PATROLLINE
ELECTRONIC ADVANCE.

HPS 845

Can bus alarm system

Thank you for choosing one of our products

THIS INSTRUCTION MANUAL IS VALID FOR SYSTEMS WITH CARLIST34 OR HGHER. IT INTEGRATES THE NEW WIRELESS SIREN SUPPORT

For "**CARLISTxx**" means the list of compatible vehicles preloaded into memory (see label report on the control unit. Each update adds new vehicles, while maintaining compatibility with earlier Carlists. for compatibility see application list HPS-845 on www.vos.be .

INDEX OF MANUAL

Read and keep this manual in the vehicle, the may be helpful in case of need, maintenance, vehicle sale, of the safety features expansions etc. Inside you will find:

PACKAGE CONTENTS

Supplied in standard version are:
- HPS 845: central unit
- Programming button
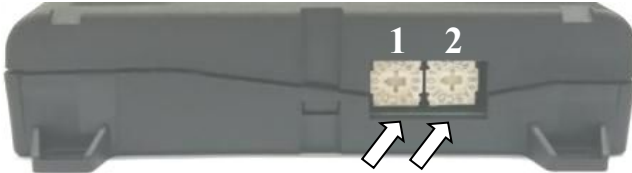- Indication LED

In the HPS-868 kit are included:
- HPS-845: central unit
- HPS-55: adjustable ultrasonic module
- HPS-98: wireless siren.
- Programming button
- Indication LED

DESCRIPTION OF THE SYSTEM

The system is able to interface and acquire information through the **CAN BUS** (Controller Area Network) of the vehicle. It then uses radio controls and / or transponder of the vehicle set for its own operation.
And 'possible to find information at www.vos.be site and downloading the vehicle specific installation manual.

Inside the alarm memory reside all compatible vehicles, the selection is done through the position of switches 1 and 2 on the control unit.

See the application list at www.vos.be for the positions of the rotation switches.

Switches vehicle

*Vehicle selection 01 is dedicated to vehicles **not** equipped with a CAN bus suitable system. Connecting appropriately the wires (see the connection diagrams of the vehicle) it can get its operation in the traditional analog version.*

OPTIONAL DEVICE TO IMPROVE SAFETY AND FUNCTIONALITY

HPA974 – Transmitter (optional)
In addition to use with the original remote control of the car it is possible to add one or more transmitters HPA 974, which can act both in synchronous with the originals, both independently for greater safety. (see functions n°5 and n°26 to p.16).

HPA 977 – Transponder (optional)
With the addition of a transponder is possible to manage transparently the special security functions (v. functions 10, 11 and 27 to p.16). The functions are still manageable through the panic button present in the package.
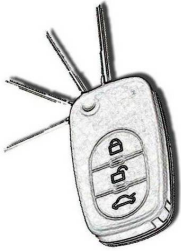
HPA 975 – Wireless sensor (optional)
It is possible to extend the protection of the system with the addition of wireless sensors 2.4 GHz (HPA 975)

HPS 98 - Self-powered wireless siren (optional)
It allows faster installation by eliminating the passage of cables in the engine compartment.

ORIGINAL REMOTE CONTROL OPERATING

***ARMING: P**RESS THE LOCKING BUTTON ON THE ORIGINAL REMOTE CONTROL ONCE TO LOCK THE VEHICLE AND ARM THE ALARM.*
CONFIRMED BY:

* 1 beep (if enabled);
* The LED on the dashboard turn ON;
* Engine block ON (if connected);
* Modules output arming (Windows lifter, ultrasonic, etc.);

The second press of the lock button allows disabling of ultrasound sensors, wireless devices in Zone 2 and the rise of windows (if connected). This function is subordinate to the vehicle type. If the second pressure NOT run the exclusion perform the sequence "Lock - Unlock - Block" of the original central locking with remote control in quick succession. The exclusion is confirmed by 4 led blinks before posting.

***DISARMING: P**RESS THE UNLOCKING BUTTON ON THE ORIGINAL REMOTE CONTROL ONCE TO UNLOCK THE VEHICLE AND DISARM THE ALARM.*
CONFIRMED BY:

* 2 beeps (if enabled);
* Turning off the LED on the dashboard;
* Deactivation of electric engine immobilization (if connected).;
* Deactivation of modules output (windows lifter, ultrasonic, etc.);

After disarming, in the case of one or more alarm cycles, the LED will remain fixe, indicating the presence of the alarm memory, that will be displayed after opening the door. To stop it turn on the key.

PRESSING THE TRUNK RELEASE OF ORIGINAL REMOTE CONTROL
If the alarm is on it will inhibit all *excludible* sensors, volumetric sensors and trunk detection to allow the access to the luggage compartment. The physical closing of the trunk will re-enable the sensors. This function could be dependent of the vehicle used.

STATUS LED OF TE SYSTEM (LED ON THE DASHBOARD)

LED indication	*Function*
- OFF	Power off or system disarmed
- ½ sec. ON - ½ sec. OFF	First power up or restart for power failure. Perform an opening and closing cycle to turn it off
- ON fixe	Neutral time 10 sec. (after insertion) or alarm memory ready for reporting (after system disarmed). Open the driver's door and count the flashes of the LED between a pause and the next. Check the sensor intervened in the "Alarm Memory" paragraph
- Flash every second	System inserted and in surveillance
- ON 2 sec. and OFF 1 sec.	Car selected not in memory, check the set selection and if properly update the unit.
- Quick flashing, 5 times per sec.	Alarm in progress. The cycle lasts 30 seconds.
- 2 flashes and pause	VALET function is active, system blocked, this signaling occurs at ignition key on and is repeated for 40 seconds (see VALET function).
- Quickly flashes (3 time/sec) only after disarming	The IMMOBILIZER function (n° 27) is active. It's necessary to disarming with the reset pushbutton (if the transponder is not present) or the system make alarm.
- Flashing very fast, 10 times per sec.	The device firmware is corrupted, it tried to load the firmware of another product, update the system via PC using the correct file.

HPA 974 - REMOTE CONTROL OPERATION (OPTIONAL)

In addition to the same functions as the original remote control, through the bi-directional transmission, the transmitter HPA 974 has useful diagnostic and control functions.

BUTTON 3
Arming system

The entry is confirmed by:
- 1 beep (if enabled)
- 1 arrows flash (if enabled)
- LED on the dashboard
- Lock the doors (if connected)
- Activation of electric engine immobilization (if connected)
- Activation of modules output (windows lifter, ultrasonic, etc.)
- Enhanced output activation (electric windows, etc.)
Press again within 10 seconds to rule the ultrasound and radio sensors in zone 2. The exclusion will be confirmed by 3 beeps and 3 flashes arrows.

LED

While pressing any of the radio button if the LED:
Is fixe: means
that the transmission is received by the system.
Blinks fast: means that the transmission is not received by the system (distance too great).
Blinks 4 times: it means that the transmitter battery is low and it should be replaced.

BUTTON 1+3
System status

Press simultaneously and release them. If the transmitter LED will flash for a few seconds, the alarm is inserted. If the alarm is off, the LED will remain off.
The function is independent of the distance from the vehicle and is valid when you use the same remote control for alarm management.
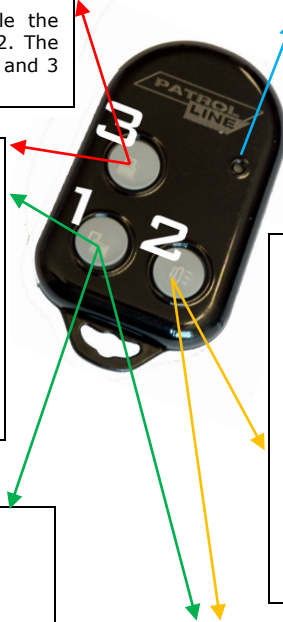
BUTTON 2
Panic alarm and siren stop

- The pressure of the button 2 when the system is armed causes an alarm cycle (and therefore the sound) for about 30 sec.
If the system is already in alarm, this is stopped.
- Pressing the button 2 after 10 sec. of the insertion causes the exclusion of the siren, confirmed by 4 beeps and 4 flashes blinkers.

BUTTON 1
Disarming system

Disarming is confirmed by:
- 2 beeps (if enabled)
- 2 flashing blinker (if enabled)
- Turning off the LED on the dashboard
- Unlock the doors (if connected)
- Deactivation of electric engine immobilization (if connected)
- Deactivate output modules (ultrasound, etc.)
After disarming, in the case of one or more alarm cycles, the LED will display the alarm memory after the opening of the door until turn on the key.

BUTTON 1+2
Exclusion zone 2 sensors

Simultaneously pressing buttons 1 and 2 (after 10 sec. of the insertion system) for excluding the alarm signal of the programmed sensors in zone 2.
The exclusion is confirmed by 6 beeps and 6 flashes blinkers.

SECURITY GUARDS AND TRANSPONDER HPA977 USE (OPTIONAL)

*The IMMOBILIZER functions, ANTI-AGGRESSION and ANTI-THEFT **ARE NOT ACTIVE** in the default configuration. Their activation can be done exclusively on the customer's request and only by qualified personnel. Warning this function are managed by the transponder device (**HPA977**) or by the RESET **Pushbutton (that must be installed)***

Button RESET and HPA 977

IMMOBILIZER FUNCTION (N° 27)

This function, if programmed, is activated when you switched off the alarm.
From this moment and within 30 sec. the function must be reset by the presence of the transponder or the appropriately installed RESET button. If not, a full alarm cycle with starts with engine block. The ignition ON skips the timeout and trigs a direct alarm cycle with engine block.
Also, the opening of any doors after 15 sec. starts a direct alarm cycle.
If the function is started you can re-arm the system by remote control or with vehicle self locking.
CAUTION: disarming the alarm (unlocking with original remote control) out of the range of the transponder, after 30 seconds trigs an audible and visual alarm cycle.

ANTI-AGGRESSION FUNCTION (N° 10)

- **Can bus vehicle.** The vehicle speed, after the ignition key turn ON, controls the activation and the engine block of the ANTIAGGRESSION function. The alarm system will request the Transponder recognition after passing the 10km/h speed threshold and, if the system cannot detect the recognition, after 40 seconds, the alarm system actives the siren sound for 20 seconds (pre-alarm), form now if the vehicle speed falls below the 10 km/h speed threshold (settable), the engine block will be activated.
- **No Can bus vehicle.** Turn ON the key, the procedure start, the LED start to flash. After 40 seconds, the alarm system actives the siren sound for 20 seconds (pre-alarm), after that it will stop the engine by the intermittent activation within 50 seconds.
The ANTIAGGRESSION procedure can be stopped every time by the anti theft push button or by the HPA 977 Transponder signal recognition.

ANTI –THEFT FUNCTION (N° 11)

- **Can bus vehicle.** The vehicle speed, after the driver door open and close, controls the activation and the engine block of the ANTIAGGRESSION function. The alarm system will request the Transponder recognition after passing the 10km/h speed threshold and, if the system cannot detect the recognition, after 40 seconds, the alarm system actives the siren sound for 20 seconds (pre-alarm), form now if the vehicle speed falls below the 10 km/h speed threshold (settable), the engine block will be activated.
- **No Can bus vehicle.** Engine is ON, open and close the door checked, the procedure start, the LED start to flash. After 40 seconds, the alarm system actives the siren sound for 20 seconds (pre-alarm), after that it will stop the engine by the intermittent activation within 50 seconds.
The ANTI THEFT procedure can be stopped every time by the anti theft push button or by the HPA 977 Transponder signal recognition.

NEUTRAL TIME AND ALARM STATUS

Once the signaling of arming is over, the alarm will stay for 10 seconds into "neutral time" condition, signaled by the fixed light of the LED. The flashing of the LED of the dashboard will indicate that the system supervises the vehicle and is ready to signal the alarms.

If, during the neutral time, 10 seconds, the alarm system detect a cause of alarm, it shows this by the blinker flashing. The number of the blinker flashing tell to you the cause of alarm. Look at the table on chapter "alarm memory" to know the cause.

If the alarm detects the same cause of alarm for 5 times, it excludes automatically this cause.

PANIC ALARM

Alarm armed, 10 second after arming, press the LOCKING push- button of the original remote control or the Button 2 of the PATROLLINE remote control HPA 974: central unit do an alarm cycle that during about 30 seconds. To stop the alarm cycle, press again the LOCKING push- button of the original remote control or the Button 2 of the PATROLLINE remote control HPA 974.

These functions are available only for some vehicles, because they depend from the model and the logical of the original remote control of the car.

ADDITIONAL MODULE EXCLUSION

After the system arming, press the LOCKING push-button of the original remote control or the button N°3 of the PATROLLINE remote control within 10 seconds.

The exclusion will be confirmed by 3 bip and 3 blinkers flashes.

TRUNK OPENING

The system can detect the trunk unlocking by the original remote control. In this case, when the trunk will physical open, the ultrasonic sensor and shock sensor will be disarmed, to avoid the alarm trigger. These protections will be armed again, when the trunk will physical close.

These functions are available only for some vehicles, because they depend from the model and the logical of the original remote control of the car.

STATUS MEMORY

If during the armed state, the alarm is turned off using the mechanical key or the alarm is detached from the cable harness, after restoration it will remember the state in which it was. This prevents any tampering attempt.

HORN / SIREN EXCLUSION

Through the ignition key it is possible to exclude the HORN / SIREN: alarm disarmed, (CDL opened), turn on and off the ignition key for 3 times and, within 30 second, press the original remote control to close the CDL of the vehicle.

Trough the PATROLLINE remote control HPA 974, is possible to exclude the HORN / SIREN: after system arming, within the first 10 seconds, push the Button2 of the PATROLLINE remote control. The exclusion will be confirmed by 4 blinkers flashes and 4 beeps.

From this moment, the central unit will signal the attempt to break only by the blinkers flashes.

ANTI-DISTRACTION FUNCTION (N°16 PROGRAMMABLE FUNCTIONS)

Every time that the alarm is disarmed and within 10 seconds nothing happens (a door opening – ignition key turns ON), the system arm itself.

SIREN LIMITATION FOR CONSECUTIVE ACTIVATIONS

If 3 consecutive alarm activations are detected from the same sensor, the system will exclude the sensor or that alarm line. During this condition, the engine block is still active.

ALARM PROCEDURE

The alarm system operating

In case of alarm, the system trigger by the optic-acoustic signals (flashing of the blinkers and horn or siren sound), for 30 seconds. One cycle of alarm is 30 seconds longs.

To stop the alarm triggering without to disarm the system, press the LOCKING button of the original remote control or the "2" button of the PATROLLINE remote control.

To stop the alarm triggering and disarm the system, press the UNLOCKING button of the original remote control or the "1" button of the PATROLLINE remote control.

ALARM MEMORY

If the central unit records one or more causes of alarm, they are signaled, when disarming and open the driver door or press the anti hi-theft push-button through the LED. To verify the type of alarm, check the number of flashings of the LED with the table below.

N° Flash of the LED	CAUSE
1	Doors Opening (by CAN-BUS)
2	Mechanical CDL Opening (by CAN-BUS) or wireless siren power supply missing
3	Bonnet opening (by CAN-BUS)
4	Trunk opening (by CAN-BUS)
5	Ignition key ON protection (by CAN-BUS)
6	Shock sensor Alarm
7	Additional sensor Alarm
8	Supplementary Alarm input (BLUE wire)
9	Supplementary Alarm input (BLUE/RED wire)
10	Supplementary Alarm input (GREEN/BLACK wire)
11	Original alarm triggered (by CAN-BUS)
12	Magnetic sensors HPA 975 Alarm
13	Bonnet opening (by WIRE), detected also by wireless siren
14	GAS detector alarm
15	Communication missing with wireless siren, or radio jamming (when radio jamming trig is enabled.

PROTECTION AGAINST RADIO INTERFERENCES ANTI-JAMMING

Alarm armed status, if the system detects a radio interference device acts to blind the operating frequency, it triggers one automatic alarm cycle.

VALET FUNCTION

This function puts the alarm into the stand-by modality. This allows the car to be left at a service centre without leaving the remote control. It is activated, when the alarm is disarmed.

Activation of the Valet function:

Compose, using the ignition key, the **unlocking** code (factory setting 1-2-3).

If the operation is successful, the LED on the dashboard will flash twice.

To remind that the Valet function is active the LED on the dashboard will flash twice at any time one turns on the ignition key.

Deactivation of the Valet function:

Compose using the ignition key the **unlocking** code (factory setting 1-2-3). If the operation is successful, the LED on the dashboard will flash 4 times and all the system functions will be restored.

It's possible to active this function also through the anti theft push-button: EASY VALET function

Activation of the EASY VALET function:

- Ignition Key ON, front doors closed and alarm disarmed, push the anti theft button for about 10 seconds, the LED start to flash slowly.
- Release the button before the LED stops to flash.

If the function is enabled	-> 1 blinkers flash– 1 beep – 1 LED flash
If the function is disabled	-> 2 blinkers flashes – 2 beeps – 2 LED flashes

Every time that the ignition key is turned ON, the LED flash 2 times slowly for about 40 seconds, to show that the function is ON.

PRE VALET FUNCTION

This function permit to disable the **anti aggression and anti theft functions** (if set), keeping ON all the other functions of the alarm.

Activation of the PRE-VALET function:

- Ignition key ON, front doors opened and alarm disarmed, push the anti theft button for about 10 seconds, the LED start to flash slowly.
- Release the button before the LED stops to flash.

If the function is enabled	-> 1 blinkers flash– 1 beep – 1 LED flash
If the function is disabled	-> 2 blinkers flashes – 2 beeps – 2 LED flashes

USE OF THE EMERGENCY UNLOCKING PIN CODE

WARNING: If the n°25 function has been activated, the procedure must be performed with the brake pedal or the parking brake and driver DOOR OPEN.
Do not use the handbrake with pulled pedal and vice versa.

To be used when the remote controls are lost or no longer operating when the alarm system is still armed.
The code is always made of 3 digits (factory setting: 1-2-3). This code should be composed (when the alarm is armed) via the ignition key as per the procedure detailed below:
1. Turn the ignition key ON/OFF as many times as per the first digit (e.g. 1 in case of factory setting)
   The LED is illuminated while composing the pin code and the horn or the siren sounds.
   Wait until the LED extinguishes.
2. Turn the ignition key ON/OFF as many times as per the second digit (e.g. 2 in case of factory setting)
3. Wait until the LED extinguishes.
4. Turn the ignition key ON/OFF as many times as per the third digit (e.g. 3 in case of factory setting)
If you succeed, the **alarm system will disarm after the third digit**.

CHANGE OF THE RELEASE PIN CODE

You may customize the factory pre-set release pin code (1-2-3) just following the herewith procedure, alarm disarmed:

Through the ignition key compose the **old secret code** as described in the previous paragraph.
Wait for quick LED flashes of confirmation that the old code of unblocking is correct, then
1. Turn the ignition key ON/OFF as many times as per the first value to be modified.
   The LED will illuminate during the composition of the secret code.
   Wait that the LED on the dashboard extinguishes.
2. Turn the ignition key ON/OFF as many times as per the second value to be modified.
   Wait that the LED on the dashboard extinguishes.
3. Turn the ignition key ON/OFF as many times as per the third value to be modified.
   Wait that the LED on the dashboard extinguishes

If you succeed, the quick flashing of the LED on the dashboard confirms that **the new secret code** has successfully substituted the old one.

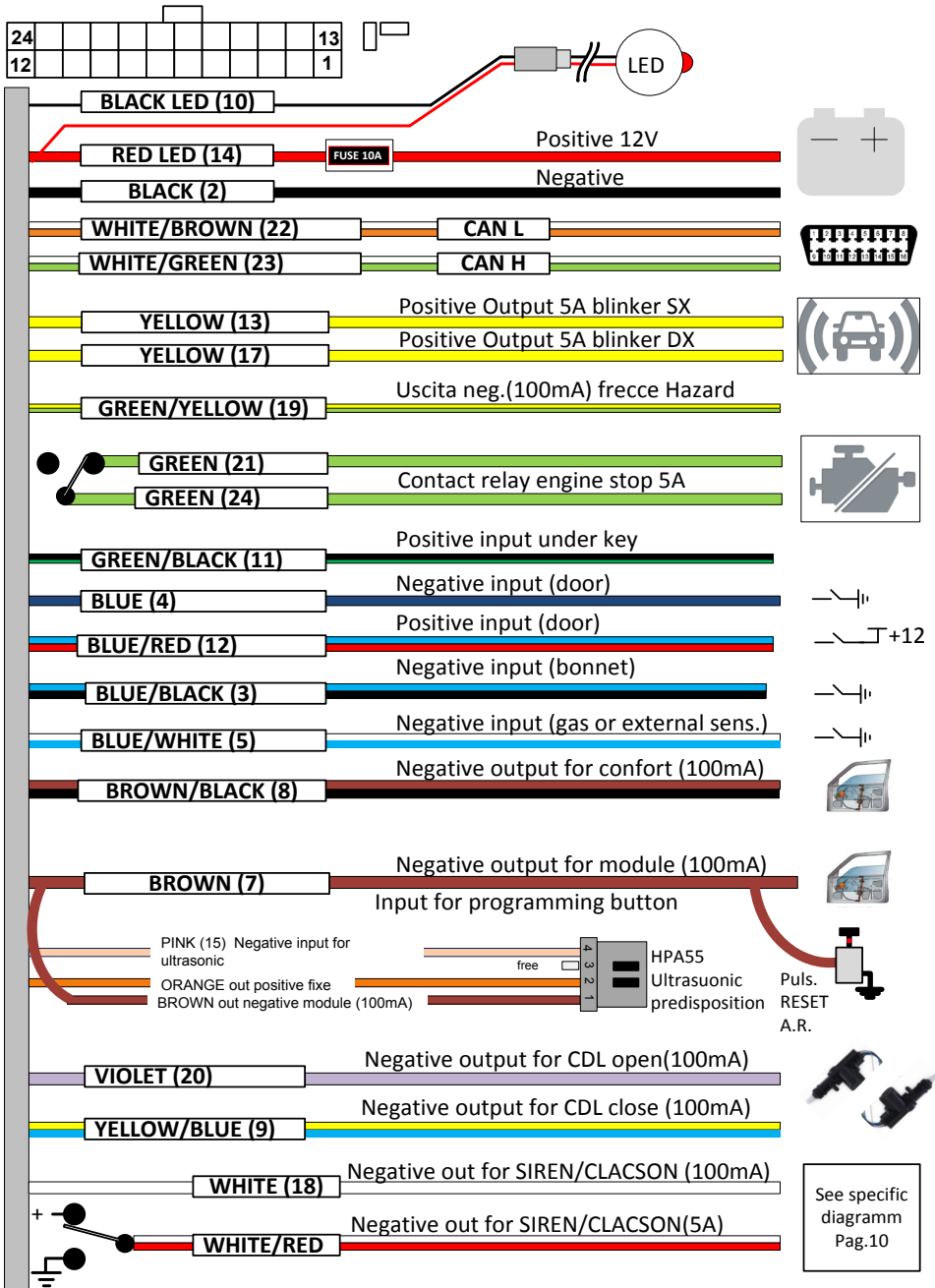**THE NEW PIN CODE WAS STORED AND HAS SUBSTITUITE THE OLD ONE**
INSERT HERE THE NEW PIN CODE _____

Installer section

GENERAL CONNECTION DIAGRAM HPS 5

There is a specific fitting instruction for every vehicle that is wrote into the vehicle compatible list.
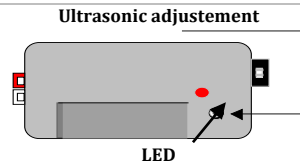
The following diagram shows a general connection example.

| 24 | | | | | | 13 |
| 12 | | | | | | 1 |

BLACK LED (10)

LED

RED LED (14)   FUSE 10A   Positive 12V

BLACK (2)   Negative

WHITE/BROWN (22)   CAN L

WHITE/GREEN (23)   CAN H

YELLOW (13)   Positive Output 5A blinker SX

YELLOW (17)   Positive Output 5A blinker DX

GREEN/YELLOW (19)   Uscita neg.(100mA) frecce Hazard

GREEN (21)

GREEN (24)   Contact relay engine stop 5A

Positive input under key

GREEN/BLACK (11)

Negative input (door)

BLUE (4)

Positive input (door)

BLUE/RED (12)

Negative input (bonnet)

BLUE/BLACK (3)

Negative input (gas or external sens.)

BLUE/WHITE (5)

Negative output for confort (100mA)

BROWN/BLACK (8)

Negative output for module (100mA)

BROWN (7)

Input for programming button

PINK (15) Negative input for ultrasonic

free

ORANGE out positive fixe

BROWN out negative module (100mA)

HPA55 Ultrasuonic predisposition

Puls. RESET A.R.

Negative output for CDL open(100mA)

VIOLET (20)

Negative output for CDL close (100mA)

YELLOW/BLUE (9)

Negative out for SIREN/CLACSON (100mA)

WHITE (18)

+

Negative out for SIREN/CLACSON(5A)

WHITE/RED

See specific diagramm Pag.10

Installer section

ADJUSTEMENT ULTRASONIC MODULE (MODEL HPS 846/55)

Ultrasonic sensitivity may be adjusted by using the trimmer in the module. Rotate the trimmer clockwise to increase sensitivity and anti clockwise to decrease it. Warning: an incorrect adjustment may cause false triggering of the alarm.

Ultrasonic adjustement

LED

SIREN INSTALLATION – HORN CONNECTION

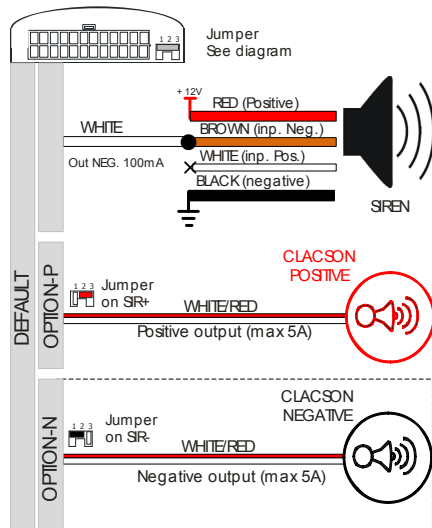The HPS845 system has two alarm outputs:
• **WHITE / RED** wire of power, 5 A max, switchable in a positive or negative output acting on the front selector SIR + / SIR-

• Wire **WHITE** negative output in case of alarm, 100 mA max.

On both outputs are present the arming beep (1), disarming (2) and signaling.
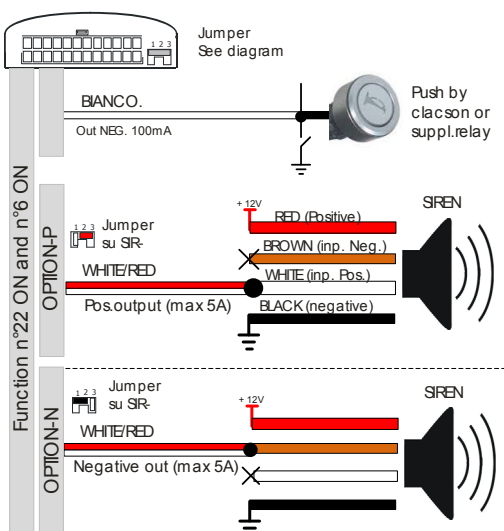They can be excluded acting on the n ° 7 functions (RED / WHITE) and n ° 19 (WHITE)

Similarly, both outputs can be fixed for continuous or intermittent output functions by acting on the n ° 6 (WHITE / RED) and n ° 22 (WHITE) functions.

Example n°1

Esempio n°2

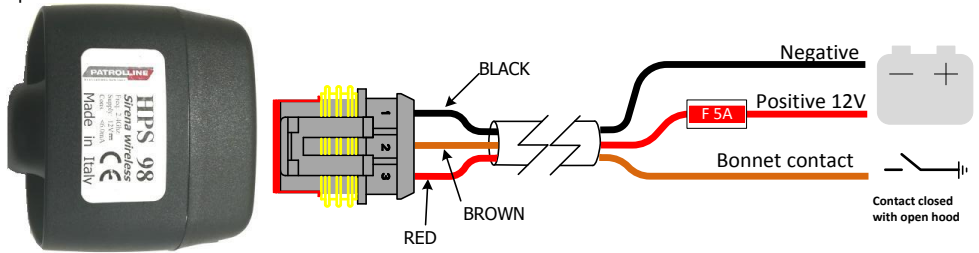| Example 1	Example 2
Siren: Command only for negative input siren (no beeps)	**Siren:** Positive or negative siren control (emits beeps). It must be programmed the function n°6 to make continuous output.
Horn power command: Positive or negative POWER command (emits CIRP). It's NOT necessary to program functions.	**Horn signal command:** Negative command and not of power (100mA max). It must be programmed function N°22 to make intermittent this output.
The siren does not sound in anti-robbery and anti-aggression if not programmed the function N° 20.	Use an external relay if the horn is positively controlled or need POWER.

Installer section

WIRELESS SIREN CONNECTION

With the upgrade to vehicles LIST 34, has been added the possibility to control the wireless siren HPS98, which avoids that the wires coming in the engine compartment. However, the two alarm outputs remain active (wires White/Red and White). The connection to the Bonnet pushbutton is optional.

Description

The HPS 98 siren operating with 2.4 GHz wireless technology. Once learned to an alarm unit, it will become like a normal wired siren, adding additional protection functions during the armed state. The siren features include:
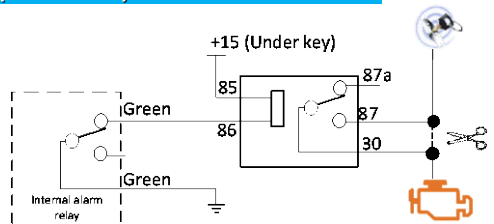
- the activation and deactivation commands (beep),
- the commands to activate and stop the acoustic warning cycle,
- the status command (alarm armed or disarmed)
- the "beacon" transmission, to signal siren presence

The siren hasn't switch-off key, disconnecting it when the alarm is disarmed, it will not trig, while disconnecting it when the alarm is armed will trig sending a power missing transmission to alarm.

Once the siren is learned by alarm, a "beacon" presence communication is established with the alarm, this allows to verify the mutual communication, if it fails, an alarm warning cycle is triggered for "jamming", (see memory table alarm).

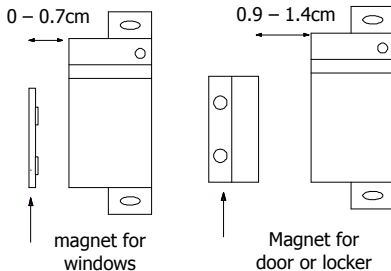## ENGINE KILL WITH EXTERNAL POWER RELAY (OPTIONAL)

The engine kill circuit of the alarm supports a maximum current of 5A steady. To cut circuit with higher steady current use the additional 30A relay. Apply the relay as indicated in this diagram:

HPA 975 INSTALLATION (OPTIONAL)

It's possible to install the 2,4 GHz transmitters on door, windows and locker.
Put the transmitter on the fixed part and the magnet on the mobile part (door or windows), as showed in the picture.

ATTENTION: the transmitters are equipped with an anti-tampering system, respect the minimum and maximum distance that are showed in the picture. If the distance between these two devices is too little, it's possible that there is a continuously alarm signal transmission, this means continue false alarms.

SET-UP PROGRAMMABLE FUNTION

Attention: this table is valid from CARLIST34 and upper.

It's possible to modify the function written into the table. <u>Alarm disarmed and driver door opened,</u> press the anti hi-jack push-button many times as the number of the function to set.

The function programming is confirmed by **1 bip, 1 blinkers flash and 1 flash LED.**

The function reset is confirmed by **2 bip, 2 blinkers flash and 2 flash LED.**

Making the programming the function turn ON, and making again the programming, to turn OFF.

N° Function and initial state	FUNCION DESCRIPTION
F.1	No function
F.2	**LEARNING WIRELESS SIREN** The Patrolline wireless sirens must be learned by the alarm in order to work. Both siren and alarm must be in the learning condition. **Alarm side:** enter in the programming procedure (2 button presses), the LED flashes quickly. Within 30 seconds carry the siren in the procedure. **Siren side:** enter in the programming procedure grounding 10 times the BROWN siren wire (bonnet input), the siren emits a series of beeps until it is detected by the alarm (beeps became more frequent). The learning procedure can end too by bringing the bonnet input back to ground, so it's better to disconnect the bonnet wire (if used) to perform the procedure. **Warning:** once the alarm has been learned, every time that the system is armed, alarm checks the presence of the siren expecting a transmission receiving, so if you need to remove the siren or perform the exclusion of the "beacon" communication, see function 29. Erasing the siren. Enter in the learning procedure, when the LED starts flashing quickly, press again for 5 seconds the pushbutton until 1 flashes blinkers and 1 beep. Siren is erased.
F. 3	**HPA975 Magnetic sensors learning in the ZONE n°1** *Area 1 is not excludible by the PATROLLINE HPA974 remote control* - Activate the function 3 (see table start) - During the LED flashing turn ON the magnetic sensor to learn; - The correct memorize is indicated by a bip, a flash lamp and the 1 sec. LED ON. Repeat the procedure for each magnetic sensor to learn. The procedure can stop after 30 seconds from the last memorize or after turn ON the key. The maximum number of the devices accepted into the **area 1 is 24.** Erasing all zone1 sensors. Enter in the learning procedure, when the LED starts flashing quickly, press for 5 seconds. the button until 1 flashes arrows and 1 beep.
F. 4	**HPA975 Magnetic sensors learning in the ZONE n°2** *Area 2 is excludible by the PATROLLINE HPA974 remote control* - Activate the function 4 (see table start) - During the LED flashing turn ON the magnetic sensor to learn; - The correct memorize is indicated by a bip, a flash lamp and the 1 second LED ON. Repeat the procedure for each magnetic sensor to learn. The procedure can stop after 30 seconds from the last memorize or after turn ON the key. The maximum number of the devices accepted into the **area 2 is 8.** Erasing all zone2 sensors. Enter in the learning procedure, when the LED starts flashing quickly, press for 5 seconds. the button until 1 flashes arrows and 1 beep
F. 5 **OFF**	**HPA974 remote controls and HPA977 Transponder learning (maximum 4)** To learn the additional remote controls and Transponders, the selectors on the central unit must be positioned as showed on the vehicle compatible list or on the selection 0-1, for no CAN BUS vehicle. Learning procedure: - Activate the function 5 (see table start) - To store one remote control, push a button of the three on it; - To store one Transponder, open the shell, extract and insert again the battery, The correct memorization is indicated by 1 beep, 1 flash lamp and 1 sec. LED ON. If the procedure starts again, the previous remote controls and Transponders stored, will be substituted by the news inserted into the memory. The procedure can stop after 30 seconds from the last memorize, after the learning of the maximum remote controls and Transponder number accepted or after turn ON the key. Erasing all transmitters. Enter in the learning procedure, when the LED starts flashing quickly, press for 5 seconds. the button until 1 flashes arrows and 1 beep.

F.6 **PULSE**	**Set the output RED/WHITE wire alarm for Siren or horn** Use this setting when it's used an acoustical siren instead of the Horn of the car. Default Horn output is enabled, intermittent during the alarm cycle. To obtain a Siren output, continue during the alarm cycle, the function must be enabled. Attention: in case of some vehicles, where the Horn is controller through the CAN BUS, this setting doesn't give any results.
F.7 **ON**	**Set the arm/disarm beep Off/On** This setting permits to remove the acoustical signal when the system is armed/disarmed and remove also the exclusion signaling. Default Beep are enabled.
F.8 **OFF**	**Set Siren command by relay (if it's CAN BUS driven)** This setting permits to change the control of the HORN from the CAN BUS (in case of vehicles where is set in this way), to relay; with this programming is necessary to execute the wire connection to the siren or Horn.
F.9 **OFF**	**Set Blinkers command by relay** This setting permits to change the control of the BLINKERS from the CAN BUS or hazard (in case of vehicles where is set in this way), to relay; with this programming is necessary to execute the wires connection to the blinkers (Yellow wires).
F.10 **OFF**	**ANTI-AGGRESSION** For operation see the user section "SPECIAL SECURITY GUARDS" on page 15. NOTE: The engine stop is not automatic, it must also be programmed via the N° 20 function
F.11 **OFF**	**ANTI-THEFT FUNCTION** For operation see the user section "SPECIAL SECURITY GUARDS" on page 15. NOTE: The engine stop is not automatic, it must also be programmed via the N° 20 function
F.12 **1 s.**	**Set 30 seconds / 1 second CDL locking** This setting permits to prolong the locking time to 30 seconds, to enable the COMFORT function where it's possible, by the HPA 974. In case of Ultrasonic/Comfort exclusion, second locking command press, the time will be reset and the windows closing will stop.
F.13 **Single**	**Lock impulse double/single** This setting permits to do the function "doors armor", where it's possible, during the locking by the HPA 974. This function is usually obtained by the original remote control, after two consecutive locking commands.
F.14 **Double**	**Unlock impulse double/single** This setting permits to do the function unlocking only the driver door or all doors, where it's possible. This function is usually obtained by the original remote control, after two consecutive unlocking commands.
F.15 **OFF**	**Blinkers flashes at arming/disarming by the HPA 974 ON/OFF** This setting permits to obtain the blinkers flashes at arming/disarming the alarm system by the TLC 2,4 GHz, HPA 974. *ATTENTION: do this setting only if the lock by the HPA 974 doesn't give any original blinkers flashes. Verify this condition locking and unlocking the car through the mechanical key.*
F.16 **OFF**	**Arming by anti distraction (CAN BUS or HPA 974)** This setting permits to disable the auto arming function of the alarm, if the vehicle interested is equipped with the original auto arming (by the original remote control). *ATTENTION: before to set this function is necessary to check if the blinkers don't flash during the locking and unlocking operation through the mechanical key.*
F.17 **OFF**	**Not applicable**

F.18 **ON**	**Disable Panic function by the remote control** This setting permits to disable the panic function by the original remote control or HPA 974.
F.19 **OFF**	**Disable the acoustical signals on the WHITE wire and WIRELESS siren.** Starting from CARLIST 32 on WHITE wire are generate the acoustic signal (bip) when arming and disarming the system (as well as on the WHITE / RED wire)
F.20 **OFF**	**Enable the engine block during the anti aggression / anti hijacking cycle** Activate the function to get the engine block during Anti aggression and/or anti-theft functions. The engine stop work intermittently becomes fixed within 50 seconds. Activate with function No. 10 and/or No. 11.
F.21 **OFF**	**PASSIVE FUNCTION WHEN ALARM OFF** After stopping the engine, opening and closing the driver door the function is activated, the LED flashes quickly and within 30 sec. the alarm will arm. During this time, you can interrupt the function turning on the ignition or by opening any accesses. The re-closing will trigger the time again. Warning: The function can be dependent on the type of vehicle!
F.22 **OFF**	**SET THE SECONDARY OUTPUT INTERMITTENT (WHITE wire)** When function is **OFF** (default) the output wires are fixe (siren connection). When function is **ON** the output wires are intermittent for the horn connection.
F.23 **OFF**	**ATTIVATE the alarm sensor for Jammer frequency** This setting permits to ACTIVATE the alarm sensor for the Jamming function. Warning: this sensor is affected by very strong WiFi networks.
F.24 **OFF**	**Inhibit the Alarm arming/disarming by the OEM remote control** This setting permits to disable the alarm arming and disarming by the OEM remote control. The alarm can be armed only by the PATROLLINE remote control HPA 974.
F.25 **KEY**	**SWITCH the reading PIN CODE from IGNITION KEY to BRAKE PEDAL** Use for cars that do not have mechanical ignition key. This function allows to switch the reading pin code input (default ignition key) with the brake pedal or the parking brake (MA ONLY WITH OPEN DOOR DRIVE). CAUTION: all the functions that use the unlock code are affected by this switching.
F.26 **OFF**	**DISARMING BY THE IGNITION KEY ON ENABLED** This setting permits to disarm the alarm system, in case of emergency, to turn ON the ignition key. The Positive under key (+15) is detected by the CAN BUS. Exist an alternative to the emergency PIN CODE to disarm the alarm by the ignition key: it's possible to set the system to accept the emergency disarming, by the transponder original key recognition. With this function enabled, during the alarm cycle, it's sufficient to unlock the car and turn ON the key. The automatic recognition of the original key disarms the alarm.
F.27 *OFF*	**Immobilizer function enabled** For operation see the user section "SPECIAL SECURITY GUARDS" on page 5. This setting permits to enable the PASSIVE function. Trough the Anti theft push button or the Transponder detections, is possible to reset this function.
F.28 **OFF**	**LOCK THE DOORS WHEN VEHICLE IS MOVING** This feature allows you to lock the central locking of the doors when the vehicle speed exceeds 10 km / h. The doors will be unlocked when turned off the ignition.
F.29	**DISABLED "BEACON" TRANSMISSION OF THE WIRELESS SIREN** The beacon transmission keeps the wireless siren in contact with the alarm where siren has been learned. Removing the siren without activating this function causes an alarm trigger. To remove the siren from the system, it is also possible to remove it from memory using function n° 2 (siren erasing).
F.30	No function
F.31	**Alarm parameters default restore** This setting permits tot o restore all the alarm default parameters, without to delete any stored devices.

ALARM MAINTENANCE

PATROLLINE alarm systems are very sophisticated and highly reliable devices.
Paying attention about some points it's possible to prolong the life time and increased the reliability.
All the operations to repair the alarm must be performed by PATROL LINE Assistance Centers. The tampering of the alarm by personal not qualified can jeopardize the device working and the safety of the vehicle.

REPLACING THE BATTERY OF TRANSMITTER / TRASPONDER

It is advisable to replace the batteries of optional HPA977 devices, HPA974, HPA975 every two years. Use CR2032 lithium 3V from any manufacturer.

SIGNAL LOW BATTERY
HPA977 - at the time of the reset protection functions (PASSIVE - ANTI-THEFT - ANTI-AGGRESSION), the LED of the transponder and the alarm LED will flash four times, indicating that the battery should be replaced as soon as possible.
HPA974 - Four flashes of the LED or each key press
HPA975 - Four flashes of the LED after each excitation / transmission

⚠️ **HOW TO REPLACE THE BATTERY**
Gently open the shells of the transponder or transmitted by levering with a flat screwdriver. Remove the battery from the house. Replace it with a new battery type CR2032 or equivalent.
Do not open the batteries. The liquid that can escape is corrosive and can cause burns or damage eyes or skin and is still toxic. In the case in which the battery is determined to be liquid leakage, replace them immediately, taking care to clean the housing and to thoroughly wash the hands in case of contact with the leaked fluid.
ATTENTION: Due to the small size of the product some of its parts may be swallowed. Keep out of reach of children under 36 months of age. Handle with care to avoid short-circuit the batteries through conductive materials. Do not use rechargeable battery. Do not incinerate.

♻️ Remove the battery from remote control before disposal of the same and dispose of according to current regulations. Dispose of batteries according to local regulations. Do not dispose of with household waste.

TECHNICAL FEATURES

Power supply	11V ÷ 15V
Absorption Armed / disarmed	< 4.5 mA
Max Current relay (Current engine immobilizer, blinker, alarm)	5 A
Alarm timing	< 30 sec.
Frequency transceiver	2.4 GHz
Working temperature	-40°C / +85°C
Central Unit size	80 x 50 x 30
Weight	143 gr.

DECLARATION OF CONFORMITY

This product follows the directive:
Regulation No. 116   >>   Rev.2/Add.115 (United Nations)

The installation certificate of the alarm, included into the packing, must be duly filled in and it will be part of vehicle documentation.
Please transcribe the following homologation number on the installation certificate in order to complete the compliance with the directive for the filling of vehicle and alarm data form.

Type approval n°   **E24** **16R A-000031**   CE

Conditions of warranty

PATROLLINE guarantees the device against manufacturing defects for a period of 24 months from the date of delivery. The warranty consists in free replacing or repairing of parts unusable or inefficient because of factory's fault verified by Patrolline. Any delay in carrying out works do not entitle to damages or extension of warranty. The warranty lapses if the devices are used not in conformity with the present conditions, if they are modified, repaired or tampered, if the defects derive from accidents, from negligence or from using parts not original. What above-mentioned is the only warranty, that therefore substitutes the legal one. The buyer has not the right to ask for the annulment of the contract, to claim compensation or price reduction.

RESPONSIBILITY: Patrolline has no responsibility or obligations for any accident and/or damage to things/people that could occur using the device.

LIMITATIONS: the buyer undertakes to not to use the device for purposes different from the ones it is for, and to not to modify its construction and its functioning. Saved any possible action of compensation for damages, it is agreed that the non-observance of the regulations above-mentioned involves the immediate end of the right of warranty.

The validity starts from the date of delivery (that is the date of the first installation) signed on the warranty special coupon with the receipt attached or a copy of the invoice. Without these documents, the warranty will start from the date of manufacturing.

The following services are free: the supply and replacement of the parts unusable or inefficient because of verified defect of material; the workforce to replace and repair the above-mentioned parts; the supply of materials that have become necessary after the above-mentioned actions and pertinent to them. **Are payable by the buyer**: the replacement of various materials not connected with the interventions to repair the device for verified defect; maintenances and interventions because of wear, accident or conditions that do not follow the indications of Patrolline. **Every piece returned**, for any reason, to Patrolline will be done by FREE PORT. **These conditions of warranty** have to be considered valid only on National territory (Italy). **Warning** The alarm must be installed by a qualified person following carefully the indications of the manufacturer. The person who do the installation must fill in the *installation certificate* attached. The homologation number of the alarm can be found on the user's manual or on the label located on the plastic box of the alarm. Every following modification to the device or to the connections of the alarm invalidates the installation certificate.

INSTALLATION CERTIFICATE

The undersigned _____

professional installer, certify that the installation of the vehicle protection device described below has been done in conformity with the instructions given by the manufacturer.

Description of the vehicle:

Brand and Model _____

Description of the vehicle protection device:

Model and Serial Number_____

Stamp and signature of the installer

Place and date of the installation: _____

MALFUNCTION (minutely describe the problem):
_____

_____

_____

_____