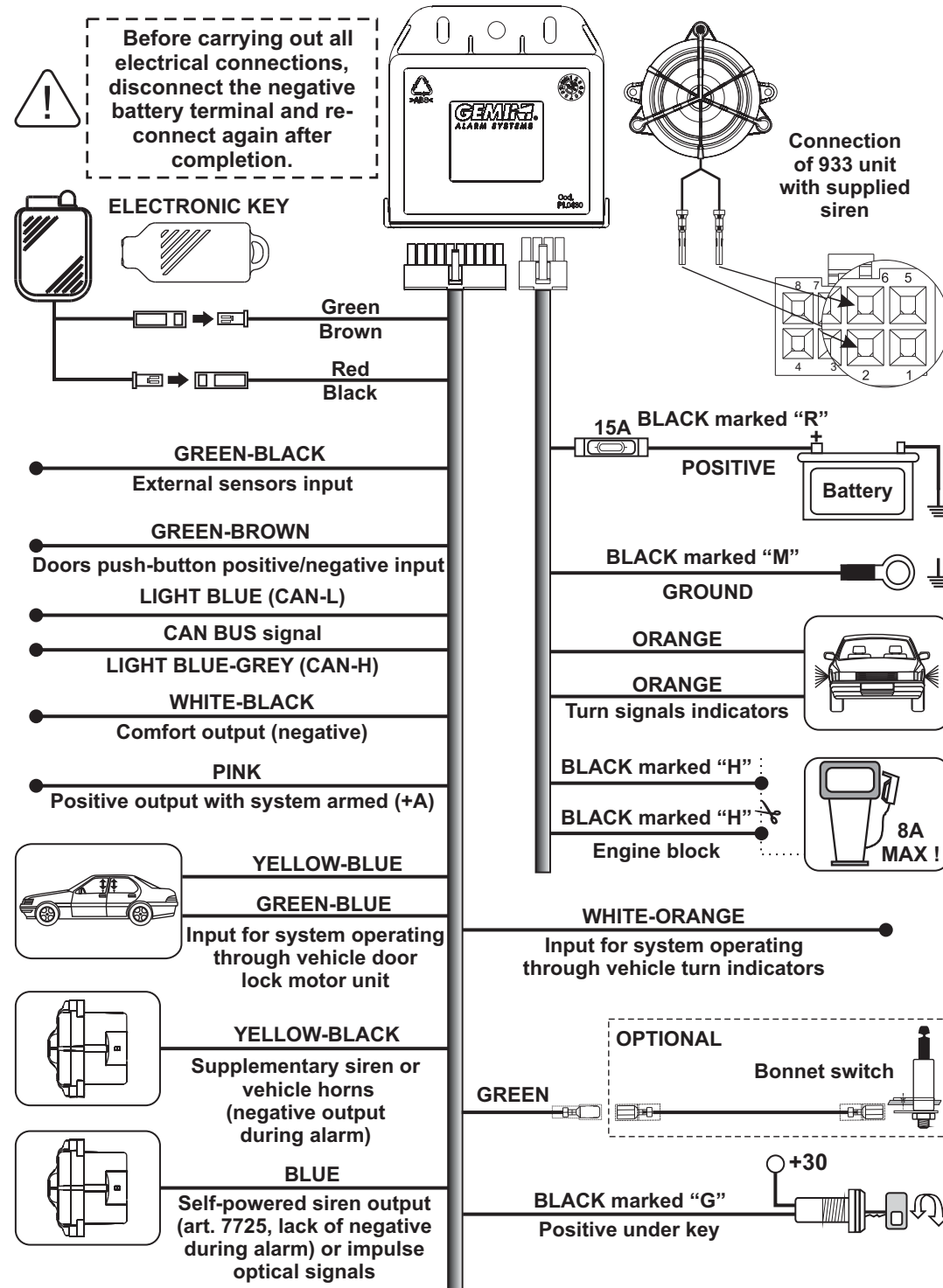
5.1 - 20-WAY CONNECTOR

POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	-----	-----
- 2 -	Signal for system arming	YELLOW-BLUE
- 3 -	Signal for system disarming	GREEN-BLUE
- 4 -	-----	-----
- 5 -	Doors push-button positive/negative input	GREEN-BROWN
- 6 -	Receptacle for electronic key input	GREEN
- 7 -	Receptacle for electronic key negative ground	BROWN
- 8 -	LED negative output	BLACK
- 9 -	LED positive output	RED
- 10 -	Positive under key	BLACK marked "G"
- 11 -	CAN BUS signal (CAN-H)	LIGHT BLUE-GREY
- 12 -	CAN BUS signal (CAN-L)	LIGHT BLUE
- 13 -	Positive output with system armed (+A)	PINK
- 14 -	External sensors negative input	GREEN-BLACK
- 15 -	Bonnet push-button negative input	GREEN
- 16 -	Self-powered siren (lack of negative during alarm) or impulse optic signalling	BLUE
- 17 -	Comfort negative output	WHITE-BLACK
- 18 -	Supplementary siren or vehicle claxson output (negative output during alarm)	YELLOW-BLACK
- 19 -	-----	-----
- 20 -	Input for self-learning and system arming/disarming by turn indicators	WHITE-ORANGE

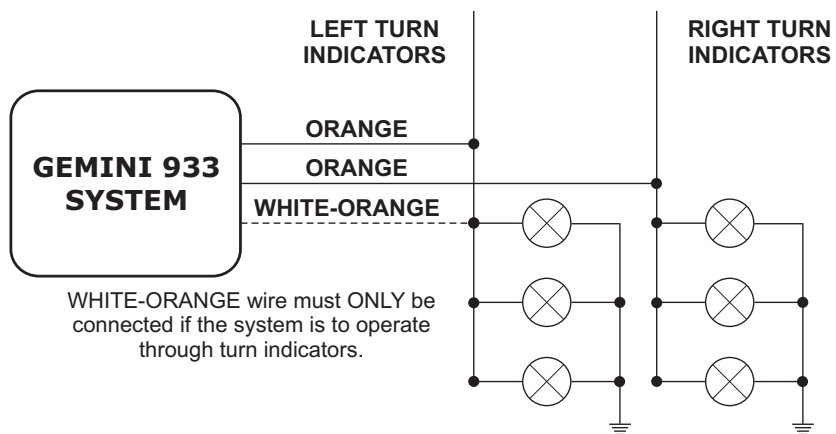
 WHITE-ORANGE wire must ALWAYS be connected if system is to operate through the turn indicators.

5.2 - 8-WAY CONNECTOR

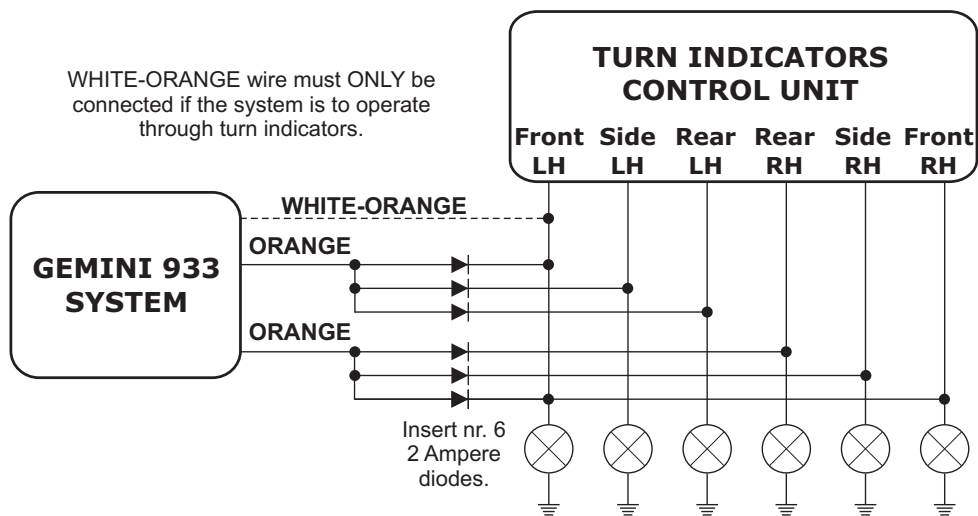
POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	Ground	BLACK marked "M"
- 2 -	Siren output	-----
- 3 -	Positive	BLACK marked "R"
- 4 -	Turn signals positive output	ORANGE
- 5 -	Engine block	BLACK marked "H"
- 6 -	Siren output	-----
- 7 -	Engine block	BLACK marked "H"
- 8 -	Turn signals positive output	ORANGE



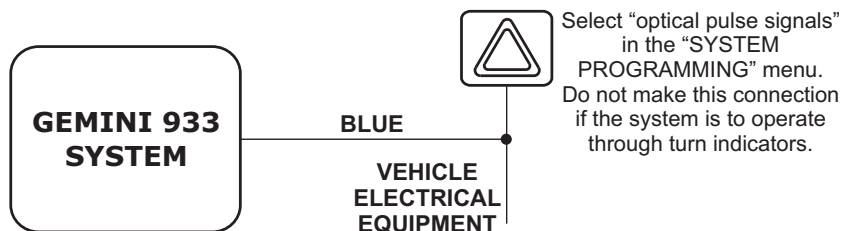
7.1 - STANDARD CONNECTIONS



7.2 - CONNECTIONS FOR VEHICLES WITH SEPARATE LINES



7.3 - CONNECTION TO HAZARD PUSH-BUTTON



The 933 system can operate in various modes according to the vehicle on which it is installed and depending on the connections that can be made. The CAN-BUS mode offers yet another operating solution. It enables the system to be managed through the CAN-BUS line and operate in combination with the CAN signals, with the turn indicators flashes and/or the door lock motor unit. The system automatically manages the different arming/disarming signals. Consult the technical installation charts for the available connections for each vehicle. The various arming modes are listed below and the connections indicated in the following paragraphs

- Arming through CAN-BUS line.
- Arming through door lock motor unit.
- Arming through self-learning of turn indicators flashes.
- Arming through turn indicators flashes and door lock motor unit.
- Arming through turn indicators flashes, door lock motor unit and CAN-BUS line.

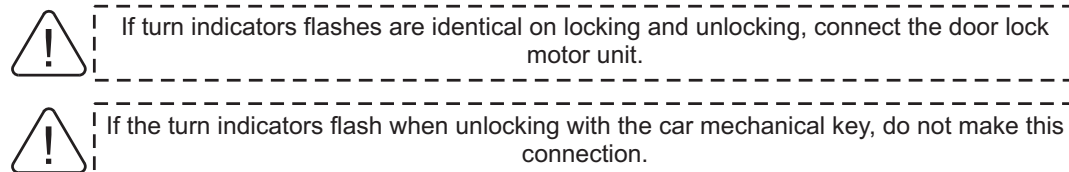
8.1 - CONNECTIONS AND MANAGEMENT BY CAN-BUS LINE

System arming/disarming and alarm are managed through CAN-BUS line. Therefore only connect the alarm system CAN BUS line to the vehicle CAN line wires (see available diagrams at web-site www.gemini-alarm.com).

8.2 - CONNECTIONS TO DOOR LOCK MOTOR UNIT

System arming/disarming connections must be made to the vehicle door lock motor unit (polarity inversion).

8.3 - CONNECTIONS TO TURN INDICATORS



To arm/disarm the system, connect the WHITE-ORANGE wire to a wire of the turn indicators.

8.4 - "MIXED" CONNECTION OPTION

This type of connection allows the system to operate through the CAN BUS line with the turn indicators or the door lock motor unit or both. The system automatically manages the different lock/unlock signals according to the programming and the connections made.

9.0 - VEHICLE CODE PROGRAMMING

If the system is to be managed via CAN-BUS line, it must be configured according to the vehicle on which it is to be installed.

To help you understand the coding procedure, here below is an example illustrating the configuration procedure.

In this case the code used is 1-0-3 which hypothetically corresponds to a "FIAT XXXXX".

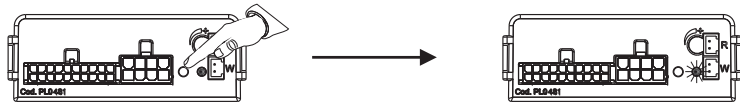


A separate leaflet, included in the alarm packaging, lists all the available vehicles (codes are updated at packaging time).
Up-to-date information on supported vehicle models can be found at: www.gemini-alarm.com (private area).

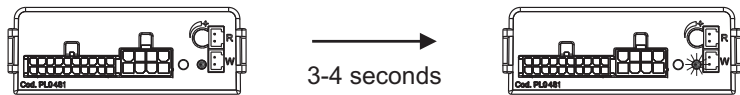


The system has an indicator LED that signals any wrong vehicle code inserted. The code must be range between 100 and 235 otherwise the LED on the unit blinks repeatedly and the procedure is interrupted. The previously inserted code remains stored.
The procedure is also invalidated if the LED blinks more than 10 times. In this case there are no optical warnings, the procedure is simply be interrupted. In either case, repeat the whole procedure.

Connect the connectors of the wiring harness to the connector of the system.
Press and hold the button shown below until the LED lights up.



Release the button, the LED switches off.



3-4 seconds

After a 3/4 seconds pause, the LED starts the first sequence of flashes.
Press the button at the first flash which corresponds to number "1".



FIRST
FLASH

Press

After a 4 seconds, the LED starts the second sequence of flashes.
Press the button at the tenth flash which corresponds to number "0".



TENTH
FLASH

Press

After another 4 seconds, the LED starts the third sequence of flashes.
Push the button at third LED flashing, corresponding to value "3".



THIRD
FLASH

Press

When the last digit is entered, the alarm system "repeats" the entered code.



ONE FLASH AND A
SHORT PAUSE



TEN FLASHES AND
A SHORT PAUSE



THREE FLASHES

Press the vehicle remote control lock/unlock buttons to make sure the alarm system works properly.

Eventually disconnect the 8-way connector and reconnect it after few seconds

10.0 - SELF-LEARNING OF TURN INDICATORS FLASHES

In order to arm/disarm through the turn indicators, the system must learn the vehicle locking (arming) and unlocking (disarming) flashes.

Connect the WHITE-ORANGE wire to the turn indicators and proceed as follows:

- Disconnect the 8-way wiring connector from the 8-way system connector.
- Turn ignition key "ON".
- Connect the 8-way wiring connector to the 8-way system connector; the LED turns on steady.
- Turn ignition key "OFF".
- Close all doors and press the lock button on the original remote control.
- When the turn indicators stop flashing, a high-pitched acoustic signal confirms the learning of the arming flashes.
- Press the unlock button on the original remote control.
- When the turn indicators stop flashing, 2 high-pitched audio signals confirm the learning of the disarming flashes.
- This completes the procedure.



To cancel the programming of the turn indicators reset the system (see chapter 16.0).

11.0 - SYSTEM PROGRAMMING


The table below applies to the system programmed in "standard configuration".
Every time you enter the programming procedure, the alarm resets to the default settings.

FUNCTION	STATUS	LED FLASHES
Exclusion of arming/disarming optic signalling	Disabled	*
Exclusion of arming/disarming acoustic signalling	Enabled	**
System passive arming	Disabled	***
Arming of self-powered coded siren	Disabled	****
Doors input - positive	Disabled	*****
Optical pulse signalling	Enabled	*****
Negative output during alarm cycle	Disabled	*****
For Gemini only, turn ignition key	----	*****

A lack of power during electrical system maintenance, will not affect the programming.
The procedure must be carried out entirely because key rotation disables the selected function and moves to the next one until the programming procedure is completed.
Programmable functions are briefly described below and the next paragraph illustrates the programming instructions.

11.1 - OPTICAL SIGNALS

This function activates optical signals during system arming (1) and disarming (2).

 If the vehicle already has optical locking/unlocking signals, the turn indicators alarm flashes should be deactivated.

11.2 - ACOUSTIC SIGNALS

This function activates acoustic signals during system arming (1) and disarming (2).

11.3 - PASSIVE ARMING

This function arms the system 60" after ignition is switched off and the last door is opened and closed.
If a door is opened during this lapse of time, the procedure is interrupted and it is resumed when the door is closed.

11.4 - ENABLING OF SIREN (7725) OUTPUT


This function enables the relative output (20-way connector, position 13, PINK wire) to activate the self-powered coded siren (art. 7725).

11.5 - DOOR SWITCH POLARITY SELECTION

This function modifies the alarm input signal (positive or negative) according to the signal generated by the doors switch.

11.6 - OPTICAL PULSE SIGNAL/SELF-POWERED SIREN

This function activates the optical signals according to the connection made; only for vehicles where hook-up is to the "emergency" push-button wire (Hazard push-button).

 When the optical pulse signaling feature is activated, the blinkers will ONLY emit optical signals during an alarm cycle.
The system BLUE wire MUST be connected to the Hazard push-button.
In this case, do not connect the ORANGE wires (see chapter 7.3)

If the function is disabled, under normal operating conditions, the blue wire carries a negative signal; during an alarm cycle, there is a lack of negative.

11.7 - NEGATIVE OUTPUT SELECTION (DURING ALARM) FOR HORNS OR ADDITIONAL SIREN

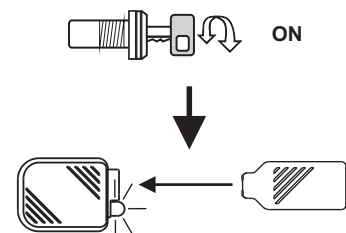
Once activated, this function can activate the output for the siren (continuous tone) or for the horn (intermittent tone).

12.0 - SYSTEM PROGRAMMING EXAMPLE

Here below is an example that illustrates the various steps to follow to modify the programmable functions.

As mentioned before, every key rotation disables a function, while the electronic key enables it.
When ignition is turned On or Off or the electronic key is touched to its receptacle, a high or low pitched signal sounds and the LED flashes according to table in chapter 11.0.

With alarm system disarmed, turn ignition key "ON" and touch electronic key to its receptacle.



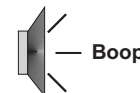
Two acoustic signals (a high and a low-pitched sound) and two flashes of the turn indicators indicate that the system is in the programming procedure.

Turn ignition "OFF" and then back "ON" to disable the function.



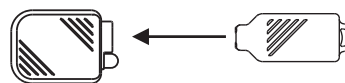
A low-pitched acoustic signal confirms the operation.

The LED flashes according to selected function (from 1 to 8).



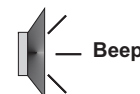
OR

Touch electronic key once to its receptacle to activate the function.



A high-pitched acoustic signal confirms the operation.

The LED flashes according to function the selected function (from 1 to 8).




In both cases, system moves on to the next function.


Repeat steps above to enable or disable other functions.

When the last function is programmed (either with the electronic key or the ignition key), in addition to the confirmation tone, the system gives two low-pitched and one high-pitched acoustic signals and the turn indicators flash twice.

These last two signals indicate the end of the programming procedure.


13.0 - ADDING NEW DEVICES

 To carry out the operation successfully, make sure the required electrical connections (bonnet push-button and positive under key) are complete.


 Storing memory is for 55 devices.
If an extra device is added, it automatically deletes the first device programmed in the system memory.

To activate the procedure proceed as follows:

- With system disarmed, open the bonnet and leave it open.


 The following operations must be carried out within four seconds otherwise the procedure is invalidated.

- Turn ignition key “ON-OFF”-“ON-OFF”-“ON-OFF”-“ON”.
- At the fourth rotation, leave it “ON”.
- To confirm it has entered in the self-learning mode, the system gives two acoustic signals (one high and one low-pitched), the turn indicators flash once and the LED turns ON.

 Do not close the bonnet otherwise all previously programmed devices are erased as described in the next paragraph.

- The system is ready to receive the device codes.
- Touch the electronic key to the receptacle; each time a device is learned a high-pitched signal sounds and the status LED turns OFF briefly.
- Repeat this procedure to program other devices.
- Turn ignition key “OFF”.
- To confirm the end of the procedure, a low-pitched signal sounds, the turn indicators flash once and the status LED turns OFF.


14.0 - DELETING PROGRAMMED DEVICES

 To carry out the operation successfully, make sure the required electrical connections (bonnet push-button and positive under key) are complete.


All device previously programmed in the memory can be erased.

To clear memory proceed as follows.

- With system disarmed, open the bonnet and leave it open.

 The following operations must be carried out within four seconds otherwise the procedure is invalidated.

- Turn ignition key “ON-OFF”-“ON-OFF-ON”-“OFF-ON”.
- After the fourth rotation, leave it “ON”.
- To confirm it has entered in the delete mode, the system gives two acoustic signals (one high and one low-pitched), the turn indicators flash once and the LED turns ON.
- Close the bonnet.
- To clear the memory, leave the bonnet closed for at least 8 seconds.

 If the bonnet is opened before 8 seconds, the devices will not be deleted.

- The status LED turns OFF when the devices are deleted.
- Turn ignition key “OFF”.
- The end of the procedure is indicated by one long low-pitched acoustic signal.

15.0 - ULTRASONIC VOLUMETRIC PROTECTION

15.1 - CONNECTION AND POSITIONING

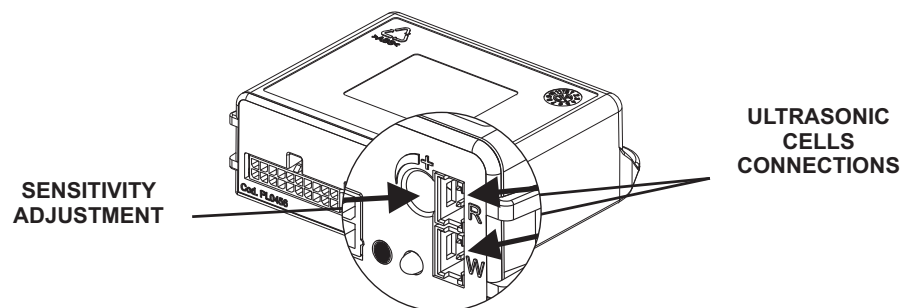
Insert the WHITE connector in the “W” marked socket and the RED connector in the “R” marked socket (see figure below).

Install the transducers of the ultrasonic sensors on the top part of the windscreen internal pillars, away from the air vents and orient them towards the center of the rear window.

15.2 - SENSOR ADJUSTMENT

To check sensitivity level proceed as follows:

- With the alarm system disarmed, roll down the front window about 20 cm.
- Adjust trimmer at a medium setting.
- Close all doors, bonnet and boot and arm the system.
- During the system inhibit arming time introduce an object in the cabin through the window and move it around; the status LED will turn off to signal a presence.
- If sensitivity level is too high or too low, readjust the trimmer and repeat the above procedure.



17.0 - TECHNICAL SPECIFICATIONS

Power supply	12 Vdc
Current absorption @ 12Vdc with system armed and LED flashing	15 mA
Working range temperature	From -30°C to +70°C
Turn signals relay contact capacity	8 A at 20°C
Engine immobiliser relay contact capacity	8 A at 20°C
Alarm cycle duration	30 sec.
Maximum positive current output when armed (+A)	700 mA
Maximum load of siren output	1 A

16.0 - SYSTEM RESET



By activating the following procedure, the system returns to the Factory default setting.

This procedure must therefore only be used in case of need, before programming the system or auto-learning the turn indicators flashes.

To reset the system proceed as follows:

- Switch-off system power supply.
- Short-circuit the RED and BLACK wires of the 2-way LED connector.
- Switch the system on; once the alarm system is powered, 4 acoustic signals will sound and the turn indicators will flash 4 times.
- Remove the previously created short-circuit; the status LED lights up steady.
- Turn ignition key “ON”; reset is confirmed by an acoustic signal and the wailing of the siren for approx. 3 seconds.
- Turn ignition key “OFF”; the LED will turn off. There are no acoustic signals.