

INSTALLATION CERTIFICATE

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

By :

Sold on :

Type of product : 931TT

Vehicle :

Gemini permanently fitted aftermarket equipment must be installed by qualified and authorised installers.

Thatcham recommends to its insurer members that the installations of certified products within the aftermarket are registered with an independent installation registration system which can be accessed by insurance companies.

Thatcham administers the Thatcham Recognised Installer scheme, on behalf of the British motor insurance industry, providing independent registration of installations to vehicle owners.

Details of the Thatcham Recognised Installer scheme can be found at www.thatcham.org.

To ensure consumers insurance cover is not adversely affected it is highly recommended that all installations are carried out by Thatcham recognised installers and that all installs are registered providing the vehicle owner with a Thatcham recognition of installation for presentation to insurers.

Thatcham recommends to its insurer members that the installations of certified products within the aftermarket are registered with an independent installation registration system which can be accessed by insurance companies.

If seeking insurer recognition for the fitment of this product it is likely that the installation will have to be carried out by a Thatcham recognised installer.

Afull list of Thatcham recognised installers is available at www.thatcham.org.

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ISO 9001 Certified Company



931TT

USER & INSTALLER MANUAL



Made in Italy

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Dear Customer,

The 931 TT self-powered alarm system is supplied with 1 touch key to emergency override the system and exclude the sensors and 2 RFID transponders (TAG cards) to engage/disengage the engine immobilizer. The alarm is compatible with wireless sensors.

Please read the present manual carefully to familiarize yourself fully with the alarm features and operating procedures and do keep it handy for future reference.

USER MANUAL

2.0 - OPERATING PROCEDURE

The alarm is operated via the vehicle original remote control. The built-in radio receiver allows the owner to wirelessly control the engine immobilizer from the TAG card.

2.1 - SYSTEM ARMING

Press the lock button on the vehicle original remote control; arming is confirmed by a Beep and a flash of the turn indicators (if signals are enabled).

NB: Before it is fully armed, the system has a 30 sec. arming delay signaled by the LED ON steady.

2.2 - SYSTEM ARMING WITH SENSOR AND COMFORT EXCLUSION

To arm the system without internal volumetric protection (US sensors), optional wireless PIR sensors and comfort feature, proceed as follows:

- Make sure the system is disarmed and ignition key is in the OFF position.
- Touch the override key to its receptacle; the LED will flash quickly.
- Close all vehicle doors and press the lock button on the vehicle original remote control.
- System arming is confirmed by a Bop and a flash of the turn indicators (if signals are enabled).



Exclusion of sensors and comfort feature is bound to each single arming cycle. They will reset upon next arming.

2.3 - PASSIVE ARMING

When passive arming is enabled, the system automatically arms approx. 60 sec. after ignition is switched OFF and after the last door is opened and closed.

Arming is confirmed by a Beep and a flash of the turn indicators (if signals are enabled).



When the alarm automatically arms (passive arming), internal sensors and comfort output (automatic window roll-up) are excluded. Opening a door during the 60-sec. passive arming countdown will cause the procedure to interrupt; it will resume once the door is closed.

2.4 - ARMING DELAY

There is a 30 sec. delay from the time the system is armed to allow you to exit the vehicle without triggering an alarm: it will be signaled by the LED powered ON steady.

2.5 - SYSTEM ARMED

After the arming delay the system is fully armed and ready to detect any alarm event. The LED will start flashing to confirm the armed status.

2.6 - ALARM, INHIBIT TIME BETWEEN ALARMS AND ALARMCYCLES

Alarm events are signaled by optical/acoustic signals. Each event can generate up to 10 cycles for each input and for each arming cycle with a pause of 5 sec. between each cycle. One alarm cycle lasts 30 sec.

2.7 - SYSTEM DISARMING

Press the unlock button on the vehicle original remote control. Disarming is confirmed by 2 Beeps and 2 flashes of the turn indicators (if signals are enabled).

If an alarm event has occurred while you were away from your vehicle, it will be signaled, when you disarm the system, by 5 Beeps and 5 flashes of the turn indicators (if signals are enabled). Alarm causes and relative LED signals are listed in par. 2.10.

2.8 - EMERGENCY OVERRIDE VIA TOUCH KEY

The touch key is used to override the system as an emergency backup and to fully disarm the system in case remote controls are lost or inoperative. By touching the key to its receptacle, the system disarms and switches OFF. It will not rearm by pressing the remote control lock button.



To restore normal operation, touch the key to its receptacle. A BEEP and a flash of the LED will confirm the operation.

2.9 - SYSTEM ARMING AND ENGINE IMMOBILIZER

The engine immobilizer is a security feature that prevents illegally starting the engine.

Operation without a paired TAG:

The engine immobilizer (if connected) kicks in upon arming the system and is disengaged when the system is disarmed.

Operation with a paired TAG:

When a TAG is paired, the engine immobilizer (if connected) is enabled when arming the alarm via the vehicle original remote control but it can only be disengaged when the TAG is detected.

If the TAG is detected before the OE remote control, the alarm remains armed and saves the TAG signal for 20 sec. It will only disarm once it detects the OE remote control. If, when the 20 sec. timeout expires, no remote control has been detected, the alarm will remain armed but it will delete the TAG signal from its memory.

If the OE remote control is detected before the TAG, the alarm remains armed and saves the OE remote control signal for 20 sec. If, when the 20 sec. timeout expires, no TAG has been detected, the alarm will remain armed but it will delete the OE remote control signal from its memory.

There is a 6 sec. inhibit time on the door, boot and ultrasonic inputs to avoid false alarms. If the 6 sec. timeout expires without the TAG being detected, an alarm cycle is triggered. The alarm will only disarm when it detects the TAG.

N.B. The engine immobilizer can be configured to automatically arm when the alarm is disarmed and no TAG is detected (See par. 10.7, Default setting => disabled).



If the TAG fails to work in the presence of any significant radio frequency interference, use the touch key to disable the immobilizer.

2.10 - ALARM MEMORY

The LED memory allows to identify the last alarm event signaled by 5 flashes of the turn indicators and 5 Beeps when the system is disarmed (if signals are enabled). Turn ignition key ON and count the LED flashes; they will indicate the last alarm detected.

The flash sequence is repeated 3 times; to interrupt, turn ignition key OFF.

LED FLASHES	ALARM CAUSES	ALARM CYCLES
●	Ignition attempt (+15/54)	10
****●****	Door tamper	10
*****●*****	Bonnet tamper	10
*****●*****	Volumetric or external sensor	10
● LED OFF (2 seconds) * LED ON (1 second)		

3.0 - TAG CARD AND BATTERY REPLACEMENT



The RFID transponder (P/N 008) must previously be paired to engage/disengage the engine immobilizer (par. 12.0)

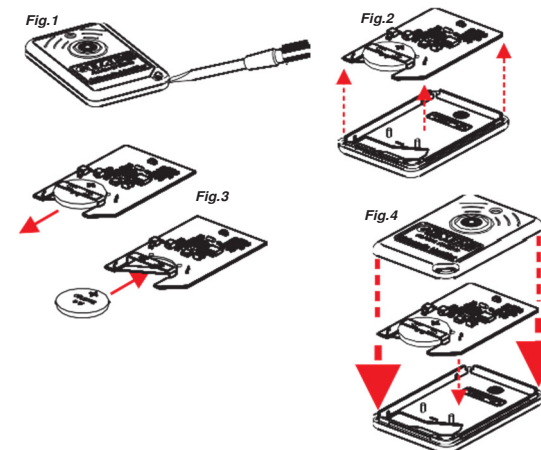
To activate the transponder simply press the button and keep it pressed for at least 4 sec. The LED turns ON steady when the transponder is activated. Release the button. The LED will flash everytime data is transmitted.

If no movement is detected within 10 min. the transponder automatically goes into standby mode to save battery life; to wake it up for another 10 min., move it or press the button. Press the button again to send a radio signal to the alarm system.

To switch OFF the transponder, press and hold the button for approx. 10 sec., the LED will be ON steady. It will flash twice just before the transponder switches OFF.

To replace the battery, proceed as follows:

- Gently separate the plastic shells by inserting a flat head screwdriver in the pry-off slot (Fig. 1).
- Carefully remove the circuit (Fig. 2).
- Remove the discharged battery and insert a new one, taking care not to invert polarity (Fig. 3).



⚠ ATTENTION



Use only CR2032 batteries. Different type batteries can seriously damage the transponder. Discard used batteries properly in special dedicated containers.

INSTALLER MANUAL

4.0 - PINOUT TABLES

4.1 - 20-PIN CONNECTOR

POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	-----	-----
- 2 -	System arming signal	YELLOW-BLUE
- 3 -	System disarming signal	GREEN-BLUE
- 4 -	-----	-----
- 5 -	Door switches positive/negative input	GREEN-BROWN
- 6 -	Touch key receptacle input	GREEN
- 7 -	Touch key receptacle ground	BROWN
- 8 -	LED negative output	BLACK
- 9 -	LED positive output	RED
- 10 -	Ignition	BLACK marked "G"
- 11 -	CAN BUS signal (CAN-H)	LIGHT BLUE-GREY
- 12 -	CAN BUS signal (CAN-L)	LIGHT BLUE
- 13 -	Positive output - system armed (+A)	PINK
- 14 -	External sensors negative input	GREEN-BLACK
- 15 -	Bonnet switch negative input	GREEN
- 16 -	Output for Hazard lights	BLUE
- 17 -	Comfort negative output	WHITE-BLACK
- 18 -	Output for digital siren/horn/additional siren	YELLOW-BLACK
- 19 -	Antenna	BLACK
- 20 -	Learning input and system arming/disarming via turn indicator flashes	WHITE-ORANGE

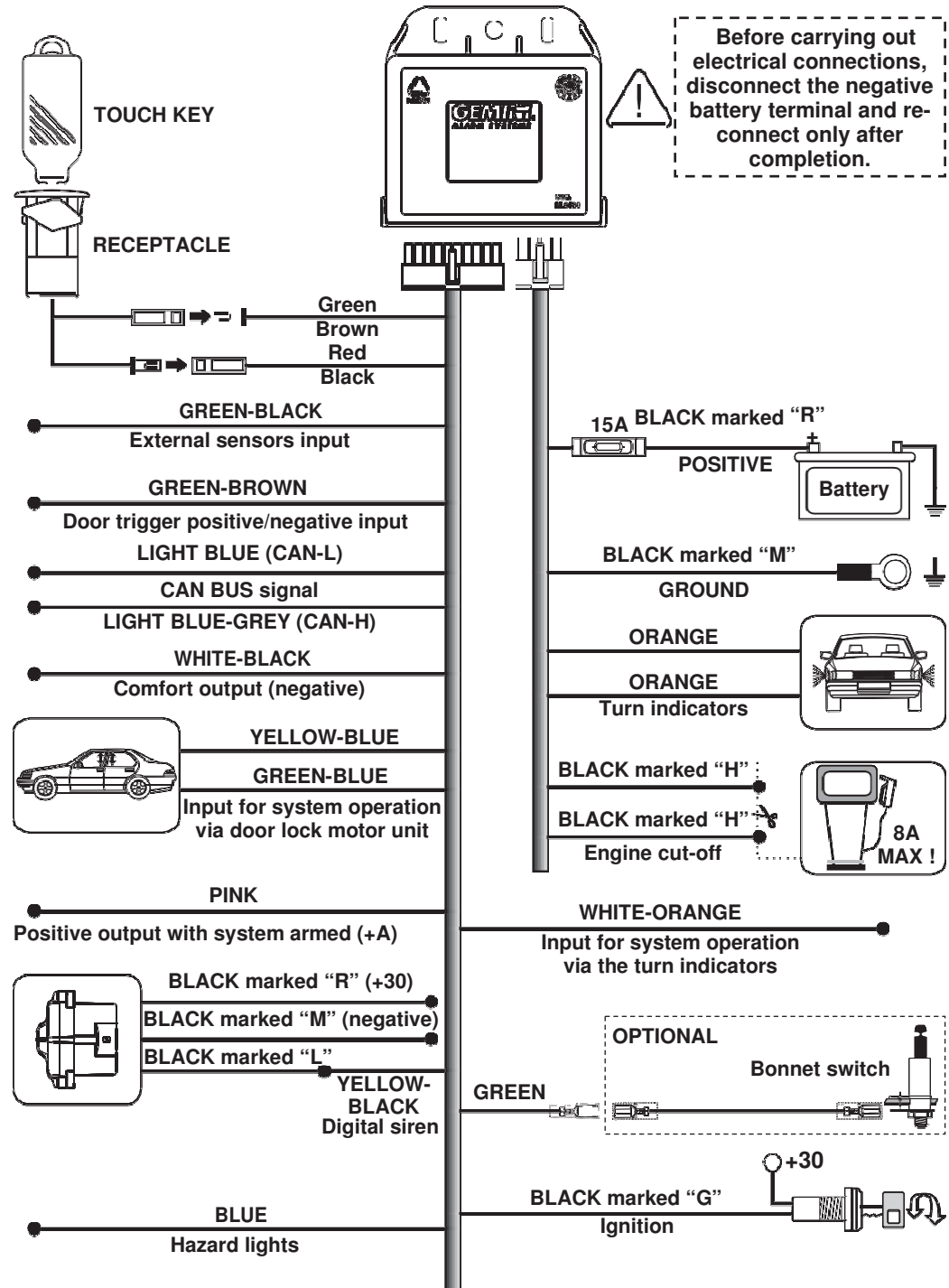


WHITE-ORANGE wire must ALWAYS be connected if the system is armed/disarmed via the turn indicators flashes.

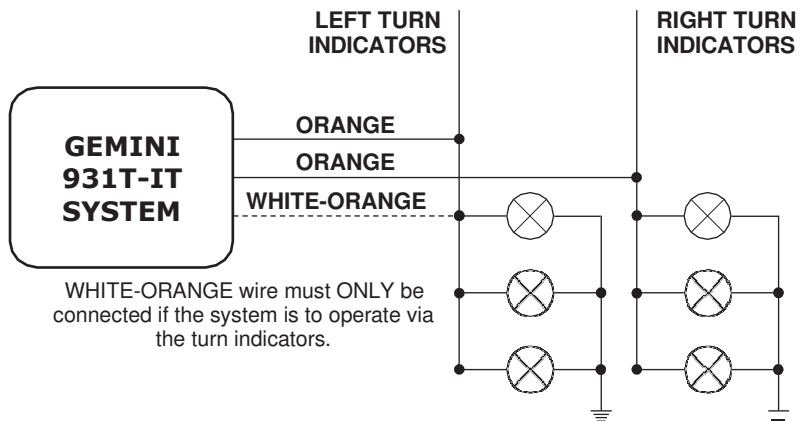
4.2 - 8-PIN CONNECTOR

POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	Ground	BLACK marked "M"
- 2 -	-----	-----
- 3 -	Positive supply	BLACK marked "R"
- 4 -	Turn indicators positive output	ORANGE
- 5 -	Engine immobilizer	Black marked "H"
- 6 -	-----	-----
- 7 -	Engine immobilizer	Black marked "H"
- 8 -	Turn indicators positive output	ORANGE

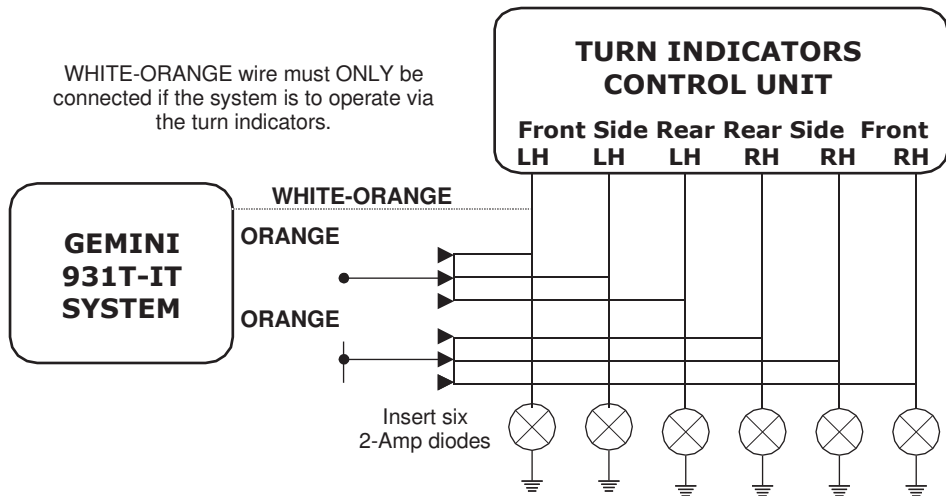
5.0 - WIRING DIAGRAM



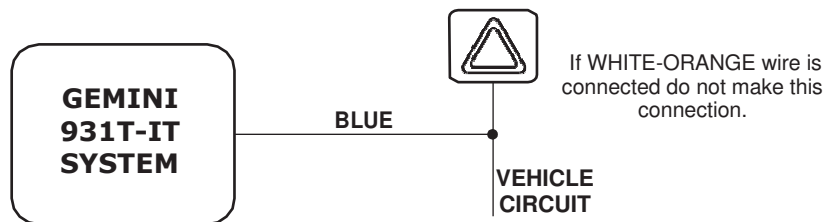
6.1 - STANDARD CONNECTIONS



6.2 - CONNECTIONS FOR VEHICLES WITH SEPARATE LINES



6.3 - CONNECTION TO HAZARD SWITCH



The alarm system can operate in various modes according to the vehicle on which it is installed and the available connections (refer to the vehicle installation specifications). It can be managed via the vehicle CAN BUS line and operate in combination with the turn indicator flashes and/or the door locking motors. The system automatically manages the different arming/disarming signals.

The various arming modes are listed below and the connections detailed in the following paragraphs (refer to the vehicle specific installation instructions available in the restricted area of our website: www.gemini-alarm.com).

- Arming via CAN BUS line.
- Arming via door lock motors.
- Arming via turn indicator flashes.
- Arming via turn indicator flashes and door lock motors.
- Arming via turn indicator flashes, door lock motors and CAN BUS line.

7.1 - CONNECTIONS AND OPERATION VIA CAN BUSLINE

System arming/disarming and alarms are managed via CAN therefore only connect the alarm CAN wires to the vehicle CAN line.

7.2 - CONNECTIONS TO DOOR LOCK MOTORS

System arming/disarming connections must be made to the door lock motors (polarity reversal).

7.3 - CONNECTIONS TO TURN INDICATORS

- ⚠ If the turn indicators lock/unlock flashes are identical, also connect the door lock motors.
- ⚠ If the turn indicators flash when unlocking with the vehicle mechanical key, this type of connection is not recommended.

To arm/disarm the system, connect the WHITE-ORANGE wire to one of the turn indicators wires and learn the lock/unlock flashes (par. 9.0).

7.4 - COMBINATION CONNECTION

This type of connection allows the system to operate via the CAN line in combination with the turn indicators or the door lock motors or both.

The system will automatically manage the different lock/unlock signals according to the selected configuration and connections.

8.0 - VEHICLE CODE PROGRAMMING

If the system is to be managed via CAN BUS, it must be configured with the code set up for the vehicle on which it is to be installed.

Here below is an example illustrating the configuration procedure where the code to be entered is "1-0-3".



A separate leaflet, included in the alarm packaging, lists available vehicles (codes are updated at packaging time).
Up-to-date information on supported vehicle models is available in the restricted area of our website: www.gemini-alarm.com.

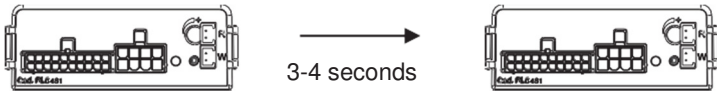


The system has an indicator LED that signals any wrong vehicle code inserted. The code must range between 100 and 239 otherwise the LED on the unit blinks repeatedly and the procedure is interrupted. The previously inserted code remains stored. The procedure is also invalidated if the LED blinks more than 10 times. In this case there are no optical warnings, the procedure is simply interrupted. In either case, repeat the entire procedure.

Connect the harness connectors to the alarm.
Press and hold the button shown below until the LED lights up.



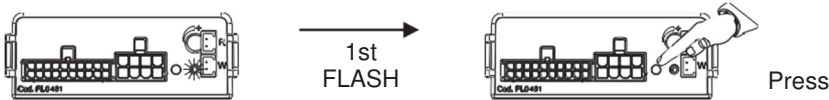
Release the button, the LED switches off.



3-4 seconds

After 3-4 seconds, the LED starts flashing.

Press the button at the 1st flash which corresponds to the code 1st digit "1".

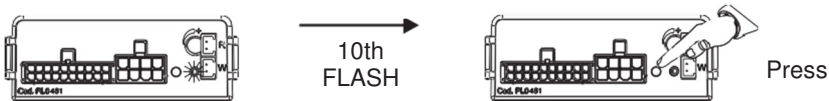


1st
FLASH

Press

After 4 seconds, the LED starts flashing again.

Press the button at the 10th flash which corresponds to the code 2nd digit "0".

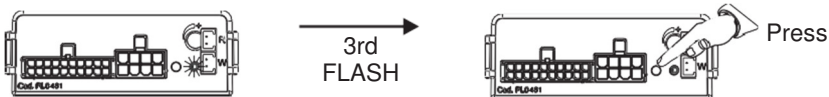


10th
FLASH

Press

After another 4 seconds, the LED flashes one last time.

Press the button at the 3rd flash which corresponds to the code 3rd digit "3".



3rd
FLASH

Press

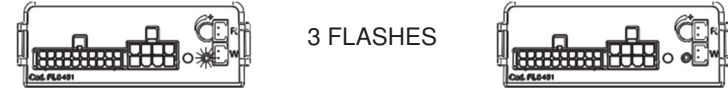
When the last digit is entered, the alarm system "repeats" the entered code "1-0-3".



1 FLASH AND A
SHORT PAUSE



10 FLASHES AND A
SHORT PAUSE



3 FLASHES

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

If needed, disconnect the 8-pin connector and reconnect it after few seconds.

9.0 - LEARNING TURN INDICATORS FLASHES

In order to arm/disarm via the turn indicators, the system must learn the vehicle lock (arm) and unlock (disarm) flashes.

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

- Disconnect the 8-pin harness connector from the unit.
- Turn ignition key ON.
- Re-connect the 8-pin harness connector to the unit; the LED turns ON steady.



At this point you have 60 sec. to turn ignition key OFF and carry out the learning procedure otherwise it will timeout with a Bop.

- Turn ignition key OFF, the LED will remain steady ON.
- Close all doors and press the lock button on the original remote control.
- When the turn indicators stop flashing, a Beep confirms the arming flashes have been learnt.
- Press the unlock button on the original remote control.
- When the turn indicators stop flashing, 2 Beeps confirm the disarming flashes have been learnt.
- The system will automatically exit the procedure.

If the ignition key is turned OFF before the 60-sec. countdown restarts to allow learning the turn indicators. It will timeout with a Bop.

If, after the ignition key is turned OFF, it is turned back ON, the procedure is interrupted with a Bop.



To cancel the programming of the turn indicators reset the system (par. 13.0).

10.0 - SYSTEM PROGRAMMING

The table below applies to the system programmed in "standard configuration". Every time you enter in programming mode, the alarm resets to the default settings. Alack of power during electrical system maintenance, will not affect the system configuration.

	FEATURES	DEFAULT STATUS	LED FLASHES
1	'Exclusion' of arm/disarm optical signals	Disabled	✱
2	'Exclusion' of arm/disarm acoustic signals	Enabled	✱✱
3	Passive arming	Disabled	✱✱✱
4	Self-powered digital siren output	Enabled	✱✱✱✱
5	Door input - positive trigger	Disabled	✱✱✱✱✱
6	Horn negative output selection	Disabled	✱✱✱✱✱✱
7	Engine immobilizer passive arming	Disabled	✱✱✱✱✱✱✱

10.1 - OPTICAL SIGNALS

Arming/disarming optical confirmation (*Default setting => optical signals ON*).



If the vehicle already has optical lock/unlock signals, the turn indicators alarm flashes should be disabled.

10.2 - ACOUSTIC SIGNALS

Arming/disarming acoustic confirmation (*Default setting => acoustic signals OFF*).

10.3 - PASSIVE ARMING

The system will automatically arm 60 sec. after ignition is switched OFF and the last door is opened and closed.

Opening a door during the 60-sec. passive arming countdown will cause the procedure to interrupt; it will resume once the door is closed.

10.4 - DIGITAL SIREN OUTPUT

If enabled, it allows communication between the alarm system and the digital siren (P/N 7725D).

If disabled, the output activates the additional siren (continuous or intermittent according to configuration of feature n.6).

10.5 - DOOR SWITCH POLARITY SELECTION

This feature modifies the alarm input signal (positive or negative trigger) according to the signal generated by the door switch (*Default setting => negative*).

10.6 - NEGATIVE OUTPUT SELECTION FOR HORN OR ADDITIONAL SIREN

If feature n.4 is disabled, the output can be configured to select either the additional siren (continuous tone) or the horn (intermittent tone). (*Default setting => siren*).



Cannot be configured if feature n.4 has been programmed to enable the digital siren.

10.7 - ENGINE IMMOBILIZER PASSIVE ARMING

If this feature is enabled, the engine block will automatically arm whenever the system is disarmed and no TAG is detected for 30 sec.

If ignition key is cycled ON, the LED will flash quickly to warn you that the immobilizer is enabled.

11.0 - SYSTEM PROGRAMMING EXAMPLE

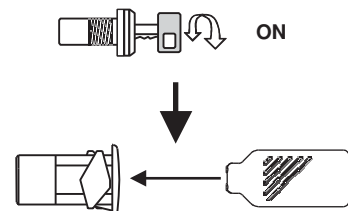
When modifying the programmable features, keep in mind that **the ignition key is used to disable** the features while the **touch key is used to enable** them.

When ignition is cycled ON/OFF or the override key is touched to its receptacle, a Beep or Bop will sound according to the action taken and the LED will flash according to the selected feature (table 10.0).

NB: The procedure must be carried out entirely.

Disarm the alarm system and make sure passive immobilizer is disabled.

Turn ignition key ON, the LED will power up for 2 sec. and, while the LED is ON, touch the override key to its receptacle.



A Beep and a Bop and 2 flashes of the turn indicators will confirm that the system is in programming mode.

TO DISABLE



Cycle ignition OFF/ON to disable the feature.

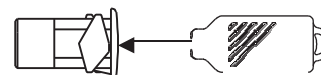
A Bop will confirm the operation.

The LED will flash according to the selected feature (from 1 to 7).



OR

TO ENABLE



Touch the override key once to its receptacle to enable the feature.

A Beep will confirm the operation.

The LED will flash according to selected feature (from 1 to 7).



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

Repeat the above steps to enable or disable the other features.

When the last feature is configured (either with the touch key or the ignition key), in addition to the confirmation tone, 2 Bops and 1 Beep will sound and the turn indicators will flash twice to confirm the end of the programming procedure.

12.0 - ADDING NEW DEVICES



To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) have been made.

To activate the procedure proceed as follows:

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



The “ON-OFF” ignition cycles must be carried out within 4 seconds otherwise the procedure is invalidated.

- Cycle ignition key “ON-OFF”-“ON-OFF”-“ON-OFF”-“ON” (on the last turn, leave it “ON”).
- To confirm it has entered in learn mode, the system gives 1 Beep and 1 Bop, the turn indicators flash once and the LED turns ON.



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

- Touch the override key to the receptacle; each time a device is learned a Beep sounds and the status LED turns OFF briefly.
- Repeat this procedure to learn other devices.
- Cycle ignition key OFF, the end of the procedure is confirmed by a Bop and a flash of the turn indicators. The status LED powers OFF.



Storing memory is for 55 devices. If an extra device is added it automatically deletes the first device stored in the alarm memory.

13.0 - DELETING PROGRAMMED DEVICES



To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) have been made.

All devices stored in the system memory can be erased; to clear memory proceed as follows:

- With the system disarmed, open and keep opened the vehicle bonnet.



The “ON-OFF” ignition cycles must be carried out within 4 seconds otherwise the procedure is invalidated.

- Cycle ignition key “ON-OFF”-“ON-OFF”-“ON-OFF”-“ON” (on the last turn leave it “ON”).
- To confirm it has entered in delete mode, the system gives 1 Beep and 1 Bop, the turn indicators flash once and the LED turns ON.
- Close the bonnet and keep it closed for approx. 8 sec. until the devices are completely deleted.



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

- The status LED turns OFF to confirm the devices have been deleted; turn ignition key OFF.
- The end of the procedure is signaled by 1 long Bop.

14.0 - ULTRASONIC VOLUMETRIC PROTECTION

14.1 - CONNECTION AND POSITIONING

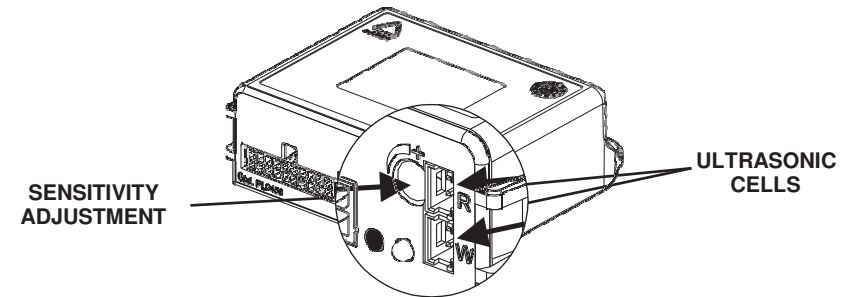
Insert the WHITE connector in the “W” marked socket and the RED connector in the “R” marked socket (see figure below).

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

14.2 - SENSOR ADJUSTMENT

To check the sensitivity level proceed as follows:

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



15.0 - SYSTEM RESET



By activating the following procedure, the system returns to the factory default settings. This procedure must therefore only be used in case of need. Reset procedure will clear the turn indicators flashes if previously learnt.

To reset the system proceed as follows:

- Disconnect the alarm power supply.
- Short-circuit the RED and BLACK wires of the 2-pin LED connector.
- Power the system; 4 Beeps and 4 flashes of the turn indicators will confirm the operation.
- Remove the previously created short-circuit; the status LED lights up steady.
- Cycle ignition key ON; reset is confirmed by a Beep and the siren will sound for approx. 3 sec.
- Cycle ignition key OFF; the LED will power off. There are no acoustic signals to confirm the end of the procedure.

