

VEHICLE ALARM SYSTEM 'GN7C'

Installation manual

1. SAFETY INFORMATION.

The 'GN7C' is an advanced vehicle alarm system designed for use with cars with their original remote controlled central lock and CAN-BUS. The 'GN7C' can be used in most cars (except cabriolets) with petrol or diesel engines, 12V batteries with the negative pole connected to "ground" (i.e. vehicle body) and the CAN-BUS system listed in the COMPATIBLE CAR LIST (see Table 1).

The vehicle alarm system must be installed inside the passenger compartment of the vehicle, in a place difficult to access in accordance with the manufacturer's supplied wiring instructions.

The manufacturer of the alarm system recommends the following:

- choose a qualified vehicle alarm systems installer to fit the device;
- mount the system unit in place free from moisture and other elements that could pose to corrode the device. It should also be placed as far away as possible from any heat emitting elements in the passenger compartment and sources of electromagnetic interference (e.g. vehicle computer, fans, relay blocks);
- avoid mounting the system unit directly onto metal parts of vehicle to prevent the accumulation of condensation in the system unit;
- mount the system unit so that the wire connectors are going from the bottom side of the unit;
- avoid placing wires next to moving or hot parts of vehicle;
- don't overload the alarm system circuits, see the following circuit requirements:

✓ cut-off circuit Δ current	25 A;
✓ 1st optional control circuit (OC1) $\textcircled{4}$ current	0.13 A;
✓ 2nd optional control circuit (OC2) $\textcircled{6}$ current	0.13 A;
✓ siren drive circuit \square current.....	2 A;
✓ right direction indicator control circuit $\textcircled{5}$ current	7 A;
✓ left direction indicator control circuit $\textcircled{2}$ current	7 A;
- For EU countries only use settings compatible with EU directives.



Fig. 1. The information sticker and the PIN code.

2. ALARM SYSTEM INSTALLATION SEQUENCE.

- select direction indicator connection method (see chapter 4);
- install the system in accordance with the wiring directions (see chapter 5);
- progress through the car's CAN-BUS learning procedure (see chapter 6);
- customize alarm system if default settings are not suitable (see chapter 7);
- fill out an installation certificate (see chapter 8).

3. PIN, FN, SN CODES.

To enter the override and setup mode, to customize the alarm system according to the required security level the PIN, FN and SN codes are required. The factory preset 4-digit PIN code is written on the alarm's 'system information' sticker (see Fig. 1). It is recommended that the PIN code is changed after alarm system installed (N.B. remember the new PIN code by keeping a record of it in a file so it may be retained for future reference).

3.1. THE OVERRIDE MODE.

The alarm system override mode is used in the following scenarios: if the remote control unit is lost; if the remote's battery becomes fully discharged; if the car is being repaired. With this mode ON, the alarm system does not respond to the sensor(s) as it is temporarily disabled, therefore the following occurs as a result: the device will not immobilize the engine; the car will not become alarmed; the system's LED flashes frequently. The override mode can be turned ON in two ways, by the use of the PIN code.

3.1.1. TURNING ON THE OVERRIDE MODE WITH THE HELP OF THE OVERRIDE BUTTON.

The most convenient way to turn the override mode ON is to enter the PIN code with the override button. If the override button is installed, check your notes with alarm system's PIN, then press the override button as many times as the value of the first digit of the PIN (N.B. the time between the presses should not exceed 1 second) and wait for a 1 second long LED flash which means that the first digit is entered. In the same way enter the second, third and fourth digits of the PIN. Upon correct entry of all four digits of the PIN code the LED emits frequent flashes. If you made a mistake while entering the PIN code, wait for a 1 second long LED flash, wait for 2 seconds and follow 3.1.1 all over again. **If the 'anti-carjack' or immobilizer features are activated the system will respond to the first press of the override button as to the control of the 'anti-carjack' or immobilizer function.** The system will respond to the next presses made as if the PIN code is being entered.

3.1.2. TURNING ON THE OVERRIDE MODE WITH THE IGNITION KEY.

If the override button is not installed, open the vehicle door and turn the ignition ON. Shortly after the system LED starts flashing double flashes. Count these flashes until the number of double flashes (1 double flash = 1) corresponds with the first digit of the PIN code. Turn the ignition OFF for a short time and turn it ON again. Count the double flashes until the number corresponds with the second digit of the PIN code. Turn the ignition OFF and ON again. Enter the remaining two digits of the PIN code in the same way. Upon correct entry of all four digits of the PIN code the LED emits frequent flashes. If you made a mistake while entering the PIN code, turn OFF the ignition, close the doors, and follow 3.1.2 all over again.

3.1.3. TURNING OFF (EXIT) THE OVERRIDE MODE.

Enter the PIN code and within 8 minutes of doing so enter the code '11' in a same way as PIN.

3.2. ALARM SYSTEM SETUP MODE.

The 'GN7C' features up to 77 system settings. Due to these settings the 'GN7C' can be adjusted to a particular vehicle or relevant customer's requirements. The alarm system is supplied with the factory preset default settings listed in Table 2, chapter 7.3. If the default settings are not suitable for the user you can customize them. To customize the alarm system please do the following steps:

- turn override mode ON by entering the PIN appropriately;
 - within 8 minutes select the function (FN) which operation you want to change and enter the 2-digit FN code;
 - to change the function operation according to the new setting enter the 1-digit setting number (SN);
 - now exit setup mode by entering the code '11'.
- For more details see chapter 7.

4. CONNECTING THE DIRECTION INDICATORS.

4.1. METHODS USED BY THE ALARM SYSTEM TO COUNT THE NUMBER OF INDICATOR FLASHES.

By default the manufacturer supplies the 'GN7C' with SN=1 for FN68 function, which means the direction indicators must be connected to the alarm system relay K1 which will supply the indicators with 12V causing them to flash (see Fig.2 and Fig.7). Some modern cars can monitor the voltage on direction indicators and can detect when a voltage is delivered by a non-original electronic device (i.e. an alarm system). In such cases, to avoid the conflicts between the original electronic components and the alarm system, the direction indicators should be controlled by emulating the car's hazard warning button when pushed. There are two wiring and operation modes that are possible to emulate the pushing of the hazard warning button, these are as follows:

- the alarm system emulates the car's hazard warning button when pushed (N.B. relay K1 makes the circuit short) and the car starts the direction indicators flashing. The number of flashes is counted via 'L+' input, which is connected to the direction indicator (see Fig.3). When the number of car indicator flashes match the number of flashes the alarm system requires, the next emulation of the hazard warning button being pushed is made by the alarm system to stop the flashing.

- b) the alarm system emulates the pushing of the car's hazard warning button (N.B. relay K1 makes the circuit short) and the car starts the direction indicators flashing. The number of flashes is counted by the analysing information in the CAN-BUS (see Fig. 4). When the number of car indicator flashes match the number of flashes the alarm system requires, the next emulation of the hazard warning button being pushed is made by the alarm system to stop the flashing.

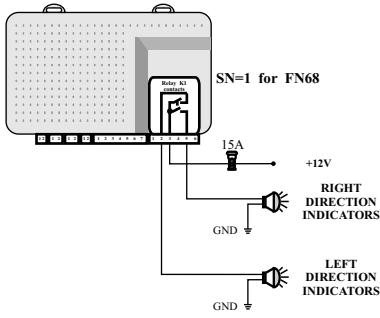


Fig. 2. Alarm system supplies the direction indicators with 12V.

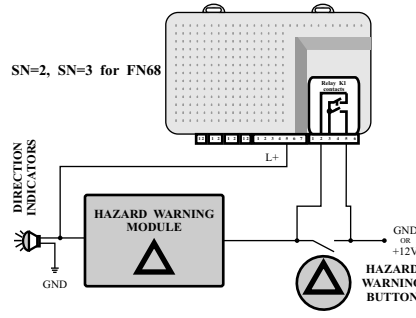


Fig. 3. Alarm system counts the flashes via input L+.

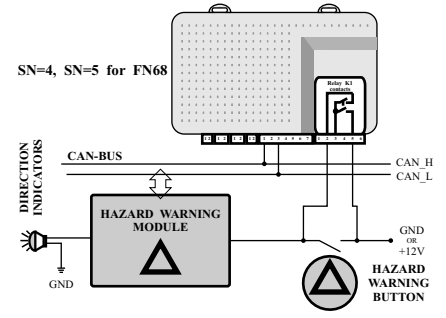


Fig. 4. Alarm system counts the flashes via CAN-BUS.

4.2. THE HAZARD WARNING BUTTON OPERATION WAY.

For most modern cars the push of the hazard warning button makes an electrical pulse and it starts the direction indicator flashing. The next pulse comes with the next push and it stops the indicators flashing (see Fig. 5). The 'GN7C' makes these pulses with the help of relay K1 by closing normally open contacts for 0.25 second.

For very few cars the push of the hazard warning button makes a continuous electrical signal and the direction indicator is flashing only when this signal is present (see Fig. 6).

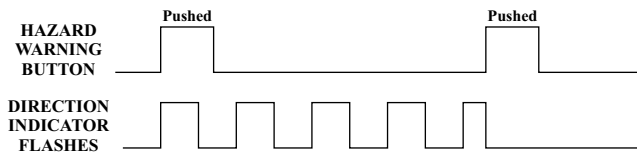


Fig. 5. The push of the hazard warning button makes short electrical pulses.

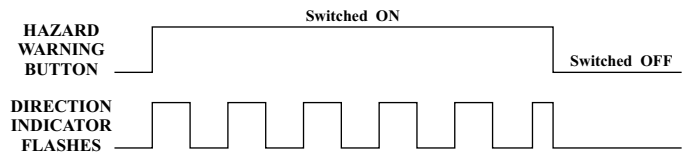


Fig. 6. The push of the hazard warning button makes the continuous electrical signal turn ON or OFF.

So, if the direction indicators are not connected according to Fig. 2 (the most popular connection) there are 4 other variants:

- the direction indicators are connected according to Fig. 3 and the hazard warning button operates according to Fig. 5. This is the second most popular direction indicators connection method. The SN=2 must be set for FN68;
- the direction indicators are connected according to Fig. 4 and the hazard warning button operates according to Fig. 5. This is the third most popular direction indicators connection method. The SN=4 must be set for FN68;
- the direction indicators are connected according to Fig. 3 and the hazard warning button operates according to Fig. 6. This is a rarely used indicator connection method. The SN=3 must be set for FN68;
- the direction indicators are connected according to Fig. 4 and the hazard warning button operates according to Fig. 6. This is a rarely used indicator connection method. The SN=5 must be set for FN68.

5. 'GN7C' WIRING DIAGRAM.

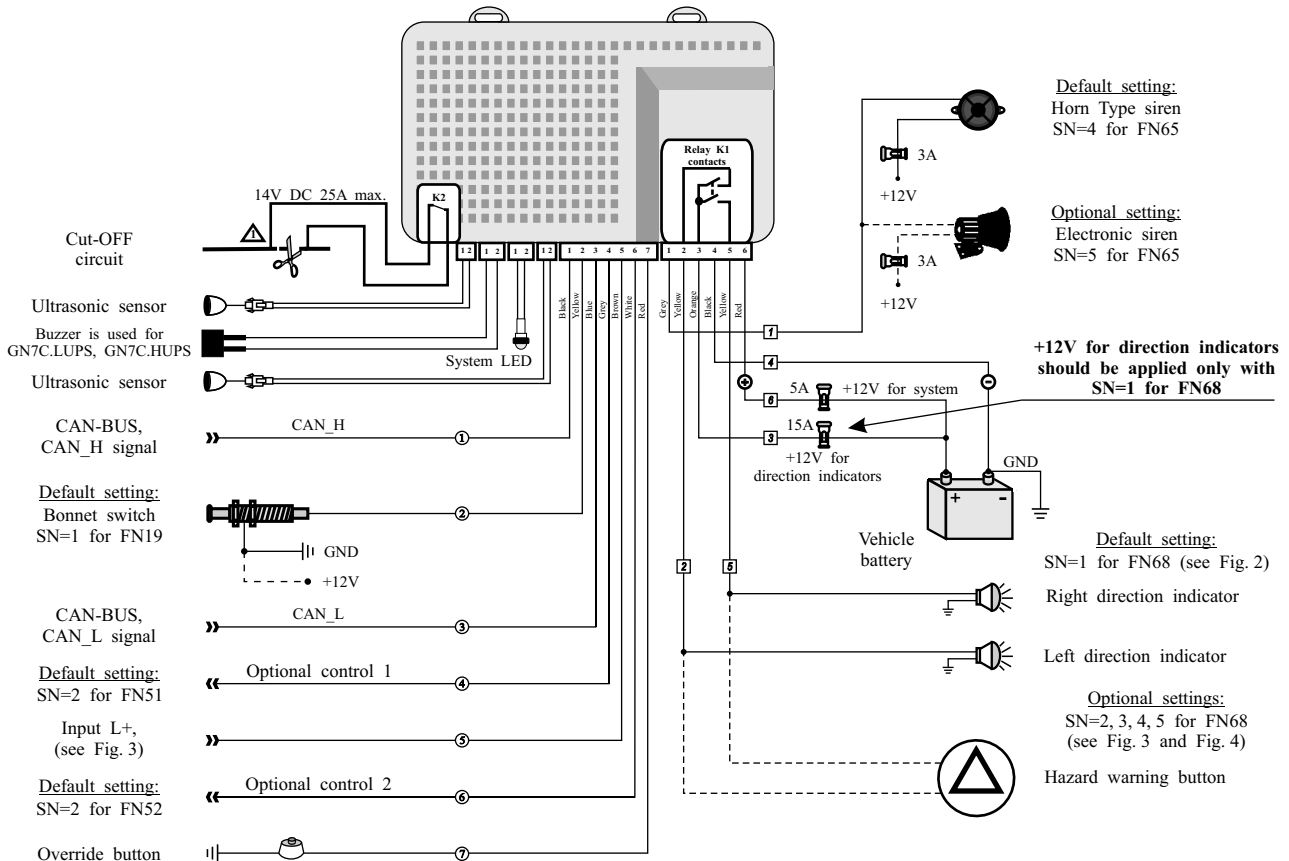


Fig. 7. 'GN7C' wiring diagram.

6. CAN-BUS LEARNING PROCEDURE.

6.1. FIRST TIME LEARNING.

The manufacturer supplies 'GN7C' alarm system with OVERRIDE MODE is turned ON and the CAN-BUS learning procedure is activated. When the alarm system is wired, for the CAN-BUS learning procedure do the following steps:

- power up the system, the siren will start to sound a series of single beeps for 1 minute;
- it prompts you to turn the IGNITION ON;
- if the alarm system learned the IGNITION ON code the siren will start to sound a series of double beeps for 1 minute;
- turn the IGNITION OFF, open the front doors on the left and right side, wait 5 seconds, close all doors and LOCK the central lock with the ORIGINAL REMOTE, wait 5 seconds and UNLOCK the central lock;
- the siren will sound a single 0.5 second beep, which means the learning procedure is over and the OVERRIDE MODE is turned OFF;
- if the system did not learned the central lock LOCK/UNLOCK codes open and close the all doors, repeat the LOCK/UNLOCK procedure;
- if the learning procedure was unsuccessful the siren will sound for 1 minute with a series of beeps that correspond to the passed learning stage and later will switch to the override mode;
- an unsuccessful learning procedure means there is no data specific to the car in the alarm system database (see Table 1), the data file must be received from the alarm system distributor or manufacturer to update the alarm system in the future with the help of a PC and PULSE-LATCHER device (see chapter 7.2).

6.2. LEARNING OF THE 'GN7C' WITH ANOTHER CAR.

If the 'GN7C' alarm system was already set to one car and later intended to be set to another car, please do the following steps:

- turn ON the override mode (see 3.1.);
- within 8 minutes turning the override mode ON, in the same way as before entering the PIN, enter the code '59' (FN59) to start the learning procedure;
- do the steps from b) through to h) in chapter 6.1.

6.3. IMPORTANT TO KNOW.

To cancel the learning procedure it is possible by a single press of the override button. The system will exit learning mode and will stay in override mode.

If the CAN-BUS learning procedure was accessed by entering FN59 (step b, chapter 6.2.), after the successful learning procedure the system will stay in override mode (to exit it see 3.1.3).

If the override button was not installed, it is possible to enter the override mode with the help of the ignition key only after the CAN-BUS codes were successfully learned.

COMPATIBLE CAR LIST.

Table 1

No	Model	Year	Available from			Direction indicators connection method	No	Model	Year	Available from			Direction indicators connection method
			GN7C.LP_(B) GN7C.LU_(B) GN7C.LUP_(B) GN7C.LUPS_(B)	GN7C.HP_(B) GN7C.HU_(B) GN7C.HUP_(B) GN7C.HUPS_(B)						GN7C.LP_(B) GN7C.LU_(B) GN7C.LUP_(B) GN7C.LUPS_(B)	GN7C.HP_(B) GN7C.HU_(B) GN7C.HUP_(B) GN7C.HUPS_(B)		
1	AUDI A8 (4E)	2003 >	023	023	Fig. 3	46	JEEP LAREDO	2005 >	-	023	Fig. 3		
2	AUDI A6 (4F)	2005 >	023	023	Fig. 3	47	LANCIA YPSILON	2006 >	023	023	Fig. 3		
3	AUDI A3	2004 >	023	023	Fig. 3 or 4	48	LEXUS ES	2007 >	-	023	Fig. 3		
4	AUDI A2	2004 >	023	023	Fig. 3 or 4	49	LEXUS LS	2007 >	-	023	Fig. 3		
5	AUDI A4 (8E)	2002 >	023	023	Fig. 3 or 4	50	LEXUS LX	2007 >	-	023	Fig. 3		
6	AUDI S4	2003 >	023	023	Fig. 3 or 4	51	MAZDA CX7	2008 >	-	023	Fig. 3 or 4		
7	AUDI A4	2008 >	023	023	Fig. 3 or 4	52	MERCEDES A 169	2004 >	-	023	Fig. 3		
8	AUDI A5	2007 >	023	023	Fig. 3 or 4	53	MERCEDES B 245	2005 >	-	023	Fig. 3		
9	AUDI Q5	2007 >	023	023	Fig. 3 or 4	54	MERCEDES C 203	2001-2007	-	023	Fig. 3		
10	AUDI Q7 (4L)	2005 >	023	023	Fig. 3 or 4	55	MERCEDES C 240	2001-2007	-	023	Fig. 3		
11	AUDI TT (8J)	2006 >	023	023	Fig. 3 or 4	56	MERCEDES C	2007 >	-	023	Fig. 3 or 4		
12	BMW 1 (E87)	2004 >	023	023	Fig. 3	57	MERCEDES E 240	2002 >	-	023	Fig. 3		
13	BMW 3 (E90)	2005 >	023	023	Fig. 3	58	MERCEDES E 280	2002 >	-	023	Fig. 3		
14	BMW 5 (E60)	2003 >	023	023	Fig. 3	59	MERCEDES E 211	2002 >	-	023	Fig. 3		
15	BMW 7 (E65)	2002 >	023	023	Fig. 3	60	MERCEDES CL	2007 >	-	023	Fig. 3 or 4		
16	BMW X5 (E70)	2007 >	023	023	Fig. 3	61	MERCEDES GLK	2008 >	-	023	Fig. 3 or 4		
17	CHRYSLER 300C	2004	-	023	Fig. 3	62	MERCEDES CLK 320	2003 >	-	023	Fig. 3		
18	CHRYSLER 300C	2005 >	-	023	Fig. 3	63	MERCEDES CLK 209	2003 >	-	023	Fig. 3		
19	CHRYSLER PT CRUISER	2006 >	-	023	Fig. 3	64	MERCEDES CLS 219	2005 >	-	023	Fig. 3		
20	CHRYSLER SEBRING	2007 >	-	023	Fig. 3	65	MERCEDES VITO 639	2003 >	-	023	Fig. 3		
21	CITROEN C2*	2006 >	023	023	Fig. 3 or 4	66	MERCEDES VIANO 639	2003 >	-	023	Fig. 3		
22	CITROEN C3*	2006 >	023	023	Fig. 3 or 4	67	MERCEDES SPRINTER 906	2006 >	-	023	Fig. 3		
23	CITROEN C-CROSSER	2007 >	023	023	Fig. 3 or 4	68	MERCEDES ML 164	2005 >	-	023	Fig. 3		
24	CITROEN JUMPY 3*	2007 >	023	023	Fig. 3 or 4	69	MERCEDES R 251	2006 >	-	023	Fig. 3		
25	CITROEN JUMPER	2006 >	023	023	Fig. 3	70	MERCEDES S 220	1998 - 2003	-	023	Fig. 3		
26	DODGE CALIBER	2006 >	-	023	Fig. 3	71	MERCEDES S 220	2003 - 2005	-	023	Fig. 3		
27	DODGE DURANGO	2004 >	-	023	Fig. 3	72	MERCEDES S	2005 >	-	023	Fig. 3 or 4		
28	DODGE MAGNUM	2005 >	-	023	Fig. 3	73	MERCEDES SL 230	2001 >	-	023	Fig. 3		
29	FIAT BRAVO	2007 >	023	023	Fig. 3	74	MERCEDES SLK 171	2005 >	-	023	Fig. 3		
30	FIAT DUCATO	2006 >	023	023	Fig. 3	75	MERCEDES E 280	1997 >	-	023	Fig. 3		
31	FIAT SCUDO*	2007 >	023	023	Fig. 3 or 4	76	MERCEDES CLK	1997 >	-	023	Fig. 3		
32	FORD C-MAX (DM2)	2003 >	023	023	Fig. 3 or 4	77	MITSUBISHI LANCER	2008 >	023	023	Fig. 3 or 4		
33	FORD FOCUS	2007 >	023	023	Fig. 3 or 4	78	MERCEDES CLK	2007 >	023	023	Fig. 3 or 4		
34	FORD FOCUS (DB3)	2005 >	023	023	Fig. 3 or 4	79	NISSAN ALTIMA	2007 >	-	023	Fig. 3 or 4		
35	FORD GALAXY	2006 >	023	023	Fig. 3 or 4	80	NISSAN MAXIMA	2007 >	-	023	Fig. 3 or 4		
36	FORD MONDEO	2007 >	023	023	Fig. 3 or 4	81	NISSAN MICRA	2006 >	-	023	Fig. 3 or 4		
37	FORD S-MAX	2007 >	023	023	Fig. 3 or 4	82	NISSAN MICRA KeylessGo	2006 >	-	023	Fig. 3 or 4		
38	HONDA C-RV	2007 >	023	-	Fig. 3 or 4	83	NISSAN MURANO KeylessGo	2007 >	-	023	Fig. 3 or 4		
39	HONDA ACCORD	2003 >	023	-	Fig. 3 or 4	84	NISSAN NAVARA	2006 >	-	023	Fig. 3 or 4		
40	HONDA CIVIC	2006 >	023	-	Fig. 3 or 4	85	NISSAN NAVARA KeylessGo	2006 >	-	023	Fig. 3 or 4		
41	HONDA LEGEND	2007 >	023	-	Fig. 3	86	NISSAN NOTE	2006 >	-	023	Fig. 3 or 4		
42	IVECO DAILY	2006 >	023	023	Fig. 3	87	NISSAN NOTE KeylessGo	2006 >	-	023	Fig. 3 or 4		
43	JEEP COMPASS	2007 >	-	023	Fig. 3	88	NISSAN PATHFINDER	2006 >	-	023	Fig. 3 or 4		
44	JEEP COMMANDER	2006 >	-	023	Fig. 3	89	NISSAN ROGUE	2007 >	-	023	Fig. 3 or 4		
45	JEEP GRAND CHEROKEE	2005 >	-	023	Fig. 3	90	NISSAN QASHQAI	2007 >	-	023	Fig. 3 or 4		

No	Model	Year	Available from			Direction indicators connection method	No	Model	Year	Available from			Direction indicators connection method
			GN7C.LUP_(B)	GN7C.LU_(B)	GN7C.LUP_(B)					GN7C.LUPS_(B)	GN7C.HP_(B)	GN7C.HU_(B)	
91	NISSAN QASHQAI KeylessGo	2007 >	-	-	023	Fig. 3 or 4	128	VOLVO C30	2007 >	-	-	023	Fig. 3
92	NISSAN QASHQAI 2	2009 >	-	-	023	Fig. 3 or 4	129	VOLVO C70	2007 >	-	-	023	Fig. 3
93	NISSAN QASHQAI 2 KeylessGo	2009 >	-	-	023	Fig. 3 or 4	130	VOLVO S40	2004 >	-	-	023	Fig. 3
94	NISSAN TEANA KeylessGo	2008 >	-	-	023	Fig. 3 or 4	131	VOLVO S60	2002	-	-	023	Fig. 3
95	NISSAN TIIDA	2007 >	-	-	023	Fig. 3 or 4	132	VOLVO S60	2003 - 2005	-	-	023	Fig. 3
96	NISSAN TIIDA KeylessGo	2007 >	-	-	023	Fig. 3 or 4	133	VOLVO S60	2005 >	-	-	023	Fig. 3
97	NISSAN X-TRAIL	2007 >	-	-	023	Fig. 3 or 4	134	VOLVO S80	2003 - 2005	-	-	023	Fig. 3
98	NISSAN X-TRAIL KeylessGo	2007 >	-	-	023	Fig. 3 or 4	135	VOLVO S80	2005 - 2007	-	-	023	Fig. 3
99	OPEL CORSA D	2006 >	023	-	-	Fig. 3	136	VOLVO V50	2004 >	-	-	023	Fig. 3
100	OPEL ASTRA H	2004 >	023	-	-	Fig. 3	137	VOLVO V70	2003 - 2005	-	-	023	Fig. 3
101	OPEL ASTRA	2010 >	023	-	-	Fig. 3 or 4	138	VOLVO V70	2005 - 2008	-	-	023	Fig. 3
102	OPEL INSIGNIA	2009 >	023	-	-	Fig. 3 or 4	139	VOLVO XC70	2005 - 2008	-	-	023	Fig. 3
103	OPEL VECTRA C	2002 >	023	-	-	Fig. 3	140	VOLVO XC90	2003 - 2005	-	-	023	Fig. 3
104	OPEL ZAFIRA	2005 >	023	-	-	Fig. 3	141	VOLVO XC90	2005 >	-	-	023	Fig. 3
105	OPEL SIGNUM	2002 >	023	-	-	Fig. 3	142	VW CADDY (2K)	2004 >	023	023	Fig. 3 or 4	
106	PEUGEOT 207*	2006 >	023	023	-	Fig. 3 or 4	13	VW CRAFTER (2E)	2006 >	-	-	023	Fig. 3
107	PEUGEOT 308	2008 >	023	023	-	Fig. 3	144	VW EOS (1F)	2006 >	023	023	Fig. 3 or 4	
108	PEUGEOT 308	2008 >	023	023	-	Fig. 3	145	VW GOLF4 (1F)	2002 >	023	023	Fig. 3 or 4	
109	PEUGEOT 407	2004	023	023	-	Fig. 3	146	VW GOLF5 (1K)	2004 >	023	023	Fig. 3 or 4	
110	PEUGEOT 4007	2007 >	023	023	-	Fig. 3 or 4	147	VW GOLF6 (1K)	2008 >	023	023	Fig. 3 or 4	
111	PEUGEOT EXPERT3 *	2007 >	023	023	-	Fig. 3 or 4	148	VW JETTA (1K)	2005 >	023	023	Fig. 3 or 4	
112	PEUGEOT BOXER	2006 >	023	023	-	Fig. 3	149	VW NEW BEETLE (1C)	2005 >	023	023	Fig. 3 or 4	
113	PORSCHE CAYMAN	2006 >	023	023	-	Fig. 3	150	VW PASSAT	1998 >	023	023	Fig. 3	
114	PORSCHE BOXER	2006 >	023	023	-	Fig. 3	151	VW PASSAT (3B)	2001 >	023	023	Fig. 3 or 4	
115	SEAT ALTEA (5P)	2005 >	023	023	-	Fig. 3 or 4	152	VW PASSAT (3C)	2005 >	023	023	Fig. 3 or 4	
116	SEAT CORDOBA (6L)	2003 >	023	023	-	Fig. 3 or 4	153	VW POLO	2008 >	023	023	Fig. 3 or 4	
117	SEAT IBIZA (6L)	2003 >	023	023	-	Fig. 3 or 4	154	VW SCIROCCO	2008 >	023	023	Fig. 3 or 4	
118	SEAT LEON (1P)	2006 >	023	023	-	Fig. 3 or 4	155	VW T5	2005 >	023	023	Fig. 3 or 4	
119	SEAT TOLEDO (5P)	2005 >	023	023	-	Fig. 3 or 4	156	VW CARAVELLE (7H)	2005 >	023	023	Fig. 3 or 4	
120	SKODA ROOMSTER (5J)	2006 >	023	023	-	Fig. 3 or 4	157	VW TOURAN (1T)	2003 >	023	023	Fig. 3 or 4	
121	SKODA FABIA (5J)	2007 >	023	023	-	Fig. 3 or 4	158	VW TIGUAN	2007 >	023	023	Fig. 3 or 4	
122	SKODA FABIA (6Y)	2005 >	023	023	-	Fig. 3 or 4	159	VW TOUAREG	2003 >	023	023	Fig. 3 or 4	
123	SKODA OCTAVIA II (1Z)	2005 >	023	023	-	Fig. 3 or 4	160	VW PHAETON	2003 >	023	023	Fig. 3 or 4	
124	SKODA OCTAVIA (1U)	2003 >	023	023	-	Fig. 3 or 4	161	TOYOTA RAV4	2006 >	-	023	Fig. 3	
125	SKODA SUPERB (3U)	2003 >	023	023	-	Fig. 3 or 4	162	TOYOTA YARIS	2006 >	-	023	Fig. 3	
126	SUBARU LEGACY	2006 >	-	-	023	Fig. 3	163	TOYOTA AURIS	2007 >	-	023	Fig. 3	
127	SUBARU OUTBACK	2006 >	-	-	023	Fig. 3	164	TOYOTA COROLLA	2007 >	-	023	Fig. 3	

Marking sample: GN7C.LUPS_(B), where L – CAN-BUS speed (L – low speed (fault tolerant) CAN-BUS, H – high speed CAN-BUS), UP – sensor configuration (U – ultrasonic sensor, P – tilt/shock sensor, UP – ultrasonic and tilt/shock sensors), S – available immobilizer and 'anti-carjack feature control by ID card, (B) – firmware version.

Available from 023 – means the system manufactured from year 2010, week 23 includes the actual car's data. The actual manufacturing date is on the alarm system's information sticker.

Note: The Data listed on the Table 1 has been updated constantly, the last Data are available on the manufacturer's web site www.kodinis.lt.

7. THE ALARM SYSTEM SETUP.

Default and available alarm system settings are available in Table 2 of chapter 7.2. If default settings are not suitable there are 2 ways to change them.

7.1. MANUAL SETUP:

- turn on the override mode ON by entering the PIN;
- the system LED will start frequently flashing;
- within 8 minutes of the override mode being turned ON, in the same way as before entering the PIN, enter the FN number of the function you want to change;
- if the correct FN number was entered, the system indicates the current SN value by 5 separate series of direction indicator flashes (with a pause of 2 seconds between the series), the number of flashes in each series corresponds to current SN value;
- the assigned control time is extended for another 8 minutes. No flash of direction indicators means either incorrect FN entry or the 8 minute control time has elapsed;
- if the FN has not been entered due to the 8 minute control time being elapsed, repeat the steps starting from a);
if the FN has not been entered due to a mistake, wait until the system LED starts flashing frequently and re-enter the FN code.;
- if the SN does not match your needs you can change it. To change it do the following: when the system indicates the current SN value by 5 separate series of flashes press and hold down the override button or turn ON the ignition. The direction indicators start to flash by single flashes every 5 seconds. When the number of flashes corresponds to the necessary SN value (wait a second after the last flash) release the override button or turn OFF the ignition. The system confirms a new SN value entry by a long siren beep (0.5 second) and indicates a new SN value by 5 separate series of direction indicator flashes. The control time is extended for another 8 minutes;
- if the FN68 has been entered the system indicates the current SN value by 5 separate series of short siren beeps (with 2 second pause between the series). If the SN is inappropriate, to change it do the following: when the system indicates the current SN value by 5 separate series of short siren beeps press and hold down the override button or turn ON the ignition. The siren starts to sound a single beep every 5 seconds. When the number of beeps corresponds to the necessary SN value (wait a second after the last beep) release the override button or turn OFF the ignition. The system confirms a new SN value entry by a long siren beep (0.5 second) and indicates the new SN value by 5 separate series of short siren beeps. The control time is extended for another 8 minutes;
- if the FN31, FN32, FN34 has been entered (for the test and adjustment of the built-in sensor) the system indicates the current level of sensitivity (SN value) by a single series of direction indicator flashes and stays in the sensor's test mode. Now (as the indication is finished) it's possible to check the sensitivity level of the sensor by applying an impact to the car's body or making movement inside the car. When the sensor is triggered the alarm system will make a short siren beep. If the sensitivity level is inappropriate, enter the new SN value (see g)). The system will indicate the sensitivity level after each SN value entry. To cancel the sensor test procedure it is possible to do this by a single press of the override button or by turning the ignition ON for a short time.

7.2. THE ALARM SYSTEM SETUP AND UPDATE WITH NEW CARS DATA BY COMPUTER.

For professional fitting it's recommended that the PULSE-LATCHER device, a PC and the 'CAdmin' software for an alarm system setup are used. This way it's possible to speed up the installation, to update the alarm system database with a new car's data and possible to store the records about changed settings of each installation. To update an alarm system with the help of a PC do the following steps:

- check the 'CAdmin' software is present on your PC or download it from www.kodinis.lt, <http://www.kodinis.lt/en/products/Car-Alarm-System-Accessories>;
- connect an alarm system to the computer by using the PULSE-LATCHER device as seen in Fig. 8;
- turn ON the car alarm override mode by entering the PIN;
- within 8 minutes start the 'CAdmin' software with the PULSE-LATCHER device connected;
- create a new installer account or login with an existing one;
- click on the "Clients DB" icon (see Fig. 9-A);
- create an account for the new client by clicking on "New client" button;
- Fill up the fields in the "Client data" form, select the correct type of alarm system and serial number according to the information sticker (see Fig. 1) and click on "OK";
- make a double click on this then a newly created client record and table with the alarm system default settings will appear (see Fig. 9-B);
- to make a settings change click on the "Change settings" icon (see Fig. 9-C) and from the options displayed click on the options you want (by clicking on their selection circles). When they are filled in you have chosen that option (see Fig. 9-D);
- when all the changes are made click on the "Change settings" icon once again to disable changing opportunity and click on the "Update CA Settings" icon (see Fig. 9-E) to start the Car Alarm settings update procedure;
- to update the alarm system with the new cars data click on the "Quick Flasher" icon (see Fig. 9-F), select the specific car CAN-BUS data file by clicking on the "Add" button (see Fig. 10) and write this file to an alarm system by clicking on the "Update CA settings, CAN-BUS DB" button;
- if the alarm system setup mode is left idle for more than 8 minutes (the control time) the system will automatically exit the setup mode. To go back into the setup mode you must re-enter the PIN.

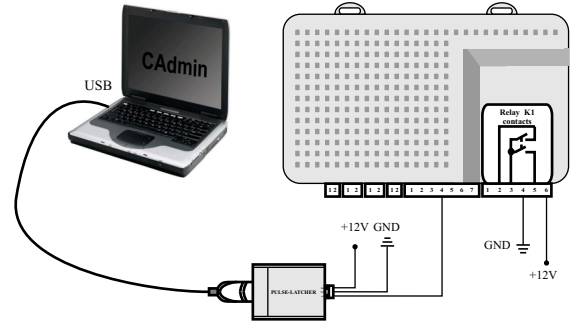


Fig. 8. 'GN7C' connected to the computer using PULSE-LATCHER.

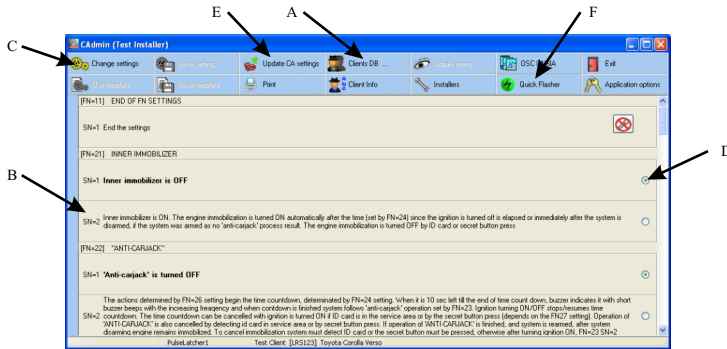


Fig. 9. 'CAdmin'. Window of settings.

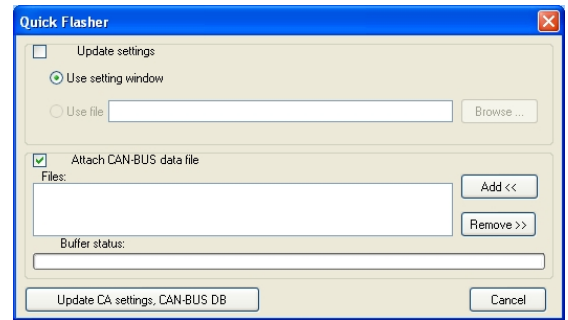


Fig. 10. 'CAdmin'. Quick Flasher.

7.3. AVAILABLE ALARM SYSTEM SETTINGS.

In the column named 'EU' the settings which comply with the requirements of EU Directives are indicated with a tick mark ✓. Selection of settings not complying with the EU requirements is allowed if the vehicle is operated outside the EU states. In the another columns are the settings which present with the alarm system software versions are indicated by a tick mark ✓. The factory default (pre-set) settings are indicated with the tick mark ⊗ in the columns.

AVAILABLE SETTINGS.

FUNCTION		EU	Table 2				
			GN7CLIP (B) GN7CHP (B)	GN7CLLU (B) GN7CHLU (B)	GN7CLUP (B) GN7CHUP (B)	GN7CLAUPS (B) GN7CHUPS (B)	
FN=11	Function: EXIT OVERRIDE MODE.	✓	✓	✓	✓	✓	
FN=19	Function: BONNET SWITCH POLARITY.						
SN=1	The bonnet switch is connected to GND.	✓	⊗	⊗	⊗	⊗	
SN=2	The bonnet switch is connected to +12V.	✓	✓	✓	✓	✓	
FN=21	Function: INNER IMMOBILIZER.						
SN=1	Inner immobilizer is turned OFF.	✓	⊗	⊗	⊗	✓	
SN=2	Inner immobilizer is turned ON. The engine will be immobilized immediately each time the alarm system is disarmed or when the ignition is turned OFF and the engine immobilization delay time (see FN24) is elapsed. To turn the immobilized state of the engine OFF press the override button once.	✓	✓	✓	✓	⊗	
SN=3	Inner immobilizer with automatic arming is turned ON. The operation is analogical as described in NN=2, however additional automatic system rearming is activated. If the system is disarmed and door is opened with ID card is outside communication area, the alarm system alarms by siren, buzzer and direction indicators for 10 seconds and after automatically rearms. Disarming by original remote is disabled; the system will disarm automatically as the ID card is placed inside the communication area. Inner immobilizer with automatic arming can be controlled by the secret button, however the such way is not recommended.	✓				✓	
FN=22	Function: 'ANTI-CARJACK'.						
SN=1	'Anti-carjack' is turned OFF.	✓	⊗	⊗	⊗	✓	
SN=2	'Anti-carjack' is turned ON. The 'anti-carjack' is a series of actions the car alarm system takes to prevent a robbery of the car. The alarm system starts the 'anti-carjack' procedure on a trigger (see FN26) and waits for the override button to be pressed within the preset time (see FN24). If the button is not pressed (the button must be fitted in a secret place) the alarm system regards the car is in unauthorized use and will start to make alarm signals by siren sounds and direction indicator flashes. Depending on the FN23 setting the car will be immobilized in 2 different ways. When the 'anti-carjack' process is finished, the alarm system will rearm automatically. In order to disarm the car alarm, in the case of the system being rearmed, press the remote's UNLOCK button and the override button, one after another to cancel the immobilization state of the engine.		✓	✓	✓	⊗	
FN=23	Function: OPERATION OF 'ANTI-CARJACK'.						
SN=1	If the override button wasn't pressed and the 'anti-carjack' override time elapses (see FN24) the car alarm system makes the direction indicators flash, starts the siren sounding for at least 10 seconds and stops alarming only when the ignition is turned OFF. If the ignition is turned OFF, the system immobilizes the engine and automatically rearms.		⊗	⊗	⊗	✓	
SN=2	If the override button wasn't pressed and the 'anti-carjack' override time elapses (see FN24) the alarm system makes the direction indicators flash, starts the siren to sound for 10 seconds then the system immobilizes the engine and automatically rearms.		✓	✓	✓	⊗	

FUNCTION		EU	GN7CLP (B)	GN7CHP (B)	GN7CLU (B)	GN7CHU (B)	GN7CLUP (B)	GN7CHUP (B)	GN7CLUPS (B)	GN7CHUPS (B)
SN=4	The optional control 2 is used for switch ON negative polarity constant signal as the system is disarmed and for switch OFF the signal as the system is armed.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=5	The optional control 2 is used for switch ON negative polarity constant signal with 15 second delay after the ignition is turned ON and for switch OFF the signal after the ignition is turned OFF. The signal can be used for automatic vehicle light switching ON/OFF.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=6	The optional control 2 is used for generation upon arming 40 second negative polarity pulse intended for closing of power-operated windows and/or sunroof.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=7	The optional control 2 is used for generation a pulse signal intended for pager message if any door, engine bonnet, luggage compartment is opened, the ignition is turned ON, alarm zone of the sensor is triggered with system is armed.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=8	The optional control 2 is used for generation a pulse signal intended for pager message if any door, engine bonnet, luggage compartment is opened, the ignition is turned ON, alarm or pre-alarm zone of the sensor is triggered with system is armed.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=9	Out of use.									
SN=10	The optional control 2 is used for engine bonnet lock locking. 1 second negative polarity pulse will be generated as the alarm system is armed. The pulse duration can be adjusted by computer.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=11	The optional control 2 is used for engine bonnet lock unlocking. 1 second negative polarity pulse will be generated as the alarm system is disarmed or as the system is disarmed with subsequent immobilization turning OFF if the immobilizer feature is in use. The pulse duration can be adjusted by computer.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=12	The optional control 2 is used for engine bonnet lock locking /unlocking. 1 second negative polarity pulse will be generated as the alarm system is armed / is disarmed or is disarmed with subsequent immobilization turning OFF if the immobilizer feature is in use. The pulse duration can be adjusted by computer.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=13	The alarm system receives the Engine Start/Stop commands transmitted via cell phone and generates on optional control 2 negative polarity 0.5 second duration Start/Stop pulses for an automatic engine start module. The alarm system should be connected to 'GSWI1' and FN51 setting SN=9 should be set.	✓							✓	
FN=59	Function: LEARNING OF THE 'GN7C' WITH ANOTHER CAR.									
	If 'GN7C' alarm system was already learned with the car and later intended to be learned with another car the CAN-BUS learning procedure must be turned ON by entering FN=59.	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=64	Function: SIREN SOUND WHEN ARMING THE SYSTEM WITH SENSOR(S) BYPASS.									
SN=1	The siren sound is turned OFF.	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The siren will sound for 0.5 seconds.		✓	✓	✓	✓	✓	✓	✓	⊗
FN=65	Function: TYPE OF SIREN. THE POWER OF SOUND ON ARMING AND DISARMING.									
SN=1	The horn type siren (speaker with coil impedance at least 4 Ohm) with the maximum sound power adjusted.	✓	✓	✓	✓	✓	✓	✓	✓	⊗
SN=2	The horn type siren (speaker with coil impedance at least 4 Ohm) with the sound power reduced by 2.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=3	The horn type siren (speaker with coil impedance at least 4 Ohm) with the sound power reduced by 4.	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=4	The horn type siren (speaker with coil impedance at least 4 Ohm) with the sound power reduced by 8.	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=5	Standard electronic siren.	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=66	Function: SIREN ACTION WHEN ARMING OR DISARMING CAR ALARM SYSTEM.									
SN=1	The siren sound is turned OFF.	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The siren makes confirmation beeps.		✓	✓	✓	✓	✓	✓	✓	✓
SN=3	The siren makes confirmation beeps. While disarming the siren will make 4 beeps if the alarm was triggered before the system was disarmed.		✓	✓	✓	✓	✓	✓	✓	⊗
FN=68	Function: DIRECTION INDICATORS CONTROL METHOD.									
SN=1	The relay 'K1' supplies direction indicators with 12V directly (see Fig. 2).	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The relay 'K1' is connected to the hazard warning button. The push of the hazard warning button makes a short electrical pulse (see Fig. 5). Alarm system counts direction indicator flashes via input 'L+' (see Fig. 3).	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=3	The relay 'K1' is connected to the hazard warning button. The push of the hazard warning button makes a constant electrical signal (see Fig. 6). Alarm system counts direction indicator flashes via input 'L+' (see Fig. 3).	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=4	The relay 'K1' is connected to the hazard warning button. The push of the hazard warning button makes a short electrical pulse (see Fig. 5). Alarm system counts direction indicator flashes via CAN-BUS (see Fig. 4).	✓	✓	✓	✓	✓	✓	✓	✓	✓
SN=5	The relay 'K1' is connected to the hazard warning button. The push of the hazard warning button makes a constant electrical signal (see Fig. 6). Alarm system counts direction indicator flashes via CAN-BUS (see Fig. 4).	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=69	Function: DIRECTION INDICATOR CONTROL WHEN ARMING OR DISARMING CAR ALARM SYSTEM.									
SN=1	The car alarm system does not control direction indicators.	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The car alarm system makes direction indicators flashes when arming or disarming the system.	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=71	Function: ALARM TRIGGER MEMORY.									
FN=72	The car alarm system shows the cause of alarm (see chapter 9) when FN71, FN72 or FN73 is entered. Direction indicators makes 5 series of flashes and the number of flashes in each series correspond to the cause of alarm trigger. The FN71 shows the latest trigger and the FN72, FN73 shows previous triggers accordingly).	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=73										
FN=75	Function: ACTIVATION OF THE BUILT-IN ULTRASONIC SENSOR.									
SN=1	The ultrasonic sensor is turned ON.	✓		⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The ultrasonic sensor is turned OFF.	✓		✓	✓	✓	✓	✓	✓	✓
FN=76	Function: ACTIVATION OF THE BUILT-IN TILT/SHOCK SENSOR.									
SN=1	The tilt/shock sensor performs in tilt and shock mode.	✓	⊗		⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The tilt/shock sensor performs in tilt mode.	✓	✓		✓	✓	✓	✓	✓	✓
SN=3	The tilt/shock sensor performs in shock mode.	✓	✓		✓	✓	✓	✓	✓	✓
SN=4	The tilt/shock sensor is turned OFF sensor is turned OFF.	✓	✓		✓	✓	✓	✓	✓	✓
FN=78	Function: ALARM SYSTEM OPERATION WHEN SENSOR(S) IS/ARE TRIGGERED.									
SN=1	The direction indicators are flashing and siren sounds if any zone of the sensor is triggered.	✓	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SN=2	The direction indicators are flashing and siren sounds if alarm (inner) zone of the sensor is triggered. The direction indicators are flashing only if pre-alarm (outer) zone of the sensor is triggered.	✓	✓		✓	✓	✓	✓	✓	✓
SN=3	The direction indicators are flashing only if any zone of the sensor is triggered.	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=88	Function: CHANGING THE PIN.	✓	✓	✓	✓	✓	✓	✓	✓	✓
FN=99	Function: RESTORE DEFAULT FACTORY SETTINGS.									
SN=1	Restore default factory settings and the default PIN code.	✓	✓	✓	✓	✓	✓	✓	✓	✓

8. ALARM TRIGGER.

The 'GN7C' is equipped with the alarm trigger memory and can indicate triggers in 2 ways:

- system LED indicates the cause of last trigger when the system is being disarmed and the ignition is turned ON;
- direction indicators show the causes of three last triggers when FN71, FN72, or FN73 is being entered in override mode.

The trigger cause is indicated by the number of flashes:

- 1 flash means the alarm was triggered by built-in tilt/shock sensor;
- 2 flashes mean the alarm was triggered by built-in ultrasonic sensor;
- 3 flashes mean the alarm was triggered by turning the ignition ON (the attempt to start engine);
- 3 flashes mean the alarm was triggered by opening of the driver door;
- 5 flashes mean the alarm was triggered by opening of the passenger door (the front and right side); 6 flashes mean the alarm was triggered by opening of the passenger door (the rear and left side);
- 7 flashes mean the alarm was triggered by opening of the passenger door (the rear and right side);
- 8 flashes mean the alarm was triggered by opening of the bonnet;
- 9 flashes mean the alarm was triggered by opening of the luggage compartment.

9. CERTIFICATE OF INSTALLATION.

I, undersigned qualified installer _____ certify that installation of
(Name, Surname)
the below described vehicle alarm system has been carried out by myself pursuant to installation manual supplied by the manufacturer of the system.

Vehicle description:
Manufacturer and model: _____
Serial number: _____ Registration number: _____

Description of vehicle alarm system:
Type: 'GN7C'. Model: _____ Official approval number: _____
Installation date: _____
Installing company: _____

Installer: _____
(Position, signature)

SEAL

After installation of the alarm system installer must fill in CERTIFICATE OF INSTALLATION!
It is recommended to mark selected settings in the TABLE OF ALARM SYSTEM SETTINGS (underline SN).